CONSOLIDATED FINANCIAL STATEMENTS AS AT 31 DECEMBER 2017

Consolidated financial statements

Board of Directors, 20 February 2018

Statutory Auditors

Ernst & Young Audit
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92400 Courbevoie – Paris-La Défense 1

KPMG Audit
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ERAMET
Public limited company with capital of €81,232,663
Registered office: Tour Maine Montparnasse - 33, avenue du Maine - 75 015 Paris
Registered in the Paris Trade and Companies Register
under number 632 045 381

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Income Statement

(€ million)	Notes	Financial Year 2017	Financial Year 2016
Sales	3 / 4	**3,528**	**2,897**
Other products		24	57
Cost of sales		(2,519)	(2,390)
Administrative and selling expenses		(160)	(164)
Research and development expenditure	4	(28)	(34)
EBITDA	3	**845**	**366**
Amortisation and depreciation of non-current assets and provisions for liabilitie	4	(247)	(275)
Current operating profit (loss)	3 / 4	**598**	**91**
Other operating income and expenses	5	(85)	(138)
Operating profit (loss)	3	**513**	**(47)**
Financial income	6	(93)	(58)
Share of income from joint ventures and associates	9	18	(66)
Income taxes	10	(216)	(61)
Profit (loss) for the period		**222**	**(232)**
- attributable to non-controlling interests	5	19	(53)
- attributable to equity holders of the parent	3 / 5	**203**	**(179)**
Basic earnings per share (€)	5	7.67	(6.79)
Diluted earnings per share (€)	5	7.03	(6.79)

Statement of comprehensive income

(€ million)	Notes	Financial Year 2017	Financial Year 2016
Profit (loss) for the period		**222**	**(232)**
Translation differences for subsidiaries' financial statements in foreign currency		(58)	22
Change in revaluation reserve for available-for-sale assets		(3)	7
Change in revaluation reserve for hedging instruments	7	35	59
Income taxes		(7)	(1)
Items recyclable to profit or loss		**(33)**	**87**
Revaluation of net defined benefit plan liabilities	11	6	(17)
Income taxes		(1)	2
Items not recyclable to profit or loss		**5**	**(15)**
Other comprehensive income		**(28)**	**72**
- attributable to non-controlling interests	5	-	7
- attributable to equity holders of the parent		**(28)**	**65**
Total comprehensive income		**194**	**(160)**
- attributable to non-controlling interests		19	(46)
- attributable to equity holders of the parent		**175**	**(114)**

These items are listed in the table of changes in equity under the section relating to OCI (*Other Comprehensive Income*).

Statement of cash flows

(€ million)	Notes	Financial Year 2017	Financial Year 2016
Operating activities			
Profit (loss) for the period		222	(232)
Non-cash income and expenses	6	260	389
Cash flow from operations		**482**	**157**
Net change in working capital requirement	8	205	(59)
Net cash flow from operating activities (1)	3	**687**	**98**
Investing activities			
Acquisition of non-current assets	9	(236)	(212)
Disposal of non-current assets	5	31	7
Net change in non-current financial assets	9	(3)	(14)
Net change in current financial assets	6	(63)	(135)
Joint ventures capital increase		(9)	-
Share capital increase – controlled companies	9	-	(97)
Impact of changes in consolidation scope	6	13	131
Net cash used in investing activities		**(267)**	**(320)**
Financing activities			
Issue of equity instruments (ODIRNAN)	6	-	100
Interest paid on ODIRNAN	6	(4)	-
Buyback of ERAMET equity shares	6	(8)	-
Loan issues	6	876	1,183
Loan repayments	6	(1,011)	(113)
Change in bank overdrafts	6	32	(32)
Other changes	6	(9)	9
Net cash used in financing activities		**(124)**	**1,147**
Impact of changes in exchange rate		(3)	3
Increase (decrease) in cash and cash equivalents		**293**	**928**
Opening cash and cash equivalents	6	**1,360**	**432**
Closing cash and cash equivalents	6	**1,653**	**1,360**

(1) including under operating activities			
Interest income	6	13	16
Interest paid	6	(81)	(71)
Tax paid	10	(56)	(33)

Statement of changes in equity

(€ million)	Number of shares	Capital	re premiums	Reserves/ available-for-sale assets	Reserves/ hedging instruments	Reserves/ defined benefit plans	Translation adjustments	Other reserves	Attributable to equity holders of the parent	Attributable to non controlling interests	Total Shareholders' equity
Shareholders' equity at 1 January 2016	**26,543,218**	**81**	**373**	**-**	**(80)**	**(61)**	**27**	**1,126**	**1,466**	**322**	**1,788**
Profit (loss) for the period								**(179)**	**(179)**	**(53)**	**(232)**
Other comprehensive income				7	51	(13)	20		65	7	72
Total comprehensive income		**-**	**-**	**7**	**51**	**(13)**	**20**	**(179)**	**(114)**	**(46)**	**(160)**
Share capital increase	7,225	-	1					(1)	**-**		**-**
Equity instruments (ODIRNAN)								100	**100**		**100**
Share-based payment								3	**3**		**3**
Other movements				2				58	**60**		**60**
Total transactions with shareholders		**-**	**1**	**2**	**-**	**-**	**-**	**160**	**163**	**-**	**163**
Shareholders' equity at 31 December 2016	**26,550,443**	**81**	**374**	**9**	**(29)**	**(74)**	**47**	**1,107**	**1,515**	**276**	**1,791**
Profit (loss) for the period								**203**	**203**	**19**	**222**
Other comprehensive income				(4)	20	9	(53)		(28)	-	(28)
Total comprehensive income		**-**	**-**	**(4)**	**20**	**9**	**(53)**	**203**	**175**	**19**	**194**
Share capital increase	83,217		3					(3)	**-**		**-**
Share-based payment								6	**6**		**6**
Buyback of equity shares								(8)	**(8)**		**(8)**
Interest from ODIRNAN								(4)	**(4)**		**(4)**
Other movements								10	**10**		**10**
Total transactions with shareholders		**-**	**3**	**-**	**-**	**-**	**-**	**1**	**4**	**-**	**4**
Shareholders' equity at 31 December 2017	**26,633,660**	**81**	**377**	**5**	**(9)**	**(65)**	**(6)**	**1,311**	**1,694**	**295**	**1,989**

Main components of changes in equity

Premiums essentially consist of issue premiums, representing the difference between the par value of the shares issued and the amount of the contributions in cash or in kind received on issue.

Reserves on available-for-sale assets include changes in the fair value of bonds classified as Other current financial assets.

Hedging instrument reserves comprise the cumulative change in the effective portion of the fair value of derivatives relating to future cash flow hedging in connection with transactions that have not yet impacted the Net profit for the period. This is offset in Derivatives under assets or liabilities, depending on whether hedging gains or losses are recognised.

Reserves on Defined benefit plans include the impact of changes in actuarial assumptions used for commitments, and the variance between actual returns and the discount rates on the plans' hedging assets.

Translation adjustments account for the conversion differences deriving from the translation of the financial statements of foreign subsidiaries into euros. They also include the fair value changes of the net investment hedges of foreign subsidiaries.

At 31 December 2017

ERAMET bought a total of 145,000 of its treasury shares in the market in 2017, at a total cost of €8 million.

At 31 December 2016

ERAMET launched an offering of net share settled undated bonds convertible into new shares (ODIRNAN) for a principal amount of €100 million recognised in equity.

Other movements in shareholders' equity, Group share relate primarily to Mitsubishi's decision to exercise its option to sell its holding in Strand Minerals (Indonesia) Pte Ltd.

Balance sheet

ASSETS

(€ million)	Notes	31/12/2017	31/12/2016
Intangible assets and goodwill	9	349	372
Property, plant and equipment	9	1,924	1,976
Investments in joint ventures and associates	9	115	107
Non-current financial assets	9	121	141
Deferred tax	10	2	4
Other non-current assets	8	86	99
Non-current assets		**2,597**	**2,699**
Inventories	8	849	896
Customers	8	361	330
Other current assets	8	170	195
Tax receivables	8 / 10	22	39
Derivatives	7	47	29
Current financial assets	6	394	331
Cash and cash equivalents	6	1,653	1,360
Current assets		**3,496**	**3,180**
TOTAL ASSETS		**6,093**	**5,879**

LIABILITIES

(€ million)	Notes	31/12/2017	31/12/2016
Capital		81	81
Share premiums		377	374
Revaluation reserve for available-for-sale assets		5	9
Revaluation reserve for hedging instruments		(9)	(29)
Revaluation reserve for net defined benefit plan liabilities		(65)	(74)
Translation adjustments		(6)	47
Other reserves		1,311	1,107
Attributable to equity holders of the parent		**1,694**	**1,515**
Attributable to non-controlling interests	5	295	276
Shareholders' equity		**1,989**	**1,791**
Employee-related liabilities	11	204	219
Provisions	12	494	482
Deferred tax	10	173	150
Non-current borrowings – due after more than one year	6	1,602	2,022
Other non-current liabilities	8	4	5
Non-current liabilities		**2,477**	**2,878**
Current provisions – due in less than one year	12	31	38
Current borrowings – due in less than one year	6	682	344
Suppliers	8	363	371
Other current liabilities	8	328	346
Tax payables	8 / 10	168	34
Derivatives	7	55	77
Current liabilities		**1,627**	**1,210**
TOTAL LIABILITIES		**6,093**	**5,879**

ERAMET is a French public limited company with a Board of Directors, governed by the provisions of Articles L.225-17 and R.225-1 et seq. of the French Commercial Code and the provisions of its Articles of Association. As required by law, the Company is audited by two statutory auditors.

The ERAMET Group's consolidated financial statements at 31 December 2017 were approved by the ERAMET Board of Directors on 20 February 2018.

The accompanying notes are an integral part of the consolidated financial statements.

Note 1 – Description of the ERAMET Group's business

The ERAMET Group is one of the world's largest producers of:

- alloy metals, especially **manganese** and **nickel**, which are used to improve the properties of steel;
- **high-performance special steels and alloys** used by industries such as aeronautics, power generation and tooling.

The ERAMET Group is divided into three Divisions.

ERAMET Manganese extracts and processes manganese ore

- **COMILOG** operates the Moanda mine in Gabon.
- The manganese extracted is then processed in the Group's metallurgical plants in France, Norway and the United States. The Group produces the widest range of alloys on the market.

ERAMET Nickel extracts and processes nickel ore

- **Le Nickel-SLN** operates five mines and one metallurgical plant in New Caledonia. The ERAMET Group is also involved in the **Weda Bay Nickel project** to mine a large nickel deposit in Indonesia.
- Eramet **Sandouville** is a refinery which produces pure nickel, nickel chloride, nickel carbonate and cobalt chloride.

ERAMET Alloys creates, processes and treats alloys

- **Aubert & Duval** and **Erasteel** make special steels and superalloys, in particular for the aeronautics and power generation sectors. These markets require high added-value metallurgical expertise.
- The ERAMET Group has also expanded into titanium, aluminium and aluminium-lithium alloys and into the powder metallurgy business.

The ERAMET Group is also exploring large projects in new business segments with strong growth potential, such as mineral sands (titanium dioxide and zircon) and lithium.

Note 2 – Key events in the reporting period

ERAMET joins the SBF 120 index

Following the decision of the Euronext Paris Scientific Advisory Board, ERAMET joined the SBF 120 stock market index on 18 December 2017.

Developments in ERASTEEL's holdings in China

On 29 September 2017, ERASTEEL finalised the increase of its holdings in the Chinese high-speed steel market.

ERASTEEL became a 100% shareholder in HeYe-ERASTEEL Innovative Materials Co. Ltd (HEIML), a Chinese company based in Tianjin specialising in the manufacture of high-speed steel bars and wire, by acquiring the 51% stake held by HeYe Special Steel Co., a subsidiary of AT&M (Advanced Technology & Materials Co., Ltd.). This transaction amounted to 59.5 million yuan, or about €8 million.

ERASTEEL sold its 10.29% stake in the Chinese company HeYe Special Steel Co. to the latter. The amount of the transaction was 109.5 million yuan, or about €14 million.

Bond issue of €500 million maturing in February 2024

In September 2017, ERAMET arranged a bond issue of €500 million maturing in February 2024. This bond issue, with a coupon of 4.196%, was subscribed to by a diversified base of French and international institutional investors. This issue is unrated.

In addition, ERAMET made a redemption offer for existing bonds maturing in November 2020 for a total of €64.9 million, reducing the outstanding amount to €460 million at 31 December 2017.

Strengthening the turnaround plan for Le Nickel-SLN in New Caledonia

ERAMET announced its plan to strengthen the turnaround plan of its subsidiary Le Nickel-SLN in New Caledonia.

In the context of the rapidly evolving global nickel industry, and considering that the achievement of the target of $4.5/lb set for the end of 2017 is essential but not sufficient to ensure the sustainability of the company during troughs in the economic cycle, a new cash cost target of $4.0/lb was set for the end of 2020.

A detailed analysis of the costs of SLN and its main competitors shows that the two main items at variance are productivity on the one hand, and energy costs on the other. Therefore, this proposed plan will focus on new actions aimed at:

- increasing the productivity of the company through measures to increase working time and restructure the organisation;
- reducing SLN's energy bill (currently the most expensive in the industry), through energy efficiency measures and reviewing the price of electricity. These actions will be carried out independently of the project to build a new power station driven by New Caledonia, which is not expected to come into service before 2022.

On 7 September 2017, the SLN Board of Directors approved these measures to strengthen the turnaround plan, making it possible to improve SLN's competitiveness from a structural perspective, which is the only way to ensure the long-term sustainability of the business in a demanding and competitive market.

Bond issue by TiZir

In July 2017, TiZir Ltd (company accounted for using the equity method of accounting) issued a new USD 300 million (EUR 250 million) bond maturing in July 2022. For the most part, this bond refinanced the previous one, which matured in September 2017.

Inauguration of ERAMET Sandouville's new facilities

The Estuaire project, launched in 2013 and completed in June 2017, focused on the upgrade of both the unit's industrial assets and its business model. ERAMET Sandouville aims to strengthen its position in the high-purity nickel market.

The programme consists of adapting part of the value production chain to process a new matte, concentrated ore that forms the plant's raw material. This transformation was accompanied by the conversion of the production site into a subsidiary, having previously been an ERAMET SA facility.

The restart of the facilities is being done gradually since the beginning of the second half-year 2017. The investment of €34.5 million is the largest since the site's creation in 1978.

Two-year extension to Revolving Credit Facility maturity and partial repayment

On 16 January 2017, the ERAMET Group signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by 2 years. The original instalments of €85 million in January 2017 and €896 million in January 2018 are €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020.

A total of €730 million of the Revolving Credit Facility was repaid in 2017 (€500 million in May 2017 and €230 million in July 2017) reducing the amount drawn to €250 million at 31 December 2017.

Sale of Eurotungstène finalised

As part of its asset disposal programme and following the agreement concluded on 9 December 2016, ERAMET finalised the sale of Eurotungstène (production and marketing of metal powders and pre-alloyed powders) to Umicore, with effect from 3 April 2017.

Signature of a framework agreement for the recovery of the nickel deposits in Weda Bay, Indonesia

ERAMET signed a framework agreement with the Chinese steel group Tsingshan with a view to determining the conditions for partnership to increase the value of the asset. The Tsingshan Group is the world's leading stainless steel producer.

This partnership would use a pyrometallurgical process to produce nickel ferroalloy, with a volume of about 30,000 tonnes of nickel content per year, from the ore mined from the Weda Bay deposit in Indonesia.

This partnership entails the Tsingshan Group acquiring an interest in Strand Minerals Pte Ltd. ERAMET will hold a 43% stake and the Tsingshan Group 57%.

The next steps in the implementation of this framework agreement are partly subject to government and environmental approval of the joint ERAMET/Tsingshan project. The transaction is expected to be finalised in 2018.

Deployment of a new cycle of governance

Ms Christel Bories succeeded Mr Patrick Buffet as Chairman and Chief Executive Officer at the end of the Shareholders' Meeting of 23 May 2017. Ms Bories had been appointed Deputy CEO by the Board of Directors on 23 February 2017.

Note 3 – Operational performance of Divisions and the Group – segment reporting

The ERAMET Group is divided into three Divisions: ERAMET Nickel, ERAMET Alloys and ERAMET Manganese. Each Division offers different products and services and relies on distinct technologies and sales strategies. Their operational and financial performance is therefore monitored separately. Their contribution to the main financial indicators of the Group is given below.

Accounting method	Estimates, assumptions and judgements
The Divisions' financial statements are prepared in compliance with the accounting principles adopted for the Group's reporting. In this context, the operational performances of joint ventures – the subgroup TiZir (ERAMET Manganese) and the company Ukad (ERAMET Alloys) – are accounted for using the proportionate consolidation method. The reconciliation with the published data is given in the Joint venture contribution column. Transactions between Divisions are carried out under market conditions.	The Executive Committee, the chief operating decision-maker, regularly assesses the performance of each Division against the following indicators: - **Sales**. - **EBITDA**, including the gross profit (difference between sales and the cost of sales), administrative and selling expenses and research & development expenditure before depreciation, amortisation and provisions, which are presented separately. - **Current operating profit (loss)**, including EBITDA, depreciation and amortisation and provisions for liabilities and charges. Current operating profit (loss) excludes material transactions that are considered to be unusual in nature, in particular events relating to restructuring, impairment losses and disposals of assets. - **Cash flows generated by operating activities**, including EBITDA, other operational cash flows not impacting EBITDA and the change in working capital requirement (WCR). - **Industrial investments**, including acquisitions of intangible assets and property, plant and equipment. The Executive Committee also monitors consolidated indicators such as: - **Net profit (loss), Group share**, defined as the net profit after tax attributable to ERAMET shareholders, after accounting for the percentage of non-controlling interest in each Group subsidiary. - **Net financial debt**, representing the gross financial debt (long and short-term borrowings) less current financial assets, and cash and cash equivalents. These items include the valuation of debt-hedging derivatives. - ***Gearing***, defined as the ratio of net financial debt to shareholders' equity (Group and non-controlling interest). The Holding companies that provide the Group's central services (cash management, currency risk management, group reinsurance management) do not constitute a Division. Their aggregates are shown in a column with the interdivision eliminations (Holding and eliminations).

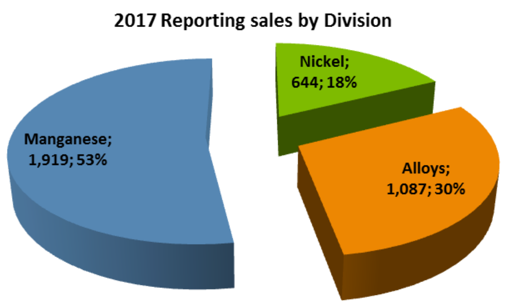
Reconciliation of published financial statements and Group reporting

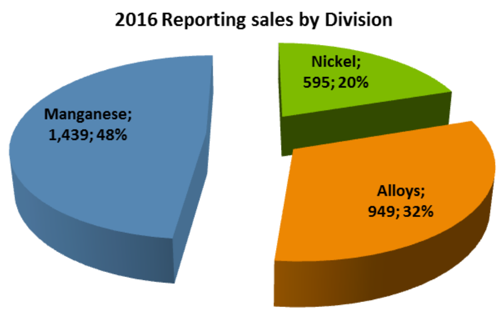
(€ million)	Financial Year 2017 Published [(1)]	Contribution of joint ventures	**Financial Year 2017 Reporting [(2)]**	Financial Year 2016 Published [(1)]	Contribution of joint ventures	**Financial Year 2016 Reporting [(2)]**
Sales	3,528	124	**3,652**	2,897	87	**2,984**
EBITDA	845	26	**871**	366	9	**375**
Current operating profit (loss)	598	10	**608**	91	(7)	**84**
Operating profit (loss)	513	54	**567**	(47)	(48)	**(95)**
Net profit (loss), Group share	203	-	**203**	(179)	-	**(179)**
Net cash generated by operating activities	687	-	**687**	98	23	**121**
Industrial investments	224	6	**230**	206	11	**217**
(Net financial debt)	(237)	(139)	**(376)**	(675)	(161)	**(836)**
Shareholders' equity	1,989	(9)	**1,980**	1,791	(15)	**1,776**
Shareholders' equity, Group share	1,694	-	**1,694**	1,515	-	**1,515**

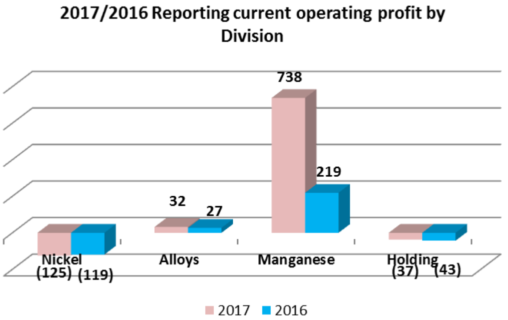
(1) Published data with joint ventures accounted for using the equity method, as per current regulations.
(2) Data from Group Reporting, where joint ventures are consolidated proportionally.

Performance indicators by Division

(€ million)	Manganese	Nickel	Alloys	Holding and eliminations	Total
Financial Year 2017					
Sales	1,919	644	1,087	2	**3,652**
EBITDA	861	(44)	84	(30)	**871**
Current operating profit (loss)	738	(125)	32	(37)	**608**
Industrial investments (intangible assets and property plant & equipment	89	80	59	2	**230**
Net cash generated by operating activities	722	(69)	90	(56)	**687**
Financial Year 2016					
Sales	1,439	595	949	1	**2,984**
EBITDA	358	(24)	74	(33)	**375**
Current operating profit (loss)	219	(119)	27	(43)	**84**
Industrial investments (intangible assets and property plant & equipment	104	56	55	2	**217**
Net cash generated by operating activities	243	(137)	22	(7)	**121**







Sales, industrial investments and non-current assets by geographical area

(€ million)	France	Europe	North America	Asia	Oceania	Africa	South America	Total
Sales (sales destination)								
Financial Year 2017	371	1,320	669	1,097	23	93	79	**3,652**
Financial Year 2016	342	940	619	938	28	75	42	**2,984**
Industrial investments (intangible assets and property plant & equipment)								
Financial Year 2017	87	21	5	-	52	64	1	**230**
Financial Year 2016	74	30	9	-	42	61	1	**217**
Non-current assets (excluding deferred tax)								
Financial Year 2017	692	326	12	133	565	1,027	2	**2,757**
Financial Year 2016	698	345	9	164	590	1,065	2	**2,873**

Consolidated performance indicators

Segment reporting information is supplemented with the main consolidated performance indicators monitored by the Executive Committee. These indicators are taken from Group reporting and are used for the financial disclosure of the Group's results and performance.

Income Statement

(€ million)	Financial Year 2017	Financial Year 2016
Sales	**3,652**	**2,984**
EBITDA	**871**	**375**
Amortisation and depreciation of non-current assets	(250)	(268)
Provisions for risks and expenses	(13)	(23)
Current operating profit (loss)	**608**	**84**
Impairment of assets	9	(110)
Other operating income and expenses	(50)	(69)
Operating profit (loss)	**567**	**(95)**
Financial income	(117)	(79)
Share of income from associates	(1)	(2)
Income taxes	(221)	(61)
Profit (loss) for the period	**228**	**(237)**
- attributable to non-controlling interests	25	(58)
- attributable to the Group	**203**	**(179)**
Basic earnings per share (€)	7.67	(6.79)

Statement of changes in net debt

(€ million)	Financial Year 2017	Financial Year 2016
Operating activities		
EBITDA	871	375
Cash impact of items in EBITDA	(387)	(228)
Cash flow from operations	**484**	**147**
Change in WCR	203	(26)
Net cash generated by operating activities (1)	**687**	**121**
Investing activities		
Industrial investments	(230)	(217)
Other investment flows	19	30
Net cash used in investing activities (2)	**(211)**	**(187)**
Net cash used in financing activities	**(12)**	**100**
Impact of changes in exchange rate	(4)	8
(Increase)/decrease in net financial debt	**460**	**42**
Opening (net financial debt)	**(836)**	**(878)**
Closing (net financial debt)	**(376)**	**(836)**
Free Cash Flow (1) + (2)	**476**	**(66)**

The reconciliation of cash and cash equivalents in the statement of cash flows to the net financial debt in the ERAMET Group reporting is as follows:

(€ million)	31/12/2017	31/12/2016
Cash and cash equivalents	**1,653**	**1,360**
Other current financial assets	394	331
Loans	(2,284)	(2,366)
Joint venture contribution	(139)	(161)
Net financial debt – Group reporting	**(376)**	**(836)**

Economic balance sheet

(€ million)	31/12/2017	31/12/2016
Fixed assets	**2,710**	**2,818**
Inventories	887	933
Trade receivables	368	333
Trade payables	(391)	(390)
Simplified WCR	**864**	**876**
Other items of WCR	(305)	(156)
Total WCR	**559**	**720**
TOTAL	**3,269**	**3,538**

(€ million)	31/12/2017	31/12/2016
Shareholders' equity, Group share	1,694	1,515
Shareholders' equity, non-controlling interest	286	261
Shareholder equity	**1,980**	**1,776**
Cash and cash equivalents and current financial assets	(2,075)	(1,698)
Loans	2,451	2,534
Net financial debt	**376**	**836**
Ratio of net financial debt to shareholders' equity (gearing)	*19.0%*	*47.1%*
Employee-related liabilities and provisions	**730**	**740**
Net deferred tax	**173**	**142**
Derivatives	**10**	**44**
TOTAL	**3,269**	**3,538**

Note 4 – Current operating profit (loss)

The current operating profit (loss) reflects the performance of the ERAMET Group's ordinary business activities as presented and defined in Note 3. This section presents its components: sales, cost of sales, administrative and selling expenses, research & development expenditure, and depreciation, amortisation and provisions.

Sales

Accounting method

Sales mostly comprise sales of ores (nickel and manganese) and manufactured goods (special steels, alloys, superalloys, etc.) to third parties.

The earnings from the sale of these products are recognised from the time all the risks and rewards attached to the ownership of the sold product have been transferred to the client.

Sales are gross sales less trade rebates. Transportation and manufacturing expenses are included in the cost price of the goods sold.

Consolidated sales for 2017 were €3,528 million compared to €2,897 million in 2016, an increase of 22% (€631 million).
The comparison with the Group's reported sales and the distribution by Division are provided in Note 3.

Cost of sales and other income

Accounting method	Estimates, assumptions and judgements
The cost of sales mainly comprises costs borne in industrial, mining and metallurgical facilities, in particular the consumption of raw materials, energy costs, personnel costs, and logistics and transport costs. It also accounts for the impacts of the change in and valuation of raw material inventories, work-in-progress and finished products. Other income includes items related to current operating profit (loss), such as translation adjustments on sales and insurance proceeds. Currency transactions are recognised at the monthly exchange rate for the month of the transaction effective date. Gains and losses arising from the conversion of operating receivables and payables are recognised in Current operating profit (loss). In the case of hedged transactions, the translation adjustments arising from the difference between the monthly exchange rate used to recognise sales and receipts or purchases and payments and the hedging rate for the settlement of transactions are also recognised in Current operating profit (loss).	The transaction date is the date on which it is executed. For practical reasons, the transaction date used is the month in which the transaction is booked. The rate applied to recognise currency transactions in a given month corresponds to the average daily rate applicable in the previous month.

Administrative and selling expenses

Accounting method

Administrative and selling expenses mainly comprise personnel costs for non-industrial sites and other administrative and sales support services.

Research & development expenditure

Accounting method

Research and development expenditure relates to expenses for scientific and technical activities necessary for the research, development and implementation of new manufacturing processes or the improvement of existing processes.

Research and development expenses do not include expenses incurred for development projects whose technical feasibility and profitability have not yet been demonstrated. These expenses are recognised in Other operating income and expenses (see Note 5).

Once the technical feasibility and profitability of a project have been established, the development expenses incurred are capitalised.

These expenses also include the geology expenses incurred in mining sites that are already in operation.

Expenses for the period

(€ million)	31/12/2017	31/12/2016
Non-capitalised research and development expenditure	28	34
of which geological expenditure ERAMET Nickel	4	4

Amortisation and depreciation of non-current assets and provisions for liabilities and charges

Accounting method

Amortisation and depreciation of non-current assets

Non-current assets can be depreciated when their expected use is limited in time or based on production units.

Where the duration or the pace of utilisation of an asset cannot be determined reliably, the straight-line method is applied.

The selected depreciation method is applied across all similar assets with the same conditions of use.

Depreciation begins at the date on which the asset is put into service.

Any significant change in the planned use of the asset, in terms of duration or pace, for example, will result in the depreciation being revised for the current and subsequent years. Likewise, in the case where impairment loss provisions are set aside or reversed following the comparison between the value in use of a non-current asset and its carrying amount (Note 9), the depreciation basis is modified prospectively, i.e. the depreciation is adjusted based on the new duration or the new pace of use for the current and future reporting periods.

The depreciation for the reporting period is recognised under a separate heading, Amortisation and depreciation of non-current assets, between EBITDA and Current operating profit (loss).

Provisions for risks and expenses

See Note 12.

Estimates, assumptions and judgements

The ERAMET Group uses two depreciation methods: the straight-line method and the units of production method.

Straight-line depreciation method

The depreciation of property, plant and equipment is calculated on a straight-line basis over the estimated useful life at 31 December 2017:

Constructions	between 10 and 50 years
Industrial and mining facilities	between 5 and 50 years
Other property, plant and equipment	between 2 and 10 years

Assets invested in the SETRAG concession are depreciated over the shorter of their useful lives or the remaining period of the concession.

Computer software is amortised over a variable period not exceeding five years.

Units of production method

The economic benefits generated by the use of certain industrial assets are determined in relation to the level of production, in particular in the start-up phase of new production units. These assets are depreciated using the units of production method.

The depreciation calculation accounts for the quantities produced during the reporting period, expressed as a percentage of the total quantities of product to be extracted or produced in the current and future reporting periods.

If the production is not deemed to fluctuate significantly from one year to the next, as with the assets whose material lifespan is shorter than the life of the plant or the mine to which they relate, the assets are depreciated using the straight-line method mentioned above over the life of the plant or the mine.

Revision of depreciation periods

The residual values and useful life of non-current assets are revised and adjusted at the end of each reporting period, as appropriate. Change is seen as a change in estimates, and impacts only the current and subsequent reporting periods.

The ERAMET Group measures its existing assets and the depreciation period when reviewing mining plans (ERAMET Nickel and ERAMET Manganese) and plant operation plans at the end of each reporting period. When it is established that the life of the allocated assets no longer matches the remaining period of expected returns, their depreciation period is modified prospectively. Uncertainties are inherent in the estimation of reserve and resource quantities, especially as regards assumptions about future prices, the geology of the mines, the mining methods used and associated costs incurred to develop and mine the reserves and resources. Changes in these assumptions could lead to major adjustments in the estimation of reserves and resources, which may be the basis for impairment or modification in depreciation expense in future periods.

(€ million)	**Financial Year 2017**	**Financial Year 2016**
Intangible assets – Note 9	(21)	(22)
Property, plant & equipment – Note 9	(214)	(230)
Amortisation and depreciation of non-current assets	**(235)**	**(252)**
of which amortisation and depreciation of acquisition price allocation	*(4)*	*(4)*
Provisions	(12)	(23)
Total	**(247)**	**(275)**

Note 5 – Net profit (loss) Group share and non-controlling interest

The Net profit (loss) Group share is the net income for the period after tax, attributable to ERAMET shareholders, after accounting for the non-controlling interest in each of the Group companies.

Apart from the Current operating profit (loss), the Net profit for the period includes the following items:

- *Other operating income and expenses (see below);*
- *Net financial income (Note 6);*
- *Share of income from joint ventures and associates (Note 9);*
- *Income tax (Note 10).*

Current operating profit (loss) – Net profit (loss) Group share cross-reference table

(€ million)	Notes	Financial Year 2017	Financial Year 2016
Current operating profit (loss)	3 / 4	**598**	**91**
Other operating income and expenses	5	(85)	(138)
Operating profit (loss)	3	**513**	**(47)**
Financial income	6	(93)	(58)
Share of income from joint ventures and associates	9	18	(66)
Income taxes	10	(216)	(61)
Profit (loss) for the period		**222**	**(232)**
- attributable to non-controlling interests	5	19	(53)
Net profit (loss), Group share	3 / 5	**203**	**(179)**

Other operating income and expenses

Accounting method

Other operating income and expenses include only very limited, unusual, abnormal and infrequent income and expenses for significant amounts that the ERAMET Group presents separately in its profit and loss account in order to **facilitate the understanding of current operating performance.** In particular, they include the following items:

- restructuring costs;
- costs incurred for development projects whose technical feasibility and profitability have not yet been demonstrated;
- defined benefits plan settlements and amendments;
- capital gains and losses on disposals of assets;
- impairment losses on goodwill and non-current assets.

Breakdown by category

(€ million)	Financial Year 2017	Financial Year 2016
Other operating income and expenses excluding impairment	(50)	(68)
Impairment of assets	(35)	(70)
Other operating income and expenses	**(85)**	**(138)**

(€ million)	Financial Year 2017	Financial Year 2016
Niobium project	(5)	(6)
Lithium project	(14)	(11)
Plant C project	-	(1)
Weda Bay Project	11	(13)
Other projects	1	(17)
Development projects	**(7)**	**(48)**
Restructuring and redundancy plans	(9)	(24)
Employee benefits – plan amendment	(1)	15
Provisions for sites restoration - SLN	(22)	-
Capital gain from sale of ERAMET headquarter Tour Montparnass	19	-
Capital gain from sale of Erachem interest	-	27
Capital loss on sale of Somivab interest	-	(5)
Other items	(30)	(33)
Other income and expenses	**(43)**	**(20)**
Total	**(50)**	**(68)**

The decrease in expenses on development projects between 2016 and 2017 is due to the Group's decision to reduce certain major projects at the end of 2015.

The proceeds from sale of the premises of the headquarter office located at Tour Montparnasse amounted to €25 million (includes in the disposal of non-current assets in the cash flow statement).

The impact of plan amendments in 2016 is mainly due to the change of some ERAMET Norway plans from defined benefit to defined contribution.

Impairment of assets and impairment losses

(€ million)	Financial Year 2017	Financial Year 2016
Losses on impairment tests – Goodwill	-	-
Losses on impairment tests – Intangible assets	-	-
Losses on impairment tests – Property, plant & equipment	(31)	(48)
Losses on impairment tests – intangible assets and property, plant & equipment	**(31)**	**(48)**
Other impairment of assets	(4)	(14)
Other provisions	-	(8)
Total impairment of assets and impairment losses – Note 9	**(35)**	**(70)**

(€ million)	Financial Year 2017	Financial Year 2016
ERAMET Nickel	-	(10)
ERAMET Alloys	(9)	(12)
ERAMET Manganese	(26)	(48)
Total impairment of assets and impairment losses	**(35)**	**(70)**

See Note 9 – Investments, Impairment of assets.

Net earnings per share, Group share

Accounting method

Net earnings per share can be obtained by dividing the Group share of net profit (loss) by the average number of shares outstanding during the reporting period. This average number of shares outstanding excludes treasury shares.
Diluted earnings per share are calculated by taking into account the net profit (loss) Group share for the period and the number of shares adjusted for potentially dilutive effects, mainly represented by employee share subscription and purchase plans and the potential conversion of ODIRNAN.

	Financial Year 2017			Financial Year 2016		
	Net profit (loss) Group share	Average number of shares	Earnings per share	Net profit (loss) Group share	Average number of shares	Earnings per share
Basic earnings per share	203	26,469,276	7.67	(179)	26,378,347	(6.79)
Diluted earnings per share (1)	**203**	**28,856,129**	**7.03**	**(179)**	**28,682,823**	**(6.79)**

(1) Where basic earnings per share are negative, the diluted earnings per share are deemed equal to it, in which case the instruments are considered to be antidilutive.

Non-controlling interest share in earnings – minority interest

(€ million)	% of non-controlling interest	Share of profit (loss)	Share of reholders' equity	Share of profit (loss)	Share of reholders' equity
		Financial Year 2017	**31/12/2017**	**Financial Year 2016**	**31/12/2016**
At beginning of period			**276**		**322**
Profit (loss) for the period			19		(53)
Change in revaluation reserve for financial instruments			5		7
Change in revaluation reserve for net defined benefit plan liabilities			(1)		(2)
Translation adjustments			(4)		2
Sub-total Other comprehensive income			-		7
Other movements			-		-
At period close		**19**	**295**	**(53)**	**276**
Le Nickel - SLN	44%	(66)	(16)	(71)	52
Comilog S.A.	36.29%	85	300	18	212
Pt Weda Nickel Ltd	10%	-	9	-	10
Interforge	6%	-	2	-	2

See Statement of changes in equity.

Note 6 – Net financial debt and shareholders' equity

Net financial debt

Net financial debt is gross financial debt (long and short-term borrowings) less current financial assets and cash and cash equivalents. These items include the valuation of hedging derivatives related to borrowings.

Accounting method

Borrowings are initially recognised on the basis of the amount received, less financing costs incurred. Borrowings are subsequently measured at amortised cost. Any variance between the amounts received and the redemption value of the borrowing is recognised in the profit and loss account under Net financial income (Borrowing costs) over the term of the borrowing, using the effective interest rate (EIR) method.

(€ million)	31/12/2017	31/12/2016
Non-current borrowings – due after more than one year	(1,602)	(2,022)
Current borrowings – due in less than one year	(682)	(344)
Loans	(2,284)	(2,366)
Cash and cash equivalents	1,653	1,360
Other current financial assets	394	331
Net financial debt	**(237)**	**(675)**

Loans

Borrowings by category

(€ million)	31/12/2017	31/12/2016
Borrowings on capital markets	1,127	689
Borrowings from credit institutions	790	1,374
Bank overdrafts and creditor banks	71	39
Finance lease liabilities	55	59
Other borrowings and financial liabilities	241	205
Total	**2,284**	**2,366**
- Due after more than one year	1,602	2,022
- Due in less than one year	682	344

Borrowings on capital markets and bank loans

(€ million)	Nominal	Interest rate	Maturity	31/12/2017	31/12/2016
Bond issue – ERAMET S.A.	€525m	4.50%	2020	463	527
Bond issue – ERAMET S.A.	€500m	4.196%	2024	502	-
Euro private placement – ERAMET S.A. (*)	€50m	5.29%	2026	52	52
Euro private placement – ERAMET S.A. (*)	€50m	5.10%	2026	51	51
Deutsche Bank (Schuldschein) loan – ERAMET S.A.	€60m	6-month Euribor + 2%	2020	59	59
Borrowings on capital markets				**1,127**	**689**
ICBC / BNP Paribas / BGFI - Comilog S.A. loans	$217m	-month Libor +4.3% / +2.1%	2018 / 2022	74	96
Issued commercial paper – ERAMET S.A.	€194m	Between 0.45% and 0.81%	1 year max.	194	-
Borrowing Base – ERAMET S.A.	€52m	1-month Euribor +2.1%	2019	52	70
European Investment Bank – ERAMET S.A.	€80m	1.736%	2025	72	81
European Investment Bank – ERAMET S.A.	€30m	2.72%	2029	30	-
IFC / PROPARCO – Setrag	€33m	Euribor + 4% / 5%	2031	30	-
Revolving Credit Facility (RCF)	€981m	onth Euribor +0.75% / 1.50%	2020	246	985
Other borrowings from credit institutions				92	142
Borrowings from credit institutions				**790**	**1,374**

(*) with investor put options that may be exercised after the 7th year, i.e. in 2021

Certain borrowings need to comply with financial ratios or covenants (Note 7).

Change over the period

(€ million)	Financial Year 2017	Financial Year 2016
At beginning of period	**2,366**	**1,344**
New borrowings	876	1,183
Loan repayments	(1,011)	(113)
Change in bank overdrafts	32	(32)
Other changes	(9)	9
Change to consolidation scope	7	(15)
Translation adjustments	23	(10)
At period close	**2,284**	**2,366**

New borrowings mainly concern:

- a €500 million bond issue (see Key events in the reporting period);
- issues of commercial paper amounting to €194 million;
- implementation of the new Borrowing Base financing agreement amounting to €53 million;
- the issue of a loan by Setrag amounting to €33 million;
- drawdown of an EIB loan amounting to €30 million.

Loan repayments mainly concern:

- the repayment of the Revolving Credit Facility of €730 million;
- repayment of the old Borrowing Base financing agreement amounting to €70 million;
- bond buyback of €65 million (see Key events in the reporting period);
- the regular repayment of bank loan instalments, particularly by subsidiaries Aubert & Duval, Comilog and Setrag.

Borrowings by currency and maturity

(€ million)	31/12/2017	31/12/2016
Euro	2,034	2,146
US dollar	176	162
CFA franc	36	31
Pound sterling	1	1
Norwegian krone	6	1
Other currencies	31	25
Total	**2,284**	**2,366**
Less than one year	682	344
One year to five years	842	1,793
More than five years	760	229
Total	**2,284**	**2,366**

Confirmed credit facilities

(€ million)	31/12/2017	31/12/2016
Unused confirmed credit facilities (1)	730	-

(1) Bank covenants relating to these credit facilities are fully respected. These covenants relate to the ratio of the Group's net financial debt to shareholders' equity.

Borrowings by interest rate

(€ million)	31/12/2017		31/12/2016	
Interest-free		50		43
Fixed interest rates		1,516		1,083
- below 5%	1,349		914	
- between 5% and 10%	167		169	
- above 10%	-		-	
Variable interest rates		718		1,240
- below 5%	658		1,240	
- between 5% and 10%	60		-	
- above 10%	-		-	
Total		**2,284**		**2,366**

Finance lease liabilities

(€ million)	31/12/2017		31/12/2016	
	Par value	Discounted value	Par value	Discounted value
Less than one year	16	15	14	13
One year to five years	37	35	41	39
More than five years	6	5	8	7
Total before interest expense	**59**	**55**	**63**	**59**
Interest expense		4		4
Total	**59**	**59**	**63**	**63**

Cash and cash equivalents

Accounting method

Cash includes cash in hand and demand deposits, excluding bank overdrafts which appear under borrowings. Cash equivalents correspond to marketable securities and consist of investments held to meet short-term cash commitments.

Marketable securities are recognised at their fair value in the balance sheet. To be considered a cash equivalent, they must be readily convertible to cash and subject to negligible risk of fluctuations in value. Changes in fair value are recognised in net profit (loss) for the period.

Breakdown by category

(€ million)	31/12/2017	31/12/2016
Cash	64	210
Cash equivalents	1,589	1,150
Total	**1,653**	**1,360**

Breakdown by currency

(€ million)	31/12/2017	31/12/2016
Euro	1,540	1,106
US dollar	76	237
Yuan Ren-Min-Bi (China)	2	3
Norwegian krone	17	3
Other currencies	18	11
Total	**1,653**	**1,360**

Breakdown by interest rate type

(€ million)	31/12/2017	31/12/2016
Interest-free	45	198
Fixed interest rates	5	19
Variable interest rates	1,603	1,143
Total	**1,653**	**1,360**

Interest-free items mainly consist of non-interest-bearing sight deposits.

Cash includes cash and cash equivalents.

Cash equivalents mostly comprise investments managed by Metal Securities.

(€ million)	31/12/2017	31/12/2016
Money market fund shares/units	1,287	871
Negotiable debt securities	159	151
Interest-bearing bank accounts	67	61
Other investments	76	67
Cash equivalents	**1,589**	**1,150**
Cash	64	210
Cash and cash equivalents	**1,653**	**1,360**

The change from one period to the next is analysed through the statement of cash flows prepared using the indirect method.

Statement of cash flows

Non-cash income and expenses

(€ million)	Financial Year 2017	Financial Year 2016
Depreciation, amortisation, impairment and provisions	260	329
Accretion expenses	8	9
Financial instruments	1	(7)
Deferred tax	23	18
Proceeds from asset disposals	(14)	(26)
Share of income from joint ventures and associates	(18)	66
Non-cash income and expenses	**260**	**389**

Impact of changes in consolidation scope

(€ million)	Financial Year 2017	Financial Year 2016
Erachem – sale price	-	148
Erachem – dividends received	-	11
Erachem – cash from sale less dividends paid	-	(35)
Erachem – net impact on cash	-	124
Sale price of Somivab interest	-	8
Disposal of Eurotungstène	2	-
Sale price of Heye interest	14	-
Acquisition 51% HEIML (net of cash acquired)	(4)	-
Other	1	(1)
Impact of changes in consolidation scope	**13**	**131**

Current financial assets

Accounting method

These assets mostly consist of bonds of listed European companies that do not satisfy the criteria to qualify as cash equivalents.
These bonds are measured at their fair value on initial recognition. The fair value used for listed bonds is the stock-market value, and for unlisted bonds it is based on estimates using specific financial criteria that reflect the specific situation of each bond (similar transactions or discounted value of future cash flows).
Where such bonds exhibit objective evidence of significant or lasting loss of value, the cumulative impairment loss, previously recognised in equity, is recognised in net profit (loss) for the period.

Changes in the fair value of these investments are recognised in transferable equity under the item Change in fair value of available-for-sale financial assets.

The net increase of €63 million in current financial assets between 2016 and 2017 (compared to +€135 million between 2015 and 2016) is shown in the net cash flows relating to investment operations.

Financial income

(€ million)	Financial Year 2017	Financial Year 2016
Net debt cost	(66)	(54)
Other financial income and expenses	(27)	(4)
Financial income	**(93)**	**(58)**

Net debt cost

Accounting method

Net debt costs include expenses relating to gross debt and financial revenue in connection with bonds and investment securities.
Borrowing costs relate to interest payable on the debt and other costs incurred in connection with the borrowing of funds. Borrowing costs directly linked to the acquisition, building or production of an asset that requires more than 12 months to be put into service are deducted from the financing expense to which they relate. All the other borrowing costs are expensed in the period in which they are incurred.

(€ million)	Financial Year 2017	Financial Year 2016
Interest income	13	16
Cash interest payments	(73)	(67)
Amortised cost on borrowings	(7)	(4)
Net income on marketable securities	-	5
Net translation differences	1	(4)
Total	**(66)**	**(54)**

Other financial income and expenses

Accounting method

Other financial income and expenses include all the components of net financial income except for income and expenses relating to the net debt cost.

(€ million)	Financial Year 2017	Financial Year 2016
Investment and dividend income	2	2
Employee benefits – net interest	(5)	(7)
Accretion expenses	(8)	(9)
Financial instruments ineligible as hedges – currency	(1)	7
Securitisation financial expense	(5)	(3)
Impairment of securities and current accounts	(4)	(6)
Net translation differences	(13)	3
Eramet / TiZir loan financial products	8	7
Other	(1)	2
Total	**(27)**	**(4)**

Accretion expenses relate to provisions for mining site restoration and the dismantling of industrial facilities, as detailed in Note 12 – Provisions.

The financial instruments that do not qualify as hedges correspond to the portion of hedging instruments recognised in profit or loss.

Shareholders' equity

Changes to the share capital

The share capital of €81,232,663 (31 December 2016: €80,978,851.15) is composed of 26,633,660 fully paid-up shares (31 December 2016: 26,550,443 shares) with a par value of €3.05 each.

	31/12/2017				31/12/2016			
	capital		voting rights		capital		voting rights	
	%	number of shares	%	number of shares	%	number of shares	%	number of shares
Registered shares								
Sorame and Compagnie d'Etudes Industrielles du Rouvray (CEIR)	36.93	9,835,834	43.94	19,671,668	37.05	9,835,834	44.02	19,671,668
FSI Equation, subsidiary of APE (Agence des participations de l'E	25.57	6,810,317	30.43	13,620,634	25.65	6,810,317	30.48	13,620,634
S.T.C.P.I.	4.02	1,070,587	4.78	2,141,174	4.03	1,070,587	4.79	2,141,174
ERAMET S.A.	0.55	147,642	-	-	0.40	105,801	-	-
ERAMET S.A. share fund	0.20	52,273	0.23	104,746	0.20	52,373	0.23	104,746
Other	32.73	8,717,007	20.61	9,226,201	32.68	8,675,531	20.47	9,145,539
Total number of shares	**100.00**	**26,633,660**	**100.00**	**44,764,423**	**100.00**	**26,550,443**	**100.00**	**44,683,761**
of which registered shares	69.50	18,509,540	81.90	36,663,450	69.21	18,375,085	81.84	36,570,694
of which bearer shares	30.50	8,124,120	18.10	8,100,973	30.79	8,175,358	18.16	8,113,067

In accordance with the Shareholders' Agreement of 16 March 2012, which entered into force on 16 May 2012 and was renewed on 31 December 2016 for a period of one year expiring on 31 December 2017, subject to Decision and Notice No. 212C0647 of the Autorité des Marchés Financiers (AMF) at its conclusion as well as AMF Decision and Notice No. 216C1753 concerning changes to the concert with the acquisition by the Agence de Participations de l'Etat (APE) of 100% of the share capital of FSI Equation, ERAMET is majority-owned by a group of shareholders declared to be acting in concert, including:

- a sub-concert between SORAME and CEIR, companies wholly owned by the Duval family, under a simultaneous shareholders' agreement of 19 July 1999, which entered into force on 21 July 1999 and was amended on 13 July 2009,
- the Agence des Participations de l'Etat (APE), through its subsidiary FSI Equation.

The provisions of the Shareholders' Agreement mentioned above as well as those of the sub-concert are contained in key extracts of the AMF Decision and Notice texts numbered 216C1753, 212C0486 and 209C1013 (amended on 13 July 2009).

Since 1 January 2002, registered shares that meet the necessary conditions benefit from double voting rights.

ODIRNAN

ERAMET group launched in 2016 an offering of net share settled undated bonds convertible into new shares (ODIRNAN).

This issue has strengthened the balance sheet structure of the ERAMET group.

ODIRNAN is a perpetual bond with no maturity date. Holders do not have the option to redeem the instrument for cash in hand. The instrument can be redeemed in the event of liquidation of the Company with the payment of accrued and deferred coupons, as applicable. The organisation of the coupon payments is left up to ERAMET and may be delayed, as ERAMET has not decided on a dividend distribution since the penultimate interest payment date (or since the issue date for the first two payment dates). In case of non-payment of coupons, they will remain due and will constitute arrears which will bear interest at the applicable rate for bond coupons.

The coupon is fixed at an annual rate of 4% until October 2022. It will then switch to a variable rate from 5 October 2022, calculated at the 6-month Euribor rate plus a margin of 1,000 basis points («step-up" clause). In the event of a change of control of ERAMET, the annual interest rate will be increased by 500 basis points unless the Company opts for early redemption within 45 days of the change of control.

Bond holders will receive an equity conversion right. The issuer may choose to deliver one of the following to bondholders exercising their right to receive shares:

- cash only;
- new shares only;
- or a combination of new shares and cash.

The characteristics of ODIRNAN shares led the ERAMET group to classify them as an equity instrument:

- there is no contractual obligation to repay the nominal value except in the event of liquidation of the issuer. The regulatory framework stipulating redemption in case of liquidation does not affect the classification as an equity instrument;
- the payment of coupons to bond holders is:
    - dependent on the liquidation of the issuer. As noted above, an obligation for the issuer to proceed with payment in case of liquidation does not establish the existence of a debt,
    - but rather is under the control of the issuer (dividends, share buy-back or equivalent, early redemption decided by the issuer, decision to pay the next bond coupon, etc.).

Finally, the default interest clause (capitalised at the same rate as the bonds) and the «step up» clause, which significantly increases the amount of coupons beyond a certain date if the instrument has not been

previously redeemed by the issuer, constitute economic constraints, not contractual obligations.

Therefore, given the characteristics of the instruments and elements mentioned above, ERAMET has no contractual obligation to pay compensation on perpetual debt instruments.

Finally, the different options mentioned above do not call into question the classification of equity instruments.

At 31 December 2017, 90,442 bonds were subject to equity conversion (83,217 in 2017) and 1 bond was repaid in cash in 2017. The number of bonds in circulation is therefore 2,067,985 (31 December 2016: 2,151,203), a decrease of 83,218 bonds in 2017.

The total value of bonds at 31 December 2017 is €95.8 million (31 December 2016: €99.7 million).

Treasury shares

The table below summarises the treasury share transactions:

	Total number of shares	Market maker (1)	Allocations to employees	Total
Position at 1 January 2016		**123,219**	**95,057**	**218,276**
As a percentage of capital	26,543,218	0.46%	0.36%	0.82%
Final allocation of free shares			(51,547)	**(51,547)**
Purchases / sales		(60,928)		**(60,928)**
Position at 31 December 2016		**62,291**	**43,510**	**105,801**
As a percentage of capital	26,550,443	0.23%	0.16%	0.40%
Redemption mandate - March 2017			25,000	**25,000**
Redemption mandate - September 2017			120,000	**120,000**
Final allocation of free shares			(64,015)	**(64,015)**
Purchases / sales		(39,144)		**(39,144)**
Position at 31 December 2017		**23,147**	**124,495**	**147,642**
As a percentage of capital	26,633,660	0.09%	0.47%	0.55%

(1) liquidity contract signed with Exane BNP Paribas

ERAMET treasury shares are classified under Other reserves and recognised at purchase cost for an amount of €14 million at 31 December 2017 (31 December 2016: €14 million). These transaction amounts were allocated to shareholders' equity.

Note 7 – Financial instruments and risk management

This note gives an overview of the financial instruments of the ERAMET Group, the associated risks, its risk management objectives, sensitivity and monitoring of the financial risk management strategy.

Accounting method

Financial instruments

Derivative assets and liabilities, current financial assets, and cash and cash equivalents are initially recognised in the balance sheet at their fair value (transaction price) adjusted for transaction costs. At each period closing, the change in fair value is recognised in income (Other financial income and expenses) unless a cash flow hedge exists. In that case, the change is recognised in Other comprehensive income and shown in equity (change in the revaluation reserve of hedging instruments).

Derivatives

The ERAMET Group uses derivatives to hedge certain risks. To manage its currency risk, the ERAMET Group uses foreign currency forwards/futures, foreign currency swaps and, to a lesser extent, foreign currency options. Foreign currency forwards/futures are recognised as hedges where the ERAMET Group has defined and documented the hedging relationship and demonstrated its effectiveness. Interest rate risk is managed using interest-rate swaps. Lastly, the ERAMET Group also uses collars and swaps when hedging commodity purchases and sales (nickel, fuel oil, aluminium and electricity).

Derivatives are measured at their fair value upon initial recognition. Subsequently, the fair value of derivatives is remeasured at each reporting date. The fair value of foreign currency forwards/futures is estimated on the basis of market conditions. The fair value of interest rate derivatives is that which the ERAMET Group would receive (or pay) to transfer current contracts at the reporting date. The fair value of commodity derivatives is estimated on the basis of market conditions. Derivatives are shown in the balance sheet under current assets or liabilities.

Hedging

Gains or losses on hedging instruments are recognised symmetrically with the gains or losses on the hedged items. However, changes in the fair value of hedges, independently of the hedged transactions, are recognised as profit or loss for the period under Current operating profit (loss) or Other financial income and expenses, depending on the nature of the hedge.

The ERAMET Group identifies the hedging item and hedged item when the hedge is set up and formally documents the hedging relationship by identifying the hedging strategy, the hedged risk and the hedge effectiveness measurement method:

- Fair value hedge: the hedged item is remeasured in respect of the hedged risk and the hedging instrument is measured and recognised at fair value. The changes in both items are recognised simultaneously in Current operating profit (loss).
- Cash flow hedge: the hedged item is not remeasured. Only the hedging instrument is remeasured at fair value. To offset the remeasurement, the effective portion of the change in fair value that can be ascribed to the hedged risk is recognised net of tax in shareholders' equity. The cumulative amounts in shareholders' equity are recognised in income for the period when income is affected by the hedged item. The ineffective portion is retained in income for the period under Other financial income and expenses.
- Hedging of net investment in foreign subsidiaries: derivatives intended to hedge net foreign currency investment in foreign subsidiaries are treated as net foreign currency investment hedges. The gains or losses from such hedges, and the changes in fair value (apart from the time value) are recognised in equity as currency translation differences, and transferred to income when the subsidiary is sold.
- Recognition of derivatives that do not fulfil hedge accounting conditions: the ERAMET Group uses these derivatives only to hedge future cash flows, and changes in fair value are immediately recognised in Other financial income and expenses.

Fair value measurement

The ERAMET Group measures its financial instruments at fair value at each reporting date.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. When measuring fair value, it is assumed that the transaction to sell the asset or transfer the liability is carried out:

- on the main market for that asset or liability; or
- if there is no main market, on the best market for that asset or liability.

The fair value measurement of a non-financial asset considers the capacity of a market participant to generate economic benefits by making full use of the asset or by selling it to another market participant who will make full use of the asset.

The fair values of financial instruments are ranked according to a three-level hierarchy:

Level 1: Listed prices (unadjusted) of the same assets and liabilities on an active market;

Level 2: Listed price of a similar instrument on an active market, or another measurement technique based on observable parameters;

Level 3: Measurement technique incorporating non-observable parameters.

The criteria for classifying and recognising financial assets and liabilities and any transfer from one level to another in the fair value hierarchy where applicable are given below.

Estimates, assumptions and judgements

The uncertainties and estimates as well as the judgements used are considered for the valuation of forward/futures contracts, the application of hedge accounting and the valuation of derivatives measured at fair value.

To continue to apply hedge accounting to raw material purchases and sales (nickel, fuel oil, aluminium and electricity), the ERAMET Group determines that the hedging instrument is efficient so as to offset the currency risk on its raw material purchases and sales, and ensures that the documentation complies with the requirements. The process for testing the efficiency of the hedge calls for the use of judgements and estimates.

Fair value measurement

Fair value represents an estimate at a given date and can change from one period to another due to market conditions and other factors.

The ERAMET Group gives priority to the assumptions that the market participants would use to determine the price of the asset or the liability, considering that the market participants act in their own best economic interests. The ERAMET Group uses measurement techniques that are appropriate in the circumstances and for which sufficient data is available to determine the fair value, maximising the use of pertinent observable inputs while minimising the use of non-observable inputs.

Financial instruments shown in the balance sheet

(€ million)	31/12/2017 Statement of financial position	Breakdown by type of instrument: Fair value hrough P&L	Available for-sale assets	Loans and receivables	Debts carried at amortised cost	Derivatives dérivés	31/12/2016 Statement of financial position	Breakdown by type of instrument: Fair value hrough P&L	Available for-sale assets	Loans and receivables	Liabilities carried at amortised cost	Derivatives dérivés
Non-consolidated equity investments	24		24				45		45			
Other non-current financial assets	97			97			96			96		
Other non-current assets	86			86			99			99		
Trade receivables	361			361			330			330		
Other current assets	170			170			195			195		
Derivatives	47					47	29					29
Other current financial assets	394		394				331		331			
Cash and cash equivalents	1,653	1,653					1,360	1,360				
Assets	**2,832**	**1,653**	**418**	**714**	**-**	**47**	**2,485**	**1,360**	**376**	**720**	**-**	**29**
Non-current borrowings – due after more than	1,602				1,602		2,022				2,022	
Other non-current liabilities	4			4			5			5		
Current borrowings – due in less than one yea	682				682		344				344	
Trade payables	363			363			371			371		
Other current liabilities	328			328			346			346		
Derivatives	55					55	77					77
Liabilities	**3,034**	**-**	**-**	**695**	**2,284**	**55**	**3,165**	**-**	**-**	**722**	**2,366**	**77**

No reclassification among categories of financial instruments was carried out during the period. Equity investments and Other current financial assets are recognised in the balance sheet at fair value. Other non-current financial assets are measured at amortised cost calculated using the effective interest rate (EIR).

Borrowings are recognised at amortised cost measured at the effective interest rate (EIR).

The fair value of trade receivables and trade payables is equal to the value shown in the balance sheet, since for the most part they fall due in less than one year.

The fair value of financial instruments broken down by fair value hierarchy is as follows:

(€ million)	31/12/2017	Breakdown by fair value category		31/12/2016	Breakdown by fair value category	
	Balance sheet value	Level 1	Level 2	alance sheet value	Level 1	Level 2
Current financial assets	394	394		331	331	
Cash and cash equivalents	1,653	1,653		1,360	1,360	
Derivatives	47		47	29		29
Assets	**2,094**	**2,047**	**47**	**1,720**	**1,691**	**29**
Derivatives	55		55	77		77
Liabilities	**55**	**-**	**55**	**77**	**-**	**77**

Effects of financial instruments on the profit and loss account

(€ million)	FY 2017 Impact on profit (loss)	Financial income and expenses	Amortised cost	Fair value	Translation adjustments	Earnings on disposal	Net impairment
Investment securities	1	2				(3)	2
Other financial assets	(10)	(13)			(13)		16
Derivatives	(8)			(8)			
(Net debt)/Net cash	(63)	(61)	(7)	4	1		
Total	**(80)**	**(72)**	**(7)**	**(4)**	**(12)**	**(3)**	**18**

(€ million)	FY 2016 Impact on profit (loss)	Financial income and expenses	Amortised cost	Fair value	Translation adjustments	Earnings on disposal	Net impairment
Investment securities	22	2				23	(3)
Other financial assets	(18)	(8)			3		(13)
Derivatives	(60)			(60)			
(Net debt)/Net cash	(55)	(53)	(4)	1	(4)	5	
Total	**(111)**	**(59)**	**(4)**	**(59)**	**(1)**	**28**	**(16)**

The financial revenue from equity investments consists of dividends of non-consolidated companies. The gains or losses on currency and commodity hedges are for the most part recognised in Current operating profit (loss). The portion that does not qualify as hedges is recognised in Other financial income and expenses.

Breakdown of derivatives included in the statement of financial position

(€ million)	31/12/2017		31/12/2016	
	Assets	Liabilities	Assets	Liabilities
At beginning of period	**29**	**77**	**30**	**187**
Change in hedging instruments for the period – shareholders' equity (1)	10	(25)	-	(59)
Change in hedging instruments for the period – financial income/loss (2)	4	5	(4)	(11)
Net change in hedging derivatives (3)	4	(2)	3	(40)
Other movements	-	-	-	-
At period close	**47**	**55**	**29**	**77**
Net position in hedging derivatives (3)	14	13	10	15
Financial instruments – currency hedges	21	29	16	54
Financial instruments – interest-rate hedges	-	3	-	5
Financial instruments – commodity hedges	12	10	3	3

(1) The impact corresponds to the effective portion of the change in fair value of derivative instruments used to hedge currency, interest rate and commodity risks.
(2) The impact corresponds to the non-effective portion of the change in fair value of derivative instruments used to hedge currency, interest rate and commodity risks
(3) Foreign-currency receivables and debts are translated at the closing rate,
and the difference between the closing rate and the hedging rate is recognised under "Financial instrument assets and liabilities".

Risk management

The ERAMET Group uses derivatives to control its exposure to currency, interest rate and commodity risks. The Executive Committee has delegated the management of the main risks to the ERAMET Group Finance Department. This management is carried out directly by ERAMET or via Metal Currencies, which was set up specifically to manage the ERAMET Group's currency risk.

The ERAMET Group's policy is to reduce its exposure to interest rate and foreign exchange fluctuations. Positions are traded either on organised markets, or over the counter with leading banking counterparties.

Gains or losses on hedging instruments are recognised symmetrically with the gains or losses on the hedged items. However, unrealised gains and losses on financing hedging transactions that are ineligible under hedging standards are recognised in Net profit (loss) for the period.

All transactions outstanding at the reporting date are recognised in the Statement of financial position, without an offsetting entry.

Currency risk

When the exposure stemming from borrowings taken out by ERAMET Group companies in currencies other than their functional currencies is not offset by income in those foreign currencies, the ERAMET Group may have recourse to hedging instruments. In addition, the ERAMET Group uses financial instruments to limit its exposure to currency risk on its sales and on certain dollar-denominated costs.

The ERAMET Group is exposed to two types of currency risk, namely:

Transactional risk where a Group company has revenue in a currency other than its functional currency that is not offset by purchases in that currency;

Balance sheet risk related to changes in the net assets of subsidiaries valued in currencies other than the euro.

The ERAMET Group centralises the subsidiaries' currency risk. Each ERAMET Group company reports its exposure in currencies other than its functional currency to Group Treasury. This management is part of a multiyear policy with procedures approved by the Executive Committee along with monthly reporting to its members. The ERAMET Group manages the currency risk to the balance sheet for each case individually.

Transactional risks

As part of transactional risk management, currency hedging primarily involves the US dollar but also the Norwegian krone, the pound sterling, the Swedish krona and the Japanese yen. These hedges are designed to protect the ERAMET Group's present and future positions on trade transactions, more than 50% of which are invoiced in foreign currencies, whereas production costs are for the most part denominated in euros. The transactions are carried out via the company Metal Currencies.

The subsidiaries in question determine the amount of their net exposure based on multiyear budgets and forecasts. The associated risks are then hedged within a maximum horizon of thirty-six months if the amount is greater than €2 million or the equivalent thereof per currency, unless exemptions apply. The ERAMET Group uses various instruments to hedge against currency risk: futures/forward contracts and options.

Balance sheet risk

The ERAMET Group manages currency risks to the balance sheet, primarily related to the US dollar, by issuing financial debt denominated in the same currency as the net assets in question, or via currency swaps.

The breakdown of the hedging portfolio by currency is shown below:

At 31 December 2017	**2017 sales**			**2018 sales**			**2019 sales and beyond**		
(foreign currency unit million	**Amount**	**Currency**	**Price**	**Amount**	**Currency**	**Price**	**Amount**	**Currency**	**Price**
Commercial hedges									
EUR/USD	266	USD	1.18	332	USD	1.18	-	USD	-
EUR/NOK	292	NOK	9.48	840	NOK	9.71	300	NOK	9.78
Other hedges – total amount not detailed by year									
EUR/USD	106	USD	1.19						
EUR/NOK	275	NOK	8.93						

At 31 December 2016	**2016 sales**			**2017 sales**			**2018 sales and beyond**		
(foreign currency unit million	**Amount**	**Currency**	**Price**	**Amount**	**Currency**	**Price**	**Amount**	**Currency**	**Price**
Commercial hedges									
EUR/USD	235	USD	1.10	270	USD	1.10	38	USD	1.24
EUR/NOK	318	NOK	8.93	575	NOK	9.32	310	NOK	9.73
Other hedges – total amount not detailed by year									
EUR/USD	316	USD	1.28						
EUR/NOK	460	NOK	8.85						

At 31 December 2017, the fair value of currency hedges covering transactional risks represented a net liability of €8 million (31 December 2016: net liability of €38 million).

In respect to the hedges of the USD 2018 sales, an increase or decrease of 0.10 in the EUR/USD exchange rate would have a pre-tax impact on the hedges recognised in equity at 31 December 2017 of +€17 million should exchange rates rise (31 December 2016: +€23 million) and approximately -€20 million should those rates fall (31 December 2016: -€28 million).

The notional amount of currency hedging contracts breaks down as follows:

(foreign currency unit million)	31/12/2017 Forward sales	31/12/2017 Forward purchases	31/12/2017 Call options	31/12/2017 Put options	31/12/2016 Forward Sales	31/12/2016 Forward purchases	31/12/2016 Call options	31/12/2016 Put options
Currency against EUR								
- USD	584	137	267	317	959	162	116	105
- JPY	57				96			
- GBP	7	3				2		
- NOK	1,222		485	749	13	1,073	578	813
Currency against SEK								
- JPY	29					125		
- USD	4					5		

The pre-tax impact on shareholders' equity and profits of financial instruments hedging currency risks is shown below:

(€ million)	Foreign exchange hedges			
	Financial Year 2017 transactional risks	Financial Year 2017 balance sheet risks	Financial Year 2016 transactional risks	Financial Year 2016 balance sheet risks
At beginning of period	**(17)**	**47**	**(104)**	**27**
Change in unexpired hedging portion (1)	7		(2)	
Change in ineffective portion via income (2)	(1)		7	
Change in effective portion via income (3)	11		82	
Translation adjustments and other movements		(53)		20
At period close	**-**	**(6)**	**(17)**	**47**
Changes recognised in shareholders' equity:				
- hedging reserve	18		80	
- translation reserve		(53)		20
Total	**18**	**(53)**	**80**	**20**
Changes recognised via income:				
- current operating profit (loss)	(11)		(82)	
- net financial income	(1)		7	
Total	**(12)**	**-**	**(75)**	**-**

(1) The impact corresponds to the effective portion of the change in fair value of derivative instruments used to hedge currency risks.
(2) The impact corresponds to the non-effective portion of the change in fair value of derivative instruments used to hedge currency risks.
(3) Foreign-currency receivables and debts are translated at the closing rate,
and the difference between the closing rate and the hedging rate is recognised under "Financial instrument assets and liabilities".

Interest rate risk

Depending on market conditions and forecast changes in net financial debt, the ERAMET Group's Finance Department monitors the allocation between fixed and floating rate debt and cash investments, and decides on whether to set up rate hedges. The financial instruments used are interest rate swaps, caps and floors. The Group's Treasury Department is responsible for setting up hedges.

The cash surpluses managed by Metal Securities are invested in:

- instruments linked to the EONIA (Euro OverNight Index Average) or EURIBOR (Euro InterBank Offered Rate) rates;
- fixed-rate instruments swapped against the EURIBOR.

These instruments are included in Other current financial assets and are hedged using interest rate futures (fixed rates against floating rates). Other cash surpluses managed by Metal Securities are primarily invested in instruments linked to the EONIA (Euro OverNight Index Average) rate.

Commodity risk

The ERAMET Group is exposed to commodity price volatility, affecting both its sales as a nickel and manganese producer and its production costs as a consumer of energy (fuel oil and electricity) and commodities (nickel and aluminium).

The ERAMET Group holds derivative instruments for the purposes of reducing its exposure. To this end, the ERAMET Group mainly uses forwards, tunnel options and call options.

The main Group entities involved are:

- ERAMET and Le Nickel-SLN for nickel sales;
- Aubert & Duval for nickel purchases;
- Le Nickel-SLN for fuel oil;
- Aubert & Duval for aluminium;
- Erasteel Kloster AB and ERAMET Norway A/S for electricity.

The exposures to manganese and coke price volatility are not hedged since there is no organised market for these commodities.

Hedges are contracted with horizons of one to four years, depending on the commodities, and are based on the budget. Only part of the forecast consumption or production is hedged (e.g. for fuel oil, a maximum of 80% of the budget is hedged). The ERAMET Group uses various instruments to hedge and limit its exposure, namely forwards/futures and options.

At 31 December 2017, the fair value of hedges set up for the various commodities stood at €2 million net (31 December 2016: €0 million net).

The main commodities contracts outstanding are set out below:

(tonnes)	31/12/2017			31/12/2016		
	Swaps	**Call options**	**Put options**	**Swaps**	**Call options**	**Put options**
Nickel	4,918			6,457		
Aluminium				84		

A change of plus or minus 10% in commodity prices would have no material pre-tax impact on the hedges recognised through shareholders' equity.

Liquidity risk

The ERAMET Group must ensure that it maintains a sufficient level of liquidity to meet its contractual obligations, including servicing its bank and bond debt.

In this context, the ERAMET Group anticipates the regular renewal of its existing borrowings (credit facilities, bonds, leases, etc.) and establishes new modes of financing (ODIRNAN 2016), according to the opportunities available.

Furthermore, operational funds (investments and receivables) are implemented directly in the ERAMET Group's subsidiaries.

ERAMET also aims to diversify its sources of funding, particularly between the bond and banking markets.

ERAMET centralises virtually all the cash requirements and surpluses of its controlled companies. This centralisation is performed by Metal Securities, which is responsible for managing the investment of cash surpluses.

The ERAMET Group's financial liquidity position at 31 December 2017 was €2,690 million (31 December 2016: €1,698 million), of which €1,681 million is classified as cash and cash equivalents (31 December 2016: €1,367 million). These cash surpluses are, for the most part, transferred to Metal Securities, the Group company in charge of centralising and investing the ERAMET Group's cash surpluses.

Revolving credit line

On 16 January 2017, the ERAMET Group signed a renegotiation agreement concerning its Revolving Credit Facility (RCF) of €981 million, extending its maturity by 2 years. The original instalments of €85 million in January 2017 and €896 million in January 2018 are now €115 million in January 2018, €85 million in January 2019 and €781 million in January 2020. This facility has a single financial covenant (gearing), subject to cross-default.

This credit facility was drawn down in its entirety in early January 2016 and was partially repaid in 2017 for an amount of €730 million.

The ERAMET Group is liable to repay its borrowings, primarily comprising financial market borrowings and bank borrowings, and its other liabilities and derivatives, for which the repayment schedule (including future interest) is given below:

(€ million)	Statement of financial position	Future payment schedule			
		Less than one year	One year to five years	Over five years	Total
Borrowings on capital markets	1,127	61	672	587	**1,320**
Borrowings from credit institutions	790	557	328	41	**926**
Bank overdrafts and creditor banks	71	71			**71**
Finance lease liabilities	55	16	37	6	**59**
Other borrowings and financial liabilities	241	74	28	181	**283**
Total borrowings	**2,284**	**779**	**1,065**	**815**	**2,659**
Derivatives	55	55			**55**
Trade and other payables	691	691			**691**
Total other financial liabilities	**746**	**746**	**-**	**-**	**746**

The schedule of future receipts on financial assets is set out below:

(€ million)	Statement of financial position	Future receipts schedule at fair value			
		Less than one year	One year to five years	Over five years	Total
Other current financial assets	394	394			**394**
Cash and cash equivalents	1,653	1,653			**1,653**
Total cash and cash equivalents	**2,047**	**2,047**	**-**	**-**	**2,047**
Derivatives	47	47			**47**
Trade and other receivables	617	531	86		**617**
Total other financial assets	**664**	**578**	**86**	**-**	**664**

Where appropriate, financial liabilities are covered by banking covenants at Group level or locally; the main covenants are described below:

Company	Type of facility		Ratio	Nominal amount
ERAMET S.A.	Revolving credit line	Net debt decreased by SLN loan with the French State / Equity	< 1	€981m
	Deutsche Bank (Schuldschein) loan	Restated net debt / Equity – Attributable to Group	< 1	€60m
	Borrowing Base	Net debt / Shareholder's equity	< 1	€65m
	European Investment Bank	Net debt / Shareholder's equity	< 1	€80m
	European Investment Bank	Net debt / Shareholder's equity	< 1	€30m
Comilog S.A.	ICBC/BNP Paribas/BGFI loans	Net debt / Shareholder's equity	< 1.15	$217 million
		Net cash flow / Debt servicing	> 2	
		sales to Eramet Norway A/S, Marietta Comilog Dunkerque, ECM / Debt Servicing	> 150%	(1)
	CAT Finance	Net debt / EBITDA on a rolling 12-month basis	< 3	$40m
		Net cash flow / Debt servicing	> 1.30	€11m
		Net debt / Shareholder's equity	< 2	
	IFC / Proparco	Net debt / Shareholder's equity	< 1.15	€33m
		Net debt / EBITDA on a rolling 12-month basis	< 4	
		Cash available	> €20m	
TiZir	Bond issue	Shareholders' equity + subordinated loans / Total assets	> 35%	$300m
		Liquidity	> $15m	
Aubert et Duval	Crédit Agricole	Consolidated net debt / shareholder's equity	< 1.15	€7m

(1) covenant applicable only to one of the two $30 million loans subscribed by Comilog

ERAMET's covenants are determined on the basis of the published consolidated accounts. COMILOG's covenants are determined on the basis of COMILOG's separate and consolidated financial statements.

At 31 December 2017, the covenants showed no circumstances of accelerated maturity.

Moreover, at 31 December 2017, no cases of cross-default likely to impact funding at Group level were recorded.

Credit and counterparty risk

The ERAMET Group may be exposed to credit risk in the event of counterparty default: in relation to its customers and its financial partners, because of its cash surpluses invested by Metal Securities, the Group company established specifically for this purpose. The ERAMET Group has several means to limit this risk: gathering information ahead of entering into transactions (from rating agencies, published financial statements, etc.), credit insurance and the establishment of letters of credit and documentary credits. Specifically for trade receivables, there is a dedicated credit manager for each Division of the Group.

The age of the Group's trade receivables and overdue receivables is shown below:

(€ million)	31/12/2017			31/12/2016		
	Gross amount	Impairment	Net amount	Gross amount	Impairment	Net amount
On-time or not due	274	-	274	203	-	203
Delays:						
- less than one month	74	(1)	73	81	(1)	80
- one to three months	7	-	7	43	-	43
- three to six months	6	-	6	4	-	4
- six to nine months	3	(2)	1	1	(1)	-
- nine to twelve months	1	(1)	-	3	(3)	-
- over one year	10	(10)	-	7	(7)	-
Total trade receivables	**375**	**(14)**	**361**	**342**	**(12)**	**330**

No material unpaid or impaired receivables have been renegotiated.

Equity and bond risk

ERAMET and its subsidiaries do not speculate on the stock markets; the investments held relate to unlisted controlled companies entirely in line with the Group's business activities.

In accordance with the Group's investment policy, which defines and limits the counterparty risk, the ERAMET group has purchased bonds subject to bond risk, recognised in Other current financial assets.

Note 8 – Working capital requirement

(€ million)	31/12/2016	Change in WCR Statement of flows	Change in payables on asset disposals	Translation adjustments and other	31/12/2017
Inventories	896	(21)		(26)	849
Customers	330	44		(13)	361
Suppliers	(371)	(24)		32	(363)
Simplified WCR	**855**	**(1)**	**-**	**(7)**	**847**
Other items of WCR	(66)	(204)	8	41	(221)
Total WCR	**789**	**(205)**	**8**	**34**	**626**

Inventories

Inventories consist mainly of the products of the three Divisions of the Group – ERAMET Nickel, ERAMET Manganese and ERAMET Alloys – at different stages of the production process, and are recorded at the lower of cost and net liquidation value.

Accounting method	Judgements and estimates
Inventories are measured using the weighted average unit cost for the industrial operations of ERAMET Alloys, and on a first-in-first-out (FIFO) basis for the industrial and mining operations of ERAMET Nickel and ERAMET Manganese. Inventories are carried at cost price and only include production costs, while not exceeding the realisable value. Costs stemming from sub-normal activity are eliminated from inventory measurement at the end of the reporting period. Impairment losses for raw materials are recognised when the net realisable value falls below the cost of entry into storage. Consumables are fully depreciated where the quantities are in storage over a much longer period than their estimated use. The impairment of spare parts that do not qualify for capitalisation is calculated on the basis of their use during the year. Spare parts inventory in excess of one year's use is fully depreciated. For work-in-process, intermediate and finished products in inventory for over a year, the forward-looking approach is applied on the basis of the order book and market validation of achievements within one year; the quantities beyond one year of consumption are fully depreciated, except in specific cases. Fixed production costs relating to recognised or planned sub-normal activity are not incorporated in inventory measurement, and are recognised as ordinary operating expenses for the period in which they are incurred. Sub-normal activity is taken into account when the actual production volume is considerably lower than the normal production volume (or normative capacity).	Judgement is exercised to determine the net realisable value, as well as to allocate the fixed and variable production overheads attributable directly to inventories.

(€ million)	31/12/2017	31/12/2016
At beginning of period	**896**	**937**
Change in gross inventories	(27)	(11)
(Impairment)/net reversals for the period	6	18
Increase/(decrease) in net inventories – cash flows	(21)	7
Translation adjustments and other movements	(26)	(48)
At period close	**849**	**896**
Raw materials	222	229
Merchandise and finished products	245	252
Work-in-progress and semi-finished goods	313	341
Consumables and spare parts	69	74
Breakdown of impairment losses:		
- At beginning of period	**(122)**	**(147)**
- (Impairment)/net reversals for the period	6	18
- Translation adjustments and other movements	5	7
- At period close	**(111)**	**(122)**

Impairment provisions mainly relate to raw materials, merchandise and finished products.

Trade and other receivables

Trade and other receivables are amounts that the ERAMET Group expects to collect from third parties.

Accounting method	**Estimates and judgements**
Receivables are booked at transaction value at initial recognition and are subsequently measured at each reporting date at amortised cost. Foreign currency receivables and payables are re-measured at the rate prevailing at the period-end date. The resulting translation adjustments are recognised in Current operating profit (loss) or in Net financial income (Other financial income and expenses) depending on the type of receivable or debt (Note 4). Impairment losses are recognised for receivables where they are more than likely not to be recovered and it is possible to reasonably measure the amount of the impairment based on historical losses on receivables, the age of the receivable and an assessment of the risks involved. This impairment, offset in Current operating profit (loss), reduces the gross value of the receivable. Receivables disposed of under a securitisation contract are removed from the balance sheet when the ERAMET Group has transferred the contractual rights to collect the cash amount and where almost all the risks and rewards attached to these receivables have been transferred to the transferee. Where risks remain but do not prejudice the removal of the receivables from the balance sheet, they are recognised under Other operating receivables together with the related security deposits (Note 8). Disposals with recourse against the ERAMET Group in the event of payment default by the client means that these transferred receivables must be retained in the balance sheet.	Judgement must be exercised to determine when the ERAMET Group could reasonably not recover the receivables. The impairment loss is calculated based on historical losses on receivables, the age of the receivable and an assessment of the risks involved.

(€ million)	Gross amount	Impairment	Net amount 31/12/2017	Net amount 31/12/2016
At beginning of period	**779**	**(155)**	**624**	**608**
Change in gross amount	66		66	85
Impairment losses for the period		(19)	(19)	(27)
Changes in working capital requirement – cash flows			47	58
Translation adjustments and other movements	(59)	5	(54)	(42)
At period close	**786**	**(169)**	**617**	**624**
Trade receivables	**375**	**(14)**	**361**	**330**
Tax and payroll receivables	116	(4)	112	127
Security deposit – securitisation agreement	9	-	9	15
Other operating receivables	200	(151)	49	53
Other current assets	**325**	**(155)**	**170**	**195**
Receivables on the Setrag concession agreement – non-current as	1	-	1	2
TiZir shareholder current account – non-current asset	73	-	73	74
UKAD shareholder current account – non-current asset	4	-	4	14
Receivable for sale of Erachem – non-current asset	8		8	9
Other non-current assets	**86**	**-**	**86**	**99**
Total	**786**	**(169)**	**617**	**624**

The bulk of trade and other receivables are due in less than one year. Tax and payroll receivables include a VAT credit amount to the Gabonese government of €42 million at 31 December 2017 for the years 2014 to 2017 (€54 million at 31 December 2016).

Securitisation of customer receivables

The ERAMET Group uses factoring or securitisation as a source of funding for its receivables. Under these agreements, certain subsidiaries in France and the United States have committed to banking institutions to transfer their trade receivables totalling €210 million at 31 December 2017 (€162 million at 31 December 2016). The analysis of the transfer of risks and rewards resulted in either full deconsolidation or partial deconsolidation. At 31 December 2017, there were no non-deconsolidated receivables (compared to €13 million at 31 December 2016).

A security deposit may be required to cover the commitments given by the transferor subsidiaries to the financing company and will be returned upon the settlement of the transaction. It consists of reserves to hedge against credit risk, delayed payment risk and dilution risk. This deposit amounted to €9 million at 31 December 2017 (31 December 2016: €15 million).

(€ million)	31/12/2017	31/12/2016
Trade receivables – Invoices assigned	(210)	(162)
Trade receivables – Invoices not deconsolidated	-	13
Other operating receivables – Security deposit	9	15

Trade and other payables

Trade and other payables mainly comprises amounts owed to suppliers and tax authorities that have already been billed or are already due.

(€ million)	31/12/2017	31/12/2016
At beginning of period	**722**	**779**
Changes in working capital requirement	81	(32)
Change in payables on non-current assets	(8)	(5)
Translation adjustments and other movements	(100)	(20)
At period close	**695**	**722**
Trade payables	**363**	**371**
Tax and payroll payables	257	212
Other operating payables	32	77
Payables on non-current assets	30	51
Deferred income	9	6
Other current liabilities	**328**	**346**
Setrag debt for the purchase of own property and inventories – no	4	5
Other non-current liabilities	**4**	**5**

Most of the trade and other payables are due in less than one year.

The debts recognised under non-current liabilities include SETRAG S.A.'s 25-year debt to the Gabonese Republic for the transfer of the concession.

Other operating liabilities include €46 million at 31 December 2016 corresponding to the unpaid balance of the COMILOG tax audit for the years 2007 to 2013. This amount was settled in 2017 in the form of a cash settlement of €11 million and compensation with VAT credits of €35 million.

Note 9 – Investments

The ERAMET Group groups its investments into two categories:

industrial investments relating to assets in connection with extraction or production equipment: intangible assets and property, plant and equipment;

financial investments that mainly relate to interest held in joint ventures and non-consolidated companies, as well as other non-current financial assets.

Acquisition of non-current assets

(€ million)	Financial Year 2017	Financial Year 2016
Capital expenditure on property, plant & equipment for the period	206	189
Capital expenditure on intangible assets for the period	18	17
Total industrial capital expenditure	**224**	**206**
Change in payables for the acquisition of non-current assets – Note 8	8	5
Acquisition of investment securities	4	1
Total acquisition of non-current assets – Statement of cash flows	**236**	**212**

Property, plant and equipment

Accounting method

Property, plant and equipment are stated in the balance sheet at their carrying amount, which is the acquisition or manufacturing cost less depreciation and impairment of losses incurred.
Land is not depreciated.
Spare parts deemed to be items of property, plant and equipment are capitalised and depreciated on the basis of their actual use.
Tooling specifically manufactured for certain customers is capitalised and depreciated over its likely useful life.
Major repairs are deemed to be components of items of property, plant and equipment.
Borrowing costs that are directly linked to the acquisition or production of an asset are incorporated into that asset's cost.
When operations commence, a provision is made to take into account the restoration of the mining site, offset by an environmental and dismantling asset that is depreciated on a straight-line basis during the operation of the mine. Revisions to these restoration cost estimates correct the value of this asset and provision by prospectively allocating the result over the period of operation, including the current year.

Finance leases transferring almost all of the risks and benefits inherent in ownership of the good to the ERAMET Group are recognised as items of property, plant and equipment, offset by a financial debt (Note 6). These are amortised over their expected useful life on the same basis as the items of property, plant and equipment held or, if shorter, the term of the corresponding lease. Similarly, other agreements, and primarily sub-contracting, involving the use of a specific asset and the right to use it, are reclassified as leases where necessary.
The Trans-Gabon railway concession was recognised as follows: property owned by the ERAMET Group is recognised as a balance sheet asset and depreciated over the shorter of its useful life or the remaining period of the concession.
Returnable assets representing the assets contributed to the concession by the Gabonese Republic that must be returned in the same state upon expiry of the agreement are not recognised in the balance sheet. Assets acquired by the ERAMET Group following the signing of the concession agreement that must be turned over to the Gabonese Republic at the end of the concession are recognised as property, plant and equipment and depreciated over the term of the concession. A provision is made to cover the net value of the property, plant and equipment at the end of the concession based on investment assumptions.

Estimates, assumptions and judgements

Judgement is exercised to determine all the expenses (e.g. labour, overheads) directly associated with the acquisition, construction, improvement or development of a non-current asset, including the costs of bringing it to the location and in the state that is required for its use as planned by Management.
Expenses for non-current assets are no longer capitalised once the non-current asset is practically completed and is capable of functioning as intended. To determine whether these conditions are met, a review must be carried out of the considerations applied in the same industries, predetermined by the Management's judgement with reference to the factors affecting the expected production capacity.
Where a non-current asset is composed of individual components which call for different methods or depreciation rates, judgement is exercised to determine how best to split the asset. Distinguishing between inspections and major revisions for repair and maintenance, and determining the appropriate period for amortising these costs, are a matter of judgement.

Property, plant and equipment by category

(€ million)	Gross amount	Depreciation & amortisation	Impairment losses de valeur	Net amount 31/12/2017	Net amount 31/12/2016
Land and buildings	1,086	(590)	(78)	418	449
Industrial and mining facilities (*)	3,363	(2,214)	(93)	1,056	1,076
Other property, plant and equipment	829	(544)	(6)	279	303
Work-in-progress, down-payments	173	-	(2)	171	148
Total	**5,451**	**(3,348)**	**(179)**	**1,924**	**1,976**
(*) of which:					
- Assets funded by finance leases				92	99
- Decommissioned assets – site restoration				89	97

Change over the period

(€ million)	Financial Year 2017	Financial Year 2016
At beginning of period	**1,976**	**2,116**
Investments for the period	206	189
Disposals for the period	(12)	(7)
Depreciation & amortisation for the period	(214)	(230)
Impairment losses for the period	(31)	(48)
Change in the gross amount of decommissioned assets	3	13
Translation adjustments and other movements	(4)	(57)
At period close	**1,924**	**1,976**
- Gross amount	5,451	5,606
- Depreciation & amortisation	(3,348)	(3,341)
- Impairment losses	(179)	(289)

Intangible assets

Accounting method

Intangible assets are stated in the balance sheet at their carrying amount, which is the acquisition cost less amortisation and any impairment of losses incurred.

Goodwill

Goodwill is the difference between the acquisition price of an entity and the ERAMET Group's share in the fair value of the identifiable asset or liability (including possible liabilities) of the acquired entity at the acquisition date. It is recognised at cost, less accumulated impairment losses.
Goodwill in associates and joint ventures is recognised under investments in joint ventures and associates (Note 9).

Mining reserves

Amounts capitalised with respect to mineral deposits relate to partial asset contributions or permits acquired since 1974. Depending on the specific operating characteristics, mining reserves are amortised on the basis of the ratio of annual production to the estimated reserves or the length of the concession.

Geology, prospecting and research expenses

Geology, exploration, prospecting and mining research expenses incurred prior to operation are recognised as intangible assets, in compliance with IFRS 6 – Exploration for and Evaluation of Mineral Resources.

The royalties paid for mining prospecting and exploration are also recognised under intangible assets.

Estimates and judgements

Judgement must be used to determine whether the expenditure on intangibles can be recognised as an intangible asset.

If its useful life is limited in time, the intangible asset is amortised on a straight-line basis over the estimated useful life.

The goodwill is allocated to the cash-generating unit from where it arose, for the purposes of impairment testing.

Intangible assets by category

(€ million)	Gross amount	on & amortisation	Impairment losses de valeur	Net amount 31/12/2017	Net amount 31/12/2016
Goodwill	166	-	(11)	155	155
Indonesia mining reserves	237	-	(124)	113	128
Gabon mining reserves	61	(37)	-	24	25
New Caledonia mining reserves	47	(34)	-	13	13
Indonesia geology, prospecting and research expenses	438	-	(438)	-	-
Other geology, prospecting and research expenses	10	(9)	-	1	1
Software	116	(96)	(2)	18	25
Other intangible assets	41	(32)	-	9	11
Work-in-progress, down-payments	35	-	(19)	16	14
Total	**1,151**	**(208)**	**(594)**	**349**	**372**

The net goodwill of €155 million at 31 December 2017 (31 December 2016: €155 million) is mainly due to the acquisition of the Norwegian company Eralloys Holding A/S in 2008 for €149 million (31 December 2016: €150 million) and is allocated to the ERAMET Norway CGU.

Change over the period

(€ million)	Financial Year 2017	Financial Year 2016
At beginning of period	**372**	**370**
Investments for the period	18	17
Disposals for the period	1	-
Depreciation & amortisation for the period	(21)	(22)
Impairment losses for the period	-	-
Translation adjustments and other movements	(21)	7
At period close	**349**	**372**
- Gross amount	1,151	1,265
- Depreciation & amortisation	(208)	(213)
- Impairment losses	(594)	(680)

Weda Bay project in Indonesia

On 2 May 2006, the ERAMET Group acquired Weda Bay Minerals Inc., a company listed on the Toronto stock exchange, whose subsidiary PT Weda Bay Nickel holds a world-class nickel deposit on Halmahera island, Indonesia, as part of a Contract of Work (COW) concession. Following this acquisition, the ERAMET Group carried out studies to mine that deposit.

Capitalised project expenditure mainly consists of geological, exploration and prospecting costs, as well as the costs of technical and economic studies.

The nickel market conditions took a turn for the worse in 2015, causing uncertainty in the short to medium term. In addition, the ERAMET Group decided to put all major projects on hold.

At the same time, negotiations with Indonesia regarding the amendment of the terms of the COW to comply with the new Indonesian mining law were pursued to clarify certain aspects of the regulatory and taxation framework applicable to the project.

The ERAMET Group's historical partners on the project – the Mitsubishi Corporation and Pacific Metals Co Ltd – decided in 2016 to exercise the option to sell to ERAMET their holdings in Strand Minerals Pte Ltd, standing at 30% and 3.4% respectively (see Key events in the reporting period).

Pt Antam has several purchase options allowing it to increase its holding, the terms and conditions of exercise of which are given in Note 14.

In 2017, ERAMET signed a framework agreement with the Chinese steel group Tsingshan with a view to determining the conditions for partnership to increase the value of the asset (see Key events in the reporting period).

Share capital increase – controlled companies

The amount of €97 million shown in the Statement of cash flows for 2016 includes:

- €71 million paid by ERAMET to Mitsubishi and Pamco for the acquisition of a 33.4% stake in Strand Minerals Pte Ltd following the exercise of their put option;
- €26 million for the reimbursement of the shareholders' current account by Strand to Mitsubishi and Pamco (see Note 5 – Working capital requirement).

Impairment of assets and impairment losses

Accounting method

Impairment tests are performed regularly: systematically at least once a year at the annual reporting date for goodwill and intangible assets with indefinite lives, and where there are indications of impairment. For intangible assets and items of property, plant and equipment with finite lives, impairment tests are carried out where there are indications of impairment.

Impairment testing consists in comparing the carrying amount of assets with their recoverable amount, which is defined as the higher of the value in use (or recoverable amount through use) and the fair value (or recoverable amount through sale), less selling costs.

Impairment losses are calculated as the difference between the recoverable and net book value and are recognised in the income for the period under Other operating income and expenses (Note 5).
Impairment losses recognised in goodwill are not reversible. For the other assets, previously recognised impairment losses are measured at each reporting date to identify whether the losses have decreased or no longer exist. An impairment loss is reversed only if the carrying amount of the asset does not exceed its net book value, as it would have been determined had no impairment been recognised.

Estimates, assumptions and judgements

Cash-generating units (CGU) are homogeneous groups of assets whose continuous use generates independent cash flows.
The ERAMET Group has defined its CGUs with reference to the various production sites of ERAMET Nickel, ERAMET Manganese and ERAMET Alloys.
Impairment tests are performed for each CGU. All intangible assets, including goodwill, and all items of property, plant and equipment are allocated to CGUs.
At 31 December 2017, the ERAMET Group is divided into 11 CGUs, distributed as follows:

- 3 CGUs in ERAMET Nickel;
- 6 CGUs in ERAMET Manganese;
- 2 CGUs in ERAMET Alloys.

ERAMET Group's General Management determines the existence of events calling for impairment testing based on several criteria. Impairment loss indicators correspond mainly to changes and fluctuations in:

raw material prices and the selling price of finished goods;

economic and regulatory environment and market conditions;

interest rates;

technological level;

asset performance and obsolescence.

An impairment test is carried out on the CGUs concerned when these indicators show a negative development.

To determine the value in use, the ERAMET Group uses the method of discounted future cash flows generated from the use of the assets. The data used to calculate the discounted forecast cash flows is taken from the annual budgets and multiyear plans prepared by the Management of the CGUs concerned. These plans are created on the basis of 5-10 year projections, in keeping with mining and industrial cycles, plus a final value corresponding to the capitalisation to infinity of normative cash flows. Plans for certain CGUs are prepared for longer periods corresponding to the operating period of the sites without assigning a terminal value.

The growth rates used are the same as those used in budgets. The growth rates to infinity used for the terminal values are generally between 1% and 3%, depending on the CGU.

The discount rate applied to calculate the value in use is the weighted average cost of capital, namely:

- 10% for mining activities (also 10% in 2016);
- 8.5% for metallurgical activities (8% in 2016);
- 11.5% for the Grande Côte CGU (also 11.5% in 2016), company accounted for using the equity method of accounting (see "Investments in joint ventures and associates").

The ERAMET Group may measure the recoverable amount using other methods that it deems relevant in the context of the CGUs concerned. These methods may include estimated transaction values.

Whatever the method used, the assumptions used are Management's best estimates. The ERAMET Group regularly reviews its estimates and assessments to take account of past experience and other factors that are deemed relevant with regard to economic conditions.

The change in impairment of assets and other impairment losses is broken down as follows:

(€ million)	31/12/2016	Impairment loss Financial Year 2017	Translation adjustments and other	31/12/2017
ERAMET Nickel	(679)	-	97	(582)
ERAMET Alloys	(76)	(9)	16	(69)
ERAMET Manganese	(258)	(26)	162	(122)
ERAMET Holding	(4)	-	-	(4)
Total	**(1,017)**	**(35)**	**275**	**(777)**
Goodwill	(18)	-	7	(11)
Intangibles	(662)	-	79	(583)
PP&E	(289)	(31)	141	(179)
Other provisions	(48)	(4)	48	(4)

The decrease in impairment of assets and other impairment losses is mainly due to changes in the scope of consolidation (disposal of Eurotungstène, deconsolidation of GCMC), effects of translation differences and reclassifications of amortisation recognised for the period.

Sensitivity

Sensitivity is determined with reference to changes in future cash flows and discount rates.

The ERAMET Group's cash projections for its mining and metallurgical businesses are highly dependent on the sale price assumptions, especially that of ores (nickel, manganese, zircon, etc.), on euro-dollar parity, and on global demand for products sold by the Group.

CGU SLN – ERAMET Nickel

The value in use is extremely sensitive to the price of nickel – the main hypothesis of the impairment test for this CGU.

This commodity is traded on the London Metal Exchange (LME). Directly observable forward prices do not reflect the long-term price. The target level for 2020 is thus determined by average industry consensus and corresponds to the previous levels reached prior to 2012. The price trend curve used to reach this target level is more conservative than the average consensus.

The selected prices are thus integrated into the 5-year business plan, which allows the cash flow projections of the CGU to be determined.

However, there is strong interdependence between the different variables, namely the value of the dollar, the price of Brent crude oil and the price of nickel, which generally do not impact the test in the same way.

The improvement in operating performance leading to a significant decrease in cash cost is ongoing, and it has been accentuated over the year with a new lower cash cost target announced in September 2017.

A decrease of USD 0.5/lb in the target nickel price, a 0.5% increase in the discount rate, or a decrease of 0.5% in the long-term growth rate under identical operating conditions would not result in recognition of an impairment loss, however would reduce the margin of comfort. On the other hand, if the long-term price levels were to be revised downwards substantially, the test could result in an impairment loss.

Gabon and manganese alloys CGUs – ERAMET Manganese

Manganese ore is not a listed commodity. The price is adjusted according to supply and demand, particularly concerning alloy production forecasts and the marginal capacity of the South African producer.

To determine the forecast price of manganese ore, the ERAMET Group uses an internal model that takes into account the marginal cost of South African production, available logistical means (trains or trucks) and ZAR/USD parity.

The price forecasts thus determined are integrated into the business plans of the Gabon and manganese alloys CGUs. These price forecasts can be compared with studies issued by the CRU (Commodities Research Unit), an independent body that carries out studies on certain metals, including manganese.

Regarding the Gabon CGU, a 0.5% increase in the discount rate, a 0.5% decrease in long-term growth rate or a fall of 1% in the EBITDA margin of the final year would not result in the recognition of an impairment loss.

Aubert & Duval CGU – ERAMET Alloys

The business plan provides for an increase in profitability of this activity on the basis of plans for productivity, reduced structural costs and improved sales. The plans to reduce costs and improve productivity were initiated as of end-2012. A 1% decrease in the EBITDA margin rate of the final year, a 0.5% increase in the discount rate or a fall of 0.5% in the long-term growth rate would not result in the recognition of an impairment loss.

Residual values by group of CGUs

The residual values of invested capital are detailed as follows by CGU group:

(€ million)	Financial Year 2017	Financial Year 2016
ERAMET Nickel		
Net intangible assets and property, plant & equipment	732	747
Working capital requirement	138	163
Total	**870**	**910**
ERAMET Alloys		
Net intangible assets and property, plant & equipment	501	476
Working capital requirement	323	369
Total	**824**	**845**
ERAMET Manganese		
Net intangible assets and property, plant & equipment	1,025	1,102
Working capital requirement	113	197
Total	**1,138**	**1,299**
ERAMET Holding and others		
Net intangible assets and property, plant & equipment	15	23
Working capital requirement	52	60
Total	**67**	**83**
ERAMET Group		
Net intangible assets and property, plant & equipment	2,273	2,348
Working capital requirement	626	789
TOTAL	**2,899**	**3,137**

Capital employed is defined as the sum of net tangible assets, property, plant and equipment and working capital requirements. It is used to determine the accounting values of assets tested as part of asset impairment tests.

Investments in joint ventures and associates

Accounting method	Estimates, assumptions and judgements
Joint ventures are companies over which ERAMET has joint control, meaning that the decisions concerning the relevant activities require the unanimous consent of all controlling parties. Associates are companies over which the ERAMET Group has significant influence. Joint ventures and associates are accounted for using the equity method of accounting and are initially recognised at cost. Their carrying amount includes the goodwill determined at their acquisition less accumulated impairment. The consolidated financial statements include ERAMET's share in earnings and the equity movements of the companies accounted for using the equity method, after adjustments to bring the accounting rules of those companies in line with those of the ERAMET Group. The dividends received from joint ventures and associates are deducted from their balance sheet value. An impairment test is carried out when there are indicators that the recoverable amount may fall below its carrying amount (Note 9).	Significant influence exists when ERAMET has the powers to take part in financial and operating decisions of the company but does not exercise control or joint control over these policies. ERAMET has significant presumed influence if it holds 20% to 50% of the voting rights of a company. ERAMET Group's General Management determines the existence of events calling for impairment testing under the same conditions as those given in the Impairment of assets section.

Breakdown by entity

(€ million)			Profit (loss)	Share of shareholders' equity	Profit (loss)	Share of shareholders' equity
Company	**Country**	**% holding**	**2017**	**31/12/2017**	**2016**	**31/12/2016**
TiZir subgroup	United Kingdom	50%	28	112	(64)	95
Ukad	France	50%	(9)	(1)	(1)	-
Total joint ventures			**19**	**111**	**(65)**	**95**
HeYe Erasteel Innovative Materials Ltd	China	49%	(1)	-	(1)	8
Ecotitanium	France	21.75%	-	4	-	4
Total associates			**(1)**	**4**	**(1)**	**12**
TOTAL			**18**	**115**	**(66)**	**107**

TiZir subgroup

On 27 July 2011, the ERAMET Group and Mineral Deposits Ltd (MDL) entered into an agreement to create a joint venture, the British company TiZir Ltd, bringing together the Norwegian company TiZir Titanium & Iron A/S (TTI) and the Grande Côte Opérations S.A. (GCO) mineral sands project in Senegal. The final agreements were completed on 25 October 2011.

The fully contributory balance sheet of the TiZir subgroup is as follows:

(€ million)	31/12/2017	31/12/2016
Non-current assets	633	644
Non-cash current assets	88	70
Liabilities excluding gross financial payables	(51)	(59)
Net debt	(462)	(495)
Non-controlling interest	(16)	(30)
Shareholders' equity, Group share	224	190
Share of shareholders' equity	**112**	**95**

The investments made for TiZir in Senegal (Grande Côte) and Norway (TTI) totalled €10 million in 2017 (FY 2016: €21 million).

In addition, the TiZir Ltd bond issue of USD 275 million which matured in September 2017 was refinanced with a new USD 300 million bond issue maturing in 2022 (see Key events in the reporting period).

The fully contributory profit and loss account of the TiZir subgroup is as follows:

(€ million)	Financial Year 2017	Financial Year 2016
Sales	199	145
EBITDA	55	16
Current operating profit (loss)	27	(13)
Non-controlling interest	(11)	10
Net profit (loss), Group share	56	(128)
Share of profit	**28**	**(64)**

Translation adjustments of -€12 million for 2017 (FY 2016: +€3 million) were posted to items recyclable to profit or loss in the ERAMET Group’s Statement of comprehensive income.

Financial Year 2017

A provision of €44 million (Group share) on the value of the investment was reversed at 31 December 2017, due to the outlook for a positive trend in the sale price of zircon and ilmenite, as well as the significant improvement in 2017 results and the end of the ramp up of the facilities in Senegal. The selling price assumptions were determined using the medium- and long-term consensus of market experts.

A 0.5% increase in the discount rate would have an impact of about €11 million (Group share) on the reversal amount. A 10% decline in the long-term zircon prices would have a negative impact of about €36 million (Group share).

The accumulated provision on the value of the investment as of December 31, 2017 is $86 million, or €72 million (Group share).

Financial Year 2016

An impairment loss of the investment value of €40 million (Group share) was recognised at 31 December 2016, given the expected decline in zircon sale prices. The selling price assumptions were determined using the medium- and long-term consensus of market experts.

Non-current financial assets

Accounting method	Judgements
Other non-current financial assets include other long-term financial assets and non-consolidated equity investments. Other non-current financial assets relate to loans or current accounts extended to non-consolidated companies or companies under joint control. They are initially recognised at fair value plus acquisition costs and are measured on each reporting date at amortised cost using the effective interest rate (EIR) method, less any offsetting provisions for impairment losses recognised in income for the period (Other financial income and expenses, see Note 6). Non-consolidated equity investments are recognised in the balance sheet at their acquisition cost or their value on the date of their deconsolidation, less any offsetting provisions for impairment losses recognised in income for the period (Other financial income and expenses, see Note 6).	The ERAMET Group has divided its non-consolidated subsidiaries into two categories: controlled companies that are not consolidated owing to their low impact on the ERAMET Group's financial statements; non-controlled companies corresponding to holdings in companies over which the ERAMET Group has no control or significant influence.

By category

(€ million)	Gross amount	Impairment	Net amount 31/12/2017	Net amount 31/12/2016
Deposits and guarantees	16	-	16	15
Shareholders' loan – TiZir	48	-	48	51
Other non-current financial assets	145	(112)	33	30
Total excluding non-consolidated equity investments	**209**	**(112)**	**97**	**96**
Non-consolidated equity investments	160	(136)	24	45
Total	**369**	**(248)**	**121**	**141**

The shareholders' loan to TiZir accounts for the loan amount granted by ERAMET to its subsidiary under joint control, TiZir Ltd.

Other non-current financial assets chiefly relate to financial current accounts or loans granted to non-consolidated companies (MKAD) or equity affiliates (Ukad, Ecotitanium).

Change

(€ million)	31/12/2017	31/12/2016
At beginning of period	**141**	**153**
Net change in non-current financial assets – statement of flows	3	14
Acquisition/disposal of investment securities	(6)	1
Impairment	19	(21)
Other movements	(36)	(6)
At period close	**121**	**141**

By currency

(€ million)	31/12/2017	31/12/2016
Euro	40	33
US dollar	52	57
CFP franc	4	5
Other currencies	1	1
Total	**97**	**96**

By interest rate type

(€ million)	31/12/2017	31/12/2016
Interest-free	14	8
Fixed interest rates	26	21
Variable interest rates	57	67
Total	**97**	**96**

Interest-free items mainly relate to deposits and guarantees as well as certain loans to employees.

Non-consolidated equity investments

(€ million) Company	Country	% holding	Gross amount	Impairment	Net amount 31/12/2017	Net amount 31/12/2016
Main controlled companies:						
- Brown Europe	France	100%	-	-	-	8
- AUBERT & DUVAL SA (Irun) (ex Metallied)	Spain	100%	2	(2)	-	-
- Erasteel GmbH	Germany	100%	3	-	3	2
- Eramet Alloys UK Ltd	United Kingdom	100%	3	-	3	2
- Aubert & Duval Mold and Die Technology	China	85%	3	-	3	2
- Aubert & Duval Special Steel GmbH	Germany	100%	3	(3)	-	-
- La Petite-Faye	New Caledonia	100%	-	-	-	2
- Sodépal	Gabon	100%	7	(7)	-	-
- GCM Liquidation Co (ex GCMC)	Gabon	100%	92	(92)	-	-
- Maboumine	Gabon	76.14%	26	(26)	-	-
Main non-controlled companies:						
- HeYe Special Steel Ltd	China	10%	-	-	-	14
- Squad	India	50%	6	-	6	3
Other companies			15	(6)	9	12
Total			**160**	**(136)**	**24**	**45**

Controlled but non-consolidated companies are mainly sales entities, the services of which are fully assigned to the ERAMET Group, and industrial companies (shaping, wire-drawing and drawing of metallurgical products).

Equity investments in controlled companies are not consolidated since they have no material impact on the ERAMET Group’s consolidated financial statements.

Note 10 – Taxes

This note explains the income tax expense and related tax amounts shown in the profit and loss account and balance sheet. The section on deferred tax provides information on expected future tax payments.

Accounting method

Income tax includes both current and deferred tax. The income tax expense is recognised in the profit and loss account, except where it relates to a business acquisition or items recognised directly in equity or in Other comprehensive income.

Current income tax includes taxes that the ERAMET Group expects to pay on its taxable income for the reporting period at the prevailing tax rates or rates substantively enacted at the reporting date, as well as any adjustments for tax relating to prior reporting periods.

Deferred tax is recognised as temporary differences between the carrying amount of the assets and liabilities measured for the purposes of financial reporting and the tax basis of those assets and liabilities measured at the income tax rate and tax laws enacted or substantively enacted at the reporting date and effective in the period in which these temporary differences should be used.
Deferred tax assets, including those related to loss carry-forwards, which are determined by fiscal entity, are recognised whenever it can be shown that they are likely to be realised.

The deferred tax assets and liabilities are classified in the balance sheet as non-current items and are offset if the entity has a legally enforceable right of set-off as is the case with the French tax consolidation group.

Deferred tax liabilities on investments in subsidiaries, associates and joint ventures are recognised unless where the ERAMET Group can determine the timetable for the reversal of the related temporary differences, and where it is likely that such differences will not reverse in the foreseeable future. Provisions are made for non-recoverable tax on dividends planned in the foreseeable future.

Estimates, assumptions and judgements

The ERAMET Group operates in several countries. Its income is therefore taxed at various income tax rates. Given the magnitude of the operations and the complexity of tax regulations, the ERAMET Group must assess uncertainties and exercise judgement to estimate the tax amount that it will eventually pay. The tax amount finally paid depends on various factors that include negotiations with tax authorities and the outcome of tax audits.
The ERAMET Group estimates deferred tax based on the temporary differences between the assets and liabilities shown in its consolidated financial statements and the tax bases of these assets and liabilities determined under the applicable tax laws. The deferred tax asset amount is generally recognised insofar as a probable taxable profit will be available in the future against which deductible temporary differences can be used. Consequently, the deferred tax asset that is recognised and considered as realisable can be reduced if the projected profit cannot be obtained.

To assess the likelihood that these assets will be realised, the ERAMET Group reviews the following information in particular:

- projected future profitability;
- extraordinary losses not expected to recur in the future;
- past taxable profits; and
- tax strategies.

Income tax

(€ million)	Financial Year 2017	Financial Year 2016
Current tax	(193)	(43)
Deferred tax	(23)	(18)
Tax income/(expense)	**(216)**	**(61)**

Effective tax rate

(€ million)	Financial Year 2017	Financial Year 2016
Operating profit (loss)	513	(47)
Financial income	(93)	(58)
Pre-tax profit (loss) of consolidated companies	**420**	**(105)**
Standard taxation rate in France (%)	**34.43%**	**34.43%**
Theoretical tax income/(expense)	**(145)**	**36**
Impact on theoretical tax of:		
- permanent differences between accounting and taxable profit	2	28
- taxes on dividend distribution (withholding tax)	(9)	-
- impairment of assets	2	3
- standard tax rate differences in foreign countries	18	2
- tax credits	4	5
- unrecognised or limited deferred tax assets	(85)	(142)
- miscellaneous items	(3)	7
Actual tax income/(expense)	**(216)**	**(61)**
Effective tax rate	**51%**	**-58%**

The decrease in the tax rate of French companies to 28% from 2019 onwards has no impact on the consolidated financial statements of the ERAMET Group. Deferred tax assets are limited to the amount of deferred tax liabilities in the French tax consolidation group given the history of losses in the past years.

Financial Year 2017

Unrecognised or limited deferred tax assets mostly relate to the tax loss carry-forwards of Le Nickel-SLN totalling €51 million, the French tax consolidation (€11 million) and other limited or unrecognised deferred tax assets in certain subsidiaries totalling €22 million.

The difference in current tax rates of foreign countries comes mainly from Norway with a tax rate of 24%.

Financial Year 2016

Unrecognised or limited deferred tax assets mostly relate to the tax loss carry-forwards of Le Nickel-SLN totalling €57 million, the French tax consolidation group (€34 million) and other limited or unrecognised deferred tax assets in certain subsidiaries totalling €51 million (Guilin, GCMC, SETRAG, COMILOG-CMM).

Main standard tax rates in foreign countries

(%)	Financial Year 2017	Financial Year 2016
China	12.5%-25.0%	12.5%-25.0%
United States	35.75%	35.97%
Gabon	35.0%	35.0%
Norway	24.0%	25.0%
New Caledonia	35.0%	35.0%
Sweden	22.0%	22.0%

Change in tax receivables and tax payables

(€ million)	31/12/2017	31/12/2016
At beginning of period	**5**	**27**
Current tax – income statement	(193)	(43)
Tax paid	56	33
Translation adjustments and other movements	(14)	(12)
At period close	**(146)**	**5**
- Current tax receivables	22	39
- Current tax payables	168	34

Deferred taxes in the balance sheet

Breakdown by category

(€ million)	31/12/2017	31/12/2016
Tax loss carry-forwards (*)	31	26
Intangible assets and property, plant & equipment	45	51
Inventory valuation	39	41
Financial instruments	31	37
Employee-related liabilities	60	78
Other provisions for liabilities and charges	42	55
Other items	15	12
Deferred tax assets before netting	**263**	**300**
Deferred tax netting by tax entity	(261)	(296)
Deferred tax assets	**2**	**4**
Regulated provisions and special amortisation and depreciation	(229)	(209)
Intangible assets and property, plant & equipment	(130)	(142)
Inventory valuation	(7)	(26)
Financial instruments	(25)	(24)
Employee-related liabilities	(3)	(17)
Other provisions for liabilities and charges	(16)	(16)
Distribution of dividends	(9)	-
Other items	(15)	(12)
Deferred tax liabilities before netting	**(434)**	**(446)**
Deferred tax netting by tax entity	261	296
Deferred tax liabilities	**(173)**	**(150)**
Net deferred tax liabilities	**(171)**	**(146)**
(*) Limited deferred tax assets for tax loss carry-forwards	509	516

Change in deferred taxes in the balance sheet

(€ million)	Assets	Liabilities	Net amount Financial Year 2017	Net amount Financial Year 2016
At beginning of period	**4**	**(150)**	**(146)**	**(128)**
Deferred tax offset in shareholders' equity	2	(10)	(8)	1
Deferred tax on profit (loss)	(4)	(19)	(23)	(18)
Deferred tax netting by tax entity	35	(35)	-	-
Translation adjustments and other movements	(35)	41	6	(1)
At period close	**2**	**(173)**	**(171)**	**(146)**

Deferred tax assets and liabilities are reported separately in the balance sheet after offsetting within each tax entity. Except for the French tax consolidation group, every company is an independent tax entity.

French tax consolidation group

Tax losses of €477 million at 31 December 2017 (31 December 2016: €411 million) mainly arose during the past five reporting periods and have been capitalised as deferred tax assets and then impaired.

Note 11 – Personnel costs and employee benefits

Workforce and personnel costs

Average workforce and workforce at end of period by Division

The average workforce and workforce at end of period include all fully consolidated companies at 31 December of each year.

	Financial Year 2017 Average workforce	31/12/2017 Workforce at period end	Financial Year 2016 Average workforce	31/12/2016 Workforce at period end
Workers	1,434	1,408	1,535	1,471
Employees, technicians and supervisors	738	702	849	821
Executives	221	210	250	242
ERAMET Nickel	**2,393**	**2,320**	**2,634**	**2,534**
Workers	1,888	1,868	2,541	1,941
Employees, technicians and supervisors	1,453	1,427	1,691	1,508
Executives	594	575	719	620
ERAMET Manganese	**3,935**	**3,870**	**4,951**	**4,069**
Workers	2,660	2,704	2,590	2,588
Employees, technicians and supervisors	1,469	1,490	1,446	1,451
Executives	525	543	519	519
ERAMET Alloys	**4,654**	**4,737**	**4,555**	**4,558**
Workers	38	25	31	31
Employees, technicians and supervisors	158	168	162	157
Executives	199	208	216	205
ERAMET Holding and others	**395**	**401**	**409**	**393**
Workers	6,020	6,005	6,697	6,031
Employees, technicians and supervisors	3,818	3,787	4,148	3,937
Executives	1,539	1,536	1,704	1,586
Total	**11,377**	**11,328**	**12,549**	**11,554**

The total workforce managed in the HR reporting system implemented by the Group, which includes non-consolidated companies and companies accounted for using the equity method, totalled 12,590 employees at 31 December 2017 (12,777 employees at 31 December 2016).

Personnel costs by category

(€ million)	Financial Year 2017	Financial Year 2016
Wages and salaries	(462)	(471)
Social security contributions and other personnel costs	(185)	(190)
Profit sharing	(23)	(11)
Share-based payment	(6)	(3)
Personnel costs subtotal	**(676)**	**(675)**
Personnel costs – temporary staff	(34)	(28)
Total personnel costs including temporary staff	**(710)**	**(703)**
Personnel costs (including temporary staff) as % of sales	20%	24%
CICE (tax credit for competitiveness and employment – shown ded	8	7

Employee-related liabilities

The ERAMET Group offers its employees many long-term benefits, such as retirement packages, pension plans, healthcare plans and long-service awards. The characteristics of these benefits vary in line with the governing laws and regulations in each country and the agreements in force in each company.

Accounting method

Employee-related liabilities are either defined benefit plans or defined contribution plans. Defined benefit plans specify the amount that an employee will receive at the time of retirement whereas defined contribution plans specify how the contributions are calculated.

Defined contribution plans

For these plans, the ERAMET Group makes payments to a fund manager and is released from its obligations for the current period and prior periods. As a result, these plans do not show any deficit or surplus and are not included in the balance sheet. The contributions are expensed when paid.

Defined benefit plans and other long-term benefits

A defined benefit plan is a post-employment benefit plan that is distinct from the defined contribution plan. The cost of the retirement benefits and other benefits accrued to employees is established actuarially for each plan using the projected unit credit cost method. They are assessed annually by independent actuaries. The obligations of the ERAMET Group are recognised as balance sheet liabilities and correspond to the difference between the present value of the obligations in respect of defined benefits and the fair value of plan assets at the reporting date. Plan assets consist of assets held in pension funds or insurance policies.

The costs of services rendered are recognised in Current operating profit (loss) in the period in which they are incurred. The costs of past services resulting from amendments and curtailments to the plan, as well as the gains and losses upon plan settlement are recognised in Other operating income and expenses. The interest expense for net obligations is included in Other financial income and expenses.

The actuarial gains (losses) (including the impact of foreign exchange) on plan assets and the obligation in respect of defined benefits are recognised directly in Other comprehensive income for the period in which they arise. They are recognised immediately in income in the case of long-term benefits.

Estimates, assumptions and judgements

The cost of employee benefits and the value of the obligations are calculated using assumptions such as discount rates, salary increases, retirement age, life expectancy, inflation and cost of healthcare. These assumptions are determined annually by the ERAMET Group’s Management.

The discount rates used are mostly calculated for each zone or country based on the average rates of private issuers observed in those zones or countries at each reporting date.

The rates vary from country to country:

- in the Eurozone and in the United States, the discount rates were determined on the basis of AA10+ corporate bonds;
- in Norway, the discount rate is determined based on secured bonds such as mortgage-backed bonds;
- in New Caledonia, given that the corporate and government bond markets are illiquid, the rate is determined with reference to the French sovereign bond rate adjusted for local inflation;
- in Gabon, the discount rate used is based on the local bond rate.

Main actuarial assumptions and related sensitivity

The actuarial assumptions used vary according to the economic and demographic conditions existing in the country in which the plan is in force. The main actuarial assumptions used for measuring these liabilities are as follows:

	31/12/2017		31/12/2016	
	Rates		Rates	
	Discount	Inflation	Discount	Inflation
Eurozone	1.50%	1.80%	1.50%	1.80%
United States	3.60%	2.00%	3.80%	2.00%
Norway	2.50%	1.75%	2.50%	1.75%
New Caledonia	2.20%	0.60%	2.60%	0.60%
Gabon	7.00%	2.50%	6.00%	2.50%

Sensitivity

An increase or decrease of 0.5 percentage point in the discount rate or inflation rate, with other actuarial assumptions remaining constant, will have the following impact:

(€ million)	Discount rate				Inflation rate			
	Increase by +0.5%		Decrease by -0.5%		Increase by +0.5%		Decrease by -0.5%	
	€ millions	%	€ millions	%	€ millions	%	€ millions	%
France	(17)	*-9%*	19	*10%*	(2)	*-1%*	3	*1%*
United States	(4)	*-4%*	5	*6%*	-	*0%*	-	*0%*
Norway	(1)	*-10%*	-	*0%*	-	*0%*	(1)	*-8%*
New Caledonia	(2)	*-5%*	1	*3%*	-	*0%*	-	*0%*
Gabon	(1)	*-3%*	1	*3%*	-	*0%*	-	*0%*
Other countries	(1)	*-10%*	2	*20%*	-	*0%*	(2)	*-22%*
Total	**(26)**	***-7%***	**28**	***7%***	**(2)**	***-1%***	**-**	***0%***

Description of the main defined benefit plans and associated risks

The ERAMET Group’s main defined benefit plans are offered in France, United States, Gabon and New Caledonia. The main plan assets are therefore located in these countries. The main characteristics of the plans described below relate to these four countries.

Retirement packages are generally paid as a lump sum or annuities determined on the basis of the employee’s length of service, final salary or average final remuneration. Pre-retirement and supplementary healthcare benefits and life insurance are also provided under the pension plan, along with long-service awards in the form of a lump sum that varies according to the number of years’ service completed.

In the United States, most defined benefit plans are no longer accessible to new employees. They participate in defined contribution plans.

In New Caledonia, the obligations also include the payment of a loyalty bonus awarded after 10 years of service and then every five years, calculated as a percentage of the basic salary, as well as the granting of plane tickets whose number, value and frequency depends on the employee’s professional category.

Risks associated with the plans

The ERAMET Group is exposed to the standard risks inherent to defined benefit plans, such as higher-than-expected salary increases, increased inflation rates or lower-than-expected returns, as well as actuarial risks, especially investment risk, interest rate risk and longevity risk. The plans are also exposed to the risk of internal negotiation to reach a more favourable agreement, and the risk of increase in taxes or annuities for supplementary pension plans.

Governance policy

Under the laws governing defined benefit plans, it is the ERAMET Group's duty to manage the plan assets and design investment policies that define, for each prefinanced plan, the investment objectives, the asset allocation target, risk mitigation strategies, and other components required by law for pension plans.

Investment policies and risk management initiatives

The investment policies are designed to obtain long-term return on investment which, combined with contributions, will enable the plans to have sufficient assets to be able to pay the promised benefits while keeping risk at an acceptable level.

The asset allocation target is determined on the basis of the expected market conditions and climate, the maturity profile of plan liabilities, the level of cover of the respective plans, and the risk tolerance of the plans' beneficiaries.

In France, the plans are funded by insurers through group life insurance contracts. The investments are made by the insurers in their respective Euro funds. These funds, of which over 80% is invested in buy and hold rate products, have suffered from a deterioration in bond returns for some years now and are still exposed to default risk on returns in a protracted low interest rate period.

In the United States, the financial management of funds is entrusted to various asset managers who are among the key players in the business. Index-based management is used for the most part and active management for the remainder. Globally, 81% of the asset allocation is in government bonds and American companies, denominated in USD, with the objective of matching the liability duration. The remaining 19% is invested in funds in American equities, world equities and emerging market equities and bonds. The risks inherent to these financial assets are therefore curve risk, duration risk, credit risk and inflation risk for bonds, and market risk and capital risk for equities. Nonetheless, in 2017, the markets in which the assets are invested performed positively.

Overall cost of employee-related liabilities

The cost of employee-related liabilities is recognised in the Income Statement and in the Statement of comprehensive income below:

(€ million)	Pension plans		End of career benefits		Other benefits		Total employee-related liabilities	
	2017	2016	2017	2016	2017	2016	2017	2016
Service cost	3	5	6	6	2	7	11	18
Past service cost (1)	-	(10)	-	(5)	1	-	1	(15)
Net interest expense	2	3	2	3	1	1	5	7
Cost recognised in income	**5**	**(2)**	**8**	**4**	**4**	**8**	**17**	**10**
Impact of revaluation on commitments	(4)	4	6	14	1	1	3	19
- experience	(1)	(3)	-	-	-	-	(1)	(3)
- demographic assumptions	2	9	(1)	11	1	1	2	21
- financial assumptions	(5)	(2)	7	3	-	-	2	1
Impact of revaluation on pension plan assets	(9)	(2)	-			-	(9)	(2)
Cost recognised in other comprehensive income	**(13)**	**2**	**6**	**14**	**1**	**1**	**(6)**	**17**
Total cost recognised in comprehensive income	**(8)**	**-**	**14**	**18**	**5**	**9**	**11**	**27**

(1) Pension plan changes and curtailments

The impact of costs of past services in 2016 (€15 million) mainly relates to the change made in some ERAMET Norway plans (see Note 5: Other operating income and expenses).

Change in obligations and plan assets

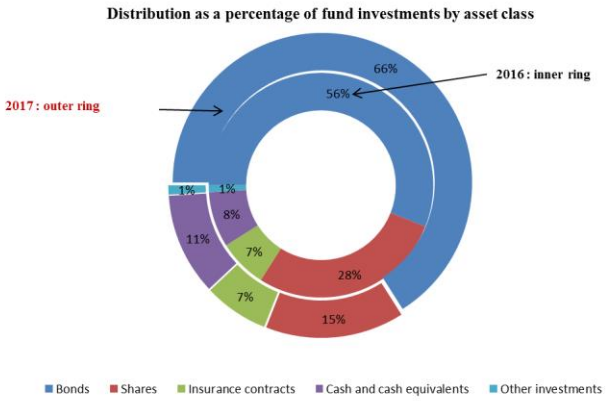
The table below illustrates the change in obligation by plan type, distribution by beneficiary and based on whether or not pre-financing is used, as well as the change in the fair value of the plan assets and its differentiation by category (listed and unlisted assets).

(€ million)	Pension plans		End of career benefits		Other benefits		Total employee-related liabilities	
Change in obligation	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Obligation at beginning of period	**246**	**322**	**103**	**102**	**47**	**43**	**396**	**467**
- Cost recognised in income	9	4	9	6	3	8	21	18
- Impact of revaluation	(4)	4	6	14	1	1	3	19
- Contributions and benefits paid	(10)	(31)	(4)	(20)	(8)	(4)	(22)	(55)
- Change to consolidation scope	(1)	(57)	(1)	2	-	1	(2)	(54)
- Translation differences and other movements	(15)	4	-	(1)	-	(2)	(15)	1
Obligation at period close	**225**	**246**	**113**	**103**	**43**	**47**	**381**	**396**
Obligation attributable to								
- Working beneficiaries	*74*	*96*	*113*	*103*	*35*	*40*	*222*	*239*
- Beneficiaries entitled to deferred benefits	*10*	*10*	*-*	*-*	*-*	*-*	*10*	*10*
- Pensioners	*141*	*140*	*-*	*-*	*8*	*7*	*149*	*147*
	225	*246*	*113*	*103*	*43*	*47*	*381*	*396*
Obligation								
- prefinanced	*192 85%*	*203 83%*	*50 44%*	*44 43%*	*- -*	*- -*	*242 64%*	*247 62%*
- not financed	*33 15%*	*43 17%*	*63 56%*	*59 57%*	*43 100%*	*47 100%*	*139 36%*	*149 38%*
	225	*246*	*113*	*103*	*43*	*47*	*381*	*396*
Change in plan assets								
Fair value of plan assets at beginning of period	**154**	**215**	**23**	**37**	**-**	**-**	**177**	**252**
- Interest income recognised in income	4	7	-	1	-	-	4	8
- Impact of revaluation	9	2	-	-	-	-	9	2
- Contributions paid	9	2	1	1	-	-	10	3
- Benefits paid	(9)	(30)	-	(16)	-	-	(9)	(46)
- Change to consolidation scope	(1)	(44)	-	-	-	-	(1)	(44)
- Translation differences and other movements	(13)	2	-	-	-	-	(13)	2
Fair value of plan assets at period close (II)	**153**	**154**	**24**	**23**	**-**	**-**	**177**	**177**
Plan assets								
- Listed on an active market	*153 100%*	*154 100%*	*12 50%*	*12 52%*	*- -*	*- -*	*165 93%*	*166 94%*
- Unlisted	*- -*	*- -*	*12 50%*	*11 48%*	*- -*	*- -*	*12 7%*	*11 6%*
	153	*154*	*24*	*23*	*-*	*-*	*177*	*177*
Net liabilities in the balance sheet (I) - (II)	**72**	**92**	**89**	**80**	**43**	**47**	**204**	**219**

The table below shows the breakdown between the main countries, the obligations in connection with employee-related liabilities, plan assets, net liability and financial cover ratio.

(€ million)	December 31, 2017				December 31, 2016			
	Current value of bonds (a)	Fair value of financial assets (b)	Net liabilities in the balance sh (a) + (b)	Financial coverage rate - (b) / (a)	Current value of bonds (a)	Fair value of plan assets (b)	Net liabilities in the balance sh (a) + (b)	Financial coverage rate - (b) / (a)
France	198	(73)	125	36.9%	203	(66)	137	32.5%
United States	89	(83)	6	93.3%	104	(90)	14	86.5%
Norway	10	(3)	7	30.0%	12	(3)	9	25.0%
New Caledonia	39	(11)	28	28.2%	39	(11)	28	28.2%
Gabon	35	-	35	-	29	-	29	-
Other countries	10	(7)	3	70.0%	9	(7)	2	77.8%
Total	**381**	**(177)**	**204**	**46.5%**	**396**	**(177)**	**219**	**44.7%**

The chart below illustrates how the funds are invested.



Projected cash outflows

The global average term was 14.4 years at 31 December 2017 (31 December 2016: 14.6 years).

In 2018, contributions for employee-related liabilities are estimated at €1 million. Future benefits, whether paid by levies on investments or directly by the ERAMET Group, are estimated at €17 million.

Bonus share plan and share-based payments

Accounting method

The ERAMET Group has established various share award plans that are all equity-settled plans: "democratic" plans open to all employees that are not subject to performance criteria and "selective" plans open to certain employees and corporate officers subject to performance requirements.
The fair value of the services received in consideration for the granting of these options is definitively measured with reference to the fair value of the options on the grant date and the number of options that will have vested by the end of the vesting period.
The total fair value thereby determined is apportioned on a straight-line basis over the full vesting period for the plans, with the number of vested exercisable options assumed at the beginning of the vesting period being reviewed at every reporting date.
This fair value is recognised in Current operating profit (loss) as administrative and selling expenses, offset by an increase in shareholders' equity.

Estimates, assumptions and judgements

Judgement must be exercised to determine the fair value of share award plans at the award date.
The fair value of "democratic" plans is estimated using the *Black-Scholes-Merton* model.
"Selective" plans are subject to two performance conditions: one intrinsic condition based on the ERAMET Group's financial performance and one external condition based on the ERAMET stock performance. The fair value of these plans is measured using the Monte Carlo model.
The assumptions used to measure the plans are based on:

- expected volatility determined on the basis of an observation of the stock's historical performance;
- a risk-free zero coupon rate over the term of the plan;
- a future distribution rate based on the average for the last five years.

The bonus share awards to employees with tax residence in France fully vest after a two-year vesting period for democratic plans, and after three years for selective plans, on the understanding that the beneficiaries must retain the shares awarded to them for an additional two years.
The bonus share awards to employees with tax residence outside France fully vest and are freely transferable after a four-year period.

Share-based payments relate only to bonus share plans for the benefit of employees and settled in the form of shares. They represented an expense of €6 million for the 2017 reporting period (FY 2016: €3 million).

Three new bonus share plans were granted on 23 February 2017 and 23 May 2017:

- one plan for all employees on 23 February 2017 for an initial total of 23,626 shares;
- one plan open to certain employees and corporate officers on 23 February 2017, of which:
    - part of the shares are subject to two performance conditions – an internal condition with 2 indicators (current operating profit / sales and cash flow from operating activities) for 2/3 and an external condition for 1/3 – for an initial total of 92,009 shares; and
    - part of the shares are not subject to performance conditions, for an initial total of 50,137 shares.

- a share plan for Ms Christel Bories, in her role as Chairman and Chief Executive Officer with effect from 23 May 2017, amounting to a total of 12,500 performance shares, the characteristics and conditions of which are identical to those of the performance share plan granted to certain employees and corporate officers as described above.

The criteria for share awards and the assessment of the accounting expense are the same as those described above.

The characteristics of the three new bonus share award plans for 2017 are as follows:

		Number of shares	Exercise price (€)	Maturity (years) (1)	Risk free rate	Average dividend rate	Fair value of of option (€) (2)
Plan open to all employees	France/Italy	10,076	free	2 + 2	-0.37%	1.00%	49.29
	World	13,550	free	4 + 0	-0.07%	1.00%	50.23
Plan open to certain employees and corporate officers	France/Italy	104,291	free	3 + 2	-0.22%	1.00%	50.74 / 28.33
	France	12,500	free	3 + 2	-0.30%	1.00%	41.86 / 22.84
	World	37,855	free	4 + 0	-0.07%	1.00%	50.23 / 28.73

(1) Maturity = vesting period + lock-in period.

(2) Bonus share award plans whose share awards are subject to two performance conditions have two fair values:
the first being the intrinsic condition and the second being the external condition

The change in the number of bonus share awards in the 2016 and 2017 reporting periods was as follows:

number of bonus shares	31/12/2017	31/12/2016
At beginning of period	**413,709**	**441,191**
New plans 2017/2016	178,272	159,233
Definitive allocations	(64,015)	(51,547)
Prescribed shares	(25,775)	(7,879)
Obsolete stock	(43,671)	(127,289)
At period close	**458,520**	**413,709**
Distribution by year of allocation		
2017	-	98,453
2018	114,591	129,279
2019	145,608	143,351
2020	148,987	42,626
2021	49,334	-

Note 12 – Provisions

A provision is a debt recorded in the balance sheet. It is an estimated value owing to uncertainty as to the time of payment and the amount to be paid. The main provisions set aside by the ERAMET Group relate to site restoration and environmental and social risks (especially restructuring).

Accounting method

The ERAMET Group sets aside a provision, where its amount can be reliably estimated, to cover all liabilities arising from past events that are known at the reporting date and the settlement of which is likely to result in an outflow of resources to settle the liability.

Provisions for site restoration and dismantling, provisions for environmental risks

The provisions for mining site restoration are recognised when mining sites are opened and as and when they show degradation, and are then remeasured and accreted at each reporting date. Where there is a legal or contractual obligation to restore mining or industrial sites, a restoration provision is made, offset by an environmental and dismantling asset. The provision is based on site-by-site estimates of the cost of this work. The asset is amortised over the life of the operation of the mine or the industrial site. Restoration costs are discounted over the period remaining until the expected end of operation of the mine or site, and the effects attributable to the passage of time (accretion expenses) are recognised in Net profit (loss) for the period under Other financial income and expenses (see Note 6). Provisions are made for all other environmental contingencies on the basis of estimated future costs without, however, making any allowance for insurance indemnities receivable. For industrial sites where there are no plans to discontinue operations, no provision is made for site restoration.

Depending on the governing laws in each country, an environmental bond issued by a banking or financial institution to the benefit of local authorities may need to be set up for the rehabilitation of mining and industrial sites.

Restructuring and redundancy plans

Provisions are made for restructuring and redundancy costs where such measures have been planned in detail and announced before the reporting date or whose implementation has begun.

Estimates, assumptions and judgements

Provisions for site restoration and dismantling

The Group's industrial sites follow the environmental regulations in force in each country where they are located. The ERAMET Group must meet regulatory and constructive obligations with regard to the restoration of certain mining sites at the end of operation. Provisions for site restoration and dismantling of industrial sites are estimated on the basis of forecast cash flows by maturity and discounted using an inflation rate and a discount rate determined in accordance with local economic conditions.

These provisions are recognised in relation to the immediate deterioration of an asset to be restored or dismantled and changes in assumptions will therefore correct this value with a prospective effect.

The planned end date of operation of the mines or industrial sites does not exceed up the year 2060 in New Caledonia, the years 2032 and 2042 in Gabon and the year 2074 for the industrial sites in the United States.

The ERAMET Group measures its provision for site restoration and dismantling at each reporting date or as new information becomes available. The final costs of site restoration and dismantling are therefore uncertain by their very nature. These uncertainties may lead to actual expenditure in the future whose amount may differ from the current provision amount. Therefore, major adjustments may be made to the provisions set aside, which may impact future income.

The provisions made are based on good practice in the sector and are calculated as follows:

- **For mining**, calculation of a cost per hectare for site restoration (replanting, landscaping, soil management, etc.) based on the cleared areas. The costs are based on estimated internal costs or the cost of providers, depending on the nature and complexity of the areas to be restored.
- **For the dismantling of facilities**, cost estimation based on external estimates or experience from dismantling/remediation work performed on other group sites.
- These costs are inflated and accreted based on the estimated useful lives. The estimated rates, including the discount rate, are fixed according to the same terms as those used for the assessment of employee-related liabilities (see Note 11).

The provision for site restoration represents the best estimate of the discounted value of future costs to be incurred.

(€ million)		Financial Year 2017		Financial Year 2016
At beginning of period		**520**		**597**
Allocations (reversals) for the period		8		19
- allocations for the period	68		71	
- used (reversals) for the period	(42)		(50)	
- unused (reversals) for the period	(18)		(2)	
Accretion expenses		8		9
Dismantling assets		3		13
Translation adjustments and other movements		(14)		(118)
At period close		**525**		**520**
- Due after more than one year		494		482
- Due in less than one year		31		38
Environmental contingencies and site restoration		435		404
Employees		17		31
Other liabilities and charges		73		85

Site restoration, dismantling and environmental contingencies

(€ million)	31/12/2017	31/12/2016
Site restoration (*)	390	373
Environmental contingencies	45	31
Total	**435**	**404**
(*) of which provisions offsetting a dismantling asset	296	300
- Due after more than one year	435	398
- Due in less than one year	-	6

Site restoration and dismantling

(€ million)		Financial Year 2017		Financial Year 2016
At beginning of period		**373**		**349**
Allocations (reversals) for the period		16		7
- allocations for the period	25		12	
- used (reversals) for the period	(3)		(5)	
- unused (reversals) for the period	(6)		-	
Accretion expenses		8		9
Dismantling assets		3		13
Translation adjustments and other movements		(10)		(5)
At period close		**390**		**373**
Le Nickel-SLN (New Caledonia) – ERAMET Nickel		315		280
Comilog (Gabon) – ERAMET Manganese		35		43
ERAMET Marietta (United States) – ERAMET Manganese		26		29
Comilog France – ERAMET Manganese		14		14
GCMC (United States) – ERAMET Manganese		-		6
Other companies		-		1

Regulatory framework of provisions for site restoration and dismantling

New Caledonia

For mining, the 2009 Mining Code establishes the general framework. The provisions are allocated to each of the mine sites in their prefectural operating licence.

For industrial operations governed by ICPE, the regulatory framework is based on Article 3 of the decision of the South Province of 25/09/2008, whose implementation involves the application of certain metropolitan circulars relating to site safety.

The provisions for wash facilities (industrial facilities on mine sites) are for their part included in the ICPE prefectural orders for each of the sites concerned.

Gabon

The existing provisions used as a reference for Gabon have not been set out in detail (no implementing circular). However rehabilitation projects are based on the decree establishing the conditions for application of Law No. 005/2000 of 12 October 2000 (Mining Code), as amended and supplemented by Order 2002 on the Mining Code in the Gabonese Republic.

The provision under Article 78 was also accounted for, in line with Article 21.5 of the COMILOG Mining Convention.

United States

Provision is made for two key components:

- restoration of waste water basins, a regulatory requirement contained in the local permit (“Permit to Install”);
- work performed as part of the “Voluntary Action Plan” negotiated with the US Environmental Protection Agency (EPA) in 2010 in connection with the “Ohio waste laws” as part of the cessation of activities at the North site (asbestos removal and dismantling of the corresponding facilities).

The discount and inflation rates used to determine the site restoration and dismantling provisions are detailed below:

	31/12/2017		31/12/2016	
	Discount rate	Inflation rate	Discount rate	Inflation rate
United States	3.60%	2.00%	3.80%	2.00%
New Caledonia	2.20%	0.60%	2.60%	0.60%
Gabon	7.00%	2.50%	6.00%	2.50%

An increase or decrease of 0.25% in the discount rate would result in an increase or decrease of around €25 million in provisions at 31 December 2017 (31 December 2016: €14 million), mainly affecting Le Nickel-SLN in New Caledonia.

Estimated expenditure is allocated as follows in percentage terms:

(€ million)	31/12/2017	31/12/2016
2018-2022 / 2017-2021	6%	15%
2023-2027 / 2022-2026	8%	13%
2028 and beyond / 2027 and beyond	86%	72%

Employees

(€ million)	31/12/2016	31/12/2016
ERAMET Alloys	8	18
ERAMET Manganese	3	7
ERAMET Holding	1	2
Restructuring and redundancy plans	**12**	**27**
Other labour liabilities and charges	5	4
Total	**17**	**31**

Other liabilities and charges

(€ million)		Financial Year 2017		Financial Year 2016
At beginning of period		**85**		**179**
Allocations (reversals) for the period		(6)		15
- allocations for the period	24		23	
- used (reversals) for the period	(18)		(8)	
- unused (reversals) for the period	(12)		-	
Translation adjustments and other movements		(6)		(109)
At period close		**73**		**85**
Provision for free return – Concession		28		26
Provisions for tax contingencies		5		18
Commercial disputes		5		5
Other provisions for liabilities and charges		35		36

Note 13 – Related-party transactions

Accounting method

Transactions with related parties comprise the following:

ordinary transactions with non-consolidated companies and associates;
gross compensation and benefits to directors and members of the Executive Committee.

Current transactions with non-consolidated companies and associates

Income Statement

(€ million)	Financial Year 2017	Financial Year 2016
Sales		
- Non-consolidated controlled subsidiaries	24	26
- Associates and joint ventures	8	6
Cost of sales, administrative and selling expenses		
- Non-consolidated controlled subsidiaries	(4)	(4)
- Associates and joint ventures	(50)	(49)
Net debt cost		
- Non-consolidated controlled subsidiaries	-	-
- Associates and joint ventures	-	-

The cost of sales and administrative and selling expenses mainly correspond to Aubert & Duval's purchases from Ukad (a company accounted for using the equity method of accounting).

Balance sheet

(€ million)	Financial Year 2017	Financial Year 2016
Trade and other receivables		
- Non-consolidated controlled subsidiaries	10	22
- Associates and joint ventures	26	27
Trade and other payables		
- Non-consolidated controlled subsidiaries	3	1
- Associates and joint ventures	10	10
Net financial assets (liabilities)		
- Non-consolidated controlled subsidiaries	9	10
- Associates and joint ventures	60	64

Gross compensation and benefits to directors and members of the Executive Committee

(€ thousand)	Financial Year 2017	Financial Year 2016
Short-term benefits		
- Fixed compensation	3,291	2,414
- Variable compensation	2,573	1,913
- Attendance fees	765	843
Other benefits		
- Post-employment benefits	3,692	673
- Retirement package	-	-
- Compensation paid in shares	1,205	1,193
Total	**11,526**	**7,036**

Note 14 – Off-balance sheet commitments, other commitments, contingent liabilities and other disclosures

The ERAMET Group has reached agreements with third parties to cover the good performance of its obligations. These obligations are dependent upon subsequent events that may result in the ERAMET Group's making or receiving a payment. They are not recognised in the balance sheet if they are not likely to increase the obligations already reported in the balance sheet.

Off-balance sheet commitments

(€ million)		31/12/2017		31/12/2016
Commitments made		**270**		**298**
- Operating activities	105		106	
- Financing activities	165		192	
Commitments received		**5**		**14**
- Operating activities	5		14	
- Financing activities	-		-	
Available credit facilities		730		-

These commitments mostly relate to:

- operating activities: client and environmental bank guarantees, other endorsements and bank guarantees (customs, leases), letters of credit;
- financing activities: guarantees, pledges, collateral and mortgages for external financing of equity method and non-consolidated companies.

Functional guarantees for the performance of business contracts

Functional guarantees are any commitments relating to business contracts, given by ERAMET and its subsidiaries to clients.

These commitments mainly consist of advance payment bonds and product guarantees post delivery of goods.

To finance the performance of the contract, the ERAMET Group collects advance payments from the client. To guarantee their refund in case of a breach of its contractual obligations, the ERAMET Group may, at the client's request, establish an advance payment bond. These bank guarantees amounted to €16 million at 31 December 2017 (31 December 2016: €16 million).

Product warranties fall under the ERAMET Group's limit of liability defined contractually for each business contract. The ERAMET Group does not recognise provisions for guarantees given that there have been no warranty claims from its clients.

The ERAMET Group considers its financial risk relative to all the above guarantees to be low, based on historical data and on the existence of civil liability policies that would limit the financial consequences on the Group's consolidated financial statements.

Financing activities

Off-balance sheet commitments relating to financing activities mainly correspond to the commitments given in respect of the ERAMET Group's share in the TiZir Ltd bond issue and the commitments given to MDL in the context of the financing of the joint venture, TiZir Ltd, through a subordinated loan (see Other commitments).

Other commitment received

The company Le Nickel-SLN has a €50 million available financing from the French State out of a total of €200 million due on June 30, 2024. The amount drawn at the end of 2017 amounts to €150 million (unchanged on 2017).

Future lease payments

(€ million)	31/12/2017	31/12/2016
Less than one year	27	32
One year to five years	80	84
More than five years	103	107
Total	**210**	**223**

Other commitments

Investment in Senegal through the TiZir Ltd joint venture

The ERAMET Group, together with its partner Mineral Deposits Ltd (MDL), has expanded its investment in the mineral sands operation in Senegal.

In addition to the initial investment, each partner contributed USD 137.5 million as capital, the full amount of which was paid out in 2013. Furthermore, the ERAMET Group (via ERAMET S.A.) granted a shareholders' loan of USD 45 million to TiZir Ltd, the full amount of which was paid out in 2013.

The partners were also party to a mutual USD 25 million guarantee covering certain specific contingencies.

The two partners contributed equally to financing the joint venture through a subordinated loan of USD 105 million, of which the last tranche was paid out in September 2015.

In 2015, the ERAMET Group committed to granting a loan to MDL to the extent that the latter would not be able to honour some of the calls for funds.

At 31 December 2016, the ERAMET Group (via Eralloys Holding, a wholly-owned subsidiary of ERAMET S.A.) granted a loan of USD 13.2 million to MDL to allow the company to make its contribution to calls for funds from 22 December 2015 onwards. MDL repaid this loan in full to Eralloys Holding in 2017.

Trans-Gabon railway concession – SETRAG

Under the terms of the 2005 agreement, signed for an initial period of 30 years, SETRAG, the concession holder, is required to meet operating capacity targets (volume of goods and number of passengers).

The concession holder is free to set prices. Its main shareholder, COMILOG, is committed to ensuring that the necessary funding is made available to cover the capital expenditure required to achieve the operating capacity targets.

On 16 October 2015, SETRAG and the Gabonese Republic signed an amendment to the concession agreement for the management and operation of the Trans-Gabon railway. The aim of the amendment is to sustainably restore the technical capacity of the railway and the economic viability of the concession holder. This amendment thus provides for a remedial investment plan estimated at €316 million over 8 years, of which €93 million will be provided by the Gabonese state and €213 million by SETRAG. The necessary funding for the implementation of this plan was put in place in 2016.

At 31 December 2017, cumulative investments amounted to €38 million, broken down into €24 million and €14 million respectively in 2017 and 2016. Two tranches of the IFC/PROPARCO loan were drawn in 2017, amounting to a total of €33 million.

Call option on Pt Weda Bay Nickel in favour of Pt Antam

The Indonesian state company Pt Antam, which owns 10% of Pt Weda Bay Nickel, has a call option exercisable between the submission date of a feasibility study by an independent banking institution and 30 days later. This option, which relates to 15% of Pt Weda Bay Nickel's share capital, will be priced at 150% of the expenses incurred at the time of the decision to begin construction. Pt Antam also has an additional call option exercisable during the first 60 days of the 14th year of production on an interest of between at least an additional 5% and the percentage required to hold a maximum interest of 40%. If Pt Weda Bay Nickel's shares are listed, the price of the shareholding will be calculated based on the average market price for the 60 days preceding and 60 days following the option exercise. If Pt Weda Bay Nickel is not listed, the shareholding value will be assigned by independent experts.

Contingent liabilities

Contingent liabilities arise from:

- *past events which, by nature, can be solved only if one or more unpredictable future events occur or do not occur;*
- *a current obligation resulting from past events but not recognised because:*
    - *it is not likely that an outflow of resources embodying economic benefits will be required to settle the obligation; or*
    - *the amount of the obligation cannot be measured with sufficient reliability.*

To measure their potential impact, the ERAMET Group exercises judgement to a great extent and may rely on estimated outcomes of future events.

Contingent liabilities are not recognized in the financial statements unless they arise from a business combination. Significant contingent liabilities are, if any, described in the notes.

Tax audit in Italy

Aubert & Duval is subject to a tax audit for the years 2009 to 2016, focusing on the assumption of the existence of a permanent establishment in Italy.

Aubert & Duval's tax audit for 2009 to 2016 ended this year with a settlement of €1.7 million in favour of the Italian tax authorities.

COMILOG customs inspection

In 2017, Comilog continued discussions with the customs tax administration as part of its audit. It is not possible to comment on the outcome of the review at this stage in proceedings.

Environmental liabilities

On certain sites there are pollution indices for which it is not possible to determine (i) the precise nature, (ii) the extent, (iii) the remediation obligations, (iv) the date of completion, making it impossible to reliably determine an amount of potential commitment and its maturity.

If assumptions such as the cease of the activity, a regulatory change, site operating conditions were to occur, the Group would be led to review its position and recognised a provision based on these most current information.

Other information

ICPE (facilities classified for environmental protection) regulation applicable to the Doniambo electric power plant

By order of the President of the Assembly of South Province, New Caledonia on 12 November 2009, new, more stringent technical directives regarding airborne emissions were declared applicable at the latest by 1 September 2013 in the present electric power plant at Doniambo. By order of 27 December 2016, the President of the Assembly of South Province extended the deadline for the application of the new limits for airborne emissions to 30 June 2019.

GCMC and BMC placed under Chapter 11 protection

In June 2016, GCMC, a wholly-owned subsidiary of COMILOG, specialising in the recycling of oil catalysts in the United States, and its wholly owned subsidiary BMC, filed a voluntary petition before the competent court in Pennsylvania for protection under chapter 11 of the US Bankruptcy code. Chapter 11 allows companies to continue operating for the duration of the proceedings and may facilitate the search for a buyer.

The two companies have found buyers for their assets and the two legal structures are being liquidated as at 31 December 2017.

Note 15 – Fees paid to the Statutory Auditors

(€ thousand)	Ernst & Young		KPMG		Other		TOTAL	
	2017	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Statutory audit, certification, examination of individual and consolidated financial statements								
- ERAMET S.A.	205	178	219	222	-	-	424	400
- Fully consolidated companies	890	857	707	768	87	422	1,684	2,047
Sub-total	**1,095**	**1,035**	**926**	**990**	**87**	**422**	**2,108**	**2,447**
	75%	*82%*	*65%*	*76%*	*86%*	*100%*	*70%*	*82%*
Other work and services directly relating to the statutory audit								
- ERAMET S.A.	88	44	55	73	-	-	143	117
- Fully consolidated companies	133	104	48	25	2	-	183	129
Sub-total	**221**	**148**	**103**	**98**	**2**	**-**	**326**	**246**
	15%	*12%*	*7%*	*8%*	*2%*	*0%*	*11%*	*8%*
Other services provided by the Statutory Auditor firms to fully consolidated subsidiaries								
- Legal, tax and employee-related	112	46	394	210	12	-	518	256
- Other	39	33	4	4	-	-	43	37
Sub-total	**151**	**79**	**398**	**214**	**12**	**-**	**561**	**293**
	10%	*6%*	*28%*	*16%*	*12%*	*0%*	*19%*	*10%*
Total	**1,467**	**1,262**	**1,427**	**1,302**	**101**	**422**	**2,995**	**2,986**

Note 16 – Events after the reporting date

Repayment of the revolving credit facility balance and decrease in the outstanding balance

The balance of €250 million of the revolving credit facility (RCF) was repaid in full on 18 January 2018.

On February 13, 2018, this Revolving Credit Facility was extended for an amount of €981 million and a five-year term, led to a new maturity in January 2023. The available amount is maintained at €981 million.

Note 17 – Basis of preparation of consolidated financial statements

General principles and declaration of compliance

Pursuant to European Regulation 1606/2002 of 19 July 2002 on the application of international accounting standards, the consolidated financial statements of the ERAMET Group for the financial year ended 31 December 2017 have been prepared in euros rounded to the nearest million, unless instructed otherwise, in accordance with IFRS (International Financial Reporting Standards) as adopted by the European Union at 31 December 2017.

The accounting principles applied for the preparation of the annual consolidated financial statements are in line with IFRS and the related interpretations, as adopted by the European Union at 31 December 2017 and available on the website: http://ec.europa.eu/finance/accounting/ias/index_fr.htm.

The accounting principles and methods adopted for the consolidated financial statements at 31 December 2016 are those that were used for the consolidated financial statements at 31 December 2015, except for the IFRS interpretations, standards and amendments adopted by the European Union and IASB whose application is mandatory for reporting periods opened as from 1 January 2017 (and for which the ERAMET Group had not opted for early application).

These standards and amendments have had no impact on the ERAMET Group's consolidated financial statements.

The ERAMET Group did not adopt the standards, interpretations and amendments published respectively by IASB and IFRS IC (IFRS Interpretations Committee) whose application was not mandatory for the reporting periods opened as of 1 January 2017. These are currently being studied to estimate their potential impact.

Progress on projects to implement new IFRS standards (IFRS 9, IFRS 15, IFRS 16)

IFRS 9 *Financial Instruments* applies as of 1 January 2018. The application of this new standard will not have a significant impact on recognition or classification and measurement of financial assets and liabilities. The change in approach in relation to hedge accounting will also have no impact on the consolidated financial statements.

IFRS 15, *Revenue from Contracts with Customers*, effective from 1 January 2018, will not have a significant impact on revenue recognition despite the sub-division of certain sales into two distinct performance obligations (sales of goods and transport/insurance).

Specific analyses of the revenue recognition of tools and dies of the Alloys division, especially in relation to the assignment of the use of dies to revenues generated from mass production (long-term contracts), did not reveal any divergence between the current treatment and IFRS 15 requirements.

The impact of the application of **IFRS 16, *Leases***, as of 1 January 2019, is currently being assessed with the completion of a detailed lease inventory. This assessment is based on the procedures in place to report information relating to off-balance sheet commitments (see Note 14 on future lease commitments). A dedicated management tool was put in place in the second half of 2017 to enable the operational monitoring of contracts and to automate any restatements. The application of this new standard will have an upward impact on net debt and fixed assets and an improvement in EBITDA.

Consolidation principles and scope

Consolidation principles

The consolidated financial statements of ERAMET Group comprise the financial statements of ERAMET and those of its fully-consolidated and equity-method subsidiaries.

The subsidiaries are fully consolidated if ERAMET holds exclusive direct or indirect control. ERAMET has exclusive control over a subsidiary when it is exposed to variable returns from its involvement with that subsidiary and has the ability to affect those returns through its power over the subsidiary. ERAMET reassesses its control over a subsidiary if facts and circumstances indicate a change in any of the elements of control.

The subsidiaries are accounted for using the equity method if ERAMET exercises joint control or has significant influence (Note 9). The equity method of accounting consists of replacing the carrying amount of the holding in a joint venture or an associate by the acquisition cost of these shares adjusted for ERAMET's share in the equity at the reporting date.

Translation of foreign currency-denominated transactions and financial statements

Foreign currency transactions are translated at the applicable exchange rate at the time of the transaction. Foreign currency debts and receivables are measured at the closing rate. Translation adjustments resulting from this conversion are recognised in income for the period, except those involving loans and borrowings between the ERAMET Group companies, considered an integral part of the net investment in a foreign subsidiary. These are recognised directly in shareholders' equity under Translation adjustments, linked to the foreign subsidiary.

The financial statements of foreign entities with functional currencies other than the euro were translated using the official exchange rates at 31 December 2017 for balance sheet items, except for shareholders' equity, for which historical rates were applied. Items from the Profit and loss account and Statement of cash flows are translated at the average rate over the period. Translation adjustments stemming from currency fluctuations used to translate shareholders' equity and profit (loss) for the period are allocated to reserves. Translation adjustments are carried as a change to shareholders' equity and broken down between Group and non-controlling interests. Where a foreign subsidiary ceases to be consolidated, the cumulative amount of translation differences is recognised in profit or loss for the period.

The main currencies used preparing the consolidated financial statements for the 2016 and 2017 reporting periods are as follows (conversion into euro):

Currency/conversion rate for €1	Financial Year 2017		Financial Year 2016	
	closing	**average**	**closing**	**average**
US dollar	1.1993	1.12767	1.0541	1.10732
Norwegian krone	9.8403	9.32025	9.0863	9.30045
Yuan Renminbi	7.8044	7.62086	7.3202	7.34816
CFA franc (pegged)	655.957	655.957	655.957	655.957
CFP franc (pegged)	119.33174	119.33174	119.33174	119.33174

Scope of consolidation

(number of companies)	31/12/2017	31/12/2016
Fully consolidated companies	49	50
Equity method companies	6	7
Number of consolidated companies	**55**	**57**

Financial Year 2017

At 31 December 2017, the following changes have been made to the consolidation scope compared to 31 December 2016:

- **additions to consolidation scope comprise,** as of 1 January 2017, Brown Europe, a wholly-owned subsidiary of ERAMET Holding Alloys; Eramet Sandouville, a wholly-owned subsidiary of ERAMET Holding Nickel; and, as of 1 July 2017, the newly established ERAMET Nickel SAS, a wholly-owned subsidiary of ERAMET Holding Nickel.
- **removals from consolidation scope**:
    - Eurotungstène following its sale finalised on 3 April 2017,
    - GCM Liquidation Co (formerly GCMC), currently in liquidation.
- **acquisition by ERASTEEL of a 51% interest in HeYe Erasteel Innovative Materials Co Ltd (HEIML),** which became Erasteel Innovative Materials Co Ltd (EIML) and was fully consolidated as of September 2017.
- **Merger of ERAMET Alloys** with ERAMET Holding Alloys
- **Mergers of Cominc and Poum** with Le Nickel-SLN

Financial Year 2016

At 31 December 2016, the following changes have been made to the consolidation scope compared to 31 December 2015:

- **removals from consolidation scope** (see Key events in the reporting period)
    - ERACHEM subsidiaries following the sale of the company to PMHC II on 30 December 2016 (see Key events in the reporting period): Erachem Comilog Inc., Erachem Comilog Sprl, Comilog US, GECC, Erachem Mexico.
    - the legal entity of BMC, following the sale of its assets and the liquidation of the company expected in early 2017,
    - Somivab, following the sale of the company.
- **additions to consolidation scope** at 1 January 2016 of the following wholly-owned subsidiaries of ERAMET: Eramet Services, ERAMET Engineering, ERAMET Research.
- **addition to consolidation scope** at 1 January 2016 of Ecotitanium, established in 2015, of which ERAMET holds a 21.75% interest and consolidated using the equity method.
- **ERAMET's acquisition of a 33.4% stake in Strand Minerals Pte Ltd** from Mitsubishi and Pamco (see Key events in the reporting period).

All companies within the scope of consolidation share the same reporting date of 31 December.

List of companies within the scope of consolidation as at 31 December 2017

Company	Country	Head office	Consolidation method	Percentage (%) Control	Percentage (%) interest
Eramet	**France**	**Paris**	**Consolidating entity**	-	-
Nickel					
Le Nickel - SLN	New Caledonia	Noumea	Fully consolidated	56	56
Weda Bay Minerals Inc.	Canada	Halifax	Fully consolidated	100	100
Weda Bay Mineral Singapore Pte Ltd	Singapore	Singapore	Fully consolidated	100	100
Strand Minerals Pte Ltd	Singapore	Singapore	Fully consolidated	100	100
Pt Weda Nickel Ltd	Indonesia	Jakarta	Fully consolidated	90	90
Eramet Holding Nickel	France	Paris	Fully consolidated	100	100
Eramet Sandouville	France	Sandouville	Fully consolidated	100	100
Eramet Nickel SAS	France	Paris	Fully consolidated	100	100
Manganese					
Eramet Holding Manganese	France	Paris	Fully consolidated	100	100
Eramet Comilog Manganese	France	Paris	Fully consolidated	100	81.86
Eramet Marietta Inc.	United States	Marietta	Fully consolidated	100	100
Eramet Norway A/S	Norway	Porsgrunn	Fully consolidated	100	100
Eralloys Holding A/S	Norway	Baerum	Fully consolidated	100	100
DNN Industrier A/S	Norway	Odda	Fully consolidated	100	100
Comilog S.A.	Gabon	Moanda	Fully consolidated	63.71	63.71
Setrag S.A.	Gabon	Libreville	Fully consolidated	100	63.71
Comilog Holding	France	Paris	Fully consolidated	100	63.71
Comilog International	France	Paris	Fully consolidated	100	63.71
Port Minéralier d'Owendo S.A.	Gabon	Libreville	Fully consolidated	97.24	61.95
Comilog France	France	Paris	Fully consolidated	100	63.71
Comilog Dunkerque	France	Paris	Fully consolidated	100	63.71
TiZir Ltd	United Kingdom	London	Equity method	50	50
TiZir Titanium & Iron A/S	Norway	Tyssedal	Equity method	50	50
TiZir Mauritius Ltd	Mauritius	Mauritius	Equity method	50	50
Grande Côte Opérations S.A.	Senegal	Dakar	Equity method	45	45
Comilog Asia Ltd	Hong Kong	Hong Kong	Fully consolidated	100	92.74
Comilog Asia Ferro Alloys Ltd	Hong Kong	Hong Kong	Fully consolidated	100	92.74
Guilin Comilog Ferro Alloys Ltd	China	Guangxi	Fully consolidated	100	92.74
Comilog Far East Development Ltd	Hong Kong	Hong Kong	Fully consolidated	100	92.74
Eramet Comilog Shanghai Trading Co. Ltd	China	Shanghai	Fully consolidated	100	92.74
Eramet Comilog Shanghai Consultancy Services Co. Ltd	China	Shanghai	Fully consolidated	100	92.74
Alloys					
Erasteel SAS	France	Paris	Fully consolidated	100	100
Erasteel Champagnole	France	Champagnole	Fully consolidated	100	100
Valdi	France	Paris	Fully consolidated	100	100
Erasteel Kloster AB	Sweden	Söderfors	Fully consolidated	100	100
Erasteel Stubs Ltd	United Kingdom	Warrington	Fully consolidated	100	100
Erasteel Inc.	United States	New Jersey	Fully consolidated	100	100
Erasteel Trading Ltd	China	Tianjin	Fully consolidated	100	100
Erasteel Innovative Materials Co Ltd	China	Tianjin	Fully consolidated	100	100
Eramet Holding Alloys	France	Paris	Fully consolidated	100	100
Aubert & Duval	France	Paris	Fully consolidated	100	100
Interforge	France	Clermont-Ferrand	Fully consolidated	94	94
Brown Europe	France	Laval-de-Cère	Fully consolidated	100	100
Ecotitanium	France	Paris	Equity method	21.75	21.75
UKAD	France	Paris	Equity method	50	50
Holding and others					
Eras SA	Luxembourg	Luxembourg	Fully consolidated	100	100
Metal Securities	France	Paris	Fully consolidated	100	100
Metal Currencies	France	Paris	Fully consolidated	100	100
Eramet Services	France	Paris	Fully consolidated	100	100
Eramet Research	France	Trappes	Fully consolidated	100	100
Eramet Ingénierie	France	Trappes	Fully consolidated	100	100
Eramine	France	Paris	Fully consolidated	100	100
Bolera Minera S.A.	Argentina	Buenos Aires	Fully consolidated	82.43	82.43
Eramine Sud America S.A.	Argentina	Buenos Aires	Fully consolidated	100	100

Glossary

EBITDA

Earnings before financial income and expenses and other operating income and expenses, income tax, provisions for liabilities and charges, and depreciation of property, plant and equipment and amortization of intangible assets.

Current operating profit (loss)

Includes EBITDA, depreciation of property, plant and equipment, amortization of intangible assets and provisions for liabilities and charges. The current operating profit (loss) excludes material transactions that are considered unusual in nature, in particular events related to restructuring and impairment loses, shown in operating income and expenses.

Net profit (loss), Group share

Net profit for the period after tax, attributable to ERAMET shareholders, after accounting for the non-controlling interest in each of the ERAMET Group companies

OCI (Other Comprehensive Income)

Transactions for which the change in value of an asset or liability is recognised directly in equity without passing through the profit and loss account. This is the case, for example, for unrealized gains or losses on hedging instruments, actuarial gains and losses relating to employee benefits, and certain translation differences.

Industrial investments

Includes the acquisition of property, plant and equipment and intangible assets.

Group reporting

Financial information prepared for the Executive Committee, the chief operating decision-maker (CODM), in which the operating performance of joint ventures, the subgroup TiZir Ltd and the company UKAD are accounted for using the proportionate consolidation method. This information is reconciled with published data and is used to measure the performance of the ERAMET Group and its divisions (segment information – see note 3). It is also used for the ERAMET Group's financial reporting.

Net financial debt

Represents the gross financial debt (long- and short-term borrowings) less cash and cash equivalents and current financial assets. These items include the valuation of debt-hedging derivatives.

Gearing

Ratio of net financial debt to total equity (Group non-controlling interest).

Financial liquidity

Includes cash and cash equivalents, current financial assets and the available amount in the credit facilities made available to ERAMET Group companies.