HALF-YEAR FINANCIAL REPORT

Six months ended 30 June 2021

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1 HALF-YEAR ACTIVITY REPORT

1.1 MANAGEMENT ANALYSIS PRINCIPLES AND ACCOUNTING STANDARDS

The main alternative performance indicators used by the Group are defined in note 4 to the condensed consolidated interim financial statements at 30 June 2021 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 2021 HIGHLIGHTS

1.2.1 Covid-19

The Covid-19 pandemic continued to spread throughout the world in the first half of 2021, with the emergence of more contagious variants leading to new lockdowns in a certain number of countries. Nevertheless the economic rebound that began in late 2020 continued, and the Group was able to take advantage of the strong growth in demand for high performance, innovative and sustainable materials, driven by the challenges of lightweight materials, new energies, natural resources management and home insulation. However, Arkema remains attentive to the evolution of the public health situation, which has benefited from the ramp-up of vaccination programs since late 2020, but is still uncertain in several regions.

1.2.2 Organic growth projects

Following the start-up in December 2020 of a 50% expansion of fluoropolymer production capacity for battery applications at its Changshu site in China, Arkema announced on 23 February 2021 that it was again investing in this site to increase capacity by a further 35%. The new expansion, which is scheduled to come on stream before the end of 2022, will notably serve the fast-growing lithium-ion battery sector, as well as the water filtration, construction and industrial coatings and semiconductor markets.

Moreover, on 7 June 2021, Arkema announced plans to develop the supply of 1233zd, a new generation of fluorospecialties with no or minimal emissive impact, to support increasing market needs for sustainable solutions in insulation materials and in an emerging application in batteries for electric vehicles. As part of these plans, an agreement to manufacture 1233zd in China was finalized with Aofan, whose initial production capacity of 5 kt/year is expected to start mid-2022. At the same time, Arkema will accelerate its detailed planning of 15 kt/year capacity at its Calvert City site in the United States, which is expected to start end-2023 for an estimated investment of US$60 million.

With these two organic growth projects, Arkema continues its strategy of sustainable growth in response to new social needs linked to greater environmental awareness, increasing urbanization and new technologies.

1.2.3 Acquisitions and divestments

In the first half of 2021, Arkema continued its bolt-on acquisition policy and review of divestment possibilities, in line with its ambition to become a pure Specialty Materials player by 2024.

Thus, in the Intermediates segment, Arkema took a major step in refocusing on Specialty Materials with the divestment on 3 May 2021 of the PMMA business to Trinseo, a US-based company specialized in the production of plastics, synthetic rubber and latex binders. The divestment of this business is based on an enterprise value of €1,137 million, or over 9 times EBITDA.

Moreover, Arkema finalized two bolt-on acquisitions in Adhesive Solutions in first-half 2021:

- Poliplas on 1 March 2021, a leader in hybrid-technology sealants and adhesives, enabling Bostik to reinforce its presence in the high-growth Brazilian construction adhesives market. With fast-growing sales of around €10 million, Poliplas is a key player in the Brazilian adhesives market and will complete Bostik's existing offering around the Fortalezza brand; and
- the Edge Adhesives business in Texas on 1 June 2021, which markets custom formulations in fast-growing easy-install window, door and roofing applications. The business, which generates annual sales of around US$12 million, is complementary to Bostik in hot-melt adhesives and pressure-sensitive adhesive tapes for residential construction and will enable the Group to offer its customers an extended range of value-added and sustainable solutions.

Arkema stepped up its commitment in the essential field of the circular economy with the acquisition of Agiplast, finalized on 1 June 2021. This company, specialized in the regeneration of high performance polymers and a historical partner of the Group in recycling operations, generates annual sales of around €15 million. With this acquisition, Arkema has become the first fully integrated high performance polymer manufacturer, offering both bio-based and recycled materials in order to address the challenges of resource scarcity and end-of-life products.

Lastly, in High Performance Polymers, Arkema announced on 8 June 2021 that it had acquired a 10% stake in ERPRO 3D FACTORY, a company specialized in large-series additive manufacturing, mainly using polyamide 11 powder, thus enabling the Group to gain new expertise and accelerate the development of new applications for its high performance polymers.

1.2.4 Share buyback

In the context of the Group's announcement on 25 February 2021 regarding its intention to implement a share buyback program for an amount of €300 million after the closing of the divestment of the PMMA business, Arkema signed a share purchase agreement with an investment services provider on 20 May 2021. This agreement sets a maximum amount of €300 million over a period from 21 May 2021 to 30 November 2021, at a maximum price of €135 per share, as stipulated in the authorization voted by the annual general meeting of 20 May 2021. The shares purchased under this agreement will be allocated to the implementation of performance share plans or employee share ownership operations up to a limit of €30 million and will be canceled above that limit.

At 30 June 2021, €76 million worth of shares had been bought back under this agreement and the residual commitment of €224 million was recognized in current debt.

1.2.5 Corporate Social Responsibility

In February 2021, Arkema published the final audited and certified results of the 4th year of the "Pragati" project, the world's first sustainable castor crop program. Arkema joined the program in 2016 alongside BASF, Jayant Agro-Organics and Solidaridad, in line with its commitment to create sustainable value for its entire ecosystem of stakeholders. With over 4,500 farmers in North Gujarat trained in best agricultural practices, yields have improved by more than 50% relative to comparable yields in the region. After successfully completing the initial three-year Phase 1 of the program, the founding members committed to a second phase for a further three years, beginning in late 2019.

Furthermore, the Group's commitment and continuous progress in the field of Corporate Social Responsibility were once again recognized in early 2021 when Arkema joined:

- S&P Global's Sustainability Year Book 2021, which recognizes the best performing companies in terms of corporate social responsibility among their industry peers. Having received the bronze award, Arkema ranks as one of the 6 leaders in the sector; and
- the new CAC40 ESG index on the Paris Stock Exchange, which lists the 40 largest companies that have demonstrated environmental, social and governance best practices.

Lastly, in line with its ambitions in terms of Corporate Social Responsibility, Arkema has signed an addendum to its €1 billion syndicated credit facility set up in July 2020 in order to integrate three key CSR criteria for the Group into the calculation of the cost of credit: greenhouse gas emissions, volatile organic compound emissions and the total recordable injury rate (TRIR). Arkema also obtained approval from all lenders for the first one-year extension, bringing the maturity date for the syndicated credit facility to 29 July 2024.

1.3 GOVERNANCE

At the combined annual general meeting, which was held behind closed doors on 20 May 2021 at the Company's headquarters, shareholders approved the appointment of Ilse Henne, Thierry Pilenko and of Bpifrance Investissement represented by Sébastien Moynot, as independent directors for four-year terms, to replace Thierry Morin, Marc Pandraud and Yannick Assouad, whose terms of office had expired.
Consequently, 73% of the members the Board of Directors are independent and the proportion of women directors remains at 45%.

The Board of Directors also decided to create, with effect from the close of the annual general meeting of 20 May 2021, a new Innovation and Sustainable Growth Committee, whose mission is to assess the contribution of Arkema's innovation and strategy to environmental challenges and sustainable growth. This committee, chaired by Victoire de Margerie and made up of five directors, meets at least twice a year and contributes, alongside the Nominating, Compensation and Corporate Governance Committee, to performing a comprehensive review of the Group's CSR and non-financial matters.

Lastly, in light of these developments, the Board of Directors decided to alter the composition of its committees with effect from 20 May 2021, as described in section 3.2.1 of the 2020 Universal Registration Document.

1.4 ANALYSIS OF FIRST-HALF 2021 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 Group's results

(In millions of euros)	First-half 2021	First-half 2020	Year-on-year change
Sales	**4,621**	**3,990**	**+15.8%**
EBITDA	**836**	**586**	**+42.7%**
Specialty Materials	723	489	+47.9%
Intermediates	162	134	+20.9%
Corporate	(49)	(37)	
EBITDA margin	*18.1%*	*14.7%*	
Specialty Materials	*18.8%*	*15.3%*	
Intermediates	*21.1%*	*17.3%*	
Recurring depreciation and amortization	(268)	(282)	-5.0%
Recurring operating income (REBIT)	**568**	**304**	**+86.8%**
REBIT margin	*12.3%*	*7.6%*	
Other income and expenses	708	93	
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(34)	(29)	
Operating income	**1,242**	**368**	**+237.5%**
Equity in income of affiliates	1	(1)	
Financial result	(28)	(45)	-37.8%
Income taxes	(263)	(124)	+112.1%
Net income	**952**	**198**	**+380.8%**
Attributable to non-controlling interests	2	1	
Net income – Group share	**950**	**197**	**+382.2%**
Adjusted net income	**426**	**190**	**+124.2%**

SALES

Sales amounted to €4,621 million, up by a strong 15.8% compared to first-half 2020, which had been impacted by the consequences of the pandemic and by lockdowns in many regions, especially in the second quarter. At constant scope and currency, sales were up 23.2% *versus* H1'20 and up 7.5% *versus* the pre-Covid level of H1'19. Sales benefited from a positive market dynamic that lasted the entire first half, with volumes rising by a sharp 12.2% year on year, and also around 3% above 2019 levels. Demand was high in most of the Group's end markets, in particular construction and DIY, batteries, electronics, transportation and consumer goods. Arkema is thus reaping the benefits of its positioning on growth markets and on innovative, sustainable, high performance solutions, where demand, linked to global megatrends, is accelerating. The evolution of volumes in the packaging, nutrition and hygiene markets reflects the high 2020 comparison base. The price effect was a positive 11.0%, reflecting price increase initiatives in all product lines to pass on the particularly steep rise in raw materials, energy and logistics costs, and benefiting as well from tight market conditions in the acrylics chain. The negative 3.1% scope effect relates to the divestments of the Functional Polyolefins business on 1 June 2020 and the PMMA business on 3 May 2021, which were partially offset by acquisitions in Specialty Materials. The euro's rise against the US dollar was the main factor behind the negative 4.3% currency effect.

In first-half 2021, Specialty Materials represented 83.5% of total Group sales (80% in first-half 2020). The breakdown of sales by segment reflects Arkema's evolving portfolio and more favorable market conditions compared to the prior-year period, which was marked by the Covid-19 pandemic. Excluding the corporate segment, Adhesive Solutions accounted for 24.5% of Group sales (24% in first-half 2020), Advanced Materials 31% (32% in first-half 2020), Coating Solutions 28% (24% in first-half 2020) and Intermediates 16.5% (20% in first-half 2020).

The difference in the regional sales split in first-half 2021 *versus* the prior-year period is mainly attributable to the regional impact of the pandemic in 2020, which was not as great in North America in the first half of that year. Europe represented 38% of total Group sales in first-half 2021 (37% in first-half 2020), North America 30% (34% in first-half 2020), Asia 28% (25% in first-half 2020) and the rest of the world 4% (unchanged from first-half 2020).

EBITDA AND RECURRING OPERATING INCOME

Group EBITDA, at €836 million, was up by a very sharp 42.7% compared to first-half 2020, despite a negative currency and scope effect of around €45 million. This excellent performance was driven by growth in volumes, particularly in Adhesive Solutions, High Performance Polymers and Coating Solutions, the benefits of our price increase initiatives in a significantly higher raw materials environment, as well as tight market conditions in the acrylics chain. At €723 million, Specialty Materials' EBITDA was well above 2019 pre-Covid levels (+21.3% *versus* H1'19 and +47.9% *versus* H1'20), with strong growth in all three segments. The Group's EBITDA margin reached the very high level of 18.1%, up 340 bps from H1'20.

Recurring depreciation and amortization totaled €268 million, €14 million lower than in first-half 2020, essentially due to currency and scope effects.

In line with the year-on-year changes in EBITDA and recurring depreciation and amortization, recurring operating income (REBIT) came to €568 million, up 86.8% compared to H1'20. The REBIT margin was up by 470 bps to 12.3%, thus repositioning the return on capital employed above the Group's long-term objective of 10%.

OPERATING INCOME

Operating income rose significantly to €1,242 million (€368 million in first-half 2020) and notably included a pre-tax capital gain of close to €950 million relating to the divestment of PMMA, as well as one-off expenses corresponding primarily to asset impairments, acquisition costs, expenses linked to the consequences of Winter storm Uri in the United States, as well as restructuring charges (for additional detail, see note 5.1 to the condensed consolidated interim financial statements at 30 June 2021).

FINANCIAL RESULT

The financial result represented a net expense of €28 million *versus* a €45 million net expense in first-half 2020. 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, lower bond costs, and the impact of actuarial differences on certain provisions for employee benefits.

INCOME TAXES

The income tax expense was up €139 million to €263 million (€124 million in first-half 2020), mainly reflecting the close to €170 million tax impact of the divestiture of the PMMA business in 2021 compared with the €75 million tax charge recorded in first-half 2020 related to the divestment of the Functional Polyolefins business. In first-half 2020, the tax expense also included a €55 million reversal of deferred tax assets due to the use of tax losses. In the first half, excluding exceptional items, the tax rate came in at 20% of recurring operating income, *versus* 22% last year, reflecting the geographic mix of the Group's earnings.

NET INCOME – GROUP SHARE AND ADJUSTED NET INCOME

As a result, net income – Group share totaled €950 million (€197 million in first-half 2020), and net earnings per share amounted to €12.38.

Excluding the post-tax impact of non-recurring items, adjusted net income came in at €426 million, representing €5.58 per share.

1.4.2 Analysis of results by segment

1.4.2.1 ADHESIVE SOLUTIONS (24.5% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2021	First-half 2020	Year-on-year change
Sales	**1,130**	**968**	**+16.7%**
EBITDA	**168**	**119**	**+41.2%**
EBITDA margin	*14.9%*	*12.3%*	
Recurring operating income (REBIT)	**136**	**89**	**+52.8%**
REBIT margin	*12.0%*	*9.2%*	
Other income and expenses	(29)	(29)	
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(24)	(18)	
Operating income	**83**	**42**	**+97.6%**

Sales of the Adhesive Solutions segment totaled €1,130 million, up a strong 16.7% compared to first-half 2020. Volumes rose by 14.2%, lifted by positive trends in the construction and DIY markets and by a significant rebound in the great majority of industrial applications. In the continuity of the first quarter, the packaging and hygiene markets faced the high prior-year comparison base. Up 1.5%, the price effect reflected the Group's actions to pass on raw materials inflation, which clearly accelerated in the second quarter. Further pricing initiatives will be implemented in the third quarter, as the impact of rising raw materials will intensify. The 4.4% positive scope effect corresponds to the integration of Fixatti, Ideal Work, Poliplas and Edge Adhesives and the currency effect was a negative 3.4%.

EBITDA for the segment totaled €168 million, up by a very sharp 41.2% *versus* H1'20, and up 26.3% *versus* H1'19. This performance was driven by high volumes, operational excellence actions, the integration of acquisitions and initiatives to increase selling prices which overall enabled to offset the rise in raw materials costs. Despite the mechanical dilutive impact of price increases on this ratio, the EBITDA margin reached 14.9% in the first half, 260 bps higher than in the prior year, thereby consolidating the target of 14% set for 2021 despite the raw materials context.

In line with the year-on-year change in EBITDA, recurring operating income (REBIT) came to €136 million. This figure includes €32 million in recurring depreciation and amortization, virtually stable compared to first-half 2020. REBIT margin stood at 12.0% in the first half of 2021.

Operating income of €83 million included €24 million in depreciation and amortization related to asset revaluations carried out as part of purchase price allocations, up €6 million year on year following the implementation of our bolt-on acquisition strategy. It also included €29 million in net other expenses, corresponding notably to acquisition costs and some restructuring charges.

1.4.2.2 ADVANCED MATERIALS (31% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2021	First-half 2020	Year-on-year change
Sales	**1,432**	**1,280**	**+11.9%**
EBITDA	**320**	**246**	**+30.1%**
EBITDA margin	*22.3%*	*19.2%*	
Recurring operating income (REBIT)	**197**	**122**	**+61.5%**
REBIT margin	*13.8%*	*9.5%*	
Other income and expenses	(114)	(18)	
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(7)	(8)	
Operating income	**76**	**96**	**-20.8%**

Sales of the Advanced Materials segment rose by a significant 11.9% to €1,432 million. Volumes grew by 12.0%, driven primarily by the excellent dynamic in High Performance Polymers, which benefited from the acceleration of new developments, particularly in lightweight materials, clean mobility and bio-based products. The trend in volumes was favorable in most of the segment's end markets, including construction, batteries, electronics, consumer goods and transportation. While gradually improving, the oil and gas market was down year on year, and growth was limited in the animal nutrition market due to the high comparison base in first-half 2020. The 4.2% positive price effect reflects the price increases carried out to pass on the rise in raw materials costs. The currency effect was a negative 4.3%.

At €320 million, the segment's EBITDA increased by nearly 10% compared to pre-Covid H1'19 levels and by 30.1% year on year, driven in particular by the excellent performance in the second quarter. These results mainly reflect the marked increase in volumes and the high technological content of Arkema's solutions. In this context, EBITDA margin reached a high level at 22.3%, up 310 bps year on year.

The recurring operating income (REBIT) of €197 million included €123 million in recurring depreciation and amortization, stable compared to last year.

Operating income amounted to €76 million, including €114 million in net other expenses corresponding mainly to the exceptional impairment of assets in the Hydrogen Peroxide business, linked to the downward trend in European markets described in note 8.5 to the condensed consolidated interim financial statements at 30 June 2021, as well as to restructuring costs.

1.4.2.3 COATING SOLUTIONS (28% OF TOTAL GROUP SALES)

(In millions of euros)	**First-half 2021**	**First-half 2020**	**Year-on-year change**
Sales	**1,279**	**953**	**+34.2%**
EBITDA	**235**	**124**	**+89.5%**
EBITDA margin	*18.4%*	*13.0%*	
Recurring operating income (REBIT)	**177**	**64**	**+176.6%**
REBIT margin	*13.8%*	*6.7%*	
Other income and expenses	(13)	(3)	
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(3)	(3)	
Operating income	**161**	**58**	**+177.6%**

Sales of the Coating Solutions segment rose by a very strong 34.2% to €1,279 million. The 14.8% increase in volumes reflects the strong dynamic in the segment's main markets, namely decorative paints, electronics, 3D printing, graphic arts and industrial coatings, but somewhat impacted in the first quarter by product availability temporarily affected by winter storm Uri in the United States. The segment also benefited from its broader offering of more environmentally friendly products, such as waterborne paints and powder coatings. The 25.2% positive price effect reflects price initiatives to offset the increased cost of propylene, acrylics and VAM, as well as a tight acrylics market for activities not integrated downstream. The currency effect was a negative 5.8%.

At €235 million, EBITDA for the segment was up by a very significant 89.5% year on year, and by 38.2% compared to H1'19, benefiting from higher volumes and prices, the shift in the product mix toward higher added-value applications, and more favorable market conditions in activities not integrated downstream linked to tightness in the acrylics chain. In this context, the EBITDA margin came out at 18.4%, a historically high level in a half-year, up 540 bps relative to H1'20 and up 350 bps relative to H1'19, thereby confirming the segment's profitability potential, in line with the ambition presented at the Capital Market Days.

Recurring operating income (REBIT) of €177 million includes €58 million in recurring depreciation and amortization, virtually stable year on year.

Operating income amounted to €161 million and included €13 million in net other expenses, corresponding mainly to the consequences of winter storm Uri in Texas.

1.4.2.4 INTERMEDIATES (16.5% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2021	First-half 2020	Year-on-year change
Sales	**766**	**776**	**-1.3%**
EBITDA	**162**	**134**	**+20.9%**
EBITDA margin	*21.1%*	*17.3%*	
Recurring operating income (REBIT)	**111**	**70**	**+58.6%**
REBIT margin	*14.5%*	*9.0%*	
Other income and expenses	876	184	
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	-	-	
Operating income	**987**	**254**	**+288.6%**

Sales of the Intermediates segment fell 1.3% year on year to €766 million, impacted by a negative 21.1% scope effect corresponding to the divestments of the PMMA business on 3 May 2021 and of the Functional Polyolefins business on 1 June 2020. Volumes grew by 6.9% and the price effect was a positive 16.5%, primarily reflecting much more favorable market conditions in acrylics in Asia as well as a slight improvement in the Fluorogases environment in the second quarter, particularly in the United States. The currency effect was a negative 3.6%.

EBITDA increased by 20.9% year on year to €162 million, with more favorable market conditions in the segment's various activities more than offsetting the negative scope effect. The EBITDA margin rose to 21.1%, driven notably by the tightness observed in the acrylics chain since the beginning of the year.

Recurring operating income (REBIT) totaled €111 million, including €51 million in recurring depreciation and amortization, down €13 million year on year following the divestment of PMMA. REBIT margin stood at 14.5% for the first half of 2021.

Operating income was up at €987 million and primarily included a pre-tax capital gain of close to €950 million relating to the divestment of PMMA on 3 May 2021, as well as exceptional asset impairments and restructuring and environmental contingency expenses in Fluorogases. First-half 2020 operating income included a €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

(In millions of euros)	First-half 2021	First-half 2020
Cash flow from operating activities	433	416
Cash flow from investing activities	760	(19)
Net cash flow	**1,193**	**397**
Of which net cash flow from portfolio management operations	896	147
Free cash flow	**297**	**250**
Of which non-recurring cash flow including exceptional capital expenditure	(1)	(21)
Recurring cash flow	**298**	**271**
Cash flow from financing activities	**(350)**	**(429)**

EBITDA can be reconciled to free cash flow as follows:

(In millions of euros)	First-half 2021	First-half 2020
EBITDA	**836**	**586**
Taxes	(117)	(55)
Cash items included in the financial result	(27)	(42)
Change in working capital	(205)	(24)
Change in fixed asset payables (1)	(35)	(54)
Recurring capital expenditure	(165)	(157)
Other	11	17
Recurring cash flow	**298**	**271**
Exceptional capital expenditure	(117)	(57)
Non-recurring items	116	36
Free cash flow	**297**	**250**

(1) *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 2021 and in first-half 2020.*

RECURRING CASH FLOW, FREE CASH FLOW AND NET CASH FLOW

For the sake of comparability between different years and to neutralize in particular significant non-recurring inflows linked to the tax impacts of recent disposals, a recurring cash flow excluding exceptional items is now calculated. This recurring cash flow [1] thus came to €298 million, up compared to first-half 2020 (€271 million). It includes a much more marked increase in working capital in the semester than in the prior year, which was strongly impacted by the Covid-19 pandemic, especially in the second quarter. This rise reflects volume growth and raw materials inflation in a context of a sharp improvement in activity. At 30 June 2021, working capital remains well controlled and represented 11.9% of annualized quarterly sales [2] excluding the PMMA business (16.5% at 30 June 2020 and 16.0% at 30 June 2019), an exceptionally low ratio that remains below the normative level due to strong demand and some difficulties to source raw materials, which did not allow to rebuild inventories.

Free cash flow, which includes exceptional items, amounted to €297 million *versus* €250 million in 2020. It included a non-recurring inflow of €116 million, mainly reflecting tax liabilities relating to the capital gains tax on the PMMA divestment. This tax has been recorded in net cash flow from portfolio management operations but will be disbursed in the second half of the year. Free cash flow for first-half 2020 also included a non-recurring €36 million cash inflow, partly attributable to tax savings of €55 million linked to the use of tax losses.
In the first half, free cash flow also included an increase in exceptional capital expenditure (€117 million *versus* €57 million in H1'20) relating to the ramp-up of construction of the polyamide bio-factory in Singapore and the hydrofluoric acid supply project with Nutrien in the United States.

Net cash flow, which includes the impact of portfolio management, came in at a very high €1,193 million in first-half 2021 compared to €397 million in first-half 2020. This strong increase was primarily linked to the net cash inflow from portfolio management operations, which amounted to €896 million *versus* €147 million in first-half 2020. It mainly corresponds to the gross proceeds from the PMMA divestment finalized on 3 May 2021 for €1.1 billion, and also includes the bolt-on acquisitions of Agiplast and the Edge Adhesives business in Texas. In first-half 2020, the net cash inflow from portfolio management operations corresponded mainly to the divestment of the Functional Polyolefins business and the acquisition of LIP in Adhesive Solutions.

CASH FLOW FROM FINANCING ACTIVITIES

The cash outflow for financing activities amounted to €350 million in first-half 2021 *versus* €429 million in the first six months of 2020. The first-half 2021 figure primarily includes a €2.50 per-share dividend payment for fiscal year 2020 for a total amount of €191 million and €104 million in share buyback costs.

(1) Recurring cash flow corresponds to free cash flow before exceptional items. It excludes non-recurring items and exceptional capital expenditure.
(2) Calculated as working capital at 30 June/(2nd quarter sales * 4).

In first-half 2020, the cash outflow for financing activities mainly included the dividend payment for €168 million, share buybacks for €21 million, 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.

1.4.4 Balance sheet analysis

(In millions of euros)	30 June 2021	31 December 2020	Year-on-year change
Non-current assets*	6,511	6,489	+0.3%
Working capital	968	875	+10.6%
Capital employed	**7,479**	**7,364**	**+1.6%**
Deferred tax assets	145	159	-8.8%
Provisions for pensions and employee benefits	505	530	-4.7%
Other provisions	399	370	+7.8%
Total provisions	**904**	**900**	**+0.4%**
Long-term assets covering some provisions	101	91	+11.0%
Total provisions net of non-current assets	**803**	**809**	**-0.7%**
Deferred tax liabilities	339	320	+5.9%
Net debt (excluding hybrid bonds)	**581**	**1,210**	**-52.0%**
Shareholders' equity	**5,789**	**5,235**	**+10.6%**

**Excluding deferred tax and including pension assets.*

Between 31 December 2020 and 30 June 2021, non-current assets increased by €22 million, primarily due to:

- €285 million in capital expenditure, including €165 million in recurring capital expenditure and €117 million in exceptional capital expenditure;
- a €19 million increase in right-of-use assets related to the Group's lease commitments under IFRS 16;
- €421 million in depreciation and amortization mainly including (i) €268 million in recurring depreciation and amortization, of which €28 million arising from the application of IFRS 16, (ii) €34 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses, and (iii) €127 million in exceptional write-downs of industrial and intangible assets;
- the impact of acquisitions for an amount of €57 million, corresponding to the integration of Poliplas, Edge Adhesives Texas and Agiplast assets, together with final purchase price allocation adjustments for Fixatti, Ideal Work, CMC and CPS; and
- a €110 million positive currency translation effect, mainly linked to the appreciation of the euro against the US dollar at 30 June.

At 30 June 2021, working capital was €93 million higher than at 31 December 2020. This increase mainly reflects volume growth and raw materials inflation in a context of a strong improvement in activity, and includes a positive currency effect of €25 million. The impact of the finalization of the PMMA divestment was negligible, as this business had already been classified as assets held for sale at 31 December 2020 in accordance with IFRS 5. At 30 June 2021, working capital remains well controlled and represented 11.9% of annualized sales excluding the PMMA business (16.5% at 30 June 2020 and 16.0% at 30 June 2019), an exceptionally low ratio that remains below the normative level due to strong demand and some difficulties to source raw materials, which did not allow to rebuild inventories.

As a consequence, the Group's capital employed increased by €115 million between 31 December 2020 and 30 June 2021 to €7,479 million at 30 June 2021.

Deferred tax assets amounted to €145 million at 30 June 2021, down €14 million on 31 December 2020 following the use of €14 million in tax losses during the period.

Gross provisions totaled €904 million. Some of these provisions, accounting for an aggregate €101 million, are covered mainly by the guarantee facility granted by Total and described in note 9.1.2 to the condensed consolidated interim financial statements at 30 June 2021 (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 2021, provisions net of these non-current assets remained stable at €803 million (€809 million at 31 December 2020), with the decrease in employee benefit obligations offset by changes in provisions for restructuring and for litigation and claims.

Net provisions can be analyzed as follows by type:

(In millions of euros)	**30 June 2021**	**31 December 2020**
Pension liabilities	342	388
Other employee benefit obligations	155	142
Environmental contingencies	117	116
Restructuring	51	40
Other	138	123

Between 31 December 2020 and 30 June 2021, net provisions for pension liabilities decreased by €46 million primarily due to a significant increase in the discount rates applied in all regions, particularly in the United States and the United Kingdom. This resulted in a decrease in pension obligations, partially offset by the revaluation of plan assets in the United States and the United Kingdom over the period. The currency effect was limited. Provisions for other employee benefit obligations (healthcare costs, welfare costs and long-service awards) increased by €13 million, mainly reflecting the recognition of a provision corresponding to the dispensation from work mechanism in France for certain categories of employees, as described in note 6.1 to the condensed consolidated interim financial statements at 30 June 2021.
The increase in provisions for litigation and claims primarily concerns the consequences of winter storm Uri in Texas in the first quarter of 2021, and legal fees for other ongoing proceedings in the United States.

Net debt and hybrid bonds amounted to €1,281 million at 30 June 2021 (€1,910 million at 31 December 2020), representing 0.9 times last-twelve-months EBITDA. This reduction mainly reflects the receipt of €1.1 billion in gross proceeds from the PMMA divestment, the €2.50 per-share dividend payment for a total payout of €191 million and a €300 million commitment corresponding to the share buyback program launched in May 2021.

Shareholders' equity amounted to €5,789 million *versus* €5,235 million at 31 December 2020. The €554 million increase primarily relates to (i) €952 million in net income for the period, which includes a pre-tax capital gain of close to €950 million relating to the divestment of PMMA, (ii) the payment of a €2.50 per-share dividend for a total amount of €191 million, and (iii) €104 million for share buybacks together with the residual commitment of €224 million concerning the €300 million share buyback program launched in late May. In first-half 2021, a €53 million actuarial gain was recognized in equity for provisions for pension liabilities and other post-employment benefit obligations, as well as a positive €92 million translation adjustment.

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 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 2020 Universal Registration Document filed with the French financial markets authority (*Autorité des marchés financiers* – AMF) on 26 March 2021 under number D.21-0206. This document is available on Arkema's website (www.finance.arkema.com) and on the AMF website (www.amf-france.org). Additionally, an update on the Group's contingent liabilities is provided in the notes to the condensed consolidated interim financial statements at 30 June 2021.

1.7 OUTLOOK

The positive dynamic observed in the first half is continuing, benefiting from solid demand in most of the Group's end markets. Arkema will nevertheless remain vigilant and ready to respond rapidly to the current evolution of the health crisis and the rising raw materials context, and will pursue its price increase initiatives.

Moreover, Arkema will continue to leverage its strong sustainable innovation dynamic and its recent capacity expansions in order to capitalize on accelerating demand for sustainable, high performance solutions, driven by global megatrends.

In light of its first-half financial performance, and while remaining attentive to the macroeconomic context which remains volatile, the Group has significantly raised its full-year guidance once again. Excluding a systemic resumption of the health crisis, Arkema is now targeting for 2021, around 30% growth in Specialty Materials' EBITDA relative to 2020 at constant scope and currency [(1)], *versus* the 20% previously announced. Group EBITDA should therefore reach around €1.4 billion for the full year.

Finally, Arkema will continue to deploy its strategic roadmap, in line with its ambition to become a pure Specialty Materials player by 2024.

[(1)] With the assumption of a €/$ exchange rate of 1.2 for 2021, the impact on 2020 EBITDA is estimated at a negative €30 million for Specialty Materials and a negative €10 million for Intermediates.

2 CONDENSED CONSOLIDATED INTERIM FINANCIAL STATEMENTS AT 30 JUNE 2021

CONSOLIDATED INCOME STATEMENT

(In millions of euros)	***Notes***	**1st half 2021**	**1st half 2020**
Sales	*(4.8 & 4.9)*	**4,621**	**3,990**
Operating expenses		(3,581)	(3,211)
Research and development expenses		(119)	(120)
Selling and administrative expenses		(387)	(384)
Other income and expenses	*(5.1)*	708	93
Operating income	*(4.8)*	**1,242**	**368**
Equity in income of affiliates		1	(1)
Financial result	*(10.1)*	(28)	(45)
Income taxes	*(7)*	(263)	(124)
Net income		**952**	**198**
Attributable to non-controlling interests		2	1
Net income - Group share		**950**	**197**
Earnings per share (in euros)	*(11.6)*	*12.38*	*2.58*
Diluted earnings per share (in euros)	*(11.6)*	*12.31*	*2.57*

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(In millions of euros)	***Notes***	**1st half 2021**	**1st half 2020**
Net income		**952**	**198**
Hedging adjustments		(25)	8
Other items		—	—
Deferred taxes on hedging adjustments and other items		—	—
Change in translation adjustments	*(11.5)*	92	(36)
Other recyclable comprehensive income		**67**	**(28)**
Impact of remeasuring unconsolidated investments		(2)	—
Actuarial gains and losses	(6.1)	67	(38)
Deferred taxes on actuarial gains and losses		(14)	10
Other non-recyclable comprehensive income		**51**	**(28)**
TOTAL INCOME AND EXPENSES RECOGNIZED DIRECTLY THROUGH EQUITY		**118**	**(56)**
Total comprehensive income		**1,070**	**142**
Attributable to non-controlling interests		3	1
Total comprehensive income – Group share		**1,067**	**141**

CONSOLIDATED BALANCE SHEET

(In millions of euros)	***Notes***	**30 June 2021**	**31 December 2020**
ASSETS			
Goodwill	*(8.1)*	1,899	1,933
Other intangible assets, net	*(8.2)*	1,494	1,433
Property, plant and equipment, net	*(8.3)*	2,807	2,828
Investments in equity affiliates		32	29
Other investments		54	57
Deferred tax assets		145	159
Other non-current assets		225	209
TOTAL NON-CURRENT ASSETS		**6,656**	**6,648**
Inventories		1,109	881
Accounts receivable		1,418	1,131
Other receivables and prepaid expenses		166	163
Income taxes recoverable		61	70
Current financial derivative assets		20	40
Cash and cash equivalents		2,415	1,587
Assets held for sale	*(3.2)*	6	191
TOTAL CURRENT ASSETS		**5,195**	**4,063**
TOTAL ASSETS		**11,851**	**10,711**
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital	*(11.1)*	767	767
Paid-in surplus and retained earnings		5,020	4,458
Treasury shares	*(11.3)*	(109)	(6)
Translation adjustments		59	(32)
SHAREHOLDERS' EQUITY – GROUP SHARE		**5,737**	**5,187**
Non-controlling interests		52	48
TOTAL SHAREHOLDERS' EQUITY		**5,789**	**5,235**
Deferred tax liabilities		339	320
Provisions for pensions and other employee benefits	*(6.1)*	505	530
Other provisions and non-current liabilities	*(9.1)*	416	383
Non-current debt	*(10.2)*	2,661	2,663
TOTAL NON-CURRENT LIABILITIES		**3,921**	**3,896**
Accounts payable		1,135	987
Other creditors and accrued liabilities		387	339
Income taxes payable		264	69
Current financial derivative liabilities		20	15
Current debt	*(10.2)*	335	134
Liabilities associated with assets held for sale	*(3.2)*	—	36
TOTAL CURRENT LIABILITIES		**2,141**	**1,580**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**11,851**	**10,711**

CONSOLIDATED CASH FLOW STATEMENT

(In millions of euros)	***Notes***	**1st half 2021**	**1st half 2020**
Operating cash flows			
Net income		952	198
Depreciation, amortization and impairment of assets		421	422
Other provisions and deferred taxes		47	54
(Gains)/losses on sales of long-term assets		(949)	(245)
Undistributed affiliate equity earnings		(1)	2
Change in working capital	*(5.2)*	(43)	(26)
Other changes		6	11
CASH FLOW FROM OPERATING ACTIVITIES		**433**	**416**
Investing cash flows			
Intangible assets and property, plant, and equipment additions	*(4.3)*	(285)	(215)
Change in fixed asset payables		(36)	(55)
Acquisitions of operations, net of cash acquired	*(3.1)*	(42)	(92)
Increase in long-term loans		(16)	(23)
Total expenditures		**(379)**	**(385)**
Proceeds from sale of operations, net of cash transferred	*(3.2)*	6	2
Proceeds from sale of intangible assets and property, plant, and equipment	*(3.2)*	1,120	327
Proceeds from sale of unconsolidated investments		4	—
Repayment of long-term loans		9	37
Total divestitures		**1,139**	**366**
CASH FLOW FROM INVESTING ACTIVITIES		**760**	**(19)**
Financing cash flows			
Issuance (repayment) of shares and paid-in surplus	*(11.1)*	—	7
Purchase of treasury shares	*(11.3)*	(104)	(21)
Issuance of hybrid bonds	*(11.2)*	—	299
Dividends paid to parent company shareholders	*(11.4)*	(191)	(168)
Interest paid to bearers of subordinated perpetual notes	*(11.2)*	(4)	—
Dividends paid to non-controlling interests		(1)	(1)
Increase in long-term debt		6	3
Decrease in long-term debt		(26)	(40)
Increase / (Decrease) in short-term debt		(30)	(508)
CASH FLOW FROM FINANCING ACTIVITIES		**(350)**	**(429)**
Net increase/(decrease) in cash and cash equivalents		843	(32)
Effect of exchange rates and changes in scope		(15)	25
Cash and cash equivalents at beginning of period		1,587	1,407
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**2,415**	**1,400**

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2021	**767**	**1,272**	**700**	**2,486**	**(32)**	**(6)**	**5,187**	**48**	**5,235**
Cash dividend	—	—	—	(195)	—	—	(195)	(1)	(196)
Issuance of share capital	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	—	—	—	(104)	(104)	—	(104)
Grants of treasury shares to employees	—	—	—	(1)	—	1	—	—	—
Share-based payments	—	—	—	8	—	—	8	—	8
Issuance of hybrid bonds	—	—	—	—	—	—	—	—	—
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other*	—	—	—	(226)	—	—	(226)	2	(224)
Transactions with shareholders	**—**	**—**	**—**	**(414)**	**—**	**(103)**	**(517)**	**1**	**(516)**
Net income	—	—	—	950	—	—	950	2	952
Total income and expenses recognized directly through equity	—	—	—	26	91	—	117	1	118
Total comprehensive income	**—**	**—**	**—**	**976**	**91**	**—**	**1,067**	**3**	**1,070**
At 30 June 2021	**767**	**1,272**	**700**	**3,048**	**59**	**(109)**	**5,737**	**52**	**5,789**

**Including the Group's residual commitment of €224 million under the 2021 share buyback program, with a corresponding entry in current debt (see note 10.2 "Debt")*

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2020	**766**	**1,266**	**694**	**2,380**	**178**	**(11)**	**5,273**	**51**	**5,324**
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
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—
Transactions with shareholders	**1**	**6**	**299**	**(159)**	**—**	**(18)**	**129**	**(1)**	**128**
Net income	—	—	—	197	—	—	197	1	198
Total income and expenses recognized directly through equity	—	—	—	(20)	(36)	—	(56)	—	(56)
Total comprehensive income	**—**	**—**	**—**	**177**	**(36)**	**—**	**141**	**1**	**142**
At 30 June 2020	**767**	**1,272**	**993**	**2,398**	**142**	**(29)**	**5,543**	**51**	**5,594**

Notes to the consolidated financial statements at 30 June 2021

Note 1: Highlights

1.1. IMPACT OF COVID-19

After a year strongly marked by Covid-19 in 2020, during which Arkema nevertheless delivered a solid financial performance, the Group has emerged from this health crisis well positioned to take advantage of the economic rebound that began in late 2020. However, Arkema is paying close attention to all developments in the health situation, which remains uncertain in some regions. Thanks to its solid balance sheet and good cash management, as well as to its careful monitoring of the still-volatile market environment, Arkema considers that it is very well placed to benefit from the fast-growing demand for high-performance materials.

1.2. PORTFOLIO MANAGEMENT

In the Intermediates segment, on 3 May 2021 the Group completed the divestment of its PMMA activity to Trinseo for an enterprise value of €1,137 million. This operation, whose impacts are described in note 3.2 “Assets held for sale”, is fully in line with the strategy of refocusing the Group’s activities on Specialty Materials.

In the first half of 2021, Arkema made two bolt-on acquisitions in Adhesive Solutions:

- on 1 March 2021, Arkema finalized the acquisition of Poliplas, a Brazilian leader in hybrid-technology sealants and adhesives for the construction market, with annual sales of around €10 million; and
- on 1 June 2021, the Group also finalized the acquisition of the Edge Adhesives business in Texas, which is complementary to Bostik in hot-melt adhesives and pressure-sensitive adhesive tapes for residential construction. The business generates annual sales of around US$12 million.

In High Performance Polymers, on 1 June 2021 the Group finalized the acquisition of Agiplast, a leader in the regeneration of high-performance polymers, in particular specialty polyamides and fluoropolymers, with annual sales of around €15 million. This acquisition will enable Arkema to offer a full service to customers in terms of materials circularity.

The impacts of these operations are described in note 3.1 “Business combinations”.

1.3. OTHER HIGHLIGHTS

Following the combined annual general meeting of shareholders on 20 May 2021, which authorized the 2021 share buyback program, Arkema signed a share purchase agreement with an investment services provider for a maximum amount of €300 million over a period from 21 May to 30 November 2021. For more details, see note 11.3 “Treasury shares” and note 10.2 “Debt”.

Note 2: Accounting policies and new standards

The notes to the financial statements at 30 June 2021 are presented differently from those at 30 June 2020 to enhance clarity and relevance, in line with recommendations by the French financial markets authority AMF (*Autorité des Marchés Financiers*). The structure of the notes to the interim financial statements is similar to that used for the notes to the financial statements at 31 December 2020.

The condensed consolidated interim financial statements should be read in conjunction with the Group’s most recent annual consolidated financial statements for the year ended 31 December 2020. They do not include all the information required for a complete set of IFRS financial statements. However, selected explanatory notes are included to explain events and transactions that are significant to an understanding of the changes in the Group’s financial position and performance since the last annual financial statements.

A concordance table cross-referencing the first-half 2021 and first-half 2020 presentation of the notes to the consolidated financial statements is provided in note 14 “Table of correspondence for the notes to the financial statements in 2021/2020”.

Arkema, a major player in Specialty Materials, 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 Arkema Group’s LEI is 9695000EHMS84KKP2785.

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. The Group’s parent company is Arkema SA.

The Group’s condensed consolidated interim financial statements at 30 June 2021 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved by the Board of Directors of Arkema on 28 July 2021.

The condensed consolidated interim financial statements at 30 June 2021 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 2021.

The accounting framework and standards adopted by the European Commission can be accessed from the following website: https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002

The accounting policies applied in preparing the consolidated financial statements at 30 June 2021 are identical to those used in the consolidated financial statements at 31 December 2020, except for IFRS standards, amendments and interpretations, as adopted by the European Union and the IASB, that are mandatory for accounting periods commencing on or after 1 January 2021 (and which had not been applied early by the Group), namely:

Amendments to IFRS 4	Insurance contracts – Extension of the temporary exemption from applying IFRS 9	Adopted by the European Union on 16 December 2020
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest rate benchmark reform – Phase 2	Adopted by the European Union on 14 January 2021

Application of these amendments had no significant impact on the financial statements at 30 June 2021.

A reform of the main interest rate benchmarks is currently underway, with the Interbank Offered Rates (IBORs) being replaced by alternative risk-free rates. The Group has taken steps to ensure a gradual transition to risk-free rates and is keeping a close eye on market practices and publications by the relevant bodies. The reform is mainly operational in scope and has no material impact on the interim financial statements at June 30, 2021.

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 2021 (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 2021
Amendments to IAS 1	Disclosure of accounting policies	Not adopted by the European Union at 30 June 2021
Amendments to IAS 8	Definition of accounting estimates	Not adopted by the European Union at 30 June 2021
Amendments to IAS 12	Income taxes – Recognition of deferred tax assets for unrealized losses	Not adopted by the European Union at 30 June 2021
Amendments to IAS 16	Property, plant and equipment – Proceeds before intended use	Not adopted by the European Union at 30 June 2021
Amendments to IAS 37	Onerous contracts – Cost of fulfilling a contract	Not adopted by the European Union at 30 June 2021
Amendments to IFRS 3	Reference to the conceptual framework	Not adopted by the European Union at 30 June 2021
Amendments to IFRS 16	Covid-19-related rent concessions beyond 30 June 2021	Not adopted by the European Union at 30 June 2021
IFRS 17	Insurance contracts	Not adopted by the European Union at 30 June 2021
Conceptual framework	Amendments to references to the conceptual framework	Not adopted by the European Union at 30 June 2021

The Group does not expect application of these amendments and this standard to have a significant impact.

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 in particular 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 condensed consolidated interim financial statements are prepared in accordance with the historical cost convention, except for certain financial assets and liabilities which are recognized at fair value.

The condensed consolidated interim financial statements are presented in millions of euros, rounded to the nearest million, unless otherwise indicated.

The functional operating currency of foreign companies in the scope of consolidation is their local currency, in which most of their transactions are denominated. Their balance sheets are translated into euros on the basis of exchange rates at the end of the period. The statements of income and of cash flows are translated using the average exchange rates during the period. Foreign exchange differences resulting from translation of the financial statements of these subsidiaries are recorded either in “Translation adjustments” in shareholders’ equity in the consolidated financial statements for the Group share, or in “Non-controlling interests” for the share not directly or indirectly attributable to the Group. In exceptional cases, a company’s functional currency may differ from the local currency.

In application of IAS 21 “The effects of changes in foreign exchange rates”, transactions denominated in foreign currencies are translated by the entity carrying out the transaction into its functional currency at the exchange rate applicable on the transaction date. Monetary balance sheet items are restated at the closing exchange rate at the balance sheet date. Gains and losses resulting from translation are recognized in recurring operating income, unless they result from unhedged financing, in which case they are included in the financial result.

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.

Note 3: Scope of consolidation

3.1. BUSINESS COMBINATIONS

3.1.1. Business combinations during the year

As described in note 1.2 “Portfolio management”, business combinations in 2021 concerned the acquisitions of Poliplas and Agiplast, as well as of the Edge Adhesives business in Texas.

In accordance with IFRS 3 (revised), the Group used the acquisition method for the accounting treatment of these operations. The goodwill of €37 million recognized at 30 June 2021 is provisional. Under IFRS 3 (revised), the Group has 12 months from the acquisition date to finalize the value of the assets acquired and liabilities assumed.

3.1.2. Finalization of the Fixatti, Ideal Work, Crackless Monomer Company (CMC) and Colorado Photopolymer Solutions (CPS) purchase price allocation

The Group has finalized the purchase price allocation for Fixatti, Ideal Work, Crackless Monomer Company (CMC) and Colorado Photopolymer Solutions (CPS).

Intangible assets stated at fair value primarily comprise technologies and customer relations and amount to €64 million.

Final goodwill totals €59 million for the four acquisitions and mainly corresponds to the value of future technologies and expected business development. This goodwill is not amortizable for tax purposes.

3.2. ASSETS HELD FOR SALE

On 14 December 2020, Arkema announced the planned divestment of its PMMA activity, which is part of its Intermediates segment, for the enterprise value of €1,137 million to Trinseo. The offer received values the business at 9.3 times estimated EBITDA for 2020 (€122 million), based on estimated sales of €510 million. The PMMA activity is an integrated operation, from production of methyl methacrylate to polymethyl methacrylate, marketed under the well-known brands Plexiglas® on the American continent and Altuglas® in the rest of the world. This activity employed some 860 people and had 7 production sites (4 in Europe and 3 in North America).

The finalization of the operation was announced on 3 May 2021.

In application of IFRS 5 “Non-current assets held for sale and discontinued operations”, the assets held for sale and the associated liabilities must therefore be presented in two specific lines of the balance sheet at 31 December 2020. 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.

The balance sheet items classified as assets held for sale at 31 December 2020 are the following:

(In millions of euros)	**2020**
Intangible assets	30
Property, plant and equipment	93
Other investments	1
Deferred tax assets	1
Other non-current assets	1
Total non-current assets	**126**
Inventories	54
Accounts receivable	7
Other receivables and prepaid expenses	2
Income taxes recoverable	1
Cash and cash equivalents	1
Other current assets	—
Total current assets	**65**
ASSETS HELD FOR SALE	**191**
Deferred tax liabilities	—
Provisions for pensions and other employee benefits	18
Other provisions and non-current liabilities	4
Non-current debt	2
Total non-current liabilities	**24**
Accounts payable	2
Income taxes payable	—
Current debt	1
Other current liabilities	9
Total current liabilities	**12**
LIABILITIES ASSOCIATED WITH ASSETS HELD FOR SALE	**36**

The assets sold on 3 May 2021 are the following:

(In millions of euros)	**2021**
Intangible assets	32
Property, plant and equipment	100
Other investments	4
Deferred tax assets	1
Other non-current assets	1
Total non-current assets	**138**
Inventories	56
Accounts receivable	11
Other receivables and prepaid expenses	1
Cash and cash equivalents	1
Total current assets	**69**
TOTAL ASSETS SOLD	**207**
Deferred tax liabilities	5
Provisions for pensions and other employee benefits	13
Other provisions and non-current liabilities	3
Non-current debt	2
Total non-current liabilities	**23**
Accounts payable	10
Income taxes payable	7
Current debt	3
Total current liabilities	**20**
TOTAL LIABILITIES TRANSFERRED	**43**

In the income statement, the provisional capital gain before deduction of disposal costs amounts to €947 million before tax and is included in “Other income and expenses” (see note 5.1 “Other income and expenses”).
The price received is included in “Proceeds from sale of operations, net of cash transferred” in the cash flow statement.

As part of the divestment of the PMMA activity, Arkema signed an agreement with Hanwha on 6 May 2021 providing for the shutdown of production at the Jinhae site (South Korea) and the sale of the land in the first half of 2022. These assets are presented in "Assets held for sale" at 30 June 2021.

3.3. 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 €105 million at 30 June 2021 (€102 million at 31 December 2020). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

Note 4: Alternative performance indicators and information by segment

To monitor and analyze 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.

4.1. RECURRING OPERATING INCOME (REBIT) AND EBITDA

(In millions of euros)	***Notes***	**1st half 2021**	**1st half 2020**
OPERATING INCOME		**1,242**	**368**
- Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(34)	(29)
- Other income and expenses	*(5.1)*	708	93
RECURRING OPERATING INCOME (REBIT)		**568**	**304**
- Recurring depreciation and amortization of property, plant and equipment and intangible assets		(268)	(282)
EBITDA		**836**	**586**

Details of depreciation and amortization of property, plant and equipment and intangible assets:

(In millions of euros)	***Notes***	**1st half 2021**	**1st half 2020**
Depreciation and amortization of property, plant and equipment and intangible assets (including goodwill)	*(8.1 & 8.2 & 8.3)*	**(421)**	**(422)**
Of which: Recurring depreciation and amortization of property, plant and equipment and intangible assets		(268)	(282)
Of which: Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(34)	(29)
Of which: Impairment included in other income and expenses	*(5.1)*	(119)	(111)

4.2. ADJUSTED NET INCOME AND ADJUSTED EARNINGS PER SHARE

	(In millions of euros)	*Notes*	1st half 2021	1st half 2020
	NET INCOME – GROUP SHARE		**950**	**197**
-	Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(34)	(29)
-	Other income and expenses	*(5.1)*	708	93
-	Other income and expenses attributable to non-controlling interests		—	—
-	Taxes on depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		8	7
-	Taxes on other income and expenses		(158)	(64)
-	One-time tax effects		—	—
	ADJUSTED NET INCOME		**426**	**190**
	Weighted average number of ordinary shares		76,338,552	76,457,621
	Weighted average number of potential ordinary shares	*(11.6)*	76,736,476	76,667,395
	ADJUSTED EARNINGS PER SHARE (IN EUROS)		**5.58**	**2.49**
	DILUTED ADJUSTED EARNINGS PER SHARE (IN EUROS)		**5.55**	**2.48**

4.3. RECURRING CAPITAL EXPENDITURE

	(In millions of euros)	1st half 2021	1st half 2020
	INTANGIBLE ASSETS AND PROPERTY, PLANT, AND EQUIPMENT ADDITIONS	**285**	**215**
-	Exceptional capital expenditure	117	57
-	Investments relating to portfolio management operations	—	—
-	Capital expenditure with no impact on net debt	3	1
	RECURRING CAPITAL EXPENDITURE	**165**	**157**

Exceptional capital expenditure corresponds to a very limited number of capital expenditure items for major development projects that the Group presents separately in its financial reporting due to their size and nature. In the two periods presented, exceptional capital expenditure concerned investments in Thiochemicals in Malaysia, Specialty Polyamides in Asia, and the partnership in the United States for the supply of anhydrous hydrogen fluoride.

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

4.4. FREE CASH FLOW

	(In millions of euros)	1st half 2021	1st half 2020
	Cash flow from operating activities	433	416
+	Cash flow from investing activities	760	(19)
	NET CASH FLOW	**1,193**	**397**
-	Net cash flow from portfolio management operations	896	147
	FREE CASH FLOW	**297**	**250**
-	Non-recurring cash flow including exceptional capital expenditure	(1)	(21)
	RECURRING CASH FLOW	**298**	**271**

The net cash flow from portfolio management operations corresponds to the impact of acquisition and divestment operations described in note 1 “Highlights”.

4.5. NET DEBT

	(In millions of euros)	*Notes*	30 June 2021	31 December 2020
	Non-current debt	*(10.2)*	2,661	2,663
+	Current debt	*(10.2)*	335	134
-	Cash and cash equivalents	*(10.2)*	2,415	1,587
	NET DEBT		**581**	**1,210**
+	Hybrid bonds	*(11.2)*	700	700
	NET DEBT AND HYBRID BONDS		**1,281**	**1,910**

4.6. WORKING CAPITAL

(In millions of euros)	***Notes***	**30 June 2021**	**31 December 2020**
Inventories		1,109	881
+ Accounts receivable		1,418	1,131
+ Other receivables including income taxes recoverable		227	233
+ Current financial derivative assets		20	40
- Accounts payable (operating suppliers)		1,135	987
- Other liabilities including income taxes		651	408
- Current financial derivative liabilities		20	15
WORKING CAPITAL		**968**	**875**

4.7. CAPITAL EMPLOYED

(In millions of euros)	***Notes***	**30 June 2021**	**31 December 2020**
Goodwill, net	*(8.1)*	1,899	1,933
+ Intangible assets (excluding goodwill) and property, plant and equipment, net	*(8.1 & 8.2 & 8.3)*	4,301	4,261
+ Investments in equity affiliates		32	29
+ Other investments and other non-current assets		279	266
+ Working capital		968	875
CAPITAL EMPLOYED		**7,479**	**7,364**

4.8. INFORMATION BY 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 segments dedicated to Specialty Materials, namely Adhesive Solutions, Advanced Materials and Coating Solutions, and an Intermediates 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 the Chief Operating Officer who is also a member of the Executive Committee. Both of these segment heads 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 segment and each of the two Business Lines (activities or group of activities) making up the Advanced Materials segment: High Performance Polymers and Performance Additives.
The content of the segments is as follows:

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

  The Adhesive Solutions 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 know-how in the automotive, textiles, glazing, flexible and rigid packaging, and hygiene markets.
- Advanced Materials comprises the following Business Lines:
  - High Performance Polymers, consisting of specialty polyamides and PVDF; and
  - 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-based products and recycling. These solutions are used in a wide variety of sectors such as the automotive and transportation sectors, oil and gas, renewable energies (photovoltaics, lithium-ion batteries, wind power), consumer goods (sports equipment, packaging, beauty and health products, etc.), electronics, construction, coatings, animal nutrition and water treatment.
- Coating Solutions comprises the following Business Lines:
  - Coating Resins, combining the EU/US acrylics activities and coating resins; and

- Coating Additives, combining Sartomer photocure resins and Coatex rheology additives.

This 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; and
  - 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.

**Business Lines are activities or groups of activities.*

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 segments prior to inter-segment adjustments. Sales between segments take place at market prices.

The segment information includes the PMMA activity until its divestment (see note 3.2 “Assets held for sale”).

1st half 2021 *(In millions of euros)*	**Adhesive Solutions**	**Advanced Materials**	**Coating Solutions**	**Intermediates**	**Corporate**	**Total**
Sales	**1,130**	**1,432**	**1,279**	**766**	**14**	**4,621**
EBITDA*	**168**	**320**	**235**	**162**	**(49)**	**836**
Recurring depreciation and amortization of property, plant and equipment and intangible assets*	(32)	(123)	(58)	(51)	(4)	(268)
Recurring operating income (REBIT)*	**136**	**197**	**177**	**111**	**(53)**	**568**
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(24)	(7)	(3)	—	—	(34)
Other income and expenses	(29)	(114)	(13)	876	(12)	708
Operating income	**83**	**76**	**161**	**987**	**(65)**	**1,242**
Equity in income of affiliates	—	1	—	(0)	—	1
Intangible assets and property, plant, and equipment additions	28	159	25	66	7	285
Of which: recurring capital expenditure**	28	85	22	23	7	165

*See note 4.1 “Recurring operating income (REBIT) and EBITDA”

**See note 4.3 “Recurring capital expenditure”

1st half 2020 ***(In millions of euros)***	**Adhesive Solutions**	**Advanced Materials**	**Coating Solutions**	**Intermediates**	**Corporate**	**Total**
Sales	**968**	**1,280**	**953**	**776**	**13**	**3,990**
EBITDA*	**119**	**246**	**124**	**134**	**(37)**	**586**
Recurring depreciation and amortization of property, plant and equipment and intangible assets	(30)	(124)	(60)	(64)	(4)	(282)
Recurring operating income (REBIT)*	**89**	**122**	**64**	**70**	**(41)**	**304**
Depreciation and amortization related to the revaluation of property, plant and equipment 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
Operating income	**42**	**96**	**58**	**254**	**(82)**	**368**
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

*See note 4.1 “Recurring operating income (REBIT) and EBITDA”

**See note 4.3 “Recurring capital expenditure”

4.9. INFORMATION BY GEOGRAPHICAL AREA

Sales are presented on the basis of the geographical location of customers.

1st half 2021 *(In millions of euros)*	France	Rest of Europe	NAFTA*	Asia	Rest of the world	Total
Sales	384	1,364	1,400	1,293	180	**4,621**

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

** NAFTA: USA, Canada, Mexico.*

Note 5: Other information relating to operating activities

5.1 OTHER INCOME AND EXPENSES

Other income and expenses concern a limited number of well-identified non-recurring items of income and expense of a particularly material nature that the Group presents separately in its income statement in order to facilitate understanding of its recurring operational performance.

	1st half 2021			1st half 2020		
(In millions of euros)	**Expenses**	**Income**	**Net**	**Expenses**	**Income**	**Net**
Restructuring and environment	(27)	3	(24)	(8)	—	(8)
Goodwill impairment	(41)	—	(41)	(70)	—	(70)
Asset impairment (excluding goodwill)	(107)	—	(107)	(47)	—	(47)
Litigation and claims	(26)	—	(26)	(13)	—	(13)
Gains (losses) on sales and purchases of assets	(42)	965	923	(4)	235	231
Other	(17)	—	(17)	—	—	—
TOTAL OTHER INCOME AND EXPENSES	**(260)**	**968**	**708**	**(142)**	**235**	**93**

In the first half of 2021, restructuring and environment expenses mainly concern the Adhesive Solutions segment and the Thiochemicals and Fluorogases activities in France. The goodwill in the Hydrogen Peroxide Cash Generating Unit (CGU) has been fully impaired as have certain other assets in the CGU (see note 8.5 “Asset value monitoring”). Asset impairments have also been recognized for Asia, mainly in the Fluorogases activities (see note 8.3 “Property, plant and equipment”), and on a receivable from Canada Fluorspar NL Inc. (CFI) (see note 8.2 “Other intangible assets”). Expenses related to litigation and claims mainly concern the consequences of Winter Storm Uri in Texas in the first quarter of 2021, and legal fees for ongoing proceedings in the United States. The income and expenses relating to sales and purchases of assets are mainly attributable to the divestment of the PMMA activity (see note 3.2 “Assets held for sale”). The item “Other” primarily includes the impact of taking into account the dispensation from work mechanism in France over the long term in the Group’s financial statements (see note 6.1 “Provisions for pensions and other employee benefits”).

In the first half of 2020, restructuring and environment expenses mainly included restructuring costs in the Adhesive Solutions segment and the Fluorogases activity in Asia. In the context of Covid-19, impairment tests were conducted, leading to recognition of goodwill impairment of €69 million, essentially on activities in the Intermediates segment. Impairment was also booked on a small number of property, plant and equipment and other intangible assets. Expenses related to litigation and claims concerned the consequences of Hurricane Harvey in the United States in 2017, and legal expenses on other ongoing proceedings in the United States. The expenses relating to sales and purchases of assets were essentially attributable to costs on the planned divestment of the PMMA activity, and expenses on acquisitions in the Adhesive Solutions segment. The pre-tax gain on the divestment of the Functional Polyolefins business was €235 million (net of expenses).

The total impairment (including goodwill impairment) included in other income and expenses amounts to €119 million at 30 June 2021 compared to €111 million at 30 June 2020.

5.2. WORKING CAPITAL

Cash flows in foreign currencies are translated into euros using the average exchange rates of each period. Cash flow statements exclude foreign exchange differences arising from the translation into euros of assets and liabilities recognized in balance sheets denominated in foreign currencies at the end of the period (except for cash and cash equivalents).

The change in working capital reported in the cash flow statement amounts to €42 million in cash flow from operating activities and €36 million in cash flow from investing activities.

(In millions of euros)	31 December 2020	Change in scope of consolidation	Monetary flows in the cash flow statement	Translation adjustment	Other non-monetary flows	30 June 2021
Inventories	881	6	206	17	—	1,109
+ Accounts receivable, excluding fixed asset receivables	1,131	2	252	26	6	1,418
+ Other receivables including income taxes recoverable	233	—	(15)	3	5	227
- Accounts payable, excluding fixed asset payables	835	2	164	15	(1)	1,016
- Other liabilities including income taxes	408	13	237	8	(15)	651
TOTAL OPERATING CATEGORIES	**1,002**	**(8)**	**42**	**22**	**27**	**1,087**
+ Fixed asset receivables	—	—	—	—	—	—
- Fixed asset payables	152	—	(36)	2	—	119
TOTAL INVESTING CATEGORIES	**(152)**	**—**	**36**	**(2)**	**—**	**(119)**
+ Current financial derivative assets and liabilities	25	—	(7)	6	(24)	—
TOTAL WORKING CAPITAL	**875**	**(8)**	**71**	**26**	**4**	**968**

5.3. OFF-BALANCE SHEET COMMITMENTS RELATED TO OPERATING ACTIVITIES

5.3.1. 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 2021**	**31 December 2020**
Guarantees granted	141	133
Comfort letters	—	—
Contractual guarantees	16	12
Customs and excise guarantees	38	32
TOTAL	**195**	**177**

Guarantees granted are mainly bank guarantees in favor of local authorities and public bodies (state agencies, environmental agencies) in respect of environmental obligations or concerning classified sites, as well as bank guarantees given to Nutrien in connection with the partnership project in the Fluorogases activity in the United States.

5.3.2. Contractual 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 or purchase commitments do not fall within the scope of IFRS 16. Many of them are irrevocable purchase commitments described above, and service contracts or contracts making available assets that are not identified or not controlled by Arkema at 30 June 2021. Only the irrevocable portion of outstanding future purchases has been valued, and the corresponding amounts are included in the table below at 30 June 2021.

The total amount of the Group's financial commitments is €1,033 million at 30 June 2021, maturing as follows:

(In millions of euros)	**30 June 2021**	**31 December 2020**
2021	202	234
2022	86	78
2023	81	55
2024	75	49
2025	69	49
2026 until expiry of the contracts	520	259
Total	**1,033**	**724**

The increase in the Group's commitments is mainly due to the establishment of a long-term hydrofluoric acid supply contract. It follows on from a partnership formed with Nutrien to start up a production unit in the United States in the first half of 2022.

Note 6: Provisions for pensions and other employee benefits

6.1. PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS

(In millions of euros)	**30 June 2021**	**31 December 2020**
Pension obligations	350	388
Healthcare and similar coverage	59	62
Dispensation from work*	22	5
Post-employment benefits	**431**	**455**
Long service awards	74	75
Other long-term benefits	**74**	**75**
Provisions for pensions and other employee benefits	**505**	**530**

(In millions of euros)	**30 June 2021**	**31 December 2020**
Provision recognized in liabilities	505	530
Amount recognized in assets	(8)	—
Net provisions for pensions and employee benefits	**497**	**530**

*Reclassified from the "Other" line at 31 December 2020

Dispensation from work: Since the end of 2010, a dispensation from work mechanism has existed in France for certain categories of employees. Arkema now considers this mechanism as a long-term commitment and has accordingly presented the commitment for all employees concerned in this line.

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

Pension obligations, healthcare and similar coverage	**France**	**Germany**	**UK**	**Rest of Europe**	**USA**
At 30 June 2021	1.40	1.50	1.90	1.30	2.60
At 31 December 2020	1.00	1.05	1.35	0.75	2.25

The present value of benefit obligations at the end of 2020 has been adjusted at 30 June 2021 on the basis of sensitivity analysis tables prepared by the Group's external actuaries in the context of the full-year 2020 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 2021. 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 2021 is as follows:

(In millions of euros)	Pension obligations	Healthcare and similar coverage	Dispensation from work	Total post-employment benefits
Net liability (asset) at beginning of year	**388**	**62**	**5**	**455**
Provision recognized in liabilities	*388*	*62*	*5*	*455*
Amount recognized in assets	—	—	—	—
(Income)/Expense for the period	17	—	18	35
Net contributions and benefits paid by the employer	(8)	(1)	(1)	(10)
Changes in scope	4	—	—	4
Actuarial gains and losses recognized in shareholders' equity	(64)	(3)	—	(67)
Translation adjustments	4	1	—	5
Other	1	—	—	1
Net liability (asset) at year-end	**342**	**59**	**22**	**423**
Provision recognized in liabilities	*350*	*59*	*22*	*431*
Amount recognized in assets	*(8)*	—	—	*(8)*

6.2. SHARE-BASED PAYMENTS

6.2.1. 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.

6.2.2. Free share grants

Movements in the free share grant plans existing at 30 June 2021 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 1st half 2021	Number of shares cancelled in 1st half 2021	Total number of shares still to be granted at 30/06/2021
2017-2	8 Nov. 2017	4 years	-	**129,405** (1)	114,845	67.88	-	1,075	**118,200**
2018-1, 2	2 May 2018	3-4 years	0-3 years	**41,137**	-	59.31-61.13	3,616	145	**37,257**
2018-3	5 Nov. 2018	3 years	2 years	**231,820** (2)	217,570	62.64	3,700	300	**225,800**
2018-4	5 Nov. 2018	4 years	-	**127,665** (3)	111,235	64.15	-	1,060	**119,330**
2019-1	29 Oct. 2019	3 years	2 years	**237,945** (4)	225,015	57.73	3,700	340	**232,450**
2019-2	29 Oct. 2019	4 years	-	**131,035** (5)	112,740	59.76	-	1,600	**126,860**
2020-1, 2	5 May 2020	3-4 years	0-3 years	**9,129**	-	10.09-20.94	6	-	**9,123**
2020-3	4 Nov. 2020	3 years	2 years	**238,550** (6)	226,000	52.58	3,700	590	**234,260**
2020-4	4 Nov. 2020	4 years	-	**128,245** (7)	111,365	54.33	-	985	**127,260**

(1) May be raised to 140,890 in the event of outperformance.
(2) May be raised to 254,011 in the event of outperformance.
(3) May be raised to 139,261 in the event of outperformance.
(4) May be raised to 282,948 in the event of outperformance.
(5) May be raised to 153,583 in the event of outperformance.
(6) May be raised to 283,750 in the event of outperformance.
(7) May be raised to 150,518 in the event of outperformance.

The amount of the IFRS 2 expense recognized in respect of free shares at 30 June 2021 is €8 million (€12 million at 30 June 2020).

Note 7: Income taxes

The income tax expense is broken down as follows:

(In millions of euros)	1st half 2021	1st half 2020
Current income taxes	(262)	(73)
Deferred income taxes	(1)	(51)
TOTAL INCOME TAXES	**(263)**	**(124)**

The income tax expense amounts to €(263) million for the first half of 2021 including €(4) million for the CVAE, compared with €(124) million for the first half of 2020 including €(7) million for the CVAE. The change in current income taxes in 2021 mainly corresponds to the tax on the divestiture of the PMMA activity. The deferred income tax expense in 2020 essentially corresponded to the reversal of €55 million of deferred tax assets following use of tax losses during the period.

Note 8: Intangible assets and property, plant and equipment

8.1. GOODWILL

Goodwill is initially recognized when a business combination takes place.

Goodwill is not amortized after initial recognition. It is included in the CGUs that are subject to impairment tests as soon as any indicators of potential impairment are identified. Impairment tests are performed at least annually, following the methodology described in note 8.5 “Asset value monitoring”.

	30 June 2021			31 December 2020
(In millions of euros)	**Gross book value**	**Accumulated amortization and impairment**	**Net book value**	**Net book value**
Goodwill	2,499	(600)	1,899	1,933

The breakdown by segment is as follows:

Goodwill by segment	**30 June 2021 Net book value**	**31 December 2020 Net book value**
Adhesive Solutions	1,034	1,057
Advanced Materials	446	462
Coating Solutions	362	359
Intermediates	57	55
Corporate	—	—
TOTAL	**1,899**	**1,933**

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

(In millions of euros)	**2021**
At 1 January	**1,933**
Acquisitions	—
Impairment	(41)
Disposals	—
Changes in scope	(21)
Translation adjustments	28
Reclassifications	—
At 30 June	**1,899**

In 2021, the “Changes in scope” caption corresponds to the initial recognition of goodwill for Poliplas and Agiplast offset by the reduction in goodwill following the finalization of the Fixatti, Ideal Work, Crackless Monomer Company (CMC) and Colorado Photopolymer Solutions (CPS) purchase price allocation. Goodwill impairment concerns the Hydrogen Peroxide CGU (see note 8.5 “Asset value monitoring”).

8.2. OTHER INTANGIBLE ASSETS

Other intangible assets mainly include patents and technologies, trademarks, software and IT licenses, capitalized contracts, customer relations, and capitalized research expenses. These intangible assets are recognized in the balance sheet at their acquisition or production cost, less any accumulated amortization and impairment losses recognized following impairment tests as described in note 8.5 “Asset value monitoring”.

(In millions of euros)	30 June 2021 Gross book value	 Accumulated amortization and impairment	 Net book value	31 December 2020 Net book value
Patents and technologies	484	(226)	258	257
Trademarks	594	(3)	591	583
Software and IT licenses	380	(308)	72	77
Capitalized REACH costs	71	(41)	30	32
Other capitalized research expenses	21	(10)	11	12
Capitalized contracts	250	(220)	30	32
Asset rights	49	(23)	27	32
Customer relations	299	(63)	236	231
Other intangible assets	86	(35)	51	23
Intangible assets in progress	220	(30)	189	154
TOTAL	**2,454**	**(959)**	**1,494**	**1,433**

Trademarks essentially comprise the Bostik® and Den Braven® trademarks, which are part of the Adhesive Solutions segment.

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

(In millions of euros)	2021
At 1 January	**1,433**
Acquisitions	65
Amortization	(58)
Impairment	(8)
Disposals	0
Changes in scope	62
Translation adjustments	19
Reclassifications (1)	(19)
At 30 June	**1,494**

(1) On 5 January 2021, Arkema terminated its fluorspar supply contract with Canada Fluorspar NL Inc. (CFI). This contract is valued in the Group's financial statements at 31 December 2020 at CAD 30 million, recognized in the form of a capacity reservation. A receivable of an equivalent amount from CFI was recognized in January 2021 instead of the capacity reservation. Arkema France filed a Statement of Claim on 1 June 2021 in the Ontario Superior Court of Justice to recover the debt due and owing by CFI under the contract. The Group has provisioned the total amount of the risk as CFI did not repay its debt at 30 June 2021.

8.3. PROPERTY, PLANT AND EQUIPMENT

(In millions of euros)	30 June 2021 Gross book value	 Accumulated depreciation and impairment	 Net book value	31 December 2020 Net book value
Land and buildings	2,073	(1,365)	708	719
Complex industrial facilities	3,567	(2,973)	594	655
Other property, plant and equipment	3,453	(2,549)	904	930
Construction in progress	470	(14)	456	372
TOTAL PROPERTY, PLANT AND EQUIPMENT EXCLUDING RIGHTS OF USE	**9,564**	**(6,902)**	**2,662**	**2,677**
Rights of use	257	(112)	145	151
TOTAL PROPERTY, PLANT AND EQUIPMENT	**9,821**	**(7,014)**	**2,807**	**2,828**

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

(In millions of euros)	**2021**
At 1 January	**2,677**
Acquisitions	220
Depreciation	(201)
Impairment	(85)
Disposals	(5)
Changes in scope	0
Translation adjustments	57
Other	—
Reclassifications	(1)
At 30 June	**2,662**

Impairment of property, plant and equipment at 30 June 2021 mainly concerns the Hydrogen Peroxide activity (see note 8.5 "Asset value monitoring") and the Fluorogases activity in Asia.

8.4. IFRS 16 LEASES: RIGHTS OF USE AND IFRS 16 DEBT

At 30 June 2021, the net book value of rights of use related to leases is €145 million.

	30 June 2021			**31 December 2020**
(In millions of euros)	**Gross book value**	**Accumulated depreciation and impairment**	**Net book value**	**Net book value**
Rights of use: real estate assets (head offices, offices)	69	(28)	41	42
Rights of use: industrial assets (factories, land, warehouses)	41	(9)	32	30
Rights of use: logistics assets (trucks, containers, trolleys)	124	(63)	61	66
Rights of use: other assets (cars, etc.)	23	(12)	11	13
Total rights of use	**257**	**(112)**	**145**	**151**

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

(In millions of euros)	**2021**
At 1 January	**151**
Acquisitions	25
Depreciation	(28)
Disposals	(4)
Changes in scope	0
Translation adjustments	1
Reclassifications	—
At 30 June	**145**

The IFRS 16 debt amounts to €150 million at 30 June 2021 (see note 10.2 "Debt"). The total non-discounted value of the Group's future lease payments amounts to €165 million at 30 June 2021, maturing as follows:

(In millions of euros)	**30 June 2021**
Within one year	47
1 - 5 years	81
After 5 years	37
TOTAL	**165**

At 30 June 2021, the cash outflows associated with leases amount to €28 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.

8.5. ASSET VALUE MONITORING

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.

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

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 2020, the terminal value was determined on the basis of a perpetuity annual growth rate of 1.5% and mid-cycle cash flow. 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. 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).
Sensitivity analyses carried out at 31 December 2020 evaluating the impact of reasonable changes in the basic assumptions, in particular the impact of a change of plus or minus 1 point in the discount rate, plus or minus 0.5 point in the perpetuity growth rate, and plus or minus 10 points in EBITDAs, have confirmed the carrying amounts of the different CGUs.

At 30 June 2021, the Group considered that the assumptions used to determine the value of property, plant and equipment and intangible assets at 31 December 2020 had not changed to an extent that would require new impairment tests for the period on the CGUs, expect for the Hydrogen Peroxide CGU.
Following an indication of impairment on the Hydrogen Peroxide CGU in the first half of 2021, an impairment test was performed using a discount rate of 7.5%, unchanged from 2020. The change in the CGU's earnings in first-half 2021 called into question the assumptions used for the tests at end-2020, notably a downward trend in European pulp bleaching and liquid chlorine markets in the medium and long term. The test resulted in the recognition of an €87 million impairment loss, including €41 million in goodwill impairment. A change of -10% in EBITDA or +0.5% in the discount rate would lead to impairment losses of €54 million and €11 million, respectively, on the remaining assets allocated to this CGU.
Impairment losses were also recognized on other specific assets at 30 June 2021 (see note 8.3 "Property, plant and equipment").

Note 9: Other provisions and other non-current liabilities, contingent liabilities and litigation

9.1. OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

9.1.1 Other non-current liabilities

Other non-current liabilities amount to €17 million at 30 June 2021 as against €13 million at 31 December 2020.

9.1.2 Other provisions

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
At 1 January 2021	**184**	**40**	**146**	**370**
Increases in provisions	9	16	39	64
Reversals from provisions on use	(8)	(7)	(15)	(30)
Reversals of unused provisions	—	(0)	(11)	(11)
Changes in scope	(2)	(0)	(2)	(4)
Translation adjustments	3	0	3	6
Other	0	2	2	4
At 30 June 2021	**186**	**51**	**162**	**399**

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

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
Total provisions at 30 June 2021	**186**	**51**	**162**	**399**
Portion of provisions covered by receivables or deposits	53	—	24	77
Deferred tax asset related to amounts covered by the Total indemnity	16	—	—	16
Provisions at 30 June 2021 net of non-current assets	117	51	138	306
For information: **Provisions at 1 January 2021 net of non-current assets**	**116**	**40**	**123**	**279**

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 €84 million (€82 million at 31 December 2020); and
- in the United States for €87 million (€87 million at 31 December 2020), of which €69 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 €53 million and €16 million recognized in deferred tax assets).

Restructuring provisions

Restructuring provisions are mainly in respect of restructuring measures in France for €30 million (€22 million at 31 December 2020), in Europe outside France for €6 million (€7 million at 31 December 2020) and in the United States for €7 million (€9 million at 31 December 2020).
Increases in such provisions in the period mainly correspond to the restructuring plans described in note 5.1 "Other income and expenses".

Other provisions

Other provisions amount to €162 million and mainly comprise:

- provisions for labour litigation for €68 million (€61 million at 31 December 2020);
- provisions for commercial litigation and warranties for €43 million (€34 million at 31 December 2020);
- provisions for tax litigation for €31 million (€27 million at 31 December 2020) ; and
- provisions for other risks for €20 million (€24 million at 31 December 2020).

Some provisions for other risks at 31 December 2020 have been reclassified to other categories for easier comparison with the 2021 presentation.

9.2. LIABILITIES AND CONTINGENT LIABILITIES

Liabilities and contingent liabilities are described in note 10.2 to the consolidated financial statements at 31 December 2020. There was no development in liabilities and contingent liabilities during the first half of 2021 with an actual or potential material effect on the Group's consolidated financial statements.

9.3. 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 indemnities and obligations 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 in the majority of cases have ceased.

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, to perform 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 defense of claims relating to contamination liabilities at these facilities and sites.

The sites currently operated by the Group are excluded from this indemnity, as are sites that received waste associated with current operations of the Group, certain sites where no significant restoration work is currently underway or anticipated, and other sites where the Group could be held liable for environmental pollution. These other sites include, for example, sites where remediation has been conducted in the past or where future remediation costs or liability are believed to be insignificant or non-existent based upon information available at the time when the indemnity was entered into. Arkema Amériques SAS has waived any claims against Legacy Site Services LLC, Total S.A. or their respective subsidiaries in respect of the sites not covered by the indemnity.

The Legacy Site Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defense 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$126 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.

Note 10: Financing

10.1 FINANCIAL RESULT

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

(In millions of euros)	**1st half 2021**	**1st half 2020**
Cost of debt	(23)	(28)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(3)	(12)
Financial income/expenses on provisions for pensions and employee benefits	(1)	(3)
Capitalized interest	1	0
Interest expenses on leases	(2)	(2)
Other	0	0
FINANCIAL RESULT	**(28)**	**(45)**

10.2 DEBT

Group net debt amounted to €581 million at 30 June 2021, taking account of cash and cash equivalents of €2,415 million.

10.2.1. Analysis of net debt by category

(In millions of euros)	**30 June 2021**	**31 December 2020**
Bonds	2,538	2,537
Bank loans	3	0
Other non-current debt	15	17
Non-current debt excluding IFRS 16 debt	**2,556**	**2,554**
Bonds	—	—
Syndicated credit facility	—	—
Negotiable European Commercial Paper	—	—
Other bank loans	29	46
Other current debt	261	42
Current debt excluding IFRS 16 debt	**290**	**88**
Debt excluding IFRS 16 debt	**2,846**	**2,642**
Non-current IFRS 16 debt	105	109
Current IFRS 16 debt	45	46
Debt	**2,996**	**2,797**
Cash and cash equivalents	2,415	1,587
Net debt	**581**	**1,210**

Bonds

- In December 2013, the Group issued a €150 million bond that will mature on 6 December 2023, with a fixed coupon of 3.125%.
  At 30 June 2021, the fair value of this bond is €159 million.
- In January 2015, the Group issued a €700 million bond that will mature on 20 January 2025, with a fixed coupon of 1.50%.
  At 30 June 2021, the fair value of this bond is €739 million.
- In April 2017, the Group issued a € 700 million bond that will mature on 20 April 2027, with a fixed coupon of 1.50%. A further €200 million tap issue was undertaken in June 2017, bringing the total amount of this bond issue to €900 million.
  At 30 June 2021, the fair value of this bond is €971 million.
- In December 2019, the Group issued a €500 million bond that will mature on 3 December 2029, with a fixed coupon of 0.75%.
  At 30 June 2021, the fair value of this bond is €519 million.
- In October 2020, the Group issued a €300 million green bond that will mature on 14 October 2026, with a fixed coupon of 0.125%.
  At 30 June 2021, the fair value of this bond is €302 million.

These issues are part of the Group’s Euro Medium Term Notes (EMTN) program introduced in October 2013.

Other current debt

Other current debt includes €224 million corresponding to the balance of Arkema’s commitment under the share buyback agreement signed on 20 May 2021 (see note 11.3 “Treasury shares”).

IFRS 16 liabilities

The maturities of the Group’s future lease payments, at non-discounted value, are presented in note 8.4 “IFRS 16 leases”.

10.2.2. Analysis of debt excluding IFRS 16 debt by currency

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

(In millions of euros)	**30 June 2021**	**31 December 2020**
Euros	2,789	2,567
Chinese Yuan	36	59
US Dollars	6	5
Other	15	11
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**2,846**	**2,642**

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 2021 the swapped portion, mainly in US dollars, represented approximately 24% of gross debt excluding IFRS 16 debt.

10.2.3. Analysis of debt excluding IFRS 16 debt by maturity

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

(In millions of euros)	**30 June 2021**	**31 December 2020**
Less than 1 year	312	102
Between 1 and 2 years	35	38
Between 2 and 3 years	184	184
Between 3 and 4 years	729	29
Between 4 and 5 years	20	729
More than 5 years	1,728	1,736
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**3,008**	**2,818**

Note 11: Shareholders' equity and earnings per share

At 30 June 2021, Arkema's share capital amounted to €767 million, divided into 76,736,476 shares with a nominal value of €10.

11.1. CHANGES IN SHARE CAPITAL AND PAID-IN SURPLUS

	1st half 2021	**1st half 2020**
Number of shares at 1 January	**76,736,476**	**76,624,220**
Issuance of shares following the capital increase reserved for employees	—	112,256
Issuance of shares following the exercise of subscription options	—	—
Number of shares at end of period	**76,736,476**	**76,736,476**

11.2. HYBRID BONDS

At 30 June 2021, the total nominal value of Arkema's perpetual hybrid bonds is unchanged at €700 million. The breakdown is as follows:

Issue date	**Nominal value** *(in millions of €)*	**Currency**	**Redemption option**	**Annual coupon rate**
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.

11.3. TREASURY SHARES

The Company purchased 1,013,235 treasury shares in 2021, including 306,897 treasury shares as part of the 2020 share buyback program and 706,338 treasury shares as part of the 2021 share buyback program. In the first half of 2021, 14,722 free shares vested to Arkema Group employees (see note 6.2 "Share-based payments").

	1st half 2021	**1st half 2020**
Number of treasury shares at 1 January	**59,756**	**131,028**
Repurchases of treasury shares	1,013,235	321,785
Grants of treasury shares	(14,722)	(393,057)
Number of treasury shares at end of period	**1,058,269**	**59,756**

2021 share buyback program

Following the combined annual general meeting of shareholders on 20 May 2021, which authorized the 2021 share buyback program, Arkema signed a share purchase agreement with an investment services provider for a maximum amount of €300 million over a period from 21 May to 30 November 2021. The shares purchased under this agreement will be allocated to the implementation of performance share plans or employee share ownership operations up to a limit of €30 million and will be canceled above that limit.

At 30 June 2021, the number of purchased shares represented an amount of €76 million. At the same date, as Arkema did not have the possibility of terminating the agreement, the Group's residual commitment of €224 million was recognized as current debt (see note 10.2. "Debt") against a corresponding decrease in retained earnings.

11.4. DIVIDENDS

The combined shareholders' general meeting of 20 May 2021 approved the distribution of a €2.50 dividend per share in respect of the 2020 financial year, or a total amount of €(191) million. This dividend was paid out on 28 May 2021.

11.5. TRANSLATION ADJUSTMENTS

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

11.6. EARNINGS PER SHARE

In accordance with IAS 33, the earnings per share and diluted earnings per share are calculated based on net income (Group share) less the net-of-tax interest paid to bearers of subordinated perpetual notes (hybrid bonds).

After this adjustment, the net income (Group share) is divided by the weighted average number of ordinary shares in circulation since the start of the year to calculate the earnings per share.

For the diluted earnings per share, the effect of dilution is thus calculated taking account of stock options and grants of free shares to be issued.

	1st half 2021	**1st half 2020**
Weighted average number of ordinary shares	76,338,552	76,457,621
Dilutive effect of stock options	0	0
Dilutive effect of free share grants	397,924	209,774
Weighted average number of potential ordinary shares	76,736,476	76,667,395

(In millions of euros)	**1st half 2021**	**1st half 2020**
Net income – Group share	950	197
Interest on subordinated perpetual notes, net of tax	(5)	0
Net income used in calculating earnings per share	945	197

	1st half 2021	**1st half 2020**
Earnings per share *(€)*	12.38	2.58
Diluted earnings per share *(€)*	12.31	2.57

Note 12: Subsequent events

None

Note 13: List of consolidated companies

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

AEC Polymers		France	100.00	FC
Afinitica Technologies S.L.		Spain	100.00	FC
Agiplast Italia S.r.l.	(d)	Italy	100.00	FC
Altuglas International Denmark A/S	(g)	Denmark	100.00	FC
Altuglas International Mexico Inc.		United States	100.00	FC
Altuglas International SAS	(g)	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.		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 UK LIMITED		United Kingdom	100.00	FC
Arkema Company Ltd.		Hong-Kong	100.00	FC
Arkema Advanced Fluorochemicals Co., Ltd.	(a)	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 Holding Limited		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	(b)	Brazil	100.00	FC
Arkema Quimica SAU		Spain	100.00	FC
Arkema Chemicals Saudi Arabia		Saudi Arabia	65.00	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 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	(b)	France	100.00	FC

ArrMaz China, LLC	United States	100.00	FC
ARR-MAZ DO BRASIL LTDA.	Brazil	99.99	FC
ArrMaz Gulf Chemical Company Ltd.	Saudi Arabia	100.00	FC
ARRMAZ MOROCCO SARLAU	Morocco	75.00	FC
ArrMaz Morocco, LLC	United States	75.00	FC
Arr-Maz Product, L.P.	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	Denmark	100.00	FC
Barrflex TU LL	United States	49.00	JV
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 Portugal Unipessoal Lda	Portugal	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 Biomatérials Co., Ltd	China	100.00	FC
Changshu Coatex Additives Co., Ltd.	China	100.00	FC
Changshu Haike Chemical Co., Ltd.	China	49.00	FC
CJ Bio Malaysia Sdn. Bhd.	Malaysia	14.00	SI
Coatex Asia Pacific Inc.	South Korea	100.00	FC
Coatex CEE s.r.o	Slovakia	100.00	FC
Coatex Inc.	United States	100.00	FC
Coatex Netherlands B.V.	Netherlands	100.00	FC
Coatex	France	100.00	FC
CRACKLESS MONOMER Co Ltd	Taiwan	51.00	FC
Daikin Arkema Refrigerants Asia Ltd.	Hong Kong	40.00	JV
Daikin Arkema Refrigerants Trading (Shanghai) Co.,	China	40.00	JV
Den Braven France	France	100.00	FC
Den Braven SA (Proprietary) Ltd.	South Africa	100.00	FC

Delaware Chemicals Corporation		United States	100.00	FC
DIFI 13		France	100.00	FC
DIFI 16	(a)	France	100.00	FC
ERPRO 3D FACTORY	(d)	France	10.00	SI
Febex SA		Switzerland	96.77	FC
FIXATTI		Belgium	100.00	FC
FIXATTI (CHINA) POLYMER SPECIALTIES Co LTD		China	100.00	FC
Fixatti AG		Switzerland	100.00	FC
FIXATTI AMERICA Inc	(b)	United States	100.00	FC
FIXATTI GmbH		Germany	100.00	FC
Fixatti Holding AG		Switzerland	100.00	FC
IDEAL WORK Srl		Italy	100.00	FC
Ihsedu Agrochem Private Ltd.		India	24.90	SI
Jiangsu Bostik Adhesive Co., Ltd		China	100.00	FC
Lambson Limited		United Kingdom	100.00	FC
Lip Norge AS		Norway	100.00	FC
Lip Sverige AB		Sweden	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
POLIPLAS SELANTES E ADESIVOS LIMITADA	(d)	Brazil	100.00	FC
Prochimir		France	100.00	FC
Prochimmo	(b)	France	100.00	FC
Prochimmo2	(b)	France	100.00	FC
PT Bostik Indonesia		Indonesia	100.00	FC
Sartomer (Guangzhou) Chemicals Co., Ltd.		China	100.00	FC
Sartomer Distribution (Shanghai) Co., Ltd.	(c)	China	100.00	FC
SDP Holding		Belgium	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 Marocoaine 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
Termoplastic Powder Hold. AG		Switzerland	100.00	FC
Turkish Products, Inc.		United States	100.00	FC
Usina Fortaleza Industria E commercio de massa fina		Brazil	100.00	FC
Viking Chemical Company		United States	100.00	FC

(a) Companies which changed their name in 2021.

(b) Companies merged in 2021.

(c) Companies liquidated in 2021.

(d) Companies consolidated for the first time in 2021.

(e) Companies for which the percentage ownership was changed in 2021, with no change to control.

(f) Companies for which the percentage ownership was changed in 2021, with change to control.

(g) Companies deconsolidated in 2021.

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.

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3 DECLARATION BY THE PERSON RESPONSIBLE FOR THE HALF-YEAR FINANCIAL REPORT AT 30 JUNE 2021

I declare that, to the best of my knowledge, the condensed consolidated interim financial statements for the six months ended 30 June 2021 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, 28 July 2021

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 2021

For the period from January 1 to June 30, 2021

KPMG Audit	ERNST & YOUNG Audit
Département de KPMG S.A.	Tour First
Tour Egho	TSA 14444
CS 60055	92037 Paris-La Défense cedex
2, avenue Gambetta	S.A.S. à capital variable
92066 Paris-La Défense cedex	344 366 315 R.C.S. Nanterre
775 726 417 R.C.S. Nanterre	
Commissaire aux Comptes	Commissaire aux Comptes
Membre de la compagnie	Membre de la compagnie
régionale de Versailles et du Centre	régionale de Versailles et du Centre

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 2021

For the period from January 1 to June 30, 2021

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, 2021,
- the verification of the information presented in the half-yearly management report.

Due to the global crisis related to the Covid-19 pandemic, the condensed half-yearly consolidated financial statements have been prepared and reviewed under specific conditions. Indeed, this crisis and the exceptional measures taken in the context of the state of sanitary emergency have had numerous consequences for companies, particularly on their operations and their financing, and have led to greater uncertainties on their future prospects. Those measures, such as travel restrictions and remote working, have also had an impact on the companies' internal organization and the performance of our review procedures.

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

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.

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 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 28, 2021

The Statutory Auditors

French original signed by

KPMG Audit
Département de KPMG S.A.

ERNST & YOUNG Audit

Bertrand Desbarrières

Eric Dupré

Christine Vitrac