

# HALF-YEAR FINANCIAL REPORT

Six months ended 30 June 2020

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# 1 HALF-YEAR ACTIVITY REPORT

## 1.1 MANAGEMENT ANALYSIS PRINCIPLES AND ACCOUNTING STANDARDS

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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 2020 presented in section 2 of this document.

When analyzing changes in its results, particularly changes in its 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 2020 HIGHLIGHTS

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### 1.2.1 Covid-19

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The spread of the Covid-19 pandemic across the world since the beginning of 2020 – which has proven to be an unprecedented public health crisis triggering strict lockdown and health measures in many countries – took a heavy toll on the global economy in first-half 2020. While it should continue to weigh on the macroeconomic environment, it is uncertain at this stage how long this will last. The fall in demand, which accelerated in the second quarter, across many sectors in which Arkema's customers operate, weighed on the Group's financial performance. In order to mitigate the impact of this crisis and maintain a very solid level of liquidity, Arkema has put in place significant measures aimed at reducing, in 2020, its costs by €50 million compared with 2019 and its capital expenditure by €100 million compared with the amount originally planned. Moreover, the Group benefits from the diversity of its end markets and geographic footprint. Given the global scale of the crisis, it is difficult to identify with any sufficient degree of reliability its impact on the Group's EBITDA, which was estimated at €45 million for the first quarter.

In this highly exceptional context linked to the Covid-19 crisis, the decline in sales and EBITDA led the Group to assess the value of its assets. To that effect, impairment tests were carried out, resulting in the recognition of exceptional asset write-downs representing a very limited amount.

### 1.2.2 Organic growth projects

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On 3 June 2020, Arkema announced that it had entered into an innovative and long-term partnership in the United States with Nutrien Ltd, securing a competitive access to anhydrous hydrogen fluoride (AHF) for the Group's Calvert City site. About half of the AHF supplied by Nutrien will be used for the production of high added-value polymers and fluoro-derivatives, and the remainder for the production of low-GWP (global warming potential) fluorogases. This project, which offers greater environmental protection than more traditional production processes, will enable the Group to support the growth of fluorinated polymers in the attractive segments of water treatment, electronics and batteries. As part of this agreement, Arkema will invest US\$150 million in a 40 kt per year AHF production plant at Nutrien's site in Aurora (North Carolina), scheduled to come on stream in the first half of 2022. This project fits perfectly with Arkema's strategy presented on 2 April 2020, as it enables, in the United States, its fluorinated polymers and other fluorinated specialty derivatives within the

Specialty Materials platform <sup>(1)</sup> to grow in a sustainable way and it strengthens the long-term competitiveness of its emissive fluorogases.

In Performance Additives, Arkema successfully started the expansion of production capacity at its Kerteh thiochemicals site in Malaysia in the first quarter of 2020 to support the strong growth of the animal nutrition, petrochemical and refining markets in Asia and consolidate its leading position in high value-added sulfur derivatives.

### 1.2.3 Acquisitions and divestments

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In the first half of 2020, Arkema continued its acquisition and divestment policy, which is fully in line with its strategy of refocusing the Group's activities on Specialty Materials.

Thus, in Adhesive Solutions, on 3 January 2020, Arkema completed the acquisition of LIP Byggningsartikler AS (LIP) – a Danish leader in tile adhesives, waterproofing systems and floor preparation solutions – with annual sales of approximately €30 million. This acquisition, which offers strong geographic and commercial synergies, will allow Bostik to offer its customers an extended range of high value-added solutions and boost its presence in the Nordic countries.

In the Intermediates segment, on 1 June 2020, Arkema completed the divestment of its Functional Polyolefins business to the South Korean corporation SK Global Chemical, based on an enterprise value of €335 million. Part of the PMMA activity, this business, which represents annual sales of around €250 million, produces ethylene copolymers and terpolymers for the food packaging, cable, electronics and coatings markets.

### 1.2.4 Financing

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Taking advantage of favorable market conditions, on 21 January 2020, Arkema carried out a €300 million undated hybrid bond issue with an annual coupon of 1.5% until the Group's first call date after 6 years. This issue complements the previous €400 million hybrid refinancing operation in June 2019, giving the Group the possibility of refinancing the remaining €300 million portion of its outstanding hybrid bonds with a 4.75% coupon and a first call date in October 2020.

In April 2020, the Group redeemed at maturity €480 million of bonds with an annual coupon of 3.85%. Arkema had refinanced this bond issue in December 2019 by issuing €500 million of senior bonds with a 10-year maturity and an annual coupon of 0.75%.

### 1.2.5 Corporate social responsibility

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Arkema committed to help keep global warming well below 2°C by announcing on 25 February 2020 its new climate plan, which is in line with the Paris Agreement. The Group thereby takes its environmental action plan to the next level, setting itself the target of reducing its absolute greenhouse gas emissions by more than 1.7 million tons of CO<sub>2</sub> equivalent compared with 2015. The Group thus aims to reduce its emissions to less than 3 million tons by 2030, regardless of the increase in production volumes, representing a 38% reduction over 15 years. At the same time, Arkema also decided to revise its environmental targets expressed in EFPI (Environmental Footprint Performance Indicator) terms by setting new targets for 2030. All these initiatives are detailed in the CSR section of Arkema's website ([www.arkema.com](http://www.arkema.com)).

In June 2020, the Group became a member of the World Business Council for Sustainable Development (WBCSD), with the objective of acting in partnership with this network to help accelerate the transition to a more sustainable world.

### 1.2.6 Capital increase reserved for employees

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In April 2020 Arkema carried out a capital increase reserved for employees. A total of 112,256 shares were subscribed at a price of €68.56 per share, representing a net amount of €7 million.

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<sup>(1)</sup>Specialty Materials include the three following segments: Adhesive Solutions, Advanced Materials and Coating Solutions.

## 1.3 CORPORATE GOVERNANCE

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### 1.3.1 Composition of the Board of Directors

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Pursuant to Arkema's Articles of Association, as amended at the combined annual general meeting of 19 May 2020, in accordance with the provisions of article L. 225-27-1 of the French Commercial Code (*Code de commerce*) modified by French Law no. 2019-486 of 22 May 2019 on the action plan for business growth and transformation, at the meeting of the European Group Works Council on 3 July 2020:

- the French Group Works Council (whose functions are assured by the French delegation of the European Works Council) elected to reappoint Nathalie Muracciole as director representing employees for a four-year term;
- the European Works Council appointed Susan Rimmer as the second director representing employees for a four-year term. She joined Arkema's Board of Directors on 29 July 2020.

### 1.3.2 Composition of the Executive Committee

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During the first half of 2020, Thierry Le Hénaff made a number of changes to Arkema's Executive Committee, notably giving the business lines a broader and more diversified representation in order to continue adapting the Group to the world's current and future challenges:

- Marc Schuller was appointed as Arkema's Chief Operating Officer (COO) as from 3 March 2020, reporting to Thierry Le Hénaff. He is responsible for overseeing the Advanced Materials, Coating Solutions and Intermediates segments and also has responsibility for North America, raw materials and energy procurement, as well as commercial excellence.
- The following three people were promoted to the Executive Committee, reporting to Marc Schuller, as from 4 May:
  - Marie-Pierre Chevallier, in charge of the Performance Additives business line
  - Erwoan Pezron, in charge of the High Performance Polymers business line
  - Richard Jenkins, in charge of the Coating Solutions segment

The other Executive Committee members who report to Thierry Le Hénaff are Bernard Boyer, Vincent Legros, Luc Benoit-Cattin, Marie-José Donsion and Thierry Parmentier.

## 1.4 ANALYSIS OF FIRST-HALF 2020 FINANCIAL RESULTS

The figures in this section are provided on a consolidated basis and in accordance with Arkema's organization comprising the following three coherent and complementary segments dedicated to Specialty Materials: Adhesive Solutions, Advanced Materials and Coating Solutions, as well as the Intermediates segment which groups together activities whose results are more volatile.

### 1.4.1 Analysis of Arkema's results

<i>(In millions of euros)</i>	<b>First-half 2020</b>	<b>First-half 2019</b>	<b>Year-on-year change</b>
<b>Sales</b>	<b>3,990</b>	<b>4,469</b>	-10.7%
<b>EBITDA</b>	<b>586</b>	<b>777</b>	-24.6%
<i>EBITDA margin</i>	14.7%	17.4%	
Recurring depreciation and amortization	(282)	(252)	+11.9%
<b>Recurring operating income (REBIT)</b>	<b>304</b>	<b>525</b>	-42.1%
<i>REBIT margin</i>	7.6%	11.7%	
Other income and expenses	93	(23)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(29)	(19)	
<b>Operating income</b>	<b>368</b>	<b>483</b>	-23.8%
Equity in income of affiliates	(1)	(1)	
Financial result	(45)	(60)	-25.0%
Income taxes	(124)	(95)	+30.5%
<b>Net income</b>	<b>198</b>	<b>327</b>	-39.4%
Of which: non-controlling interests	1	4	
<b>Net income – Group share</b>	<b>197</b>	<b>323</b>	-39.0%
<b>Adjusted net income</b>	<b>190</b>	<b>357</b>	-46.8%

## SALES

Given the challenging context linked to Covid-19, the Group demonstrated its resilience. Sales for the first half totaled €3,990 million, down 10.7% year on year. Volumes declined 8.6%, mainly due to the economic downturn caused by the health crisis linked to Covid-19 and the lockdown measures imposed in many countries. The automotive, transportation and oil & gas sectors were marked by a strong slowdown during the period, and the construction and industrial markets were more particularly impacted in the second quarter. However, demand remained robust for packaging, nutrition and hygiene, as well as for certain niche applications that are key in fighting the virus, such as disinfection, medical as well as protective barriers and masks, in which Arkema has strong expertise. In addition, the construction market improved in June in Europe and the United States. The Group benefitted from the diversity of its end markets and geographic footprint. The price effect was a negative 5.5%, mainly reflecting more challenging market conditions for Intermediates in a context of lower demand, but also a relative stability of prices overall in Specialty Materials. The consolidation of ArrMaz in Advanced Materials, Prochimir and LIP in Adhesive Solutions and Lambson in Coating Solutions, as well as the divestment of the Functional Polyolefins business at 1 June, resulted in a 3.2% positive scope effect. The currency effect was limited at a positive 0.2%.

In first-half 2020, Specialty Materials accounted for 80% of total Group sales (78% in first-half 2019). Excluding the corporate segment <sup>(1)</sup>, the breakdown of sales by segment was similar to 2019, with Adhesive Solutions accounting for 24% of Group sales (23% in first-half 2019), Advanced Materials 32% (30% in first-half 2019), Coating Solutions 24% (25% in first-half 2019) and Intermediates 20% (22% in first-half 2019).

<sup>(1)</sup> As defined in note C.2 to the condensed consolidated interim financial statements at 30 June 2020 in section 2 of this document.

The regional sales split was also similar to first-half 2019, with Europe representing 37% of Group sales (38% in first-half 2019), North America 34% (31% in first-half 2019) and Asia 25% (27% in first-half 2019) and the rest of the world (unchanged from first-half 2019) at 4%.

## **EBITDA AND RECURRING OPERATING INCOME**

Group EBITDA came in at €586 million (€777 million in first-half 2019), mainly reflecting the impact of much lower demand. Advanced Materials held up well in this context thanks to the good performance of certain end markets such as nutrition, the benefits of innovation in niche applications used in the fight against the virus, and the contribution of ArrMaz. After a very good first quarter, Adhesive Solutions logically suffered in April and May from the construction market's slump in Europe and the United States, but delivered a much better performance in June as lockdowns were lifted in a number of countries that are important for the Group. The Group's results for the first half of 2020 also include the negative impacts of illegal HFC imports into Europe, although the effect of this eased as from June, and to a lesser extent, the impact of national pension reform strikes in France that took place in the first quarter, which particularly affected the Advanced Materials segment.

The EBITDA margin, which was impacted by the slowdown linked to the Covid-19 health crisis, remained solid at 14.7% (17.4% in first-half 2019). It was notably supported by the very good first quarter in Adhesive Solutions, a solid second-quarter performance from Advanced Materials with an EBITDA margin of 20%, and by initiatives to reduce fixed costs.

Recurring depreciation and amortization totaled €282 million, €30 million higher than in first-half 2019 essentially due to the start-up of production units in 2019 and early 2020, and the consolidation of newly acquired entities.

In line with the year-on-year changes in EBITDA and recurring depreciation and amortization, recurring operating income (REBIT) came to €304 million and REBIT margin was 7.6%.

## **OPERATING INCOME**

Operating income amounted to €368 million (€483 million in first-half 2019), including €93 million in net other income, primarily corresponding to the €235 million pre-tax capital gain, net of costs, relating to the divestment of the Functional Polyolefins business, exceptional asset write-downs recognized following impairment tests performed in the very exceptional context of Covid-19, and €29 million in depreciation and amortization related to asset revaluations carried out as part of purchase price allocations.

## **FINANCIAL RESULT**

The financial result represented a net expense of €45 million versus a €60 million net expense in first-half 2019. The year-on-year change mainly reflects a less adverse interest rate effect on the portion of the Group's debt swapped into US dollars, and the impact of actuarial differences on certain provisions for employee benefits.

## **INCOME TAXES**

The income tax expense was up year on year at €124 million (€95 million in first-half 2019), including a €55 million reversal of deferred tax assets due to the use of tax losses during the period. Excluding non-recurring items, the tax rate for the first half of 2020 amounted to approximately 22% of recurring operating income.

## **NET INCOME – GROUP SHARE AND ADJUSTED NET INCOME**

As a result, net income – Group share totaled €197 million (€323 million in first-half 2019), and net earnings per share amounted to €2.58.

Excluding the post-tax impact of non-recurring items, adjusted net income came in at €190 million, representing €2.49 per share.

## 1.4.2 Analysis of results by segment

### 1.4.2.1 ADHESIVE SOLUTIONS (24% OF TOTAL GROUP SALES)

<i>(In millions of euros)</i>	<b>First-half 2020</b>	<b>First-half 2019</b>	<b>Year-on-year change</b>
<b>Sales</b>	<b>968</b>	<b>1,033</b>	-6.3%
<b>EBITDA</b>	<b>119</b>	<b>133</b>	-10.5%
<i>EBITDA margin</i>	12.3%	12.9%	
<b>Recurring operating income (REBIT)</b>	<b>89</b>	<b>103</b>	-13.6%
<i>REBIT margin</i>	9.2%	10.0%	
Other income and expenses	(29)	(5)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(18)	(17)	
<b>Operating income</b>	<b>42</b>	<b>81</b>	-48.1%

Sales for the Adhesive Solutions segment totaled €968 million in first-half 2020, down 6.3% year on year. Volumes declined by 8.2%, reflecting the sharp slowdown in demand in the construction market in the second quarter, as well as the decline in the transportation and industrial sectors throughout the first half. However, the decrease in volumes was mitigated thanks to the good performance of the packaging and hygiene markets and an improvement in the construction and DIY markets seen in Europe and the United States in June. Prices held up well during the period, down just 0.2%, reflecting measures taken by the Group in 2019 to optimize the product mix. The scope effect was a positive 2.8% and corresponds to the integration of LIP and Prochimir. Currencies had a limited negative impact of 0.7%.

The segment's EBITDA totaled €119 million, down 10.5% on first-half 2019. Despite a very good first quarter, with an EBITDA increase of 11% year on year, the sharp drop in volumes during April and May in the construction sector, combined with weak demand in the industrial assembly sector, weighed on the segment's EBITDA in the second quarter. Bostik's performance picked up sharply in June thanks to the rebound seen in the construction and DIY markets, confirming the operational improvement of the segment. In addition, EBITDA was supported by operational excellence initiatives and fixed cost savings announced in May, as well as by the favorable evolution of certain raw materials and the integration of LIP and Prochimir. EBITDA margin was 12.3% in the first half (12.9% in first-half 2019), temporarily down in the second quarter following the significant increase seen in the first quarter.

In line with the year-on-year decrease in EBITDA, recurring operating income (REBIT) came to €89 million. This figure includes €30 million in recurring depreciation and amortization, stable compared with first-half 2019. REBIT margin stood at 9.2% for the first half of 2020.

Operating income for the Adhesive Solutions segment amounted to €42 million, including €18 million in depreciation and amortization related to asset revaluations carried out as part of purchase price allocations and €29 million in net other expenses, corresponding notably to restructuring costs.

### 1.4.2.2 ADVANCED MATERIALS (32% OF TOTAL GROUP SALES)

<i>(In millions of euros)</i>	<b>First-half 2020</b>	<b>First-half 2019</b>	<b>Year-on-year change</b>
<b>Sales</b>	<b>1,280</b>	<b>1,322</b>	-3.2%
<b>EBITDA</b>	<b>246</b>	<b>293</b>	-16.0%
<i>EBITDA margin</i>	19.2%	22.2%	
<b>Recurring operating income (REBIT)</b>	<b>122</b>	<b>184</b>	-33.7%
<i>REBIT margin</i>	9.5%	13.9%	
Other income and expenses	(18)	(11)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(8)	-	
<b>Operating income</b>	<b>96</b>	<b>173</b>	-44.5%



At €1,280 million, sales posted by the Advanced Materials segment for first-half 2020 were down slightly by 3.2% compared with the first half of 2019. Volumes fell 10.7% year on year, mainly due to the impact of the Covid-19 crisis which weighed particularly on demand for High Performance Polymers. The strong decline in the transportation, consumer electronics and oil and gas sectors overshadowed the good performance of the nutrition market, and the benefits of innovation in niche applications used in protection against the virus. The price effect was contained at a negative 1.8%. The consolidation of ArrMaz added 8.9% to the segment's sales, driven by favorable end markets such as crop nutrition. The currency effect was a positive 0.4%.

EBITDA for Advanced Materials fell 16.0% year on year to €246 million, reflecting the sharp contraction in volumes linked to the Covid-19 crisis, notably for High Performance Polymers, and, to a lesser extent, the national pension reform strikes that took place in France in January. With the consolidation of ArrMaz, Performance Additives were more resilient, notably in the second quarter. EBITDA margin remained high for the Advanced Materials segment, coming in at 19.2% (22.2% in first-half 2019), benefitting from a good product mix, the favorable evolution of certain raw materials, and fixed cost reductions.

Recurring operating income (REBIT) came to €122 million, including €124 million in recurring depreciation and amortization, which was €15 million higher year on year, due notably to the integration of ArrMaz, the start-up of the capacity expansion of high performance powders at Mont, France in the second half of 2019, and the doubling in capacity of the Kerteh site in Malaysia in first-quarter 2020.

The segment's operating income totaled €96 million and included €8 million in depreciation and amortization related to asset revaluations carried out as part of the purchase price allocation for ArrMaz and €18 million in net other expenses, mainly corresponding to the impact of Hurricane Harvey in 2017 in the United States and exceptional asset write-downs for a very limited amount.

### 1.4.2.3 COATING SOLUTIONS (24% OF TOTAL GROUP SALES)

<i>(In millions of euros)</i>	<b>First-half 2020</b>	<b>First-half 2019</b>	<b>Year-on-year change</b>
<b>Sales</b>	<b>953</b>	<b>1,139</b>	-16.3%
<b>EBITDA</b>	<b>124</b>	<b>170</b>	-27.1%
<i>EBITDA margin</i>	<i>13.0%</i>	<i>14.9%</i>	
<b>Recurring operating income (REBIT)</b>	<b>64</b>	<b>116</b>	-44.8%
<i>REBIT margin</i>	<i>6.7%</i>	<i>10.2%</i>	
Other income and expenses	(3)	(1)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(3)	(2)	
<b>Operating income</b>	<b>58</b>	<b>113</b>	-48.7%

Sales for the Coating Solutions segment were down 16.3% year on year to €953 million. Despite holding up well in the first quarter – thanks notably to the start-up of the acrylic acid reactor at Clear Lake in the United States – volumes fell 9.3% over the period, due to the weak demand during the second quarter in construction, paints and in some industrial markets. The price effect was a negative 8.9%, stemming mainly from lower propylene prices. The scope effect was a positive 1.4%, linked to the acquisition of Lambson, and currencies had a slight positive impact of 0.5%.

At €124 million, the segment's EBITDA was down significantly on the very good performance achieved in first-half 2019 (€170 million). The results were impacted by the effects of the Covid-19 crisis and, to a lesser extent, the strikes that took place in France in the first quarter of the year, but benefitting from the improvement in the decorative paints market in June. In a context of strong volume declines, the EBITDA margin resisted well, coming in at 13.0%, thanks notably to the benefits of the integration between upstream and downstream activities.

Recurring operating income (REBIT) came in at €64 million, including €60 million in recurring depreciation and amortization, representing a €6 million year on year increase primarily resulting from the start-up of the acrylic acid reactor at Clear Lake in the United States.

Operating income totaled €58 million.

#### 1.4.2.4 INTERMEDIATES (20% OF TOTAL GROUP SALES)

<i>(In millions of euros)</i>	First-half 2020	First-half 2019	Year-on-year change
<b>Sales</b>	<b>776</b>	<b>961</b>	-19.3%
<b>EBITDA</b>	<b>134</b>	<b>230</b>	-41.7%
<i>EBITDA margin</i>	17.3%	23.9%	
<b>Recurring operating income (REBIT)</b>	<b>70</b>	<b>174</b>	-59.8%
<i>REBIT margin</i>	9.0%	18.1%	
Other income and expenses	184	(3)	
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	-	-	
<b>Operating income</b>	<b>254</b>	<b>171</b>	+48.5%

At €776 million, sales for the Intermediates segment was down 19.3% compared with first-half 2019. The decrease includes a negative 12.2% price effect, which primarily stemmed from the challenging market conditions in Fluorogases and lower propylene prices. Volumes fell by 5.3%, reflecting the slowdown in demand in the automotive sector over the entire six-month period and in the construction sector in the second quarter, partly offset by the good dynamic in the niche market of PMMA protective sheets. The scope effect was a negative 2.2%, corresponding to the divestment of the Functional Polyolefins business which was completed on 1 June. The currency effect was limited, at a positive 0.4%.

In this context of strong declines in volumes and prices, the segment's EBITDA came in at €134 million (€230 million in first-half 2019). Those results also reflect continued illegal HFC imports into Europe, although the effect of this eased towards the end of the period. EBITDA margin contracted to 17.3%.

Recurring operating income (REBIT) totaled €70 million, including €64 million in recurring depreciation and amortization, up €8 million year on year as a result of Arkema's acquisition of Jurong's interest in Taixing Sunke Chemicals. REBIT margin stood at 9.0% for the first half of 2020.

Operating income rose to €254 million and included the €235 million pre-tax capital gain, net of costs, generated on the divestment of the Functional Polyolefins business, and limited exceptional write-downs of goodwill recognized following impairment tests carried out in the unprecedented context of Covid-19.

#### 1.4.3 Group cash flow analysis

<i>(In millions of euros)</i>	First-half 2020	First-half 2019
Cash flow from operating activities	416	484
Cash flow used in investing activities	(19)	(346)
<b>Net cash flow</b>	<b>397</b>	<b>138</b>
Of which net cash flow from portfolio management operations	147	(25)
<b>Free cash flow</b>	<b>250</b>	<b>163</b>
<b>Cash flow used in financing activities</b>	<b>(429)</b>	<b>(238)</b>

EBITDA can be reconciled to free cash flow as follows:

<i>(In millions of euros)</i>	<b>First-half 2020</b>	<b>First-half 2019</b>
<b>EBITDA</b>	<b>586</b>	<b>777</b>
Taxes	(55)	(96)*
Cash items included in the financial result	(42)	(49)
Change in working capital	(24)	(167)
Change in fixed asset payables <sup>(1)</sup>	(54)	(62)
Recurring capital expenditure	(157)	(187)
Exceptional capital expenditure	(57)	(38)
Non-recurring items	36	(24)*
Other	17	9
<b>Free cash flow</b>	<b>250</b>	<b>163</b>

\* Restated for the impact of taxes on non-recurring items.

<sup>(1)</sup> Excluding cash flows related to non-recurring items and portfolio management operations. These items represented a net cash outflow of € 1 million in first-half 2020. In first-half 2019 they represented a net cash outflow of € 34 million, primarily relating 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".

## NET CASH FLOW AND FREE CASH FLOW

The Group's net cash flow represented a strong inflow of €397 million in the first half of 2020, versus a €138 million inflow in first-half 2019. This amount includes a €147 million net cash inflow from portfolio management operations, corresponding mainly to the acquisition of LIP in Adhesive Solutions and the divestment of the Functional Polyolefins business, for which a tax rate of 32% was applied to the related capital gain. In the first half of 2019, cash flows from portfolio management operations represented a net outflow of €25 million and primarily corresponded to a US\$20 million equity investment in Carbon®.

Consequently, free cash flow – which corresponds to net cash flow excluding the impact of portfolio management operations – amounted to the very good level of €250 million (€163 million in first-half 2019). This amount includes a slight seasonal increase in working capital during the period, which was much lower than in first-half 2019 thanks to strict management of inventory and receivables in a context of lower sales and costs for certain raw materials.

The first-half 2020 free cash flow figure also reflects a slight year-on-year decrease in capital expenditure to €215 million (€233 million in first-half 2019). Recurring capital expenditure amounted to €157 million for the period and exceptional capital expenditure totaled €57 million. The exceptional capex related to the polyamides project in Asia and the partnership with Nutrien announced in June for the long-term supply of anhydrous hydrogen fluoride in the United States. As stated in the Group's first-quarter 2020 results release, recurring and exceptional capital expenditure for the full year is expected to total some €600 million – €100 million lower than the amount originally planned for 2020.

Lastly, free cash flow in the first half of 2020 included a €36 million inflow for non-recurring items, of which tax savings linked to the use of tax losses for an amount of €55 million.

## CASH FLOW USED IN FINANCING ACTIVITIES

The cash outflow for financing activities amounted to €429 million in first-half 2020 versus €238 million in the first six months of 2019. The first-half 2020 figure includes a €2.20 per-share dividend payment for fiscal year 2019 for a total amount of €168 million, €21 million in share buyback costs, and €7 million in net proceeds from the capital increase reserved for employees. It also includes the net proceeds from the hybrid bonds issued in January 2020 for €299 million and the redemption of the bonds with a face value of €480 million that matured in April 2020.

In first-half 2019, cash flow used in financing activities included the dividend payment, share buybacks, and the overall net cost of partially refinancing the Group's hybrid bonds, which involved a new bond issue and the partial buyback of outstanding hybrid bonds.

## 1.4.4 Balance sheet analysis

<i>(In millions of euros)</i>	30 June 2020	31 December 2019	Year-on-year change
Non-current assets*	6,621	6,744	-1.8%
Working capital	1,231	1,173	+4.9%
<b>Capital employed</b>	<b>7,852</b>	<b>7,917</b>	<b>-0.8%</b>
Deferred tax assets	161	216	-25.5%
Provisions for pensions and employee benefits	562	525	+7.0 %
Other provisions	374	374	-
<b>Total provisions</b>	<b>936</b>	<b>899</b>	<b>+4.1%</b>
Long-term assets covering some provisions	90	94	-4.3%
<b>Total provisions net of non-current assets</b>	<b>846</b>	<b>805</b>	<b>+5.1%</b>
Deferred tax liabilities	334	334	-
<b>Net debt including hybrid bonds</b>	<b>2,134</b>	<b>2,331</b>	<b>-8.5%</b>
<b>Shareholders' equity</b>	<b>5,594</b>	<b>5,324</b>	<b>+5.1%</b>

\* Excluding deferred tax and including pension assets.

Between 31 December 2019 and 30 June 2020, non-current assets decreased by €123 million, primarily due to:

- €215 million in capital expenditure, including €157 million in recurring capital expenditure and €57 million in exceptional capital expenditure;
- the recognition of €39 million in right-of-use assets related to lease commitments following the Group's application of IFRS 16;
- €422 million in depreciation and amortization including (i) €282 million in recurring depreciation and amortization, of which €28 million arising from the application of IFRS 16, (ii) €29 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) €111 million in exceptional write-downs of industrial and intangible assets;
- the impact of the LIP acquisition, amounting to €91 million; and
- a €25 million negative currency translation effect, mainly linked to the slight appreciation of the euro against the US dollar at the end of the period.

At 30 June 2020, working capital was €58 million higher than at 31 December 2019. This limited increase reflects in particular the Group's strict management of inventory and receivables in a context of lower sales and costs for certain raw materials. It also includes a negative €39 million linked to currencies and an €8 million scope effect related to the acquisition of LIP in Adhesive Solutions. At 30 June 2020, the ratio of working capital to annualized sales <sup>(1)</sup> was 16.5%, close to the year-earlier figure of 16.0%.

As a consequence, the Group's capital employed decreased by €65 million between 31 December 2019 and 30 June 2020 to €7,852 million.

Deferred tax assets amounted to €161 million at 30 June 2020, down €55 million on 31 December 2019 following the use of €55 million in tax losses during the period.

Gross provisions totaled €936 million. Some of these provisions, accounting for an aggregate €90 million, are covered mainly by the guarantee facility granted by Total and described in note C.19.2 to the condensed consolidated interim financial statements at 30 June 2020 (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 2020, provisions net of these non-current assets stood at €846 million versus €805 million at 31 December 2019, with the increase mainly attributable to the rise in net provisions for pension liabilities.

<sup>(1)</sup> Calculated as working capital at 30 June/(2<sup>nd</sup> quarter sales \* 4).

Net provisions can be analyzed as follows by type:

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Pension liabilities	420	381
Other employee benefit obligations	142	143
Environmental contingencies	121	124
Restructuring	33	34
Other	130	123

Between 31 December 2019 and 30 June 2020, net provisions for pension liabilities increased by €39 million primarily due to a sharp decrease in the discount rates applied in the United States and the United Kingdom, partially offset by higher discount rates in Europe and the revaluation of plan assets in the United Kingdom. The currency effect during the period was limited. Provisions for other employee benefit obligations (healthcare costs, welfare costs and long-service awards) decreased by €1 million.

Net debt and hybrid bonds amounted to €2,134 million at 30 June 2020 (€2,331 million at 31 December 2019), representing 1.7 times last-twelve-months EBITDA. The increase compared with end-December 2019 was mainly attributable to the net cash flow, the outflows related to the dividend payment and share buybacks, and the inflow related to the capital increase reserved for employees.

Shareholders' equity amounted to €5,594 million versus €5,324 million at 31 December 2019. The €270 million increase primarily relates to (i) €198 million in net income for the period, (ii) the payment of a €2.20 per-share dividend for a total amount of €168 million, (iii) the January 2020 hybrid bond issue for a net €299 million, (iv) €21 million for share buybacks and (v) €7 million in net proceeds from the capital increase reserved for employees. In first-half 2020, a €28 million actuarial loss was recognized in equity for provisions for pension liabilities and other post-employment benefit obligations.

## **1.5 TRANSACTIONS WITH RELATED PARTIES**

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

## **1.6 SUBSEQUENT EVENTS**

Significant events occurring after the reporting date are described in note C.20 to the condensed consolidated interim financial statements at 30 June 2020 (see section 2 of this document).

## **1.7 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 2019 Universal Registration Document filed with the French financial markets authority (*Autorité des marchés financiers* – AMF) on 26 March 2020 under number D.20-0182 and the amendment thereto filed on 30 July 2020. These documents are available on Arkema's website ([www.finance.arkema.com](http://www.finance.arkema.com)) and on the AMF website ([www.amf-france.org](http://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 2020.

## 1.8 OUTLOOK

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Based on the progressive lifting of lockdown measures in some important countries for the Group, Arkema expects that demand will continue to improve gradually in the second part of the year, while remaining below last year's level. The pace and strength of this improvement are still uncertain, dependent on the evolution of the pandemic, and will vary between end-markets and geographies. Arkema estimates at this stage that sales in the third quarter will decline by around 10% year-on-year at constant scope and currency, representing a clear improvement compared to the decline of around 20% recorded in the second quarter.

In this context, Arkema will focus its efforts on the elements that are within its control, in particular costs, capital expenditure and working capital in order to maintain a strong level of liquidity. The Group thus confirms it is on track to reduce in 2020 its fixed costs by €50 million compared to 2019 and to reduce capital expenditure by €100 million compared to the level originally planned. Its innovation efforts in Specialty Materials will be preserved in order to meet its customers' numerous technological and sustainable development opportunities. Thanks to those initiatives, and on the back of its solid performance in the second quarter given the current environment, the Group remains very confident in its ability to deal with this unprecedented crisis, drawing also on its balanced geographic exposure, diversified end markets and strong balance sheet.

Finally, Arkema will continue its acquisition strategy, the roll-out of its major organic growth projects, as well as its strategic review for Intermediates, in line with its ambition to become a pure Specialty Materials player by 2024.

## 2 CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS AT 30 JUNE 2020

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## CONSOLIDATED INCOME STATEMENT

<i>(In millions of euros)</i>	Notes	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
<b>Sales</b>	(C2&C3)	<b>3,990</b>	<b>4,469</b>
Operating expenses		(3,211)	(3,456)
Research and development expenses		(120)	(123)
Selling and administrative expenses		(384)	(384)
Other income and expenses	(C4)	93	(23)
<b>Operating income</b>	(C2)	<b>368</b>	<b>483</b>
Equity in income of affiliates		(1)	(1)
Financial result	(C5)	(45)	(60)
Income taxes	(C6)	(124)	(95)
<b>Net income</b>		<b>198</b>	<b>327</b>
Of which: non-controlling interests		1	4
<b>Net income - Group share</b>		<b>197</b>	<b>323</b>
<i>Earnings per share (in euros)</i>	(C7)	2.58	3.75
<i>Diluted earnings per share (in euros)</i>	(C7)	2.57	3.73



## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

<i>(In millions of euros)</i>	<b>1<sup>st</sup> half 2020</b>	<b>1<sup>st</sup> half 2019</b>
<b>Net income</b>	<b>198</b>	<b>327</b>
Hedging adjustments	8	(1)
Other items	-	1
Deferred taxes on hedging adjustments and other items	-	-
Change in translation adjustments	(C13) (36)	14
<b>Other recyclable comprehensive income</b>	<b>(28)</b>	<b>14</b>
Actuarial gains and losses	(C14) (38)	(33)
Deferred taxes on actuarial gains and losses	10	5
<b>Other non-recyclable comprehensive income</b>	<b>(28)</b>	<b>(28)</b>
<b>Total income and expenses recognized directly through equity</b>	<b>(56)</b>	<b>(14)</b>
<b>Comprehensive income</b>	<b>142</b>	<b>313</b>
Of which: non-controlling interests	1	4
<b>Comprehensive income – Group share</b>	<b>141</b>	<b>309</b>

## CONSOLIDATED BALANCE SHEET

<i>(In millions of euros)</i>	Notes	30 June 2020	31 December 2019
<b>ASSETS</b>			
Intangible assets, net	(C10)	3,365	3,392
Property, plant and equipment, net	(C11 & C12)	2,944	3,026
Investments in equity affiliates		32	33
Other investments		56	53
Deferred tax assets		161	216
Other non-current assets		224	240
<b>TOTAL NON-CURRENT ASSETS</b>		<b>6,782</b>	<b>6,960</b>
Inventories		1,006	1,014
Accounts receivable		1,184	1,204
Other receivables and prepaid expenses		183	184
Income taxes recoverable		74	113
Other current financial assets		20	17
Cash and cash equivalents		1,400	1,407
Assets held for sale	(C9)	-	78
<b>TOTAL CURRENT ASSETS</b>		<b>3,867</b>	<b>4,017</b>
<b>TOTAL ASSETS</b>		<b>10,649</b>	<b>10,977</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>			
Share capital		767	766
Paid-in surplus and retained earnings		4,663	4,340
Treasury shares		(29)	(11)
Translation adjustments		142	178
<b>SHAREHOLDERS' EQUITY – GROUP SHARE</b>	(C13)	<b>5,543</b>	<b>5,273</b>
Non-controlling interests		51	51
<b>TOTAL SHAREHOLDERS' EQUITY</b>		<b>5,594</b>	<b>5,324</b>
Deferred tax liabilities		334	334
Provisions for pensions and other employee benefits	(C14)	562	525
Other provisions and non-current liabilities	(C15)	389	391
Non-current debt	(C17)	2,380	2,377
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>3,665</b>	<b>3,627</b>
Accounts payable		783	905
Other creditors and accrued liabilities		352	366
Income taxes payable		86	80
Other current financial liabilities		15	8
Current debt	(C17)	154	661
Liabilities associated with assets held for sale	(C9)	-	6
<b>TOTAL CURRENT LIABILITIES</b>		<b>1,390</b>	<b>2,026</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>		<b>10,649</b>	<b>10,977</b>

**CONSOLIDATED CASH FLOW STATEMENT**

<i>(In millions of euros)</i>	<b>1<sup>st</sup> half 2020</b>	<b>1<sup>st</sup> half 2019</b>
Net income	198	327
Depreciation, amortization and impairment of assets	422	316
Other provisions and deferred taxes	54	(1)
(Gains)/losses on sales of long-term assets	(245)	(4)
Undistributed affiliate equity earnings	2	1
Change in working capital	(26)	(167)
Other changes	11	12
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>	<b>416</b>	<b>484</b>
Intangible assets and property, plant, and equipment additions	(215)	(233)
Change in fixed asset payables	(55)	(96)
Acquisitions of operations, net of cash acquired	(C8) (92)	(19)
Increase in long-term loans	(23)	(20)
<b>Total expenditures</b>	<b>(385)</b>	<b>(368)</b>
Proceeds from sale of intangible assets and property, plant, and equipment	2	6
Proceeds from sale of businesses, net of cash transferred	(C9) 327	-
Repayment of long-term loans	37	16
<b>Total divestitures</b>	<b>366</b>	<b>22</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>	<b>(19)</b>	<b>(346)</b>
Issuance (repayment) of shares and paid-in surplus	(C13) 7	3
Purchase of treasury shares	(C13) (21)	(17)
Issuance of hybrid bonds	(C13) 299	399
Redemption of hybrid bonds	(C13) -	(425)
Dividends paid to parent company shareholders	(C13) (168)	(190)
Interest paid to bearers of subordinated perpetual notes	(C13) -	(12)
Dividends paid to non-controlling interests	(1)	(1)
Increase in long-term debt	3	2
Decrease in long-term debt	(C17.1) (40)	(515)
Increase / decrease in short-term debt	(C17.1) (508)	518
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>	<b>(429)</b>	<b>(238)</b>
Net increase/(decrease) in cash and cash equivalents	(32)	(100)
Effect of exchange rates and changes in scope	25	(10)
Cash and cash equivalents at beginning of period	1,407	1,441
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD</b>	<b>1,400</b>	<b>1,331</b>

## CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

<i>(In millions of euros)</i>	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
<b>At 1 January 2020</b>	<b>766</b>	<b>1,266</b>	<b>694</b>	<b>2,380</b>	<b>178</b>	<b>(11)</b>	<b>5,273</b>	<b>51</b>	<b>5,324</b>
Cash dividend	-	-	-	(168)	-	-	(168)	(1)	(169)
Issuance of share capital	1	6	-	-	-	-	7	-	7
Purchase of treasury shares	-	-	-	-	-	(21)	(21)	-	(21)
Grants of treasury shares to employees	-	-	-	(3)	-	3	0	-	0
Share-based payments	-	-	-	12	-	-	12	-	12
Issuance of hybrid bonds*	-	-	299	-	-	-	299	-	299
Other	-	-	-	-	-	-	-	-	-
<b>Transactions with shareholders</b>	<b>1</b>	<b>6</b>	<b>299</b>	<b>(159)</b>	<b>-</b>	<b>(18)</b>	<b>129</b>	<b>(1)</b>	<b>128</b>
Net income	-	-	-	197	-	-	197	1	198
Total income and expenses recognized directly through equity	-	-	-	(20)	(36)	-	(56)	-	(56)
<b>Comprehensive income</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>177</b>	<b>(36)</b>	<b>-</b>	<b>141</b>	<b>1</b>	<b>142</b>
<b>At 30 June 2020</b>	<b>767</b>	<b>1,272</b>	<b>993</b>	<b>2,398</b>	<b>142</b>	<b>(29)</b>	<b>5,543</b>	<b>51</b>	<b>5,594</b>

\* See note C13.2 "Hybrid bonds"

<i>(In millions of euros)</i>	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
<b>At 1 January 2019</b>	<b>766</b>	<b>1,263</b>	<b>689</b>	<b>2,147</b>	<b>142</b>	<b>(28)</b>	<b>4,979</b>	<b>49</b>	<b>5,028</b>
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	-	-	-	-	-	-	-	-	-
<b>Transactions with shareholders</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>(222)</b>	<b>-</b>	<b>(16)</b>	<b>(230)</b>	<b>(1)</b>	<b>(231)</b>
Net income	-	-	-	323	-	-	323	4	327
Total income and expenses recognized directly through equity	-	-	-	(28)	14	-	(14)	-	(14)
<b>Comprehensive income</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>295</b>	<b>14</b>	<b>-</b>	<b>309</b>	<b>4</b>	<b>313</b>
<b>At 30 June 2019</b>	<b>766</b>	<b>1,266</b>	<b>694</b>	<b>2,220</b>	<b>156</b>	<b>(44)</b>	<b>5,058</b>	<b>52</b>	<b>5,110</b>

## A. HIGHLIGHTS

### A.1 Impact of COVID-19

The financial performance for the first half of 2020 has been clearly marked by the effects of the COVID-19 pandemic. Sales for this period, particularly in the second quarter, were significantly impacted by the substantial decline in global demand given the scale of the governmental lockdown measures introduced in many countries. The Group has endeavoured to continue operating while ensuring due protection for its employees, and is implementing decisive cost and investment adjustments in order to limit the impact of this crisis on its results. Thanks to these initiatives, the positioning of its product lines, its moderate indebtedness and its high level of liquidity, Arkema confirms that it is very confident in its ability to withstand this unprecedented crisis and be well positioned when normal business resumes.

In the extraordinary context of COVID-19, the substantial decreases in sales and EBITDA were identified by the Group as indications of impairment, and consequently impairment tests of the Cash Generating Units (CGUs) were conducted in accordance with IAS 36. The results of these tests showed a good level of resilience in all CGUs except for Asia Acrylics, for which the goodwill was partly written down. In addition to testing the CGUs, the Group carried out an exhaustive analysis of specific assets that can be tested separately and showed signs of potential impairment. Impairment was recorded in respect of a small number of assets, mainly used in the oil and gas, automotive and aeronautics markets. The assumptions and judgements used for the tests of the CGUs, and details of the impairment recognized, are presented in notes C4 "Other income and expenses", C10 "Intangible assets" and C11 "Property, plant and equipment".

### A.2 Portfolio management

On 3 January 2020 Arkema finalized the acquisition of LIP Bygningsartikler AS (LIP), a Danish leader in tile adhesives, waterproofing systems and floor preparation solutions, with annual sales of approximately €30 million. The impacts of this operation are detailed in note C8 "Business combination".

In the Intermediates business segment, on 1 June 2020 Arkema completed the divestment of its Functional Polyolefins business, which was part of the PMMA activity and had annual sales of approximately €250 million. The operation was based on an enterprise value of €335 million and is fully in line with the strategy of refocusing the Group's activities on Specialty Materials. The impacts of this operation are detailed in note C9 "Assets held for sale".

### A.3 Other highlights

Taking advantage of favourable market conditions, on 21 January 2020 Arkema undertook a €300 million undated hybrid bond issue with an annual coupon of 1.5% until the first call date after 6 years. This issue complements the previous €400 million hybrid refinancing operation of June 2019 and puts the Group in a position to refinance the remaining €300 million portion of its outstanding 4.75% hybrid bonds with a first call date in October 2020. See note C13.2 "Hybrid bonds".

Also, the Group redeemed its €480 million bonds with an annual coupon of 3.85% that reached maturity in April. The Group had refinanced this issue in December 2019 through a €500 million senior bond issue with 10-year maturity and an annual coupon of 0.75%.

Finally, in April 2020, Arkema carried out a capital increase reserved for employees. 112,256 shares were subscribed at the price of €68.56 per share, giving a total amount of €7 million net of expenses (see notes C13 "Shareholders' equity" and C18 "Share-based payments").

## 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 2020 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved by the Board of Directors of Arkema on 29 July 2020.

The condensed consolidated interim financial statements at 30 June 2020 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 2020. 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 2019.

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 2020 are identical to those used in the consolidated financial statements at 31 December 2019, except for IFRS standards, amendments and interpretations that are mandatory for accounting periods commencing on or after 1 January 2020 (and which had not been applied early by the Group), namely:

Amendments to IAS 1 and IAS 8	Definition of material	Adopted by the European Union on 10 December 2019
Amendments to IFRS 3	Definition of a business	Adopted by the European Union on 22 April 2020
Amendments to IFRS 9, IAS 39 and IFRS 7	Interest rate benchmark reform	Adopted by the European Union on 16 January 2020
Conceptual framework	Amendments to references to the conceptual framework	Adopted by the European Union on 6 December 2019

Application of these amendments and interpretations had no significant impact on the financial statements at 30 June 2020.

### Non-mandatory IFRS standards and interpretations at 1 January 2020

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 2020 (and which had not been applied early by the Group) are:

Amendments to IAS 1	Classification of liabilities as current or non-current	Not adopted by the European Union at 30 June 2020
IFRS 17	Insurance contracts	Not adopted by the European Union at 30 June 2020

### **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. These interim financial statements therefore take into consideration the current COVID-19 health crisis and are based on parameters available at the closing date. 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.

The information for the condensed consolidated interim financial statements at 30 June 2020 was prepared in the extraordinary context of the COVID-19 pandemic, and the Group conducted impairment tests as explained in note A1 "Impact of COVID-19" (see also notes C4 "Other income and expenses", C10 "Intangible assets" and C11 "Property, plant and equipment").

### **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. In the extraordinary context of COVID-19, the above seasonal effects may also be impacted by the development and consequences of the pandemic.

**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 segment" partly refers to these alternative performance indicators.

## 1.1 Recurring operating income (REBIT) and EBITDA

<i>(In millions of euros)</i>	Notes	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
<b>OPERATING INCOME</b>		<b>368</b>	<b>483</b>
- Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(29)	(19)
- Other income and expenses	(C4)	93	(23)
<b>RECURRING OPERATING INCOME(REBIT)</b>		<b>304</b>	<b>525</b>
- Recurring depreciation and amortization of tangible and intangible assets		(282)	(252)
<b>EBITDA</b>		<b>586</b>	<b>777</b>

Details of depreciation and amortization of tangible and intangible assets:

<i>(In millions of euros)</i>	Notes	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
<b>Depreciation and amortization of tangible and intangible assets</b>	(C10, C11 & C12)	<b>(422)</b>	<b>(316)</b>
Of which: Recurring depreciation and amortization of tangible and intangible assets		(282)	(252)
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		(29)	(19)
Of which: Impairment included in other income and expenses	(C4)	(111)	(45)

## 1.2 Adjusted net income and adjusted earnings per share

<i>(In millions of euros)</i>	Notes	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
<b>NET INCOME – GROUP SHARE</b>		<b>197</b>	<b>323</b>
- Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(29)	(19)
- Other income and expenses	(C4)	93	(23)
- 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		7	5
- Taxes on other income and expenses		(64)	3
- One-time tax effects		-	-
<b>ADJUSTED NET INCOME</b>		<b>190</b>	<b>357</b>
Weighted average number of ordinary shares		76,457,621	76,214,216
Weighted average number of potential ordinary shares	(C7)	76,667,395	76,608,099
<b>ADJUSTED EARNINGS PER SHARE (IN EUROS)</b>		<b>2.49</b>	<b>4.68</b>
<b>DILUTED ADJUSTED EARNINGS PER SHARE (IN EUROS)</b>		<b>2.48</b>	<b>4.66</b>



## 1.3 Recurring capital expenditure

<i>(In millions of euros)</i>	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
<b>INTANGIBLE ASSETS AND PROPERTY, PLANT, AND EQUIPMENT ADDITIONS</b>	<b>215</b>	<b>233</b>
- Exceptional capital expenditure	57	38
- Investments relating to portfolio management operations	-	-
- Capital expenditure with no impact on net debt	1	8
<b>RECURRING CAPITAL EXPENDITURE</b>	<b>157</b>	<b>187</b>

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). In 2020, exceptional capital expenditure mainly concerns the Polyamide project in Asia and the long-term partnership with Nutrien in the United States for the supply of anhydrous hydrogen fluoride. In 2019, it mainly concerned investments in 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

<i>(In millions of euros)</i>	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
Cash flow from operating activities	416	484
+ Cash flow from net investments	(19)	(346)
<b>NET CASH FLOW</b>	<b>397</b>	<b>138</b>
- Net cash flow from portfolio management operations	147	(25)
<b>FREE CASH FLOW</b>	<b>250</b>	<b>163</b>

The net cash flow from portfolio management operations corresponds to the impact of acquisition and divestment operations. In 2020, a tax rate of 32% was applied to the capital gain related to the Functional Polyolefins business divestment.

## 1.5 Working capital

<i>(In millions of euros)</i>	30 June 2020	31 December 2019
Inventories	1,006	1,014
+ Accounts receivable	1,184	1,204
+ Other receivables including income taxes	257	297
+ Other current financial assets	20	17
- Accounts payable	783	905
- Other liabilities including income taxes	438	446
- Other current financial liabilities	15	8
<b>WORKING CAPITAL</b>	<b>1,231</b>	<b>1,173</b>

## 1.6 Capital employed

<i>(In millions of euros)</i>	Notes	30 June 2020	31 December 2019
Goodwill, net		1,875	1,917
+ Intangible assets (excluding goodwill) and property, plant and equipment, net	(C10, C11 & C12)	4,434	4,501
+ Investments in equity affiliates		32	33
+ Other investments and other non-current assets		280	293
+ Working capital		1,231	1,173
<b>CAPITAL EMPLOYED</b>		<b>7,852</b>	<b>7,917</b>

## 1.7 Net debt

<i>(In millions of euros)</i>	<b>Notes</b>	<b>30 June 2020</b>	<b>31 December 2019</b>
Non-current debt	(C17)	2,380	2,377
+ Current debt	(C17)	154	661
- Cash and cash equivalents		1,400	1,407
<b>NET DEBT</b>		<b>1,134</b>	<b>1,631</b>
+ Hybrid bonds	(C13)	1,000	700
<b>NET DEBT AND HYBRID BONDS</b>		<b>2,134</b>	<b>2,331</b>

## 2. Information by business segment

As required by IFRS 8 "Operating Segments", segment information for the Group is presented in accordance with the internal reporting structure that is used by executive management in order to assess financial performance and allocate resources.

Arkema is organized around three complementary, coherent business segments dedicated to Specialty Materials, namely Adhesive Solutions, Advanced Materials and Coating Solutions, and an Intermediates business segment consisting of activities with more volatile results. The Adhesive Solutions segment is headed by a member of the Executive Committee, and the Advanced Materials, Coating Solutions and Intermediates segments are directed by a Chief Operating Officer who is also a member of the Executive Committee. Both of them report 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 segments' operating activities, financial results, forecasts and plans.

The Chief Operating Officer is supported by three other Executive Committee members, who report to him and are respectively in charge of the Coating Solutions business segment and each of the two Business Lines<sup>1</sup> making up the Advanced Materials business segment: High Performance Polymers and Performance Additives.

The composition of the business segments is as follows:

- the Adhesive Solutions segment comprises the following Business Lines:
  - Construction and Consumer, providing solutions for construction, renovation of buildings, and DIY,
  - Industrial Assembly, comprising high performance adhesives for durable goods, and adhesive solutions for packaging and non-woven.

The Adhesive Solutions business segment supplies technologies used in building activities for businesses and individuals, including sealants, tile and flooring adhesives and waterproofing systems, and technologies used in industry, including state-of-the-art knowhow in the automotive, textiles, glazing, flexible and rigid packaging, and hygiene sectors.

- the Advanced Materials segment comprises the following Business Lines:
  - High Performance Polymers, consisting of specialty polyamides and PVDF,
  - Performance Additives, covering interface agents combining specialty surfactants and molecular sieves, organic peroxides, thiochemicals and hydrogen peroxide.

The Advanced Materials segment offers innovative solutions with high added value to meet the major challenges of sustainable development, including lightweighting, new energies, access to water, bio-source products and recycling. These solutions are used in a wide variety of sectors such as the automotive and transport sectors, oil and gas, renewable energies (photovoltaics, lithium-ion batteries, wind power), consumer goods (beauty and health products, sports equipment, packaging, etc), electronics, construction, coatings, animal feed and water treatment.

- the Coating Solutions segment comprises the following Business Lines:
  - Coating Resins, combining the EU/US acrylics activities and coating resins,
  - Coating Additives, combining Sartomer photocure resins and Coatex rheology additives.

<sup>1</sup> Business Lines are activities or groups of activities.

This business segment offers a broad range of innovative products for decorative paints, industrial coatings and adhesives, and also provides solutions for applications in the paper industry, superabsorbents, water treatment and oil and gas extraction, and in cutting-edge high-growth markets such as 3D printing and electronics.

- the Intermediates segment comprises the following activities:

- Fluorogases,
- PMMA,
- Asia Acrylics.

These industrial intermediate chemicals activities, in which Arkema holds leading positions, concern competitive global product lines used in several industrial sectors such as construction, production of cold (refrigeration and air conditioning), the automotive industry, coatings and water treatment.

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 segment.

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

This new reporting structure was announced by the Group at the Strategy Update presentation on 2 April 2020. The 2019 figures shown below have been restated accordingly.

<b>1<sup>st</sup> half 2020</b> <i>(In millions of euros)</i>	<b>Adhesive Solutions</b>	<b>Advanced Materials</b>	<b>Coating Solutions</b>	<b>Inter-mediates</b>	<b>Corporate</b>	<b>Total</b>
<b>Sales</b>	<b>968</b>	<b>1,280</b>	<b>953</b>	<b>776</b>	<b>13</b>	<b>3,990</b>
<b>EBITDA*</b>	<b>119</b>	<b>246</b>	<b>124</b>	<b>134</b>	<b>(37)</b>	<b>586</b>
Recurring depreciation and amortization of tangible and intangible assets*	(30)	(124)	(60)	(64)	(4)	(282)
<b>Recurring operating income (REBIT)*</b>	<b>89</b>	<b>122</b>	<b>64</b>	<b>70</b>	<b>(41)</b>	<b>304</b>
Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses	(18)	(8)	(3)	-	-	(29)
Other income and expenses	(29)	(18)	(3)	184	(41)	93
<b>Operating income</b>	<b>42</b>	<b>96</b>	<b>58</b>	<b>254</b>	<b>(82)</b>	<b>368</b>
Equity in income of affiliates	-	(2)	-	1	-	(1)
Intangible assets and property, plant, and equipment additions	34	83	29	62	7	215
Of which: recurring capital expenditure*	34	55	28	33	7	157

<b>1<sup>st</sup> half 2019<sup>(1)</sup></b> <i>(In millions of euros)</i>	<b>Adhesive Solutions</b>	<b>Advanced Materials</b>	<b>Coating Solutions</b>	<b>Inter-mediates</b>	<b>Corporate</b>	<b>Total</b>
<b>Sales</b>	<b>1,033</b>	<b>1,322</b>	<b>1,139</b>	<b>961</b>	<b>14</b>	<b>4,469</b>
<b>EBITDA*</b>	<b>133</b>	<b>293</b>	<b>170</b>	<b>230</b>	<b>(49)</b>	<b>777</b>
Recurring depreciation and amortization of tangible and intangible assets*	(30)	(109)	(54)	(56)	(3)	(252)
<b>Recurring operating income (REBIT)*</b>	<b>103</b>	<b>184</b>	<b>116</b>	<b>174</b>	<b>(52)</b>	<b>525</b>
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	(5)	(11)	(1)	(3)	(3)	(23)
<b>Operating income</b>	<b>81</b>	<b>173</b>	<b>113</b>	<b>171</b>	<b>(55)</b>	<b>483</b>
Equity in income of affiliates	-	(3)	-	2	-	(1)
Intangible assets and property, plant, and equipment additions	21	134	46	27	5	233
Of which: recurring capital expenditure*	21	88	46	27	5	187

\*See C1 "Alternative performance indicators"

<sup>(1)</sup> The 2019 figures have been restated in accordance with the new reporting structure announced by the Group on 2 April 2020.

### 3. Information by geographical area

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

<b>1<sup>st</sup> half 2020</b> <i>(In millions of euros)</i>	France	Rest of Europe	NAFTA*	Asia	Rest of the world	<b>Total</b>
Sales	311	1,161	1,362	985	171	<b>3,990</b>

<b>1<sup>st</sup> half 2019</b> <i>(In millions of euros)</i>	France	Rest of Europe	NAFTA*	Asia	Rest of the world	<b>Total</b>
Sales	366	1,322	1,405	1,196	180	<b>4,469</b>

\* NAFTA: USA, Canada, Mexico

### 4. Other income and expenses

<i>(In millions of euros)</i>	<b>1<sup>st</sup> half 2020</b>			<b>1<sup>st</sup> half 2019</b>		
	Expenses	Income	Net	Expenses	Income	Net
Restructuring and environment	(8)	-	(8)	(10)	-	(10)
Goodwill impairment	(70)	-	(70)	-	-	-
Asset impairment (excluding goodwill)	(47)	-	(47)	(7)	-	(7)
Litigation and claims	(13)	-	(13)	(5)	4	(1)
Gains (losses) on sales and purchases of assets	(4)	235	231	(4)	-	(4)
Other	-	-	-	(37)	36	(1)
<b>Total other income and expenses</b>	<b>(142)</b>	<b>235</b>	<b>93</b>	<b>(63)</b>	<b>40</b>	<b>(23)</b>

In the first half of 2020, restructuring and environment expenses mainly include restructuring costs at Bostik, and expenses related to the strategic restructuring of the Coating Solutions segment. In the context of COVID-19, impairment tests were conducted, leading to recognition of goodwill impairment of €70 million (see note C10 "Intangible assets"). Impairment was also booked on a small number of tangible assets (see note C11 "Property, plant and equipment") and other intangible assets (see note C10 "Intangible assets"). Expenses related to litigation and claims concern the consequences of Hurricane Harvey in the United States in 2017, and legal expenses on other ongoing proceedings in the United States. Gains (losses) on sales and purchases of assets include the pre-tax gain of €235 million (net of expenses) on the sale of the Functional Polyolefins business.

In the first half of 2019, restructuring and environment expenses mainly included restructuring costs in adhesives. Asset impairments concerned industrial assets in the United States. "Other" items essentially comprised asset impairments recognized after discontinuation of a project that was fully financed by a partner; consequently, this impairment was 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.

<i>(In millions of euros)</i>	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
Cost of debt	(28)	(30)
Financial income/expenses on provisions for pensions and employee benefits	(3)	(10)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(12)	(20)
Capitalized interest	0	2
Interest expenses on leases	(2)	(2)
Other	0	0
<b>Financial result</b>	<b>(45)</b>	<b>(60)</b>

## 6. Income taxes

The income tax expense is broken down as follows:

<i>(In millions of euros)</i>	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
Current income taxes	(73)	(92)
Deferred income taxes	(51)	(3)
<b>Total income taxes</b>	<b>(124)</b>	<b>(95)</b>

The income tax expense amounts to €124 million for the first half of 2020, including €7 million for the CVAE (compared with €95 million for the first half of 2019, including €8 million for the CVAE). The change in deferred taxes essentially corresponds to reversal of €55 million of deferred tax assets following use of tax losses during the period.

## 7. Earnings per share

	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
Weighted average number of ordinary shares	76,457,621	76,214,216
Dilutive effect of stock options	-	4,392
Dilutive effect of free share grants	209,774	389,491
Weighted average number of potential ordinary shares	76,667,395	76,608,099

The calculation of earnings per share is presented below:

<i>(In millions of euros)</i>	1 <sup>st</sup> half 2020	1 <sup>st</sup> half 2019
Net income – Group share	197	323
Interest on subordinated perpetual notes, net of tax	-	(37)
Net income used in calculating earnings per share	197	286
	<b>1<sup>st</sup> half 2020</b>	<b>1<sup>st</sup> half 2019</b>
Earnings per share (in euros)	2.58	3.75
Diluted earnings per share (in euros)	2.57	3.73

## 8. Business combination

On 3 January 2020 Arkema finalized the acquisition of LIP Bygningsartikler AS (LIP), the Danish leader in tile adhesives, waterproofing systems and floor preparation solutions, with annual sales of approximately €30 million.

The Group used the acquisition method for the accounting treatment of this operation. The amount recorded in the financial statements at 30 June 2020 for the identifiable assets acquired and liabilities assumed at the acquisition date is €86 million.

Intangible assets stated at fair value mainly consist of the LIP® trademark, technologies and customer relations, and a non-compete clause. The latter three assets are amortized over periods of 23 years, 16 years and 3 years respectively and amount to €39 million.

The goodwill resulting from allocation of the purchase price amounts to €31 million and mainly corresponds to the value of future technologies and expected commercial development. This goodwill is provisional and may be adjusted for deferred tax effects. Goodwill is not amortizable for tax purposes.

## 9. Assets held for sale

In the Intermediates business segment, on 1 June 2020 Arkema completed the divestment of its Functional Polyolefins business, which was part of the PMMA activity and had annual sales of approximately €250 million. The operation was based on an enterprise value of €335 million and is fully coherent with the strategy of refocusing the Group's activities on Specialty Materials.

In accordance with IFRS 5, "Non-current assets held for sale and discontinued operations", assets held for sale and the associated liabilities were presented in two specific lines of the balance sheet at 31 December 2019, and were not offset. Non-current assets and groups of assets held for sale are stated at the lower of book value and fair value net of costs of disposal.

At 31 December 2019, the following balance sheet items were classified as assets held for sale:

<i>(In millions of euros)</i>	<b>2019</b>
Intangible assets	31
Deferred tax assets	1
Other non-current assets	3
<b>Total non-current assets</b>	<b>35</b>
Inventories	42
Other current assets	1
<b>Total current assets</b>	<b>43</b>
<b>ASSETS HELD FOR SALE</b>	<b>78</b>
Deferred tax liabilities	2
Provisions and other non-current liabilities	5
<b>Total non-current liabilities</b>	<b>7</b>
Accounts payable	(3)
Other current liabilities	2
<b>Total current liabilities</b>	<b>(1)</b>
<b>LIABILITIES ASSOCIATED WITH ASSETS HELD FOR SALE</b>	<b>6</b>

The assets sold during the first half of 2020 are the following:

<i>(In millions of euros)</i>	
Intangible assets	41
Deferred tax assets	0
Other non-current assets	3
<b>Total non-current assets</b>	<b>44</b>
Inventories	40
Other current assets	0
<b>Total current assets</b>	<b>40</b>
<b>TOTAL ASSETS SOLD</b>	<b>84</b>
Deferred tax liabilities	0
Provisions and other non-current liabilities	4
<b>Total non-current liabilities</b>	<b>4</b>
Accounts payable	(3)
Other current liabilities	1
<b>Total current liabilities</b>	<b>(2)</b>
<b>TOTAL LIABILITIES TRANSFERRED</b>	<b>2</b>

The gain on sale, net of selling expenses, recognized in the income statement amounts to €235 million before tax and is included in "Other income and expenses".

The price received is reported as "Proceeds from sale of businesses, net of cash transferred" in the cash flow statement.

## 10. Intangible assets

The recoverable amount of property, plant and equipment and intangible assets is tested as soon as any indication of impairment is identified. A review to identify if any such indication exists is performed at each year-end, based on a 5-year plan validated by the Executive Committee. This impairment test is performed at least once a year and includes goodwill and trademarks with indefinite useful lives.

As indications of impairment were observed in the context of COVID-19, in accordance with IAS 36 the Group conducted sensitivity analyses for the CGUs already subjected to impairment tests at 31 December 2019, and carried out impairment tests for the new CGUs resulting from the new reporting structure.

An asset's recoverable amount corresponds to the greater of its value in use and its fair value net of costs of disposal.

Tests are performed for each autonomous group of assets, termed Cash Generating Units (CGUs). A CGU is a group of assets whose continued use generates cash flows that are substantially independent of cash flows generated by other groups of assets. They are worldwide business operations, which bring together groups of similar products in strategic, commercial and industrial terms. The value in use of a CGU is determined on the basis of the discounted future cash flows that are expected to be generated by the assets in question, based upon Group management's expectation of future economic and operating conditions over the next 5 years or, when the asset is to be sold, by comparison with its market value. In 2019, the terminal value was determined on the basis of a perpetuity annual growth rate of 1.5% (the same rate as used in 2018) and mid-cycle cash flows. The after-tax rate used to discount future cash flows and the terminal value is the Group's weighted average cost of capital, estimated at 7.5% in 2020 (the same rate as used in 2019). Any impairment is calculated as the difference between the recoverable amount and the carrying amount of the CGU. Because of its unusual nature, any such impairment is presented separately in the income statement under the "Other income and expenses" caption. Impairment may be reversed, to the maximum carrying amount that would have been recognized for the asset had the asset not been impaired. Impairment losses on goodwill are irreversible (in application of IFRIC 10, impairment losses on goodwill recognized in previous interim accounting periods cannot be written back).

In the extraordinary context of the COVID-19 pandemic, as indications of impairment were identified, sensitivity analyses were carried out well beyond the 10 points in EBITDAs tested at the 2019 year-end. These analyses were carried out for every CGU existing at 31 December 2019, based on the percentage change in each CGU's EBITDA between the first half of 2019 and the first half of 2020, projected over the 5 years of the plan, including the standard final year. Note that the change in total Group EBITDA between 2019 and the first half of 2020 was -25%. This sensitivity analysis, which is not a management assumption, did not lead to recognition of impairment. In addition to



sensitivity to changes in EBITDA, the standard sensitivities to a change of plus or minus 1 point in the discount rate and plus or minus 0.5 point in the perpetuity growth rate confirmed the net book values of the various CGUs.

Based on updated plans, the Group also tested the new CGU Asia Acrylics, using a specific discount rate of 9% for the Asia zone at 30 June 2020. This rate would have been 8.5% in 2019.

The result of this test led to recognition of goodwill impairment of €20 million. The same test applying the 2019 discount rate would not have led to any impairment. A change of -10% in EBITDA or +0.5% in the discount rate would lead to a complete write-off of all the residual goodwill allocated to this CGU, i.e. €44 million.

#### 10.1 Goodwill

<i>(In millions of euros)</i>	Gross book value	30 June 2020	31 December 2019	
		Accumulated amortization and impairment	Net book value	Net book value
Goodwill	2,489	(614)	1,875	1,917

The breakdown by segment is as follows:

Goodwill by segment	30/06/2020 Net Book Value	31/12/2019 Net Book Value
Adhesive Solutions	965	949
Advanced Materials	489	488
Coating Solutions	364	366
Intermediates	57	106
Corporate	0	8
<b>TOTAL</b>	<b>1,875</b>	<b>1,917</b>

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

<i>(In millions of euros)</i>	2020
<b>At 1 January</b>	<b>1,917</b>
Changes in scope	32
Impairment	(70)
Translation adjustments	(4)
<b>At 30 June</b>	<b>1,875</b>

Goodwill impairment mainly concerns Fluorogases in China and the Asia Acrylics CGU (€50 million), Adhesives (€12 million), and activities positioned on the aeronautics market (€8 million).

## 10.2 Other intangible assets

<i>(In millions of euros)</i>	30 June 2020		31 December 2019	
	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Patents and technologies	504	(224)	280	281
Trademarks	595	(3)	592	579
Software and IT licences	362	(277)	85	94
Capitalized REACH costs	68	(36)	32	34
Other capitalized research expenses	20	(7)	13	12
Capitalized contracts	356	(295)	61	71
Asset rights	50	(18)	32	34
Customer relations	263	(41)	222	229
Other intangible assets	91	(33)	58	54
Intangible assets in progress	147	(32)	115	87
<b>Total</b>	<b>2,456</b>	<b>(966)</b>	<b>1,490</b>	<b>1,475</b>

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

<i>(In millions of euros)</i>	2020
<b>At 1 January</b>	<b>1,475</b>
Acquisitions	55
Amortization and impairment	(76)
Disposals	0
Changes in scope	39
Translation adjustments	(3)
Reclassifications	0
<b>At 30 June</b>	<b>1,490</b>

Impairment of intangible assets mainly relates to capitalized R&D (€9 million) for certain activities where growth is insufficient to confirm the value of the assets.

## 11. Property, plant and equipment

## 11.1 Property, plant and equipment

<i>(In millions of euros)</i>	30 June 2020		31 December 2019	
	Gross book value	Accumulated depreciation and impairment	Net book value	Net book value
Land and buildings	2,087	(1,359)	728	730
Complex industrial facilities	3,935	(3,183)	752	801
Other property, plant and equipment	3,354	(2,422)	932	901
Construction in progress	382	(12)	370	442
<b>Total property, plant and equipment excluding rights of use</b>	<b>9,758</b>	<b>(6,976)</b>	<b>2,782</b>	<b>2,874</b>
Rights of use (C12)	235	(73)	162	152
<b>Total property, plant and equipment</b>	<b>9,993</b>	<b>(7,049)</b>	<b>2,944</b>	<b>3,026</b>

## 11.2 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:

<i>(In millions of euros)</i>	<b>2020</b>
<b>At 1 January</b>	<b>2,874</b>
Acquisitions	160
Depreciation and impairment	(248)
Disposals	(10)
Changes in scope	23
Translation adjustments	(17)
Reclassifications	0
<b>At 30 June</b>	<b>2,782</b>

Impairment of property, plant and equipment mainly concerns activities linked to the aeronautics market (€18 million) and Adhesives (€7 million).

**12. 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.

At 30 June 2020, the net book value of the rights of use associated with leases is €162 million.

<i>(In millions of euros)</i>	<b>30 June 2020</b>		<b>31 December 2019</b>	
	Gross book value	Accumulated depreciation and impairment	Net book value	Net book value
Rights of use: real estate assets (head offices, offices)	64	(19)	45	49
Rights of use: industrial assets (factories, land, warehouses)	39	(5)	34	21
Rights of use: logistics assets (trucks, containers, trolleys)	110	(40)	70	68
Rights of use: other assets (cars, etc)	22	(9)	13	14
<b>Total rights of use</b>	<b>235</b>	<b>(73)</b>	<b>162</b>	<b>152</b>

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

<i>(In millions of euros)</i>	<b>2020</b>
<b>At 1 January</b>	<b>152</b>
Acquisitions and contract revisions	39
Amortization	(28)
Disposals and contract revisions	0
Changes in scope	-
Translation adjustments	(1)
<b>At 30 June</b>	<b>162</b>

The IFRS 16 debt amounts to €164 million at 30 June 2020 (see note C17 "Debt"). The total non-discounted value of the Group's future lease payments amounts to €186 million at 30 June 2020, maturing as follows:

<i>(In millions of euros)</i>	<b>30 June 2020</b>
Within one year	48
1 - 5 years	92
After 5 years	46
<b>TOTAL</b>	<b>186</b>

At 30 June 2020, 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 material at Group level.

### 13. Shareholders' equity

At 30 June 2020, Arkema's share capital amounted to €767 million, divided into 76,736,476 shares with nominal value of €10.

<b>Number of shares at 1 January 2019</b>	<b>76,581,492</b>
Issuance of shares following the exercise of subscription options	42,728
<b>Number of shares at 30 June 2019</b>	<b>76,624,220</b>
Issuance of shares following the exercise of subscription options	-
<b>Number of shares at 31 December 2019</b>	<b>76,624,220</b>
<b>Number of shares at 1 January 2020</b>	<b>76,624,220</b>
Issuance of shares following the capital increase reserved for employees	112,256
Issuance of shares following the exercise of subscription options	-
<b>Number of shares at 30 June 2020</b>	<b>76,736,476</b>

#### 13.1 Changes in share capital

On 21 April 2020, Arkema carried out a capital increase reserved for employees totalling €7 million net of expenses, resulting from subscription of 112,256 shares (see note C18.3 "Capital increase reserved for employees").

#### 13.2 Hybrid bonds

The amount of the perpetual hybrid bonds recorded in shareholders' equity is €993 million at 30 June 2020.

On 21 January 2020 Arkema issued a perpetual hybrid bond with a nominal value of €300 million, or €299 million net of issue premiums and fees. These bonds carry a first-call redemption option that Arkema may exercise at any time between 21 October 2025 and 21 January 2026, and have a coupon of 1.5% until the second of these dates, subject to early redemption.

Following this issue, the total nominal value of Arkema's perpetual hybrid bonds is €1,000 million. The breakdown is as follows at 30 June 2020:

<b>Issue date</b>	<b>Nominal value</b> (in millions of €)	<b>Currency</b>	<b>Redemption option</b>	<b>Annual coupon rate</b>
29 October 2014	300	EUR	6 years	4.75%
17 June 2019	400	EUR	5.25 years	2.75%
21 January 2020	300	EUR	6 years	1.50%

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.

## 13.3 Treasury shares

The Company bought back 280,000 treasury shares during the first half of 2020.

The Arkema Group definitively granted 33,124 free shares to its employees in May 2020, mainly in application of plans 2016-1,2.

<b>Number of treasury shares at 1 January 2019</b>	<b>318,998</b>
Purchases of treasury shares	408,621
Grants of treasury shares	(596,591)
<b>Number of treasury shares at 31 December 2019</b>	<b>131,028</b>
<b>Number of treasury shares at 1 January 2020</b>	<b>131,028</b>
Purchases of treasury shares	280,000
Grants of treasury shares	(33,124)
<b>Number of treasury shares at 30 June 2020</b>	<b>377,904</b>

## 13.4 Dividends

The combined shareholders' general meeting of 19 May 2020 approved the distribution of a €2.20 dividend per share in respect of the 2019 financial year, or a total amount of €168 million. The dividend was paid out on 27 May 2020.

## 13.5 Translation adjustments

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

## 14. Provisions for pensions and other employee benefits

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Pension obligations	420	382
Healthcare and similar coverage	65	64
<b>Post-employment benefits</b>	<b>485</b>	<b>446</b>
Long service awards	74	74
Other	3	5
<b>Other long-term benefits</b>	<b>77</b>	<b>79</b>
<b>Provisions for pensions and other employee benefits</b>	<b>562</b>	<b>525</b>

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

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Provision recognized in liabilities	562	525
Amount recognized in assets	-	(1)
<b>Net provisions for pensions and other employee benefits</b>	<b>562</b>	<b>524</b>

The discount rates used by the Arkema Group are as follows:

<b>Pension obligations, healthcare and similar coverage</b>	<b>Europe (excl. UK)</b>	<b>UK</b>	<b>USA</b>
At 30 June 2020	1.45%-1.65%	1.45%	2.50%
At 31 December 2019	1.25%-1.30%	2.00%	3.15%

The present value of benefit obligations at the end of 2019 has been adjusted at 30 June 2020 on the basis of sensitivity analysis tables prepared by the Group's external actuaries in the context of the full year 2019 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 2020. 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 2020 is as follows:

<i>(In millions of euros)</i>	Pension obligations	Healthcare and similar coverage	Total post-employment benefits
<b>Net liability (asset) at 1 January 2020</b>	<b>381</b>	<b>64</b>	<b>445</b>
Provision recognized in liabilities	382	64	446
Amount recognized in assets	(1)	0	(1)
(Income)/Expense for the period	11	-	11
Net interest expense	4	1	5
Net contributions and benefits paid by the employer	(12)	(1)	(13)
Liquidations	-	-	-
Other *	(1)	-	(1)
Actuarial gains and losses recognized in shareholders' equity	37	1	38
<b>Net liability (asset) at 30 June 2020</b>	<b>420</b>	<b>65</b>	<b>485</b>
Provision recognized in liabilities	420	65	485
Amount recognized in assets	-	-	-

\* Other items essentially consist of translation adjustments

## 15. Other provisions and other non-current liabilities

### 15.1. Other non-current liabilities

Other non-current liabilities amount to €15 million at 30 June 2020 as against €17 million at 31 December 2019.

### 15.2. Other provisions

<i>(In millions of euros)</i>	Environmental contingencies	Restructuring	Other	Total
<b>At 1 January 2020</b>	<b>197</b>	<b>34</b>	<b>143</b>	<b>374</b>
Increases in provisions	2	4	24	30
Reversals from provisions on use	(8)	(5)	(15)	(28)
Reversals of unused provisions	-	-	(2)	(2)
Changes in scope	-	0	-	0
Translation adjustments	0	-	(0)	(0)
Other	0	0	(0)	(0)
<b>At 30 June 2020</b>	<b>191</b>	<b>33</b>	<b>150</b>	<b>374</b>

Furthermore, certain provisions are covered by non-current assets (receivables and deposits):

<i>(In millions of euros)</i>	Environmental contingencies	Restructuring	Other	Total
<b>Total provisions at 30 June 2020</b>	<b>191</b>	<b>33</b>	<b>150</b>	<b>374</b>
Portion of provisions covered by receivables or deposits	54	-	20	74
Deferred tax assets related to amounts covered by the Total Indemnity	16	-	-	16
<b>Provisions at 30 June 2020 net of non-current assets</b>	<b>121</b>	<b>33</b>	<b>130</b>	<b>284</b>
<b>For information:</b>				
<b>Provisions at 1 January 2020 net of non-current assets</b>	<b>124</b>	<b>34</b>	<b>123</b>	<b>281</b>

### 15.3. 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 €83 million (€85 million at 31 December 2019),
- in the United States for €90 million (€94 million at 31 December 2019), of which €70 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 €54 million and €16 million recognized in deferred tax assets) (see note C19.2 "Off-balance sheet commitments/Commitments received").

### 15.4. Restructuring provisions

Restructuring provisions are mainly in respect of restructuring measures in France for €19 million (€19 million at 31 December 2019), in Europe outside France for €7 million (€7 million at 31 December 2019) and in the United States for €7 million (€8 million at 31 December 2019).

### 15.5. Other provisions

Other provisions amount to €150 million and mainly comprise:

- provisions for labour litigation and risks for €62 million (€62 million at 31 December 2019),
- provisions for commercial litigation and warranties for €29 million (€33 million at 31 December 2019)
- provisions for tax litigation for €27 million (€28 million at 31 December 2019),
- provisions for other risks for €32 million (€20 million at 31 December 2019).

## 16. Liabilities and contingent liabilities

Liabilities and contingent liabilities are described in note 22 to the consolidated financial statements at 31 December 2019.

There was no development in liabilities and contingent liabilities during the first half of 2020 with an actual or potential significant effect on the Group's consolidated financial statements, except regarding the prejudice of anxiety. Two decisions by the French Supreme Court (*Cour de Cassation*, on 5 April 2019 and 11 September 2019) extended the right to compensation for the prejudice of anxiety to employees who have not worked in an establishment classified as exposing workers to asbestos, but can prove they have been exposed to a harmful or toxic substance entailing a high risk of developing a serious medical condition.

Two compensation claims for the prejudice of anxiety, filed in the first half of 2020, have so far been brought against Arkema France before the employee claims courts. The possibility remains that current or former employees of the Arkema Group who have been exposed during their career to harmful or toxic substances that could cause serious medical conditions may bring other cases before the employee claims courts on the grounds of these latest court rulings.

## 17. Debt

### 17.1 Analysis of net debt by category

Group net debt amounts to €1,134 million at 30 June 2020, taking account of cash and cash equivalents of €1,400 million.

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Bonds	2,238	2,237
Bank loans	5	11
Other non-current debt	18	19
<b>Non-current debt excluding IFRS 16 debt</b>	<b>2,261</b>	<b>2,267</b>
Bonds	-	481
Syndicated credit facility	-	-
Negotiable European Commercial Paper	-	-
Other bank loans	74	79
Other current debt	35	57
<b>Current debt excluding IFRS 16 debt</b>	<b>109</b>	<b>617</b>
<b>Debt excluding IFRS 16 debt</b>	<b>2,370</b>	<b>2,884</b>
Non-current IFRS 16 debt	119	110
Current IFRS 16 debt	45	44
<b>Debt</b>	<b>2,534</b>	<b>3,038</b>
Cash and cash equivalents	1,400	1,407
<b>Net debt</b>	<b>1,134</b>	<b>1,631</b>

### Bonds

At 30 June 2020, the fair values of the bonds issued by the Group are as follows:

- €150 million senior bond issued as Euro Medium Term Notes (EMTN) maturing in December 2023: €163 million,
- €700 million senior bond issued as Euro Medium Term Notes (EMTN) maturing in January 2025: €733 million,
- €900 million senior bond issued as Euro Medium Term Notes (EMTN) maturing in April 2027: €943 million.
- €500 million senior bond issued as Euro Medium Term Notes (EMTN) maturing in December 2029: €487 million.

### IFRS 16 debt

The maturities of the Group's future lease payments, at non-discounted value, are presented in note C12 "IFRS 16 leases: rights of use and IFRS 16 debt".

### 17.2 Analysis of debt excluding IFRS 16 debt by currency

The Arkema Group's debt excluding IFRS 16 debt is mainly denominated in euros.

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Euros	2,265	2,761
Chinese Yuan	76	89
US Dollars	15	10
Other	14	24
<b>Total debt excluding IFRS 16 debt</b>	<b>2,370</b>	<b>2,884</b>

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 2020 the swapped portion, mainly in US dollars, represented approximately 38% of gross debt excluding IFRS 16 debt.

### 17.3 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:



<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
Less than 1 year	132	639
Between 1 and 2 years	39	44
Between 2 and 3 years	33	33
Between 3 and 4 years	184	183
Between 4 and 5 years	728	29
More than 5 years	1,448	2,175
<b>Total debt and interest excluding IFRS 16 debt</b>	<b>2,564</b>	<b>3,103</b>

## 18. Share-based payments

### 18.1 Stock options

The Board of Directors has decided not to introduce any further stock option plans, and there are no remaining stock option plans outstanding.

### 18.2 Free share grants

Movements in the free share grant plans existing at 30 June 2020 are as follows:

Plan	Grant date	Vesting period	Conservation 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 1 <sup>st</sup> half 2020	Number of shares cancelled in 1 <sup>st</sup> half 2020	Total number of shares still to be granted at 30 June 2020
2016-1, 2	10 May 2016	3-4 years	0-3 years	43,278	-	22.91-39.70	33,124	4,907	-
2016-5	9 Nov 2016	4 years	-	122,080 <sup>(1)</sup>	112,860	50.01	-	1350	111,825
2017-1	8 Nov 2017	3 years	2 years	230,695 <sup>(2)</sup>	218,255	63.59	-	55	229,590
2017-2	8 Nov 2017	4 years	-	129,405 <sup>(3)</sup>	114,845	67.88	-	1500	120,720
2018-1, 2	2 May 2018	3-4 years	0-3 years	41,137	-	59.31-61.13	-	50	41,037
2018-3	5 Nov 2018	3 years	2 years	231,820 <sup>(4)</sup>	217,570	62.64	-	70	230,770
2018-4	5 Nov 2018	4 years	-	127,665 <sup>(5)</sup>	111,235	64.15	-	1,650	122,335
2019-1	29 Oct 2019	3 years	2 years	237,945 <sup>(6)</sup>	225,015	57.73	-	60	237,885
2019-2	29 Oct 2019	4 years	-	131,035 <sup>(7)</sup>	112,740	59.76	-	1,140	129,715
2020-1, 2	5 May 2020	3-4 years	0-3 years	9,129	0	10.09-20.94	-	-	9,129

(1) May be raised to 133,366 in the event of outperformance

(2) May be raised to 252,521 in the event of outperformance

(3) May be raised to 140,890 in the event of outperformance

(4) May be raised to 254,011 in the event of outperformance

(5) May be raised to 139,261 in the event of outperformance

(6) May be raised to 282,948 in the event of outperformance

(7) May be raised to 153,583 in the event of outperformance

The amount of the IFRS 2 expense recognized in respect of free shares at 30 June 2020 is €12 million (€12 million at 30 June 2019).

### 18.3. Capital increase reserved for employees

In application of its employee shareholding policy, the Arkema Group offered its employees the possibility to subscribe to a reserved capital increase at the subscription price of €68.56. This price corresponds to the average opening price of the Arkema share quoted on the Paris stock exchange in the 20 trading days prior to the Chairman and CEO's decision of 3 March 2020 setting the terms of the capital increase, minus a 20% discount.

The shares subscribed through this operation cannot be sold for 5 years, except in the United States where the minimum holding period is 3 years.

The employees subscribed 112,256 shares for the total value of €7 million net of expenses. The capital increase was completed and recognized on 21 April 2020.

Arkema shares were also given to Group employees located outside France, via a free share grant plan: one free share was awarded for every four shares subscribed, up to a maximum of 25 free shares per person.

As a result, on 5 May 2020 the Board of Directors formally recorded the attribution of 7,629 free shares to employees located outside France. These shares will only be definitively granted after a vesting period of 3 or 4 years, depending on the country.

Finally, on 5 May 2020, the Board of Directors decided to put in place a plan to award 1,500 free shares for the benefit of Group employees who had not been able to participate in the capital increase reserved for employees undertaken on 21 April 2020. The only condition for awarding these shares is a presence condition, and they will be definitively granted after a vesting period of 4 years from the date of the Board's decision to award them.

### Valuation method

In accordance with the method recommended by France's national accounting standards authority (*Autorité des normes comptables*), the calculation used to value the cost of being unable to sell the shares for a certain period is based on the cost of a two-step strategy assuming that these shares will ultimately be sold, and that the same number of shares will be purchased and settled immediately, financed by a loan. The rate used for the loan is the mean rate that a bank or a credit institution would grant to a private individual presenting an average risk profile in the context of a 5-year consumer loan.

The fair values of the shares subscribed in France and outside France have been calculated separately in order to reflect the grants of free shares to Group employees located outside France.

The main market parameters used in the valuation of the cost of being unable to sell the shares are as follows:

Country of subscription	France	United States	Italy and Spain	Other countries
Date of the Chairman and CEO's decision setting the terms of the operation	3 March 2020	3 March 2020	3 March 2020	3 March 2020
Share price at the date of the decision(€)	82.74	82.74	82.74	82.74
Risk-free interest rate (at 3 March 2020)*	-0.62%	0.71%	0.02%	-0.81%
Borrowing rate*	7.06%	8.24%	7.06%	9.33%
Cost of not being able to sell the shares (as a percentage of the share price)	28.65%	20.02%	26.61%	35.19%

\* 5-year risk-free rate, except for the United States (3 years)

The difference between the share price at the date of the Chairman and CEO's decision setting the terms of the operation and the subscription price is €14.18 per share, representing a total benefit granted to employees of €2 million.

An IFRS 2 expense of €0.1 million will also be recognized in respect of the free shares granted to Group employees located outside France. This expense will be spread over the vesting period of the shares concerned (see note C18.2 "Free share grants").

## 19. Off-balance sheet commitments

### 19.1 Commitments given

#### 19.1.1 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 2020	31 December 2019
Guarantees granted	127	75
Comfort letters	-	-
Contractual guarantees	17	11
Customs and excise guarantees	33	21
<b>Total</b>	<b>177</b>	<b>107</b>

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.

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

In the normal course of business, the 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.

Some lease commitments 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 2020. Only the irrevocable portion of outstanding future purchases has been valued, and the corresponding amounts are included in the table below at 30 June 2020.

The total amount of the Group's financial commitments is €720 million at 30 June 2020, maturing as follows:

<i>(In millions of euros)</i>	<b>30 June 2020</b>	<b>31 December 2019</b>
2020	168	186
2021	111	105
2022	71	62
2023	45	45
2024 until expiry of the contracts	325	256
<b>Total</b>	<b>720</b>	<b>654</b>

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

##### **Warranties related to sales of businesses**

When selling businesses, the 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 €75 million at 30 June 2020 (€85 million at 31 December 2019). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

#### 19.1.4 Off-balance sheet commitments related to Group financing

These commitments are described in note C23 to the consolidated financial statements at 31 December 2019, "Debt".

#### 19.2 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 the 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 US\$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 site.

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 US\$270 million. The amount received by Arkema under this indemnity amounts to US\$120 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 US\$270 million, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

## 20. Subsequent events

On 20 July 2020, Arkema announced its proposed acquisition of Fixatti, a company specialized in high-performance thermobonding adhesive powders reporting annual sales of around €55 million. This acquisition will enable Bostik to strengthen its global offering of hotmelt adhesive solutions for niche industrial applications in the construction, technical coating, battery, automotive, and textile printing markets. The deal is expected to close in the fourth quarter of 2020, subject to approval by the antitrust authorities in the relevant countries.

Also, on 29 July 2020, the Group secured refinancing for its €900 million credit facility maturing on 29 October 2021 by setting up a new multi-currency syndicated credit facility whose amount was raised to €1 billion. This new facility has an initial term of three years with a maturity date of 29 July 2023 and two one-year extension options exercisable, subject to the lenders' approval, at the end of the first and the second year. It is intended to finance the Group's general corporate needs and to serve as a back-up facility for the Negotiable European Commercial Paper program.

**D. SCOPE OF CONSOLIDATION AT 30 JUNE 2020**

- (a) Companies which changed their name in 2020.  
 (b) Companies merged in 2020.  
 (c) Companies liquidated in 2020.  
 (d) Companies consolidated for the first time in 2020.  
 (e) Companies for which the percentage ownership was changed in 2020, 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.	(b)	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	JO
American Acryl NA, LLC		United States	50.00	JO
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 Argentina S.A.U.	(a)	Argentina	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	JO
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
AMP Trucking, Inc.		United States	100.00	FC
AMZ Holding Corp.	(b)	United States	100.00	FC
AMZ Intermediate Holding Corp.		United States	100.00	FC
ARR MAZ GLOBAL HOLDINGS, S.L.		Spain	100.00	FC
ArrMaz Africa I, LLC		United States	100.00	FC
ArrMaz Africa II, LLC		United States	100.00	FC
ARR-MAZ Brazil LLC		United States	100.00	FC
ArrMaz Chemicals (Yunnan) Co., Ltd.		China	100.00	FC
ArrMaz Chemicals SAS		France	100.00	FC
ArrMaz China, LLC		United States	100.00	FC
ARR-Maz Custom Chemicals, Inc.	(b)	United States	100.00	FC
ARR-MAZ DO BRASIL LTDA.		Brazil	99.99	FC
ArrMaz Gulf Chemical Company Ltd.		Saudi Arabia	100.00	FC
ARR-MAZ Management Company	(b)	United States	100.00	FC
ARRMAZ MOROCCO SARLAU		Morocco	75.00	FC
ArrMaz Morocco, LLC		United States	75.00	FC
ArrMaz Products, Inc.	(a)	United States	100.00	FC
ArrMaz Speciality Chemicals, Inc.		United States	100.00	FC
ARRMAZ TECHNOLOGY AFRICA, SARL		Morocco	100.00	FC
A/S LIP Bygningsartikler. Nørre Aaby	(d)	Denmark	100.00	FC
BarrflexTU LLC		United States	49.00	JV
Blueridge Films Inc.	(b)	United States	100.00	FC
Bostik AB		Sweden	100.00	FC
Bostik Aerosols GmbH		Germany	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.		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 Technology GmbH		Germany	100.00	FC
Bostik Romania S.r.l		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 Biomaterials 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
CUSTOM CHEMICALS CORPORATION	(b)	United States	100.00	FC
Daikin Arkema Refrigerants Asia Ltd.		Hong Kong	40.00	JV
Daikin Arkema Refrigerants Trading (Shanghai) Co., Ltd.		China	40.00	JV
Den Braven France		France	100.00	FC
Den Braven Produtos Quimicos, Unipessoal, Lda.		Portugal	100.00	FC
Den Braven Sealants GmbH	(b)	Austria	100.00	FC
Den Braven SA (Proprietary) Ltd.		South Africa	100.00	FC
Delaware Chemicals Corporation		United States	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
Lambson Europe		France	100.00	FC
Lambson Limited		United Kingdom	100.00	FC
Lip Sverige AB	(d)	Sweden	100.00	FC
Lip Norge AS	(d)	Norway	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
Prochimir		France	100.00	FC
Prochimmo		France	100.00	FC
Prochimmo2		France	100.00	FC
Prochitech		France	100.00	FC
Prochimir Inc.	(b)	United States	100.00	FC
Prochimir Real Estate Holdings Inc.	(b)	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 LLC		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	100.00	FC
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 comercio de massa fina Ltda		Brazil	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 2020**

I declare that, to the best of my knowledge, the condensed consolidated interim financial statements for the six months ended 30 June 2020 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 14, 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, 29 July 2020

Thierry Le Hénaff  
Chairman and Chief Executive Officer



KPMG Audit  
*Département de KPMG S.A.*

ERNST & YOUNG Audit

# Arkema

**Statutory Auditors' Review Report on the Half-yearly  
Financial Information 2020**

For the period from January 1 to June 30, 2020

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Commissaire aux Comptes  
Membre de la compagnie  
régionale de Versailles

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Commissaire aux Comptes  
Membre de la compagnie  
régionale de Versailles

*This is a free translation into English of the statutory auditors' review report on the 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 standards applicable in France.*

**Arkema****Statutory Auditors' Review Report on the Half-yearly Financial Information 2020**

For the period from January 1 to June 30, 2020

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, 2020,
- the verification of the information presented in the half-yearly management report.

These condensed half-yearly consolidated financial statements were approved by the Board of Directors on July 29, 2020 based on the information available at that date and in the evolving context of the Covid-19 crisis and related difficulties to apprehend its impacts and outlooks. Our role is to express a conclusion on these financial statements based on our review.

**I. 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.



**Arkema**

*Statutory Auditors' Review Report on the Half-yearly Financial Information 2020*

*29 July 2020*

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.

## **II. Specific verification**

We have also verified the information presented in the half-yearly management report established on the July 29, 2020, 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 29, 2020

The Statutory Auditors

French original signed by

KPMG Audit  
Département de KPMG S.A.

ERNST & YOUNG Audit

Bertrand Desbarrières

Eric Dupré

Denis Thibon