HALF YEAR FINANCIAL REPORT

First half ended 30 June 2019

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1 HALF-YEAR ACTIVITY REPORT

1.1 MANAGEMENT ANALYSIS PRINCIPLES AND ACCOUNTING STANDARDS

The main alternative performance indicators used by the Group are defined in note C.1 to the condensed consolidated interim financial statements at 30 June 2019 presented in section 2 of this document.

As of 1 January 2019, the Group applies IFRS 16 "Leases". The income statement, balance sheet and cash flow statement for the first half of 2019 include the impacts of the Group's first-time application of IFRS 16, which are detailed in notes B, C.1 and C.10 to the condensed consolidated interim financial statements at 30 June 2019 presented in section 2 of this document. The comparative figures for 2018 have not been restated.

When analyzing changes in its results, particularly changes in sales, the Group identifies the impact of the following effects (such analysis is unaudited):

- **scope effect**: the impact of changes in the Group's scope of consolidation, which arise from acquisitions and divestments of entire businesses or as a result of the first-time consolidation or deconsolidation of entities. Increases or reductions in capacity are not included in the scope effect;
- **currency effect**: the mechanical impact of consolidating accounts denominated in currencies other than the euro at different exchange rates from one period to another. The currency effect is calculated by applying the foreign exchange rates of the prior period to the figures for the period under review;
- **price effect**: the impact of changes in average selling prices is estimated by comparing the weighted average net unit selling price of a range of related products in the period under review with their weighted average net unit selling price in the prior period, multiplied, in both cases, by the volumes sold in the period under review;
- **volume effect**: the impact of changes in volumes is estimated by comparing the quantities delivered in the period under review with the quantities delivered in the prior period, multiplied, in both cases, by the weighted average net unit selling price in the prior period.

1.2 FIRST-HALF 2019 HIGHLIGHTS

1.2.1 Organic growth projects

In order to support its customers' growth with innovative solutions for sustainable development and mobility, Arkema announced:

- the opening, with Hexcel, of a joint research and development laboratory in France as part of their strategic alliance to develop thermoplastic composites for the aerospace sector;
- the start-up of the Kepstan® PEKK facility at its site in Mobile, United States, to support the strong demand for carbon fiber reinforced composites and 3D printing. Through this investment, Arkema strengthens its offering of advanced materials that contribute notably to lightweighting materials in markets such as aerospace, oil and gas, electronics and automotive;
- the start-up of a new polyester resins manufacturing plant in Navi Mumbai (India) to support its customers' development throughout this region in this fast-growing market;
- the start-up by Sartomer, in April 2019, of a 30% capacity extension at its photocure liquid resin production plant in Nansha (China), in order to meet strong demand from customers in Asia in the electronics, 3D printing, adhesives and inkjet printing markets; and
- the choice of Jurong Island in Singapore as the location to build its new world-scale plant for the production of the amino 11 monomer and Rilsan® polyamide 11. With this project to increase by 50% its global capacities, the Group will support the strong demand from its customers in Asia for high-performance bio-based solutions to address notably the major opportunity of material lightweighting. This project is part of the Group's exceptional capital expenditure totaling some €500 million to be spread over the 2018-2021 period essentially. Construction is scheduled to be completed by late 2021.

1.2.2 Acquisitions

Acquisition of ArrMaz

In May 2019, Arkema reached a new milestone in the development of its specialty businesses, with the announcement of its planned acquisition of ArrMaz, a global leader in specialty surfactants for the crop nutrition, mining and infrastructure markets, with sales of US$290 million and an 18% EBITDA margin. Completed on 1 July 2019, the acquisition of this profitable, resilient and low capital intensive business, will lead to the creation of a new leader in specialty surfactants thanks to the excellent fit between Arkema and ArrMaz in terms of technologies, geographic reach and formulation expertise. The acquisition was based on a US$570 million enterprise value, which corresponds to an EV/EBITDA multiple of 10.8 times that should be reduced to around 7 times 2023 EBITDA taking into account synergies and ArrMaz's organic growth. ArrMaz has been integrated into Arkema's Performance Additives Business Line within the High Performance Materials division.

Acquisition of an equity interest in Carbon®

In June 2019, Arkema, through its subsidiary Sartomer, and Carbon®, a world leader in digital manufacturing, entered into a strategic partnership to deliver new high performance materials for Carbon®'s customers and partners. As part of this partnership, Arkema announced it acquired a US$20 million equity interest in Carbon®.

1.2.3 Financing

Arkema took advantage of favorable market conditions to partially refinance on 17 June 2019 its existing hybrid bonds through a combination of a new bond issue and a bond tender offer.

Consequently, the Group accepted the tender of existing perpetual hybrid bonds amounting to €400 million at a tender price of 106.137%. These bonds, which have a residual nominal value of €300 million, have a first call date on 29 October 2020 and carry an annual coupon of 4.75% until that date.

At the same time, the Group issued a €400 million perpetual hybrid bond. These bonds carry a first-call redemption option that Arkema may exercise at any time between 17 June 2024 and 17 September 2024, and have an annual coupon of 2.75% until the first call date, subject to early redemption.

1.3 ANALYSIS OF FIRST-HALF 2019 FINANCIAL RESULTS

The figures in this section are provided on a consolidated basis and in accordance with Arkema's organization into three divisions: High Performance Materials, Industrial Specialties and Coating Solutions.

1.3.1 Analysis of Arkema's results

(In millions of euros)	First-half 2019	First-half 2018	Year-on-year change
Sales	**4,469**	**4,442**	**+0.6%**
EBITDA	**777**	**813**	**-4.4%**
EBITDA margin	*17.4%*	*18.3%*	
Recurring depreciation and amortization	(252)	(218)	+15.6%
Recurring operating income (REBIT)	**525**	**595**	**-11.8%**
REBIT margin	*11.7%*	*13.4%*	
Other income and expenses	(23)	(4)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(19)	(18)	
Operating income	**483**	**573**	**-15.7%**
Equity in income of affiliates	(1)	1	
Financial result	(60)	(47)	+27.7%
Income taxes	(95)	(116)	-18.1%
Net income	**327**	**411**	**-20.4%**
Of which: non-controlling interests	4	4	
Net income – Group share	**323**	**407**	**-20.6%**
Adjusted net income	**357**	**421**	**-15.2%**

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

SALES

At €4,469 million, sales for the first half of 2019 were up 0.6% year-on-year. Prices were overall stable for the Group as a whole (up 0.3%), with continued strong initiatives to raise selling prices in the High Performance Materials division (up 4.7%) more than offsetting the decrease observed in Industrial Specialties and Coating Solutions in a context of volatile raw materials costs. Volumes declined 2.4% compared with the very high level recorded in the first half of 2018. This mainly reflects lower demand year-on-year in the automotive, consumer electronics and oil and gas markets, overshadowing the strong dynamic in batteries and 3D printing as well as higher volumes in Coating Solutions. The currency effect was a positive 2.3%, mainly due to the appreciation of the US dollar against the euro. The scope effect was limited to a positive 0.4%.

Excluding the corporate segment [1], the breakdown of sales by division was similar to first-half 2018, with High Performance Materials accounting for 45% of Group sales (unchanged year-on-year), Industrial Specialties 30% (31% in first-half 2018) and Coating Solutions 25% (24% in first-half 2018).

The regional sales split is also similar to that of first-half 2018, with Europe representing 38% of Group sales (39% in first-half 2018), North America 31% (unchanged from first-half 2018), Asia 27% (26% in first-half 2018) and the rest of the world unchanged at 4%.

[1] *As defined in note C.2 to the consolidated financial statements at 30 June 2019 in section 2 of this document.*

EBITDA AND RECURRING OPERATING INCOME

In a complex macroeconomic context that was less favorable than last year's, Arkema achieved a high EBITDA at €777 million, slightly down on the record performance of first-half 2018 (€813 million). Despite volumes being impacted by end markets, High Performance Materials resisted well, driven by innovation and the pro-active policy of raising selling prices, while growth in Coating Solutions mitigated the impact of market conditions in Fluorogases and of MMA/PMMA normalization compared with their historically high performances last year. The first-half 2019 EBITDA figure includes a €27 million positive impact from IFRS 16.

EBITDA margin remained excellent at 17.4% (18.3% in first-half 2018 and 17.3% in first-half 2017).

Recurring depreciation and amortization amounted to €252 million, up €34 million year-on-year, as a result of the €26 million impact of IFRS 16 and an unfavorable currency effect.

Recurring operating income (REBIT) amounted to €525 million, in line with the year-on-year changes in EBITDA and recurring depreciation and amortization. REBIT margin stood at 11.7%.

OPERATING INCOME

Operating income came in at €483 million, including €23 million in net other expenses, mainly corresponding to restructuring costs and asset impairments, as well as €19 million in depreciation and amortization resulting from the revaluation of assets carried out as part of purchase price allocations.

FINANCIAL RESULT

The financial result represented a net expense of €60 million against a €47 million net expense in first-half 2018. The year-on-year change mostly reflects an unfavourable interest rate effect on the portion of the Group's debt swapped into US dollars and actuarial losses on certain provisions for employee benefits.

INCOME TAXES

The income tax expense was down year-on-year at €95 million (versus €116 million in first-half 2018) in line with the change in results. Excluding non-recurring items, the tax rate for the first half of the year amounted to around 20% of recurring operating income.

NET INCOME GROUP SHARE AND ADJUSTED NET INCOME

Consequently, net income – Group share totaled €323 million (€407 million in first-half 2018) while net earnings per share amounted to €3.75 after deduction of the €37 million expense resulting from the refinancing of hybrid bonds.

Excluding the post-tax impact of non-recurring items, adjusted net income came in at €357 million, representing €4.68 per share.

1.3.2 Analysis of results by division

1.3.2.1 HIGH PERFORMANCE MATERIALS (45% OF GROUP SALES)

(In millions of euros)	First-half 2019	First-half 2018	Year-on-year change
Sales	**2,006**	**2,005**	**-**
EBITDA	**332**	**353**	**-5.9%**
EBITDA margin	*16.6%*	*17.6%*	
Recurring operating income (REBIT)	**243**	**275**	**-11.6%**
REBIT margin	*12.1%*	*13.7%*	
Other income and expenses	(17)	(2)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(17)	(18)	
Operating income	**209**	**255**	**-18.0%**

At €2,006 million, sales for the High Performance Materials division were stable compared with the first half of 2018, driven by a +4.7% price effect, positive across all product lines, reflecting continued actions to raise selling prices and optimization of the product mix towards higher value-added applications. In line with market trends, volumes were down 7.4% due to notably lower demand compared with last year in the automotive, consumer electronics and oil & gas markets, inventory adjustments in some of these chains and the particularly strong contribution from specialty molecular sieves in the first quarter of 2018. The scope effect was a positive 0.8%, corresponding to the integration of targeted acquisitions in adhesives. The positive 1.9% currency effect was mainly driven by the appreciation of the US dollar against the euro.

At €332 million, EBITDA was slightly down on the very good first-half 2018 performance, in an environment marked by the weakness of certain markets which weighed on volumes, particularly in advanced materials. These impacts were mitigated to a large extent by the benefits of pricing actions, particularly in adhesives, where EBITDA increased significantly year-on-year. At 16.6%, EBITDA margin remained high, above the division's margin for full-year 2018, while Bostik's EBITDA margin reached 13%, up by one percentage point year-on-year.

Recurring operating income totaled €243 million. This figure includes €89 million in recurring depreciation and amortization, up €11 million on first-half 2018, mainly stemming from the impact of IFRS 16 and an unfavorable currency effect. REBIT margin came in at 12.1%.

Operating income amounted to €209 million and included €17 million in depreciation and amortization related to the revaluation of assets carried out as part of purchase price allocations, and €17 million in net other expenses, mainly corresponding to restructuring costs in adhesives and asset impairments.

1.3.2.2 INDUSTRIAL SPECIALTIES (30% OF GROUP SALES)

(In millions of euros)	First-half 2019	First-half 2018	Year-on-year change
Sales	**1,315**	**1,370**	**-4.0%**
EBITDA	**336**	**370**	**-9.2%**
EBITDA margin	*25.6%*	*27.0%*	
Recurring operating income (REBIT)	**232**	**283**	**-18.0%**
REBIT margin	*17.6%*	*20.7%*	
Other income and expenses	(2)	(1)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	-	-	
Operating income	**230**	**282**	**-18.4%**

Industrial Specialties sales totaled €1,315 million, down 4.0% year-on-year with a negative 4.1% price effect and a 2.3% decrease in volumes. It reflects lower volumes and prices in Fluorogases and the MMA/PMMA chain compared with the very high levels reached in 2018. The currency effect was a positive 2.4%, mainly reflecting the appreciation of the US dollar against the euro.

At €336 million, the division's EBITDA was down on the record first-half 2018 performance as Fluorogases were impacted in particular by illegal HFC imports in Europe, which weighed on both volumes and prices of this business. The performance also reflects, to a lesser extent, the normalization of market conditions in the MMA/PMMA chain. These impacts were mitigated by the very good performance of Thiochemicals. In this context, EBITDA margin remained excellent at 25.6%.

Recurring operating income amounted to €232 million and included €104 million in recurring depreciation and amortization, €17 million higher than in first-half 2018 due to the impact of IFRS 16 and an unfavorable currency effect.

Operating income was €230 million and included €2 million in net other expenses.

1.3.2.3 COATING SOLUTIONS (25% OF GROUP SALES)

(In millions of euros)	First-half 2019	First-half 2018	Year-on-year change
Sales	**1,134**	**1,054**	**+7.6%**
EBITDA	**158**	**134**	**+17.9%**
EBITDA margin	*13.9%*	*12.7%*	
Recurring operating income (REBIT)	**102**	**83**	**+22.9%**
REBIT margin	*9.0%*	*7.9%*	
Other income and expenses	(1)	(2)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(2)	-	
Operating income	**99**	**81**	**+22.2%**

Coating Solutions sales grew 7.6% year-on-year to €1,134 million, driven by a good volume dynamic (+6.8%), in particular in acrylic monomers, and a 3.0% positive currency effect. The negative 2.2% price effect mainly reflects lower propylene prices for acrylic monomers, while the Group continued its actions to raise selling prices in its more downstream activities.

The division’s EBITDA increased sharply by 18% year-on-year to €158 million, driven by gradually improving market conditions in acrylic monomers and the progressive recovery of unit margins in downstream businesses. In this context, EBITDA margin rose to 13.9% in first-half 2019 from 12.7% in the same period of 2018.

In line with the change in EBITDA, recurring operating income increased to €102 million. This figure includes €56 million in recurring depreciation and amortization, up €5 million compared with first-half 2018 due to the impact of IFRS 16 and an unfavorable currency effect. REBIT margin improved to 9% in the first half.

Operating income totaled €99 million, up 22% year-on-year.

1.3.3 Group cash flow analysis

(In millions of euros)	First-half 2019	First-half 2018
Cash flow from operating activities	484	250
Cash flow from investing activities	(346)	(408)
Net cash flow	**138**	**(158)**
Of which net cash flow from portfolio management operations	(25)	(174)
Free cash flow	**163**	**16**
Cash flow from financing activities	**(238)**	**(169)**

EBITDA can be reconciled to free cash flow as follows:

(In millions of euros)	First-half 2019	First-half 2018
EBITDA	**777**	**813**
Taxes	(94)	(117)
Cash items included in the financial result	(49)	(42)
Change in working capital	(167)	(373)
Change in fixed asset payables [(1)]	(62)	(29)
Recurring capital expenditure	(187)	(148)*
Exceptional capital expenditure	(38)	(18)
Non-recurring items	(18)	(17)
Other	1	(53)*
Free cash flow	**163**	**16**

* *Restated in order to present investments with no impact on net debt separately (see note C.1 to the condensed consolidated interim financial statements at 30 June 2019 presented in section 2 of this document).*

[(1)] *Excluding cash flows related to non-recurring items and portfolio management operations. These two items represented a net cash outflow of €34 million in first-half 2019 primarily related to the discontinuation of a project that was fully financed by a partner, for which a corresponding exceptional gain was recognized in the same amount. These two amounts, which offset each other, have been included in "Non-recurring items". In first-half 2018, non-recurring items and portfolio management operations represented a net cash inflow of €3 million.*

NET CASH FLOW AND FREE CASH FLOW

The Group's net cash flow represented an inflow of €138 million in the first half of 2019 versus a €158 million outflow in the same period of 2018. The first-half 2019 figure includes a €25 million outflow from portfolio management operations, mainly corresponding to a US$20 million equity investment in Carbon®. In first-half 2018, net cash flow from portfolio management operations represented an outflow of €174 million and mainly related to the acquisition of XL Brands assets.

Consequently, free cash flow – which corresponds to net cash flow excluding the impact of portfolio management operations – came to €163 million. This represents a significant year-on-year increase on first-half 2018 (€16 million), which mainly reflects a lower increase in working capital than in first-half 2018, as a result of tight management, activity levels and the favorable impact of lower raw materials costs on inventories. This limited rise in working capital offset the €59 million year-on-year increase in recurring and exceptional capital expenditure, in line with the Group's ambitious organic investment policy to support its future growth. In first-half 2018 free cash flow also included a €21 million outflow for loans granted to employees in connection with a share capital increase reserved for employees carried out during that period. This amount was recognized in the "Other" line.

Capital expenditure for first-half 2019 amounted to €233 million (€175 million in first-half 2018), including €187 million in recurring capital expenditure and €38 million in exceptional capital expenditure, which primarily concerns the project to double the Group's thiochemicals production capacity in Malaysia, as well as investments relating to specialty polyamides in Asia (for further details, see note C.1 to the condensed consolidated interim financial statements at 30 June 2019). For full-year 2019, recurring and exceptional capital expenditure is expected to total around €610 million.

Free cash flow in the first half of 2019 included an €18 million outflow for non-recurring items, mainly relating to restructuring costs and expenses related to the termination of a supply agreement.

CASH FLOW FROM FINANCING ACTIVITIES

Cash flow from financing activities represented a net outflow of €238 million in the first six months of 2019 against a €169 million net outflow in first-half 2018. The first-half 2019 figure includes a €2.50 per-share dividend payment, representing a total payout of €190 million and €17 million in share buybacks. It also includes the €38 million net global cost of partially refinancing the Group's hybrid bonds. This refinancing – which represented a total nominal value of €400 million – combined the issue of new bonds with the partial repurchase of outstanding hybrid bonds. Following these transactions, the total nominal value of the Group's hybrid bonds remains unchanged at €700 million.

In first-half 2018, cash flow from financing activities included the dividend payment, share buybacks and a share capital increase reserved for employees.

1.3.4 Balance sheet analysis

(In millions of euros)	30 June 2019	31 December 2018	Year-on-year change
Non-current assets*	5,958	5,818	+2.4%
Working capital	1,447	1,178	+22.8%
Capital employed	**7,405**	**6,996**	**+5.8%**
Deferred tax assets	207	209	-1.0%
Provisions for pensions and employee benefits	517	470	+10.0%
Other provisions	393	409	-3.9%
Total provisions	**910**	**879**	**+3.5%**
Long-term assets covering some provisions	76	79	-3.8%
Total provisions net of non-current assets	**834**	**800**	**+4.3%**
Deferred tax liabilities	265	268	-1.1%
Net debt	**1,308**	**1,006**	**+30.0%**
Shareholders' equity	**5,110**	**5,028**	**+1.6%**

** Excluding deferred tax and including pension assets*

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

Between 31 December 2018 and 30 June 2019, non-current assets increased by €140 million, primarily due to:

- €233 million in capital expenditure, including €187 million recurring capital expenditure and €38 million exceptional capital expenditure;
- the recognition of a total €180 million in right-of-use assets for leases, resulting from the Group's application of IFRS 16 from 1 January 2019;
- €316 million in depreciation and amortization including (i) €252 million in recurring depreciation and amortization, of which €26 million arising from the application of IFRS 16, (ii) €19 million in depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses, and (iii) a €45 million impairment of industrial assets, with the vast majority of this amount recognized following the discontinuation of a project that was fully financed by a partner, and which was offset by the recognition of an exceptional gain of the same amount;
- an €18 million equity investment in Carbon®;
- a €21 million positive currency translation effect, mainly linked to the slight appreciation of the US dollar against the euro at the end of the period.

At 30 June 2019, working capital was €269 million higher than at 31 December 2018. This increase notably reflects the usual seasonality of sales. The currency effect during the period was limited. At 30 June 2019, the working capital to annualized sales ratio [(1)] stood at 16.0% versus 16.5% at 30 June 2018.

As a result of the above factors, the Group's capital employed increased by €409 million between 31 December 2018 and 30 June 2019 to €7,405 million.

[(1)] Calculated as working capital at 30 June/(2nd quarter sales x 4).

At 30 June 2019, gross provisions amounted to €910 million. Some of these provisions, accounting for a total of €76 million, are mainly covered by the guarantee facility granted by Total and described in note 18.2 to the condensed consolidated interim financial statements at 30 June 2019 (see section 2 of this document) and therefore by long-term assets recognized in the balance sheet. These essentially consist of provisions related to former industrial sites in the United States. At 30 June 2019, provisions net of these non-current assets amounted to €834 million against €800 million at 31 December 2018.

Net provisions can be analyzed as follows by type:

(In millions of euros)	**30 June 2019**	**31 December 2018**
Pension liabilities	357	322
Other employee benefit obligations	157	145
Environmental contingencies	127	129
Restructuring	33	36
Other	160	168

Between 31 December 2018 and 30 June 2019, net provisions for pension liabilities increased by €35 million due to a significant decrease in discount rates, partially offset by the revaluation of plan assets. The currency effect during the period was limited. Provisions for other employee benefit obligations (healthcare costs, welfare costs and long-service awards) increased by €12 million over the period due to lower discount rates.

Net debt stood at €1,308 million at 30 June 2019, representing a gearing of 26% and 0.9 times EBITDA of the last 12 months. The increase compared with end-December 2018 was mainly attributable to the cash flows described in section 1.3.3 of this document and the €156 million impact at 30 June 2019 due to the Group's application of IFRS 16.

Shareholders' equity amounted to €5,110 million at 30 June 2019 versus €5,028 million at 31 December 2018. The €82 million increase primarily corresponds to (i) €327 million in net income for the period, (ii) the payment of a dividend of €2.50 per share representing a total payout of €190 million, (iii) the €38 million net global cost of partially refinancing the hybrid bonds, and (iv) €17 million in share buybacks. A €28 million actuarial loss was recognized in shareholders' equity in first-half 2019 for provisions for pension liabilities and other employee benefit obligations.

1.4 TRANSACTIONS WITH RELATED PARTIES

Transactions between consolidated companies have been eliminated in the consolidation process. In addition, in the normal course of business, the Group has business relationships with certain non-consolidated companies or companies which are accounted for under the equity method. The amounts involved are not material.

1.5 SUBSEQUENT EVENTS

Significant events occurring after the reporting date are described in note C.19 to the condensed consolidated interim financial statements at 30 June 2019 (see section 2 of this document).

1.6 MAIN RISKS AND UNCERTAINTIES

The main risks and uncertainties which the Group could face over the next six months are the same as those described in chapter 2 of the 2018 Reference Document filed with the *Autorité des marchés financiers* ("AMF") on 11 April 2019 under number D.19-0308. This document is available on Arkema's website under the heading "Investor Relations" (www.finance.arkema.com) and on the AMF website (www.amf-france.org). Additionally, an update on the Group's contingent liabilities is provided in the notes to the condensed consolidated interim financial statements at 30 June 2019.

1.7 OUTLOOK

In the second half of the year, the macroeconomic environment is expected to remain volatile and complex, marked by continued geopolitical uncertainties, which are weighing on global demand and raw material volatility. However, the inventory adjustments observed in the first half of the year in certain end-markets are expected to ease. In this context, Arkema will maintain its focus on internal momentum and the implementation of its long-term strategy.

The Group will therefore continue to roll out its industrial projects, its innovation drive for sustainable development and mobility, and its targeted acquisition dynamic. In the second half of the year, the Group should, in particular, benefit from the start-up of certain industrial projects in Sartomer resins in Asia, technical polymers in France and acrylics in the United States, as well as the contribution from the acquisition of ArrMaz, finalized on 1 July, and of Sunke, which is due to be completed in the third quarter of the year. The Group will also continue to implement its operational excellence initiatives and its policy of selectively raising selling prices in a context of still high oil prices.

While remaining attentive to the development of the macroeconomic environment, Arkema confirms its ambition to consolidate its financial performance at high levels and to achieve in 2019 [1] an EBITDA comparable with the 2018 record level.

The Group's medium- and long-term targets are described in the section "Profile, ambition and strategy" in the introduction to the 2018 Reference Document.

The Group specifies that all of these targets are defined in normalized conditions and in accordance with current IFRS. The Group also notes that the achievement of these targets is based on assumptions deemed reasonable by the Group, as of the date of this document and within this time frame (in particular regarding future development of global demand, conditions relating to raw materials and energy costs, balance between supply and demand for products marketed by the Group and their price levels, as well as currency exchange rates). However, it takes no account of the potential occurrence of certain risks described in chapter 2, section 2.1 of the 2018 Reference Document or any unknown factors related to the economic, financial, competitive or regulatory environment in which the Group operates, that could affect the achievement of its targets.

[1] 2019 takes into account the new IFRS 16 standard

2 CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS AT 30 JUNE 2019

CONSOLIDATED INCOME STATEMENT

(In millions of euros)	**Notes**	**1st half 2019**	**1st half 2018**
Sales	(C2&C3)	**4,469**	**4,442**
Operating expenses		(3,456)	(3,377)
Research and development expenses		(123)	(118)
Selling and administrative expenses		(384)	(370)
Other income and expenses	(C4)	(23)	(4)
Operating income	(C2)	**483**	**573**
Equity in income of affiliates		(1)	1
Financial result	(C5)	(60)	(47)
Income taxes	(C6)	(95)	(116)
Net income		**327**	**411**
Of which: non-controlling interests		4	4
Net income - Group share		**323**	**407**
Earnings per share (in euros)	(C7)	*3.75*	*5.35*
Diluted earnings per share (in euros)	(C7)	*3.73*	*5.34*

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(In millions of euros)		**1st half 2019**	**1st half 2018**
Net income		**327**	**411**
Hedging adjustments		(1)	-
Other items		1	-
Deferred taxes on hedging adjustments and other items		-	-
Change in translation adjustments	(C12)	14	28
Other recyclable comprehensive income		**14**	**28**
Actuarial gains and losses	(C13)	(33)	18
Deferred taxes on actuarial gains and losses		5	(4)
Other non-recyclable comprehensive income		**(28)**	**14**
Total income and expenses recognized directly through equity		**(14)**	**42**
Comprehensive income		**313**	**453**
Of which: non-controlling interests		4	5
Comprehensive income – Group share		**309**	**448**

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

CONSOLIDATED BALANCE SHEET

(In millions of euros)	Notes	**30 June 2019**	**31 December 2018**
ASSETS			
Intangible assets, net	(C8)	2,863	2,877
Property, plant and equipment, net	(C9 & 10)	2,758	2,627
Investments in equity affiliates		37	38
Other investments	(C11)	52	33
Deferred tax assets		207	209
Other non-current assets		248	243
TOTAL NON-CURRENT ASSETS		**6,165**	**6,027**
Inventories		1,167	1,136
Accounts receivable		1,370	1,247
Other receivables and prepaid expenses		184	173
Income taxes receivables		74	80
Other current financial assets		8	7
Cash and cash equivalents		1,331	1,441
TOTAL CURRENT ASSETS		**4,134**	**4,084**
TOTAL ASSETS		**10,299**	**10,111**
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital		766	766
Paid-in surplus and retained earnings		4,180	4,099
Treasury shares		(44)	(28)
Translation adjustments		156	142
SHAREHOLDERS' EQUITY – GROUP SHARE	(C12)	**5,058**	**4,979**
Non-controlling interests		52	49
TOTAL SHAREHOLDERS' EQUITY		**5,110**	**5,028**
Deferred tax liabilities		265	268
Provisions for pensions and other employee benefits	(C13)	517	470
Other provisions and non-current liabilities	(C14)	412	433
Non-current debt	(C16)	1,875	2,246
TOTAL NON-CURRENT LIABILITIES		**3,069**	**3,417**
Accounts payable		926	1,037
Other creditors and accrued liabilities		348	343
Income taxes payable		75	78
Other current financial liabilities		7	7
Current debt	(C16)	764	201
TOTAL CURRENT LIABILITIES		**2,120**	**1,666**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**10,299**	**10,111**

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

CONSOLIDATED CASH FLOW STATEMENT

(In millions of euros)		1st half 2019	1st half 2018
Net income		327	411
Depreciation, amortization and impairment of assets		316	235
Other provisions and deferred taxes		(1)	(28)
(Gains)/losses on sales of long-term assets		(4)	(2)
Undistributed affiliate equity earnings		1	(1)
Change in working capital		(167)	(373)
Other changes		12	8
CASH FLOW FROM OPERATING ACTIVITIES		**484**	**250**
Intangible assets and property, plant, and equipment additions		(233)	(175)
Change in fixed asset payables		(96)	(26)
Acquisitions of operations, net of cash acquired		(19)	(174)
Increase in long-term loans		(20)	(44)
Total expenditures		**(368)**	**(419)**
Proceeds from sale of intangible assets and property, plant, and equipment		6	1
Repayment of long-term loans		16	10
Total divestitures		**22**	**11**
CASH FLOW FROM INVESTING ACTIVITIES		**(346)**	**(408)**
Issuance (repayment) of shares and paid-in surplus	(C12)	3	51
Purchase of treasury shares	(C12)	(17)	(19)
Issuance of hybrid bonds	(C12)	399	-
Redemption of hybrid bonds	(C12)	(425)	-
Dividends paid to parent company shareholders	(C12)	(190)	(176)
Interest paid to bearers of subordinated perpetual notes	(C12)	(12)	-
Dividends paid to non-controlling interests		(1)	(1)
Increase in long-term debt		2	1
Decrease in long-term debt	(C16.1)	(515)	(9)
Increase / decrease in short-term debt	(C16.1)	518	(16)
CASH FLOW FROM FINANCING ACTIVITIES		**(238)**	**(169)**
Net increase/(decrease) in cash and cash equivalents		(100)	(327)
Effect of exchange rates and changes in scope		(10)	(7)
Cash and cash equivalents at beginning of period		1,441	1,438
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**1,331**	**1,104**

The Group applied IFRS 16 for the first time at 1 January 2019, under the modified retrospective approach which does not require restatement of the comparative figures for 2018.

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2019	**766**	**1,263**	**689**	**2,147**	**142**	**(28)**	**4,979**	**49**	**5,028**
Cash dividend	-	-	-	(202)	-	-	(202)	(1)	(203)
Issuance of share capital	0	3	-	-	-	-	3	-	3
Purchase of treasury shares	-	-	-	-	-	(17)	(17)	-	(17)
Grants of treasury shares to employees	-	-	-	(1)	-	1	-	-	-
Share-based payments	-	-	-	12	-	-	12	-	12
Issuance of hybrid bonds*	-	-	399	-	-	-	399	-	399
Redemption of hybrid bonds*	-	-	(394)	(31)	-	-	(425)	-	(425)
Other	-	-	-	-	-	-	-	-	-
Transactions with shareholders	**0**	**3**	**5**	**(222)**	**-**	**(16)**	**(230)**	**(1)**	**(231)**
Net income	-	-	-	323	-	-	323	4	327
Total income and expenses recognized directly through equity	-	-	-	(28)	14	-	(14)	-	(14)
Comprehensive income	**-**	**-**	**-**	**295**	**14**	**-**	**309**	**4**	**313**
At 30 June 2019	**766**	**1,266**	**694**	**2,220**	**156**	**(44)**	**5,058**	**52**	**5,110**

*Cf C12.2 "Hybrid bonds"

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2018	**759**	**1,216**	**689**	**1,670**	**101**	**(2)**	**4,433**	**41**	**4,474**
Cash dividend	-	-	-	(176)	-	-	(176)	(1)	(177)
Issuance of share capital	6	45	-	-	-	-	51	-	51
Purchase of treasury shares	-	-	-	-	-	(19)	(19)	-	(19)
Grants of treasury shares to employees	-	-	-	(2)	-	2	-	-	-
Share-based payments	-	-	-	11	-	-	11	-	11
Other	-	-	-	-	-	-	-	-	-
Transactions with shareholders	**6**	**45**	**-**	**(167)**	**-**	**(17)**	**(133)**	**(1)**	**(134)**
Net income	-	-	-	407	-	-	407	4	411
Total income and expenses recognized directly through equity	-	-	-	14	27	-	41	1	42
Comprehensive income	**-**	**-**	**-**	**421**	**27**	**-**	**448**	**5**	**453**
At 30 June 2018	**765**	**1,261**	**689**	**1,924**	**128**	**(19)**	**4,748**	**45**	**4,793**

A. HIGHLIGHTS

A.1 Portfolio management

In May 2019, Arkema announced the planned acquisition of ArrMaz, a global leader in specialty surfactants for crop nutrition, mining and infrastructure markets, with sales of US$290 million and an EBITDA margin of 18%. The offer was based on an enterprise value of US$570 million. The operation was completed on 1 July 2019. The newly-acquired business has joined the Performance Additives Business Line in the High Performance Materials division.
Arkema also announced an investment of US$20 million in Carbon® in June 2019.

A.2 Other highlights

Arkema took advantage of favourable market conditions to partially refinance its existing hybrid bonds through a combination of a new bond issue and a bond tender offer.
On 17 June 2019 Arkema thus issued a €400 million perpetual hybrid bond. These bonds carry a first-call redemption option that Arkema may exercise at any time between 17 June 2024 and 17 September 2024, and have a coupon of 2.75% until the first call date, subject to early redemption. Arkema also accepted the tender of perpetual hybrid bonds amounting to €400 million at a tender price of 106.137%. These bonds were issued on 29 October 2014 in the total amount of €700 million, with a first call option on 29 October 2020 and an annual coupon of 4.75% until that date. See note C12.2 “Hybrid bonds”.

B. ACCOUNTING POLICIES

Arkema is a French limited liability company *(société anonyme)* with a Board of Directors, subject to the provisions of book II of the French Commercial Code and all other legal provisions applicable to French commercial companies.
The Company’s head office is at 420 rue d’Estienne d’Orves, 92700 Colombes (France). It was incorporated on 31 January 2003 and the shares of Arkema have been listed on the Paris stock exchange (Euronext) since 18 May 2006.

Basis for preparation

The Group’s condensed consolidated interim financial statements at 30 June 2019 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved by the Board of Directors of Arkema on 31 July 2019.

The condensed consolidated interim financial statements at 30 June 2019 were prepared in compliance with IAS 34 “Interim financial reporting” and established in accordance with the IFRS (International Financial Reporting Standards) issued by the IASB (International Accounting Standards Board) and IFRS endorsed by the European Union at 30 June 2019. As condensed interim financial statements, they do not incorporate all of the disclosures required in full financial statements and must thus be read in conjunction with the consolidated financial statements for the year ended 31 December 2018.
The accounting framework and standards adopted by the European Union can be consulted on the following website:
https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002

Changes in IFRS and interpretations

The accounting policies applied in preparing the condensed consolidated interim financial statements at 30 June 2019 are identical to those used in the consolidated financial statements at 31 December 2018, except for IFRS standards, amendments and interpretations that are mandatory for accounting periods commencing on or after 1 January 2019 (and which had not been applied early by the Group), namely:

Amendments to IAS 19	Plan amendment, curtailment or settlement	Adopted by the European Union on 14 March 2019
Amendments to IAS 28	Long-term interests in associates and joint ventures	Adopted by the European Union on 11 February 2019
Amendments to IFRS 9	Prepayment features with negative compensation	Adopted by the European Union on 26 March 2018
IFRS 16	Leases	Adopted by the European Union on 9 November 2017
IFRIC 23	Uncertainty over income tax treatments (IAS12)	Adopted by the European Union on 24 October 2018
Annual improvements to IFRS - 2015-2017 cycle		Adopted by the European Union on 15 March 2019

Application of these amendments and interpretations had no significant impact on the financial statements at 30 June 2019.

Impact of the application of IFRS 16

The impact of IFRS 16 is described in notes C1.8 “Impact of IFRS 16 in the first half of 2019” and C10 “IFRS 16 leases”.

From 1 January 2019, the Group’s lease obligations are recorded in application of IFRS 16 “Leases”. In the balance sheet, the Group recognizes an asset corresponding to the right to use the leased asset, and an equivalent financial liability. In the income statement, the lease payment expense is replaced by amortization of the right to use the asset, recorded in “Depreciation, amortization and impairment”, and a financial interest expense, recorded in “Financial result”. The cash flow statement is also impacted. Instead of the lease payments previously presented in “cash flow from operating activities”, the Group records repayments of the financial liability presented in “Cash flow from financing activities” and a financial interest expense, presented in “Cash flow from operating activities”.

The Group applies this standard under the modified retrospective approach, and opted to use the two exemptions from capitalization allowed for leases of less than twelve months and leases of assets with an individual value of less than USD5,000 when new. For purposes of simplification, the Group excludes a certain number of subsidiaries from the scope of application of IFRS 16. The combined impact of the excluded lease contracts is not material for the Group.

The right of use is recognized at an amount corresponding to the initial debt, adjusted for prepaid and accrued payments on the original lease, and any estimated repair costs. The right of use is amortized on a straight-line basis over the term of the lease.

The lease term is the irrevocable period, extended where relevant by any renewal options the Group is reasonably certain to use; in particular, the Group applies the recommendation issued by the *Autorité des normes comptables* to real estate property leases in France, taking as the maximum term the longest term, i.e. 9 years. The lease obligation at 1 January 2019 is calculated under IFRS 16, applying the discount rates in force at that date over the residual term of the lease. As the implicit interest rate of the leases is not easily determined, the Group applies a discount rate based on the subsidiaries’ estimated incremental borrowing rate.

The principal leases affected by IFRS 16 concern real estate property and logistics equipment, excluding servicing obligations associated with the lease.

For the first-time application of IFRS16, a reconciliation with off-balance sheet commitments is presented below:

(in millions of euros)	**1 January 2019**
Lease obligations	126
Service component included in leases	(6)
Leases outside the scope of IFRS 16 at 1 January 2019	(16)
Materiality threshold effect on off-balance sheet commitments	76
IFRS16 lease obligation	**180**
Discount effect	(22)
TOTAL IFRS 16 DEBT	**158**

Non-mandatory IFRS standards and interpretations at 1 January 2019

The standards, amendments and interpretations published by the IASB and the IFRS IC (IFRS Interpretations Committee) which are not yet mandatory for accounting periods commencing on or after 1 January 2019 are:

Amendments to IAS 1 and IAS 8	Definition of material	Not adopted by the European Union at 30 June 2019
Amendments to IFRS 3	Definition of a business	Not adopted by the European Union at 30 June 2019
Conceptual framework	Amendments to references to the conceptual framework	Not adopted by the European Union at 30 June 2019
IFRS 17	Insurance contracts	Not adopted by the European Union at 30 June 2019

Use of assumptions

Preparation of the condensed consolidated interim financial statements in accordance with IFRS requires Group management to make estimates and determine assumptions that can have an impact on the amounts recognized in assets and liabilities at the balance sheet date, and have a corresponding impact on the income statement. Management made its estimates and determined its assumptions on the basis of past experience and taking into account different factors considered to be reasonable for the valuation of assets and liabilities. Use of different assumptions could have a material effect on these valuations. The main assumptions made by management in preparing the financial statements are those used for measuring the recoverable value of property, plant and equipment and intangible assets, pension benefit obligations, deferred taxes and provisions. The disclosures provided concerning contingent assets and liabilities and off-balance sheet commitments at the date of preparation of the condensed consolidated interim financial statements also involve the use of estimates.

Impact of seasonality

The Group's standard pattern of business shows seasonality effects. Various characteristics contribute to these effects:

- demand for products manufactured by the Group is generally lower in the summer months (July-August) and in December, notably as a result of the slowdown in industrial activity during these months, particularly in France and the rest of Europe;
- in some of the Group's businesses, particularly those serving the paints and coatings as well as the refrigeration and air-conditioning markets, sales are generally higher in the first half of the year than in the second half. By contrast, in adhesives, the two halves of the year are more evenly balanced;
- the major multi-annual maintenance turnarounds at the Group's production plants also have an impact on seasonality, and tend in general to be carried out in the second half of the year.

These seasonal effects observed in the past are not necessarily representative of future trends, but can have a material effect on the variations in results and working capital from one quarter of the year to another.

C. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Alternative performance indicators

To monitor and analyse the financial performance of the Group and its activities, Group management uses alternative performance indicators. These are financial indicators that are not defined by IFRS. This note presents a reconciliation of these indicators and the aggregates from the consolidated financial statements under IFRS.

Note C.2 "Information by business division" partly refers to these alternative performance indicators.

1.1 Recurring operating income (REBIT) and EBITDA

(In millions of euros)	**Notes**	**1st half 2019**	**1st half 2018**
OPERATING INCOME		**483**	**573**
- Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(19)	(18)
- Other income and expenses	(C4)	(23)	(4)
RECURRING OPERATING INCOME (REBIT)		**525**	**595**
- Recurring depreciation and amortization of tangible and intangible assets		(252)	(218)
EBITDA		**777**	**813**

Details of depreciation and amortization of tangible and intangible assets

(In millions of euros)	**Notes**	**1st half 2019**	**1st half 2018**
Depreciation and amortization of tangible and intangible assets	(C8 & C9 & C10)	**(316)**	**(236)**
Of which: Recurring depreciation and amortization of tangible and intangible assets		(252)	(218)
Of which: Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(19)	(18)
Of which: Impairment included in other income and expenses	(C4)	(45)	0

1.2 Adjusted net income and adjusted earnings per share

(In millions of euros)	**Notes**	**1st half 2019**	**1st half 2018**
NET INCOME – GROUP SHARE		**323**	**407**
- Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(19)	(18)
- Other income and expenses	(C4)	(23)	(4)
- Other income and expenses attributable to non-controlling interests		-	-
- Taxes on depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		5	4
- Taxes on other income and expenses		3	2
- One-time tax-effects		-	2
ADJUSTED NET INCOME		**357**	**421**
Weighted average number of ordinary shares		76,214,216	76,070,820
Weighted average number of potential ordinary shares	(C7)	76,608,099	76,169,120
ADJUSTED EARNINGS PER SHARE (IN EUROS)		**4.68**	**5.53**
DILUTED ADJUSTED EARNINGS PER SHARE (IN EUROS)		**4.66**	**5.53**

1.3 Recurring capital expenditure

(In millions of euros)	1st half 2019	1st half 2018
INTANGIBLE ASSETS AND PROPERTY, PLANT, AND EQUIPMENT ADDITIONS	**233**	**175**
- Exceptional capital expenditure	38	18
- Investments relating to portfolio management operations	-	-
- Capital expenditure with no impact on net debt	8	9*
RECURRING CAPITAL EXPENDITURE	**187**	**148***

** Restated figures*

Exceptional capital expenditure corresponds to a very limited number of capital expenditure items that the Group presents separately in its financial reporting due to their unusual size or nature (major development projects, accidents or damage, exceptional restructuring operations). They mainly concern capital expenditure for thiochemicals in Malaysia and specialty polyamides in Asia.

Investments relating to portfolio management operations reflect the impact of acquisition operations.

Capital expenditure with no impact on net debt corresponds to capital expenditure items financed by non-Group entities, or reclassifications of assets.

1.4 Free cash flow

(In millions of euros)	1st half 2019	1st half 2018
Cash flow from operating activities	**484**	250
+ Cash flow from net investments	(346)	(408)
NET CASH FLOW	**138**	**(158)**
- Net cash flow from portfolio management operations	(25)	(174)
FREE CASH FLOW	**163**	**16**

The net cash flow from portfolio management operations corresponds to the impact of acquisition and divestment operations.

1.5 Working capital

(In millions of euros)	30 June 2019	31 December 2018
Inventories	1,167	1,136
+ Accounts receivable	1,370	1,247
+ Other receivables including income taxes	258	253
+ Other current financial assets	8	7
- Accounts payable	926	1,037
- Other liabilities including income taxes	423	421
- Other current financial liabilities	7	7
WORKING CAPITAL	**1,447**	**1,178**

1.6 Capital employed

(In millions of euros)	Notes	30 June 2019	31 December 2018
Goodwill, net		1,622	1,618
+ Intangible assets (excluding goodwill) and property, plant and equipment, net	(C8, C9 & C10)	3,999	3,886
+ Investments in equity affiliates		37	38
+ Other investments and other non-current assets		300	276
+ Working capital		1,447	1,178
CAPITAL EMPLOYED		**7,405**	**6,996**

1.7 Net debt

(In millions of euros)	Notes	30 June 2019	31 December 2018
Non-current debt	(C16)	1,875	2,246
+ Current debt	(C16)	764	201
- Cash and cash equivalents		1,331	1,441
NET DEBT		**1,308**	**1,006**

1.8 Impact of IFRS 16 in the first half of 2019

As of 1 January 2019 Arkema applies IFRS 16 "Leases". The impacts of this standard in the first half of 2019 on the main aggregates and alternative performance indicators used by the Group are described below. The 2018 figures have not been restated.

Income statement

(In millions of euros)	1st half 2019
EBITDA	27
Recurring depreciation and amortization	(26)
Recurring operating income (REBIT)	1
Operating income	1
Financial result	(2)
Adjusted net income	(1)
Net income	(1)

Cash flow statement

(In millions of euros)	1st half 2019
Cash flow from operating activities	25
Cash flow from financing activities	(25)
Free cash flow	25

Balance sheet

(In millions of euros)	30 June 2019
Property, plant and equipment	155
Total assets	**155**
Non-current debt	113
Current debt	43
Net debt	**156**
Net income	(1)
Total liabilities and shareholders' equity	**155**

Information by business division (1st half 2019)

(In millions of euros)	High Performance Materials	Industrial Specialties	Coating Solutions	Corporate
EBITDA	8.5	12.5	5	1
Recurring depreciation and amortization	(8)	(12)	(5)	(1)
Recurring operating income (REBIT)	0.5	0.5	-	-

2. Information by business division

As required by IFRS 8 “Operating Segments”, segment information for the Group is presented in accordance with the business divisions identified in the internal reports that are regularly reviewed by general management in order to allocate resources and assess financial performance.

Arkema has three business divisions: High Performance Materials, Industrial Specialties and Coating Solutions. Three members of the Executive Committee supervise these divisions; they report directly to the Chairman and CEO, Arkema’s chief operating decision-maker as defined by IFRS 8, and are in regular contact with him for the purpose of discussing their sector’s operating activity, financial results, forecasts and plans.

The content of the business divisions is as follows:

- High Performance Materials includes the following Business Lines [(1)]:
  - Bostik,
  - Technical Polymers, comprising specialty polyamides and PVDF,
  - Performance Additives, comprising photocure resins (Sartomer), organic peroxides and the adsorption activity.

  High Performance Materials provide innovative solutions with high value added, used in varied sectors such as transport, oil extraction, renewable energies (photovoltaics, lithium-ion batteries), consumer goods (beauty products, sports equipment, packaging, etc), electronics, construction, coatings and water treatment;

- Industrial Specialties groups the following Business Lines:
  - Thiochemicals,
  - Fluorogases,
  - PMMA,
  - Hydrogen Peroxides.

  These integrated industrial niche markets in which Arkema Group benefits from global positions, concern products used in several industrial sectors such as refrigeration and air conditioning, petrochemicals, refining, paper pulp, animal nutrition, electronics and the automotive industry;

- Coating Solutions comprises the following Business Lines:
  - Acrylics,
  - Coating Resins and Additives, comprising the coating resins and Coatex rheological additives activities.

  This division proposes solutions for decorative paints, industrial coatings, adhesives and high-growth acrylic applications (superabsorbents for disposable nappies, water treatment, oil and gas extraction).

Functional and financial activities which cannot be directly allocated to operational activities (notably certain research costs and central costs) are brought together in a Corporate division.

Operating income and assets are allocated between business divisions prior to inter-division adjustments. Sales between divisions take place at market prices.

([1]) Business Lines are activities or groups of activities.

1st half 2019 *(In millions of euros)*	**High Performance Materials**	**Industrial Specialties**	**Coating Solutions**	**Corporate**	**Total**
Non-Group sales	**2,006**	**1,315**	**1,134**	**14**	**4,469**
Inter-division sales	5	78	39	-	
Total sales	**2,011**	**1,393**	**1,173**	**14**	
EBITDA*	**332**	**336**	**158**	**(49)**	**777**
Recurring depreciation and amortization of tangible and intangible assets*	(89)	(104)	(56)	(3)	(252)
Recurring operating income (REBIT)*	**243**	**232**	**102**	**(52)**	**525**
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(17)	-	(2)	-	(19)
Other income and expenses	(17)	(2)	(1)	(3)	(23)
Operating income	**209**	**230**	**99**	**(55)**	**483**
Equity in income of affiliates	0	(1)	-	-	(1)
Intangible assets and property, plant, and equipment additions	**104**	**81**	**43**	**5**	**233**
Of which: recurring capital expenditure*	83	56	43	5	187

1st half 2018 *(In millions of euros)*	**High Performance Materials**	**Industrial Specialties**	**Coating Solutions**	**Corporate**	**Total**
Non-Group sales	**2,005**	**1,370**	**1,054**	**13**	**4,442**
Inter-division sales	5	94	38	-	
Total sales	**2,010**	**1,464**	**1,092**	**13**	
EBITDA*	**353**	**370**	**134**	**(44)**	**813**
Recurring depreciation and amortization of tangible and intangible assets *	(78)	(87)	(51)	(2)	(218)
Recurring operating income (REBIT)*	**275**	**283**	**83**	**(46)**	**595**
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(18)	-	-	-	(18)
Other income and expenses	(2)	(1)	(2)	1	(4)
Operating income	**255**	**282**	**81**	**(45)**	**573**
Equity in income of affiliates	0	1	-	-	1
Intangible assets and property, plant, and equipment additions	**62**	**75**	**26**	**12**	**175**
Of which: recurring capital expenditure*	51	59 (1)	26	12	148 (1)

* See C1 “Alternative performance indicators”
(1) *Restated figures*

3. Information by geographical area

Non-Group sales are presented on the basis of the geographical location of customers.

1st half 2019 *(In millions of euros)*	France	Rest of Europe	NAFTA*	Asia	Rest of the world	**Total**
Non-Group sales	366	1,322	1,405	1,196	180	**4,469**

1st half 2018 *(In millions of euros)*	France	Rest of Europe	NAFTA*	Asia	Rest of the world	**Total**
Non-Group sales	373	1,345	1,371	1,151	202	**4,442**

* NAFTA: USA, Canada, Mexico

4. Other income and expenses

	1st half 2019			**1st half 2018**		
(In millions of euros)	Expenses	Income	Net	Expenses	Income	Net
Restructuring and environment	(10)	-	(10)	(5)	1	(4)
Goodwill impairment	-	-	-	-	-	-
Asset impairment (excluding goodwill)	(7)	-	(7)	-	0	0
Litigation and claims	(5)	4	(1)	(2)	1	(1)
Gains (losses) on sales and purchases of assets	(4)	-	(4)	(1)	2	1
Other	(37)	36	(1)	0	-	0
Total other income and expenses	**(63)**	**40**	**(23)**	**(8)**	**4**	**(4)**

In the first half of 2019, restructuring and environment expenses mainly include restructuring costs in adhesives. Exceptional asset impairment concerns industrial assets in the United States. “Other” items essentially comprise exceptional asset impairment recognized after discontinuation of a project that was fully financed by a partner; consequently, this impairment is offset by an exceptional gain of the same amount.

5. Financial result

Financial result includes the cost of debt adjusted for capitalized financial expenses, and as regards provisions for pensions and employee benefits, the interest cost, the expected return on plan assets and the actuarial gains and losses related to changes in the discount rate on other long-term benefits. It also includes the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate, and the foreign exchange gain/loss on unhedged financing.

(In millions of euros)	**1st half 2019**	**1st half 2018**
Cost of debt	(30)	(30)
Financial income/expenses on provisions for pensions and employee benefits	(10)	(6)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(20)	(12)
Capitalized interest	2	1
Financial expenses related to the IFRS 16 debt	(2)	-
Other	0	0
Financial result	**(60)**	**(47)**

6. Income taxes

The income tax expense is broken down as follows:

(In millions of euros)	1st half 2019	1st half 2018
Current income taxes	(92)	(117)
Deferred income taxes	(3)	1
Total income taxes	**(95)**	**(116)**

The income tax expense amounts to €95 million for the first half of 2019, including €8 million for the CVAE (compared with €116 million for the first half of 2018, including €8 million for the CVAE).

7. Earnings per share

	1st half 2019	1st half 2018
Weighted average number of ordinary shares	76,214,216	76,070,820
Dilutive effect of stock options	4,392	54,341
Dilutive effect of free share grants	389,491	43,959
Weighted average number of potential ordinary shares	76,608,099	76,169,120

The calculation of earnings per share is presented below:

(In millions of euros)	Notes	1st half 2019	1st half 2018
Net income – Group share		323	407
Interest on subordinated perpetual notes, net of tax	(C12.2)	(37)	-
Net income used in calculating earnings per share		286	407

	1st half 2019	1st half 2018
Earnings per share (in euros)	3.75	5.35
Diluted earnings per share (in euros)	3.73	5.34

8. Intangible assets

8.1 *Goodwill*

	30 June 2019			31 December 2018
(In millions of euros)	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Goodwill	2,160	(538)	1,622	1,618

Changes in the net book value of goodwill are as follows:

(In millions of euros)	2019
At 1 January	**1,618**
Changes in scope	-
Translation adjustments	4
At 30 June	**1,622**

8.2 Other intangible assets

(In millions of euros)	Gross book value	**30 June 2019** Accumulated amortization and impairment	Net book value	**31 December 2018** Net book value
Patents and technologies	432	(197)	235	244
Trademarks	550	(3)	547	546
Software and IT licences	336	(238)	98	102
Capitalized REACH costs	61	(29)	32	34
Other capitalized research expenses	23	(8)	15	16
Capitalized contracts	351	(272)	79	81
Asset rights	48	(17)	31	32
Customer relations	95	(22)	73	76
Other intangible assets	85	(28)	57	60
Intangible assets in progress	96	(22)	74	68
Total	**2,077**	**(836)**	**1,241**	**1,259**

Changes in the net book value of other intangible assets are as follows:

(In millions of euros)	**2019**
At 1 January	**1,259**
Acquisitions	27
Amortization and impairment	(48)
Disposals	-
Changes in scope	-
Translation adjustments	3
Reclassifications	-
At 30 June	**1,241**

9. Property, plant and equipment

9.1 Property, plant and equipment

(In millions of euros)		Gross book value	**30 June 2019** Accumulated depreciation and impairment	Net book value	**31 December 2018** Net book value
Land and buildings		1,943	(1,280)	663	655
Complex industrial facilities		3,624	(2,953)	671	659
Other property, plant and equipment		3,158	(2,317)	841	850
Construction in progress		438	(10)	428	463
Total property, plant and equipment excluding rights of use		**9,163**	**(6,560)**	**2,603**	**2,627**
Rights of use	(C10)	180	(25)	155	-
Total property, plant and equipment		**9,343**	**(6,585)**	**2,758**	**2,627**

9.2 Changes in property, plant and equipment excluding rights of use

Changes in the net book value of property, plant and equipment excluding rights of use are as follows:

(In millions of euros)	**2019**
At 1 January	**2,627**
Acquisitions	206
Amortization and impairment	(242)
Disposals	(1)
Changes in scope	-
Translation adjustments	13
Reclassifications	-
At 30 June	**2,603**

10. IFRS 16 leases: rights of use and IFRS 16 debt

From 1 January 2019, the Group's lease obligations are accounted for in accordance with IFRS 16 "Leases" and classified in property, plant and equipment. The principles applied and the impacts on the alternative performance indicators are described in notes B "Accounting policies" and C1.8 "Impact of IFRS 16 in the first half of 2019".

At 30 June 2019, the net book value of the rights of use associated with leases is €155 million.

	30 June 2019		
(In millions of euros)	Gross book value	Accumulated depreciation and impairment	Net book value
Rights of use: real estate assets (head offices, offices)	59	(6)	53
Rights of use: industrial assets (factories, land, warehouses)	24	(2)	22
Rights of use: logistics assets (trucks, containers, trolleys)	80	(14)	66
Rights of use: other assets (cars, etc)	17	(3)	14
Total rights of use	**180**	**(25)**	**155**

Changes in the net book value of rights of use are as follows:

(In millions of euros)	**2019**
At 1 January	**158**
Acquisitions and contract revisions	23
Amortization	(26)
Disposals and contract revisions	(1)
Changes in scope	-
Translation adjustments	1
At 30 June	**155**

The IFRS 16 debt amounts to €156 million at 30 June 2019 (see note C16 “Debt”). The total non-discounted value of the Group’s future lease payments amounts to €177 million at 30 June 2019, maturing as follows:

(In millions of euros)	**30 June 2019**
Within one year	47
1 - 5 years	99
After 5 years	31
TOTAL	**177**

At 30 June 2019, the cash outflows associated with leases amount to €27 million. The financial expenses related to the IFRS 16 debt amount to €2 million.

The application of exemptions for short-term leases and leases of low-value assets concerns amounts that are not significant at Group level. For purposes of simplification, the Group has excluded a certain number of subsidiaries from the scope of application of IFRS 16 because their right-of-use assets are below the materiality threshold defined by the Group.

11. Other investments

The main movements in the first half of 2019 concern the investment in Carbon®. See note A.1 “Portfolio management”.

12. Shareholders’ equity

At 30 June 2019 Arkema’s share capital amounts to €766 million, divided into 76,624,220 shares with a nominal value of 10 euros.

Number of shares at 1 January 2018	**75,870,506**
Issuance of shares following the capital increase reserved for employees	610,405
Issuance of shares following the exercise of subscription options	51,545
Number of shares at 30 June 2018	**76,532,456**
Issuance of shares following the exercise of subscription options	49,036
Number of shares at 31 December 2018	**76,581,492**

Number of shares at 1 January 2019	**76,581,492**
Issuance of shares following the exercise of subscription options	42,728
Number of shares at 30 June 2019	**76,624,220**

12.1 Changes in share capital

Following the exercise of 42,728 share subscription options, the Company carried out a capital increase in the total nominal amount of €0.4 million.

12.2 Hybrid bonds

The amount of the perpetual hybrid bonds recorded in shareholders’ equity is €694 million at 30 June 2019.

On 17 June 2019 Arkema issued a perpetual hybrid bond with a nominal value of €400 million, or €399 million net of issue premiums and fees. These bonds carry a first-call redemption option that Arkema may exercise at any time between 17 June 2024 and 17 September 2024, and have a coupon of 2.75% until the first call date, subject to early redemption.

In parallel, Arkema redeemed some of its existing perpetual hybrid bonds for the nominal value of €400 million plus a redemption premium of €25 million including bank charges. These bonds were issued on 29 October 2014 in the total nominal value of €700 million, with a first call option on 29 October 2020 and an annual coupon of 4.75% until that date. As part of this bond redemption, Arkema also paid accrued coupons due on the redeemed portion of these bonds, amounting to €12 million, on 17 June 2019.

Following these combined operations, the total nominal value of Arkema's perpetual hybrid bonds is unchanged at €700 million. The breakdown is as follows at 30 June 2019:

Issue date	Nominal value (in millions of €)	Currency	Redemption option	Annual coupon rate
29 October 2014	300	EUR	6 years	4.75%
17 June 2019	400	EUR	5.25 years	2.75%

Arkema has an option to defer payment of coupons for the above bonds.
In accordance with IAS 32, when there is an unconditional right to avoid delivering cash or another financial asset in the form of repayment of principal or interest, an instrument is recognized in shareholders' equity. In application of this principle, the hybrid bonds are recorded in shareholders' equity, and the coupons paid are recorded as dividends in the Group's consolidated financial statements.

12.3 Treasury shares

The Company bought back 205,621 treasury shares during the first half of 2019.
Arkema Group definitively granted 22,749 free shares to its employees between April and June 2019, principally in application of plans 2016-1, 2 and 2016-3.

Number of treasury shares at 1 January 2018	**33,225**
Purchases of treasury shares	557,642
Grants of treasury shares	(271,869)
Number of treasury shares at 31 December 2018	**318,998**

Number of treasury shares at 1 January 2019	**318,998**
Purchases of treasury shares	205,621
Grants of treasury shares	(22,749)
Number of treasury shares at 30 June 2019	**501,870**

12.4 Dividends

The combined shareholders' general meeting of 21 May 2019 approved the distribution of a €2.50 dividend per share in respect of the 2018 financial year, or a total amount of €190 million. The dividend was paid out on 29 May 2019.

12.5 Translation adjustments

The change in translation adjustments recognized in other recyclable comprehensive income mainly comprises the impacts of movements in the USD-EUR exchange rate.

13. Provisions for pensions and other employee benefits

(In millions of euros)	**30 June 2019**	**31 December 2018**
Pension obligations	360	325
Healthcare and similar coverage	80	74
Post-employment benefits	**440**	**399**
Long service awards	72	66
Other	5	5
Other long-term benefits	**77**	**71**
Provisions for pensions and other employee benefits	**517**	**470**

In addition, certain provisions are covered by non-current assets:

(In millions of euros)	**30 June 2019**	**31 December 2018**
Provision recognized in liabilities	517	470
Amount recognized in assets	(3)	(3)
Net provisions for pensions and employee benefits	**514**	**467**

The discount rates used by Arkema Group are as follows:

Pension obligations, healthcare and similar coverage	**Europe (excl. UK)**	**UK**	**USA**
At 30 June 2019	1.30%-1.50%	2.30%	3.40%
At 31 December 2018	1.90%-1.95%	2.70%	4.20%

The present value of benefit obligations at the end of 2018 has been adjusted at 30 June 2019 on the basis of sensitivity analysis tables prepared by the Group's external actuaries in the context of the full year 2018 closing, to take account of the change in interest rates over the half-year. The fair value of plan assets has also been reassessed on the basis of new valuations at 30 June 2019. The effects of the change in discount rates and the revaluation of assets are included in actuarial gains and losses for the period.

The change in net provisions for post-employment benefits over the first half of 2019 is as follows:

(In millions of euros)	Pension obligations	Healthcare and similar coverage	**Total post-employment benefits**
Net liability (asset) at 1 January 2019	**322**	**74**	**396**
Provision recognized in liabilities	325	74	399
Amount recognized in assets	(3)	-	(3)
(Income)/Expense for the period	8	-	8
Net interest expense	5	1	6
Net contributions and benefits paid by the employer	(5)	(1)	(6)
Liquidations	-	-	-
Other *	0	0	0
Actuarial gains and losses recognized in shareholders' equity	27	6	33
Net liability (asset) at 30 June 2019	**357**	**80**	**437**
Provision recognized in liabilities	360	80	440
Amount recognized in assets	(3)	-	(3)

* Other items essentially consist of translation adjustments

14. Other provisions and other non-current liabilities

14.1. Other non-current liabilities

Other non-current liabilities amount to €19 million at 30 June 2019 as against €24 million at 31 December 2018.

14.2. Other provisions

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
At 1 January 2019	**189**	**36**	**184**	**409**
Increases in provisions	2	2	12	16
Reversals from provisions on use	(7)	(5)	(15)	(27)
Reversals of unused provisions	(0)	(0)	(6)	(6)
Changes in scope	-	-	-	-
Translation adjustments	0	0	1	1
Other	-	-	-	-
At 30 June 2019	**184**	**33**	**176**	**393**

In addition, certain provisions are covered by non-current assets (receivables, deposits):

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
Total provisions at 30 June 2019	**184**	**33**	**176**	**393**
Portion of provisions covered by receivables or deposits	44	-	16	60
Deferred tax assets related to amounts covered by the Total Indemnity	13	-	-	13
Provisions at 30 June 2019 net of non-current assets	**127**	**33**	**160**	**320**
For information: **Provisions at 1 January 2019 net of non-current assets**	**129**	**36**	**168**	**333**

14.2.1 Provisions for environmental contingencies

Provisions for environmental contingencies are recognized to cover expenses related to soil and water table clean-up, mainly:

- in France for €88 million (€90 million at 31 December 2018),
- in the United States for €77 million (€80 million at 31 December 2018), of which €57 million in respect of former industrial sites covered 100% by the Total group indemnity (receivable recognized in "Other non-current assets" for an amount of €44 million and €13 million recognized in deferred tax assets) (see note C18.2 "Off-balance sheet commitments/Commitments received").

14.2.2 Restructuring provisions

Restructuring provisions are mainly in respect of restructuring measures in France for €21 million (€22 million at 31 December 2018), in Europe outside France for €8 million (€10 million at 31 December 2018) and in the United States for €4 million (€4 million at 31 December 2018).

14.2.3 Other provisions

Other provisions amount to €176 million and mainly comprise:

- provisions for labour litigation and risks for €62 million (€61 million at 31 December 2018),
- provisions for commercial litigation and warranties for €49 million (€61 million at 31 December 2018),
- provisions for tax litigation for €29 million (€29 million at 31 December 2018),
- provisions for other risks for €36 million (€33 million at 31 December 2018).

15. Liabilities and contingent liabilities

Liabilities and contingent liabilities are described in note 20 to the consolidated financial statements at 31 December 2018. There was no development in liabilities and contingent liabilities during the first half of 2019 with an actual or potential significant effect on the Group's consolidated financial statements.

16. Debt

16.1 Analysis of net debt by category

Group net debt amounts to €1,308 million at 30 June 2019, taking account of cash and cash equivalents of €1,331 million.

(In millions of euros)	**30 June 2019**	**31 December 2018**
Bonds	1,738	2,219
Bank loans	11	11
Other non-current debt	13	16
Non-current debt excluding IFRS 16 debt	**1,762**	**2,246**
Bonds	482	-
Syndicated credit facility	-	-
Negotiable European Commercial Paper	-	-
Other bank loans	201	145
Other current debt	38	56
Current debt excluding IFRS 16 debt	**721**	**201**
Debt excluding IFRS 16 debt	**2,483**	**2,447**
Non-current IFRS 16 debt	113	-
Current IFRS 16 debt	43	-
Debt	**2,639**	**2,447**
Cash and cash equivalents	1,331	1,441
Net debt	**1,308**	**1,006**

Bonds

At 30 June 2019, the fair values of the bonds issued by the Group are as follows:

- €480 million bond maturing in April 2020: €495 million,
- €150 million bond issued as Euro Medium Term Notes (EMTN) maturing in December 2023: €166 million,
- €700 million bond issued as Euro Medium Term Notes (EMTN) maturing in January 2025: €749 million,
- €900 million bond issued as Euro Medium Term Notes (EMTN) maturing in April 2027: €967 million.

IFRS 16 debt

The maturities of non-discounted future lease payments on the Group's lease obligations are presented in note C10 "IFRS 16 leases".

16.2 Analysis of debt (excluding IFRS 16 debt) by currency

Arkema Group's debt (excluding IFRS 16 debt) is mainly denominated in euros

(In millions of euros)	**30 June 2019**	**31 December 2018**
Euros	2,280	2,270
Chinese Yuan	149	147
US Dollars	23	9
Other	31	21
Total debt (excluding IFRS 16 debt)	**2,483**	**2,447**

Part of the debt in euros is converted through swaps to the accounting currency of internally-financed subsidiaries, in line with the Group's policy. At 30 June 2019 the swapped portion, principally in US dollars, represented approximately 57% of gross debt (excluding IFRS 16 debt).

16.3 Analysis of debt (excluding IFRS 16 debt) by maturity

The breakdown of debt (excluding IFRS 16 debt), including interest costs, by maturity is as follows:

(In millions of euros)	**30 June 2019**	**31 December 2018**
Less than 1 year	761	223
Between 1 and 2 years	35	534
Between 2 and 3 years	35	35
Between 3 and 4 years	29	29
Between 4 and 5 years	179	179
More than 5 years	1,652	1,679
Total debt (excluding IFRS 16 debt)	**2,691**	**2,679**

17. Share-based payments

17.1 Stock options

The Board of Directors has decided not to introduce any further stock option plans.

Movements in the stock option plans granted in previous years and still outstanding are as follows:

Plan	**Total number of options granted***	**Exercise price***	**Number of options exercised in 1st half 2019**	**Number of options cancelled in 1st half 2019**	**Total number of options exercised**	**Total number of options outstanding**	**Final year for exercising options**
2011-1	109,082	65.92	10,000	-	109,082	-	2019
2011-2	109,082	65.92	32,728	-	109,082	-	2019

* After adjustment following the capital increase with preferential subscription rights of November 2014

The amount of the IFRS 2 expense recognized in respect of stock options at 30 June 2019 is nil (also nil at 30 June 2018).

17.2 Free share grants

Movements in the free share grant plans awarded up until 30 June 2019 are as follows:

Plan	**Grant date**	**Vesting period**	**Conser-vation period**	**Total number of free shares granted**	**Number of shares subject to performance conditions**	**Fair value** *(euros per share)*	**Number of shares definitively granted in 1st half 2019**	**Number of shares cancelled in 1st half 2019**	**Total number of shares still to be granted at 30 June 2019**
2015-1	**9 Nov 2015**	4 years	-	285,525	285,525	42.31	400	1,075	272,940
2015-2	**9 Nov 2015**	4 years	-	59,595	-	42.31	-	2,020	53,295
2016-1, 2	**10 May 2016**	3-4 years	0-3 years	43,278	-	22.91-39.70	5,058	189	38,031
2016-3	**7 June 2016**	1-3 years	2 years	50,000	-	41.04-53.53	16,666	-	-
2016-4	**9 Nov 2016**	3 years	2 years	235,835(1)	226,040	47.31	-	830	230,205
2016-5	**9 Nov 2016**	4 years	-	122,080(2)	112,860	50.01	400	1,740	114,605
2017-1	**8 Nov 2017**	3 years	2 years	230,695(3)	218,255	63.59	-	140	230,095
2017-2	**8 Nov 2017**	4 years	-	129,405(4)	114,845	67.88	200	790	124,415
2018-1, 2	**2 May 2018**	3-4 years	0-3 years	41,137	-	59.31-61.13	25	10	41,087
2018-3	**5 Nov 2018**	3 years	2 years	231,820 (5)	217,570	62.64	-	520	231,300
2018-4	**5 Nov. 2018**	4 years	-	127,665 (6)	111,235	64.15	-	715	126,950

(1) *May be raised to 258,439 in the event of outperformance*
(2) *May be raised to 133,366 in the event of outperformance*
(3) *May be raised to 252,521 in the event of outperformance*
(4) *May be raised to 140,890 in the event of outperformance*
(5) *May be raised to 254,011 in the event of outperformance*
(6) *May be raised to 139,261 in the event of outperformance*

The amount of the IFRS 2 expense recognized in respect of free shares at 30 June 2019 is €12 million (€11 million at 30 June 2018).

18. Off-balance sheet commitments

18.1 Commitments given

18.1.1 Off-balance sheet commitments related to the Group's operating activities

The main commitments given are summarized in the table below:

(In millions of euros)	**30 June 2019**	**31 December 2018**
Guarantees granted	73	75
Comfort letters	-	-
Contractual guarantees	7	7
Customs and excise guarantees	21	17
Total	**101**	**99**

Guarantees granted are mainly bank guarantees in favour of local authorities and public bodies (state agencies, environmental agencies) in respect of environmental obligations or concerning classified sites.

18.1.2 Contractual commitments related to the Group's operating activities

Some of the commitments described in the lease commitments in note 29.1.2 to the consolidated financial statements at 31 December 2018, "Contractual commitments related to the Group's operating activities", do not fall within the scope of IFRS 16. Many of them are irrevocable purchase commitments described below, and service contracts or contracts making available assets that are not controlled by Arkema at 30 June 2019. Only the irrevocable portion of outstanding future purchases has been valued, and the corresponding amounts are included in the table below at 30 June 2019.

As of 1 January 2019 Arkema applies IFRS 16 "Leases". The impacts of this standard in the first half of 2019 are described in notes B "Accounting policies", C1.8 "Impact of IFRS 16 in the first half of 2019", and C10 "IFRS 16 leases". A reconciliation table of lease commitments at 31 December 2018 and the IFRS 16 debt is presented in note B, "Accounting policies".

In the normal course of business, Arkema Group has signed multi-year purchase agreements for raw materials and energy for the operational requirements of its factories, in order to guarantee the security and continuity of supply. Signature of such contracts over initial periods generally comprised between one and ten years is a normal practice for companies in the Group's business sector in order to cover their needs.

These purchase commitments were valued taking into account, on a case-by-case basis, Arkema's financial commitment to its suppliers, as certain of these contracts include clauses which oblige the Group to take delivery of the minimum volumes as set out in the contract or, otherwise, to pay financial compensation to the supplier. Depending on the case, these commitments are reflected in the purchase contracts in the form of notice periods, indemnification to be paid to the supplier in case of early termination of the contract or "take or pay" clauses. The value of these agreements thus corresponds to the minimum amount payable to suppliers as indemnification in the event of termination of the contracts or failure to take delivery of the minimum contractual quantities, less any quantities that can be resold on the market when the Group is able to do so.

The total amount of the Group's financial commitments is €644 million at 30 June 2019, maturing as follows:

(In millions of euros)	**30 June 2019**	**31 December 2018**
2019	144	202
2020	77	69
2021	85	67
2022	46	38
2023 until expiry of the contracts	292	282
Total	**644**	**658**

18.1.3 Off-balance sheet commitments related to changes in the scope of consolidation

Warranties related to sales of businesses

When selling businesses, Arkema Group has sometimes granted the purchaser warranties in respect of unrecorded liabilities. In most cases these warranties are capped and granted for a limited period of time. They are also limited in terms of their coverage to certain types of expenses or litigation. In the majority of cases, they cover risks of occurrence of environmentally related expenses or litigation.

The cumulative residual amount of capped warranties in respect of unrecorded liabilities granted by the Group amounts to €83 million at 30 June 2019 (€85 million at 31 December 2018). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

18.1.4 Off-balance sheet commitments related to Group financing

These commitments are described in note C21 to the consolidated financial statements at 31 December 2018, “Debt”.

18.2 Commitments received

Commitments received from Total in 2006

In connection with the Spin-Off of Arkema’s Businesses, Total S.A. and certain Total companies extended certain indemnities, or assumed certain obligations, for the benefit of Arkema Group. Some are still in application while others terminated during 2017. The warranties and commitments concerned are described below, and relate to actual or potential environmental liabilities of the Group arising from certain sites in France, Belgium and the United States, the operations on which have ceased in the majority of cases.

Obligations and indemnities given in respect of Former Industrial Sites

In order to cover certain risks relating to certain industrial sites situated in France, Belgium and the United States in respect of which the Group is or could be held liable, and where, for the most part, operations have ceased (the Former Industrial Sites), Total S.A. companies have entered into indemnity and service agreements with Arkema or its subsidiaries.
Pursuant to these agreements, the obligations and environmental responsibilities associated with these Former Industrial Sites in France and at Rieme in Belgium were transferred to Total S.A. group companies.

Agreement relating to certain Former Industrial Sites located in the United States

In March 2006, Arkema Amériques SAS completed the acquisition from Elf Aquitaine Inc. and Arkema France of Arkema Delaware Inc., a holding company for most of the Group’s operations in the United States. The negotiated terms of the stock purchase agreement among Elf Aquitaine Inc., Legacy Site Services and Arkema Amériques SAS, dated 7 March 2006 (the Arkema Delaware Main SPA) required Elf Aquitaine Inc. to use $270 million to capitalize a new subsidiary, Legacy Site Services LLC, that performs remediation services and indemnify the Group against the cost of environmental contamination liabilities incurred by the Group entities covered by this indemnity, and related personal injury and property damage claims associated with contamination at 35 of the Group’s closed and formerly operated facilities and 24 third party sites where the Group’s liability arises solely out of waste shipments from the sites other than currently operated sites. In exchange for this indemnification, Arkema Amériques SAS agreed to grant to Legacy Site Services LLC control over remediation activities and the defence of claims relating to contamination liabilities at these facilities and sites.
The sites currently operated by the Group are excluded from this indemnity, as are sites that received waste associated with current operations of the Group, certain sites where no significant restoration work is currently underway or anticipated, and other sites where the Group could be held liable for environmental pollution. These other sites include, for example, sites where remediation has been conducted in the past or where future remediation costs or liability are believed to be insignificant or non-existent based upon information available at the time when the indemnity was entered into. Arkema Amériques SAS has waived any claims against Legacy Site Services LLC, Total S.A. or their respective subsidiaries in respect of the sites not covered by the indemnity.
The Legacy Site Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defence and settlement costs and personal injury, property and natural resource damages. The indemnity does not cover liabilities unrelated to site remediation, in particular liabilities in respect of products manufactured on the said sites, liability arising from certain dangerous and potentially dangerous substances, particularly asbestos exposure and criminal liability.

The indemnity described above is capped at $270 million. The amount received by Arkema under this indemnity amounts to $111 million. At the same time as the stock purchase agreement and the indemnity described above, Legacy Site Services LLC and Arkema Inc. entered into a supplemental contamination indemnity agreement pursuant to which Legacy Site Services LLC will indemnify the liabilities of the Group in excess of $270 million, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

19. Subsequent events

The acquisition of ArrMaz was completed on 1 July 2019. For more details see note A1, “Portfolio management”.

In adhesives, Arkema announced at the end of July the planned acquisition by Bostik of Prochimir, a company specialized in high-performance thermobonding adhesive films with sales of €30 million. Closing of the deal is expected in fourth quarter 2019, after consultation of trade unions and subject to approval by the antitrust authorities in the relevant countries.

End-July, Arkema also announced a project to acquire Lambson, a company specializing in photoinitiators for curing, reporting sales of some €45 million. Closing of the deal is expected in fourth quarter 2019, subject to approval of antitrust authorities in the relevant countries.

D. SCOPE OF CONSOLIDATION AT 30 JUNE 2019

(a) Companies which changed their name in 2019.
(b) Companies merged in 2019.
(c) Companies liquidated in 2019.
(d) Companies consolidated for the first time in 2019.
(e) Companies for which the percentage ownership was changed in 2019, with no change to control.

The percentage of control indicated below also corresponds to the Group's ownership interest.

AEC Polymers	France	100.00	FC
Afinitica Process Technologies S.L.	Spain	100.00	FC
Afinitica Technologies S.L.	Spain	100.00	FC
Altuglas International Denmark A/S	Denmark	100.00	FC
Altuglas International Mexico Inc.	United States	100.00	FC
Altuglas International SAS	France	100.00	FC
American Acryl LP	United States	50.00	OC
American Acryl NA, LLC	United States	50.00	OC
Arkema	South Korea	100.00	FC
Arkema	France		FC
Arkema Afrique	France	100.00	FC
Arkema Amériques S.A.S.	France	100.00	FC
Arkema Antwerp	Belgium	100.00	FC
Arkema Asie S.A.S.	France	100.00	FC
Arkema B.V.	Netherlands	100.00	FC
Arkema Canada Inc.	Canada	100.00	FC
Arkema (Changshu) Chemicals Co., Ltd.	China	100.00	FC
Arkema (Changshu) Fluorochemical Co., Ltd.	China	100.00	FC
Arkema Chemicals India Private Ltd.	India	100.00	FC
Arkema (Changshu) Polyamides Co., Ltd.	China	100.00	FC
Arkema (China) Investment Co., Ltd.	China	100.00	FC
Arkema Coatex Brasil Indústria e Comércio Ltda.	Brazil	100.00	FC
Arkema Coating Resins Malaysia Sdn. Bhd.	Malaysia	100.00	FC
Arkema Coating Resins Ltd.	United Kingdom	100.00	FC
Arkema Company Ltd.	Hong Kong	100.00	FC
Arkema Daikin Advanced Fluorochemicals (Changshu) Co., Ltd.	China	60.00	OC
Arkema Delaware Inc.	United States	100.00	FC
Arkema Europe	France	100.00	FC
Arkema France	France	100.00	FC
Arkema GmbH	Germany	100.00	FC
Arkema (Hong Kong) Co., Ltd.	Hong Kong	100.00	FC
Arkema Hydrogen Peroxide Co., Ltd. Shanghai	China	66.67	FC
Arkema Inc.	United States	100.00	FC
Arkema Insurance Designated Activity Company	Ireland	100.00	FC
Arkema K.K.	Japan	100.00	FC
Arkema Kimya Sanayi ve Ticaret AS	Turkey	100.00	FC
Arkema Ltd.	United Kingdom	100.00	FC
Arkema Mexico S.A. de C.V.	Mexico	100.00	FC
Arkema Mexico Servicios S.A. de C.V.	Mexico	100.00	FC
Arkema Peroxides India Private Limited	India	100.00	FC
Arkema Pte. Ltd.	Singapore	100.00	FC
Arkema Pty Ltd.	Australia	100.00	FC
Arkema Quimica Ltda	Brazil	100.00	FC
Arkema Quimica SAU	Spain	100.00	FC
Arkema Chemicals Saudi Arabia	Saudi Arabia	51.00	FC
Arkema (Shanghai) Distribution Co., Ltd.	China	100.00	FC
Arkema Sp z.o.o	Poland	100.00	FC
Arkema S.r.l	Italy	100.00	FC
Arkema (Suzhou) Polyamides Co., Ltd.	China	100.00	FC
Arkema Taixing Chemicals Co., Ltd.	China	100.00	FC

Arkema Thiochemicals Sdn Bhd		Malaysia	86.00	FC
Arkema Yoshitomi Ltd.		Japan	49.00	SI
Barrflex TU LLC		United States	49.00	JV
Bostik AB		Sweden	100.00	FC
Bostik Argentina S. A.		Argentina	100.00	FC
Bostik A/S		Denmark	100.00	FC
Bostik AS		Norway	100.00	FC
Bostik Australia Pty Ltd.		Australia	100.00	FC
Bostik Belux S.A. – N.V.		Belgium	100.00	FC
Bostik Benelux B.V.	(a)	Netherlands	100.00	FC
Bostik B .V.		Netherlands	100.00	FC
Bostik Canada Ltd.		Canada	100.00	FC
Bostik Egypt For Production of Adhesives S.A.E		Egypt	100.00	FC
Bostik Findley China Co., Ltd		China	100.00	FC
Bostik Findley (Malaysia) Sdn. Bhd.		Malaysia	100.00	FC
Bostik GmbH		Germany	100.00	FC
Bostik Hellas S.A.		Greece	100.00	FC
Bostik Holding Hong Kong Ltd.		Hong Kong	100.00	FC
Bostik Holding SA		France	100.00	FC
Bostik Inc.		United States	100.00	FC
Bostik India Private Ltd.		India	100.00	FC
Bostik Industries Ltd.		Ireland	100.00	FC
Bostik Kimya Sanayi Ve Ticaret A.S		Turkey	100.00	FC
Bostik Korea Ltd.		South Korea	100.00	FC
Bostik Ltd.		United Kingdom	100.00	FC
Bostik Mexicana S.A. de C.V.		Mexico	100.00	FC
Bostik Nederland B .V.		Netherlands	100.00	FC
Bostik New Zealand Ltd.		New Zealand	100.00	FC
Bostik-Nitta Co., Ltd.		Japan	80.00	FC
Bostik L.L.C.		Russia	100.00	FC
Bostik OY		Finland	100.00	FC
Bostik Philippines Inc.		Philippines	100.00	FC
Bostik Romania S.r.l	(a)	Romania	100.00	FC
Bostik SA		France	100.00	FC
Bostik S.A.		Spain	100.00	FC
Bostik (Shanghai) Management Co., Ltd.		China	100.00	FC
Bostik Sp z.o.o.		Poland	100.00	FC
Bostik (Thailand) Co., Ltd		Thailand	100.00	FC
Bostik UAB		Lithuania	100.00	FC
Bostik Vietnam Company Ltd.		Vietnam	100.00	FC
Casda Biomatérials Co., Ltd		China	100.00	FC
Changshu Coatex Additives Co., Ltd.		China	100.00	FC
Changshu Haike Chemical Co., Ltd.		China	49.00	FC
CJ Bio Malaysia Sdn. Bhd.		Malaysia	14.00	SI
Coatex Asia Pacific Inc.		South Korea	100.00	FC
Coatex CEE s.r.o		Slovakia	100.00	FC
Coatex Inc.		United States	100.00	FC
Coatex Netherlands B.V.		Netherlands	100.00	FC
Coatex		France	100.00	FC
Daikin Arkema Refrigerants Asia Ltd.		Hong Kong	40.00	JV
Daikin Arkema Refrigerants Trading (Shanghai) Co., Ltd.		China	40.00	JV
Debratec GmbH		Germany	100.00	FC
Den Braven Aerosols GmbH & Co. Kg		Germany	100.00	FC
Den Braven Belgium N.V.	(b)	Belgium	100.00	FC
Den Braven France		France	100.00	FC
Den Braven Produtos Quimicos, Unipessoal, Lda.		Portugal	100.00	FC
Den Braven Sealants GmbH		Austria	100.00	FC
Den Braven SA (Proprietary) Ltd.		South Africa	100.00	FC
Delaware Chemicals Corporation		United States	100.00	FC

Distri-Mark France	(b)	France	100.00	FC
Febex SA		Switzerland	96.77	FC
Ihsedu Agrochem Private Ltd.		India	24.90	SI
Jiangsu Bostik Adhesive Co., Ltd		China	100.00	FC
MEM BAUCHEMIE GmbH		Germany	100.00	FC
Michelet Finance, Inc.		United States	100.00	FC
MLPC International		France	100.00	FC
Odor-Tech LLC		United States	100.00	FC
Ozark Mahoning Company		United States	100.00	FC
PT.Bostik Indonesia		Indonesia	100.00	FC
Sartomer (Guangzhou) Chemicals Co., Ltd.		China	100.00	FC
Sartomer Distribution (Shanghai) Co., Ltd.		China	100.00	FC
Seki Arkema Co. Ltd.		South Korea	51.00	FC
Siroflex Inc.		United States	100.00	FC
Siroflex Ltd.		United Kingdom	100.00	FC
Société Marocaine des Colles		Morocco	97.01	FC
Sovereign Chemicals Ltd.		United Kingdom	100.00	FC
Taixing Sunke Chemicals Co., Ltd.		China	55.00	OC
Tamer Endüstriyel Madencilik Anonim Sirketi		Turkey	50.00	FC
The LightLock Company Limited		Hong Kong	55.00	FC
Turkish Products, Inc.		United States	100.00	FC
Usina Fortaleza Industria E commercio de massa fina Ltda		Brazil	100.00	FC
Vetek SAU		Argentina	100.00	FC
Viking Chemical Company		United States	100.00	FC

NB: FC: full consolidation.
JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses.
JV: joint venture – consolidation by the equity method.
SI: significant influence – consolidation by the equity method.

3 DECLARATION BY THE PERSON RESPONSIBLE FOR THE HALF-YEAR FINANCIAL REPORT AT 30 JUNE 2019

I declare that, to the best of my knowledge, the condensed consolidated interim financial statements for the six months ended 30 June 2019 have been prepared in accordance with the applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and all of the companies included in the scope of consolidation. I further declare that the management report, presented on pages 3 to 12, presents a fair review of the major events that occurred in the first six months of the year and of their impact on the financial statements, as well as the main related-party transactions, and that the said management report provides a description of the main risks and uncertainties for the remaining six months of the financial year.

Colombes, 31 July 2019

Thierry Le Hénaff

Chairman and Chief Executive Officer

KPMG Audit
Département de KPMG S.A.

ERNST & YOUNG Audit

This is a free translation into English of the statutory auditors' review report on the condensed half-yearly financial information issued in French and is provided solely for the convenience of English-speaking users. This report includes information relating to the specific verification of information given in the Group's half-yearly management report. This report should be read in conjunction with, and construed in accordance with French law and professional auditing standards applicable in France.

Arkema

For the period from January 1 to June 30, 2019

Statutory auditors' review report on the half-yearly financial information

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Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles

Arkema

For the period from January 1 to June 30, 2019

Statutory auditors' review report on the half-yearly financial information

To the Shareholders,

In compliance with the assignment entrusted to us by your annual general meetings and in accordance with the requirements of article L. 451-1-2 III of the French Monetary and Financial Code ("Code monétaire et financier"), we hereby report to you on:

- the review of the accompanying condensed half-yearly consolidated financial statements of Arkema, for the period from January 1 to June 30, 2019,

- the verification of the information presented in the half-yearly management report

These condensed half-yearly consolidated financial statements are the responsibility of the Board of Directors. Our role is to express a conclusion on these financial statements based on our review.

1. Conclusion on the financial statements

We conducted our review in accordance with professional standards applicable in France. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with professional standards applicable in France and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Based on our review, nothing has come to our attention that causes us to believe that the accompanying condensed half-yearly consolidated financial statements are not prepared, in all material respects, in accordance with IAS 34 - standard of the IFRSs as adopted by the European Union applicable to interim financial information.

Without qualifying the conclusion expressed above, we draw your attention to the matter set out in note B. « Accounting policies - Impact of the application of IFRS 16» to the condensed half-yearly consolidated financial statements which presents the first application of the IFRS standard “Lease contract”.

2. Specific verification

We have also verified the information presented in the half-yearly management report on the condensed half-yearly consolidated financial statements subject to our review.

We have no matters to report as to its fair presentation and consistency with the condensed half-yearly consolidated financial statements.

Paris-La Défense, July 31, 2019

The Statutory Auditors

French original signed by

KPMG Audit *Département de KPMG S.A.*		ERNST & YOUNG Audit
Bertrand Desbarrières	Eric Dupré	Denis Thibon