REFERENCE DOCUMENT 2017

INCLUDING THE ANNUAL FINANCIAL REPORT

ARKEMA

INNOVATIVE CHEMISTRY

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

ARKEMA
INNOVATIVE CHEMISTRY

2017

REFERENCE DOCUMENT

INCLUDING THE ANNUAL FINANCIAL REPORT

AUTORITÉ DES MARCHÉS FINANCIERS
AMF

This document is a free translation of the French language reference document that was filed with the French Financial Markets Authority (*Autorité des marchés financiers - AMF*) on 29 March 2018, in accordance with Article 212-13 of its general regulations. It may be used to support a financial operation only if supplemented by a transaction note approved by the AMF. This document was drafted by the issuer and is binding for its signatories.

This translation has been prepared solely for the information and convenience of English-speaking readers. No assurances are given as to the accuracy or completeness of this translation, and the Group assumes no responsibility with respect to this translation or any misstatement or omission that may be contained therein. In the event of any ambiguity or discrepancy between this translation and the French reference document, the French reference document shall prevail.

LETTER

FROM
THIERRY LE HÉNAFF
CHAIRMAN AND
CHIEF EXECUTIVE OFFICER

Ladies and Gentlemen, dear Shareholders,

Arkema delivered a very good performance in 2017. Financially, the Group far exceeded the medium-term targets set in 2014 with EBITDA up 17% on last year at close to €1.4 billion, excellent cash generation and a low debt level.

This achievement marks a very important milestone for the Group, reflecting the relevance of our underlying strategy, the strength of our growth projects, especially in specialty businesses, and the strong commitment of our teams.

Over the past years, we have, in particular, reaped the benefits of our successful innovation in research and development, one of our strategic priorities. Our developments in advanced materials have met our customers' strong demand for lighter materials, new energies, 3D printing and consumer goods, which represent as many underlying sustainability trends offering promising development opportunities for the Group over the medium and long term. The 239 patent applications filed in 2017 and our ranking, for the seventh consecutive year, among the 100 most innovative companies around the world by Clarivate Analytics also testify to our constant drive in this area.

Our financial performance also illustrates the step-up in the development of our adhesives. With Bostik, we have created a leading growth platform, which currently represents almost a quarter of our total sales. Bostik's EBITDA has increased by more than 50% since it joined Arkema three years ago.

Our intermediate chemical businesses have also delivered an excellent performance, supported by robust global growth, a more intense environmental policy in China and the development and productivity initiatives undertaken over the years.

Arkema has thus demonstrated over the past three years and in different operating contexts, the quality of its portfolio of businesses with one of the best growth rates in the industry.

As announced during our Capital Markets Day in July 2017, we will actively pursue this strategy and speed up the development of specialty businesses, which should account for more than 80% of the Group's sales in 2023 compared to around 70% today.

At our Capital Markets Day, we set ambitious financial targets for 2023. This ambition will be supported by several major investment projects announced in Asia and in the United States, our innovation drive to support our customers' sustainable performance and our bolt-on acquisitions strategy especially in adhesives.

The announcements made at the Capital Markets Day of a major investment project in the bio-based polyamide 11 chain in Asia, a 30% production capacity increase at Sartomer in China as well as the doubling of our thiochemical production capacity in Malaysia fully reflect this strategy and will support our future growth.

Finally, digital will stand at the core of this new chapter for Arkema as shown by the recent establishment of a Digital Transformation department which reports directly to me.

As you can see, the coming years once again promise to be rich in developments and I remain convinced that our geographic and technological positioning, our entrepreneurial and customer-focused culture, our many growth projects, our very strong balance sheet and the talent and solidarity of our teams will support our ability to create value over the long term for our shareholders and all of our stakeholders.

Thierry Le Hénaff

€8.3 bn

Sales

of which **2.8%** dedicated to R&D

19,800

employees

€2.30

dividend per share

+12% vs 2016

WELL AHEAD OF THE 2017 FINANCIAL TARGETS SET IN 2014

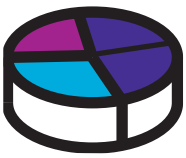
	2017 targets	Achieved in 2017
EBITDA	€1.3 bn	€1,391 m from €784 m in 2014
Net cash flow (1)	x3	x4 vs 2014
EBITDA to free cash conversion	35%	41% from 18% in 2014
Capital intensity (recurring capex to sales)	5.5%	5.2% from 5.8% in 2014
Working capital (as a % of sales)	15%	13.1% from 16.1% in 2014
Gearing	40%	24%
Net debt/EBITDA (excluding hybrid bond)	1.5x	0.8x

(1) Net cash flow excluding M&A, exceptional capex, dividend and cost of hybrid.

STEP UP IN GROUP'S PROFILE

A BALANCED PORTFOLIO OF BUSINESSES AND GEOGRAPHIC FOOTPRINT

SALES BY DIVISION



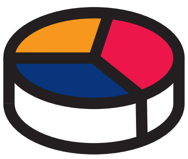
46% High Performance Materials
Bostik: 24%
Advanced materials[2]: 22%

31% Industrial Specialties

23% Coating Solutions

(2) Advanced materials comprises the Technical Polymers and Performance Additives Business Lines.

SALES BY REGION



32% North America

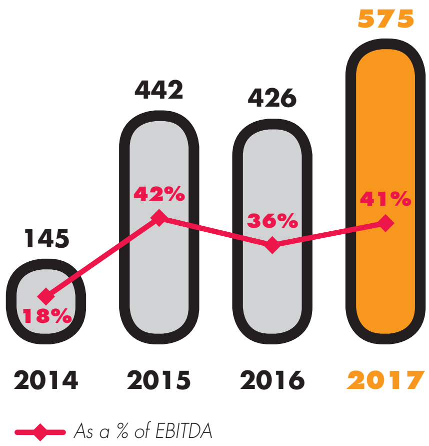
38% Europe

30% Asia and rest of the world

STRONG CASH GENERATION

FREE CASH FLOW (3)

(in €m)



(3) Excluding exceptional investments.

AMBITIOUS 2023 TARGETS

A GLOBAL PLAYER IN SPECIALTY CHEMICALS

Objective to achieve over **80%** of Group sales in specialty businesses
(from 71% in 2017)

2023 financial targets

REBIT MARGIN	EBITDA TO FREE CASH CONVERSION
11.5% to 12.5%	**35%**

Defined in normalized market conditions and under current IFRS rules

Strict financial discipline

ROCE	NET DEBT	RATING
at least 10%	**<2x EBITDA**	**Solid investment grade**

SUPPORTED BY A WAVE OF SIGNIFICANT PROJECTS

Expected start-up

2018

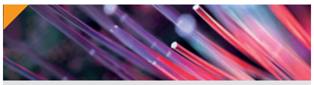
+20% PVDF Kynar® production capacities at Calvert City (US)
Markets
New energies and water filtration

Powder coating resins facility in India
Markets
Paints, coatings and construction

PEKK plant at Mobile (US)
Markets
Aeronautics, 3D printing and oil & gas

2019

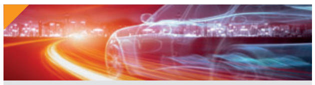
90kt acrylic acid reactor at Clear Lake (US)
Markets
Paints, coatings, adhesives and water treatment



+30% Sartomer photocure resins production capacities in Nansha (China)
Markets
3D printing, graphic arts and electronics

2020

Doubling of thiochemicals capacities in Malaysia
Markets
Animal nutrition and petrochemicals and refining applications



+25% global PA12 production capacities (China)
Markets
Lightweight materials, sports and electronics

2021

+50% global PA11 monomer and polymer production capacities
+50% global Pebax® production capacities
Markets
Lightweight materials, sports and electronics

Asia *North America*

AND A **STRONG AMBITION** IN ADHESIVES AND ADVANCED MATERIALS

Our ambition in adhesives

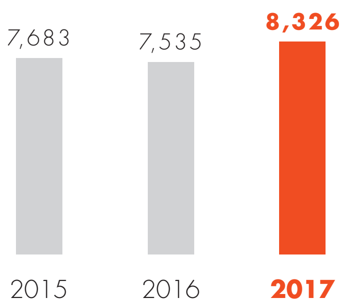
- Exceed **1/3** of Group sales
- **More than double** sales versus 2016
- **12.5%** to **13%** REBIT margin target

Our ambition in advanced materials

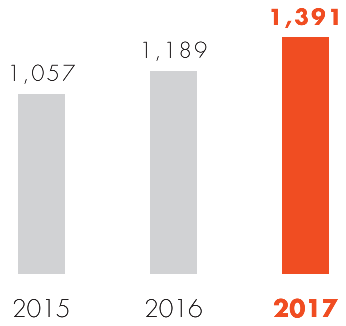
- Exceed **25%** of Group sales
- **14%** to **15%** REBIT margin target

2017 KEY FIGURES

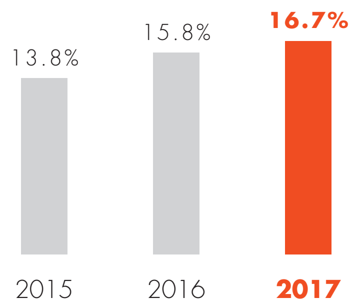
Sales
(in €m)



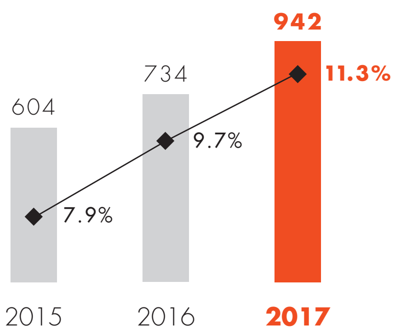
EBITDA
(in €m)



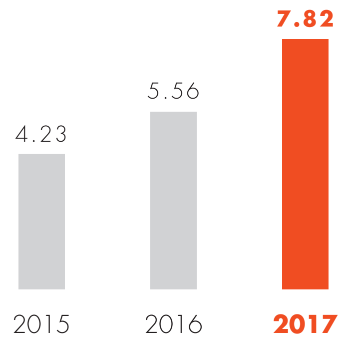
EBITDA margin
(in %)



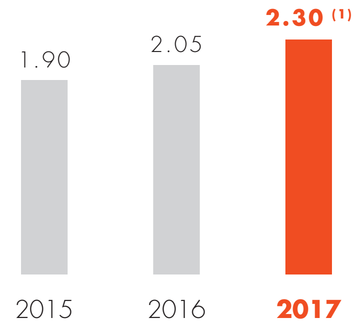
Recurring operating income (REBIT) (in €m)
and REBIT margin (in %)



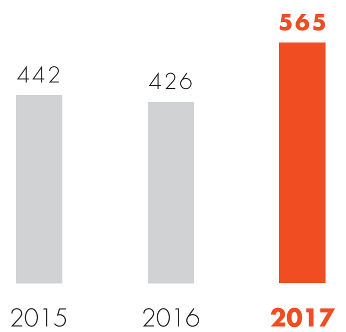
Adjusted earnings per share
(in €)



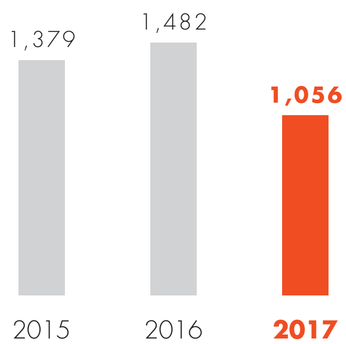
Dividend per share
(in €)



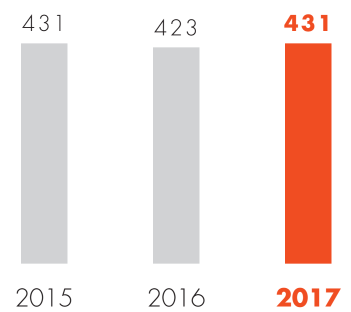
Free cash flow [2]
(in €m)



Net debt
(in €m)



Recurring capital expenditure [3]
(in €m)



(1) Dividend proposed to the shareholders' annual general meeting of 18 May 2018.
(2) Cash flow from operations and investments excluding the impact of portfolio management.
(3) Recurring capital expenditure as defined in note C.1 to the consolidated financial statements at 31 December 2017.

2017 KEY NON-FINANCIAL FIGURES

SAFETY

2017	2025 target
1.6	<1.2

TRIR (1)

(1) *Total recordable injury rate per million hours worked.*

SOCIAL

2017	2025 targets
19%	23% to 25%

Senior executive positions to be held by women

2017	2025 targets
37%	42% to 45%

Senior executive positions to be held by non-French nationals

ENVIRONMENT

(basis 1 in 2012)

	2017	2025 target
Greenhouse gas emissions	-48%	-50%
Chemical oxygen demand	-30%	-40%
Net energy purchased	-11%	-15%
Volatile organic compounds	-34%	-33%

INNOVATION

2017 TOP 100 GLOBAL INNOVATOR Clarivate Analytics

Ranked by Clarivate Analytics among the 100 most innovative companies in the world for the seventh consecutive year

Doubling of PEKK Kepstan® production capacities in France

Manufacturing of a wind turbine blade from Elium® thermoplastic resin

3D

Joint development agreement with EOS, a world leading technology supplier in the field of industrial 3D printing

CORPORATE GOVERNANCE

8

BOARD OF DIRECTORS' MEETINGS in 2017 with a **90.5%** attendance rate

1

ANNUAL SEMINAR DEDICATED TO STRATEGY

80%

INDEPENDENCE RATE

45%

OF WOMEN

GENERAL COMMENTS

In this document:

- the term "Company" refers to the company named Arkema, whose shares are traded on the regulated market of Euronext Paris;
- the terms "Arkema", "Group" or "Arkema Group" refer to the group composed of the Company and all the subsidiaries and shareholdings it holds directly or indirectly; and
- the term "Bostik" refers to the Bostik group.

This document contains forward-looking statements about the Group's targets and outlook, in particular in section 4.2. Such statements may in certain cases be identified by the use of the future or conditional tense, or by forward-looking words including but not limited to "believes", "targets", "expects", "intends", "should", "aims", "estimates", "considers", "wishes", "may", etc. These statements are based on data, assumptions and estimates that the Group considers to be reasonable. They may change or be amended due to uncertainties linked to the economic, financial, competitive, regulatory and climatic environment. In addition, the business activities and its ability to meet its targets may be affected if certain of the risks described in section 1.7 of this document were to materialize. Furthermore, achievement of the targets implies the success of the strategy presented in paragraph 1.1.2 of this document.

The Group does not undertake to meet and does not give any guarantee that it will meet the targets described in this document.

Investors are urged to pay careful attention to the risk factors described in section 1.7 of this document. The materialization of one or more of these risks could have an adverse effect on the Group's activities, condition, financial results or targets. Furthermore, other risks not yet identified or considered as not material by the Group could have the same adverse effect.

This document also contains information on the markets in which the Group operates. This information is derived in particular from research produced by external organizations. Given the very rapid pace of change in the chemicals sector in France and the rest of the world, this information may prove to be erroneous or out of date.

Accordingly, trends in the Group's business activities may differ from those set out in this document.

For 2017, the Company has prepared annual financial statements and consolidated financial statements for the period between 1 January and 31 December. These financial statements are presented in chapter 4 of this document.

Chapter 4 of this document provides a comparative analysis between the 2017 consolidated financial statements and the 2016 consolidated financial statements.

A glossary defining the technical terms used in this document can be found on pages 345 to 347 of this document.

1

BUSINESS OVERVIEW AND RISK FACTORS

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

1.1 A GLOBAL PLAYER IN SPECIALTY CHEMICALS AND ADVANCED MATERIALS

All figures contained in this chapter are provided on a consolidated basis and reflect Arkema's organization into three business divisions: High Performance Materials, Industrial Specialties and Coating Solutions.

1.1.1 General overview

1.1.1.1 OVERVIEW OF ARKEMA'S BUSINESS SECTOR

Arkema is a significant player in the global chemical industry.

Its business sector, which is known as the "industry of industries", manufactures a wide range of products for other major industries, including the construction, chemical, automotive, coatings, electronics, energy, food and pharmaceutical industries.

The chemical industry focuses primarily on processing, in one or more stages, raw materials such as petroleum products, gas, minerals and other natural products into more or less complex chemical products, or into plastics via polymerization.

At one end of this wide spectrum are commodities, which are characterized by few processing stages, large volumes and cyclical prices and unit margins, and include olefins and polyolefins, ammonia, methanol and caustic soda. At the other end are sophisticated products like pharmaceuticals and agrochemical derivatives. Between the two extremes lies a large number of chemical intermediates, polymers, fine chemical products and specialty chemicals. Generally defined as a solution for a particular application, specialty chemicals consist mainly of high performance materials or formulations such as adhesives, paints, inks and cosmetics.

With estimated sales of some €3,360 billion worldwide in 2016, the chemical industry operates on a global scale in three main regions: Europe (around 18% of world production in value terms), North America (around 16%) and Asia Pacific (around 61%) [1]. Trade in chemicals between these three main production regions is increasing regularly.

Overall, the chemical industry is highly fragmented, be it in terms of products (several tens of thousands), end markets (almost all industrial sectors are consumers) and industry players (the top ten competitors have no more than a 10% share of the global market [2]).

1.1.1.2 OVERVIEW OF ARKEMA

A major player in specialty chemicals, Arkema operates in the chemical industry with a business portfolio focused on three divisions: High Performance Materials, Industrial Specialties and Coating Solutions. Arkema reported sales of €8.33 billion in 2017, making it one of the chemical industry's large players worldwide.

Present in 55 countries with 19,779 employees at 31 December 2017, Arkema operates on a global scale, with production sites in Europe, North America and Asia (136 production centers) as well as subsidiaries and sales offices in a large number of countries.

Arkema ranks among the leading players worldwide in its main product lines, which account for close to 90% of its sales and are positioned in niche markets characterized by limited size, few major competitors and complex technologies.

In 2017, Arkema had 13 research and development (R&D) centers spread across three regional research and innovation hubs, and employed more than 1,500 researchers, with R&D expenditure representing around 2.8% of sales. Arkema draws on six research platforms focusing on current and future global sustainable development megatrends, specifically bio-based products, lightweight materials and design, new energies, water management, electronics solutions, and home efficiency and insulation. Arkema has also set up a dedicated unit named the incubator to facilitate their development, as described in section 1.4.4.1 of this document.

(1) Source: Cefic Facts and Figures 2017. The rest of the world accounts for approximately 5% of world production.

(2) Source: Arkema internal estimates.

At 31 December 2017, Arkema had nine Business Lines [1], organized into three divisions according to the similarity of their activities. These are the High Performance Materials division for predominantly application-oriented activities, the Industrial Specialties division comprising various chemical intermediate activities, and the Coating Solutions division, which combines activities relating to coatings (decorative paints and industrial coatings), with upstream integration in acrylic monomers. These Business Lines may group together several businesses, which are responsible for their own results, cash flows (working capital, capital expenditure, etc.), production management, research, sales, marketing and customer relations. The Managing Directors of the Business Lines or businesses each report to an operational Executive Vice-President who is also a member of the Executive Committee, with the exception of the Bostik Executive Vice-President, who is a member of the Executive Committee and, as such, reports directly to the Chairman and Chief Executive Officer (see section 3.2.2.2 of this document).

The simplified organization chart below, effective at 31 December 2017, shows the Business Lines in each division.

High Performance Materials	Industrial Specialties	Coating Solutions
Bostik	PMMA	Acrylics
Technical Polymers	Thiochemicals	Coating Resins and Additives
Performance Additives	Fluorogases	
	Hydrogen Peroxide	

The corporate departments provide continuous support to Arkema's divisions, mainly in the areas of accounting, taxation, legal affairs, IT, human resources and communication.

Under the authority of the Executive Committee and in particular the corporate Executive Vice-Presidents (see section 3.2.2.2 of this document), the corporate departments are responsible for ensuring the overall coherence and control of Arkema.

More specifically, they coordinate procurement and logistics and maintain expertise in such key areas as safety, environment, R&D and process engineering. Some of the corporate departments work for Arkema as a whole. This is notably the case for Internal Audit and Internal Control, External Communication, Investor Relations, Accounting and Controlling, and Legal Affairs.

(1) The Business Lines correspond to businesses or groups of businesses.

The simplified organization chart below shows Arkema's corporate departments at 31 December 2017.

ARKEMA
INNOVATIVE CHEMISTRY

Human Resources & Communication
- HR Development & Internal Communication
- Labor Relations and Remuneration Systems
- Institutional Relations
- External Communication

Industry
- Sustainable Development
- Safety, Environment & Industry
- Technical/Construction
- Logistics
- Purchasing of Goods & Services
- Process
- Operational Excellence
- Customer Supply Chain

Finance
- Accounting/Controlling
- Financing/Treasury/Taxation
- Legal Affairs
- Information Systems & Telecommunications Systems
- Investor Relations

Strategy
- Acquisitions/Divestitures
- Planning/Economic Studies
- Internal Audit/Internal Control
- Insurance
- Business Development

R&D
- Research Programs
- Research Platforms
- Partnerships

As an exception to the general organizational principles governing the corporate departments, the Raw Materials and Energy Procurement department reports directly to one of the three operational Executive Vice-Presidents.

In addition, the R&D department and the Digital Transformation department created on 1 March 2018 report directly to the Chairman and Chief Executive Officer, reflecting the importance of R&D and digital transformation in the Group's strategy.

1

BREAKDOWN OF SALES BY DIVISION

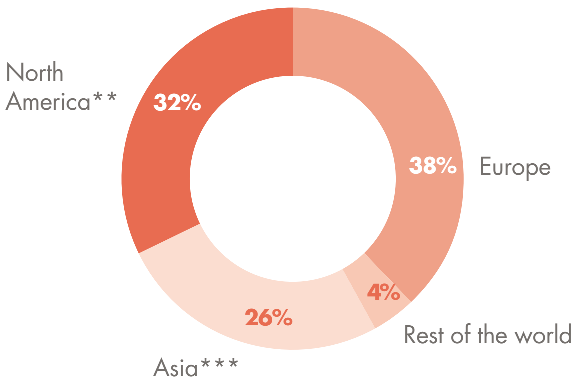
(In billions of euros)		2017		2016		2015
High Performance Materials	3.8	46%	3.4	46%	3.4	44%
Industrial Specialties	2.5	31%	2.3	30%	2.5	32%
Coating Solutions	1.9	23%	1.8	24%	1.8	24%
TOTAL	**8.3**	**100%**	**7.5**	**100%**	**7.7**	**100%**

SUMMARY OF ARKEMA'S MAIN PRODUCTS IN 2017 AND THEIR AREAS OF APPLICATION BY BUSINESS

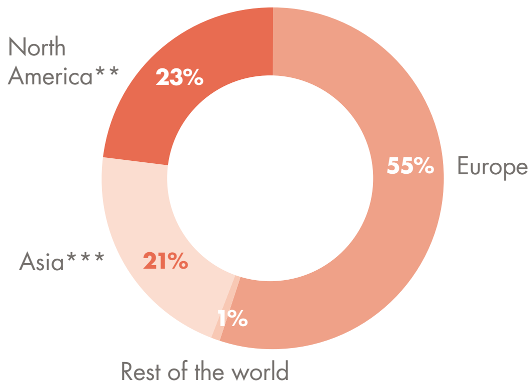
High Performance Materials	
Bostik	Adhesives and sealants used in industry, hygiene products (non-woven), construction and consumer products.
Technical Polymers	Technical Polymers include: • specialty polyamides used in automotive, aerospace, aeronautics, oil and gas, electronics and consumer goods (sports and cosmetics); and • polyvinylidene fluoride (PVDF) used in chemical engineering, paint and anti-corrosive coating production, oil and gas extraction, photovoltaic panels, lithium-ion batteries and water treatment membranes.
Performance Additives	Performance Additives comprise: • photocure resins (Sartomer), which harden under ultraviolet light and are used in metal, plastic and wood coatings and in optics, graphic art, electronics, 3D printing and inkjet printing; • organic peroxides, which are used as polymerization initiators for polyethylene, PVC and polystyrene and as crosslinking agents. This business also includes glass coating additives; and • adsorption, which includes both specialty surfactants and molecular sieves used for gas and liquid separation.
Industrial Specialties	
PMMA	This business includes: • PMMA used in the construction and automotive industries as well as for billboards, decorations and LED televisions; and • functional polyolefins used in adhesives, packaging, photovoltaics and the electric, electronics and automotive industries.
Thiochemicals	Chemical intermediates for animal feed, petrochemicals and refining, natural gas odorization, polymerization agents, agrochemicals and pharmaceuticals.
Fluorogases	Gases used in refrigeration, air-conditioning, foam and solvents, and as feedstock for fluoropolymers.
Hydrogen Peroxide	Hydrogen peroxide (used in pulp and paper bleaching, water treatment, disinfection, electronics and textiles) and sodium chlorate.
Coating Solutions	
Acrylics	Acrylic monomers used in the production of resins and emulsions for adhesives, paints, coatings and superabsorbents as well as in water treatment and enhanced oil and gas recovery.
Coating Resins and Additives	This business includes: • coating resins, which comprise waterborne, solventborne and powder resins used for decorative paints and industrial coatings, as well as inks, sealants, varnishes and dyes for wood, road paints, adhesives, construction materials, etc. This business also encompasses impact modifiers and processing aids for PVC; and • rheology additives (Coatex): specialty acrylic polymers used as rheology modifiers such as dispersants and thickeners in paper, paints and industrial coatings.

INFORMATION BY REGION

2017 SALES* BY REGION (1)



CAPITAL EMPLOYED IN 2017 BY REGION (2)



In Europe, Arkema generated 8% of its total sales in France, 4% in the United Kingdom and 6% in Southern Europe (Spain, Greece, Italy and Portugal).

In Asia, sales in China represented 10% of Arkema's total sales.

* Based on the geographic location of customers.

** United States, Canada and Mexico.

*** Asia and the Middle East.

The breakdown of Arkema employees by region is given in section 2.6 of this document.

1.1.2 Strategy and competitive strengths

1.1.2.1 COMPETITIVE STRENGTHS

Arkema's many competitive strengths include in particular:

- leading commercial and manufacturing positions, with Arkema ranking among the world's top players in most of its businesses. This is particularly true in adhesives, acrylics, coating resins, photocure resins, polymethyl methacrylate (PMMA), fluorogases, PVDF, hydrogen peroxide, thiochemicals, specialty polyamides (polyamides 10, 11 and 12), molecular sieves and organic peroxides;
- a strong manufacturing footprint in Europe, North America and Asia, enabling Arkema to efficiently and effectively meet customer demand. Its technical knowledge of products and manufacturing processes enables it to leverage its existing production facilities and gain a key advantage when entering new markets. It also allows Arkema to carry out complex investment projects in a timely, cost-effective and technically efficient manner. In addition, Arkema also has extensive R&D skills, which it leverages to launch innovative new products on the market, provide its customers with the technical support they need and further improve the efficiency of its manufacturing processes (see section 1.4 of this document);
- a solid balance sheet, with net debt of €1,056 million (or 0.8 times EBITDA for the year) at 31 December 2017, compared with shareholders' equity of €4,474 million, representing a gearing ratio of 24%; and
- committed, high-performing teams who have proved their ability to build a world-class chemical company in just ten years as well as to handle complex industrial projects and to address the challenges brought about by the economic environment. Arkema can also count on its employees' recognized loyalty, professionalism and experience.

(1) *In 2016, Group sales by region broke down as follows: 36% in Europe, 34% in North America, 25% in Asia and 5% in the rest of the world.*

(2) *In 2016, Group capital employed by region broke down as follows: 53% in Europe, 25% in North America, 21% in Asia and 1% in the rest of the world.*

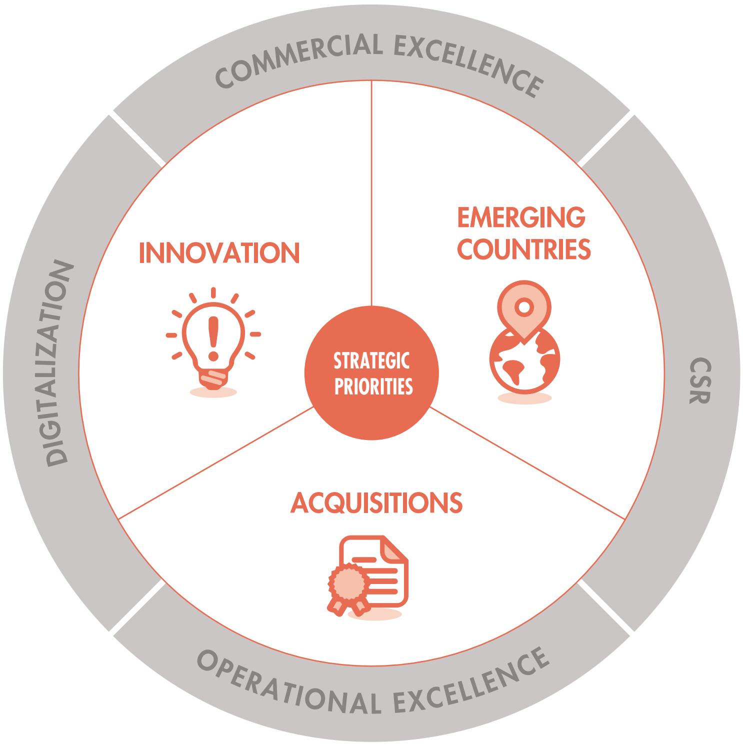
1.1.2.2 STRATEGY

Since its stock market listing in May 2006, Arkema has actively engaged in a transformation process that has enabled it to shift its business portfolio toward specialty chemicals while increasing the share of higher value-added activities with strong development potential. These specialty businesses accounted for 71% of Arkema's total sales in 2017 (versus 44% in 2006) and the intermediate chemical activities (Acrylics, PMMA and Fluorogases) for just 29%. Alongside this profound change in its profile, Arkema has also rebalanced its geographic positioning by significantly developing business in North America and in emerging economies, primarily in Asia.

Arkema intends to speed up the development of its specialty businesses over the coming years, which will contribute to ensuring resilient growth and steady cash generation and will consolidate its position among the world leaders in specialty chemicals. More specifically, Arkema intends to pursue the development of its specialty businesses so that they account for over 80% of sales in 2023, and will in particular strengthen adhesives, advanced materials (which encompasses Technical Polymers and Performance Additives) and Thiochemicals, which constitute three major drivers of its future growth. It also aims to complete its geographic rebalancing so that Europe, North America and Asia/rest of the world each account for one third of its total sales. Arkema detailed its medium- and long-term strategy and targets at its Capital Markets Day on 11 July 2017. All of Arkema's targets are described in section 4.2 "Trends and outlook" of this document.

To achieve its ambition, Arkema continues to implement a targeted growth strategy, supported by technological innovation, bolt-on acquisitions and a stronger presence in fast-growing economies.

This strategy is built around the following focus areas:



Arkema's innovation strategy is described in section 1.4 of this document, its corporate social responsibility policy in chapter 2 and its operational excellence program in section 1.6.

In terms of its external growth strategy, Arkema intends to continue making bolt-on acquisitions for a total of between €1 billion and €1.5 billion in additional sales. A first significant phase of this strategy has already been achieved with the recent acquisitions of Den Braven, CMP floor preparation products and XL Brands. Additional small- to medium-sized acquisitions will be carried out, primarily in adhesives, advanced materials and downstream acrylics, to enable the Group to increase its market share in these areas, strengthen its business portfolio and increase its resilience. In line with its intent to carry out high-value-creating transactions, the Group aims to reduce the enterprise value to EBITDA multiple of its various acquisitions to below that of Arkema four or five years after the acquisition date and following the implementation of synergies. These transactions are also expected to have an accretive impact on earnings per share and on cash generation between the first and second year of integration. Lastly, the Group intends to maintain a very solid balance sheet and has reiterated its objective of maintaining a solid investment grade rating with the rating agencies and a net debt to EBITDA ratio of below 2.

Arkema will also continue its program to divest non-core businesses representing a total of around €700 million in sales. The Group was about half-way through the program at the end of 2017.

As part of its strategy, Arkema announced the following operations in 2017 and early 2018:

- in Thiochemicals, a project to double methyl mercaptan production capacity at its Kerteh site in Malaysia;
- in adhesives, the extension of Bostik's production capacity with the opening of a new unit in Gujarat, India;
- in advanced materials:
  - a 25% increase in fluoropolymer (Kynar® PVDF) production capacity in China (Changshu) and a planned 20% increase in the United States (Calvert City),
  - an investment plan representing around €300 million over five years for the bio-based polyamide 11 chain in Asia,
  - a 25% increase in global polyamide 12 production capacity in China (Changshu),
  - a project to increase by over 30% Sartomer's production capacity in China (Nansha),
  - the start-up of the new production unit for specialty molecular sieves in France (Honfleur); and
- in Acrylics, a project to replace older reactors at the Clear Lake site in the United States for a total investment of around US$90 million.

For more information about these projects, see section 1.2 of this document.

In terms of portfolio management, Arkema completed:

- in March 2017, the sale to INEOS of its 50% stake in Oxochimie, their oxo alcohol manufacturing joint venture, along with the associated business assets (see section 1.2.3.3 of this document);
- in May 2017, the acquisition of CMP Specialty Products, a floor preparation product business in the United States (see section 1.2.1.3 of this document); and
- in January 2018, the acquisition of the assets of XL Brands, a leader in floor covering adhesives in the United States, that will allow Bostik to offer comprehensive solutions in this growing high value-added market (see section 1.2.1.3 of this document).

Arkema's strategic priorities are set out by division in section 1.2 of this document.

1.2 OVERVIEW OF ARKEMA'S DIVISIONS

Arkema is organized into three divisions:

- High Performance Materials, which comprises Bostik as well as the Technical Polymers and Performance Additives Business Lines that together make up advanced materials, one of the three major drivers of Arkema's future growth;
- Industrial Specialties, which comprises Thiochemicals, Fluorogases, PMMA and Hydrogen Peroxide; and
- Coating Solutions, which comprises Acrylics and Coating Resins and Additives.

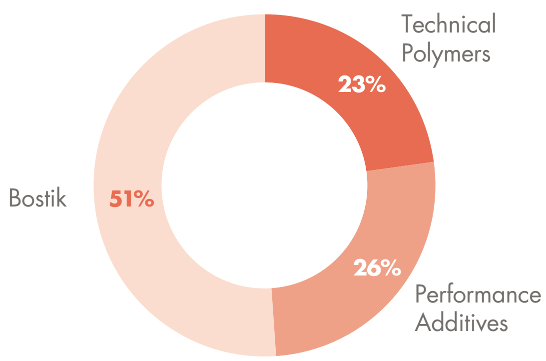
1.2.1 High Performance Materials

1.2.1.1 KEY FIGURES

(In millions of euros)	2017	2016	2015
Sales	3,830	3,422	3,358
EBITDA	632	570	506
Recurring operating income	474	416	354
Capital expenditure*	168	173	167

* *Excluding investments relating to portfolio management operations and investments with no impact on net debt.*

1.2.1.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2017) (1)



1.2.1.3 OVERVIEW OF THE DIVISION'S BUSINESS

The High Performance Materials division brings together two major drivers of Arkema's future growth: adhesives and advanced materials, which comprise the Technical Polymers and Performance Additives Business Lines.

The businesses in this division share the same objective of serving their various niche markets with innovative, high value-added technical solutions that meet their customers' needs.

Arkema holds leadership positions in most of these product lines, notably for adhesives, polyamides 10, 11 and 12, PVDF, molecular sieves and organic peroxides, and sells many of its products under widely recognized brands.

Arkema services these markets worldwide thanks to an industrial footprint on three continents.

The key success factors for the High Performance Materials division lie in its ability to offer innovative solutions from R&D, to develop new, high value-added products and to leverage the

(1) In 2016, division sales by Business Line broke down as follows: 24% for Technical Polymers, 29% for Performance Additives and 47% for Bostik.

potential offered by growing local markets, particularly in Asia, where Arkema has expanded significantly in the past few years. Brand recognition (Bostik®, Kynar® and Rilsan®) and quality relationships with customers that are the leaders in their areas of expertise are also key competitive strengths.

Over the coming years, Arkema will continue to develop the division around Bostik and advanced materials, which should account respectively for more than one third and more than 25% of Arkema's total sales in 2023. In particular, Arkema intends to participate in the consolidation of the attractive but still fragmented adhesives market and will continue to invest in advanced materials, which offer significant opportunities both for innovation in the areas of lightweight materials, bio-based polymers and consumer goods design and for expansion in fast-growing economies. The announcements made at the Capital Markets Day in July 2017 of a major investment project in the bio-based polyamide 11 chain in Asia and of a 30% increase in Sartomer's production capacity in China illustrate this strategy perfectly.

Bostik (24% of Arkema sales in 2017)

Products and markets

With little cyclicality and capital intensity, the adhesives market offers steady growth, at a rate higher than that of the world GDP, and numerous opportunities for consolidation in a still very fragmented market.

Since the acquisition of Bostik in February 2015, Arkema manufactures and markets adhesives and sealants for construction and industrial applications worldwide, with 59 production units in Europe, North America and Asia, operations in 50 countries, and three regional R&D centers.

For several years now, Bostik has been working to strengthen its global Bostik® Smart Adhesives brand. Bostik has a number of well-known local brands that help secure customer loyalty, such as in the construction and consumer goods industries Sader®, Quelyd®, Evo-Stik®, Mem®, Fortaleza®, XL Brands® and Den Braven®.

Demand for adhesives and sealants worldwide is estimated at some €50 billion [1], spread across:

- industry (58%), which encompasses a wide range of end markets such as assembly, tapes and labels, packaging, transportation, non-woven for the hygiene and personal care industries and electronics;
- construction (34%), which includes wall and floor surface preparation products, adhesives for tiles, walls, floors and ceilings, and waterproofing solutions; and
- consumer goods (8%), which brings together adhesive solutions for a wide variety of applications such as repair work, attachment, assembly, decoration and renovation.

Geographically, demand breaks down as follows [1]:

- North America accounts for around 28% of global demand, with expected average annual growth of 2.5% to 3%;
- Europe accounts for around 31%, with expected average annual growth of 1.5% to 2%; and
- Asia and the rest of the world make up around 41% of global demand, with expected average annual growth of 4% to 5%.

Overall, the global adhesives market is expected to grow by between 3% and 3.5% per year on average over the next few years. This trend is likely to be driven by the replacement of traditional mechanical assembly systems and by new solutions that reduce the weight of materials, improve energy efficiency in buildings and contribute to the development of new energies. Other factors driving the market include significant growth in adhesives for the non-woven fabric used to make baby diapers, feminine hygiene products and adult incontinence products, and the strong momentum in emerging economies, where consumption of adhesives *per capita* is currently much lower than in Europe or the United States. Lastly, technology and experience are key in this market, which is characterized by high barriers to entry such as customer relations built on proximity and trust, and a portfolio of well-known brands.

In addition to Bostik, the main players in the market are Henkel, Sika and HB Fuller. However, the industry is still very fragmented with a large number of local players, offering numerous opportunities for consolidation through small- or medium-sized bolt-on acquisitions.

Bostik holds a leadership position in several end markets, including:

- non-woven for hygiene and personal care products: in this global market characterized by a limited number of players, Bostik is estimated to be among the world's top three and the leader for specialty products thanks to its technological expertise. Its main competitors are Henkel and HB Fuller;
- industry: thanks in particular to its three main high-growth technology platforms, Bostik is estimated to rank among the world's top four in this more regional market. Its main competitors are Henkel and HB Fuller but it also has a number of local competitors, particularly in emerging economies; and
- construction and consumer goods: in these local markets, Bostik ranks among the top three players in the main countries in which it operates. Bostik can leverage its brand portfolio and position in growth regions such as South-East Asia and China to expand its business in these still fragmented markets. Its main competitors are Henkel, Sika and Mapei.

(1) Source: Arkema internal estimates and IHS Specialty Chemicals Update Program – Adhesives and Sealants, July 2016.

Strategy

By 2020, Arkema is targeting for Bostik an EBITDA margin of 15% with capital expenditure of between 2.5% and 3% of sales, which will enable the Group to catch up with the average results of its main competitors in this market.

Arkema intends to significantly develop Bostik over the coming years, with the aim of more than doubling the sales generated by this Business Line (from a 2016 baseline of €1.6 billion) by 2023, when Bostik is expected to account for more than one third of Arkema's total sales. Arkema also plans to continue to improve Bostik's profitability, with the aim of achieving a REBIT margin of between 12.5% and 13% in 2023.

This ambition will notably be achieved by stepping up implementation of Bostik's development strategy, which includes:

- the adoption of a specific strategy for each type of segment:
  - hygiene: maintain technological leadership and pursue globalization,
  - industry: build global leadership positions in core segments and step up development in high value-added niche markets,
  - construction: develop leadership positions in floor adhesives and sealants and take advantage of the leverage created by recent and upcoming acquisitions,
  - consumer goods: strengthen the Bostik® brand worldwide and be recognized as the preferred innovative player, and boost marketing initiatives through digital technology;
- ongoing development in fast-growing regions, in line with Bostik's 2023 target of doubling sales in emerging economies (China, India, South-East Asia, Latin America, Eastern Europe and the Middle East) versus the 2016 baseline and generating 30% of its total sales in these geographies compared with around 26% in 2016;
- bolt-on acquisitions offering significant synergies. These synergies might correspond to cost synergies realized on raw materials, goods and services or logistics purchases, or achieved by centralizing certain support functions or strengthening operational excellence programs. They may also result from new geographic, technological or commercial developments driven by the strategic fit between Bostik and the acquired businesses; and
- ongoing day-to-day efforts to improve operational excellence, which are expected to drive annual gains of around €10 million.

Highlights

As part of its strategy, Bostik announced:

- the completion on 1 December 2016 of the acquisition of Den Braven, a European leader in sealants for construction and insulation applications which achieved in 2016 around €345 million in sales. The transaction strengthens Bostik's insulation and construction offering and will speed up its growth thanks to the excellent entry point which these product ranges represent when entering emerging markets, particularly in Asia. Den Braven employs some 1,000 people and boasts world class industrial facilities, with eight production sites around the world. This high-value-creating acquisition was made on the basis of an enterprise value of €485 million, or 11 times 2016 EBITDA. It offers significant synergies assessed at €30 million at least, to be fully achieved within five years, reducing the multiple to around 6.5 times EBITDA. The acquisition had an accretive impact on Arkema's earnings per share and cash in 2017, as expected;
- the acquisition in May 2017 of CMP Specialty Products, a floor preparation products business based in the United States. This business, which generated US$15 million in sales in 2016, offers significant synergies with Bostik. The acquisition fits perfectly with Bostik's strategy to expand in the growing US construction market and to offer its customers a complete range of innovative solutions for the flooring market;
- the acquisition, completed in January 2018, of XL Brands, a leader in floor covering adhesives in the United States. The offer was based on an enterprise value of US$205 million or 11 times current EBITDA (7 times within 4 to 5 years and including synergies). This bolt-on acquisition, which complements the acquisition of CMP, will allow Bostik to become one of the leaders in floor covering adhesives in the United States and offer comprehensive solutions in this growing high value-added market; and
- the start-up of several production units since 2015. In 2017, Bostik announced the opening of a new hot melt pressure sensitive adhesives (HMPSA) unit in Gujarat, India, which will enable it to meet growing demand for adhesives from various industrial sectors in India, such as flexible packaging, transportation and footwear production. Bostik started up new production units for the construction markets in Malaysia, the Philippines and Sweden in 2016 and increased HMPSA production capacity in Bangalore, India and Mexico in 2015. Lastly, Bostik opened a new production site and a training center in Dallas, United States, also in 2015.

Advanced materials: Technical Polymers and Performance Additives

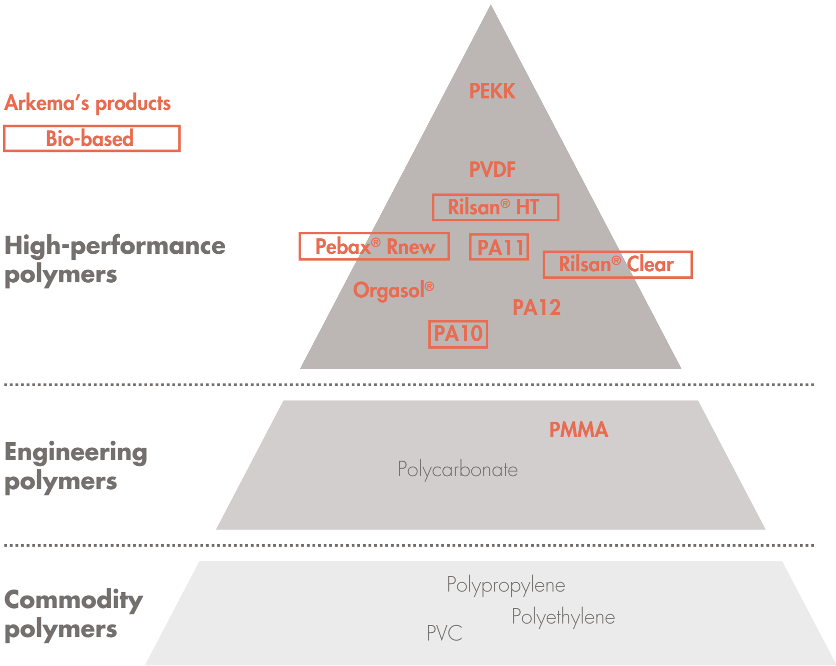
In the coming years, Arkema plans to maintain a strong innovation dynamic in advanced materials, which bring together the Technical Polymers and Performance Additives Business Lines and represent a major driver of Arkema's future growth.

Products and markets

Technical Polymers (10% of Arkema sales in 2017)

Technical Polymers comprises two product lines: specialty polyamides and polyvinylidene fluoride (PVDF). These are sold under well-known brand names such as Rilsan®, Rilsamid®, Orgasol® and Pebax® for specialty polyamides and Kynar® for PVDF.

RANKING OF POLYMERS BY PERFORMANCE



- **Specialty polyamides**

Specialty polyamides encompass long-chain polyamides 10, 11 and 12. Arkema is a market leader for these products and the only manufacturer of bio-based polyamide 11, made from castor oil. Its main competitors are Evonik and EMS for polyamide 10, which is also bio-based, and Evonik, EMS and Ube for polyamide 12.

Specialty polyamides are primarily used in the transportation, oil and gas (deep offshore extraction), sport, new energies, electronics and 3D printing industries.

In the coming years, global growth of specialty polyamides end markets could reach an average of 5% per year, of which 7% in Asia [(1)], driven by growing demand for (i) lighter materials, particularly in the automotive (as a replacement for metal to reduce vehicle weight) and consumer goods markets (sports equipment and electronics) and (ii) bio-based polymers such as polyamide 10 and 11.

- **Polyvinylidene fluoride (PVDF)**

PVDF is widely used in architectural and anticorrosion coatings, the chemical and oil and gas industries (deep offshore extraction), electric cables, photovoltaic panels, lithium-ion batteries and water treatment membranes.

Demand is primarily being driven by growth in Asia, the rapid development of new energies and the rising need for drinking water.

Arkema is the world leader in the PVDF polymer range [(2)], with Solvay and Kureha as its main competitors. In the coming years, end markets could grow by an average annual rate of 7% [(1)].

Performance Additives (12% of Arkema sales in 2017)

Performance Additives comprises Sartomer's photocure resins and the organic peroxides and adsorption businesses.

- **Sartomer's photocure resins**

Thanks to unique technologies, Sartomer provides its customers with high-tech, high value-added products and applications. Its photocure resins deliver excellent technical performance properties, particularly in terms of stain, impact and scratch resistance, and offer almost instant crosslinking. With 100% dry-content, these innovative resins are environmentally friendly and comply with European volatile organic compound (VOC) standards. As such, they play a key part in Arkema's sustainable new materials strategy.

(1) Source: Arkema internal estimates.

(2) Source: IHS Chemical Economics Handbook – Fluoropolymers, April 2016.

The photocure resins business operates globally, with two sites in the United States, one in Europe and another in Asia.

Photocure resins are used in a wide range of markets, including graphic art (inks and varnishes), industrial coatings, optics (fiber, DVD and Blu-Ray technologies), electronics (printed circuits), wood coatings, 3D printing and inkjet printing. Global growth in photocure resin end markets over the coming years could reach 5% per year [1]. The Group's main competitors are Allnex, Eternal and Miwon.

Sartomer is also a pioneer in the design of material systems for UV curable 3D printing. Its specialized offering for UV curable 3D printing, marketed under the new N3xtDimension™ brand, is aimed at the booming global 3D printing market, which is expected to grow by nearly 20% per year until 2020 [1].

- **Organic peroxides**

Organic peroxides are initiators used in a variety of fields including commodity polymers (reaction initiators for low-density polyethylene, PVC and polystyrene), acrylic polymers, unsaturated polyesters and rubber crosslinking. Arkema estimates that it ranks number two worldwide in this sector. Its main competitors are AkzoNobel and United Initiators.

This business also includes glass coating additives (primarily used in glass bottles), for which Arkema ranks among the leading companies worldwide.

- **Adsorption**

The adsorption business is organized around two activities: molecular sieves, and specialty surfactants and interface agents.

Arkema is the world number two in molecular sieves [1]. Featuring excellent adsorption and dehydration properties, these products are mainly used for industrial gas separation in certain petrochemical units and for medical oxygen in healthcare as well as in the construction and pharmaceutical packaging industries.

The specialty surfactants and interface agents activity mainly includes specialty chemicals produced downstream from fatty acids. The many products derived are used as additives in such highly diverse areas as oil and gas production, bitumen, fertilizers, corrosion inhibitors, antistatics and emulsifiers.

Strategy

On the back of its portfolio of innovative products with properties that are highly sought after, particularly in the areas of lightweight materials, water treatment, new energies and 3D printing, Arkema will continue to invest significantly in coming years in advanced materials, which offer significant opportunities for innovation and geographic expansion. Advanced materials are expected to account for more than 25% of Arkema's total sales in 2023, with a REBIT margin of 14% to 15%.

In particular, Arkema aims to:

- strengthen its positions in certain fast-growing, high value-added markets such as the aerospace, automotive, 3D printing, water treatment, consumer electronics and sports markets, through new developments from its innovation efforts;
- step up its growth in Asia in order to support the very strong growth of its global and local customers in this region;
- develop partnerships with world recognized players in their areas of expertise; and
- strengthen its portfolio of solutions with breakthrough innovations like Kepstan® PEKK for aerospace and 3D printing applications, and thermoplastic composites, some of which can be recycled.

To implement this strategy successfully, Arkema will dedicate around 4% of the sales generated by these activities to research and development and up to 8% of sales for certain very-high-potential applications.

Arkema will also carry out several significant capital expenditure projects, such as those announced in Asia for the bio-based polyamide 11 chain and for Sartomer's photocure resins in China, and in the United States for Kynar® PVDF and Kepstan® PEKK.

These various investments should enable sales of advanced materials to increase by around 5% per year on an organic basis.

Highlights

To support its customers' growth, Arkema announced:

- in June 2015, a project to double its specialty **molecular sieve** capacity to allow it to meet the market's average annual growth rate of 6% to 7% [1] in particular in Asia and the Middle East, driven mainly by the development of the synthetic textile and PET bottle end markets. This capacity extension at the Honfleur site in France was inaugurated in April 2017 and is now fully operational. It produces adsorbents for use in the petrochemicals industry when separating aromatics, including Arkema's latest generation of ultra-high performance molecular sieves Siliporite® SPX 5003;
- in January 2016, the start-up of a new **organic peroxide** production line in Changshu, China that doubles the site's production capacity. Thanks to this investment, the Group can support the strong growth of its customers in Asia, in particular in the plastics markets for the construction, packaging and automotive industries;
- in September 2016, an increase in **specialty polyamide** production capacity in China and the United States. At the Zhangjiagang bio-based specialty polyamides site in China's Jiangsu Province, Arkema has increased compounding capacity by starting up two new production lines, enabling it to expand the range of specialty polyamides produced at the site;

(1) Source: Arkema internal estimates.

- in February 2017, the doubling of its **Kepstan® PEKK** production capacities in France, and confirmed its investment in a world-scale PEKK plant at its Mobile, Alabama site in the United States, scheduled to come on stream in second-half 2018. These investments will help to meet growing demand in the carbon fiber reinforced composites and additive manufacturing (3D printing) markets, once again demonstrating Arkema's commitment to continue its efforts in the area of lightweight materials, one of its six innovation platforms;
- in April 2017, the start-up of new **Kynar® PVDF** capacities at the Changshu complex. With this 25% increase of its production capacities in China, Arkema has consolidated its position as the world leader in PVDF. The increase enables the Group to meet fast-growing demand, notably for new energies and water treatment applications;
- in July 2017, a major investment plan representing around €300 million for the bio-based **polyamide 11** chain in Asia to enable the Group to support its customers' very strong growth, especially in the automotive and 3D printing markets as well as in consumer goods such as sports and electronics. The new plant which will produce both the amino 11 monomer and its polymer, Rilsan® PA11, should start up in late 2021 and will allow Arkema to increase its global polyamide 11 production capacity by 50%. The investment also entails a 50% increase in global production capacity for Pebax®;
- in July 2017, a project to increase **Sartomer**'s production capacity by over 30% in China (Nansha). The new line will produce high-performance photocure resins designed for the cutting-edge electronics market, where they are used for the design and manufacture of printed circuits and screens for smartphones, tablets and television sets, and for the 3D printing market for which Sartomer recently launched its new generation of solutions under the N3xtDimension™ range. The new line is scheduled to start operating in early 2019;
- in September 2017, a plan to extend by some 20% the Group's capacity to produce **Kynar® PVDF** at the US-based Calvert City plant. This capacity increase will enable the Group to meet strong demand in the new energies and water management markets as well as for more traditional applications (chemical engineering and high performance cables). Start-up is scheduled for mid-2018; and
- in February 2018, a 25% increase in the global **polyamide 12** capacity, which is marketed under the Rilsamid® brand. The new capacity will be constructed on the Changshu platform in China, with start-up scheduled for mid-2020. This investment of a few tens of millions of euros will enable the Group to meet strong demand for growing applications such as cable protection, lighter materials in the automotive market, technical sports shoes and consumer electronics.

In addition, Arkema actively pursued its research and innovation efforts in order to continue to offer innovative solutions for high-growth applications such as electronics, which notably resulted in a new product offering in specialty polyamides. It has also stepped up development in the battery market through the increased use of its PVDF in electric vehicles and lithium-ion batteries for electronic devices like tablets and smartphones. Arkema is reinforcing its presence in the aerospace market with the Kynar® foam range, which can be used to replace certain metal aircraft parts, such as window frames and air-conditioning conducts, thereby meeting demand for lighter materials.

Lastly, as part of the strategy to refocus its portfolio on its core businesses, in November 2016 Arkema finalized the sale of its activated carbon and filter aid business, which was part of the adsorption business, for an enterprise value of €145 million, or 9.5 times 2015 EBITDA. The business represented sales of around €93 million and had 300 employees spread across six European industrial sites in France and Italy.

Arkema also had to deal with a one-off event that affected its organic peroxide facility in Crosby, Texas in late August 2017. The torrential rains and severe flooding caused by Hurricane Harvey had an unprecedented impact on the Crosby site, which was covered by nearly two meters of water for several days. At the date of this document, the site is largely intact apart from flood damage but remains shut down. Operations could start up again in mid-2018.

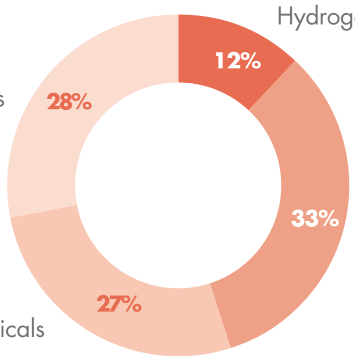
1.2.2 Industrial Specialties

1.2.2.1 KEY FIGURES

(In millions of euros)	2017	2016	2015
Sales	2,545	2,316	2,450
EBITDA	585	473	418
Recurring operating income	411	300	237
Capital expenditure*	165	155	183

* *Excluding investments relating to portfolio management operations and investments with no impact on net debt.*

1.2.2.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2017) [1]



1.2.2.3 OVERVIEW OF THE DIVISION'S BUSINESS

The Industrial Specialties division comprises four Business Lines: PMMA, Thiochemicals, Fluorogases and Hydrogen Peroxide.

The Business Lines in this division share various characteristics, including the use of complex manufacturing processes for chemical intermediates and the existence of global markets with strong growth prospects, particularly in Asia.

Arkema is a leading industry player worldwide and has production units in Europe, North America and Asia.

The Industrial Specialties division continues to selectively pursue the development of its activities, strengthen its positions worldwide and implement cooperation projects with its main partners. Arkema also intends to increase the share of specialty products in its portfolio in order to take advantage of the higher growth rates in these higher value-added niche markets. Industrial Specialties is actively pursuing efforts to improve operational excellence and thereby maintain competitiveness and technological leadership in its markets. Lastly, it is also pursuing its objective of securing a competitive, long-term supply of strategic raw materials.

PMMA (10% of Arkema sales in 2017)

Products and markets

The PMMA Business Line is organized into two areas.

The first is an integrated production chain from methyl methacrylate (MMA) to polymethyl methacrylate (PMMA). Operating on three continents, this global activity has facilities in the United States, Mexico, Europe and South Korea. Its main brand names – Plexiglas® on the American continent and Altuglas® elsewhere – have a strong reputation. Its main products include granules for molding, and cast and extruded sheets for forming.

The overall size of the PMMA market is estimated at 2 million tonnes [2] and primarily serves the construction, automotive, sanitaryware, commercial display, electronics and household goods markets. In the automotive market, alongside traditional PMMA applications like rear lights, new applications are also emerging such as Altuglas® ShieldUp panoramic roofs, which help reduce vehicle weight. In the signs and display market, growth is being driven by an increase in advertising expenditure and improved living standards in emerging economies. In PMMA end markets as a whole, annual global growth over the coming years could be close to 2% [2]. Arkema is one of the leading producers of PMMA in the world [3]. Its main competitors are Mitsubishi Rayon, Evonik and Sumitomo Chemical.

(1) *In 2016, division sales by Business Line broke down as follows: 32% PMMA, 28% Thiochemicals, 27% Fluorogases and 13% Hydrogen Peroxide.*

(2) *Source: Arkema internal estimates.*

(3) *Source: IHS Chemical Economics Handbook – Acrylic Resins and Plastics, May 2016.*

The second area is functional polyolefins, which are used primarily in packaging, photovoltaics, and the electrical, electronics and automotive industries.

The MMA/PMMA market conditions remained tight in 2017 but should gradually normalize from 2018 with the expected start-up of two new production units in Saudi Arabia.

Highlights

To enhance competitiveness, Arkema shut down operations at the extruded PMMA sheet site in Bernouville, France in November 2015, resulting in the loss of 39 positions.

In November 2015, Arkema sold its plastic and aluminum sheet distribution business, Sunclear, for an enterprise value of €105 million as part of its strategy to refocus its portfolio on core businesses. Sunclear represented sales of around €180 million.

Thiochemicals (8% of Arkema sales in 2017)

Products and markets

The Thiochemicals Business Line mainly focuses on sulfur derivatives.

One of Arkema's three growth drivers for the coming years, the Business Line operates worldwide, with production sites in the United States, Europe and, in Asia with a new complex in Malaysia started in early 2015.

The size of the global thiochemical market is estimated at 0.8 million tonnes [(1)].

The main markets for Thiochemicals are animal feed, refining and petrochemicals, natural gas odorization, solvents, pharmaceuticals and cosmetics. In the animal feed market, Arkema produces a sulfur-based intermediate used in the synthesis of methionine, an amino acid used as a nutritional supplement notably in poultry feed. Demand in this sector is being supported by increasing poultry consumption, particularly in emerging economies. In the oil and gas industry, demand is driven by the growing use of natural gas and by stricter sulfur content standards for automotive fuel (gasoline and diesel). New applications have also been developed, for example in soil fumigation.

Global thiochemical end markets are expected to grow by around 5% per year on average in the coming years [(1)].

Arkema is currently the world number one in this sector [(1)]. Its main competitor is Chevron Phillips Chemical, with additional competition from local players for some products.

Highlights

Arkema started operations at its Thiochemicals complex in Kerteh, Malaysia in early 2015. To carry through this project, two joint ventures were set up with CJ CheilJedang (CJ). The first, in which Arkema holds an 86% interest and CJ a 14% interest, produces Thiochemicals (methyl mercaptan, DMDS) primarily for the animal feed, refining, petrochemicals and soil fumigation markets. The second joint venture, in which CJ has an 86% stake and Arkema holds the remaining 14%, was created to produce bio-methionine for animal feed using methyl mercaptan manufactured by Arkema at the same complex and based on CJ's innovative and very competitive new industrial bio-fermentation process, which uses bio-based raw materials to produce L-methionine. The project has enabled the Group to strengthen its global position with production units in Europe, the United States and now Asia.

In July 2017, Arkema announced a project to double its methyl mercaptan production capacity at its Kerteh site in Malaysia to support the strong growth of the animal feed market in Asia and thereby strengthen its world-leading position in high value-added sulfur derivatives. This additional capacity is expected to start production in 2020. A project to double production capacity at the Beaumont site in the United States is also under review.

Fluorogases (9% of Arkema sales in 2017)

Products and markets

The Fluorogases Business Line manufactures and markets a range of HCFC and HFC products under the Forane® brand. This is a worldwide business for the Group, with production sites in France, the United States and China. The Business Line also develops fourth-generation HFO blowing agents with zero ozone depletion potential (ODP) and low global warming potential (GWP).

These products are primarily used in two sectors:

- refrigeration and air-conditioning (notably in construction, automotive and distribution) and foams (blowing agents for polyurethane foam, for example). These emissive applications are subject to regulatory changes and are expected to grow by an annual average of 1% to 2% over the coming years [(1)], driven primarily by the development of air-conditioning equipment in emerging countries; and
- fluoropolymers such as polytetrafluoroethylene (PTFE), and polyvinylidene fluoride (PVDF), which is produced by Arkema as part of the Technical Polymers Business Line. Going forward, average annual growth in these markets is expected to reach between 4% and 5% [(2)], and can reach even higher rates for some fluoropolymers like PVDF.

(1) Source: Arkema internal estimates.

(2) Source: IHS Chemical Economics Handbook – Fluoropolymers, April 2016.

The size of the global fluorogas market is estimated at 1.9 million tonnes [1].

Arkema is the world number three in Fluorogases [1], with its main competitors being Chemours, Mexichem, Honeywell and several Chinese players (Dongyue, Juhua).

With regard to emissive applications, the implementation of the Montreal and Kyoto Protocols has led to a change in fluorogas regulations in a certain number of countries. For this reason, the transition from old generations (HCFC) to existing generations (HFC) then new generations (HFO) of products is taking place progressively at different paces depending on the region, application and product.

For HCFCs, regulatory changes in developed countries, notably regarding HCFC-22, have led to their use being phased down in emissive applications. Regulations vary from region to region, with Europe having implemented a total ban and North America permitting regulated sale for maintenance use only as part of a quota allowance system, which significantly tightens the balance between supply and demand. Under this quota allowance system, the Fluorogases Business Line generates a significant share of its results in the region from the sale of HCFC-22, a situation which has continued after allowance quotas were revised downward for the period 2015 to 2019. From 2020, the production and import of HCFC-22 will no longer be allowed in the United States. Only sales of existing stockpiles and recycled products will be authorized. For new equipment and foam expansion in Europe and North America, HCFCs are being replaced by HFCs. However, as per Article 5 of the Montreal Protocol, developing countries are still authorized to use HCFCs, albeit with quotas in some cases.

HFCs have also been the object of recent regulatory changes such as the European F-Gas regulation, applicable since 1 January 2015, which introduces a quota system that gradually phases down, or bans in a few cases, the use of these fluorogases in certain applications, and the European directive on mobile air-conditioning systems (MAC), which bans the use of refrigerant gases with a global warming potential higher than 150 in new vehicle platforms manufactured after 1 January 2013 and in all new vehicles sold in Europe after 1 January 2017. More generally, the October 2016 Kigali Amendment to the Montreal Protocol aims to gradually phase down the use of HFC fluorogases.

To comply with these regulations, and the HCFC regulations first and foremost, the Fluorogases Business Line has developed HFC blends (32, 125, 134a, 143a, etc.) and new substitutes for foams. Together with HFC-32, HFC-125 is an essential component of refrigerant blends of current generation fluorogases. Among these blends is R-410A, which replaces HCFC-22 in air-conditioning equipment in construction. Arkema has an HFC-32 production unit in Calvert City, United States, and an HFC-125 production unit in Changshu, China.

The Fluorogases Business Line also includes the sebacic acid business, which has a production site in China's Hebei Province. Derived from castor oil, sebacic acid is notably used in the production of polyamide 10.

Highlights

Between 2013 and 2014, the Fluorogases Business Line was impacted by increased competitive pressure from certain Chinese producers and by a less favorable product mix, which negatively affected prices and margins. Consequently, EBITDA for the business decreased by €100 million between mid-2013 and mid-2014 compared with the level of the prior 12 months.

Arkema made it a priority to fully offset this decline between 2015 and 2018 and return the Business Line to historical levels of profitability. This objective was achieved a year early, at the end of 2017, thanks to internal measures to optimize fixed and variable costs and to gradually improving market conditions supported notably by regulatory changes such as the definition of the HCFC-22 quota allowances in the United States, the 1 January 2015 entry into force of the European F-Gas regulation, which introduces a quota system for HFC gases in Europe, and some claims requesting the application of antidumping duties in the United States.

Concerning competitiveness, Arkema shut down in the 1st quarter 2017 the R134a fluorogas unit and reorganized the Pierre-Bénite site in France in response to the expected decline in demand for 134a in Europe following the 1 January 2017 application of the European MAC directive, which bans the use of this gas in all new vehicles sold within the EU. Arkema had already stopped fluorogas production at the Zaramillo site in Spain in the second quarter of 2015.

Arkema also aims to participate in the development of HFOs, the low-GWP next generation of Fluorogases. Arkema has thus developed its own technology for producing 1234yf, which is the standard developed for replacing 134a in car air-conditioning. However, the right to sell this fluorogas in this market is currently patent-protected by US-based company Honeywell. Arkema considers that these patents are based on weak claims and that

(1) Source: IHS Chemical Economics Handbook – Fluorocarbons, September 2017 and Arkema internal estimates.

Honeywell's practices hinder fair competition. For this reason, Arkema has launched legal actions against Honeywell, on the one hand, to have the patents declared null and void and with the European Commission, on the other hand, to obtain a fair, reasonable and non-discriminatory (FRAND) license to market the product. In 2017, a new complaint was filed with the European Commission against Honeywell for abuse of dominant position. Arkema believes that this new complaint will ensure a straightfoward path to enable Arkema to contribute to a competitive market by obtaining a FRAND license to Honeywell patents. Consistent with the filing of the new complaint, Arkema has withdrawn its previous complaint. Arkema looks forward to the European Commission's thorough and timely investigation of Honeywell's antitrust practices. Arkema's announced 2020 targets do not include any contribution from 1234yf. Arkema has, however, built a production unit at its Changshu site in China to ensure it can supply its customers once it is in a position to do so.

Arkema is also pursuing the development of the new low-GWP Forane® 1233zd, which serves as a blowing agent for polyurethane foams used in the production of domestic refrigerators and freezers, commercial refrigeration, spray foam, polyurethane insulating boards for buildings, and other construction applications.

With regard to upstream integration in fluorspar, Arkema has entered into a long-term fluorspar purchasing agreement with Canada Fluorspar Inc. (CFI). The two companies were partners in the Newspar joint venture until the Group sold its stake to CFI in April 2016.

Hydrogen Peroxide (4% of Arkema sales in 2017)

Products and markets

The Hydrogen Peroxide Business Line includes hydrogen peroxide, sodium chlorate and sodium perchlorate.

Hydrogen peroxide is a global business for Arkema, with production units in Europe (France and Germany), North America (Canada and the United States), and Asia (China). Sodium chlorate, which is mostly used in the paper pulp market, is produced only at the Jarrie site in France. Arkema is a regional player for this product.

Hydrogen peroxide is primarily used in paper pulp, chemical products (including organic peroxides in the case of Arkema), water treatment, disinfection of food packaging, cleaning of electronic components, and textiles. Its intrinsic properties, particularly its environmental safeness, offer good prospects, with an estimated global long-term growth of 2% to 3% annually [(1)]. Energy is a major component of the business's production costs.

Arkema is ranked third worldwide in terms of hydrogen peroxide production [(2)]. Its main competitors are Solvay, Evonik, EKA (AkzoNobel) and PeroxyChem. The size of the global market is estimated at 3.7 million tonnes [(1)].

Highlights

In September 2016, Arkema and PROMES, a laboratory run by French national research agency CNRS, inaugurated the "MicroSol-R" micro solar power plant in the French Pyrenees. The plant operates using Jarysol heat-transfer fluid (a chlorine-based product) specially developed by Arkema at the Jarrie site.

(1) Source: Arkema internal estimates.

(2) Source: IHS Chemical Economics Handbook - Hydrogen Peroxide, September 2014 and Arkema internal estimates.

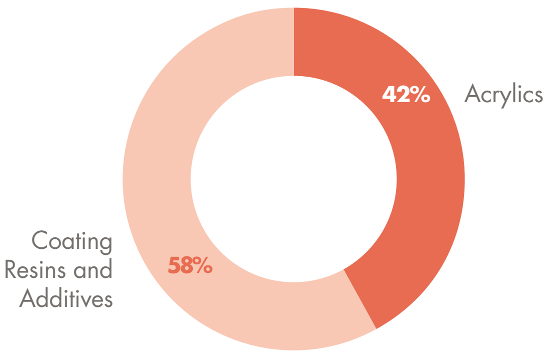
1.2.3 Coating Solutions

1.2.3.1 KEY FIGURES

(In millions of euros)	2017	2016	2015
Sales	1,924	1,771	1,849
EBITDA	244	208	190
Recurring operating income	135	83	72
Capital expenditure*	88	82	137

* *Excluding investments relating to portfolio management operations and investments with no impact on net debt.*

1.2.3.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2017) (1)



1.2.3.3 OVERVIEW OF THE DIVISION'S BUSINESS

The Coating Solutions division comprises the Acrylics and Coating Resins and Additives Business Lines.

Since its stock market listing, Arkema has strengthened its Acrylics activities by securing competitive upstream acrylic monomers in Europe, North America and Asia, by developing downstream integration of its acrylic monomers and by building an integrated production chain in the coatings sector. This strategy has been supported by various acquisitions. In 2007, Arkema acquired rheology additives specialist Coatex. In 2010, it purchased certain acrylics assets from the Dow Chemical Company in North America, including its Clear Lake, United States monomers site and downstream emulsions activities. In July 2011, it bought the coating and photocure resins business from Total. In 2014, it acquired a stake in an acrylic monomer production unit in China.

The Coating Solutions division is built around a coherent set of activities, with a downstream segment focused on the coatings market (decorative paints and industrial coatings), and a competitive upstream segment in acrylic monomers supplying the coatings market and higher-growth markets like superabsorbents and water treatment. Building on an industrial footprint in three continents and the market's most comprehensive product range, the Coating Solutions division is implementing a strategy based on:

- pursuing the downstream integration of acrylic monomer activities, with the target of achieving around 45% integration including long-term partnerships by 2020, compared with around 37% in 2017. Downstream acrylics will be strengthened through long-term partnerships with industry leaders, geographic expansion into higher-growth regions, innovation focused on the development of more environmentally friendly solutions and bolt-on acquisitions; and
- strengthening the competitiveness of the upstream by maintaining technological leadership and enhancing operational efficiency.

The main purpose of this strategy is to enhance the division's performance and reduce its cyclicality.

Acrylics (10% of Arkema sales in 2017)

Products and markets

The main products of the Acrylics Business Line are acrylic acid and derivatives (esters).

The primary raw material used by the Acrylics Business Line is propylene, making supply security a critical factor for Arkema. Its main supplier in France is Total Petrochemicals France. In the United States, Arkema has a supply agreement with Enterprise. For more details on both agreements, see section 1.5 of this document.

(1) In 2016, division sales by Business Line broke down as follows: 41% Acrylics and 59% Coating Resins and Additives.

The Acrylics production sites are located in Carling, France, Clear Lake and Bayport, United States and Taixing, China.

The size of the global acrylic acid market was estimated at 5.8 million tonnes in 2017 [(1)].

The main markets for acrylics are coatings (such as decorative paints, industrial coatings and photocure resins), superabsorbents, adhesives, water treatment as well as the energy industry and, more particularly, enhanced oil and gas recovery. In coming years, growth in coatings, especially paints, is expected to be supported by the development of the construction market in emerging countries, by the increasing use of high performance formulations in paints, and by the gradual recovery of the construction industry in the United States and in Europe. Demand for superabsorbents is expected to benefit from the growing use of diapers in emerging countries like China and India, and from the aging population in more mature markets. Water treatment is also expected to enjoy buoyant growth thanks to the increased water use driven by economic development and urbanization in emerging economies and stricter environmental regulations on municipal and industrial water treatment. Over the next few years, acrylics end markets may grow by an average of 4% annually [(1)]. Growth should average an annual 5% in Asia and around 3% in the Americas (North, Central and South) and in Europe [(2)].

Arkema is the second largest acrylics producer worldwide [(2)]. Its main competitors are BASF, DowDupont, Nippon Shokubai and several Asian players.

In 2017, market conditions gradually improved from the lows seen in 2016. The Group estimates that they are between the bottom and the middle of the cycle.

Highlights

To keep pace with growth in its end markets and reinforce its geographic presence in Acrylics, Arkema announced:

- in January 2014, the project to set up Taixing Sunke Chemicals (Sunke), a joint venture with Jurong Chemical, which owns and operates acrylic acid and butyl acrylate production units at the Taixing site in China.

  In a first stage finalized in October 2014, Arkema gained access to 160,000 tonnes of annual production capacity for an investment of US$240 million.

  In 2016, Arkema negotiated a 50/50 split in site capacity rights with its partner, Jurong Chemical, giving the Group access to an additional capacity of 80,000 tonnes of acrylic acid per year for a limited cash outflow; and
- in January 2017, a project to replace two end-of-life acrylic-acid reactors with annual capacities of 45,000 tonnes each at its Clear Lake site in the United States with a single new reactor with an annual capacity of 90,000 tonnes. The US$90 million investment will make Clear Lake one of the most competitive acrylics sites in North America while supporting growing demand in the region.

In addition, in March 2017, Arkema completed the sale to INEOS of its 50% interest in Oxochimie, their oxo alcohol production joint venture, along with the associated business assets. Produced at the Lavéra site in France, these products were in part used to manufacture Arkema's acrylic esters in Europe. They were also sold on the merchant market, representing for Arkema annual third-party sales of some €40 million. INEOS continues to supply Arkema's acrylic ester units.

Coating Resins and Additives (13% of Arkema sales in 2017)

The Coating Resins and Additives Business Line comprises two businesses: coating resins and rheology additives (Coatex).

Products and markets

Coating resins

Arkema is one of the major suppliers of resins to the paint and coating industry, with a comprehensive offering in terms of technologies and geographical coverage. Arkema's wide-ranging innovative product range comprises the following:

- liquid resins: these include emulsions and alkyd, acrylic and polyester resins and serve the decorative paint and industrial coating markets as well as the adhesive and sealant, ink and road paint markets;
- powder resins for the metal coatings market: by eliminating the need for solvents, these 100% dry-content solutions comply with European requirements for the production of low-VOC coatings; and
- PVC additives, which are acrylic-acid derivatives that include impact modifiers and processing aids.

The coating resins business operates worldwide, with sites in the United States, Europe, Asia and South America and R&D centers in Europe and the United States, enabling Arkema to support its global customers in their search for innovative and environmentally friendly formulations.

(1) Source: Arkema internal estimates.

(2) Source: IHS Chemical Economics Handbook – Acrylic Acid and Esters, September 2017 and Arkema internal estimates.

Growth in the business's end markets could average up to 4% annually over the coming years [(1)].

Arkema ranks among the world's leading companies in the coating materials market. Its main competitors are BASF, DowDupont, Allnex, Synthomer and DSM.

Rheology additives (Coatex)

The rheology additives business manufactures primarily acrylic-based polymers that are used as dispersants and thickeners. The main applications for these high-growth specialty chemical activities are in the paper, paint, water treatment, cosmetics, textile and concrete industries. Coatex has industrial sites and storage facilities in Europe, the United States, Asia and Latin America.

Highlights

Arkema has taken the following steps to support the development of Coating Resins and Additives:

- in September 2016, the Group announced plans to expand its resin manufacturing complex in Navi Mumbai, Maharashtra, India by building a polyester powder resin production unit with operations scheduled to start in 2018. Representing an investment of some US$15 million, the project comprises a new production unit and a new laboratory dedicated to application development and technical assistance. The new facilities will enable the Group to serve customers more effectively in the fast-growing powder coating market;
- in 2015, the Group achieved a 60% increase in its acrylic resin production capacity at the Araçariguama site in Brazil by starting up a new reactor. Thanks to this addition, the Group can manufacture specialty chemicals that were previously unavailable in the region; and
- the Group has also continued to innovate with the development of several innovative solutions, including Celocor®, an additive that potentially reduces the cost of paint by partially replacing titanium dioxide.

In addition, in 2017, Coatex renewed its long-term contract for the supply of dispersants to the Omya group.

Lastly, to improve profitability, the Group announced the shutdown of coating resin production at the Villers-Saint-Paul site in France in late 2015, a decision that resulted in the loss of 26 positions.

(1) *Source: Arkema internal estimates.*

1.3 CAPITAL EXPENDITURE

1.3.1 Overview of Arkema's main capital expenditure projects over the past three years

Arkema's capital expenditure on property, plant and equipment and intangible assets [(1)] amounted to €441 million in 2017 (of which €431 million in recurring capital expenditure, representing 5.2% of sales), €423 million in 2016 (5.6% of sales) and €431 million in 2015 (5.6% of sales). Over the past three years, Arkema has invested some €432 million per year on average.

Capital expenditure in the past three years has been focused on (i) facility maintenance, safety, environmental protection and information technology, accounting for approximately 62% of the total, and (ii) development projects, *i.e.*, either major projects or productivity improvements to existing facilities, accounting for approximately 38%.

Over the period, 39% of capital expenditure was made in the High Performance Materials division, 39% in the Industrial Specialties division, 19% in the Coating Solutions division, and 3% on corporate projects. The breakdown of capital expenditure by region was 49% in Europe, 30% in North America, 20% in Asia and 1% in the rest of the world.

Arkema's main development capital expenditure projects over the past three years were:

2015	Performance Additives	Two-fold increase in organic peroxide production capacity at the Changshu site in China started in early 2016.
2016	Fluorogases	Construction of a 1234yf refrigerant fluorogas unit at the Changshu site in China.
	Performance Additives	Two-fold increase in specialty molecular sieve production capacity at the Honfleur site in France, with phase one started in 2016 and phase two in early 2017.
2017	Incubator	Increase in PEKK production capacity in France started in early 2017.
	Bostik	Opening of a new hot melt pressure sensitive adhesives (HMPSA) unit in Gujarat, India.
	Technical Polymers	25% increase in PVDF fluoropolymer production capacity at the Changshu site in China, which came on stream in first-half 2017.
2015-2017	IT	Deployment of IT systems as part of customer supply chain optimization in Europe and Asia, completed in late 2017.

(1) Excluding capital expenditure related to portfolio management operations. In 2016, excluding €22 million corresponding to fixed assets that were reassigned with no impact on net debt. For further details, see section 4.1.9 of this document.

1.3.2 Overview of the main capital expenditure projects in progress

At the date of this document, Arkema had the following main capital expenditure projects in progress:

Technical Polymers	20% increase in PVDF fluoropolymer production capacity at the Calvert City site in the United States, with start-up expected for mid-2018.
Incubator	Construction of a world-scale PEKK plant at its Mobile, Alabama site in the United States, scheduled to come on stream in second-half 2018.
Coating Resins and Additives	Construction of a polyester powder resin unit in Navi Mumbai, India, scheduled to come on stream in late 2018.
Performance Additives	Extension by more than 30% of Sartomer's photocure resin production capacity at the Nansha site in China, with start-up scheduled in early 2019.
Acrylics	Replacement of old acrylic acid production units at the Clear Lake site in the United States, with start-up of the new facility scheduled in 2019.
Thiochemicals	Two-fold increase in production capacity at the Thiochemicals complex in Kerteh, Malaysia, with an expected start-up in 2020.
Technical Polymers	An investment plan in Asia representing around €300 million over five years to increase Arkema's global production capacity of polyamide 11 and Pebax® by 50%.

Capital expenditure is primarily funded by the cash resources that Arkema generates during the year. In addition, the Group may also use the credit resources detailed in section 4.1.8 of this document.

1.3.3 Future capital expenditure

Arkema aims to further reduce its capital intensity and targets annual capital expenditure of approximately 5.5% of sales, of which around 55% for maintenance and 45% for development. These amounts do not include the two exceptional investment projects that will be carried out in Thiochemicals to double the production capacity of the Kerteh complex in Malaysia, on one hand, and the project to invest around €300 million in specialty polyamides in Asia, on the other hand.

In 2018, Arkema expects capital expenditure to amount to around €550 million, corresponding to recurring capital expenditure representing around 5.5% of sales and exceptional investments for the specialty polyamides project in Asia and the Thiochemicals project in Malaysia.

Arkema believes that its current cash situation and financing resources (see section 4.1.8 of this document) are sufficient to finance its future capital expenditure projects, in particular those mentioned in sections 1.3.2 and 1.3.3 of this document.

1.3.4 Property, plant and equipment

Arkema has a policy of owning its industrial facilities. By way of exception, Arkema sometimes leases offices and warehouses from third-party lessors. Lease commitments are included in the off balance sheet commitments described in note 29 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

The net book value of Arkema's property, plant and equipment was €2,464 million at 31 December 2017. This figure includes transportation equipment and pipelines owned by Arkema (see note 11 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document).

1.4 R&D STRATEGY AND INNOVATION

1.4.1 R&D objectives

Research and development (R&D) is one of the key drivers in Arkema's growth strategy.

R&D is focused on four primary goals:

- contributing to Arkema's operational excellence by making innovative improvements to production facilities, thereby enabling the Group to produce safely and competitively with the smallest environmental footprint possible;
- developing the Group's products by continuously improving their performance in existing markets and by systematically exploring new markets;
- anticipating technological and market changes and developing products today that meet society's needs in the coming years; and
- introducing disruptive innovations that will secure the Group's technological positioning in the medium term.

In a constantly changing world, achieving these last two goals is largely contingent on the Group's ability to anticipate the main challenges of tomorrow. Therefore, Arkema has identified the main megatrends shaping society, a work which it is regularly updating and which has led it to define and leverage research platforms in the six following areas:

- bio-based products;
- lightweight materials and design;
- new energies;
- water management;
- electronics solutions; and
- home efficiency and insulation.

The R&D department is also responsible for developing disruptive project innovations, enabling Arkema to anticipate product and technology trends that are fundamental to Arkema's businesses. The department relies on a dedicated unit called the incubator, which supports these innovations until they are ready to be brought to market. When the products or technologies have reached an appropriate level of maturity, they are transferred to the relevant businesses for commercial development.

Renowned for its strong innovation culture, Arkema was listed as one of the world's 100 most innovative companies for the seventh year in a row in the "2017 Top 100 Global Innovators" by Clarivate Analytics.

1.4.2 R&D resources

1.4.2.1 QUANTITATIVE INFORMATION

In 2017, R&D expenditure represented almost 2.8% of Arkema's sales and the Group's R&D teams comprised more than 1,500 researchers, spread across three regional research and innovation hubs in Europe, Asia and North America.

R&D efforts break down among Arkema's three divisions and its corporate research program as follows:

- the High Performance Materials division accounts for 51% of Arkema's R&D expenses, with a particular focus on the materials of tomorrow. Innovations combining performance with sustainable development include materials made from renewable feedstocks, materials and adhesives with a low environmental impact, lightweight materials for transportation, structural adhesives used to assemble these materials, and functional adhesives for the construction and manufacturing industries. High Performance Materials fuels its growth by expanding its product range and by adapting the performance and functions of its products to new market demands. The division's technical excellence is reflected in the strong reputation of brands such as Rilsan®, Pebax®, Luperox® and Bostik®, and in the widespread consumer awareness of retail brands like Sader® and Quelyd®;
- the Industrial Specialties division represents 20% of Arkema's R&D expenses, with an emphasis on ensuring the division's processes are competitive and finding new applications and end markets for its products. One of its primary objectives is to continuously improve its main processes, such as those used for fluorochemicals, thiochemicals and hydrogen peroxide, in order to make them safer, more reliable, more productive and therefore more competitive, while minimizing their environmental impact. To this end, R&D teams study the benefits of new raw materials, test new catalysts and reactor types and develop new synthesis pathways. They also contribute to the

development of new products such as the new HFO low global warming potential (GWP) refrigerants;

- the Coating Solutions division accounts for 19% of Arkema's R&D expenses, with its main priority being to develop innovative solutions for the coatings market while combining technical performance with sustainable development. In addition to working closely with customers to provide responsive technical support, the division's R&D teams also carry out process research, which enables them to optimize production costs and produce new formulas at an industrial scale; and
- the corporate research program represents 10% of Arkema's R&D expenses. Defined by the R&D department and subject to the approval of Arkema's Executive Committee, the program aims to prepare the innovations of tomorrow.

1.4.2.2 ORGANIZATION AND MANAGEMENT OF INNOVATION

The R&D department reports directly to the Chairman and Chief Executive Officer. It coordinates all of Arkema's research programs worldwide, the development of research platforms and the implementation of partnerships.

The R&D department ensures that all projects funded by Arkema's various businesses are scientifically and technologically relevant and in line with the Group's overall strategy. The ideas for projects come from various sources: scientific or technological proposals, current or future needs of customers or the market to meet health, safety and environment challenges and product or process innovations that contribute to sustainable development.

Each business manages its own project portfolio, measuring the degree of maturity of the various projects based on a structured decision-making process (design, feasibility, development, and marketing) and defining portfolio management priorities while optimizing the resources used.

The R&D department creates and steers corporate R&D programs, identifies development opportunities and new research areas and manages open innovation tools.

To do this, it leverages the following resources:

- a scientific committee made up of the Group's scientific directors, who are specialized in either a major scientific field or a region, the global R&D managers for the businesses, the incubator's department heads and the head of intellectual property. Outside experts may also be invited to take part in this committee;
- research centers spread across the three regional hubs in Europe, North America and Asia;
- the Intellectual Property department, which directs patent filing Group-wide and coordinates the management of intellectual property, a fundamental part of Arkema's asset base (see section 1.4.3); and
- the Incubator, which develops the Group's disruptive innovations until they are ready to be brought to market.

This organization is supplemented by R&D partnerships, which sometimes extend to shared laboratories (see section 1.4.2.3).

Lastly, the R&D department ensures that the skills and equipment at Arkema's R&D centers are kept up-to-date and in line with the latest digital and technological innovations.

FOCUS

Industry 4.0 and the use of digital technology in research

As part of the innovation process, Arkema's R&D teams leverage the expertise required in an increasingly digital environment. Therefore, while projects are conducted by groups of experts in the areas being researched, their success also depends on the use of calculation skills and tools. Digital skills, such as modeling, 3D views and calculation algorithms and their interpretation, enhance the efficiency of research carried out to develop and roll out new products or materials. These technologies are critical in enabling Arkema to meet the quality and productivity challenges set by its customers in such areas as the production of composites for the automotive industry. They also make it possible to predict and optimize the impacts of an industrial site's raw material, product and waste flows within its regional ecosystem.

1.4.2.3 COLLABORATIVE RESEARCH

Partnerships

Partnerships are a fundamental prerequisite for research excellence.

Research partnerships may take the form of upstream partnerships with scientific bodies, research contracts, for example with doctoral or postdoctoral students, and original and innovative structures. In France, for example, Arkema takes part in industrial endowment programs, such as the Industrial Organic Electronics Chair in Bordeaux. It has also formed special partnerships as part of major strategic research programs, such as with the laboratory of the ESPCI physics and chemistry engineering college in Paris, France.

Arkema also forms downstream partnerships with industrial partners as part of joint research programs with customers, suppliers and even competitors to develop new products and technologies. As part of this, Arkema establishes many research partnerships with customers in order to better understand market demand and to accelerate the development and time-to-market of innovative technical solutions.

Numerous structuring tools have been put in place both nationally and internationally to encourage the implementation of collaborative research programs. Arkema makes the use of these tools one of the key aspects of its research policy. Many collaborative programs have been undertaken with the European

Commission, such as Horizon 2020, and with various French bodies like the national research agency ANR, the environment and energy management agency ADEME, and the interministerial fund. These partnerships allow Arkema's R&D to benefit from joint funding with the public sector and from active collaboration with multiple partners. In France, Arkema has been particularly active in the various aspects of the French government's *Investissements d'Avenir* investment program by taking part in both collaborative research projects and multidisciplinary bodies such as technological research institutes. In 2015, Arkema became a partner of the Raw Materials Knowledge Innovation Community (KIC) in Europe, which aims to address the problem of European access to critical raw materials and to develop projects in the areas of mineral extraction, recycling and rare product substitution.

Open innovation

In addition to research-contract partnerships, Arkema has implemented a dynamic policy on open innovation.

Two examples of this policy are outlined below:

Shared laboratories

The R&D department has set up several shared laboratories that team Group employees with staff from another organization, most frequently on the latter's premises.

Examples of partners include:

- French atomic energy agency CEA, with the creation of shared laboratories within the following organizations:
  - French solar energy institute INES, with the aim of improving polymer performance in photovoltaic applications, and
  - IT electronics laboratory LETI for organic electronics and micro-electronics;
- the Lorraine-based *Pôle de Plasturgie de l'Est* (PPE) for the development of thermoplastic composites; and
- Hydro-Québec, Canada's largest electricity producer, which set up a shared energy storage R&D laboratory with the Group at Arkema's Lacq Research Center in France. The laboratory primarily works on developing the next generations of materials used to make lithium-ion batteries.

Technology acquisition policy

The R&D department has a technology acquisition policy that involves targeting high value-added SMEs and startups and supporting them through the development process, allowing them to grow in an application-oriented environment thanks to Arkema's resources and expert staff. These equity interests enable Arkema to position itself in the ultra-innovative product and high-tech markets.

1.4.3 Patent and trademark management

Arkema attaches great importance to industrial property rights in respect of both trademarks and patents in order to protect the innovations that result from its R&D and to promote its products among customers. Together, the Group's patents and trademarks represent a key asset for its business.

1.4.3.1 PATENTS

Protecting the Group's technologies, products and processes with patents is key in optimally managing its business.

Consequently, Arkema files patent applications in its main markets in order to protect new chemical compounds, new high technical performance materials, new synthesis processes for major industrial products and new product applications.

The number of patents granted and the number of patent applications filed annually are good indicators of how much a company invests in R&D, and how promising the results are. In 2017, Arkema filed 239 priority patent applications. At 31 December 2017, it held 8,711 patents and had 5,461 patent applications pending [1]. The high ratio of pending patent applications to patents filed per year is due to the lengthy examination process.

Patent protection in countries where Arkema seeks it is typically granted for the maximum legal duration of twenty years, calculated from the application date. The level of protection varies from one country to another, depending on the patent type and scope. Arkema seeks patent protection in many countries and regions, primarily in Europe, China, Japan, South Korea, North America, India and South America.

Arkema actively protects its markets. To this end, it monitors competitors and takes action against any third-party infringements of its patents. The Group also challenges third-party patents that are granted without justification and takes legal action to have them declared null and void.

The expiration of a basic patent for a product or process can lead to increased competition as other companies bring new products to market. In some cases, however, the Group may continue to benefit commercially from a patent after its expiration

(1) *All patent applications filed as part of a centralized process – with the World Intellectual Property Organization (WIPO), for example – are counted as a single application, even though the application may result in several patents being granted depending on the number of countries subsequently selected.*

by leveraging expertise related to a product or process or by filing for application or improvement patents.

Arkema also has a policy of obtaining and granting patent licenses to meet operating requirements. For inventions by employees, the Group continues to use the system that it implemented in 1989, whereby it grants additional compensation to employees whose inventions have given rise to a commercially exploited patent.

1.4.3.2 TRADEMARKS

Trademark protection varies from country to country. While in most countries, trademark rights are the result of registration, in some, they may be based on usage regardless of registration. Trademark rights are obtained by registering the trademark nationally, internationally or even supra-nationally in the case of EU trademarks. Registrations are usually granted for a ten-year term and can be renewed indefinitely.

Arkema implements a centralized, dynamic trademark registration policy that draws on a worldwide network of intellectual property advisors.

In particular, Arkema holds the trademark rights to its main products. Examples from Arkema's flagship brands include Pebax®, Rilsan®, Forane®, Altuglas®, Plexiglas® (which is used exclusively on the American continent), Bostik®, Sader® and Quelyd®. Arkema has also trademark protected the names of its latest innovations, such as Kepstan®, Nanostrength® and Apolhya®.

Mindful of the importance of its brand portfolio, Arkema monitors trademark registrations by competitors in similar business sectors and has a policy of taking legal action against infringements.

1.4.4 The incubator and the six innovation platforms

1.4.4.1 THE INCUBATOR

The incubator was set up to develop disruptive innovations. Since its creation, it has notably developed a new PEKK polymer capable of withstanding ultra-high temperatures under the Kepstan® brand, nanostructured PMMA for automotive glazing under the Altuglas® ShieldUp brand and piezoelectric polymers via the Piezotech subsidiary. Working closely with academic and industrial partners, Piezotech is developing applications for electroactive polymers, notably in the area of haptics for virtual reality devices and sensors for consumer electronics.

The incubator was also behind the 2016 launch of Arkema's commercial thermoplastic composites line, which includes:

- the Elium® range of solutions for infusion molding and resin transfer molding (RTM) technologies; and
- the Polystrand® range of continuous fiber-reinforced thermoplastic solutions in tape or sheet form, for thermo compression, thermo-stamping and lamination technologies.

In 2017, Arkema doubled its Kepstan® PEKK production capacities in France and confirmed its plan to invest in a world-scale PEKK plant at its Mobile, Alabama site in the United States, scheduled to come on stream in second-half 2018. These investments will help to meet growing demand in the carbon fiber reinforced composites and additive manufacturing (3D printing) markets.

1.4.4.2 INNOVATION PLATFORMS

Arkema has six innovation platforms: bio-based products, lightweight materials and design, new energies, water management, electronics solutions, and home efficiency and insulation. Their purpose is to keep Arkema's R&D in line with the megatrends shaping our world now and in the future.

Bio-based products platform

Mindful of the need to reduce the use of non-renewable fossil resources, Arkema has long been involved in the development of bio-based products such as bio-based polyamides. In addition, the Group also uses bio-based products from other sources, such as the bioethanol used as a feedstock for Acrylics and Thiochemicals.

Bio-based Rilsan® and Pebax® polyamides

Arkema has developed a wide range of bio-based polyamides derived from the castor oil plant, which is mainly cultivated in water-scarce regions of India. These unique products are used in a wide variety of markets, including the automotive, energy, optics and electronics markets.

Arkema's portfolio of bio-based polyamides has expanded considerably since 1947, when polyamide 11 entered industrial production. With the Pebax® Rnew range, for example, Arkema has developed thermoplastic elastomers that combine blocks of polyamide 11 with blocks of flexible material. Boasting outstanding energy return, lightness, shock resistance and durability as well as a broad spectrum of flexibility, this range of polymers has become the standard for ski boots and sport shoe soles.

Arkema has also leveraged its expertise in bio-based technology to develop the flexible yet temperature-resistant Rilsan® HT range. These polyamides offer outstanding performance enabling them to replace metal automotive parts, thereby helping to lighten vehicles and, by extension, reduce vehicle emissions.

The highly transparent Rilsan® Clear Rnew polyamides offer another, equally renewable-based variation of this range, with notable applications in the eyewear industry.

Lastly, the Group has developed a range of new, highly rigid materials under the Rilsan® XD brand for the production of numerous small parts found in telephones, computers and tablets.

Bio-methionine development partnership

Together with South Korea-based CJ CheilJedang, Arkema participated in the technical development of L-methionine, which is also partly based on the use of renewable raw materials.

Currently, virtually all methionine worldwide is produced from a chemical pathway using propylene. CJ CheilJedang has developed a completely different pathway that produces methionine from renewable sources by replacing the use of propylene with a unique bio-fermentation process, for which Arkema developed a special sulfur-based intermediate.

Implemented in the Kerteh facility in Malaysia, this highly innovative process has given rise to a number of patents. Its remarkable results have also led Arkema to study biocatalysis or enzyme catalysis as a synthesis process for other products in its portfolio.

Lightweight materials and design platform

Lightweight materials, particularly for transportation applications, can reduce fuel consumption while increasing vehicle speed and autonomy. The strong trend toward their development offers benefits for both users and society as a whole.

The polymers developed by Arkema are ideally positioned to support this trend, be they high-temperature polyamides designed to replace certain metal components in car engines (Rilsan® HT), structural adhesives that substitute for metal attachment systems, or composite materials.

The development of thermoplastic composite materials is a good illustration of the research platform's work. Current carbon-or glass-fiber-based composites make heavy use of thermoset polymers, for which the crosslinking process is irreversible. Examples include polyester and epoxy resins, which present two limitations: they cannot be recycled and their production cycle time makes them difficult to use in high throughput industries such as automotive.

To address this challenge, Arkema has developed thermoplastic-polymer-based composites by adapting its high-level chemical expertise in areas such as acrylics and polyamides to the specific needs of various markets. The Elium® resin, for example, is used in applications in the automotive and wind turbine industries. In the wind turbine market, where this resin's recyclability represents a major advantage, 25-meter-long Elium® blades have been installed on a demonstration turbine for qualification tests. The technology won an award at JEC Asia in 2017. Arkema has also developed, in partnership with IRT M2P, an industrial demonstration pilot showcasing fast resin transfer molding (RTM) technology that uses Elium® resin. With the help of its partners, the Group hopes to quickly reduce cycle time to under two minutes, thereby fulfilling a highly important criteria for automotive applications. In terms of performance, replacing steel parts with Elium® substitutes is expected to deliver weight savings of between 30% and 50%. In addition to development in the composites market, Arkema's R&D teams are assessing the processes for recycling the polymers concerned (acrylics, polyamides), which will enable users to recycle their waste via dedicated channels.

The Lightweight materials and design platform places particular emphasis on fast manufacturing technologies, such as 3D printing. Arkema regularly expands its product range with a view to becoming a key player in this fast-growing market, where strong demand is being driven by the aerospace, electronics, automotive and healthcare industries. The Group has significantly diversified its product range over the past years, enabling it to occupy a unique position with a range that now caters to the demands of all additive manufacturing technologies: selective laser sintering, stereolithography, material jetting and fused filament fabrication (FFF). The Rilsan® and Orgasol® polyamide powders in the Invent® range, for example, are used in selective laser sintering (SLS), offering such benefits as an excellent finish, ease of use and superior mechanical properties. The ultra-high performance Kepstan® PEKK makes it possible to obtain particularly hard-wearing and flame-retardant parts that meet the stringent specifications of the aerospace industry. And Arkema's range of UV-curing acrylic resins developed through the Sartomer subsidiary have been specially designed for PolyJet and stereolithography technologies, which are widely used in the 3D printing industry. In 2016, Sartomer launched the new N3xtDimension™ range of high performance solutions to meet this market's growing requirements for mechanical performance and esthetics. The same year, the Group announced a partnership with HP Inc. for the development of materials to be used in the US company's Multi Jet Fusion printers. In 2017, Arkema announced a development partnership with EOS, a world leader in 3D printing of metals and polymers. The agreement is in line with Arkema's strategy of developing industrial applications directly with end-users.

New energies platform

The development of new energies is a far-reaching megatrend driven by the world transition to a less fossil-fuel-dependent economy. Innovative polymer materials and chemicals are used to varying degrees in all available new energy solutions, including rechargeable batteries, supercapacitators, solar photovoltaic panels, wind turbines and heat pumps. Thanks to its technological expertise, Arkema can offer these various markets a number of innovative solutions.

In particular, Arkema has developed:

Materials for rechargeable batteries

Thanks to innovation in materials, binders and electrolytes, Arkema has a range of solutions designed for use in the development of batteries, particularly for electrical vehicles.

The Group's main product in this field is the Kynar® resin, a fluoropolymer used in lithium-ion batteries for several applications – in the electrodes as the binder for the active phase and as a protective coating for the separator. These products play a very important role in the battery's lifespan and performance. For this reason, innovative research is constantly being undertaken to improve their adhesion, chemical resistance, ease of use and other properties.

Arkema also develops lithium salts, which move lithium ions from one electrode to the other in lithium-ion batteries. Battery manufacturers need lithium salts that can withstand the increasingly challenging conditions in which their products are used, including high temperatures and rising electrochemical potential. Arkema has developed a synthesis process for innovative salts in its laboratories, in partnership, for example, with one of the world's industry leaders, Hydro-Québec. Following the success of these laboratory tests, the process is now being extrapolated to the pilot phase prior to commercial-scale production.

Materials for photovoltaic cells

Photovoltaic cells are made up of a number of highly technical organic materials that protect the silicon from outside elements. Arkema has harnessed its performance materials expertise to bring this market a large number of innovations, such as:

- the Apolhya® grafted polyolefins, which are used for the encapsulation or protection of photovoltaic cells due to their high transmittance and UV resistance;
- highly effective fluoropolymers for backsheet applications, and in particular the Kynar® resin films, which offer excellent UV resistance, chemical stability and mechanical performance. Arkema produces Kynar® film, for example, with an innovative formulation providing effective protection for the backs of solar modules while offering customers excellent value for money in this highly competitive industry; and
- Bostik Vitel® polyester adhesives, which are used for binding photovoltaic backsheets (PVDF on PET).

Arkema's research also benefits wind turbines, supercapacitators and many other fields related to new energies. Arkema's R&D teams are also attentive to future trends, such as the development of new batteries.

Water management platform

An important part of Arkema's technological research into process improvement is aimed at decreasing discharges to water. To this end, a global water management project, known as Optim'O, has been launched within Arkema (for more details, see section 2.4.2.3 of this document).

In terms of its product range, Arkema develops innovative solutions for water treatment, transportation and filtration.

Acrylic acid, for example, serves to manufacture polyacrylates that are used in water treatment plants to ensure the flocculation of suspended solids. Arkema is also pursuing its developments to use more hydrogen peroxide to disinfect cooling systems or as a water treatment product for drinking water and swimming pools. Unlike the chlorinated products typically used, this solution avoids chlorinated water discharges.

In terms of water transportation, Arkema has launched a Kynar® PVDF grade that is suitable for multi-layered pipes used to transport drinking water and can be implemented without additives. Thanks to its purity, it delays the growth of thin layers of bacteria and is compatible with the use of powerful disinfectants to ensure excellent water quality. The grade has received KTW certification from the German water and gas agency. Similarly, Rilsan® fine powders have been chosen by many cities to coat their drinking-water pipe networks and wastewater treatment plant equipment because of their strength, durability and flow properties.

However, Arkema deploys its main water management innovations in the area of filtration. Filtration membranes for waste and drinking water treatment are typically based on fluoropolymers, notably PVDF. Kynar® resin delivers outstanding performance in this market. When implementing water filtration systems, one of the key factors to monitor is the gradual clogging of the membranes by biofilms. With this in mind, Arkema and Polymem, a French SME specialized in hollow-fiber membrane filtration modules, jointly developed a new hydrophilic technology. Arkema developed a resin with durable hydrophilic properties and Polymem used this resin to develop a hollow-fiber membrane using these properties. The benefits of this technology include much finer filtration (suspended solids, bacteria and viruses), higher (+20%) volume of water filtered for constant energy consumption, and extended lifetime of filtration systems, from 5 to 10 years. The new Neophil™ PVDF hollow-fiber ultrafiltration membranes were granted NSF/ANSI 61 certification in 2017, enabling the Group to secure its first resin sales and its partner to immediately enter the North American market and to create its first drinking water production systems.

Electronics solutions platform

With its range of Technical Polymers (specialty polyamides and fluoropolymers), Arkema brings innovative solutions to the electronics market, which is currently experiencing strong growth in the smartphone and tablet segments, among others. Arkema markets materials designed to meet the most exacting specifications, be it for electronic devices' internal structural parts, which are required to be increasingly thin and made using the same simple injection molding process as well as offering ultra-high rigidity, or for external parts such as the cables and stylus, which need to be stain and shock resistant. Thanks to the Group's global network and the close collaboration between research teams in France, the United States and Asia, new technical solutions are constantly being developed to meet the needs of the main manufacturers.

A new polyphthalamide, for example, was successfully launched on the portable devices market, opening up new design possibilities thanks to its exceptional rigidity, dimensional stability and fatigue resistance. In addition, the Pebax® MH and MV range delivers a full spectrum of antistatic additive solutions, particularly for electronics packaging.

One of this platform's most ambitious projects concerns directed self-assembly (DSA), where block copolymers are used for nanoscale semiconductor etching.

Traditionally, lithography has been used to etch the structure of microprocessor and memory chips onto silicon wafers. The lithography process uses UV light to project a pattern of the structure onto the substrate, meaning that performance is governed by the laws of optics. However, this process has today reached its limits due to the use of extremely small patterns of just some dozen micrometers that are much smaller than the wavelengths of visible and UV light.

DSA lithography represents a major breakthrough, converting lithography from an optical technology to a molecular one. By using block copolymers' capacity to self-assemble at the scale of several dozen nanometers to form a variety of tunable geometric patterns (nanolines and nanocontacts), it is possible to create a desired nanostructure and thereby obtain extremely thin electronic nanocomponents. With this process, a 50:50 block copolymer will form nanometric lamellar structures whereas a 30:70 block copolymer will form cylinders. These forms are correctly aligned thanks to precise control of the surface energies, enabling patterns to be etched onto the surface of the silicon substrate before being transformed into electrical contacts.

Arkema owns proprietary technology for the synthesis of ultra-pure block copolymers with perfectly defined structures. The Group already produces these block copolymers on a pilot production line at its Lacq site in France, as part of the European PLACYD project whose participants include CEA-Leti, Intel and STMicroelectronics. The pilot line is able to produce block copolymers with the quality consistency required by the electronics industry.

Thanks to these positive results, in November 2015, Arkema forged a special R&D and marketing partnership with Brewer Science, a world leader in materials for the microprocessor industry. Numerous other partnerships have since been developed with major semiconductor players to assess this technology, for which production could begin in 2018.

Home efficiency and insulation platform

Energy efficiency, health, comfort and environmental footprint are key concerns in developing the building of the future, with consumer demand in the field regularly becoming greater and more complex. This trend is likely to continue over the long term. Against this backdrop and following the expansion of the Group's building material and home comfort product portfolio due to the acquisition of Bostik in 2015, Arkema has decided to make home efficiency and insulation a key focus of its R&D strategy and to set up a sixth innovation platform in this area.

Arkema offers solutions for the thermal insulation of buildings, which is achieved by combining vacuums or air, which have low thermal conductivity, with materials that provide mechanical strength, such as glass, metal and wood. In particular, Arkema markets a range of high-performance adhesives and sealants, such as adhesives for making double-glazed windows and adhesives for constructing doors and insulation panels.

This expertise continues to be actively developed within Bostik, where it forms a significant R&D focus. Particular attention is paid to formulations, where the Company proactively limits the use of additives with unfavorable toxicity profiles. For example, the most recent floor covering adhesives, Mipaflix 800, are phthalate- and solvent-free and have sufficiently low volatile organic compound (VOC) emissions to obtain an A+ rating as well as EC1 Plus, LEED and BREEAM certification.

The coating resins business also contributes to the development of healthier, more environmentally friendly homes. Most new grades of acrylic and alkyd emulsions, which are developed by this business, can be used without the addition of a coalescing agent, enabling customers to prepare very low VOC coatings. Some grades also capture formaldehyde. In addition, the new binders for exterior paints offered by Arkema have a high water content, enhanced dust resistance and excellent stability with regard to environmental conditions. Thanks to these improvements, consumers can use the coatings for a number of years, thereby reducing the environmental impact of maintenance and replacement works.

The innovation platform also benefits from the development of the Smart House by Arkema, which was inaugurated at the Venette R&D site in France in 2015. This one-of-a-kind house-laboratory was designed to bring together players in construction to cooperate on innovation and sustainable development. The purpose of the concept house is to test, develop and approve new solutions to major challenges facing the construction industry, particularly energy efficiency, environmental footprint and the health and comfort of building occupants. Since its creation, the project has offered a real-scale illustration of several innovative solutions, including new adhesive concepts that simplify floor replacement and make recycling possible, and solutions that improve occupants' acoustic comfort. The improved functionality of construction components such as walls and floors is also under review. The approach developed at the Smart House is part of the Group's open innovation ecosystem, where input from such diverse participants as economists, rental companies, architects, customers, universities and suppliers provides a better understanding of future needs.

1.5 MATERIAL CONTRACTS

In order to conduct its business, Arkema has concluded a number of contracts that are of major importance either because they enable it to secure access to raw materials or energy resources or to ensure operating procedures at its production sites, or because they represent material financial income.

1.5.1 Raw materials and energy supply contracts

The agreements described in this section represent major raw material or energy supply contracts that cover several years. For confidentiality reasons, the Group cannot disclose the terms and conditions of certain contracts, including those governing Arkema's supply of hydrofluoric acid (HF), which is used as a main raw material for its fluorochemicals activities, of cyclododecatriene (CDT) or cyclododecane (CDAN), which are used to manufacture PA 12, and of oxo alcohols, which are a feedstock for acrylic esters.

CONTRACT WITH ENTERPRISE PRODUCTS PARTNERS L.P. ("ENTERPRISE") FOR THE SUPPLY OF PROPYLENE IN THE UNITED STATES

Arkema Inc. concluded a contract for the supply of propylene in the United States with Enterprise, one of the leaders in the US energy industry. The contract takes advantage of the development of shale gas in the United States and secures a long-term supply (more than ten years) of propylene produced by propane dehydrogenation (PDH). The first deliveries could be made by Enterprise from its Mont Belvieu production unit in 2018.

CONTRACT WITH TOTAL PETROCHEMICALS FRANCE (TPF) FOR THE SUPPLY OF PROPYLENE (C3) FOR ARKEMA FRANCE'S CARLING SITE

Following the shutdown of the TPF steam cracker in 2015, the terms under which Arkema France's Carling site was supplied with propylene were reviewed to ensure the long-term viability of its operations. Under the terms of a new propylene supply contract, entered into on 3 September 2015 and terminating on 30 April 2021, TPF has agreed to sell and deliver propylene to Arkema France, for use at its Carling site (Acrylics).

INDUSTRIAL AGREEMENT WITH EDF SIGNED ON 21 DECEMBER 1995

Arkema France secured electricity supplies from EDF for its industrial sites for a 25-year period (1996-2020) in return for payment to EDF of a sum corresponding to a drawing right. The quantities of electricity reserved at the signing of the agreement covered the electrical consumption of Arkema France's and its subsidiaries' non-chlorine producing sites. This contract was split between Total Petrochemicals France and Arkema France by an amendment dated 23 September 2005 specifying the rights and obligations of each party for the 15 years remaining on the agreement. Beyond 2020, Arkema France will have to negotiate new supply conditions with electricity providers for its industrial sites. It cannot be ruled out that these conditions will be significantly less favorable than the current ones.

CONDITIONS OF ELECTRICITY SUPPLY FROM EXELTIUM

Arkema France, together with six other electro-intensive industrial companies, is a founding member of Exeltium, from which it continues to source a significant part of its energy needs. Under an agreement, signed in July 2014 between EDF and Exeltium, the price paid for electricity supplies will be decreased initially, before being increased as a counterpart on the basis of changes in the market price for electricity. This mechanism makes the contract more flexible without compromising its overall economic balance.

With respect to Arkema France, the supply period extends to 2030, with an option for the Group to opt out of the agreement as from 2020.

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1.5.2 Industrial agreements

Industrial agreements include platform contracts, toll processing and capacity reservation. The most significant agreements of this type are described in this section.

MEMORANDUM OF UNDERSTANDING WITH TOTAL E&P FRANCE AND SOBEGI FOR THE LACQ SITE

Arkema France has signed a memorandum of understanding with Total E&P France and Sobegi for future industrial activities on the Induslacq complex in Lacq, France, beyond 2013. It specifies three components: (i) the ongoing extraction of gas to supply Arkema's Thiochemicals units with hydrogen sulphide (H_2S) and Sobegi's steam furnaces with fuel, (ii) the construction of new gas treatment units and their connection to existing facilities, and (iii) the modification of Thiochemicals units to operate with new H_2S specifications.

EDA SERVICE CONTRACT WITH TOTAL PETROCHEMICALS FRANCE (CARLING PRODUCTION LINE 41)

TPF owns the Carling site's production line 41, which mainly produces EDA for Arkema France, and can also produce polyethylene for TPF. Under the terms of the line 41 EDA toll-processing contract, Arkema France is responsible for the procurement of the main raw materials, the EDA production process and the financing of related investments. In return, TPF processes the main raw materials to produce EDA on Arkema France's behalf on line 41, and provides secondary raw materials and associated services.

Following the shutdown of the Carling steam cracker in 2015, TPF now supplies ethylene from other sources.

CONTRACT FOR THE PRODUCTION OF HYDROFLUORIC ACID AND FORANE® F22 FOR DAIKIN AT THE CHANGSHU SITE IN CHINA

In 2002, Arkema started production of Forane® F22 at its Changshu site near Shanghai, China. The production of Forane® F22 is backed up by the upstream production of hydrofluoric acid (HF). Arkema shares the production of Forane® F22 with the Japanese company Daikin pursuant to a heads of agreement document signed on 30 July 1998, which also provides for Daikin to have reserve capacity and access to hydrofluoric acid for its own supply requirements. Following an amendment to the contract in 2009, the amounts payable by Daikin are calculated on the basis of a Forane® F22 market price, and depreciation recognized to cover Daikin's share of the investment in the facilities.

MMA CAPACITY RESERVATION AGREEMENT WITH DOW IN THE UNITED STATES

In October 2000, Arkema signed methyl methacrylate (MMA) capacity reservation agreements with the Dow Chemical Company (formerly Rohm and Haas) in the United States. Under the terms of these agreements, the Dow Chemical Company supplies the Group with significant quantities of MMA, representing Arkema's only source of MMA supply in the United States.

1.5.3 Multi-year sales contracts

The contracts described in this section, which represent material sales for Arkema, are related to specific acquisition and investment transactions.

Other types of sales agreements have also been signed, such as framework agreements and key supplier agreements. These have the particularity of being global in scope and being able to cover multiple products across several Arkema businesses. For confidentiality reasons, they are not described in this section.

CONTRACT FOR THE SUPPLY OF METHYL MERCAPTAN BY ARKEMA THIOCHEMICALS SDN. BHD. TO CJ BIO MALAYSIA

Joint venture agreements were signed between Arkema and the South Korean group CJ CheilJedang (CJ) on 12 March 2012. Under the terms of these agreements, since the beginning of 2015, Arkema Thiochemicals Sdn. Bhd. (86%-owned by Arkema and 14%-owned by CJ) supplies methyl mercaptan (MeSH) from its Kerteh complex in Malaysia to CJ Bio Malaysia Sdn. Bhd. (86%-owned by CJ and 14%-owned by Arkema) in volumes sufficient to cover all of the needs of CJ Bio Malaysia Sdn. Bhd. with respect to the manufacture of methionine at its production unit on the same industrial site.

CONTRACT BETWEEN ARKEMA INC. AND NOVUS FOR THE SUPPLY OF 3 METHYLTHIOPROPIONALDEHYDE (MMP)

Arkema Inc. signed a long-term contract with Novus International, Inc. on 1 January 2002 for the production of 3 methylthiopropionaldehyde (MMP), an intermediate in the manufacture of methionine, at its site in Beaumont in the United States. Under the terms of this contract, Arkema Inc. has built an MMP production unit on behalf of Novus International, Inc., which is operated by and receives its raw materials from Arkema Inc. This contract represents material sales for Arkema.

1.5.4 Guarantees and commitments made by the Total group as part of the 2006 Spin-Off

In connection with the Spin-Off of Arkema's Businesses in 2006, Total S.A. and certain Total group companies have made certain guarantees or commitments for the benefit of Arkema relating to (i) Arkema's actual or potential environmental liabilities arising from certain sites in France, Belgium and the United States, at which operations have ceased in the majority of cases, and (ii) certain tax matters.

These guarantees and commitments are described in note 29 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

1.6 OPERATIONAL EXCELLENCE STRATEGY

1.6.1 Arkema's commitments

For Arkema, reinforcing operational excellence in order to position itself as one of the top global industrial leaders is both a priority and one of the main drivers of its strategy.

Arkema has consequently set out the following commitments:

- **being a top-quartile performer in safety in the chemical industry**

In order to further improve its safety performance, Arkema has set itself ambitious targets for 2025, which are detailed in section 2.3 of this document. Implementing the necessary actions to achieve these targets together with the AIMS management system and peer observation program will also help enhance the reliability of the Group's sites.

- **positioning its main production sites in the top quartile in terms of competitiveness**

Since its stock market listing, Arkema has steadily improved the competitiveness and reliability of its main production sites, thereby constantly improving its industrial facilities and reducing its cost structure. The Group has undertaken various reorganization and optimization programs to reduce the fixed and variable costs of its different business activities and to partly offset the impact of inflation on its fixed costs. It shut down the R134a fluorogas unit at the Pierre-Bénite site (France) at the end of the first quarter of 2017. The Group also continued the modernization of Bostik industrial sites in Sweden, India, Australia and Mexico.

The Group's program to reduce variable costs is based in particular on optimizing its processes – an initiative sustained by continuous innovation efforts – and enhancing the reliability of its processes and equipment, and on deploying powerful digital tools. These measures help optimize raw material consumption and energy efficiency on the Group's production sites. To this end, the Group makes targeted development or productivity investments, such as those made as part of its Arkenergy program to increase energy efficiency throughout all its business activities, as described in section 2.4.2.2 of this document.

Lastly, when designing new production units or complexes, Arkema leverages the recognized know-how of its technical and R&D teams in order to implement the latest technological processes developed by the Group and to develop ever more competitive units in terms of cost and operations. Arkema also carries out various investments to enhance the competitiveness of its main production units. In 2017, as part of its operational excellence program, the Group announced that it would replace two 45,000 tonnes per year acrylic acid reactors at the end of their life with a single 90,000 tonnes per year reactor at its Clear Lake site in the United States. With this investment, Clear Lake will have a modern, competitive reactor using the latest production technologies available and will thus be positioned among the most competitive acrylic sites in North America.

- **improving the quality of customer service through an optimized supply chain**

With its "Ambition" program, whose rollout was completed in 2017, the Group has upgraded and reorganized its IT systems in order to optimize its supply chain and therefore improve the quality of customer service and satisfaction. Arkema extended the program in 2018 by creating a Supply Chain department, with ambitious targets for improving customer service quality and reducing working capital.

- **optimizing the procurement of goods and services**

In line with actions undertaken to improve the procurement of raw materials and energy, the Group is enhancing the globalization and professionalism of its goods and services procurement and maximizing synergies through its strategic Global Procurement project. These efforts should enable it to reduce the total budget allocated to goods and services procurement, optimize investment performance and strictly manage its working capital while controlling quality, lead-time and safety risks.

1.6.2 Arkema's operational excellence program

To achieve its operational excellence ambitions, the Group's executive management has launched a program involving all Group businesses and subsidiaries. In 2017, savings of around €100 million compared with 2014 were achieved thanks to Arkema's operational excellence program. Over the coming years, the program will enable the Group to offset at least half of the impact of annual inflation on fixed costs and, alongside innovation and geographic expansion, contribute to reaching the Group's medium- and long-term targets.

The program, rolled out and monitored at individual business level, involves the industrial managers and site managers for all operating lines, and requires the commitment of all Group employees.

The continuous improvement process involves:

- assessing the improvement potential of each Group business. After reviewing the main areas for improvement at every production site within the various Business Lines, safety, reliability, productivity and raw material and energy consumption objectives are set for each Business Line and translated into quantified fixed and variable cost-savings targets;
- improving the monitoring of certain key indicators and the achievement of Business Line objectives by using reporting scoreboards particularly for total recordable injury rates, the optimization of raw material, energy and logistics costs, the optimization of industrial working capital, etc.;
- identifying best practices within the Group, the chemical industry, and other industrial sectors;
- capitalizing on feedback by implementing best practice reference frameworks that are gradually shared by all of the Group's production sites;
- involving all employees in the process of improving production-unit performance. In line with this goal, the SMART project is gradually being rolled out across all Group industrial sites at a pace of 15 to 20 sites per year, with the aim of completing rollout for all sites by 2025. The project enables all employees to actively foster continuous improvement in their workplace by giving them the means to contribute at their level, be it in terms of improving operational performance or solving problems that they encounter; and
- strengthening employee training, particularly regarding safety, through the training programs detailed in section 2.3.2.1 of this document.

Implementing these various human and technical resources will help the Group achieve its operational excellence objectives.

1.7 RISK FACTORS

1.7.1 Comprehensive internal control and risk management procedures

1.7.1.1 GENERAL ORGANIZATION: OBJECTIVES AND SCOPE OF INTERNAL CONTROL AND RISK MANAGEMENT

Objectives

Arkema applies the Reference Framework of the French financial markets authority (*Autorité des marchés financiers* – AMF), published in 2007 and subsequently reviewed and expanded in 2010, which it has adapted to its business activities, size and organization.

Internal control is a Group-wide process defined and implemented by executive management, management and employees. Its objective is to ensure:

- compliance with current laws and regulations;
- compliance with the instructions and guidelines issued by executive management;
- the smooth operation of internal processes, notably those serving to protect assets; and
- the reliability of financial information.

Generally, internal control contributes to the management of Arkema's activities, the effectiveness of its operations, and the efficient use of resources.

However, no internal control process can provide absolute assurance that these goals are met. Despite the processes and controls in place, it cannot guarantee that all Arkema employees will constantly comply with the internal control guidelines and apply all the defined procedures.

Arkema has also implemented a risk management system that enables the Executive Committee to ensure that risks are at a level that it deems acceptable. This system contributes to:

- creating and protecting Arkema's value, assets and reputation;
- securing Arkema's decision-making and other processes so that objectives may be achieved more easily;
- ensuring consistency between Arkema values and actions; and
- rallying Arkema employees around a common vision of the main risks.

Scope

The internal control and risk management procedures are adapted to Arkema's organization, which is structured around three components:

- the three divisions, each comprising Business Lines, which are responsible for their respective performance and the implementation of internal control procedures (see section 1.1.1.2 of this document);
- the corporate departments (or support functions), which assist the divisions and businesses in their area of competence, such as accounting, human resources, legal affairs and IT, to ensure the coherence and optimization of the Group as a whole (see section 1.1.1.2 of this document); and
- the subsidiaries, in which Arkema performs its business activities (see section 5.1.2 of this document).

These internal control and risk management procedures apply to all fully consolidated Arkema Group companies. Internal control is not limited to procedures that improve the reliability of financial and accounting information.

1.7.1.2 PERSONS INVOLVED IN INTERNAL CONTROL AND RISK MANAGEMENT

Board of Directors and committees

The Board of Directors, the two committees in place (the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee) and their members, through their experience and expertise, contribute to the promotion of an internal control and risk management culture adapted to Arkema's activities.

In particular, it is the responsibility of the Audit and Accounts Committee to oversee the effectiveness of internal control and risk management systems, and assess the schedule of the internal auditors and the results of their work.

Executive Committee

The Executive Committee implements the internal control process and ensures compliance by:

- defining the internal control framework and the rules for delegating responsibility;
- setting targets for each business, corporate department and subsidiary, and providing the resources for these targets to be met;
- supervising the implementation of the control procedures that help achieve the targets it has set;
- assessing the risks specific to each project submitted to the Executive Committee; and
- carrying out a review (annually and as deemed necessary) of Arkema's major risks, based on the work of the Risk Review Committee and its risk mapping presentation. The Executive Committee relies on the Internal Audit and Internal Control department and the expertise of all its own members to help in its implementation and operation.

Each member of the Executive Committee is responsible for ensuring that the Internal Control Framework's Group-wide rules and principles (as described in section 1.7.1.3 of this document) are observed in the entities and, in particular, the businesses that he or she supervises.

Risk Review Committee

A Risk Review Committee was set up in October 2007 to strengthen the formal framework of risk identification, analysis and management, and to regularly monitor the development of risk factors. It is made up of the Strategy Executive Vice-President (committee Chairman), the Industry Executive Vice-President, the Chief Financial Officer, the Legal Affairs Vice-President, the Sustainable Development Vice-President, the Group Safety and Environment Vice-President, the Insurance Vice-President and the Internal Audit and Internal Control Vice-President (committee secretary).

Every six months, or more often in response to specific events, the committee convenes under the Chairmanship of Arkema's Strategy Executive Vice-President to review:

- summaries of audits and assessments carried out by the Internal Audit and Internal Control, the Safety, Environment and Quality and the Insurance departments;
- reports on fraud or attempted fraud prepared by the anti-fraud unit;
- a summary and progress report of ongoing disputes presented by the Legal department;
- assessments of commercial intermediaries made by the commercial intermediaries review commission;
- a list of risks identified in the surveys carried out by the Internal Audit and Internal Control, Legal, and Accounting and Controlling departments;
- a risk map prepared by the Internal Audit and Internal Control department; and
- the monitoring of corrective measures in all of these areas.

Following its review, the Risk Review Committee can decide on further corrective measures or request additional information, and can also request updates to the risk map.

The conclusions of its review are reported to the Executive Committee.

Upon completion of the process, the Executive Committee may decide whether or not to update the main risks described in section 1.7.2 of this document.

The Risk Review Committee met twice in 2017.

Internal Audit and Internal Control department

The Internal Audit and Internal Control department is made up of the Internal Audit sub-department and the Internal Control sub-department, both of which are independent functions under the responsibility of the Strategy Executive Vice-President.

The role of Internal Audit is principally to improve and develop controls in Arkema's management systems and processes and, more broadly, to ensure that its operating procedures comply with the Internal Control Framework.

All processes and management systems may be subject to an internal audit. The Internal Audit department discusses and agrees its findings with the audited entities before presenting them with a set of recommendations and related action plans that the entities commit to implementing.

An internal committee consisting of the Chief Financial Officer, the Strategy Executive Vice-President and the Internal Audit and Internal Control Vice-President regularly ensures that the recommendations have been followed.

The Internal Audit and Internal Control department defines a draft program for the audit plan based on:

- risk identification initiatives;
- interviews with Arkema's operational and corporate departments; and
- a selection of priorities from the various proposals gathered.

The final program is validated by the Executive Committee, and then approved by the Audit and Accounts Committee.

In 2017, the Internal Audit department carried out the following 36 audits:

- 7 audits of industrial sites and 3 audits of research centers in France, China, Mexico, Brazil and the United States;
- 16 audits of subsidiaries in Europe, Asia, the Middle East, North America and South America;
- 3 process audits in Europe and North America; and
- 7 audits of businesses in Asia, Europe and North America.

The primary mission of Internal Control is to strengthen Arkema's internal control systems. Its initiatives are communicated and implemented, at subsidiary level, by a network of correspondents within the subsidiaries' Finance and IT departments.

Internal Control is involved in the analysis and formal implementation of processes that impact financial information, for which key controls have been defined.

The methodology consists of:

- analyzing the main risks of error, omission or fraud in processes or sub-processes, which could have a material impact on Arkema's consolidated financial statements;
- identifying and implementing control procedures to minimize any risk of error, omission or fraud;
- periodically checking the existence and effective operation of these controls, carried out by the Internal Control correspondents based in the subsidiaries (self-audit) or by the Internal Audit department; and
- defining corrective measures in the event of shortcomings and overseeing their implementation.

The list of procedures covered by this methodology is based on the 14 procedures of the AMF Reference Framework application guide published in 2007 and updated in 2010. It is adapted to the specific features and size of the subsidiaries.

Virtually all subsidiaries were covered by Arkema's internal control system in 2017, with the exception of the Den Braven entities acquired on 1 December 2016.

In 2012, Den Braven put in place an internal control system based on a selection of key controls. In 2017, the Den Braven Benelux subsidiary, responsible for most of the activity, was audited by the Internal Audit department and its internal control system was assessed. The Den Braven subsidiaries will gradually switch to Arkema's system in 2018 according to a two-year rollout plan, finishing in 2019.

Divisions, Business Lines, corporate departments and subsidiaries

Arkema is organized into divisions as described in section 1.2 of this document. The divisions are made up of Business Lines, which coordinate the use of resources allocated to them by the Executive Committee to meet the targets set in their respective areas. Each business is responsible for its own performance and for implementing suitable control procedures and processes, in accordance with the principles and procedures mainly defined in Arkema's Internal Control Framework, Code of Conduct and Business Ethics, charters and guidelines.

The corporate departments ensure that Arkema's organization is consistent and optimized.

Each subsidiary is placed under the responsibility of a local executive who is responsible for employing the resources defined with the businesses and the support functions to meet the subsidiary's targets, in accordance with current laws and the rules and principles defined by Arkema.

1.7.1.3 INTERNAL CONTROL AND RISK MANAGEMENT FRAMEWORK

Arkema's internal control and risk management systems are based on three core principles:

- clear definition of responsibilities and delegations of authority, observing rules governing the segregation of duties (in particular distinguishing between those who perform actions and those who approve them), to ensure that any person who makes commitments to third parties on behalf of Arkema has the authority to do so;
- identification, analysis and management of risks; and
- regular reviews, notably via annual internal control assessments and the internal audit program, to ensure internal control and risk management systems operate correctly.

Arkema's Internal Control Framework defines its organization and the guiding principles behind its operating procedures. Approved by the Executive Committee and available to all employees, notably via the intranet, it is based on the Safety, Health, Environment and Quality Charter, the Users' Guide for IT and Electronic Communication Resources, and the Code of Conduct and Business Ethics put in place by Arkema. In line with the AMF Reference Framework published in 2007 and updated in 2010, the Internal Control Framework is based on five components:

- control environment;
- risk management (detailed in section 1.7.1.4 of this document);
- control activities;
- information and communication; and
- continuous assessment of internal control systems.

Control environment

The control environment is the basis for the other components of internal control and refers primarily to Arkema's organizational principles, its values as set out in the Code of Conduct and Business Ethics and the level of awareness among employees.

All employees are informed of the importance attached to observing the rules of proper conduct set out in the Code of Conduct and Business Ethics, the Health, Safety, Environment and Quality Charter, and the Users' Guide for IT and Electronic Communication Resources.

Arkema has put in place a compliance program, which mainly covers antitrust, export control and anti-corruption legislation. Each area is the subject of various procedures and/or guides, which are provided to employees. To ensure that the compliance program has been followed, the Legal department sends a declaration of compliance each year to the heads of the businesses, the corporate departments and the main subsidiaries and sites, which they must sign and return to show that they are aware of the compliance program, that they have acted in accordance with it over the past year, and that they undertake to continue to do so in the coming year. These heads are then responsible for obtaining an identical declaration, signed by the employees concerned within their business, corporate department, subsidiary or site.

A fraud prevention procedure was put in place from 2008 onward to record and centralize situations of fraud and therefore improve their handling and prevention.

In general, the roles and duties of every operational and corporate manager are set out in a job description. Their objectives, which include an internal control dimension, are set by their respective line managers, to whom they must periodically report on their activities.

Lastly, Arkema has set up a dynamic human resources management approach and a policy of ongoing training designed to ensure that employees' skills are continuously adapted, and to maintain a high level of individual engagement and motivation.

Control activities

Control activities involve applying the standards and procedures that help ensure that Group management directives are implemented at every level of the Arkema Group.

To this end, a set of regulations has been formally documented in the Internal Control Framework, and general principles applicable to all Arkema entities have been defined in order to be able to control the application of the operating procedures defined by the Executive Committee. For example, delegations of authority and investment management are the subject of specific notes.

- Businesses and subsidiaries are responsible for operational processes and therefore for internal control.
- Corporate departments are responsible for defining and communicating policy and best practice guidelines relating to their area of expertise and ensuring that they are correctly applied, particularly in the following fields:
  - compliance with laws and regulations;
  - safety and environmental protection; and
  - the reliability of financial information.
- Controlling access to IT systems forms a key part of internal control and is subject to a formal management process, which involves both the departments using the systems and the IT and Telecommunications department.

The Internal Audit team conducts assessments of Arkema's compliance with its Internal Control Framework in accordance with the audit plan validated annually by the Executive Committee and approved by the Audit and Accounts Committee.

Information and communication

IT systems are a key component of Arkema's organization.

Mindful of the opportunities and risks related to the use of information technologies, Arkema has set up an IT management structure to control risks while creating value and improving performance.

This approach consists of deploying Group-wide the ten IT management practices drawn up formally by the French IT association for major companies, CIGREF (*Club informatique des grandes entreprises françaises*), as part of Arkema's IT systems security policy. For further details, see section 1.7.2.6 of this document.

Additionally:

- Arkema has a highly detailed financial reporting system, an essential management tool used by executive management;
- the main internal control documents are available on Arkema's intranet; and
- each support function develops professional best practices and communicates them throughout Arkema via the intranet.

Continuous assessment of internal control systems

The internal control system is assessed on an ongoing basis. The Executive Committee is responsible for the overall internal control system, its performance and its oversight. However, each entity is responsible for improving internal control performance within its own scope.

In general, any weaknesses in the internal control system must be reported to management and, if necessary, to the Executive Committee.

In addition, recommendations made by the Internal Audit department on completion of its audits are systematically reviewed, and a summary is presented to the Audit and Accounts Committee. When decisions to apply corrective measures are adopted, their implementation is monitored on a formal basis.

Furthermore, as part of their engagement, the statutory auditors may alert Arkema (represented by the Finance department and the Internal Audit and Internal Control department) and the Group's Audit and Accounts Committee regarding any weaknesses that they may have identified. These factors are taken into account by Arkema in its efforts to improve internal control.

1.7.1.4 RISK IDENTIFICATION AND MANAGEMENT

In the course of its business, Arkema is exposed to a number of internal and external risks.

As Arkema's structure is highly decentralized, risk assessment and management is the responsibility of the businesses, corporate departments and subsidiaries. Each of these entities has a duty to reduce the risks inherent in their activities.

Arkema's risk management system is based on regular reviews of risk identification, analysis and treatment, as follows:

- every month, each business presents its results and indicators to its operational executive Vice-President, who also sits on the Executive Committee, and the Executive Committee reviews the results of the divisions and their respective businesses;
- the Accounting and Controlling department organizes a quarterly review of risks and legal disputes that may have to be reported in Arkema's financial statements. The businesses, corporate departments and subsidiaries report on their entity's risks, which are analyzed and addressed at quarterly meetings with the Chief Financial Officer, the Accounting and Controlling department, the Legal department, and the Internal Audit and Internal Control department; and
- the Internal Audit and Internal Control department carries out an annual survey of risks amongst Arkema's main entities, namely the businesses, corporate departments and subsidiaries. The risks are identified and analyzed and the most significant generic risks are positioned on a risk map, which is presented to the Risk Review Committee. The Risk Review Committee then assesses the need to update the risk map and puts forward suitable action plans where necessary. As part of this generic risk map, certain specific risks may be presented on an additional map. The Committee's conclusions are reported to the Executive Committee prior to the definition of the internal audit plan. This plan is drawn up on the basis of the risk map and the need to cover Arkema's scope of activity on a regular basis. Material risks known to Arkema are allocated to a member of the Executive Committee. They are also examined

by the Audit and Accounts Committee and presented to the Board of Directors. The main risks are set out in section 1.7.2 of this document, where they have been classified into the following sections:

- economic and business risks,
- supply chain risks,
- industrial safety, environmental and climate change risks,
- regulatory and legal risks,
- financial risks,
- IT risks,
- strategic projects risks, and
- insurance cover default risks.

1.7.1.5 ACCOUNTING AND FINANCIAL INTERNAL CONTROL PROCEDURES

Operational and corporate managers' control and understanding of their business' financial performance represent one of the key factors in Arkema's financial control system.

Organization of the finance function

The finance function is the responsibility of the Chief Financial Officer and includes:

- functions under his direct supervision, in particular:
  - the production of consolidated financial and accounting information, falling within the remit of the Accounting and Controlling department, which is responsible for ensuring the reliability of the data constituting Arkema's financial information and for providing management analyses common to Arkema's different entities, thereby facilitating the management of each entity,
  - cash management and optimization of Arkema's financing, under the responsibility of the Financing and Treasury department, and
  - investor relations, whose remit is to establish, develop and maintain relations with investors, shareholders and financial analysts, and publish financial information once it has been approved by the Board of Directors;
- delegated functions:
  - each business has its own management control team, which monitors and analyzes the business' performance monthly, and
  - each subsidiary is responsible for its own monthly accounts and for its half-year and full-year financial information.

Accounting reporting and management control

The fundamental financial reporting principles are set out in the financial reporting manual and Arkema's management framework. These reference documents are updated regularly by the Accounting and Controlling department, following approval by the Chief Financial Officer or the Executive Committee, depending on the type of amendment and its significance.

One of the main purposes of accounting-related reporting is to analyze actual performance compared with forecasts and prior periods based on the processes described below.

Medium-term plan

Every year, the Strategy department draws up a five-year plan, which is reviewed and approved by the Executive Committee. It enables the Executive Committee to understand the financial consequences of the Group's major strategic choices and the main threats identified in the environment under consideration.

Budget

The budget sets out the financial performance targets for the following year in line with the medium-term plan approved by the Executive Committee.

The budget is the main benchmark to measure the actual performance of the three divisions, their respective businesses, the corporate departments, the subsidiaries and Arkema overall.

The budget is prepared annually under the responsibility of the Accounting and Controlling department.

The businesses and corporate departments submit their budget proposals, prepared with the subsidiaries, to the Executive Committee members overseeing them.

The budget of each business and each corporate department is then submitted to the Executive Committee.

The process is completed when the budget is approved by the Company's Board of Directors.

Year-end forecasts

Once approved by the Executive Committee and reviewed and approved by the Board of Directors, the budget may no longer be modified. Based on a frequency defined by the Accounting and Controlling department, quarter-end and year-end forecasts are prepared by the businesses and corporate departments.

Monthly reporting

Every month, the Accounting and Controlling department prepares detailed consolidated reports by division and business for the Executive Committee.

Financial statements, analytical accounts, capital expenditure and cash flow details are presented together with a commentary on the past month's significant events.

The Executive Committee analyzes these reports in detail at one of its monthly meetings.

Consolidated financial statements

The Company publishes consolidated financial information on a quarterly basis. Figures for the six months to 30 June and the twelve months to 31 December are published as full financial statements under IFRS, while the quarterly information to 31 March and 30 September is in summary form only (balance sheet, income statement and cash flow statement).

The half-year financial statements to 30 June are subject to a review by the statutory auditors, while full-year financial statements are fully audited.

As part of the closing of each accounting period, the Accounting and Controlling department identifies the specific closing issues during preparatory meetings with the support functions and businesses. Similar meetings are also organized at least once a year with Arkema's main legal entities.

Each quarter, the Accounting and Controlling department receives a risk report from each business, corporate department and subsidiary.

Additionally, each entity is responsible for identifying, compiling and monitoring its off-balance sheet commitments. The Financing and Treasury department consolidates all these commitments every six months as part of the half-yearly and annual financial statement preparation process.

The Accounting and Controlling department is also responsible for monitoring changes in accounting regulations and issues technical notes on points of specific relevance to Arkema.

Parent company financial statements

The preparation of the Company's financial statements is part of the Accounting and Controlling department's general process for the preparation of annual financial information. Furthermore, the Company submits management forecast documents to the Board of Directors in compliance with the appropriate regulations.

IT systems

The IT department (iTeam) defines and coordinates the IT systems for the entire Group.

Arkema is continuing its transformation program using SAP integrated software, which is helping to improve the Group's control environment, particularly through procedure review, improved automated checks, and the removal of interfaces.

Representation letters

Each year, Arkema issues a representation letter attesting in particular to the accuracy and consistency of the consolidated financial statements. This letter is then signed by the Chairman and Chief Executive Officer and the Chief Financial Officer and addressed to the Group's statutory auditors. In support of this representation letter, the operational and financial heads of each consolidated subsidiary make an annual undertaking to observe the internal control rules and ensure the accuracy of the financial information supplied, in the form of a representation letter to the Group's Chairman and Chief Executive Officer, the Chief Financial Officer and the statutory auditors.

Following the same procedure, Arkema's half-yearly representation letter is based on the main subsidiaries' half-yearly letters of representation, which certify that the subsidiaries' half-yearly consolidated financial statements have been prepared in accordance with Arkema's financial reporting manual.

Investor relations

Press releases concerning financial information are prepared by the Investor Relations team and reviewed, internally, by the relevant units of the Finance department, and then by the statutory auditors and the Company's Audit and Accounts Committee. The Company's Board of Directors approves the final text.

1.7.1.6 ARKEMA'S INSURANCE POLICY

Arkema implements an insurance cover strategy that combines a prevention policy designed in close cooperation with insurers (in particular for property damage, via periodic visits to the sites together with technical recommendations followed up on a regular basis), and the purchasing of insurance policies.

The Group's policy is to centralize its insurance against risks relating to the production, transportation and marketing of its products worldwide. Arkema uses international insurance brokers to optimize its cover of all Group companies. As a general rule, the Group's insurance cover limits apply either to each claim, or to each claim and each year, and vary according to the risks covered. In most cases, cover is limited both by certain exclusions standard to these kinds of contracts and by deductibles that are reasonable given the size of the Group.

For the financial year ended 31 December 2017, total premiums paid by the Group, and relating to the Group's insurance policies presented below, amounted to less than 1% of its sales for the period.

The Group's insurance policies are drawn up to cover current risks while also accommodating any new acquisitions or disposals that may take place during the year.

The Group retains a certain level of risk through the deductibles on its insurance policies, and centrally through a captive insurance company that is active only in property insurance. The objective of the captive company is to optimize the Group's external insurance costs.

Descriptions of the insurance policies taken out by Arkema are provided below to a level of detail that enables it to comply with confidentiality requirements and protect its interests and competitiveness.

Arkema believes that its insurance policies are consistent with those currently available on the insurance market for groups of similar size and involved in similar business activities.

Arkema selects its insurers from the best and most financially sound companies when subscribing its policies. However, the possibility cannot be ruled out that, at the time of settling a claim, one or more of these insurers could be in a difficult, even compromised, financial situation that puts payment of the compensation in doubt.

Furthermore, developments in the insurance market could result in unfavorable changes to the Group's insurance policies and an increase in policy premiums, which could adversely affect the Group's business, financial position or results.

The Group's insurers, under certain conditions deemed customary in the insurance industry for the particular contract type, can prematurely terminate insurance policies in the event of a major claim. In such an event, the Group nevertheless remains covered throughout the notice period, which may vary from policy to policy.

Civil liability

The Group has contracted civil liability insurance policies with leading insurance companies. The civil liability policies are subject to applicable exclusions and sub-limits but cover the Group worldwide against the financial consequences of civil liability claims in the context of its business activities and in respect of physical, material or non-material damages or losses caused to third parties. These policies cover up to €1 billion for the Group. Deductibles vary, particularly depending on the subsidiaries' location.

Property damage

The Group's sites are covered by leading insurance companies against material damage and any resulting business interruption. This cover is intended to avoid any significant financial loss and to ensure the resumption of operations in the event of property damage. However, certain property and types of damage can be excluded from the insurance policy's cover depending on the country in which the loss occurs.

The cover includes a "direct damage" component and a "business interruption" component, with the compensation period for the latter limited to either 24 or 36 months, depending on the site. These policies may include sub-limits, particularly for machinery breakdowns, natural disasters and terrorism. Deductibles vary depending on the size of the site concerned. In 2017, the maximum total retention in the event of a major claim was €17.5 million.

The combined cover limit of the policies in place for direct damage and business interruption is €500 million (after retention of €17.5 million).

Transportation

The Group is insured against the risk of damage to its manufacturing assets, equipment, finished or semi-finished products and raw materials during transportation or storage by third parties up to a limit of €12 million per shipment. The policy includes a deductible and several exclusions that are standard for this kind of agreement.

Environmental risks

Arkema has taken out an environmental liability insurance program with leading insurance companies. For production sites located in the United States, the limit is US$75 million. For production sites outside the United States, the limit is €80 million.

These programs cover, under certain conditions, environmental liabilities linked to the production sites of the Group. They include in particular damages suffered by third parties as a result of pollution generated either on Group production sites or as a result of transporting Group products.

Cyber risks

Arkema took out a cyber insurance program from 15 January 2017 covering all subsidiaries worldwide, within the limits of an annual coverage ceiling of €40 million and subject to a deductible of €2 million.

1.7.2 Main risks

Arkema carries out its business activities in a rapidly changing environment, which creates risks that may be beyond its control. The items described below do not constitute a comprehensive list of the risks and uncertainties that Arkema currently faces or may face in the future. Other risks and uncertainties of which Arkema is currently unaware or that it deems not to be significant at the date of this document could also adversely affect its business activities, financial position, results or future prospects. The means implemented by Arkema to assess and manage risks, particularly its regularly updated risk map, are generally outlined in section 1.7.1 of this document and described in more detail below, for each of the risks to which Arkema is exposed.

The occurrence of one or more of the risks described below could have a material adverse impact on Arkema's business activities, financial position, results or future prospects and, in certain cases, negatively affect Arkema's image or reputation.

1.7.2.1 ECONOMIC AND BUSINESS RISKS

Arkema has identified three main types of risks related to the economic and business environment: risks related to fluctuations in supply and demand, country-related risks and competition-related risks.

Risks related to fluctuations in supply and demand

Arkema's results could be directly or indirectly affected by changes in supply and demand, both upstream of its activities (raw materials and energy resources) and downstream, in the various end markets it serves, such as the decorative paints, automotive, construction and energy markets.

Upstream of its activities, the Group uses raw materials and energy resources as part of its manufacturing processes. Some of these materials and resources, such as propylene and butadiene, are indirectly linked to the price of crude oil, while others, such as sulfur, castor oil and fluorspar, are only minimally connected or not at all. Regardless of their link to the price of crude, the prices of these raw materials can be highly volatile, with any fluctuation leading to significant variations in the cost price of the Group's products.

External factors over which the Group has no control, such as economic conditions, competitors' activities or international situations and events, can also lead to volatility in demand and hence changes in the sales volumes and prices of products manufactured and marketed by the Group. This may have a material adverse impact on the Group's business activities, financial position, results or future prospects.

Risk management

Arkema seeks to secure its raw material and energy supplies and to optimize their cost by diversifying its sources of supply. In some cases, it may also use derivatives such as futures, forwards, swaps and options, on both exchange and over-the-counter markets. These derivatives are matched with existing contracts (see notes 22.5 and 23 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document).

Arkema also seeks to pass on to its sales prices any increases in the cost of the raw materials used to manufacture its products. Thanks to its diversified portfolio of application-oriented products and markets, and its balanced global presence, the Group manages to limit the risks and adverse effects of demand volatility. These advantages also enable it to mitigate the risk related to worsening economic conditions in any one of its end markets.

Arkema is also continuing to consolidate its positioning in higher value-added niche markets, a strategy that allows it to offset potential slowdowns in its main end markets.

Lastly, the Group's integration in certain product lines such as acrylics, fluorochemicals and specialty polyamides reduces its exposure to market cycles.

Country-related risks

Arkema operates on the global market with production facilities mainly located in Europe, North America and Asia. Many of its main customers and suppliers also operate internationally, with a presence in various countries and regions. Consequently, the Group's business and financial results are likely to be directly or indirectly impacted by any adverse changes to the economic and political environment in the countries in which the Group operates.

The direct and indirect consequences of conflicts, terrorist activities, political instability or the emergence of health risks in countries where the Group is active or markets its products could impact the Group's financial position or future prospects, in particular by causing delays or losses in raw material and product delivery or supply, and increased safety costs, insurance premiums or other expenses needed to ensure the continuity of the operations concerned.

Arkema's international operations expose it to a multitude of local business risks. Its global success depends in particular on its ability to adapt to economic, social and political changes in each of its host countries, and to develop and implement effective policies and strategies in each of its foreign operations.

Risk management

In most countries in which it has industrial and commercial operations, Arkema relies on subsidiaries, which are placed under the responsibility of a regional Vice-President. This organization helps the Group maintain relations with local authorities and economic players, defend its interests, and better anticipate changes in the local political and economic environment.

With its balanced geographic presence in Europe, North America and Asia, the Group is able to spread its risk between the different geographic regions in which it operates.

Risks related to competition

Arkema faces strong competition in each of its businesses.

In the Industrial Specialties division, the commoditization of certain products can lead to significant price competition. Some of the Group's competitors are larger and more vertically integrated, which could enable them to benefit from lower production costs for certain products that are also manufactured by the Group. Downstream of Coating Solutions and in High Performance Materials, an important role is played by differentiation, innovation, product quality and related services.

The economic emergence of certain countries, notably China, has been accompanied by the rise of local competitors and, subsequently, growing competition on certain product lines, such as Fluorogases and Acrylics. This could intensify in the future or extend to other products and, consequently, put lasting downward pressure on the price of these products.

The Group's competitive position could also be affected by innovative new products, new technologies, or the emergence of new competitors on the market.

Risk management

Since it was created, Arkema has implemented a policy of operational excellence and cost optimization to enhance the competitive advantages that it enjoys in its various product lines and to guarantee the quality and performance of the products offered to its customers.

Arkema invests heavily in R&D, particularly in the High Performance Materials division, which has enabled it to bring to market a large number of innovative new products (see section 1.4 of this document).

The Group has also built its strategy around the development of customer and supplier partnerships with leaders in their respective fields, allowing it to build strong business relationships with its main partners.

1.7.2.2 SUPPLY CHAIN RISKS

Risks related to transportation

Arkema has various hazardous, toxic or flammable materials transported by road, rail, sea and air, particularly as part of shipments to customers in countries where it operates, giving rise to the risk of accidents. Any such accidents could result in claims against Arkema, in particular in its role as the shipper.

Furthermore, due to (i) stricter regulations on the transportation of hazardous materials, (ii) the temporary or permanent lack of transportation means for certain toxic or hazardous products to certain destinations, (iii) the market dominance of a single supplier, and (iv) job action affecting transportation, Arkema may face the following problems:

- delays in delivery or even refusal by its carriers to collect shipments;
- difficulties in meeting certain customer demands;
- increases in certain shipping costs or shipping equipment rental costs; and
- reductions in certain shipments, unless geographical swaps are set up with other manufacturers.

Arkema also owns or uses a small number of pipelines to transport hazardous chemical products. Despite the safety measures it has put in place for the operation of these pipelines, the possibility of an accident can never be ruled out. In addition to the environmental impact, such an accident would adversely affect the operation of certain units at its industrial sites and could therefore have a material adverse impact on Arkema's business activities, financial position, results or future prospects.

Risk management

In order to prevent or minimize the risks related to transportation, Arkema endeavors to:

- diversify its service providers and share its product movements between several carriers where possible;
- use transportation methods that are deemed less dangerous (barge, pipeline, road-rail or rail), when technical and financial conditions permit;
- strictly select suppliers based on the Safety and Quality Assessment System (SQAS), which was established by a consortium of European chemical manufacturers under the aegis of the European Chemical Industry Council (CEFIC) whose activities extend to the Middle East and Asia;
- assess the quality and safety performance of the carriers used;
- ensure regular maintenance of the transportation equipment that it owns, hires or leases (freight cars, ISO containers, tankers and pipelines);
- carry out systemic risk assessment studies when a modal shift is required; and
- implement a variety of operational risk assessment measures, including vetting bulk charter vessels and having the transportation safety management system maintained by the Transportation Safety team, which reports to the Group Safety and Environment department.

For pipelines, Arkema notably carries out hazard studies and develops compensatory measures to minimize risks where necessary, defines monitoring and response plans, and carries out drills with the emergency services.

Risks related to storage

Arkema uses many storage and warehousing facilities located on its industrial sites and elsewhere that may present risks to the environment or to public health and safety. Arkema could be held liable for accidents occurring in the storage and warehousing facilities that it uses.

Moreover, some of the storage providers that Arkema uses derive substantial revenues from it in certain regions. Should one of these providers fail to perform, Arkema could be compelled to renegotiate storage contracts under less favorable terms, or to store its products in other locations.

Risk management

To anticipate and minimize the above-mentioned risks related to storage, Arkema endeavors to:

- diversify its service providers where possible;
- develop alternative emergency solutions combining transportation plans and distribution schemes, with a lag time for implementation;
- select suppliers based strictly on the SQAS Warehouse and CDIT (Chemical Distribution Institute – Terminals) guidelines; and
- conduct storage audits prior to signing contracts – repeated every three years for warehouse facilities hosting hazardous materials – under the responsibility of the relevant business management.

Risks related to dependence on suppliers

Arkema has developed a policy of spreading supplier risk at product-line level and at geographic exposure level for its supplies of raw materials, energy and gas, services and some equipment. However, in the case of certain raw materials or equipment that are essential to its business, it is significantly dependent on a limited number of suppliers and, in some cases, a single supplier. For example, some of Arkema's operational units in France – in the acrylic acid, oxo-alcohols and functional polyolefins segments – were built downstream of steam crackers. These units present a particularly high level of physical integration with the production capacities supplying the raw materials.

Furthermore, Arkema has entered into long-term agreements featuring minimum supply commitments with a number of its raw materials suppliers. In the event of failure to fulfill these contractual commitments or of early termination of the agreements by Arkema, these suppliers could claim compensation or penalties.

Other events that could have an adverse impact on Arkema's industrial and financial performance include failure to perform by a major supplier, the non-renewal of supply contracts for certain raw materials or their renewal on less favorable terms, and significant price increases.

Arkema's main contracts are described in section 1.5 of this document.

Risk management

One of the aims of Arkema's centralized procurement policy for raw materials and goods and services is to analyze and comprehensively address its exposure to the risk of significant dependence on supplies and suppliers.

This policy is based on the following principles:

- diversification of sources of supply when technical conditions permit;
- the development of long-term partnerships and contracts for supply situations that are subject to severe structural constraints due to the supply and demand balance or the limited number of suppliers;
- careful management of the duration of contractual commitments;
- supply chain and inventory management adapted to both business and industrial requirements, particularly for strategic products;
- a thorough assessment of suppliers based on the following criteria: position in the relevant market, industrial performance, financial strength and development; and
- participation in certain investments or development projects.

With regard to the supply of propylene for the Acrylics business at the Carling site in France following the shutdown by Total Petrochemicals France of its steam cracker in Carling, a new agreement was signed on 3 September 2015 with Total. Arkema is working with the Total group on the supply of propylene to the site beyond the end of the current agreement.

Arkema has also included the risk of failure to perform by one of its suppliers in its insurance policies.

Risks related to dependence on customers

Arkema has entered into agreements representing significant financial income with certain customers. It cannot be ruled out that these contracts may not be renewed, may be renewed under less favorable terms than initially agreed, or may be terminated.

Risk management

Arkema has a highly diversified customer base and makes less than 25% of its sales to its top 40 customers. No customer represented more than 2.5% of its sales in 2017.

Furthermore, Arkema's business policy is based on developing alliances or partnerships with customers in order to establish solid, long-term relationships.

However, in some exceptional cases, when the customer breaches its contractual commitments, Arkema may initiate legal proceedings or arbitration to enforce its rights.

Lastly, Arkema hedges its customer risk with a global credit insurance program that, given the quality of its customer portfolio and low claim rate, allows it to cover a significant proportion of its accounts receivable.

1.7.2.3 INDUSTRIAL SAFETY, ENVIRONMENTAL AND CLIMATE CHANGE RISKS

Arkema's business activities are subject to frequently changing international and national laws and regulations in the areas of environmental protection and health and safety. These laws and regulations impose increasingly strict obligations, particularly concerning industrial safety, emissions and discharges to air, water and land of toxic or hazardous substances (including waste), the use, labeling, traceability, handling, transportation, storage and disposal of toxic or hazardous substances and exposure thereto, the clean-up of past industrial sites, and soil and groundwater remediation.

The industrial safety, environmental and climate change risks described below are considered in view of the potential impact they could have both on Arkema and on the environment and stakeholders.

Risks related to the operation of industrial facilities

Arkema's facilities may be subject to risks of accidents, fires, explosions and pollution due to the very nature of their operations and to the level of hazard, toxicity or flammability of certain raw materials, finished products and production or supply processes. Any accident, regardless of whether it occurs at one of Arkema's production sites or during the transportation or use of products manufactured by Arkema, may cause delays in production or give rise to compensation claims on grounds of contractual liability or product liability, as appropriate.

Furthermore, Arkema's production facilities may experience extended shutdowns, particularly as a result of problems with raw material or energy resource supplies, reliability of major equipment or even industrial action.

In addition, Arkema operates many industrial facilities, including 35 "Seveso" classified sites in Europe as per directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, which amended and subsequently repealed Council directive 96/82/EC, known as the "Seveso III directive". It also operates facilities outside Europe that have been given a similar classification due to their use, production or storage of hazardous substances that may present significant risks to the health or safety of neighboring communities and to the environment. In this respect, Arkema could be held liable (i) following injury or damage to property or people, notably due to exposure to hazardous substances being used, produced or destroyed by Arkema or present on its sites, or (ii) for having caused damage to natural resources.

Created by French Act no. 2003-699 of 30 July 2003 on the prevention of technological and natural risks and compensation for damages, Technological Risk Prevention Plans (PPRTs) form part of the Group's risk management policy for areas hosting high-risk industrial sites corresponding to "upper-tier Seveso" establishments. Arkema has completed studies for the 16 relevant French sites and is implementing the appropriate additional resources, working alongside the local authorities to further secure the facilities in compliance with the regulatory processes. Arkema has estimated the cost of all measures that it is responsible for implementing in the coming years, and set aside provisions to this end.

These risks, over and above any liability issue, could have an impact on Arkema's results, financial position or business activities.

Risk management

All Arkema's facilities and activities worldwide are covered by a Group-wide safety management program adapted to the risks that each may face.

Developed in line with the Health, Safety, Environment and Quality Charter, the program is based on taking action at three priority levels:

- at the technical level, for example when designing or improving production units (process safety and ergonomics), or drawing up specifications for hazardous material transportation equipment;
- at the organizational level, by ensuring that each entity's management system complies with Arkema's safety requirements, which are also adapted to the level of risk at each site. These requirements are reflected in the Arkema Integrated Management System (AIMS), which combines all the Group's safety, environment and quality audits in a single audit; and
- at the human level, by developing social dialogue and a safety culture that raises everyone's awareness of their individual responsibility and of the importance of their behavior.

These points are detailed in section 2.3 of this document.

Arkema has also taken out insurance policies for civil liability and property damage with leading insurance companies (see section 1.7.1.6 of this document).

Risks related to security

Arkema may suffer the consequences of possible malicious acts against its facilities or its employees, including theft and pilferage risks particularly in the fields of research and technology and the growing threat of cybercrime.

Risk management

Security directives are regularly updated in line with recommendations from the public authorities in order to strengthen the security of the Group's industrial facilities.

The Group's upper-tier ("*seuil haut*") Seveso sites in France have undergone security audits by the French authorities, with no evidence found of significant deviations from standards. The audits highlighted Arkema's high level of security, and led to minor adjustments being made where necessary.

In addition, Arkema has raised security levels at its industrial facilities and R&D centers since 2015 in response to terrorist attacks in France, Germany, the United Kingdom and elsewhere. It has also taken additional security measures in response to deliberate acts of violence at other industrial companies in Isère and Étang de Berre, France.

The Group's action plan also covers cyber security and protection from cyber attacks (see section 1.7.2.6 on IT risks). As part of this, Arkema has begun working more closely with the IT security agency ANSSI in France and has developed a specific strategy to enhance cyber security.

Risks related to health

Arkema uses and has used in the past toxic or hazardous substances to manufacture its products. Employees and former employees of Arkema and, in some cases, employees of external companies and service providers, Arkema customers and people living near Arkema's industrial sites, may have been exposed or may still be exposed to these substances and, as a result, may have developed or may develop specific illnesses from such exposure. In addition, for certain substances currently regarded as risk-free, chronic toxicity, even at very low concentrations or exposures, could be discovered in the future.

Certain products may also be used directly or indirectly in sensitive applications, particularly medical and food applications.

Furthermore, several types of serious government-declared health crises could result in the shutdown of facilities, research centers, and even head offices and other facilities. Serious health crises of this sort notably include:

- major epidemics or pandemics;
- crises related to contaminated or polluted medicines, food or vaccines;

- health crises related to climate or weather events, such as heat waves, droughts, tornadoes, cyclones and exceptional flooding; and
- the consequences of long-term, chronic exposure to a hazardous contaminant.

Risk management

Arkema has put in place safety and monitoring procedures at the Group level and at individual production sites. It also conducts regular research into the toxicity of the products it uses, and in addition has developed a tool for monitoring individual exposure to toxic products. The various procedures in place are described in section 2.3.2 of this document.

Arkema may also be forced to withdraw certain products, particularly in certain sensitive markets.

In the event of a serious health emergency, crisis units managed by trained employees are set up in the facilities, in the countries and at Group level to define the standards that guarantee high levels of health protection and the rules governing certain activities in order to achieve the lowest possible risk level, and to put in place response plans to address health emergencies and exceptional situations. Additionally, in the specific event of epidemics or pandemics, most Arkema sites around the world have set out business continuity plans with actions on two levels:

- health and organization measures to limit the transmission of viruses and protect the health of employees and subcontractors working on the sites by (i) informing all employees about health measures, raising awareness and providing alcohol-based hand sanitizers and protective masks, (ii) issuing instructions on how to contain isolated cases, (iii) reducing the number of meetings and business trips, and (iv) implementing teleworking solutions; and
- measures to adapt business activities to the level of absenteeism by creating a structure that enables a site to continue operating despite the absence of significant numbers of employees and, in extreme cases, to ensure safety and environmental protection in the absence of a very large number of employees.

Risks related to the environment

Arkema has activities in business areas that entail significant environmental liability risks.

While the Group has secured insurance policies from leading insurance companies to cover environmental risks (see section 1.7.1.6 of this document), it cannot rule out the possibility that claims will be made in connection with its operations or products, seeking to hold it liable for uninsured events or for amounts exceeding the cover limits. Furthermore, any accident, regardless of whether it occurs at one of the Group's production sites or during the transportation or use of products manufactured by Arkema, may cause delays in production or give rise to compensation claims on grounds of contractual liability or product liability, as appropriate.

Should Arkema be held liable for environmental claims, the amounts covered by provisions or included in its investment plans could prove to be insufficient due to the intrinsic uncertainties involved in projecting expenditure and liabilities relating to health, safety and the environment. The assumptions used to determine these provisions and investments may need to be adjusted, mainly due to changes in regulations, changes in the interpretation or application of regulations by the relevant authorities, the technical, hydrological or geological constraints of environmental remediation or the identification of as yet unknown pollutants.

Achieving compliance for Arkema sites that are still in operation, or for sites where operations have ceased, entails a risk that could generate substantial financial costs for Arkema.

Contingent environmental liabilities are detailed in note 20 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Risk management

Environmental risk is managed by the implementation of a policy defined and monitored by the Environmental Remediation team within Arkema's Safety and Environment department and rolled out within its various businesses under the responsibility of the industrial Vice-Presidents. The components of this policy are detailed in section 2.4 of this document.

Arkema also benefits from guarantees from subsidiaries of Total S.A. with respect to former industrial sites, which were granted prior to Arkema's stock market listing. A description of these guarantees can be found in note 29 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Risks related to climate change

Due to their geographic location, 35 of Arkema's industrial sites are exposed to seismic and/or climate risks such as floods, droughts and storms, the extent and frequency of which may evolve as a result of climate change. In 2017, 22 sites (unchanged from 2016) were identified as currently being exposed to climate risks. However, Arkema has no data enabling it to estimate how the exposure of these or other sites may evolve in the future as a result of climate change.

Arkema monitors developments in international, European and national regulations on greenhouse gas (GHG) emissions reduction, notably as concerns CO_2 quota systems. The tightening of such regulations could have a negative impact on the Group's business activities, operating costs or profitability.

Risk management

Arkema pays close attention to the publication of any works that will enable it to assess the medium- and long-term impact of climate change on its industrial operations and supply chain.

At the same time, it implements a range of Group-wide initiatives to anticipate the effects of climate change as effectively as possible. In 2016, for example, an internal carbon pricing system was introduced to steer investment toward low-carbon solutions. In the same year, Arkema implemented the Optim'O water management plan in a drive to further improve water management at its sites and in its production processes. For further details on these initiatives, see section 2.4.2.3 of this document.

Lastly, Fluorogases have been identified as the products that have been most exposed to regulatory developments for many years. Accordingly, Arkema is already anticipating the relevant regulatory changes by developing new blends or substitutes.

Risks related to the management of sensitive data and in particular the dependence on certain technologies

In the course of its business, Arkema uses both technologies that it owns and a certain number of technologies under license from third parties. Furthermore, in some cases, Arkema's activities rely on technologies that require specific skills from its employees. It also invests in new industrial units and is exposed to the risk of disclosure of confidential documents and of copying of processes or technologies that are critical to its production and to maintaining its international competitiveness.

If Arkema were no longer able to use these technologies, it could have an adverse impact on its business activities, financial position, results or future prospects.

Risk management

Arkema implements a technological development policy for its processes, in particular as part of its R&D programs, to give it direct ownership over the technologies that it uses in its major activities, and to help reduce its level of technological exposure to third parties.

It also has an employee retention policy (see section 2.6 of this document), and ensures that skills in certain sensitive technologies are shared by a sufficient number of employees.

Furthermore, Arkema only subcontracts equipment essential to its critical processes to specific companies bound by confidentiality agreements. Files and technical manuals are managed by a restricted number of individuals, specifically the business process officers and technical center engineers.

Arkema has decided to strengthen its security policy and to broaden the documentation to be applied in its sites worldwide, by drawing on services provided by the French State in France and on feedback from other regions. This strategy resulted in updates and improvements to application guides and procedures, particularly to take into account IT risks, the protection of sensitive data, the protection of sites and the protection of employees working in high-risk countries. The documentation includes security audit guides, vulnerability analysis guides and the classification of documents containing sensitive data.

It continues to strengthen employee training and awareness initiatives in this area. In particular, it introduced the iSafe program in 2017 to share throughout the Group a set of rules that it considers essential to ensuring cyber security.

Risks related to land that Arkema does not own

While Arkema owns most of the land on which its industrial sites are built, some industrial facilities around the world are located on land that belongs to third parties, either due to local regulations or for technical or strategic reasons. In such cases, Arkema occupies the land under the terms of leases or similar agreements.

If these agreements were to be terminated or not renewed, or if a site were to be expropriated, it could adversely impact Arkema's business activities, results or financial position.

Risk management

When negotiating contracts, Arkema secures its right to occupy land by implementing sufficiently long terms and lengthy notice periods. Contractual expiration dates are monitored regularly to anticipate any problems regarding renewals.

1.7.2.4 REGULATORY AND LEGAL RISKS

Arkema is subject to complex and constantly changing local, national and international laws and regulations that differ depending on the countries in which it operates. These laws and regulations encompass a large number of fields, including safety, environmental protection, antitrust law, company law, commercial law, patent protection, labor law, personal data protection, tax law and customs regulations.

Arkema's corporate and regional units and subsidiaries ensure regulatory watch in their respective fields of expertise in order to maintain a high level of knowledge and anticipate possible future changes.

Risks related to product regulations

If existing regulations were to be amended to become more restrictive for Arkema or if new regulations were adopted, it could (i) compel Arkema to significantly scale back on the production and marketing of certain products or, possibly, discontinue production and marketing altogether, (ii) restrict Arkema's ability to alter or expand its facilities, and (iii) possibly compel it to abandon certain markets, incur significant expenditure to produce substitute substances, institute costly emissions control or reduction systems or (iv) exclude Arkema from certain markets if it could not develop substitute products.

A large number of these regulations, described in section 2.3.5 of this document, require chemical products to be recorded in lists, called inventories, and accompanied by files of varying degrees of complexity.

Risk management

To ensure that its products are marketed in accordance with local, national or international regulations, Arkema employs regulatory experts supported by a global network of correspondents based in the industrial sites, businesses and subsidiaries, and experts in physicochemistry, toxicology and ecotoxicology who work to improve knowledge and understanding of the hazard characteristics of the substances and products manufactured, imported and marketed by Arkema. All these experts also use efficient IT resources and have access to databases allowing them to follow scientific developments and regulatory changes, and to produce the documents required to comply with the regulations within the prescribed time. These experts take part in professional associations that monitor proposed regulatory changes at the state or agency level, thus helping the Group to anticipate regulatory changes and prepare accordingly.

In cases where product regulation changes lead to restrictions on the use of raw materials or the marketing of finished products, Arkema relies on its R&D to develop alternative solutions. This is the case, for example, with Arkema's successful development of resins-for-paint formulations that meet the latest VOC requirements, such as alkyds in emulsions, VAE emulsions, powder resins and high solid resins.

Finally, in the particular case of the Registration, Evaluation and Authorization of Chemicals (REACH) regulation and local legislation described in chapter 2 of this document, Arkema has put in place a specific organization to optimize the implementation of these regulations.

Risks related to industrial property

Arkema attaches great importance to industrial property rights in respect of trademarks and patents in order to protect the innovations that result from its R&D. Taken together, its patents and trademarks represent a key asset for its business. Arkema is also attentive to the risk of direct and indirect patent infringement as well as all types of trademark infringements.

Patent infringement can occur when a third party uses products or industrial processes patented by Arkema. Trademark infringement, on the other hand, can occur when a third party unlawfully seeks to take advantage of the investments or reputation of Arkema brands in a given market. These actions have an instantly negative impact on Arkema's sales and results and can harm the reputation and the perceived quality of the products concerned as well as the image of the Company.

Patent infringement can also occur involuntarily because of Arkema, particularly given the risk related to the time during which patent applications are not made public. Patent applications filed by third parties and made public only on publication could impact ongoing developments or even products recently brought to market. This situation would oblige Arkema to change the product, thereby increasing the related R&D costs, or to negotiate a license to use the patented component. In either case, there would be an impact on the project's profit margins.

Inadequate protection of the innovations resulting from its research or trademarks could therefore have a material adverse impact on Arkema's business activities, results, financial position or future prospects.

Risk management

Arkema has developed an assertive policy to protect its innovations and know-how (registration of patents and trademarks), particularly with the support of a global network of industrial property consultants (for further details on Arkema's industrial property protection policy, see section 1.4.3 of this document). Arkema is also attentive to any infringements of the rights conferred by its patents and trademarks. If, therefore, products on the market suggest that protected products or technologies or trademarks have been infringed, Arkema can take whatever action it deems necessary to notify, end and sanction the infringement of its intellectual property rights.

This risk is managed by the Intellectual Property department, which reports to the R&D department for patent matters and to the Legal department for trademark and design matters. The role of these departments is to apply in practice the principle of respect for intellectual and industrial property rights enshrined in the Code of Conduct and Business Ethics. They go about this by ensuring customers are only offered products that are not covered by valid, third-party patents, based on the best knowledge that can be obtained by regularly reviewing competitors' patents throughout the development of new products. In addition, the role of the Legal department is to constitute trademark rights for certain product ranges and, where appropriate, protect them via designs. To this end, it carries out research for prior user rights before trademark and/or design applications are filed, to the greatest extent allowed by resource availability and information accessibility, in order to identify any prior third-party rights that may form an obstacle to a new project.

Risks related to business practices

Arkema operates in many countries and, for this reason, is subject to a range of antitrust and anti-corruption laws as well as export control regulations in certain countries. Non-compliance with any of these laws or regulations may result in significant fines being levied on Arkema or civil or criminal charges being brought against it and/or its employees.

Risk management

Arkema has put in place a business compliance and ethics program, which notably covers antitrust, export control and anti-corruption legislation. Procedures and/or guides have been issued on each of these topics. Training is also given within the Group to prevent risky behavior and maintain a suitable level of awareness in these areas. For further details on this program, see section 2.7.3 of this document.

Arkema is also particularly careful with regard to:

- planned export sales to countries subject to economic sanctions or other restrictive measures. In such situations, in-depth reviews are carried out to avoid any risk of violating the export control regulations; and
- the choice of commercial intermediaries used in order to minimize the risk of corruption.

Furthermore, a specific map of corruption-related risks has been drawn up, as part of the general risk map exercise performed by the Group (see section 1.7.1.4 of this document). It is intended to serve as a guide for implementing procedures to assess customers, suppliers and intermediaries.

Risks related to current or potential litigation

In the normal course of its business, Arkema is or may become a party to a number of administrative, legal or arbitration proceedings, as a result of which it may be found liable on various grounds, such as violating antitrust laws relating to cartel behavior, full or partial failure to fulfill contractual obligations, termination of established commercial relationships, pollution, or non-conformity of products.

A description of the most significant current or potential litigation is given in note 20 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document. To the best of the Company's and the Group's knowledge, there are no other administrative, legal or arbitration proceedings currently underway, or with which the Company or the Group are threatened, that are likely to have or have had over the course of the past twelve months a material adverse impact on the results or financial position of the Company or the Group.

Provisions are made in the accounts whenever the payment of a quantifiable and large indemnity is likely (see note 19 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document). However, the resulting provisions, and in particular those relating to large claims, can prove insufficient, which could have material adverse consequences on Arkema's business activities, financial position, results or future prospects.

In addition, it generally cannot be ruled out that, in the future, new proceedings, related or unrelated to existing proceedings, could be initiated against an Arkema entity. Should such proceedings have an unfavorable outcome, they could adversely impact Arkema's business activities, financial position or results.

Risk management

All legal risks related to current or potential litigation are subject to a quarterly review. On the first day of the last month of every quarter, each business, corporate department and subsidiary must provide Arkema's Accounting and Controlling department and Legal department with a written summary of any legal risks or proceedings that affect Arkema's business activities, results or financial position or are likely to do so. Representatives from the Accounting and Controlling department and the Legal department meet to analyze the risks and legal proceedings that were identified and to determine, in conjunction with the businesses, corporate departments and subsidiaries, the amount of the provisions relating to such risks and legal proceedings based on the rules described in note B. "Accounting policies" to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

1.7.2.5 FINANCIAL RISKS

Arkema is exposed to various types of financial risks, such as liquidity risk, foreign exchange risk, interest rate risk, credit risk (counterparty risk), pension funding risk and tax risk.

The information provided below is based on certain assumptions and expectations that, by nature, may prove to be inaccurate, particularly with respect to changes in exchange rates and interest rates, and Arkema's exposure to the associated risks.

Liquidity risk

Arkema uses bond issues and loans from banking institutions to finance its day-to-day operating requirements and development. However, unforeseen needs may also arise, resulting in particular from an increase in working capital or unfavorable market conditions. Additionally, market conditions may make it difficult to refinance bonds at maturity, or one or more banks may be unable to meet their obligations to Arkema with respect to one of its main credit lines, which would significantly reduce its access to financing under equivalent terms.

For further details on borrowing terms and in particular on early repayment clauses, see section 4.1.8.1 and notes 21 and 22 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Risk management

Arkema's financing policy, implemented by the Financing and Treasury department, aims to provide the Group with the necessary financial resources to fund its operations over periods of time adapted to its repayment ability. This policy is based on the following principles:

- having Arkema's long-term credit rated by two rating agencies and maintaining a solid investment grade rating;
- having a net debt to EBITDA ratio of less than 2;
- maintaining cash reserves in excess of €500 million;
- maintaining average maturity at over three years; and
- diversifying its sources of financing.

At 31 December 2017, Arkema had a strong financial profile, with:

- a net debt to EBITDA ratio of 0.8;
- cash reserves of around €2 billion; and
- a Euro Medium Term Note (EMTN) program, representing a maximum amount of €2.75 billion, to facilitate access to bond markets.

At the date of this document:

- without taking into account the issue of perpetual hybrid bonds classified as equity, completed on 29 October 2014, the average maturity of Arkema's financial resources is greater than five and a half years; and
- Arkema's long-term credit ratings are BBB (stable outlook) according to Standard & Poor's and Baa2 (stable outlook) according to Moody's.

Consequently, at the date of this document, Arkema is able to meet its financial commitments as part of its operations, and does not anticipate any problems in the coming months.

Foreign currency risk

Given its international operations, Arkema is exposed to various types of currency risks:

- transaction risks related to Arkema's day-to-day operations and development projects;
- translation risks related to the consolidation in euros of Arkema's subsidiaries' accounts in currencies other than the euro. Fluctuations in the exchange rates of these currencies, particularly the US dollar-to-euro exchange rate, have had in the past and may have in the future a material impact on Arkema's financial position and operating income. For an indication of the impact of the translation effect on Arkema's income statement and balance sheet, especially with regard to the US dollar-to-euro exchange rate, see sections 4.1.5 and 4.1.9 of this document; and
- competition risk related to the fact that, proportionately, in the euro zone, Arkema incurs more operating expenses in euros than it generates sales in the currency owing to the fact that it is an export-focused company. As a result, Arkema's competitive position may be affected by the weakness of certain currencies, and in particular the US dollar against the euro, compared with its competitors positioned in countries with a weak currency. Furthermore, the weakness of certain currencies in countries with major imports from Arkema may affect its results.

Risk management

Arkema's objective is to minimize the impact of exchange rate fluctuations on its results and financial position.

Transactional risks are systematically hedged when recorded in the accounts. Arkema companies hedge their foreign currency assets and liabilities against their respective functional currencies. Revenues and costs in foreign currencies are hedged essentially by spot foreign exchange transactions and sometimes by forward transactions.

Foreign exchange risk linked to future flows, such as capital expenditure or sales flows, particularly export sales, may also be hedged. The Executive Committee is responsible for deciding whether such hedging is necessary, while implementation is carried out by the Financing and Treasury department using simple derivatives.

For further details, see notes 22 and 23 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Competition risk has gradually decreased following the implementation of a more balanced Arkema development and geographic expansion strategy.

Translation risk is not hedged as Arkema considers that it is inherent to its worldwide operations. However, Arkema reduces its balance sheet risk through a policy of allowing its companies to contract debt only in their functional currencies, except when a foreign-currency loan is backed by a commercial risk in the same currency.

Interest rate risk

Arkema is exposed to interest rate fluctuations.

At 31 December 2017, Arkema's debt stood at €2,494 million, which mainly included a €480 million bond issue with a 3.85% fixed rate, a €150 million bond issue with a 3.125% fixed rate, a €700 million bond issue with a 1.50% fixed rate and a €900 million bond issue with a 1.50% fixed rate. Neither the revolving multi-currency credit line nor the commercial paper program had been used at 31 December 2017. The terms of this financing are described in section 4.1.8.1 of this document.

Given the Group's net debt and the distribution of net debt between fixed rate and variable rate borrowings, a 1% increase in interest rates would reduce the cost of the debt by around €4 million.

Risk management

Arkema's policy is to minimize the impact of interest rate fluctuations on its financing costs.

- Interest rate risk exposure is managed by the Group's Financing and Treasury department and is hedged using simple derivatives.
- Arkema gives priority to fixed-rate borrowing due to the historically low rates. However, it regularly re-assesses its position based on market developments, and could enter into rate swaps on its bonds in order to reduce the cost of its debt.

For further details, see note 22 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Credit risk

Accounts receivable and other debtors

Arkema fosters relations with a large number of counterparties, most of which are its customers. At 31 December 2017, accounts receivable net of provisions amounted to €1,115 million. These accounts receivable are detailed by due date in note 22.4 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Arkema's exposure to credit risk is linked to the individual characteristics of its customers. Default by one of these customers is likely to lead to a financial loss limited to the uninsured share of the customer's debt to Arkema.

Risk management

Arkema's objective is to secure the collection of its accounts receivable through a global insurance policy implemented by the Financing and Treasury department.

- Arkema has a highly diversified customer base and makes less than 25% of its sales to its top 40 customers.
- There is no geographical concentration of credit risk as sales are evenly balanced across the different geographic regions in which Arkema operates.
- Arkema hedges most of its customer risk with a global credit insurance program. Given the quality of the Group's customer portfolio and low claim rate, this program allows it to cover a significant proportion of its accounts receivable. Arkema is striving to further minimize this risk through a specific credit risk management policy that consists in regularly assessing the solvency of each of its uninsured customers. Uninsured customers whose financial situation does not meet Arkema's solvency requirements are only supplied after payment.

For further details, see note 22 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document. The policy concerning provisions for doubtful accounts on fully or partially uninsured accounts receivable is also detailed in note 22.

Investments

Investment risk is related to financial investments with financial institutions. Arkema is indebted overall, but at times may be required to invest cash, in particular to maintain a certain level of liquidity, to comply with local regulations or to manage cash lags. At 31 December 2017, the amount of cash invested with banking institutions or money market funds amounted to €1,438 million. Default by any one of these counterparties is likely to lead to a financial loss limited to the amount invested with the defaulting counterparty and therefore to an adverse impact on Arkema's results.

Risk management

Arkema's objective is to minimize this risk by centralizing the management of its financing resources and requirements.

- Arkema recycles the financial surplus of its subsidiaries through intra-Group current accounts wherever local regulations permit.
- Any new relationship between an Arkema subsidiary and a banking or financial institution is first approved by the Financing and Treasury department.
- Arkema minimizes its exposure to credit risk by investing only in highly secure assets with leading diversified counterparties.

For further details, see note 22 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Risks related to pension funding

Arkema has obligations to its employees for pension benefits and other post-employment benefits in most countries where it operates (see section 2.6 of this document). These obligations could:

- exceed its related provisions if the actuarial assumptions used were inaccurate or if regulations changed; or
- result in asset shortfalls in certain countries where Arkema operates, particularly the United States and the United Kingdom, in the event of an adverse trend in the financial markets.

Risk management

Arkema's objective is to minimize this risk by opting for defined contribution plans wherever possible. Thus:

- the main defined benefit plans have been closed to new entrants, sometimes for a number of years, and in some cases to further accrual too;
- certain plans have been the subject of a transfer of pension rights to insurance institutions, in particular in France and the Netherlands; and
- the management of assets allocated to cover employee pension benefit obligations in some host countries, when such requirements exist, is outsourced to qualified professionals and controlled by independent trustees who themselves use the services of recognized professionals.

For further details, see note 18 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Tax and customs risks

Changes in tax or customs duty laws or regulations or amendments in the interpretation of case law, international treaties or administrative doctrine in any one of the many countries in which Arkema operates could adversely impact its business activities, financial position or results.

Furthermore, Arkema benefits from special tax treatment in some countries, such as reduced tax rates under certain conditions and for limited periods of time. If such special tax treatment were to be withdrawn, amended or not renewed, it could adversely impact its financial position or results.

Similarly, certain customs procedures may be reviewed by the customs administration on account of different practices in place in different countries or changes to regulations, which could adversely impact Arkema's business activities, financial position or results.

Risk management

Arkema's objective is to comply with the tax and customs regulations in all the countries in which it operates, while minimizing its tax burden.

The tax function is overseen by a team within the Financing and Treasury department that is made up of specialists supported by local employees and that uses the services of major external consultants whenever necessary. The Central Tax department is responsible for regularly updating Arkema's transfer pricing policy. Tax audits are overseen by the Tax department, which ensures corrective measures are implemented when required.

In addition, Arkema has a dedicated "customs" team that centralizes all key issues, with the help of an internal and external network of customs specialists and purpose-designed IT systems.

For further details on the financial impact of tax disputes, see note 20 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

1.7.2.6 IT RISKS

Industrial and management processes, and communication between employees and third parties, are highly dependent on information technology systems based on complex and ever-changing technical environments. Their failure could have a material impact on the Group's business activities, results or financial position. These threats also apply to the industrial businesses' production unit control systems. The main cyber and other risks related to IT systems are as follows:

- technical risk of an interruption in the operation of critical applications or the loss of sensitive data, resulting in the shutdown or serious disruption of the operation of all or part of an industrial unit or department; and
- risk of intrusion or malicious use of the IT systems, particularly to steal information, misappropriate money, disrupt the operation of industrial facilities or impede the Group's business activities.

Risk management

The Group's IT department (iTeam) aims to provide systems access to authorized users while ensuring the integrity and confidentiality of sensitive data.

Accordingly, the Group has adopted an IT Systems Security Policy that sets out the objectives and rules to be applied to guarantee the reliability of its IT systems based on the three criteria of availability, integrity and confidentiality mentioned above. The Group has also defined and implemented an internal directive to bolster the security of its industrial networks, as well as a regular compliance audit plan at its production sites.

Pursuant to this policy, iTeam implements a variety of initiatives, including technical measures (network protection, high-availability architectures with data replication, redundant data centers, standard workstation architecture with up-to-date antivirus software, segregation of industrial networks, etc.) and organizational measures (remote access for key employees, IT systems monitoring, enhanced ID and access-right security management, regularly tested business recovery plans, formal classification of information, user awareness-raising, annual reviews of IT risks, security patch management policy, etc.). Strict version management procedures that include non-regression testing are also in place to minimize any incidents brought about by the rollout of new versions of software or hardware.

The Security Operations Center, currently being set up, will also boost the overall level of the Group's IT security by increasing its surveillance and response capacity in the event of a security breach of its IT systems.

The regular review of the Group's IT Systems Security Policy, particularly with regard to industrial systems, and closer collaboration with government security bodies enables the Group to deal with threats to its management systems and to the operations of its industrial units (see section 1.7.2.3 on industrial safety, environmental and climate change risks). The Group also adapts its security policy in line with regulatory developments on personal data protection (European General Data Protection regulation) and network and information system security (European NIS directive).

The technical requirements of the Group's IT systems security policy comprise a behavioral component with a program to raise employee awareness in the areas of data protection and cyber security, including the distribution of a booklet of essential rules to all Group employees as well as regular and periodic awareness raising sessions.

The Group has also taken out an insurance policy for cyber security risks with leading insurance companies (see section 1.7.1.6 of this document).

Lastly, the Group has set up an internal control system consisting of a number of general IT controls to ensure the reliability of the Group's critical processes and compliance with security rules. The effectiveness of these measures is assessed every year and action plans are put in place to address any identified weaknesses.

1.7.2.7 STRATEGIC PROJECTS RISKS

Risks related to innovation

Innovation is a key part of Arkema's strategy. Its business activities, results and future prospects are heavily reliant on its ability to produce new products and new applications and to develop new production processes. Furthermore, Arkema invests in new industrial units and is exposed to the risk of disclosure of confidential documents and of copying of a process or technology that is critical to its production and to maintaining its international competitiveness.

Risk management

Each year, Arkema invests heavily in R&D to develop new products and processes. In the High Performance Materials and Coating Solutions divisions, the regular introduction of innovative new products is a key success factor. Similarly, in Industrial Specialties, process performance is a major driver of competitiveness. Arkema focuses its R&D efforts on fast-growing markets such as new energies, water treatment, 3D printing and lightweight materials to replace metal and glass.

This major focus on innovation also enables the Group to adapt to regulatory trends.

Furthermore, Arkema only subcontracts the manufacture of equipment essential for critical processes to specific companies bound by confidentiality agreements. Files and technical manuals are managed by a restricted number of individuals, specifically the business process officers and technical center engineers.

Risks related to mergers, acquisitions and disposals

As Arkema implements its strategy, it may provide a number of guarantees to third parties when disposing of businesses. It cannot be ruled out that when some of these guarantees are invoked, the compensation claims could exceed the provisions made by Arkema and therefore have an adverse impact on its results or financial position.

Arkema has also carried out several acquisitions in recent years that may expose it to various risks and in particular potential liabilities or responsibilities related to these activities. Should the assumptions on which these acquisitions were made fail to materialize, the development prospects of these activities may not be achieved. This could consequently impact the valuation of goodwill and have a material adverse impact on Arkema's business activities, results or financial position.

Risk management

Arkema endeavors, before entering into any external growth transaction, to take all necessary precautions when identifying targets, in particular by conducting in-depth evaluations of the activities and companies concerned and the various liabilities related to the business being sold, and by negotiating appropriate guarantees from the sellers with the advice of external consultants with expert industry knowledge. Furthermore, acquisitions are carried out by teams of qualified experts under the responsibility of the Strategy department.

Arkema's policy in terms of business disposals is to limit its liability with respect to guarantees to the buyers.

Risks related to joint ventures

Arkema is subject to risks related to the non-controlling interests that it holds in companies, some of which are major suppliers or customers of Arkema. The joint ventures included in the Group's scope of consolidation are described in the notes to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

In accordance with the contracts and agreements governing the operation, control and financing of these joint ventures, certain strategic decisions can be made only with the agreement of all partners. There are risks of disagreement or deadlock between the partners in these joint ventures. In certain cases that are beyond Arkema's control, these joint ventures could also make decisions that go against Arkema's interests. Lastly, despite all the precautions taken when choosing partners, the Group cannot rule out the possibility that one of its partners could file for bankruptcy.

Investment decisions made within these joint ventures, whether as part of general operations or pursuant to specific agreements with the partners in these companies, may require Arkema to incur additional expenses, to invest further or to purchase or sell certain companies.

Risk management

Arkema has a small number of non-controlling or joint-controlling interests in joint ventures, and accordingly protects its interests by introducing, where possible, contractual terms designed to resolve deadlocks and maintain its decision-making powers. The contracts or agreements relating to joint ventures that Arkema considers material are described in section 1.5 of this document.

1.7.2.8 INSURANCE COVER DEFAULT RISKS

Arkema's insurance policy is part of the overall risk management framework and, as such, is described in detail in section 1.7.1.6 of this document.

At the date of this document, Arkema believes that the limits of cover described in said section take into account the type of risks it incurs and are consistent with those currently available on the insurance market for groups of similar size and involved in similar business activities.

However, in some cases, the possibility that Arkema could be required to pay substantial compensation for claims that are not covered by the existing insurance program, or that it will incur very large expenses that will not be reimbursed or only partially reimbursed under its insurance policies, cannot be excluded. Indeed, while the insurance market offers property insurance levels that cover any probable maximum claims, this is not the case with respect to civil liability, where the potential maximum claims exceed what the insurance market can offer on acceptable terms for Arkema.

For a description of the various types of insurance contracts subscribed by Arkema, see section 1.7.1.6 of this document.

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1.8 SELECTED FINANCIAL INFORMATION

(In millions of euros unless otherwise mentioned)	**2017**	**2016**	**2015**
Sales	8,326	7,535	7,683
EBITDA	1,391	1,189	1,057
EBITDA margin	*16.7%*	*15.8%*	*13.8%*
Recurring operating income (REBIT)	942	734	604
REBIT margin	*11.3%*	*9.7%*	*7.9%*
Operating income	845	717	488
Net income – Group share	576	427	285
Adjusted net income (1)	592	418	312
Net income per share *(euros)* (2)	7.17	5.24	3.42
Adjusted net income per share (1) *(euros)*	7.82	5.56	4.23
Dividend per share *(euros)*	2.30 (3)	2.05	1.90
Shareholders' equity	4,474	4,249	3,949
Net debt	1,056	1,482	1,379
Gearing	24%	35%	35%
Net debt/EBITDA	0.8	1.2	1.3
Capital employed	6,554	6,829	6,466
Working capital on sales (4)	13.1%	14.5%	14.6%
Net provisions (5)	797	863	907
Cash flow from operating activities	1,008	821	858
Cash flow used in investing activities	(448)	(664)	(1,635)
Free cash flow (6)	565	426	442
EBITDA to cash conversion rate (7)	41%	36%	42%
Recurring capital expenditure (8)	431	423	431
Total capital expenditure on property, plant and equipment and intangible assets	459	445	493
Capital intensity (recurring capital expenditure/sales)	5.2%	5.6%	5.6%
Employees (31 December)	19,779	19,637	18,912

(1) Adjusted net income excludes unrealized foreign exchange gains and losses on the financing in foreign currencies of non-recurring investments.
(2) In accordance with IAS 33, the earnings per share computation includes the coupon paid on hybrid bond (see note C.8 to the consolidated financial statements at 31 December 2017).
(3) Dividend proposed at the annual general meeting on 18 May 2018.
(4) Working capital on sales as defined in section 4.1.9 of this document.
(5) Provisions net of non-current assets as defined in section 4.1.9 of this document.
(6) Cash flow from operations and investments excluding the impact of portfolio management.
(7) Free cash flow excluding exceptional investments and investments with no impact on net debt (defined in note C.1 to the consolidated financial statements at 31 December 2017)/EBITDA.
(8) Recurring capital expenditure defined in note C.1 to the consolidated financial statements at 31 December 2017.

2

CORPORATE SOCIAL RESPONSIBILITY

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

2.1 ARKEMA'S CORPORATE SOCIAL RESPONSIBILITY (CSR) APPROACH

2.1.1 Introduction

In a world facing numerous economic, environmental and social challenges, Arkema's ambition, as a global leader in specialty chemicals and advanced materials, is to act as a responsible chemicals producer by reducing its environmental footprint and offering its customers innovative, sustainable solutions. In this way, Arkema aims to drive sustainable, responsible growth in its business, while effectively responding to the planet's social and environmental challenges.

> **FOCUS**
>
> **Thierry Le Hénaff,**
> **Chairman and Chief Executive Officer**
>
> "Our strategic position as a central player in the industry, dedicated to serving our customers, creates a responsibility for us to set an example of excellence in environmental awareness, safety and sustainability in chemical production."
>
> Excerpt from COP 2016, commitment to the Global Compact

In line with this approach, Arkema's CSR policy has been structured around five commitments:

1. Being a top quartile performer in safety in the chemical industry;
2. Reducing the environmental footprint of its operations;
3. Placing solutions for sustainable development at the heart of its approach to innovation and product range;
4. Promoting the individual and collective development of all its employees; and
5. Encouraging open dialogue with all its stakeholders.

The Group's CSR policy is developed in compliance with the main international texts and standards in force and more particularly with the International Bill of Human Rights, the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights, the OECD Guidelines for Multinational Enterprises, the ten principles of the United Nations Global Compact, of which Arkema has been a participant since 2014, and the Responsible Care® program, of which the Group has been a member since 2006.

For several years now, Arkema has been engaged in a voluntary process to improve its corporate social responsibility performance, with the aim of being included in the Dow Jones Sustainability Index (DJSI). The Group's CSR approach is regularly assessed by external stakeholders, particularly customers or SRI rating agencies.

The very significantly improved ratings obtained in 2017 confirm the relevance of Arkema's CSR approach and provide the Group with areas for improvement that will enable it to rank among the best performing companies in the industry.

ROBECOSAM We are Sustainability Investing.	FTSE4Good	CDP DRIVING SUSTAINABLE ECONOMIES	2017 CSR Rating GOLD ecovadis	EURONEXT vigeo eiris INDICES
Participation since 2015, with a significantly improved assessment in line with the Group's objective of joining the DJSI	Renewed every year since its initial inclusion in 2015	A- score achieved on Climate Change in 2017 reflecting continuous improvement over three years. B score obtained on Water for the first year of participation	Gold recognition level achieved in 2015 and renewed in 2017	Included in the Europe 120 and Eurozone 120 indices since 2015

2.1.2 Governance and ethics

2.1.2.1 PARTICIPANTS IN THE CSR PROCESS

To ensure that the social, environmental and business aspects of Arkema's operations are managed consistently and in the interests of all stakeholders, the Group's CSR commitment is fully led by the Chairman and Chief Executive Officer and the Executive Committee. The Group's commitment to the United Nations Global Compact is renewed each year via its annual Communication On Progress. Internally, environmental, social and ethics policies are validated by the Executive Committee members, who are responsible for their dissemination and application across the Group.

Arkema has thus deployed, for all its entities, a Health, Safety, Environment and Quality Charter, a Code of Conduct and Business Ethics, a Supplier Code of Conduct, a charter for the promotion and application of the International Labour Organization's conventions, a policy on conflict minerals and a policy on the use of Group products for medical applications.

To fulfill its ambitious CSR approach, the Group has created a Sustainable Development department, comprising the Product Safety and Environment department and the Sustainable Development team. It reports directly to the Industry Executive Vice-President, who is a member of the Executive Committee.

In addition, a CSR Steering Committee guides and supports the Group's progress in the area of CSR. Its members include the Human Resources and Communication Executive Vice-President and a number of corporate Vice-Presidents, all of whom are actively involved in the CSR process, and it is chaired by the Industry Executive Vice-President. It meets twice a year.

The Group's CSR ambition, the related initiatives and their monitoring, the main KPIs and the sustainable development targets are defined and validated by the Executive Committee and presented once a year to the Board of Directors.

Arkema's governance of the CSR process is integrated into the Group's corporate governance. In particular, every year the Sustainable Development Vice-President reports to the Audit and Accounts Committee, presenting the scope of the CSR data audit and the findings of the independent third-party auditor. These findings appear in the auditor's opinion issued to the annual general meeting along with the Board of Directors' report, which also includes a variety of social and environmental information.

All of the 2017 CSR indicators were reviewed by the independent third-party auditor, as indicated in its limited assurance statement in section 2.8 of this chapter.

2.1.2.2 CSR REPORTING ORGANIZATION

The CSR reporting organization is designed to enable the Group to manage and measure the effectiveness of its sustainable development program.

Reporting scope and period

The scope of reporting for safety, environmental, employee and social data is described in the methodological note in section 2.8 of this document. To optimize the organization, coordination and integration of the financial and CSR reports, these data are reported on a calendar year basis.

Reporting organization and protocol

The Group has defined directives governing the reporting of safety, environmental, employee and social data for all facilities. Data are generally reported once a year, but for certain specific issues, interim data are reported quarterly so as to identify trends and implement required corrective measures on a timely basis. The interim data are not published.

Compliance and standards

The Group publishes employee, environmental and social information in compliance with Articles L. 225-102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (*Code de commerce*) and in accordance with the recommendations of ISO 26000. In compliance with the above articles, this information is reviewed by an independent third-party auditor, who issues a report attesting to the completeness and fairness of the CSR information.

The reporting process follows the fourth generation of the Global Reporting Initiative guidelines (GRI G4). The concordance table can be found in section 2.8.4 of this document.

2.1.2.3 APPLICATION OF THE LAW ON DUTY OF CARE

Pursuant to French Law no. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting firms, the Group has carried out an in-depth review of the risk of serious violations of human rights and fundamental freedoms, as well as of health, safety and environmental risks, for the Group itself and in its relationships with stakeholders, in order to supplement existing reasonable care measures and establish and implement a duty of care plan for the activities of all Group companies, in a spirit of continuous improvement.

The risk review was carried out using a collaborative approach involving the Sustainable Development, Human Resources, Health, Safety and Environment, Legal Affairs, Procurement and Internal Control and Internal Audit departments. The main risks identified for the Group itself are presented in section 1.7.2 of this document and are included in the Group's risk mapping process.

For health, safety and environmental risks, a harmonized approach based on a vision set out in the Health, Safety, Environment and Quality Charter has existed within the Group for many years and is managed centrally. The management system for these risks, which is described in detail in sections 2.3 and 2.4 of this document, includes risk prevention measures as well as measures for mitigating impacts in the event of an incident or accident. For risks relating to human rights and fundamental freedoms, the Group confirms its commitment presented in section 2.7.4 of this document and intends to leverage its duty of care plan to strengthen and harmonize its system for preventing as much as possible risks of serious violations across all Group entities.

For risks relating to the activities of suppliers and subcontractors with which the Group has established business relationships, Arkema has published a Supplier Code of Conduct and is a member of Together for Sustainability (TfS), a chemical industry initiative that organizes the assessments required by duty of care legislation. The audits carried out at Group subsidiaries by the Internal Audit department also include supplier-related tests. For more details on the Group's management of its relationships with suppliers and subcontractors, see section 2.7.5 of this document.

A whistleblowing system introduced as part of the Group's compliance with the Sapin II Law also meets the requirements of the law on duty of care. For further details, see section 2.7.3 of this chapter.

As part of the follow-up of the duty of care plan and the assessment of its effectiveness, the internal audit and control system may be modified, if necessary, to take into account any additional items identified.

2.2 CSR PERFORMANCE CHALLENGES AND MANAGEMENT

2.2.1 Growth and value creation model

As described in detail in section 1.1.1.1 of this document, the Group's activities are part of a very diversified value chain, both in terms of the suppliers upstream and the customers and end users downstream. Beyond this commercial value chain, the Group is part of a broader ecosystem comprising a wide variety of stakeholders, including research partners, the financial community and shareholders, employees and employee representatives, neighboring communities, civil society and NGOs, public authorities and professional associations. The various members of the value chain and the ecosystem have diverse CSR processes that reflect their own activities, history, culture and strategy.

Determined to create value on the economic, environmental and social fronts, the Group has developed a robust CSR policy.

The Group supports its customers in developing their potential, improving their performance and becoming more competitive with innovative, sustainable solutions derived from its applications-driven research and development, which takes into account the needs and expectations of end users.

The Group is striving to build lasting relationships with its suppliers and has issued a Supplier Code of Conduct for this purpose. By becoming a member of the Together for Sustainability program, the Group has demonstrated its commitment to a responsible supply chain, as explained in section 2.7.5 of this chapter.

2.2.2 Stakeholders and materiality assessment

OPEN DIALOGUE

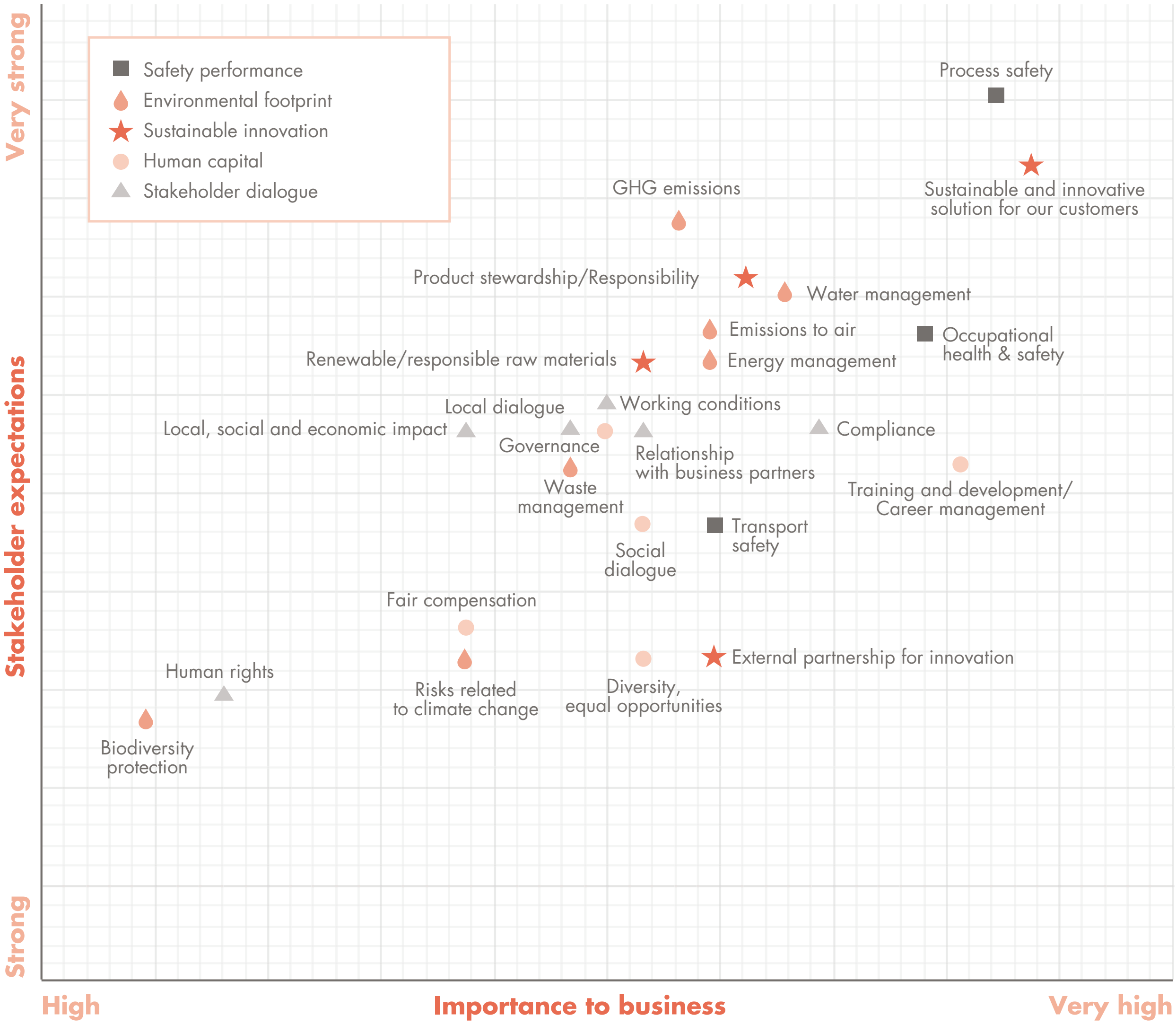
Consultation and open dialogue with internal and external stakeholders is a prerequisite for understanding their expectations, building relationships based on trust and cooperation, and creating value for all.

The following table summarizes the Group's dialogue with its main stakeholders and refers to other sections of this document for more details.

Stakeholder	Context and purpose of dialogue	Form of dialogue
Customers	Business relationship and collaboration aimed at meeting the current and future needs of customers and end users	Arkema establishes ongoing dialogue with its customers at various levels of the organization. To increase the value added created, the Group capitalizes in particular on: • dedicated management of global key accounts as part of a commercial excellence program; • joint innovation programs with customers; and • development of new digital solutions that increase this value added for customers and partners
Suppliers	Business relationship and collaboration aimed at meeting the current and future needs of the Group and its customers	Arkema favors suppliers that have a global presence (Europe, Americas and Asia), are competitive and innovative (including in digital technology), and actively deploy a CSR policy Arkema maintains open dialogue with its suppliers at various levels of the organization so that they support the Group in its developments over the short- and long-term
Research partners	Technology partnerships aimed at strengthening the Group's innovation performance by providing access to additional skills and discoveries that can drive breakthrough innovations	Arkema develops a diverse range of partnerships in various forms, including with academic institutions and industrial companies or as part of national or international cooperation efforts For more details, please refer to section 1.4.2.3
Financial community and shareholders	Inform the market of the Group's results and main operations Improve understanding of the Group's activities, strategy and outlook among investors, analysts and individual shareholders through transparent information	• Results presentations; • Meetings with institutional investors and analysts; • Discussions with financial rating agencies; and • Annual general meeting. For further details, see section 5.4 of this document.
Employees and employee representative bodies	Dialogue with employee representative bodies and direct dialogue with employees	• Continuous social dialogue with employee representative bodies that goes beyond legal requirements and provides numerous opportunities for discussion and negotiation with a view to driving social progress; and • Consultation and dialogue with employees notably in the form of internal surveys. For more details, please refer to section 2.6.4.
Neighboring communities	Neighbors and communities that interact locally with Group sites	The Common Ground® initiative described in section 2.7.6 promotes local dialogue at each of the Group's sites
Civil society and NGOs	Proactive and reactive dialogue	• Collaboration with NGOs on specific projects; • Discussions in relation to the materiality assessment; • Periodic meetings with the media; and • Responsible and transparent communication in the event of a crisis.
Public authorities	Regular and occasional contact aimed at ensuring the responsible development of our activities	• Responding to periodic surveys; • Participation in various consultation and working groups; and • Occasional contact at various levels (departments and cabinets) on specific topics.
Professional associations	Continuous contribution to defending the industry's interests vis-à-vis the public authorities	Arkema participates actively in segment- or topic-specific working groups, commissions and statutory bodies within relevant associations and in the external initiatives carried out by such associations.

MATERIALITY ASSESSMENT

In 2016, the Group conducted a formal process of exchange with stakeholders on CSR topics in the form of a materiality assessment. The resulting materiality map reveals a strong correlation between the materiality assessments of both internal and external stakeholders. It also enabled the Group to identify areas for improvement and set new strategic objectives.



The material topics identified in the map have been classified into three levels of priority as follows:

	Safety	Environment	Innovation	Employees	Social
Priority topics	• **Safety of people and processes**	• **Resources management (water and energy)**	• **Sustainable and innovative solutions** • **Product stewardship and responsibility**	• **Diversity and equal opportunities** • **Training and individual development**	
Important topics	• Transport safety	• Climate change • Direct environmental impact of operations	• Renewable/responsible raw materials	• Working conditions	• Compliance • Local dialogue • Relationships with business partners • Governance
Permanent topics		• Biodiversity protection	• Open innovation	• Social dialogue • Fair compensation	• Local, social and economic impact • Human rights

In 2017, the Group pursued its stakeholder dialogue process by inviting representatives from each category of external stakeholders to provide feedback on the results of the materiality assessment and the priorities defined. Participants expressed their satisfaction with the consultation process and their desire to continue the collaboration initiated in the form of direct dialogue.

The Group made a commitment to organize annual meetings in order to respond to this request.

To extend the scope of the initial assessment and take into account changes to stakeholder expectations, a new materiality assessment will be carried out in 2019.

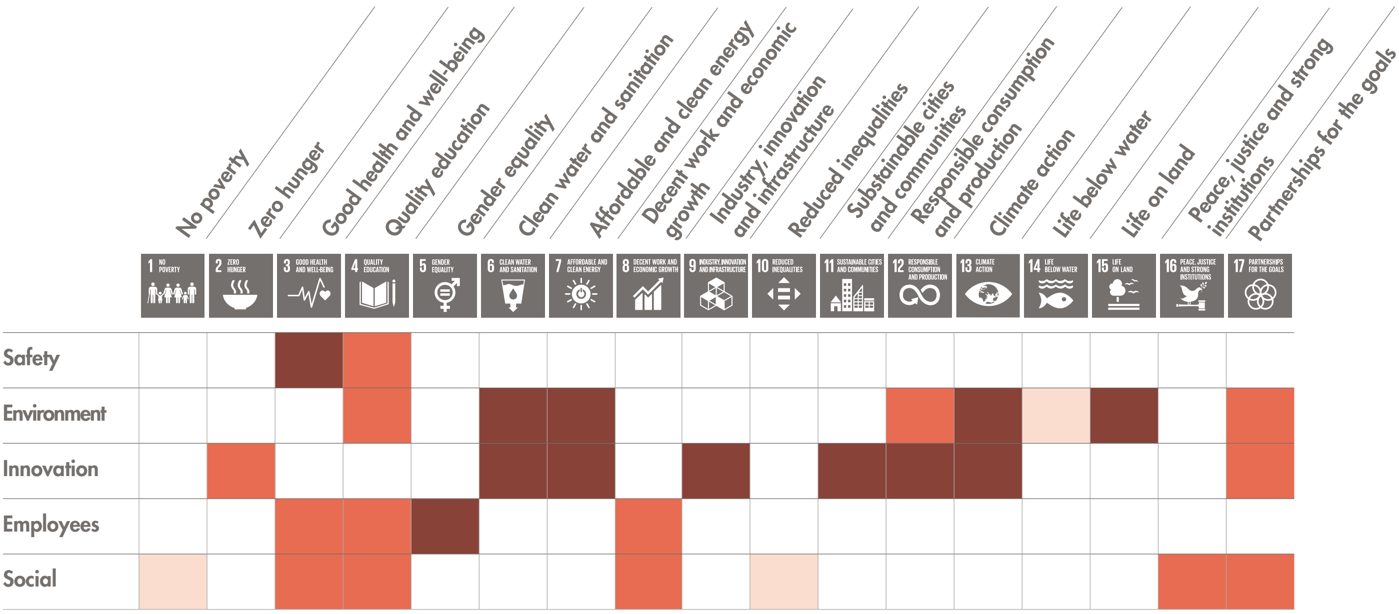
DESCRIPTION OF KEY IMPACTS, RISKS, AND OPPORTUNITIES

Like all companies, through its activities, Arkema interacts with its social environment. The identification and analysis of the Group's impact are part of its sustainable development process in order to mitigate the negative effects and accentuate the positive effects, both for the Group itself and for its stakeholders.

Arkema has therefore been engaged for many years in a continuous process of reducing the main risks associated with its activities, particularly those relating to safety and the environment (described in section 1.7.2 of this document). At the same time, thanks to its capacity for innovation and its expertise, Arkema develops new products and solutions that provide a wide range of opportunities to contribute to meeting the challenges of sustainable development (see section 2.5.2 of this chapter).

2

The Sustainable Development Goals defined by the United Nations (SDGs) set out the economic, social and environmental challenges facing our world today. Arkema's sustainable development initiatives are underpinned by these SDGs. Based on the expectations expressed by stakeholders, the Group's activities and the five commitments structuring its CSR policy, Arkema has mapped its contribution to the SDGs by identifying the intensity of its commitments and actions in relation to its impacts.



Strategic contribution (through strategic objectives or programs)
Direct contribution (resulting from voluntary initiatives)
Indirect contribution (resulting from the Group's activities)

The quantitative targets are presented in section 2.2.4 of this chapter.

2.2.3 The Group's five CSR commitments

1. **Safety: being a top quartile performer in safety in the chemical industry**

The Group's industrial safety initiative has been rolled out around the world and comprises complementary technical, organizational and human aspects. By introducing a Group-wide safety culture and making safety a priority, the Group has continuously improved its safety performance since its stock market listing.

The Group also takes care that neither people's health or safety, nor the environment, are impacted by its products.

2. **Environment: reducing the environmental footprint of its operations**

All employees share the objective of reducing the Group's environmental footprint, by pursuing three types of actions: limiting emissions from operating activities, reducing the use of natural resources and developing the use of renewable resources.

3. **Innovation: placing sustainable development solutions at the heart of its approach to innovation and product range**

The Group uses its product R&D and marketing teams to support sustainable development and address the challenges facing the planet. To this end, it creates innovative solutions in support of new energies, lightweight materials, the fight against climate change, access to water, and the use of bio-based raw materials. R&D policies are described in section 1.4 of this document.

4. **Social: promoting the individual and collective development of all its employees.**

While unique in their know-how, capabilities, nationality, role and personality, together, the Group's employees make up a community. Employment policies around the world focus on two aspects: the individual development of employees and social development through actions that aim to improve working conditions for all.

5. **Societal: encouraging open dialogue with all its stakeholders**

The Group invites dialogue on its activities and products with all stakeholders, through programs such as the Common Ground® initiative, developed to build mutual understanding and trust-based relationships with local residents, associations and schools. With its suppliers, the Group also adopts responsible behavior based on the desire to develop balanced, long-term, trust-based relationships.

2.2.4 CSR key performance indicators

The following table summarizes the Group's key CSR performance indicators. Tracking and analyzing these KPIs enables the Group to validate, year after year, the performance of its CSR process.

The Group's 2025 targets attest to the strength of its commitment to sustainability and social responsibility. In 2017, given that the environmental target for chemical oxygen demand (COD) was achieved earlier than expected, the 2025 target was reinforced from 0.80 to 0.60.

	2025 targets	2017	2016	2015
Safety				
Total recordable injury rate (TRIR) [(1)]	<1.2	1.6	1.5	1.5
Percentage of sites having implemented peer observation in the last three years	100%	59%	56%	57%
Percentage of AIMS audited sites	100%	69%	63%	61%
Environment (in EFPI terms compared with 2012)				
Greenhouse gas emissions	0.50	0.52	0.60	0.62
Volatile organic compound emissions	0.67	0.66	0.80	0.83
Chemical oxygen demand	0.60	0.70	0.78	0.93
Net purchases of energy	0.85	0.89	0.92	0.98
Innovation				
Number of patent applications filed during the year relating to sustainable development		150	116	121
Percentage of sales from products made from renewable raw materials		9%	10%	N/A
Social				
Percentage of women in senior management and executive positions	23% to 25%	19%	18%	17%
Percentage of non-French nationals in senior management and executive positions	42% to 45%	37%	39%	N/A
Average number of training hours per employee		25	27	27
Societal				
Percentage of plants taking part in the Common Ground® program		78%	86%	82%

(1) The TRIR includes injuries to both Group and subcontractor employees.

Based on the results of the materiality assessment, which positions process safety and sustainable and innovative solutions as priority topics, the Group introduced a new Process Safety Event Rate indicator in 2017 and is working on the definition of an indicator for 2018 that will measure the Group's contribution to the United Nations' Sustainable Development Goals. Targets will be defined for these two indicators once they have been monitored for a certain period of time.

2.3 HEALTH AND SAFETY INFORMATION

BEING A TOP QUARTILE PERFORMER IN SAFETY IN THE CHEMICAL INDUSTRY

2.3.1 Safety management

Safety and protecting health and the environment are core priorities in the management of the Group's business and manufacturing operations, and a major focus of its CSR policy. This focus is shown by the Group's involvement in the Responsible Care® program, a voluntary initiative undertaken by the chemical industry to responsibly manage its operations and products, based on a continuous improvement process.

The Group's safety policy is structured around three areas: prevention of risks (related to safety, the environment and pollution), management guidelines, and a culture of safety and sustainability. It reflects prevailing legislation and the Group's own requirements, which have been formally defined in a Safety, Health, Environment and Quality Charter and in a global standard, the Health, Safety and Environment (HSE) manual. The charter and manual form the basis of HSE management systems in all Group entities.

The materiality assessment performed in 2016 confirmed that employee and process safety was one of the major aspects of the Group's CSR approach.

The Group's commitment to safety has been materialized in three targets for 2025, which reflect the Group's willingness to continuously improve its performance in this area.

2025 TARGETS

Reduce the total recordable injury rate (TRIR) to less than 1.2

Extend the peer observation program to every Group site*

Audit every Group site* in accordance with the Arkema Integrated Management System (AIMS)

These policies are being implemented worldwide by the Group Safety and Environment department, with the support of safety and environmental experts in each region.

2.3.2 Employee safety and health

Arkema considers protecting the health and safety of its own employees and those of its subcontractors as a core value and believes that every occupational accident is preventable.

As part of a prevention and continuous improvement process the Group is committed to ensuring a good working environment for everyone, in particular by analyzing workstation health and safety risks and studying accident typologies.

Regarding safety, the Group has the same level of expectation for subcontractors working on its industrial sites as for its employees.

In particular, all of them systematically take part in awareness initiatives designed to develop a safety culture and in the Group's safety processes and programs. In addition, the injury rates for both employees and subcontractors are tracked as part of the safety performance management system.

Another priority concerns the attenuation of arduous working conditions, with the deployment several years ago of a dedicated program comprising workstation ergonomics and other remedial actions. Workplace well-being and the quality of work-life are also important factors in protecting employee health.

* *For newly acquired companies, this program or system will be deployed within approximately three years*

2.3.2.1 EMPLOYEE SAFETY

Instilling a culture of safety through employee training, awareness-building and industrial safety and environment systems

Behavior plays a critical role in managing and preventing risks. That is why a core aspect of the Group's safety process is the development of a common safety culture that raises everyone's awareness of his or her responsibility and the importance of his or her personal behavior. To develop a shared safety culture across the organization, the Group uses a variety of programs and initiatives, including:

- general training in health, safety and the environment for new hires;
- the "Safety in Action" and "Essentials" programs;
- field initiatives, such as peer observations, flash audits, scheduled general inspections, safety tours and field safety audits;
- dedicated training courses, such as SafeStart®, "Human and Organizational Safety Factors", "Safety Culture and Leadership", "Transporting Hazardous Substances" and "Crisis Management"; and
- the Arkema Safety Academy, which is enabling every employee to share the Group's safety challenges, policies and tools.

Some of these tools are covered in more detail below.

Safety training effort

In 2017, safety training [1] totaled 207,581 hours (*i.e.*, 15 hours per year per employee trained), and the number of employees who attended at least one safety training session totaled 13,566 (71% of the Group headcount) [1].

In addition over 6,000 people (33% of the Group headcount) took e-learning courses on safety in 2017 [1].

FOCUS

Using neuroscience for a behavior-based approach

In 2017, the Group initiated a review in conjunction with a neuroscientist of the mechanisms associated with human error, particularly among experts (which most of the Group's employees are in their respective professions). The lessons learned are being converted into simple, practical measures to modify behavior and thereby avoid accidents or limit their consequences.

The "Safety in Action" and "Essentials" programs

The "Safety in Action" and "Essentials" programs which concern both employees and outside contractors working on Group sites are deployed worldwide. "Safety in Action" is designed to promote and deepen everyone's safety culture, while the "Essentials" define a set of rules that must be applied without compromise in every situation.

Peer observation

Peer observation aims at raising risk awareness in ways that help to reduce the number of occupational accidents. It capitalizes on positive experiences and a joint search for solutions to improve practices. Using a structured observation process, each site implements the method taking into account its own specific features (risks and operations). During the deployment phase that is currently underway, employees with similar qualifications are encouraged to observe each other while carrying out their duties.

As of today, peer observation programs have already been successfully deployed in the United States and are now being rolled out in Asia and the main European countries.

In 2017, 59% of the sites had put in place peer observation practices to improve safety, compared with 56% in 2016. The 2025 target is 100% of the Group's sites.

As part of this same process, Arkema has put in place a number of special programs, such as Smart Zone and SafeStart®:

- **Smart Zone: identifying and rectifying shortfalls**

Bostik has developed a monitoring system to identify in-field non-compliance or shortfalls against best safety practices. Employees detecting such an incident can record it in a Smart Zone table. After immediate corrective action is taken, further measures can be discussed between the employee and the Smart Zone table manager. Implementation of the corrective solution is tracked in the Smart Zone through to completion, for fast, effective incident follow-up.

- **SafeStart® to make safety everyone's business**

To encourage the shift from a compliance to a commitment-based safety culture, the Group has rolled out the SafeStart® initiative, which is based on observing oneself and other people to identify critical states, such as rushing, frustration, fatigue and complacency, that can lead to critical errors (eyes not on task, line of fire, mind not on task, loss of balance, traction or grip) which in turn transform minor risks into major ones. Techniques to reduce the incidence of critical errors in turn help to drive a continuous improvement in the prevention of accidents. In 2017, the Group decided to train all employees in the fundamentals of this approach by 2020.

Getting stakeholders involved in safety

In France, many entities organize Safety Days once or twice a year with their subcontractors, which are attended by local HSE employees, the Group contract manager and the contractor's sales manager. During these days, the Group is represented by local executives, business executives and representatives from the Group Procurement and Safety and Environment departments. These events provide an opportunity to share best workplace health and safety practices.

(1) *In entities at least 50%-owned and employing more than 30 people.*

Certain entities, such as the coating resins business, carry out an annual employee satisfaction survey with a particular focus on safety. To extend this approach, in 2017 the Group prepared a tool for assessing the engagement and safety culture of its employees, which was presented to all sites in France. In 2018, the tool will gradually be rolled out across these sites and presented to other sites in Europe.

Injury rates

The Group's safety performance ranks among the best in the global chemical industry, confirming the clear improvement dynamic underway for several years, driven largely by the deep involvement of every employee.

2025 TARGET

To further improve, the Group has set a target to achieve a total recordable injury rate per million hours worked (TRIR) of less than 1.2 in 2025.

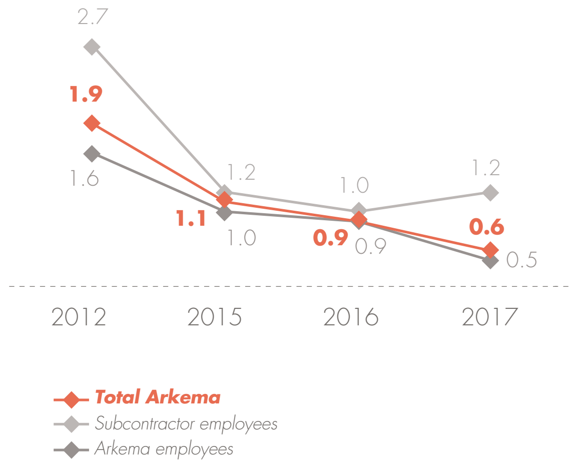
After several years of strong improvement, the Group continued to consolidate its safety performance in 2017 at a very good level with a TRIR of 1.6, virtually unchanged from the very good result achieved in 2016. The overall TRIR reflects an excellent performance by Group employees, with a decline in TRIR to 1.2 in 2017 versus 1.4 in 2016, which offset the weaker performance among subcontractor employees, for whom the TRIR rose to 3.2. Preventive measures aimed at subcontractor employees will therefore be reinforced starting in 2018.

The Group also made very significant progress in its drive to reduce lost-time injuries, thanks to the implementation of prevention initiatives. The lost-time injury rate (LTIR), which reflects the severity of incidents, therefore declined to 0.6 in 2017 from 0.9 in 2016. An average 44 days were lost per incident in 2017 across all Group and subcontractor employees working on site, compared with 24 in 2016. The increase was primarily due to lost-time injuries among subcontractor employees, for whom the average time lost per incident came to 62 days. For Group employees, the average was 32 days. Initiatives targeting subcontractor employees will therefore be reinforced starting in 2018 and beyond. No fatal accidents have been recorded since 2013.

The following charts show consolidated injury rates for the 2015 to 2017 period, in number of incidents per million hours worked, calculated according to the methodology described in section 2.8 of this chapter. They also show data for 2012, the baseline year used to set the Group's long-term CSR targets.

TOTAL RECORDABLE INJURY RATE (TRIR) [(1)]

LOST-TIME INJURY RATE (LTIR) [(1)]



In 2017, a total of 42 Group employees were victims of reported incidents recorded in the TRIR for the year, of which 16 resulted in lost time, out of a total worldwide workforce of 19,779 people. The rate also reflected the 27 incidents involving subcontractor employees reported during the year, of which 11 were lost-time incidents. Analysis of the data shows a decrease in the number of very serious incidents, which account for a very small proportion of the total. In the years ahead, the Group's ambition remains to further reduce this number.

As part of its drive to continuously reduce the number of serious incidents, Arkema decided to launch a process in 2017 to identify potentially serious accidents. This will enable prevention measures to focus on these types of incidents as a first priority, thereby improving the effectiveness of prevention efforts.

(1) *A lost-time incident refers to any incident causing bodily harm or psychological trauma to an employee in the course of his or her duties and resulting in at least one day off work.*

2.3.2.2 OCCUPATIONAL ILLNESSES

Toxic or hazardous substances have been and continue to be used in the manufacture of the Group's products. Despite the safety and monitoring procedures in place Group-wide and in each production facility, employees may have been exposed to such substances and may develop illnesses arising from such exposure.

In this respect, like most manufacturers, the Group has used a variety of asbestos-based insulating or heat-proofing materials at its production facilities in the past. Consequently, certain employees may have been exposed to such materials before they were gradually removed and replaced.

Claims for occupational illnesses related to past asbestos exposure have been filed against the Group, mostly for periods before 1980. Health risks are described in section 1.7.2 of this document.

With respect to industrial hygiene, beyond the use of enclosed industrial processes limiting emissions as much as possible, protective systems such as source capture of residual emissions, general improvement works designed to minimize exposure, and the use of appropriate personal protective equipment at each workstation, the Group requires risk exposure to be assessed at each workstation and that residual employee exposure to hazardous chemicals be regularly measured in order to attenuate the risk of occupational illness in the future. Measurement data are stored in conditions that guarantee their long-term integrity.

In 2017, 56 occupational illnesses were reported Group-wide, of which 23 were related to exposure to asbestos and 4 to exposure to chemicals.

In France, the Group also deploys traceability programs to track potential exposure to arduous working conditions, (including chemicals) in its facilities, as part of the annual occupational risk assessment report (*document unique*). Globally, the Group is working on digitizing its risk assessment data using the dedicated STARMAP tool (see section 2.3.2.4 of this chapter), which guarantees internal traceability. At end-2017, 48% of the Group's sites worldwide had entered their workplace risk assessment data into the STARMAP tool.

2.3.2.3 MEDICAL CARE

Regular medical check-ups were available in 93.6% of Group companies in 2017, covering 93.9% of employees.

2.3.2.4 HEALTH AT WORK

To maintain health at work, Arkema has undertaken continuous improvement initiatives to prevent arduous working conditions, stress and workstation risk and generally to improve employee well-being.

Integrating ergonomics and preventing arduous working conditions

Since 2012, the Group has undertaken a process to integrate ergonomics and prevent arduous working conditions. In France, a new agreement on the prevention of arduous working conditions and the integration of ergonomics was signed in 2016 by all of the unions, following on from the previous one. In this context, numerous initiatives have contributed to improve working conditions, such as:

- workstation ergonomics studies;
- workstation upgrades;
- the development of handling support systems;
- the development of internal expertise through the implementation of a network of ergonomics correspondents; and
- the integration of ergonomics into the industrial design of projects.

As part of this process, many initiatives have been undertaken to improve working conditions. For example, after the major workstation ergonomics project carried out at the Honfleur, France plant, ergonomic considerations were also taken into account in the project to fit out a new facility at the Orgasol unit in Mont. As a result, field observations were used to make practical improvements to the debagging workstation.

FOCUS

Workstation ergonomics

The principles of workstation ergonomics are integrated into all large projects thanks to the use of 3D models. These models are developed by technical experts as part of the Group's digital strategy.

The network of ergonomics correspondents (comprising one to two correspondents per Arkema France site) was set up in 2016 and an initial round of six days training in ergonomics was provided to its members. Since its creation, the network has met three times to share best practices. More members will be added in 2018 and the network will continue to meet at least twice a year.

Preventing stress and improving quality of work life

In 2008, Arkema France initiated a physician-supported stress management program for individual employees, whose stress levels are determined by taking a standardized stress, anxiety and depression test (OMSAD) during their annual check-up with the occupational physician. The Group has also undertaken a company-wide voluntary workplace stress prevention initiative to improve any working environment identified as being at risk, based on such proven indicators as an abnormally high percentage of employees diagnosed as being over-stressed.

The primary stress management initiatives undertaken in 2017 included:

- continuation of conferences, workshops, quality of work days and other local initiatives concerning quality of work life;
- a new map of the OMSAD results for Arkema and for all sites concerned: communication of the results to the central and local workplace stress prevention task forces;
- adaptation of training programs to help managers deal effectively with workplace stress and psychosocial risks, while enhancing quality of work life;
- changes in the way psychosocial risks are taken into account in the annual occupational risk assessment report (*document unique*) describing workstation risk factors; and
- changes to the OMSAD questionnaire to include questions about well-being in the workplace.

In addition, a teleworking system is being gradually introduced in agreement with the employees concerned and their managers.

An agreement was signed by four of Arkema France's five unions on this company-wide workplace stress management initiative. With this agreement, the Group affirms its ambition to offer employees a working environment favorable to their well-being. This agreement calls for a variety of training and information initiatives, as well as the introduction of a procedure for identifying working environments at risk together with an analysis to determine stress factors and take corrective action.

Protecting health at the workstation

To consolidate all of the workstation health and safety initiatives, the Group is developing a workstation risk assessment application, known as STARMAP, to prevent health and safety risks more effectively by capitalizing on globally managed data libraries and best practices.

Agreements on early retirement for employees in asbestos-contaminated facilities

In France, five Group operating plants have been included by ministerial decree on a list of sites whose current employees would be entitled to the early retirement provisions for asbestos workers. The Group cannot exclude that other Group sites may be added to the list in the future.

In addition, on 30 June 2003, Arkema France signed an agreement with all of the representative unions that improved the terms of retirement for employees qualifying for this provision, and adjusted their retirement dates to facilitate the transfer of their skills and knowledge within the organization. These measures were extended to all Group companies in France by an agreement signed on 1 September 2007 with all of the unions. For more information, please refer to note 19 to the 2017 consolidated financial statements in section 4.3.3 of this document.

2.3.3 Process safety

The Group carefully analyzes the risks associated with all of its production, transportation, loading/offloading and storage processes and pays particular attention to both internal and external feedback concerning incidents, accidents and best industrial risk management practices.

The aim of the risk analysis is to identify and manage potential risks that may cause harm to people, goods or the environment. This enables the Group to seek out processes that are inherently safer and to implement risk management measures that focus on prevention.

The analysis is carried out in compliance with applicable legislation, using systematic studies based on recognized methods, which are chosen in accordance with the type of process involved, the complexity of the operations and the size of the facility. The aspects taken into account include (i) the risks associated with the properties of the chemical products used, (ii) the risks associated with operating conditions, equipment characteristics and potential technical and human weaknesses, (iii) the risks associated with the location of units on a site and their potential interaction and (iv) natural risks.

The risks identified in this way are prioritized using a semi-quantitative process developed and led by a network of experts in Europe, the United States and Asia. The experts are also responsible for preparing the directives, procedures and guidelines required for effective risk management.

The risk analysis process and the corresponding measures are carried out prior to the implementation of new processes, new facilities, operations that require the use of new chemical products, and extensions or modifications to existing facilities. The resulting risk analyses are updated periodically.

As a result, the Group regularly makes improvements to its existing production units. In 2017, Group capital expenditure allocated to safety, the environment and maintaining the production facilities to standard amounted to €242 million, versus €240 million in 2016.

At the same time, the Group is investing heavily to reinforce a culture of process safety among its employees. This involves not only technical training in process safety systems and methods, but also seminars conducted in the United States, Europe and Asia for plant employees and managers by experts from the Center for Chemical Process Safety of the American Institute of Chemical Engineers.

In France, Technological Risk Prevention Plans (PPRTs) put in place in accordance with environmental legislation help manage urban development around the Group's Seveso facilities. As of year-end 2017, 16 facilities operated by the Group in France are subject to a PPRT and the Group will support any of the related measures through 2018. Furthermore, the ministerial decree of 29 September 2005, requiring that the probability of occurrence, kinetics, impact intensity and severity of potential accidents be assessed and addressed in the hazardous impact studies performed for classified installations subject to authorization, is also entailing the introduction of risk management measures at all of the sites classified as such.

In Europe, at the date of this document, 35 of the Group's production facilities are subject to reinforced monitoring in accordance with the provisions of the Seveso III directive (directive 2012/18/EU of 4 July 2012) concerning major accidents involving hazardous substances. This directive requires, in particular, the deployment of safety management systems and the regular updating of hazard studies.

In the United States, industrial accident risk management is primarily regulated by the Superfund Reauthorization Act, the Risk Management Process and the Emergency Planning and Community-Right-to-Know Act. In particular, the latter requires companies to inform government authorities when more than the minimum authorized quantity of a hazardous substance is being used or stored, and if such substances are stored, to have emergency plans and procedures in place. Other regulations at the federal, state or local levels govern certain specific aspects of the storage of chemicals, the safety of workers when handling stored products and the storage of highly hazardous substances.

CRISIS MANAGEMENT

The in-plant crisis management procedures are broadly based on the Group Crisis Management directive, which covers the management of potentially critical situations in the areas of health, safety and the environment on Group sites and during transportation.

A year-round on-call system enables the Group to manage crises by setting up a dedicated crisis management team. The Group regularly offers training courses in "Crisis management and communication" and conducts simulations of crises and set-up of crisis management teams.

PROCESS SAFETY EVENTS (PSEs)

In terms of process safety, the Group's objective is to minimize the number of process safety events. Starting in 2017, Arkema has decided to use the new process safety event criteria published by the International Council of Chemical Associations (ICCA).

Major PSEs are reported as soon as possible to Executive Committee members and to the surrounding community in the event of nuisances.

Since 2013, the number of PSEs has been systematically reviewed at every meeting of the Executive Committee.

In 2017, the PSE rate (number of PSEs per million hours worked) according to the new ICCA/CEFIC criteria was 4.7.

TRANSPORTATION-RELATED EVENTS

Transportation-related events are events that occur during the transportation or handling of hazardous and non-hazardous goods at loading/offloading areas and on Group and customer sites. The Group uses six criteria to distinguish between major and minor events, primarily based on the regulations in effect for the transportation of hazardous goods.

Since 2016, major events have been communicated to the Executive Committee on a quarterly basis.

2.3.4 Audits

The effective implementation of safety policies is regularly audited, with a focus on measuring progress and harmonizing practices. These audits are also an important management practice.

To ensure a highly efficient inspection and control process, all of the Group-led safety, environment and quality audits have been consolidated into a single audit, known as the Arkema Integrated Management System (AIMS). It is based on all of the Group's standards, both proprietary and endorsed, such as ISO 9001, ISO 14001, OHSAS 18001 and ISO 50001. This "all-in-one" approach has the dual benefit of being aligned with the Group's corporate culture and ensuring consistency across all its safety, environment and quality management initiatives. AIMS audits are conducted every three years, with follow-up audits every year.

The 2025 target is for every facility to have been AIMS-audited within the past three years.

	2017	2016	2015
% of facilities AIMS-audited over the past three years	69	63	61

The increase in the percentage of AIMS-audited facilities over the last three years illustrates the continued deployment of this program, in particular at the Bostik plants included in early 2015.

Many facilities are audited simultaneously according to the AIMS standard and a variety of international standards, to earn or renew external certification, depending on their particular situation. The number of sites certified in this way over the last three years is presented in the following table and attests in 2017, as for previous years, to the Group's ongoing efforts in these areas:

Number of units certified according to each standard	2017	2016	2015
ISO 9001	150	130	135
ISO 14001	84	72	74
OHSAS 18001	74	66	71
ISO 50001	29	21	17

45% of Group facilities have been certified to OHSAS 18001 standard in Europe, 43% in North America and 49% in Asia. In addition, the Group performs a large number of non-AIMS audits every year, including:

- operational safety audits: construction site inspections, pre-start-up reviews, and operational safety audits in areas such as mechanical integrity and explosive atmospheres;
- process safety audits, including fire safety audits, post-incident audits, risk analysis reviews and specific reviews of the management of safety instrumentation;
- regulatory hazardous materials transportation audits;
- supplier and supply chain audits: transportation companies and warehouses are inspected and assessed. These audits are performed in addition to third party audits, such as the Safety & Quality Assessment System for overland transportation, the Chemical Distribution Institute for maritime shipping, and the European Barge Inspection Scheme for river shipping. A certain amount of packaging is also inspected; and
- field safety audits led by plant employees to assess the safety culture and installation compliance on a continuous, sustainable basis. These assessments include task or process audits, short flash audits, scheduled general inspections and safety tours by management. They concern everyone working on the site, including contractor employees, and are performed in every aspect of the site's operations, including production, logistics, maintenance, offices, capital works and turnarounds.

In addition to audits, teams from the Group Safety and Environment department (DSEG) lead safety support initiatives at facilities whose performance has fallen short of Group standards or which have reported a specific issue. DSEG experts share their findings of the facility's accident record and HSE activities with plant management, then discuss how to prepare, implement and follow-up on the remedial action plans. In 2017, the DSEG continued to provide specific support to plants during their turnarounds and stepped up its participation in events organized by the Business Lines, plants (annual meetings with partner companies) and corporate departments (maintenance, R&D, etc.).

Another important tool in managing the deployment of the Group's safety process is feedback on material incidents. It consists in sharing experiences on relevant incidents so that ways can be found to avoid recurrence. Feedback takes place across the global organization, through various geographic, professional and technological networks. In the event of a material incident, the network issues a safety alert that enables other Group facilities that may encounter a similar incident to take corrective measures. The feedback process is helping to improve the Group's safety expertise and ensure the effectiveness of the deployed measures.

2.3.5 Responsible product stewardship

Arkema integrates health, safety and environmental protection into every product's design and throughout its life-cycle.

This product stewardship process, which in certain aspects exceeds regulatory requirements, engages stakeholders across the product chain, from raw material suppliers to end-customers.

The Group expresses its commitment to product stewardship in its Safety, Health, Environment and Quality Charter and by endorsing the International Council of Chemical Associations' (ICCA) Responsible Care® initiative. In particular, Arkema participates in a variety of international ICCA programs, such as the High Production Volume (HPV) initiative, which delivers globally-harmonized data sets and initial hazard assessments for around 1,000 chemical substances.

Leveraging its organization and the scientific and regulatory expertise acquired over many years, Arkema ensures to define product-specific HSE roadmaps by country that are well adapted to local conditions, thus helping to drive continuous improvement and deepen its knowledge of each product's features and conditions of use. In addition, the Group uses the Arkema Integrated Management System (AIMS) to manage HSE risks related to product modifications, particularly changes to product composition and manufacturing processes.

2.3.5.1 REGULATORY COMPLIANCE

Regulatory compliance plays a key role in ensuring product safety for customers, the value chain and stakeholders.

In recent years, Arkema has deployed the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and implemented the REACH regulations in Europe.

Deployment of GHS

GHS is a major United Nations initiative designed to replace the various chemical classification and labeling standards used in different countries with a global system based on consistent criteria. The Group has deployed it in every participating country, in line with its implementation in local legislation.

In Europe, the GHS has been transposed into the Classification, Labeling and Packaging (CLP) regulation governing chemical products and mixtures. Arkema reassessed and classified all the substances contained in its product portfolio within the regulation's deadline and updated the related safety data sheets and labels.

In addition, Arkema has deployed the system in other countries, in particular in the United States, South Korea, China, Malaysia, Australia and Turkey, again within the regulatory timeframe. Roll-out is proceeding apace in the countries that are currently phasing in the GHS, such as Canada and Russia.

Implementation of the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) legislation in Europe

REACH is a European regulation that aims to make in-depth changes in the way chemical substances are managed by improving the level of knowledge of these substances, analyzing their environmental and health risks and defining measures to manage the risks arising from their use or manufacture. Arkema endorses the objectives of REACH, which represents an additional pathway to continuously improving knowledge of its substances and their safe use, in line with the legitimate expectations of civil society. Arkema therefore complies with all of the REACH standards governing the registration, evaluation, authorization and restriction of chemicals.

REACH compliance is managed at Group level by the Product Safety and Environment department, whose team of experts in toxicology, ecotoxicology and compliance oversee implementation of the regulation. More particularly, Arkema has filed the following registrations with the European Chemicals Agency (ECHA):

	Number of substances	Substances for which Arkema is Lead or Sole Registrant	Number of dossiers submitted to the ECHA	Dossiers accepted by the ECHA
2010 and 2013 deadlines	277	122	311	100%
2018 deadline	146	49	129	70%

In all, Arkema plans to register 423 substances. This number has been adjusted after the first two registration deadlines were met and after surveying forthcoming developments in the businesses' portfolios. REACH compliance is expected to cost around €25 million over the 2016-2020 period, and to represent a total cost to the Group of an estimated €65 million between 2008 and 2020.

The Group regularly revises its existing substance registration dossiers following the acquisition of new data or at the request of the ECHA. Preventive updates designed to improve the dossiers again accounted for around 40% of the Group's dossier maintenance activity in 2017.

Arkema is also participating in the Community Rolling Action Plan (CoRAP) launched by the authorities after the first registration phase. Once a substance has been evaluated, additional information may be requested to determine if the risks are effectively managed. This could eventually lead to proposed pan-European risk management measures, such as restrictions, the identification of substances of very high concern or other initiatives outside the REACH remit.

Since 2012, 28 Group substances have been listed in CoRAP and their state of advancement is as follows:

CoRAP	2012-2020	Evaluation completed	Additional information provided, awaiting conclusion	Additional information being acquired	Upcoming evaluation
Number of substances	28	4	5	12	7

Management of REACH-defined substances of very high concern (SVHC)

Arkema has put in place a dedicated process to track the REACH-defined substances of very high concern (SVHCs) that are used in its productions or placed on the market. It was designed in response to the REACH substance authorization process, which has two phases:

- the first consists in identifying substances that could have potential negative impacts on human health or the environment. Once so designated, these "substances of very high concern" are added to a list of substances that may be subject to prior authorization for their specific use (Annex XIV); and
- the second phase aims to ensure that the risks from the use of these SVHCs are adequately managed and that the substances themselves are being gradually replaced by appropriate alternatives. These substances may not be placed on the market or used after a designated date unless an authorization is granted (or waived) for their specific use.

As soon as the authorities propose that a substance be listed as an SVHC, Arkema responds to the public call for comments by the ECHA for substances whose use(s) may be subject to authorization.

In cases where these substances are finally identified as SVHCs and included in the candidate list, a review is conducted to determine the most appropriate response, such as assessing alternative substances for the intended uses, applying for authorization when the substance is listed in Annex XIV, or converting the production unit and phasing out production.

ANALYSIS OF THE GROUP'S SVHCs

Substances of Very High Concern	SVHCs contained in products placed on the market	Of which SVHCs contained in raw materials
SVHCs subject to REACH authorization	10	9
SVHCs on the REACH candidate list	44	30

In addition to Europe, the table above includes data for the Asia and United States regions, as well as for Bostik.

In November 2015, Arkema filed an application with the ECHA to authorize the sodium dichromate used as a processing aid at the Jarrie plant in France, while waiting for an alternative solution to be found. The request was accepted by the European Commission on 29 January 2018 for a period of 12 years.

At 1 June 2017, the industry candidate list contained 174 substances, including (i) the hydrazine produced at the plant in Lannemezan, France, (ii) the 2-imidazolidinethione (ETU) produced by MLPC, and (iii) the nonylphenol ethoxylates (NPE) produced by CECA.

On 13 June 2017, NPE was added to the list of substances that require authorization. To date, Arkema has not yet finalized its strategy for the limited range of products that fall under this authorization.

REACH's third component is the restriction procedure, which is intended to restrict or prohibit a substance's production, marketing or use.

The restriction relating to perfluorooctanoic acid (PFOA) derivatives came into effect on 13 June 2017. However, the Group is not affected by the measure because it voluntarily replaced these substances in its fluoropolymer production process back in January 2016, before the measure came into effect in Europe.

Previously recommended for authorization, cobalt chloride is now expected to be recommended for restriction, after an analysis of the most effective risk management option. The ECHA is expected to submit the file in mid-2018. The change should not affect the Group, which uses the substance as a processing aid at the Jarrie site in France (industrial use). Nevertheless, pending a formal proposal for restriction and as a precautionary measure, an alternative solution is being explored.

Compliance with other legislation

Outside Europe, Arkema markets its chemicals in accordance with national and regional mandatory inventories, as applicable. Due to its history and global presence, some of these products are already notified in many inventories. Should a need arise for a new product notification, dossiers can be filed in a timely manner thanks to the extensive database Arkema maintains on the characteristics of its products.

In particular, since 2015, this process has made it possible to respond to the three new REACH-like regulations that have been introduced in Asia (South Korea, Taiwan and Turkey). For example, Arkema completed Phase I registration of substances in Taiwan and submitted its first annual report to the Korean authorities in 2016.

Arkema has also joined consortia formed to jointly register substances brought to market in South Korea, in accordance with Article 15 of the Act on the Registration and Evaluation of Chemical Substances (ARECS), and will register around ten substances by June 2018.

Following the publication of rules aimed at reforming the Toxic Substances Control Act (TSCA) Inventory in the United States, the Group is preparing to notify the US authorities of active substances in its portfolio by February 2018.

On a more specific note, the Group does not manufacture any persistent organic pollutants (POPs).

Lastly, the Group has a policy of restricting the use of its products in medical applications solely to temporary implants (less than 30 days). To assist the Business Lines in their choices, Medical Applications Assessment Committees have been tasked with assessing the compliance of the intended products with prevailing laws and regulations.

2.3.5.2 PRODUCT INFORMATION

Arkema relies on an in-house team of expert toxicologists and ecotoxicologists who conducts product hazard studies and works closely with regulatory experts to assess risks in normal conditions of use. The findings are shared across the Group and externally in various forms, including Safety Data Sheets, labeling and GPS Safety Summaries.

Safety Data Sheets (SDSs)

In many countries, Arkema describes its product characteristics and conditions of use in Safety Data Sheets (SDSs), which are required to market chemicals classified as hazardous to human health or the environment. They are prepared in some forty languages based on a global database comprising the composition of every product and its toxicological, ecotoxicological and physical-chemical-data, thereby ensuring consistent information in every market. Arkema issues SDSs in accordance with regulatory requirements and posts them on the Group website or the online QuickFDS platform. As part of the product stewardship process, Arkema exceeds regulatory obligations by issuing SDSs even for products that are not classified as hazardous.

In Europe, the Group's organization and IT infrastructure have made it possible to issue extended "SDSs", the latest REACH compliant format, which improve risk management by including exposure scenarios for each identified use.

Labeling

Arkema has also developed systems to print labels with a consistent classification, regardless of the country in which the product is manufactured or marketed.

In addition, efficient IT systems enable Arkema to prepare compliance documents and align them as needed with the latest formats and data, notably when the GHS standardized classification and labeling system is introduced in a new country.

Global Product Strategy (GPS)

Arkema remains actively engaged in the Global Product Strategy (GPS) program, which is designed to support the deployment of safer, more efficient chemicals management practices. As part of this process, a dedicated web page has been created and Safety Summaries are regularly posted on the ICCA and corporate websites, as and when REACH registration dossiers are filed. To date, the Group has already published 145 GPS Safety Summaries, describing the intrinsic properties of the substances marketed by the Group, their potential risks for human health and the environment and the recommended ways of managing these risks effectively. Arkema will continue to publish these summaries as part of the next REACH deadline in 2018.

2.3.5.3 ANIMAL TESTING

Given its business portfolio, Arkema neither conducts triage trials on substances derived from its research nor participates in toxicology research projects that could involve the use of laboratory animals. Toxicology studies conducted on vertebrate animals are strictly limited to those required for regulatory compliance. They are contracted to outside laboratories subject to oversight by the relevant ethics committees.

The Group always conducts in-depth analyses of existing literature data, thanks to constant tracking of information on Group substances, in order to use all of the available public information. As required by REACH, the Group applies, whenever possible, the rules for waiving standard testing when such tests are not justified (due to the absence of exposure) or when alternative methods can be used.

In addition, Arkema participates in the work of FRANCOPA, a French platform dedicated to the development, validation and dissemination of alternative animal testing methods, using the 3Rs (reduction, refinement, replacement).

2.4 ENVIRONMENTAL INFORMATION

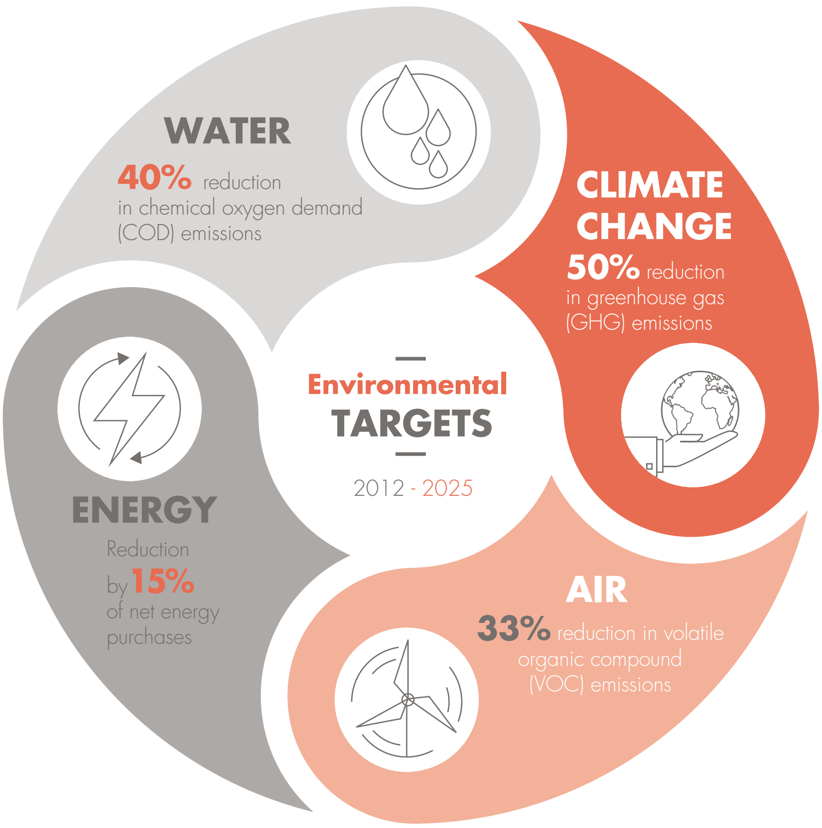
REDUCING THE ENVIRONMENTAL FOOTPRINT OF THE GROUP'S OPERATIONS

2.4.1 Environmental management

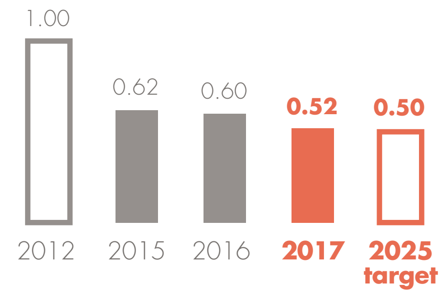
Reducing the environmental footprint of its operations is one of the Group's five CSR commitments. To achieve it, the Group is upgrading its manufacturing practices to minimize emissions and to optimize and reduce the use of energy, water and non-renewable raw materials. By stringently tracking their effluent releases, air emissions and waste production, the plants are implementing effective initiatives.

The findings of the 2016 materiality assessment confirmed the importance of environmental topics for stakeholders, for which the Group has already defined four objectives. These objectives apply to intensive indicators, known as Environmental Footprint Performance Indicators (EFPI) which are not impacted by changes in the scope of reporting, making them more effective in tracking the Group's industrial performance. The following charts illustrate the objectives and the progress made since the 2012 baseline.

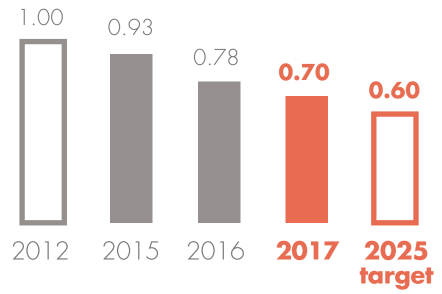
In 2017, given that the environmental target for chemical oxygen demand (COD) was achieved earlier than expected, the 2025 target was reinforced from 0.80 to 0.60.



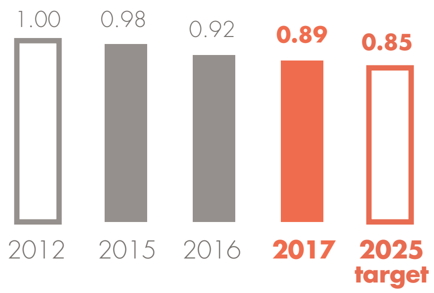
CLIMATE (DIRECT GREENHOUSE GAS EMISSIONS EFPI)



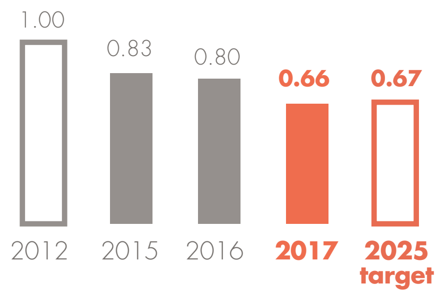
WATER (CHEMICAL OXYGEN DEMAND EFPI)



ENERGY (NET ENERGY PURCHASES EFPI)



AIR (VOLATILE ORGANIC COMPOUNDS EFPI)



NB: the change in the EFPI indicators is expressed in relation to an index base of 1 in 2012.

In addition to the progress made in these four intensive indicators, the Group reports absolute figures for every parameter used to track the Group's environmental footprint.

To meet its targets, the Group has undertaken initiatives at two levels:

- continuous improvement programs, based on employee training and an action plan deployed in every unit; and
- a certification process, completed by internal audits, to assess the performance of each plant's environmental management system.

Regulatory and compliance monitoring

The Group ensures that its HSE network properly understands EU regulations, such as Phase III of the European Union Emissions Trading Scheme (EU ETS) or the Industrial Emissions directive (IED), as well as the latest environmental data reporting rules which concern it, thanks to the organization of awareness-building sessions. The Group also performs regulatory compliance audits every three years at the US facilities. For China, a regulatory monitoring process has been set up with a specialized firm. European facilities can monitor their compliance with applicable regulations using specific IT applications dedicated to each country's legislation.

Instilling an environmental culture through employee training and information

As regard the environment, Group employees are trained and made aware of the main characteristics of their plant, the real-world consequences of their actions, the operational management of all types of releases and emissions, the environmental impact of turnaround or installation restart operations, and waste sorting.

At the 52% of Group facilities that earned ISO 14001 or, in the United States, RCMS certification in 2017, a dedicated environmental training program is offered after an environmental risk analysis has been performed in each workshop. At an increasing number of facilities, feedback on environmental incidents is being tracked in a common system for reporting incidents, and following up corrective actions. The training program is regularly repeated to maintain employee awareness of the importance of critical parameters.

Details on employee training and the new-hire induction process may be found in section 2.6.3.2 of this chapter, "Special professional training programs for employees". Environmental training totaled 22,665 hours in 2017, or an average of 6.7 hours per employee. In all, 3,398 employees, or 23% of the consolidated workforce, attended at least one environment-related course during the year (excluding e-learning) [(1)].

Management engagement

Initiatives underway to reduce the environmental footprint are extensively reviewed and discussed within the Group:

- each business's entire environmental footprint, including its energy footprint, is reviewed annually in individual meetings with the business's Managing Director and industrial Vice-President(s) and the Group Safety and Environment and Sustainable Development Vice-Presidents. During this process, the managers concerned are assigned an environmental target for the following year. This target is a criterion for their annual performance review and compensation;
- the Group's annual environmental and energy reports presenting results for the reporting and prior years, along with historical environmental footprint data (excluding energy) for the trailing six years, are issued to all the departments concerned. These reports track the initiatives that helped to improve the Group's environmental performance. A total of 159 initiatives were undertaken in 2017. They covered the full range of environmental related topics, including water withdrawals, the reduction in water effluent releases, GHG and COV emissions, soil contamination and waste production; and
- each year, the Group Safety and Environment Vice-President and the Sustainable Development Vice-President provide the Executive Committee with overviews of, respectively, the Group's environmental performance and the progress made in the key indicators towards the 2025 targets.

In addition to internally tracking the improvement plans deployed in each entity, the Group ensures alignment among the environmental management systems through an outside certification process.

A certified environmental management system

The Group deploys environmental management systems in its production plants, most of which have also earned environmental certification in accordance with the ISO 14001 standard. Depending on local conditions, certain facilities have been certified to other standards, such as the Responsible Care® Management System (RCMS) in the United States.

	2017	2016	2015
% of facilities ISO 14001 or RCMS-certified	52	52	62

The ISO 14001 or, in the United States, RCMS certification systems, require each production facility to identify its environmental impact in terms of water, air (including greenhouse gas emissions), waste, noise, odors, soil, use of resources and logistics flows, and then to define an action plan with priority areas for improvement. Periodic environmental assessments enable the facilities to measure progress and determine new improvement targets.

To harmonize the identification, assessment and analysis of environmental risks, the Group rolled out in 2013 a new methodology, with global application, while a dedicated IT system was deployed in Europe, the United States and Asia in 2016. In 2017, 60% of the Group's industrial sites received training in how to use the system and around 40% updated their environmental assessment in the system.

This process is being supported on every site by environmental audits performed by the Internal Audit department, AIMS audits conducted by the Group Safety and Environment department and certifications by third-party accreditation bodies, depending on the country.

Environmental declaration

The Group's statement concerning its environmental indicators is based on the principles of relevance, representativeness and consistency. The methodology applied is described in section 2.8 of this chapter.

(1) In entities at least 50%-owned and employing more than 30 people.

2.4.2 Resources

Reducing the environmental impact of the Group's industrial sites consists of optimizing their use of raw materials, energy and natural resources like water. New manufacturing units are designed to incorporate environmental footprint considerations into the choice of processes and equipment. Special attention is also paid to operating conditions and maintenance and development investments are regularly undertaken to reduce the Group plant's use of water, energy and raw materials.

2.4.2.1 RAW MATERIAL CONSUMPTION

Arkema wants to contribute to optimizing the consumption of non-renewable raw materials used in its manufacturing process with the primary goal of reducing their use by deploying process control initiatives and developing best operating practices. These initiatives are described in more detail in section 1.6 of this document.

In addition, to optimize its own and its customers' raw materials use, the Group undertakes, independently or in partnership with suppliers, such programs as recycling the reaction solvents used in its production processes. It also offers customers other recycling solutions and deploys circular economy initiatives that are described in section 2.4.5.2 of this chapter.

Lastly, the Group is expanding the use of renewable and especially bio-based raw materials in its products. The resulting Group products are presented in section 1.4.4.2 of this document. This ongoing commitment was demonstrated in 2017 by the fact that products at least 20% made from renewable raw materials accounted for around 9% of Group sales.

2.4.2.2 ENERGY CONSUMPTION

The Group uses a variety of energy sources, primarily in its industrial operations. To optimize energy consumption, the Group set the following target:

2025 TARGET

Reduce net energy purchases by 15% in EFPI terms by 2025.

To this end, the Group is rolling out the Arkenergy program in every subsidiary through a global network of Energy Leaders in the Business Lines, facilities and relevant Procurement and Technical departments. It focuses on optimizing the energies used in the production facilities and processes, which account for 98% of consolidated energy consumption. Moreover, Arkenergy is structured to meet the following priorities:

- continuously optimize energy use and cost, from equipment design and procurement to day-to-day on-site operations;
- deploy an energy management system to systematically embed best operational practices, define site-specific targets and periodically review them; and
- ensure compliance with energy efficiency legislation, regulations and other applicable standards.

As well as improving energy efficiency, the program is also contributing to reinforce the production plants' competitiveness.

The Arkenergy process mainly consists in:

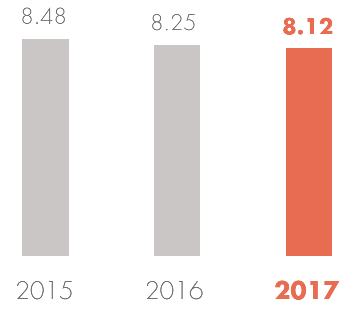
- rolling out energy efficiency audits worldwide, focusing on the facilities with the highest net energy purchases. The energy efficiency audits carried out to date represent 86% of the Group's total energy consumption;
- implementing the ISO 50001 energy management system in Europe and Asia. To date, a total of 29 sites are ISO 50001-certified, which corresponds to 57% of Arkema's total energy use; and
- allocating a dedicated capital expenditure budget specifically for Arkenergy initiatives. In 2017, 60 capital projects were funded out of the budget, including 41 in Europe, 11 in the Americas and 8 in Asia.

The Group's deployment of digital technologies helps to optimize energy consumption through the introduction of data collection and analysis systems.

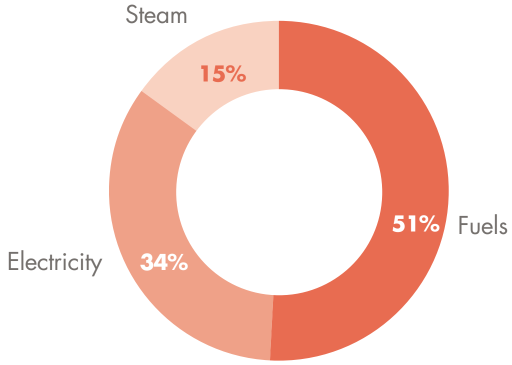
Absolute indicator for energy purchases

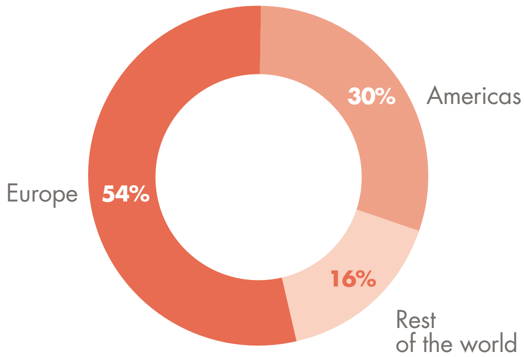
The chart hereafter presents consolidated net energy purchases in 2017, 2016 and 2015, calculated in terawatt-hours according to the methodology described in section 2.8 of this document.

NET ENERGY PURCHASES (in TWh)



Net energy purchases by region and by type of energy break down as follows:





93% of the terawatt-hours generated by fuel were natural gas-fired.

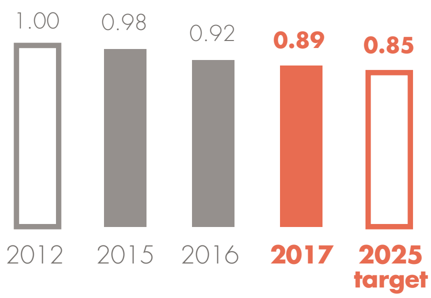
18% of the net terawatt-hours purchased by the Group, regardless of source, were from low-carbon electricity.

Intensive indicator for energy purchases

The chart below presents the net energy purchases EFPI for the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this document. Net energy purchases are calculated using the Group's biggest net energy purchasing entities, which account for more than 80% of the consolidated total.

The indicator showed significant improvement in 2017, demonstrating the effectiveness of the capital investments committed as part of the Arkenergy project. The energy performance of Group installations was also considerably improved by the high utilization rates in the production units and their reliability.

NET ENERGY PURCHASES EFPI



2.4.2.3 WATER USE

Water is used in the Group's industrial operations to:

- provide a reaction medium for certain production processes, cool production installations and clean products and equipment;
- generate steam; and
- operate hydraulic barriers to treat groundwater contaminated by legacy pollution on historical sites.

To contribute to optimizing the use of fresh water, whether withdrawn from the surface or the ground table, the Group is upgrading production practices by installing water-saving systems and closed loops. These initiatives can cover a wide range of solutions, such as tracking usage more effectively, installing flow meters, deploying leak detection programs, changing technologies, upgrading fire-fighting systems, recovering rainwater and recycling water from scrubbing or boiler condensates.

In 2016, as part of the operational excellence program, the Group launched the "Optim'O" project to optimize its production units' water management. The analyses carried out as part of this project found that:

- 80% of water withdrawn from the natural environment is returned as surface water;

- 90% of consolidated water use is attributable to less than 20 plants; none of which are located in a water-stressed region; and
- facilities located in water-stressed regions represent less than 2% of the Group's consolidated water use.

Drawing on these observations, the Optim'O project gives rise to numerous initiatives, particularly at the 35 sites that account for most of the Group's water use and/or generate the most wastewater. The work carried out on the water network at the Pierre-Bénite site (France), for example, has reduced the use of drinking water by more than 25%.

The program for managing sites located in water-stressed regions has kicked off, with a production site in Australia serving as the pilot.

The chart below presents consolidated water withdrawals in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

Water use	2017	2016	2015
Total water withdrawn (in millions of cu. m)	118	126	124

The significant decline in the amount of water withdrawn in 2017 can be attributed primarily to the shutdown of a production unit at the Pierre-Bénite site (France), but also to process optimization initiatives that resulted in a reduction in water use at the Lacq site (France).

Rating agency CDP gave Arkema a Water score of B in 2017, in recognition of the Group's approach and actions in the area of responsible water management.

2.4.3 Land and biodiversity

Arkema wants to limit its land footprint and use as well as its impact on biodiversity.

2.4.3.1 MANAGING LEGACY POLLUTION AND PROTECTING THE SOIL

Arkema responsibly manages soil and groundwater contamination caused by legacy pollution, including the storage of waste from operating facilities that have been operated, sold or acquired. The Group's environmental responsibility is managed to ensure control of health risks and protection of the environment over the long term, with an appropriate allocation of funds.

In addition, Arkema implements prevention policies at all of the operating facilities, with mechanical integrity programs, dedicated incident reporting systems and experience sharing. When soil or groundwater contamination is suspected at a facility, an inquiry is conducted to determine the extent of the area concerned and ascertain the impact. The Group cooperates with the authorities to define the appropriate management response, in line with applicable legislation.

The Group also implements a wide range of remediation initiatives using new techniques and looks for ways to reuse redundant industrial sites.

Brownfield redevelopment

To redevelop certain brownfield sites, the Group is partnering with local officials, academics and specialized companies. They use these brownfield sites either for biomass production projects or for the installation of photovoltaic panel projects.

Provisions for the management of legacy pollution

The amount of provisions for environmental risk at 31 December 2017 may be found in note 19.3 to the consolidated financial statements, in section 4.3.3 of this document.

2.4.3.2 BIODIVERSITY

Measures to protect flora, fauna and biodiversity in general

Preserving biodiversity primarily means protecting all of the flora and fauna species liable to be impacted by emissions from the Group's operations.

The initiatives underway are therefore designed to reduce each plant's releases into the surrounding water, soil and air.

Periodic environmental assessments enable the facilities to identify their environmental impact and the species liable to be affected, define priority objectives for their environmental protection action plans, and measure the improvements. Additionally, new manufacturing units are designed to incorporate environmental footprint considerations into the choice of processes and equipment.

In this way, the compliance and other initiatives being led by the Group have enabled:

- a reduction in chemical oxygen demand (COD) in the effluent discharged into rivers, thereby preserving the dissolved oxygen that is essential to all aquatic life;
- a reduction in the amount of volatile organic compounds (VOCs) released into the air, thereby limiting the formation of ground-level ozone, a super-oxidant harmful to flora and fauna;
- a reduction in SO_2 and NOx emissions, thereby helping to prevent the formation of acid rain which, in addition to its direct impact on plant life, can also alter soil characteristics; and
- the pursuit of soil remediation projects at sites with long-standing industrial operations, as described in the preceding section, so as to protect all of the species that depend on their land or groundwater.

Measures to develop biodiversity

Despite occupying only a limited amount of land, the Group is leading a number of initiatives to help enhance biodiversity on sites where part of the land is not allocated to industrial operations. One of the purposes is to encourage revegetation and the development of local species on and around the sites.

The Group promotes certain initiatives to improve biodiversity around production units. In Italy, for example, hundreds of olive trees are being tended on the grounds of the Gissi facility, helping to safeguard the surrounding plant and animal ecosystem.

2.4.4 Emissions

The Group is leading an active policy of managing and reducing the impact of its operations on air emissions, effluent releases and waste production.

As part of this process, released substances are identified and their amounts calculated by category, so that appropriate measures can be taken to manage each one, in compliance with host country legislation.

In this way, the manufacturing plants are reducing their releases by optimizing their use of raw materials, energy or natural resources, so that they produce fewer emissions and less waste. Following the findings of the environmental assessments conducted according to the Group methodology, production units are also being constantly improved with process upgrades and the installation of effluent treatment facilities.

2.4.4.1 AIR EMISSIONS

The Group's objective is to minimize its emissions of the most harmful compounds, particularly greenhouse gases (GHG), volatile organic compounds (VOCs), acidifying substances (nitrogen oxides and sulfur dioxide) and dust.

Climate change: direct greenhouse gas emissions

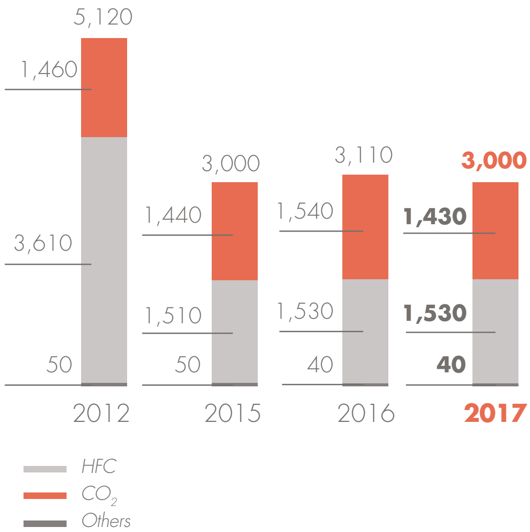
The Group's direct greenhouse gas emissions (Scope 1 GHG) arise from:

- hydrofluorocarbon (HFC) emissions from its fluorogas production units;
- fugitive emissions from cooling circuits using GHGs;
- burning of fuel oil and gas in production operations; and
- processes that generate carbon dioxide (CO_2), nitrous oxide (N_2O) or methane (CH_4) as a product, by-product, co-product or waste, and gas discharges from processes such as thermal oxidation, which converts VOCs into CO_2.

Absolute indicator for direct greenhouse gas emissions

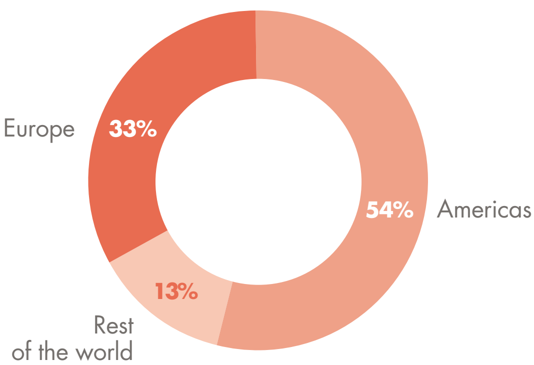
The chart below details direct greenhouse gas emissions (in kt CO_2 eq.) from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

DIRECT GHG EMISSIONS (in kt per year)



The net reduction in GHG emissions in 2017 was 3.5% and primarily related to CO_2. It was driven in particular by improvements made to boilers by changing fuel type (notably in China) or boiler technology (Pierre-Bénite in France). It also reflects the impact of maintenance turnarounds in Clear Lake (United States) and Marseille (France). These factors more than offset the additional emissions generated by increased production at certain sites.

The breakdown of direct GHG emissions by region is as follows:



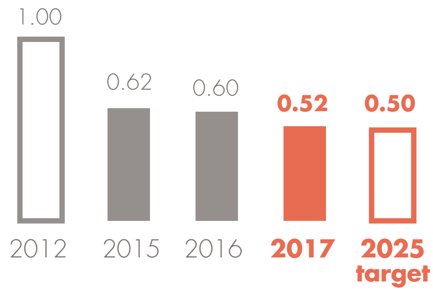
To reduce its impact on global warming, the Group has undertaken a number of actions and deployed effective measures to minimize direct GHG emissions, such as:

- installing emissions scrubbers, notably at the plants in Calvert City (United States), Pierre-Bénite (France) and Changshu (China);
- introducing systematic leak detection programs at the fluorogas production facilities, so as to minimize fugitive emissions; and
- replacing boilers with more efficient installations as part of the Arkenergy program (see section 2.4.2.2 of this chapter).

Intensive indicator for direct greenhouse gas emissions

The chart below presents the direct greenhouse emissions EFPI from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter. The index base is 1 for 2012. Emissions are calculated using the Group's biggest GHG emitters, which account for more than 80% of the consolidated total.

DIRECT GHG EMISSIONS EFPI



The improvement in this indicator in 2017 was led by the progress made at all of the most emission-intensive sites.

2025 TARGET

Reduce GHG emissions, expressed in EFPI terms, by 50% compared with 2012.

Internal carbon price

In 2016, to strengthen its long-term approach, the Group set an internal price for Scope 1 and Scope 2 GHG emissions, expressed in terms of CO_2 equivalent, known as "internal carbon price". It is used to analyze strategic industrial investments and to steer investment decisions under the operational excellence program towards the lowest carbon solutions.

Indirect greenhouse gas emissions

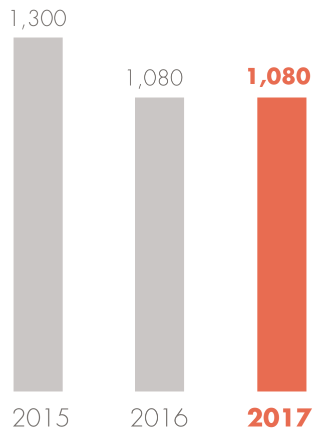
The Group analyzes the following indirect GHG emissions:

- Scope 2 GHG emissions from the use of purchased electricity and steam; and
- Scope 3 GHG emissions, categories 2, 5, 6, 7, 8, 9 and 12.

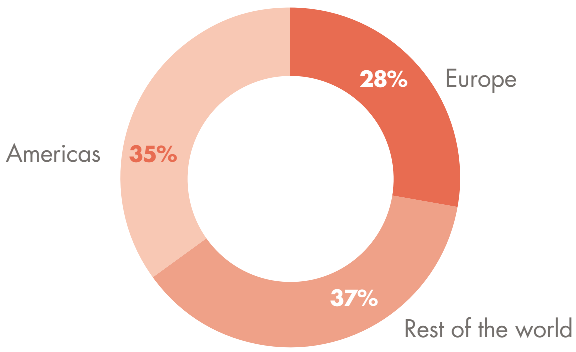
The chart below presents the Scope 2 emissions from the Group's operations in 2017, 2016 and 2015, as defined above and calculated according to the methodology described in section 2.8 of this chapter.

Scope 2 GHG emissions break down as follows:

INDIRECT GHG EMISSIONS (SCOPE 2) (kt CO_2 eq.)



INDIRECT GHG EMISSIONS BY REGION



Scope 2 GHG emissions remained stable in 2017 despite the year-on-year decline in energy use, due to the less favorable energy mix used by our energy suppliers.

The Group deploys a wide range of actions to reduce Scope 2 emissions as part of both the Arkenergy program (see section 2.4.2.2 of this chapter) and its operational excellence strategy (see section 1.6 of this document).

SCOPE 3 EMISSIONS INVENTORY

Following an initial inventory of its indirect Scope 3 emissions in 2016, the Group calculated the Scope 3 emissions arising from seven categories of upstream and downstream activities related to its value chain in 2017, in accordance with the GHG Protocol calculation guidance issued by the World Business Council for Sustainable Development (WBCSD). The guidance also supports compliance with French legislation and standards, including the provisions of Law no. 2015-992 of 17 August 2015 concerning the energy transition to drive green growth.

According to the WBCSD, Scope 3 emissions arise from 15 categories of activities across the corporate value chain. The emissions calculated for the Group in 2017 are presented by category in the following table:

Category number	Category name	Emissions (kt CO_2 eq.)	Comment
1	Purchased goods and services	Data not available	For this major source of GHG emissions, the inventory begun in 2017 will be continued during 2018
2	Capital goods	1,086	Application of the default calculation method proposed by the WBCSD (see the note on methodology in section 2.8)
3	Fuel- and energy-related activities not included in Scope 1 or 2	Data not available	Additional measures are required for the calculation of this category in light of its complexity
4	Inbound freight (upstream transportation and distribution)	Data not available	Additional measures are required for the calculation of this category in light of its complexity
5	Waste generated	455	Based on actual data relating to the waste generated by the Group in 2017, application of the WBSCD's default calculation rules (see the note on methodology in section 2.8)
6	Business travel	26	The emissions in this category relate to air travel in 2017 (see the note on methodology in section 2.8)
7	Employee commuting	40	Emissions were estimated based on the most unfavorable scenario, *i.e.*, that all Group employees commute by car (see the note on methodology in section 2.8)
8	Upstream leased assets	9	See the note on methodology in section 2.8
9	Downstream transportation and distribution	282	Based on Group companies' internal logistics data, application of the emission factors set out in the Guidelines for Measuring and Managing CO_2 Emissions from Freight Transport Operations (see the note on methodology in section 2.8)

10	Processing of sold products	Data not available	Given the diversity of applications for the products sold by the Group, the indirect emissions relating to the processing of said products cannot be assessed in a reasonable and reliable way
11	Use of sold products	Data not available	
12	End-of-life treatment of sold products	1,665	The methodology used takes into account the nature of the products marketed by the Group and their end-of-life treatment (see the note on methodology in section 2.8)
13	Downstream leased assets	Not relevant	The Group does not lease any assets downstream of its value chain
14	Franchises	Not relevant	The Group does not have any franchises
15	Investments	Data not available	
TOTAL		**3,563**	

For 2017, Scope 3 CO_2 emissions from Category 9 – "Downstream transportation and distribution" were estimated at 282 kt CO_2 eq., plus or minus 10%, according to the methodology described in section 2.8 of this document. The increase of around 23 kt CO_2 eq. between 2016 and 2017 reflects better reporting by the subsidiaries and a significant increase in air and maritime freight, partly offset by a reduction in road freight and more accurate data.

Emissions in Category 12 – "End-of-life treatment of sold products" were estimated at 1,665 kt CO_2 eq. in 2017, or 59% of Scope 1 emissions, and therefore represented a major source of GHG emissions. Scope 3 emissions in Category 2 – "Capital goods" were estimated at 1,086 kt CO_2 eq., or 36% of Scope 1 emissions, and also represented a major source of GHG emissions.

Emissions relating to Category 5 – "Waste generated" were estimated at 455 kt CO_2 eq. in 2017, or 15% of Scope 1 emissions, confirming that this category is material.

Indirect emissions relating to Category 6 – "Business travel", Category 7 – "Employee commuting" and Category 8 – "Upstream leased assets" all represented less than 2% of the Group's Scope 1 emissions and are therefore considered not material.

In 2017, estimated Scope 3 indirect GHG emissions came to 3,563 kt CO_2 eq., or 119% of Scope 1 emissions.

Building on this seven-category analysis in 2017, the Group will improve the data collection process (particularly for categories where no data has been available) and continue, in 2018, to inventory its Scope 3 emissions in the categories identified as material. The goal is to prepare effective action plans to reduce the Group's material Scope 3 emissions.

Rating agency CDP gave Arkema a Climate Change score of A-in 2017, versus B in 2016. The significant improvement reflects the Group's approach, actions and contribution to meeting this key challenge.

Volatile organic compound emissions

Group production facilities are reducing their VOC emissions in several ways, including:

- collecting and treating effluent containing VOCs, particularly with thermal oxidizers or vent scrubbing; and
- conducting regular campaigns to detect and eliminate VOC leaks.

The Group is also reducing its emissions of acidifying substances by:

- firing boilers with low or ultra-low sulfur fuels, or replacing fuel oil with natural gas; and
- installing new low-NOx burner technologies.

At the Feuchy site in France, for example, a modification to a synthesis process reduced VOC emissions significantly, by around 50% or 50 tonnes.

Absolute indicators for air emissions

The indicators in the table below present air emissions from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

Air emissions	2017	2016	2015
Acidifying substances (*t SO_2 eq.*)	3,380	3,570	4,430
Carbon monoxide (CO) *(t)*	860	690	1,900
Volatile organic compounds (VOCs) *(t)*	4,280	4,800	5,010
Dust *(t)*	230	300	520

The divestment of the activated carbon and filter aids facilities in 2016 led to a reduction in air emissions over the year, in particular in carbon monoxide.

The steady decline in acidifying substances since 2015 attests to the success of the initiatives undertaken by several production plants to significantly reduce their emissions. Several investments were made to upgrade the boilers, either to run on natural gas instead of fuel oil or to equip them with vented emission treatment systems, so that these emissions were significantly reduced. In 2017, a change in methodology resulting in more accurate reporting from a site also contributed to the reduction.

The significant decline in volatile organic compounds resulted from an emissions reduction and recovery program at Hengshui (China) and Bostik Tanay (Philippines), and from progress made in particular in reducing fugitive emissions at the Pierre-Bénite site (France).

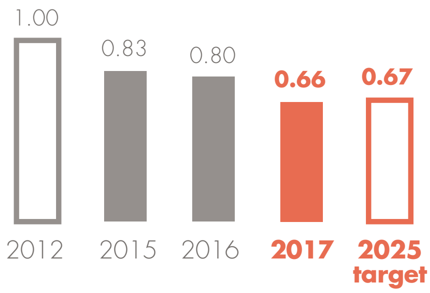
For carbon monoxide, the change is primarily attributable to high levels of activity at certain industrial facilities and to an improvement in reporting.

The further reduction in dust emissions in 2017 was mainly linked to a change in fuel at a facility in China.

Intensive indicator for air emissions

The chart below presents the volatile organic compound emissions EFPI from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter. Emissions are calculated using the Group's biggest VOC emitters, which account for more than 80% of the consolidated total.

VOLATILE ORGANIC COMPOUND EFPI



The significant improvement in this indicator in 2017 was led by the progress made by several plants following the investments undertaken in previous years.

Action plans are being deployed to sustain the improvement dynamic through to 2025.

2025 TARGET

Reduce VOC emissions, expressed in EFPI terms, by 33% compared with 2012.

2.4.4.2 EFFLUENT RELEASES

Reducing effluent and other water discharge is one of the Group's main environmental objectives, with particular attention paid to effluents with high chemical oxygen demand (COD) and/or suspended solids.

The Optim'O project, presented in section 2.4.2.3 of this chapter under its water consumption aspects, is also aiming to reduce the amount of effluent discharged by the Group. It is contributing to:

- continuously optimize water use and the efficiency of the water treatment process, from the initial design of the installations to their daily operation, through the use of advanced technologies and the development of innovative solutions, thanks in particular to the "Water management" innovation platform;
- ensure compliance with applicable legislation or address forthcoming standards, such as the Best Available Techniques reference documents (BREFs) and the Common Waste Water (CWW) document issued by the European Union; and
- implement the pretreatment of process effluent, where relevant, to reduce the COD content of effluent sent to wastewater treatment facilities.

In 2017, the Optim'O project focused its efforts on building a detailed map of the treatment conditions of effluent from the Group's industrial sites. The analysis revealed 39 priority sites that contribute significantly to the COD EFPI. These sites will be the target of an action plan to be implemented during 2018.

Absolute indicators for effluent releases

The environmental indicators in the table below present effluent released from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

Effluent releases	2017	2016	2015
Chemical oxygen demand (COD) (*t O_2*)	2,440	2,600	3,200
Suspended solids (*t*)	920	770	870

In recent years, several initiatives have helped to reduce COD emissions from certain plants. Since 2016, the Optim'O project helped to strengthen this process through better reporting, targeted investments and better facilities management.

FOCUS

Becancour plant (Canada): the introduction of additional substance-specific treatment processes, together with excellent operational management, has driven a 50% reduction in COD emissions compared with 2016.

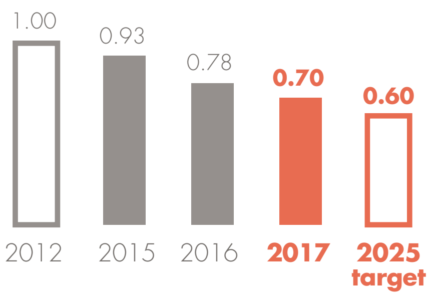
In 2017, the reduction in COD emissions was driven by improvements in the effectiveness of wastewater treatment facilities and in the quality of reporting at certain sites.

Emissions of suspended solids increased in 2017 despite the improvement measures carried out at various sites. The increase resulted from technical problems at two physico-chemical wastewater treatment facilities, which led to specific corrective actions.

Intensive indicator for effluent releases

The chart below presents the COD effluent EFPI from the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter. Emissions are calculated using the Group's biggest COD effluent emitters, which account for more than 80% of the consolidated total.

CHEMICAL OXYGEN DEMAND EFPI



The improvement in results since 2016 notably illustrates the positive impact of the Optim'O project.

The initial 2025 target of reducing COD emissions by 20% was surpassed in 2016, resulting in the definition of a new, more ambitious target.

2025 TARGET

Reduce COD emissions, expressed in EFPI terms, by 40% compared with 2012.

2.4.4.3 WASTE

While inherent to its industrial operations, the Group ensures that its waste production is managed at every stage of its business activity and that resource recovery and/or recycling solutions are found whenever possible.

This commitment is reflected in a number of areas:

- reducing waste at source, by designing products and processes that generate as little waste as possible;
- recycling waste in the product value chain, in compliance with the REACH regulation; and
- recovering the energy potential of waste by burning it as fuel, wherever possible.

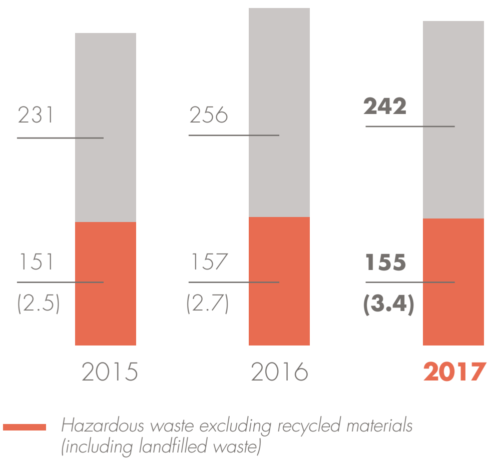
In recent years, the Group has in particular:

- explored new ways to recover and reuse certain types of waste, for example, to replace conventional fuels in boilers;
- recycled cleaning solvents and optimized cleaning cycles; and
- installed filters to reduce sludge volumes.

The following chart shows the amounts of hazardous and non-hazardous waste generated by the Group's operations in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

NON-HAZARDOUS AND HAZARDOUS WASTE

(in kt per year)



2017 saw a significant reduction in non-hazardous waste due to a change in fuel at a facility in China and to product mix effects.

The Group's objective is not only to reduce overall waste production, but also to recycle waste or recover its energy potential by burning it as fuel.

The following table shows the amounts of hazardous waste that were either recycled or burned as fuel in 2017, 2016 and 2015, calculated according to the methodology described in section 2.8 of this chapter.

Hazardous waste (kt per year)	2017	2016	2015
Waste recycled into materials	27	28	26
Waste burned as fuel	90	92	84
Total waste (including recycled)	184	188	177

Recovering waste for reuse as fuel is continuing to gain ground across the Group. Accordingly, in 2017, 15% of hazardous waste produced by the Group worldwide was recycled on- or off-site to recover useful materials, and 49% was burned as fuel.

2.4.4.4 OTHER EMISSIONS

Another major focus of the Group's environmental policies is to ease the impact of other pollutants from its operations on people living in nearby communities. Every year, projects are undertaken to attenuate such other pollutions as:

- odors, by upgrading incinerators to cut SO_2 emissions;
- noise, by improving air compressor soundproofing; and
- visual pollution (smoke), by firing boilers with natural gas rather than fuel oil.

The Group has put in place communication systems to alert stakeholders in real-time about any event likely to result in noise, odors, or visual pollution in and around a production site. In addition, most facilities now have a system for receiving and responding to complaints from local residents so that they can address the issues and minimize the nuisances to the extent possible. Complaints are investigated and action plans defined accordingly in liaison with local authorities.

2.4.5 Products and services

Arkema strives to optimize its environmental footprint by participating in recycling and circular economy initiatives and assists customers in assessing the environmental performance of its products.

2.4.5.1 LIFE-CYCLE ASSESSMENTS

To assess the environmental performance of certain products and in response to customer requests, life-cycle assessments (LCAs) are used to convert the entire inventory of a product's process material and energy inputs and environmental emissions into environmental impacts. The Group has developed dedicated LCA expertise at its Rhône-Alpes research center in France. It has also set up the global Arkema's LCA Network, which is instilling this LCA culture across the organization, in particular through periodic employee training courses, and endurably embedding it into the Group's CSR process.

The Group is supplying LCA data at the request of customers to enable them to assess the environmental footprint of a given product all along its value chain. This particularly concerns the Rilsan®, Rilsamid®, Pebax®, Kynar® and Forane® ranges, as well as Bostik adhesives. Assessments are also performed for acrylic monomers and PMMA through trade associations.

Depending on the type of product, internal experts assess the impacts in such areas as climate change (greenhouse gas emissions), ozone depletion potential, contribution to acidification, and energy, water and land use. Their scope is generally limited to a cradle-to-gate analysis, *i.e.* to production operations and upstream factors. In certain cases, this expertise may be shared with customers to help them implement their own eco-design process, by discussing the most relevant indicators and the best practices associated with their assessment.

LCAs are performed in accordance with the recommendations of the International Reference Life Cycle Data System (ILCD) Handbook and the international ISO 14040 and ISO 14044 standards describing the principles and framework for LCAs.

2.4.5.2 RECYCLING AND CIRCULAR ECONOMY PROJECTS

The Group is contributing to preserve non-renewable fossil-based raw materials by reusing the by-products of its industrial processes, supporting the recyclability of its own and its customers' products, and extending the lifespan of customers' products.

Recycling

Arkema is developing a number of solutions that are making it easier for customers to recycle their products.

For example, Elium® liquid thermoplastic resins are produced using the same equipment and processes as thermoset composites. Their properties make them easy to recycle, unlike parts made from thermoset resins such as epoxy.

The Group has also developed technologies to protect glass bottles (Kercoat®) and hide scuffs (Opticoat®), which significantly improve the appearance and useful lives of bottles by tripling the number of times returnable beer and other bottles can be reused.

CECA has developed a solution that increases the recycling rate of roadwork scrap. Using Cecabase RT® additives in the asphalt mix increases the aggregate recycling rate by 10% to 15% compared with conventional techniques. These additives also reduce the asphalt mix's workable heating temperature.

Circular economy

Arkema markets numerous by-products from the production of its leading products by finding suitable commercial applications linked to their inherent properties.

In addition, Arkema is seeking solutions to transform certain types of industrial waste, which otherwise would be discarded, into products that can be used in other industries. In 2015, the Group formed an inter-business working group to step up these efforts and tighten coordination with partners.

In 2017, as in 2016, some 15% of hazardous waste produced worldwide was recycled on- or off-site to recover useful materials.

For example, the Mont facility in France has long marketed the sodium-water produced as part of a monomer purification process to the paper industry for use in the Kraft paper and cardboard production process. The basic, organic-rich water helps to minimize sulfur loss in the process regeneration loops.

At the Hebei Casda Biomaterials Co. Ltd plant in Hengshui, China, the residual sulfuric acid generated by the sebacic acid manufacturing process is neutralized to obtain a sodium sulfate solution, which is then concentrated and crystallized. Instead of discharging the residual acid as waste, the plant now uses the new process to produce 50,000 tonnes a year of solid sodium sulfate for sale.

By-products from the conversion of castor oil into undecanoic acid 11 at the Marseille plant, which have been sold for many years through stable marketing channels, are an example of how existing products are re-used.

After the signature in 2016 of a "Commitment to green growth" with the French government to promote a complete recycling chain for PMMA as part of the Reverplast project, the multi-year PMMA recycling project is continuing in France in line with objectives.

Extending the lifespan of customer products

Arkema is constantly enhancing the performance over time of both its own and its customers' products.

For example, Kynar® offers a coating with a particularly long lifespan. Aquatec® version, used for reflective roofs (see section 2.5.2 of this chapter), retains a virtually intact white finish maintenance-free for an especially long time.

Arkema has also developed a line of organic peroxides for crosslinking rubber, which is then used to manufacture automotive and other parts that last longer than their conventional counterparts.

2.5 INNOVATION INFORMATION

PLACING SOLUTIONS FOR SUSTAINABLE DEVELOPMENT AT THE HEART OF THE GROUP'S APPROACH TO INNOVATION AND PRODUCT RANGE

2.5.1 Managing innovation to support sustainable development

In a fast-changing world characterized by global warming, a rising world population, the increasing difficulty in accessing energy and safe drinking water, and the growing scarcity of certain resources, manufacturing companies like Arkema must constantly innovate and adapt their product range to offer solutions addressing these challenges.

To contribute actively to these major changes, the Group has structured its innovation strategy around six innovation platforms, described in section 1.4 of this document, that are developing and delivering for its customers usable, innovative and environmentally friendly solutions in such areas as bio-based products, lightweight materials and design, new energies, water management, electronics solutions, and home efficiency and insulation.

These six platforms are addressing issues that are of rising interest, as evidenced by the entry into force on 1 January 2016 of the 17 Sustainable Development Goals (SDGs) defined by the United Nations in their "2030 Agenda for Sustainable Development", and to which governments, civil society and companies are being encouraged to contribute.

Arkema has identified six SDGs where its expertise and innovation efforts will enable it to offer new solutions and thus to contribute to their achievement. These SDGs are:

- "Ensure sustainable consumption and production patterns" (SDG 12);
- "Ensure access to affordable, reliable, sustainable and modern energy for all" (SDG 7);
- "Ensure availability and sustainable management of water and sanitation for all" (SDG 6);
- "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation" (SDG 9);
- "Take urgent action to combat climate change and its impacts" (SDG 13); and
- "Make cities inclusive, safe, resilient and sustainable" (SDG 11).

The materiality assessment performed in 2016 and presented in section 2.2 of this chapter confirmed that the development of sustainable, innovative solutions was one of the important aspects of the Group's CSR approach.

The Group's ambitious partnership and open-innovation policy is supporting internal R&D efforts, as described in section 1.4.2.3 of this document.

In addition, the Group is developing new processes and upgrading the manufacturing technologies used on its production sites so as to attenuate the environmental risks relating to their operations and reduce their emissions of potential pollutants as well as to optimize their use of energy and raw materials. These initiatives, described in section 1.6 and sections 2.4.2 and 2.4.5 of this document, will also contribute to the achievement of certain of these SDGs.

Information on industrial safety, environmental and climate change risks for the Group may be found in section 1.7.2.3 of this document.

2.5.2 Arkema's solutions to sustainable development challenges

The Group has developed a range of innovative solutions that respond perfectly to six of the UN's Sustainable Development Goals, as shown in the examples described below.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

"Ensure sustainable consumption and production patterns"

The growth in the world's population, the improvement in living standards and the rapid pace of industrialization are all driving the increased use and therefore growing scarcity of the planet's fossil raw materials.

By developing products using renewable raw materials within its "Bio-based products" innovation platform, the Group is helping to preserve non-renewable fossil materials and to introduce eco-design solutions with optimized environmental footprints, for example through recycling or as part of the circular economy (see section 2.4.5.2 of this chapter).

This ongoing commitment was demonstrated in 2017 by the fact that products at least 20% made from renewable raw materials accounted for around 9% of Group sales. These products are described in section 1.4.4.2 of this document.

Leveraging their more than 60 years of expertise, the Group's R&D teams will continue their efforts in this field to further expand the range of solutions offered.

The Group is also striving to reduce its own use of raw materials, particularly petrochemical feedstock, as part of the continuous improvement in its production processes (see section 2.4.2.1 of this chapter).

7 AFFORDABLE AND CLEAN ENERGY

"Ensure access to affordable, reliable, sustainable and modern energy for all"

New energies are one of Arkema's important research areas. By offering innovative solutions in this area, the Group is helping to preserve the planet's fossil resources and fight against climate change.

Through its "New energies" innovation platform, Arkema offers a wide range of products and innovations designed to support the growth of alternative energy production methods, including:

- Kynar® and Evatane® resins, and the Apolhya® Solar resin, which are used to encapsulate module components or to produce the coatings for photovoltaic panels; and
- Elium® recyclable thermoplastic resin, which is being tested for the production of wind turbine rotor blades.

The Group's innovation focus also includes a range of solutions for the batteries used for energy storage and in electric vehicles (see section 1.4.4.2).

In addition to product innovations, the Group is also working on reducing the energy used in its production processes.

6 CLEAN WATER AND SANITATION

"Ensure availability and sustainable management of water and sanitation for all"

Growth in the world's population and its increasing urbanization are sharply impacting water demand and tightening access to safe drinking water. Global access to high-quality water is a major challenge for the 21st century. In addition, the increased treatment of industrial, agricultural and domestic wastewater is driving the emergence of new needs.

To help prevent the risk of a shortage of water resources, the Group offers solutions – through its existing product range and its "Water management" innovation platform – aimed at various stages in the water treatment process:

- acrylic monomers, which are used as flocculants to purify wastewater;
- Hydrogen Peroxide, used as a water disinfectant; and
- Rilsan® and Kynar® resins, which can be used to produce materials for water transportation and to make filtration processes more effective, more energy-efficient and less costly.

Details of these innovations are provided in section 1.4.4.2.

In addition, the Group is continuing its efforts and is finding innovative ways to optimize its own water consumption in its production processes (see section on the Optim'O project in section 2.4.2.3) and improve the quality of its discharges (see strategic objective for COD in section 2.2.4).

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

"Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation"

This SDG addresses the important social challenge of sustainable and inclusive industrialization. Two of its main drivers are technology and innovation, particularly digital technologies and electronics, which will enable manufacturers in the developed world to optimize their production facilities and supply chain. In developing countries, they will help to give equal access to information and knowledge to the more than four billion people living without internet access in these countries. The Group is positioning itself, with the "Electronics solutions" innovation platform, as a player in the upstream part of this chain.

The electronics industry is characterized by strong growth and very short time-to-market cycles for new solutions. With its Technical Polymers range, the Group offers solutions for the mobile device segment, which includes smartphones and tablets. For further details, see section 1.2.1.3 of this document.

In addition, an ambitious research project in the area of nano-scale semiconductor etching, housed in the incubator, aims at using the directed self-assembly process, based on ultra-pure block copolymers, where the Group enjoys unique expertise. By enabling the fabrication of even smaller silicon chips, this innovation offers a promising pathway to increasing microprocessor storage capacity, a key factor in the spread of digital technology. The recent developments are described in section 1.4.4.2 of this document.

13 CLIMATE ACTION

"Take urgent action to combat climate change and its impacts"

An increasing global population, growing urbanization, rising living standards (with a corresponding increase in the number of cars and air travel) and the faster pace of industrialization in emerging markets all contribute to the gradual warming of the planet and to climate change. The fight against global warming is therefore a major challenge that mobilizes the entire international community.

To actively participate in this fight, the Group is developing, within its "Lightweight materials and design" innovation platform, solutions that reduce vehicle weight and thereby their fuel consumption. In doing so, they also contribute to minimizing CO_2 emissions in the transportation sector. These products include the Altuglas® ShieldUp nanostructured polymer sheet that replaces glass in automobile windows, Rilsan® HT and, more recently, Kepstan® PEKK, which can be used as metal substitutes, and thermoplastic composites such as the Elium® resin. In addition, Bostik and Platamid® adhesives offer automotive and aerospace manufacturers lightweight bonding solutions for materials assembly.

For example, in the case of cars, the use of Altuglas® ShieldUp roofs can reduce fuel consumption by 0.4 liters and reduce CO_2 emissions by seven kilograms per 100 kilometers traveled. Assuming that 100,000 vehicles driving 20,000 kilometers a year were equipped with this innovation, CO_2 emissions would be reduced by 140,000 tonnes a year.

The Group's lightweight materials solutions are presented in detail in section 1.4.4.2 of this document.

In addition, within the Fluorogases Business Line, the Group is developing chemicals with low global warming potential (GWP), in particular low-GWP HFO refrigerants with zero ozone-depletion potential (ODP).

11 SUSTAINABLE CITIES AND COMMUNITIES

"Make cities and human settlements inclusive, safe, resilient and sustainable"

With growing urbanization, access to high-quality, sustainable housing is becoming increasingly problematic. The "Home efficiency and insulation" innovation platform offers solutions that insulate buildings more effectively, which in turn improves the energy efficiency of their air-conditioning systems. These innovations are also helping to fight against global warming.

One of them is the Kynar Aquatec® PVDF resin, a water-based formulation for the white paint on reflecting roofs, whose use reduces a building's energy consumption in high-sunlight regions by 20%, or 20 kilowatt-hours per square meter a year. For ten buildings with a roof area of 15,000 square meters, this would represent a total reduction of 1,500 tonnes of CO_2 a year, assuming an emission coefficient of 0.5 tonnes of CO_2 per 1,000 kilowatt-hours.

FOCUS

The BSTC experiments successfully with Kynar Aquatec®

In 2017, 800 square meters of roof at the Bostik Smart Technology Center (BSTC) in France were coated with Kynar Aquatec®. The results demonstrate the innovation's potential: the building's interior is 3°C to 4°C cooler on the sunniest days and the amplitude of temperature variations has been reduced by a factor of two, generating a significant improvement in comfort.

In addition to addressing these energy efficiency challenges, the Group is also participating in the development of solutions that reduce a home's environmental footprint and make it healthier and more comfortable for residents. In particular, these solutions are being trialed in the "Smart House by Arkema", a world-unique laboratory for construction technologies.

The Group's home efficiency and insulation initiatives and solutions are described in more detail in section 1.4.4.2 of this document.

2.5.3 R&D organization and outcome

R&D organization and outcomes are described in section 1.4 of this document. The key R&D indicators are presented in the table of CSR indicators in section 2.8.3 of this chapter.

To develop the technologies of the future and invent new products, the Group is innovating directly with its ecosystem in a seamless, interconnected way. Initiatives undertaken as part of partnerships and open innovation are described in section 1.4.2.3 of this document.

FOCUS

Sustainable innovation

In 2017, 150 patent applications were filed by the Group for innovative solutions that contribute to meeting the United Nations' Sustainable Development Goals. The significant increase in patent applications versus previous years reflects the efforts made by Arkema to generate innovative, sustainable solutions, particularly in the areas of bio-based polymers (SDG 12) and lightweight materials (SDG 13).

To secure its commitment to developing sustainable solutions that benefit the entire value chain, the Group is currently working on the definition of a new indicator for 2018 to assess its contribution to the United Nations' Sustainable Development Goals. The indicator's progress will be supported by innovation. A target will be set once the indicator has been monitored for a certain period of time.

2.6 SOCIAL INFORMATION

PROMOTING THE INDIVIDUAL AND COLLECTIVE DEVELOPMENT OF ALL ITS EMPLOYEES

2.6.1 Social management

The Group's success is deeply linked to its 19,779 employees in some fifty countries around the globe, who each contribute to its development and performance. The Group benefits from a strong corporate culture, rooted in the four core values of simplicity, solidarity, performance and accountability.

Arkema's human resources policies are designed to encourage employee development by providing career opportunities within an innovative, global company, and to attract and retain the best talent. This implies an environment offering good working conditions and guaranteeing fair treatment in every circumstance.

These policies cover both personal development initiatives and programs focused on the workplace environment as follows:

- personal development initiatives concern hiring, training and career development, with the aim of improving each employee's skills and capabilities. Career management policies help to build career paths that enhance the expertise of employees and, by extension, the entire Group. They are supported by training programs that provide the knowledge and practices required to take up a new position or acquire new job skills. Employee development is also being encouraged by a policy of proper recognition and fair compensation, regularly benchmarked against peer groups; and
- programs focused on working conditions that are designed to drive continuous improvement. They include initiates to improve the working environment and preserve employee health and safety. They are also designed to foster positive employee relations, by paying close attention to employee feedback, maintaining social dialogue and broadening the diversity of national origins, profiles and educational backgrounds among employees.

The Group ensures that it consistently complies with the constitutional texts, treaties, conventions, laws and regulations in force in the countries and regions in which it operates, as detailed in section 2.7.3 of this chapter.

2.6.2 Employment

Through its human resources policies, the Group endeavors to offer its employees varied career paths and opportunities, in particular by encouraging transfers among subsidiaries and businesses and by developing their capabilities.

The Group supports the personal development of every employee, provides opportunities for promotion and transfer and is actively broadening the diversity of its teams.

2.6.2.1 TOTAL HEADCOUNT AND EMPLOYEES BY REGION, GENDER AND AGE

Data in this section concern all of the companies that are more than 50%-owned by the Group. They describe how the workforce breaks down by various criteria and how the Group manages its human capital.

Every reporting company considers as an employee, any person hired under an employment contract. The number of employees, which does not include interns or temporary workers, is calculated on a headcount basis, regardless of working hours.

For further details on the methods used to collect and calculate this data and their possible limitations, please see the note on methodology in section 2.8 of this chapter.

TOTAL WORKFORCE OVER THE PAST THREE YEARS

	31 December 2017	31 December 2016	31 December 2015*
GROUP TOTAL	**19,779**	**19,637**	**18,912**
France	7,144	7,145	7,282
Europe (excluding France)	3,936	3,838	3,120
North America	3,742	3,694	3,568
Asia	4,104	4,061	3,979
Rest of the world	853	899	963
Of which permanent [1]	18,701	18,607	17,801
Of which fixed-term	1,078	1,030	1,111

(1) See the note on methodology in section 2.8 of this chapter.
* *Excluding Den Braven.*

There were no significant changes in scope in 2017 since the acquisition of Den Braven was carried out in December 2016 and that of XL Brands in January 2018. The Group's total headcount increased by a slight 0.7% in 2017 compared with 2016.

The regional headcounts were also relatively stable and break down as follows:

	31 December 2017	31 December 2016	31 December 2015*
France	36.1%	36.4%	38.5%
Europe (excluding France)	19.9%	19.5%	16.5%
North America	18.9%	18.8%	18.9%
Asia	20.8%	20.7%	21.0%
Rest of the world	4.3%	4.6%	5.1%

* *Excluding Den Braven.*

HEADCOUNT BY REGION AND GENDER

The proportion of men in the total headcount continued to decline slightly in 2017 to reach 75% (down 0.4 points versus 2016 and 1.1 points versus 2015).

	MALE			FEMALE		
	2017	2016	2015*	2017	2016	2015*
France	73.4%	74.0%	74.7%	26.6%	26.0%	25.3%
Europe (excluding France)	75.2%	75.5%	77.9%	24.8%	24.5%	22.1%
North America	77.7%	78.2%	78.4%	22.3%	21.8%	21.6%
Asia	74.6%	74.3%	74.3%	25.4%	25.7%	25.7%
Rest of the world	78.3%	79.0%	80.2%	21.7%	21.0%	19.8%

* *Excluding Den Braven.*

The fact that the majority of employees are men reflects the high percentage of jobs traditionally held by men in non-managerial positions (supervisors and operators), who account for 73.1% of the workforce.

HEADCOUNT BY CATEGORY AND GENDER

At 31 December 2017, managers accounted for 26.9% of Group employees. The table below shows a slight increase in the proportion of managers in the total headcount.

	MANAGERS			NON-MANAGERS		
(in %)	**2017**	**2016**	**2015***	**2017**	**2016**	**2015***
Total	26.9%	26.2%	25.8%	73.1%	73.8%	74.2%
Of which women	*29.1%*	*28.3%*	*27.4%*	*23.5%*	*23.3%*	*22.7%*

* *Excluding Den Braven.*

Women accounted for an average 29.1% of managers, an increase of 0.8 points year-on-year, and 4.1 points higher than the percentage of women in the workforce as a whole (25%).

HEADCOUNT BY AGE GROUP

	31 December 2017	31 December 2016	31 December 2015*
GROUP TOTAL	**19,779**	**19,637**	**18,912**
Under 30 years	13.8%	14.5%	15.3%
30 to 39 years	26.1%	26.0%	25.6%
40 to 49 years	28.7%	28.7%	28.3%
50 to 59 years	25.9%	25.9%	26.1%
Over 60 years	5.5%	4.9%	4.7%

* *Excluding Den Braven.*

HEADCOUNT BY AGE GROUP AND GENDER

	MALE			FEMALE		
	2017	**2016**	**2015***	**2017**	**2016**	**2015***
Under 30 years	12.8%	13.8%	14.4%	16.5%	16.6%	18.1%
30 to 39 years	25.6%	25.3%	25.0%	28.2%	28.2%	27.5%
40 to 49 years	29.3%	29.2%	28.8%	26.8%	27.4%	27.1%
50 to 59 years	26.6%	26.7%	27.1%	23.7%	23.3%	22.8%
Over 60 years	5.7%	5.0%	4.7%	4.8%	4.5%	4.5%

* *Excluding Den Braven.*

The breakdown by age group is typical of the chemicals industry. The preponderance of employees over 30 reflects the fact that, compared to other industries, both managers and non-managers spend a longer time in professional education and training. This means that Arkema can build its growth on well-trained, experienced employees. Human resources policies are also designed to ensure that, over time, this expertise is transferred to a new generation of employees. However, the high proportion of employees over 50 is prompting the Group to address the foreseeable departure of nearly a quarter of its current workforce over the next ten years, by leveraging its hiring and career management policies to gradually replace them.

2.6.2.2 RECRUITMENTS AND DEPARTURES

The Group's recruitment policies are designed to attract talented, highly skilled individuals to support its growth.

In keeping with its founding values of simplicity, solidarity, performance and accountability, Arkema attaches a great deal of importance to finding applicants with cultural awareness, teamwork skills, a solutions-driven approach and an entrepreneurial spirit.

A recruitment charter has been issued to help promote the principles of fairness and non-discrimination in the selection of job applicants.

In 2017, Arkema continued to develop its employer brand, revised in 2016. New videos focusing on the Group's professions were produced in Asia for dissemination via the Group's communication media and for use locally in its relations with academic institutions.

Proactively attracting talented young graduates

In order to continuously improve the recruitment and hiring process, the Group nurtures special relationships with the best educational and training institutions for all its professions.

In France

The Group takes part in a large number of school events, such as job forums, presentations and plant tours. These initiatives seek to promote the Group and its professions to the students of general engineering schools (Mines de Paris, Centrale Paris and Polytechnique), chemical engineering schools (such as ESPCI, Chimie Paris, ENSIC and ENSIACET), business schools (particularly HEC, ESSEC and ESCP-Europe), and technical schools in the fields of safety and maintenance.

Each year, the Group offers numerous opportunities for internships, apprenticeships, doctoral research positions and jobs under France's International Volunteers in Business (IVB) program. Arkema had a total of 26 IVB program participants in 2017, of which 10 who joined during the year. The Group aims to further broaden these international opportunities by offering students from partner schools the possibility to intern abroad. Final-year internships, IVB contracts and doctoral research projects are managed at the corporate level to monitor the future recruitment pool more effectively. In addition, Arkema invested in 2017 in talent programs that give young graduates the opportunity to take on business-related positions that offer international exposure.

Another major objective in France is to develop work-study programs, whose participants represent an important source of new hires. The objective is for one-third of positions open to young graduates to be offered to people already on a work-study contract with the Group. Students on work-study programs accounted for 3.5% of the workforce in 2017.

In the United States

Arkema Inc. nurtures close relations with universities whose students can meet the Group's hiring needs. In 2016, for example, a series of meetings was organized between Group researchers and students from MIT, the University of Massachusetts, Cornell University and Pennsylvania State University. In addition, 51 internships were offered during the year. The Group also recently invested in an MBA Rotational Leadership Development program with the goal of recruiting candidates with technical backgrounds who are capable of moving into management positions. The two-year program offers participants experience in a variety of corporate positions.

In China

To meet its hiring needs, operations in China are fostering closer relations with selected universities. Seven university visits were organized in 2017, providing the opportunity to meet more than 2,100 students. In addition, 46 internships were offered to students in target universities.

RECRUITMENTS UNDER PERMANENT CONTRACTS BY REGION

In 2017, Arkema hired 1,616 people under permanent contracts, compared with 1,694 in 2016.

	31 December 2017	31 December 2016*	31 December 2015*
France	22.5%	17.4%	17.9%
Europe (excluding France)	15.7%	11.0%	11.9%
North America	28.7%	31.2%	32.6%
Asia	27.1%	30.2%	30.3%
Rest of the world	6.0%	10.2%	7.3%

* *Excluding Den Braven.*

The geographic distribution of recruitments shows that Asia and North America remain the most active regions, in line with the Group's expansion in Asia and the higher turnover in both regions.

RECRUITMENTS UNDER PERMANENT CONTRACTS BY REGION AND GENDER

Women represented 28.5% of total new hires in 2017, an increase of 3.8 points year-on-year, and higher than the percentage of women in the workforce as a whole (25.0%).

	MALE			FEMALE		
	2017	2016*	2015*	2017	2016*	2015*
France	65.1%	67.5%	66.8%	34.9%	32.5%	33.2%
Europe (excluding France)	66.5%	73.1%	73.4%	33.5%	26.9%	26.6%
North America	72.6%	76.0%	76.7%	27.4%	24.0%	23.3%
Asia	76.9%	78.3%	74.9%	23.1%	21.7%	25.1%
Rest of the world	79.4%	79.7%	84.0%	20.6%	20.3%	16.0%

* *Excluding Den Braven.*

RECRUITMENTS UNDER PERMANENT CONTRACTS BY CATEGORY AND GENDER

	MANAGERS			NON-MANAGERS		
(in %)	2017	2016*	2015*	2017	2016*	2015*
Total	29.1%	26.3%	25.9%	70.9%	73.7%	74.1%
Of which women	*29.1%*	*34.1%*	*31.9%*	*28.2%*	*21.4%*	*23.2%*

* *Excluding Den Braven.*

In 2017, 29.1% of recruitments concerned managerial positions, compared with 26.3% in 2016. This is slightly higher than the proportion of managers in the total workforce (26.9%), thereby ensuring an efficient succession process and driving an increase in the number of managers.

The percentage of women among managerial hires decreased in 2017, to 29.1% from 34.1% in 2016. These proportions are in line with the percentage of women among the applicants for Group jobs. The Group remains attentive to this indicator as part of its determination to gradually hire more women across the organization, as described in section 2.6.5.2 of this chapter.

RECRUITMENTS UNDER PERMANENT CONTRACTS BY AGE GROUP

Recruitment practices are designed to provide the skills and expertise that the technical, sales and administrative professions need. The recruitment of people under 40 illustrates the initiatives in place to proactively respond to the wave of departures projected over the next ten years.

Recruitments	31 December 2017	31 December 2016*	31 December 2015*
GROUP TOTAL	**1,616**	**1,694**	**1,450**
Under 30 years	38.5%	41.9%	41.7%
30 to 39 years	33.6%	33.8%	35.0%
40 to 49 years	18.5%	16.5%	15.4%
50 to 59 years	8.3%	7.4%	7.4%
Over 60 years	1.1%	0.4%	0.5%

* *Excluding Den Braven.*

RECRUITMENTS UNDER PERMANENT CONTRACTS BY AGE GROUP AND GENDER

	MALE			FEMALE		
	2017	2016	2015*	2017	2016	2015*
Under 30 years	37.6%	41.7%	41.2%	40.6%	42.5%	42.8%
30 to 39 years	34.5%	34.0%	35.5%	31.3%	32.9%	33.3%
40 to 49 years	19.1%	16.3%	15.9%	17.0%	17.2%	14.1%
50 to 59 years	8.0%	7.5%	7.0%	9.1%	7.2%	8.7%
Over 60 years	0.8%	0.5%	0.4%	2.0%	0.2%	1.1%

* *Excluding Den Braven.*

DEPARTURES OF EMPLOYEES UNDER PERMANENT CONTRACTS

In 2017, the Group recorded 1,705 departures of permanent employees, versus 2,023 in 2016, which break down as follows:

	France	Europe (excluding France)	North America	Asia	Rest of the world	Total
TOTAL DEPARTURES OF PERMANENT EMPLOYEES	**376**	**292**	**422**	**464**	**151**	**1,705**
Of which resignations	70	130	253	380	29	862
Of which dismissals	36	58	68	57	113	332

RESIGNATIONS OF PERMANENT EMPLOYEES

The following table shows employee turnover, defined as resignations as a percentage of the total workforce, for 2017, 2016 and 2015.

	2017	2016*	2015*
Resignations	862	866	758
Turnover *(resignations as a percentage of employees under permanent contracts)*	4.6%	4.7%	4.3%

* *Excluding Den Braven.*

Concerning 2017 resignations, turnover by region and global turnover were all within the industry average.

2.6.2.3 ORGANIZATION OF WORKING TIME

In every country, working hours comply with local legislation and business practices.

Employees work full time and, to a lesser extent, part time. At Arkema France, for example, full-time employees work 1,575 hours a year while part-time hours range from 50% to 80% of the full-time equivalent. In the United States, full-time employees work 1,960 hours a year and part-time hours range from 50% to 90% of the full-time equivalent. For the Group overall, part-time employees accounted for 3.7% of the total workforce at 31 December 2017, compared with 3.8% in 2016.

Given the specific features of the Group's industrial operations, some employee categories may work on continuous, discontinuous or semi-continuous shifts.

In response to a sudden demand increase or unusual difficulties, the Group may make use of fixed-term employment contracts, overtime, subcontractors or temporary employment agencies, in compliance with local legislation and depending on the local labor market.

2.6.2.4 ABSENTEEISM

Absenteeism, which includes sickness, accident and maternity leave as well as strikes and unpaid leave, is presented in the following table:

	2017	2016*	2015*
Percentage of hours of absence (excluding authorized leave)/ number of hours worked.	3.9	3.7	3.4

* *Excluding Den Braven.*

The following table presents the percentage of hours of medical leave:

	2017	2016*	2015*
Percentage of hours of medical leave/number of hours worked	2.8	2.6	2.4

* *Excluding Den Braven.*

The absenteeism rate rose slightly but remained in line with the average 3.5% to 4.5% reported by the global manufacturing industry.

2.6.2.5 COMPENSATION AND CHANGES IN COMPENSATION

Total payroll costs for 2017 and previous years are presented in note 25 of chapter 4 of this document.

A key component of the Group's human resources policies, total compensation is designed to recognize and equitably reward each employee's contribution to Arkema's success.

The compensation structure comprises a fixed base salary, an individual bonus and a collective bonus, which are applied differently depending on the position and the country. This structure fulfills a number of objectives:

- compensate individual and collective performance;
- enhance each employee's awareness of his or her responsibilities and involve everyone in meeting objectives;
- offer fair compensation consistently across the organization; and
- manage costs.

In addition, the compensation structure is regularly benchmarked.

32% of employees receive some form of individual bonus, whose amount depends on their fulfillment of personal objectives and their contribution to the collective performance of a business, a country organization or the Group. A significant portion of their bonus depends on a safety or other CSR objective.

67% of employees are eligible for some form of collective bonus, which give them a stake in the Group's expansion and financial performance. This is the case for the incentive and profit-sharing schemes in effect in France.

Nearly all employees, *i.e.*, 99.6% of the total workforce, are covered by a guaranteed minimum compensation agreement. In the few countries where there is no minimum wage, Group companies regularly perform benchmarking studies and are in line with standard chemical industry practices.

Employees may also receive various forms of long-term or deferred compensation, such as performance shares and employee share ownership plans.

Employee share ownership

Since its 2006 stock market listing, Arkema has encouraged employee share ownership, with plans offered every two years in the Group's main host countries to enable the purchase of Company shares on preferential terms.

The participation rate has increased over time to an average of 40% (close to 70% in France and 21% in other countries) and the average amount invested by employees reached €5,700 in 2016. These figures reflect the employees' engagement and their confidence in the Group's development.

As a result, 5.1% of outstanding shares were owned by employees at 31 December 2017, collectively making them one of the Group's main shareholders.

In the spring of 2018, Arkema will carry out another capital increase reserved for employees, the sixth since its stock market listing in 2006. The plan will be open to employees in around 30 countries.

For more details, please refer to section 5.2.7 of this document.

Performance shares

Performance shares are granted, as decided each year by the Board of Directors, to executives and employees who have demonstrated remarkable performance or whom the Group wishes to incentivize and involve more closely in its long-term development. In 2017, performance shares were granted to 1,400 beneficiaries, representing 7% of the total headcount and around 200 more than in 2016.

For more information, please refer to section 3.5, section 5.2.6 and note 27 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

2.6.2.6 PENSION, HEALTH AND WELFARE BENEFITS

In most countries in which the Group operates, employees are covered by mandatory public schemes addressing risks related to death, disability, work incapacity, pensions and healthcare costs.

In addition to this statutory coverage, Group entities in France and abroad are responsible for implementing and updating health, welfare and employee benefit schemes, with a preference for defined contribution plans, in compliance with the approved annual budgets and in line with local requirements and practices. Nearly 93% of Group employees thus receive supplementary life cover and 90% supplementary disability cover.

2.6.3 Training and personal development

Arkema is committed to fostering a workplace environment that encourages the personal and professional development of its employees and to offering resources that help them to effectively meet this objective and improve their performance.

Around the world, annual performance reviews provide one-on-one opportunities for employees and managers to set objectives for the coming year and to discuss the employee's desired career path. They also review the training completed over the year, and on that basis, determine the further training needed to improve the employee's expertise and capabilities. Performance reviews are conducted for every employee, regardless of category.

In all, 99% of Group companies conduct annual performance reviews.

In addition, meetings with career managers provide an opportunity to review the employee's career path, their expectations and how they could advance their career in other Group professions.

2.6.3.1 TRAINING POLICY

Professional training concerns all employees regardless of their job, level of responsibility or age. It enables everyone to develop or acquire the skills needed to hold a position, move to a new position and fulfill the Company's expectations in terms of technical expertise or management practices. This is why the Group has reaffirmed its desire to provide every employee with access to lifelong learning and continued employability.

Training hours are reported for entities at least 50%-owned and employing more than 30 people, corresponding to 96% of the total workforce.

NUMBER OF TRAINING HOURS (EXCLUDING E-LEARNING)

	2017	2016*	2015*
Total number of training hours, Group-wide	484,578	464,706	463,065
Training hours per employee per year	25	27	27
Number of employees having attended at least one course	16,161	16,256	17,062
Percentage of employees having attended at least one course during the year	85	94.7	99.3

* *Excluding Den Braven.*

Employees continued to benefit from a significant level of training in 2017, with an average of 25 training hours per employee. The figures for 2015 and 2016 were particularly high due to the deployment of the global Safety Academy program.

NUMBER OF EMPLOYEES WHO TOOK AN E-LEARNING COURSE

To facilitate access to training, the Group offers e-learning modules, which are easy to use, particularly for courses on safety and corporate subjects. The curriculum currently consists of more than 20 modules in French and English and sometimes in Chinese, German or Italian, depending on the course. One reason for their growing popularity is the ease of enrollment, given that almost every employee has a log-in and access to a computer.

A new version of the platform that manages e-learning modules was implemented in 2017, enabling better management and more detailed tracking of e-learning across the Group.

	2017	2016*	2015*
Number of employees who took an e-learning course	10,496	9,298	8,218
Percentage of employees having taken at least one e-learning course during the year	55	54	45

* *Excluding Den Braven.*

E-learning courses continue to grow in popularity, as measured by both the number and percentage of participating employees. After the deployment in 2016 of the "Code of Conduct and Business Ethics" module, a new training module relating to the Arkenergy project was developed and rolled out worldwide. Backed by a dedicated communication campaign, the module is designed to raise employee awareness of energy savings.

2.6.3.2 SPECIAL PROFESSIONAL TRAINING PROGRAMS FOR EMPLOYEES

The Group's training policies are especially designed to improve employee skills in the areas of safety, health, the environment, its businesses and management.

International initiatives include:

- the Isafe program that was launched during the year and the cyber security awareness campaign deployed in all countries via a network of correspondents; and
- the SMART program dedicated to operational excellence, which is being rolled out at 10 pilot sites in the United States and Europe. The program is part of a strategy to leverage input from employees in the field to resolve problems or improve team efficiency.

Regional initiatives include:

- the Share Strategic Challenges seminar that was held in Europe in June 2017 for newly hired managers (with two to five years of experience), enabling them to deepen their understanding of the Group's strategy and projects and to embrace its changes and challenges; and
- the two leadership development programs held in 2017, one in Asia and the other in Europe. Inspired by feedback from the Arkema Cornell Leadership Program offered in the United States, the two programs provided training for more than 50 managers. Known together as the Arkema Leadership Academy, these three programs round out the Group's offering of training dedicated to high potentials.

In France, a special initiative has been undertaken in recent years to expand the management training curriculum and to add the following courses to the "Managers' Passport" induction training program:

- managing psychosocial risks and quality of work life;
- working together internationally;
- managing teams remotely;
- communicating one-on-one: realignment meetings, annual performance reviews, job interviews;
- communicating interpersonally; and
- reviewing management practices in accordance with the Arkema Management Way.

2.6.3.3 TALENT MANAGEMENT

One of the cornerstones of the Group's human resources development process, talent management helps to diversify the experience that employees acquire along their career paths, while steadily enhancing their capabilities, which is a fundamental driver of the Group's development.

This process therefore focuses on both:

- ensuring that the Group has the expertise it needs to secure its successful development, today and over the medium-term; and
- helping employees build their careers, thereby enabling them to increase their skills and implement their projects based on the potential and opportunities available in the Group.

Employee talent management is led by career managers, whose responsibilities include:

- overseeing talent management at the corporate level for managers in France and grade 15 jobs and higher internationally; and
- working in collaboration with other career managers in each country or facility for operational, administrative, technical and supervisory employees.

Talent management policies are based on the same principles regardless of employee category, country, age or gender, as follows:

- providing each employee with the resources and support he or she needs to manage every phase in his or her career;
- leading a proactive promotion-from-within policy;
- identifying and developing high-potentials to encourage acceptance of responsibility and support career development;
- encouraging mobility between subsidiaries and geographies; and
- enabling every employee to move up in the organization and enrich his or her experience and skills, while ensuring organizational flexibility.

In every country, a career development program has been rolled out Group-wide for high-potentials, based on feedback to participants after their self-assessment has been compared with those of their manager and their manager's manager. This system provides input for preparing personalized action and improvement plans involving coaching, new experience and training.

In France

In addition to the recruitment targets for young people and seniors (see section 2.5.1.2 of this chapter), the Provisional Management of Employment and Skills agreement renewed in 2016 for Group companies in France includes measures for recognizing experts through skills/professions charts, in addition to the Hay classification. The agreement also includes specific measures to manage career endings for seniors, such as knowledge transfer, retirement counseling, and the possibility of working 80% of full-time equivalent at 90% of pay for the 24 months preceding retirement.

In the United States

To support the talent management process, human resources teams are using the SAP SuccessFactors software to manage hiring, career development, annual performance reviews, training and performance initiatives for all US employees. The system is now being introduced worldwide to support a holistic, global vision of employee career paths.

In China

In 2015, a talent management leader was appointed and tasked with encouraging the development of employee skills not only in China, but also across all of Asia, in liaison with the country human resources managers.

2.6.3.4 INTERNATIONAL EXPERIENCE

Arkema, which mainly operates in Europe, North America and Asia, is actively pursuing an international job mobility policy designed to ensure that it has the skills and capabilities it needs at all its sites, and to broaden employee skills by offering them opportunities to work in different environments.

This policy is being applied through five programs aligned with the different international mobility objectives, as follows.

Expertise

This program enables employees who are contributing to implement strategic Group projects in a country where the requisite skills are not yet available to gradually transfer those capabilities to local employees.

Development

This program concerns employees who are going to take up a position in their area of expertise for a set period (on average three years) in a country where similar capabilities exist locally, with the goal of broadening their skills and returning home with their newly acquired experience.

International

This program is for employees whose career is exclusively international, with no further reference to their country of origin.

Expatriation in Europe

This program enables French employees to work on strategic projects or develop their careers in another European country.

Talent Program

Introduced in 2016, this new program offers an international experience to talented junior employees identified after being hired for an initial position or completing an IVB contract with the Group.

On average, only around 80 employees are working as expatriates, reflecting the Group's priority focus on hiring locally whenever possible, including for executive or high responsibility positions.

2.6.4 Consultation and dialogue

The Group respects the fundamental freedoms of its employees, such as the freedom of association and expression, protects their personal data and respects their privacy, as defined in its Code of Conduct and Business Ethics.

Among the fundamental principles and rights at work, the right to freedom of association and to collective bargaining is a vector of social progress that the Group encourages wherever it operates.

Accordingly, in addition to complying with host country legislation, the Group facilitates employee representation in order to support suitable collective bargaining processes. In countries where the law does not provide for employee representation, specific bodies can be set up locally. A consultation and dialogue structure has been implemented at the European level with the European Works Council.

The social dialogue process and the results of the collective agreements signed within the Group are presented in section 2.6.4.1 of this chapter.

Lastly, the Group strives to develop two-way feedback and consultation with employees, either directly in the form of surveys or via employee representatives.

2.6.4.1 THE SOCIAL DIALOGUE ORGANIZATION

As part of its employee relations policy, the Group fosters ongoing dialogue with employee representatives in every entity, in accordance with local cultural norms and legislation.

At the European level

The social dialogue body is the 26-member European Works Council, which holds a one-day plenary meeting every six months to discuss issues within its remit, including:

- business issues: market trends, commercial situation, activity level, main strategic priorities, growth outlook and objectives;
- financial issues: review of the consolidated financial statements, annual report and investments;
- labor issues: human resources policy and the employment situation and outlook;
- environmental issues: Group policy and emerging European regulations; and
- organizational issues: significant changes in the Group's organization, developments in the businesses and the creation or termination of operations affecting at least two European Union countries.

In 2017, two plenary sessions were held on 30-31 March and 26-27 October at the Arkema head office.

In the United States

Employees at unionized facilities are covered by collective bargaining agreements negotiated with local and national trade unions for an average period of three years. They deal with such issues as compensation, the safety of people and processes, and quality of work life.

In China

The first Employee Representatives Congress of Arkema China Investment Co. Ltd, the Group's main local subsidiary, was elected in late 2007 and began operations in January 2008. It currently has 34 members. The ERC has a broad remit, ranging from pay negotiations to safety and training. It complements the labor unions already in place at the Group's local production plants.

Around the world, a high percentage of employees were represented by elected bodies or unions in 2017, as shown in the following table.

PERCENTAGE OF EMPLOYEES REPRESENTED BY ELECTED BODIES AND/OR UNIONS, BY REGION

	2017
GROUP TOTAL	**89%**
France	100%
Europe (excluding France)	88%
North America	77%
Asia	83%
Rest of the world	87%

2.6.4.2 DIRECT DIALOGUE WITH EMPLOYEES

The Group is committed to developing two-way feedback and consultation with its employees, either directly in the form of internal surveys or via employee representatives.

Internal surveys are carried out in particular to assess employee satisfaction and engagement and to identify appropriate action plans. Over the past two years, internal surveys have been organized in 17 countries in Asia, Europe and the United States covering such topics as employee engagement, organization, compensation, working conditions and health and safety. Participation among employees of the various entities involved was very high, with response rates often above 85%.

2.6.4.3 COLLECTIVE AGREEMENTS

Since the Group was founded, its collective bargaining policy has led to the signing of a wide range of agreements in each facility or company.

In France, some agreements are Group-wide and therefore applicable to every Group company in the country, while others have been negotiated only for a given company or facility.

In other countries, collective bargaining procedures are aligned with national employee representation practices and legislation.

Negotiations are designed to raise the social status of employees in correlation with the Group's development and the macroeconomic environment. The main topics negotiated in 2017 concerned total compensation (salaries, health and welfare plans, health insurance, employee savings plans and other employee benefits), employment and skills management, quality of work life, workplace health and safety, workplace equality and diversity, and social dialogue. In France, 22 major agreements were signed in the subsidiaries or Group-wide during the year.

Collective agreements have a positive impact on working conditions, as illustrated in France by the measures taken in favor of people with disabilities, described in section 2.6.5.3 of this chapter, and the agreement signed in 2017 on employees' right to disconnect.

2.6.5 Diversity, equal opportunity and equal treatment

As part of its policy of non-discrimination, workplace equality and diversity, the Group commits to promote the elimination of all forms of discrimination in its operations, encourage diversity as a valuable asset in its global business and hire people solely on the basis of its needs and each applicant's personal qualities, as defined in its Code of Conduct and Business Ethics and its human resources policy memo.

Workplace equality is one of the major priorities of the Group's human resources policy, along with the prevention of discrimination in general. Special attention is given to ensure gender equality in the workplace, facilitate the integration of disabled employees and prevent discrimination on the basis of age or nationality. Measures put in place to ensure equal opportunity and obtain quantifiable results include:

- a program that periodically revises job descriptions to ensure that they are non-discriminatory and consistent across each profession, with a particular focus on accurately describing the related tasks and responsibilities. In addition, the positions, job titles and requisite profiles are reviewed once a year, department by department; and
- recruitment policies based on the sole criterion of suitability for the job. In the United States, for example, Arkema Inc. gives training to people involved in the recruitment and hiring process, provides them with job descriptions and applicant profiles, and remedies any situation where there is a significant underrepresentation of minorities or women in the workforce.

Diversity is an important issue for the Group and a powerful lever for driving team performance and attracting the finest talent. It is also a way for the Group to enhance its employer brand image. Arkema has therefore set two diversity objectives, to increase the percentage of women and of non-French nationals in senior management and executive positions. Details of these objectives are provided below.

2.6.5.1 MEASURES TO FOSTER INTERNATIONAL DIVERSITY

In every country and region where Arkema operates, it is committed to developing local skills and capabilities, with a preference for hiring locals in every aspect of the business, from shop floor to executive teams. The Group also offers career opportunities abroad. Several expatriation programs have been designed, including the recent "Talent Program" for the most junior employees.

Encouraging the presence of non-French executives was also an important issue identified during the 2016 materiality assessment. The Group has therefore set the following objective for 2025:

2025 TARGET

42% to 45% of senior management and executive positions to be held by non-French nationals.

In 2017, 37% of senior managers were non-French nationals. The change versus 2016 reflects an increase in the number of senior managers in corporate positions based in France.

To help meet these objectives, international diversity is integrated into the recruitment process. Training is also offered to managers on "working in an intercultural environment" to foster healthy working relationships in a context of international diversity.

2.6.5.2 MEASURES TO PROMOTE GENDER EQUALITY

Arkema ensures that women enjoy the same career development opportunities as their male counterparts. In recent years, a policy of gender equality and equal pay has been deployed, with initiatives in the following four areas:

- strengthening the principle of non-discrimination in the hiring process;
- ensuring equal pay for equal work;
- encouraging and facilitating career development; and
- taking parenthood into account in the career management process.

The second diversity objective set for the human capital aspects of the CSR process concerns promoting women to executive positions, where the proportion of women needs to increase. This issue was also identified during the materiality assessment performed in 2016. An action plan has been put in place to encourage female talent. Today, more than 30% of middle managers are women, who therefore represent a promising source for meeting the 2025 target. The action plan involves:

- raising awareness among managers by introducing a "managing in a diverse environment" training module and by integrating diversity into existing training modules;
- introducing career workshops designed in particular to encourage women to maintain their career goals;
- identifying women in key positions in other businesses or organizations to create a pool of female talent for future recruitment needs; and
- carrying out communication and awareness campaigns within the Group.

2025 TARGET

23% to 25% of senior management and executive positions to be held by women.

In 2017, women accounted for 19% of all senior managers and executives across the Group, compared with 18% in 2016. This figure is consistent with the average 0.5% a year increase required to meet the 2025 target.

In France

In 2015, Arkema France signed an agreement on gender equality and diversity, covering such issues as hiring and induction, compensation and promotions, access to training and work/life balance.

In 2017, the Group continued to strengthen its policy of hiring and promoting women. Practical initiatives have been deployed, in particular the expansion of a mentoring program run by senior Group executives to help women into positions of responsibility. Around 40 women have benefited from the program over the past two years.

To lead the entire process, a diversity steering committee comprising business Managing Directors and corporate Vice-Presidents was formed in 2016, with the goal of approving and recommending initiatives to support gender diversity.

In the United States

Arkema Inc. has prepared an action plan supporting workplace equality and equal pay for all employees and job applicants, with similar qualifications, regardless of race, ethnicity, national origin, religion or gender. The plan, which is specific to each facility, is updated every year.

In addition, to support the objectives set by the Group, an action plan has been implemented involving:

- cross-disciplinary actions: the integration of diversity into existing management programs and the creation of a training offer dedicated to diversity management; initiatives to help employees work on their career goals; communication initiatives promoting access for women to industrial professions; and
- profession-specific actions: definition of targeted actions to support the hiring and promotion of women, based on the assessment carried out for each profession.

2.6.5.3 MEASURES TO PROMOTE THE RECRUITMENT OF PEOPLE WITH DISABILITIES

One of the flagship commitments of the Group's disability policy is to hire and maintain the employability of people with disabilities, through dedicated training programs and workstation modifications. In addition, the Group's recruitment procedures make it possible to offer disabled talents various job opportunities.

The following sections describe the measures taken in France that illustrate the approach taken by the Group. For the other regions, similar measures have been implemented taking into account local conditions and legislation.

At the end of 2017, disabled employees accounted for 3.83% of the Group's workforce in France.

A new, four-year agreement was signed by Arkema France in 2017 reaffirming the Group's commitment to hiring, integrating, training and retaining disabled employees, raising awareness of the issue and increasing the use of social enterprises and work centers. The agreement includes the following objectives: hire the equivalent of 60 disabled employees over four years and increase the amount spent on social enterprises and work centers by 21%.

In addition, actions in favor of the disabled have been pursued and strengthened in the following areas:

- retention: performing a wide variety of workstation ergonomic studies; installing appropriate upgrades; training nurses in ergonomics; developing a network of correspondents; organizing the first meeting of the network of disabled employment correspondents and coordinators;
- hiring and integration: making the website's Careers pages accessible; participating in various local and national recruitment events; maintaining relations with certain partners such as the Club House, which promotes the integration of disabled people;
- increasing the use of social enterprises and work centers: strengthening support for all sites via a partner specialized in this area;
- training: starting up a fourth "Manufacturing Operator" job certification cycle and launching a project to introduce a job certification course to train laboratory technicians; and
- communication and awareness training: continuing to raise employee and manager awareness through local initiatives and corporate information.

In the United States, to encourage diversity in hiring, Arkema Inc. vacancies for outside applicants are posted on job search sites designed for the disabled and emailed to local community organizations that help disabled people find employment.

2.6.5.4 MEASURES TO HIRE AND RETAIN SENIORS

In France, the issue of recruiting and retaining seniors is included in the strategic workforce planning (SWP) agreement. Under the agreement, which defined "seniors" as people over 50 years old, the Group pledged to undertake initiatives in the following areas:

- a recruitment target of 10% of permanent contracts for people aged 50 and over;
- retaining senior employees;
- supporting career-endings;
- transitioning to retirement; and
- knowledge transfer.

In 2017, 45 of the 364 people hired under permanent contracts in France were over 50 years old, representing 12.4% of the total (versus 9% in 2016), 2.4 points above the targeted 10%.

2.7 SOCIETAL INFORMATION

ENCOURAGING OPEN DIALOGUE WITH ALL THE GROUP'S STAKEHOLDERS

2.7.1 Societal management

The Group's activities are part of a value chain and an ecosystem comprising numerous partners and stakeholders, as described in section 2.2.2 of this document. High-quality dialogue is essential to creating value for all involved.

All of the international standards and principles that the Group upholds, which are presented in section 2.1.1 of this document, are included in corporate reference documents, such as the Code of Conduct and Business Ethics; the Supplier Code of Conduct; the Health, Safety, Environment and Quality Charter; and the Energy Policy.

In addition to complying with international conventions and host country legislation, Arkema is committed to complying with competition rules and to rejecting all forms of corruption and fraud. It also condemns and works to prevent fraud and corruption in business transactions with its partners.

2.7.2 Institutional initiatives

As a responsible chemicals producer, the Group interacts with public authorities in every country where it operates, in particular to contribute preparing legal and regulatory frameworks favorable to the development of its businesses, in full accordance with its values and social responsibility commitments. As part of this process, it may take part in public debate on issues directly related to its businesses, while maintaining a position of strict political neutrality.

These public initiatives fully comply with the lobbying rules in each host country. For example, the Group has been entered in the European Union Transparency Register and has pledged to comply with the related Code of Conduct. Similarly, in France, Arkema is registered as a lobbyist in the national digital registry of lobbyists set up in 2017, which is managed by France's High Authority for Transparency in Public Life (HATVP).

The Group is also active in several business federations or associations, such as the French Association of Private Enterprises (AFEP) and the *Cercle de l'industrie* in France, and chemical industry trade associations, such as *Union des industries chimiques* - UIC in France, CEFIC in Europe and the American Chemistry Council in the United States.

Employees in charge of institutional relations are responsible for monitoring public initiatives at the local, national or international level that may impact the Group and, in response, defending or promoting the interests both of the Group. The priority issues addressed concern business competitiveness, both globally (*i.e.*, at Group level, such issues as taxation, particularly on output, payroll taxes, employment law, regulation in general, etc.) and locally (*i.e.*, at the plant level, such issues as health, safety and environmental legislation, and support for expansion projects and reorganizations), the energy and climate change transition, and the circular economy. The consolidated budget allocated to institutional relations amounted to around €400,000 in 2017.

In the United States, Arkema Inc. files quarterly activity reports with both houses of Congress, as required under section 5 of the Lobbying Disclosure Act of 1995. Expenses reported for 2017, calculated according to the prescribed rules, amounted to around $730,000. Two Arkema Inc. employees have been registered as lobbyists to Congress, particularly on the issue of refrigeration gases.

2.7.3 Compliance and ethics

THE CODE OF CONDUCT AND BUSINESS ETHICS

The Group has a Code of Conduct and Business Ethics that is based on Arkema's values and the principles of the Global Compact and describes the good business practices to be applied in every aspect of the Group's operations

In application of French Law no. 2016-1691 of 9 December 2016 relating to transparency, the fight against corruption and the modernization of the economy, known as the "Sapin II Law", the Code of Conduct and Business Ethics as updated in 2013, together with an Anti-Corruption Charter (hereafter the "Code of Conduct"), will be disseminated within the Group and integrated into the internal rules of all sites in France during the first half of 2018. It may be downloaded from the corporate website and covers the following main points:

- employees may not offer, provide or accept, directly or indirectly, any unfair advantage, be it pecuniary or otherwise, whose purpose is to secure business relations or any other business advantage. The counterparties concerned include people in positions of public authority, business intermediaries, customer employees and political parties;
- employees must scrupulously comply with all applicable rules relating to antitrust legislation in every country in which the Group operates; and
- employees must comply with import and export regulations.

PROCESSES FOR IDENTIFYING AND REDUCING THE RISKS OF NON-COMPETITIVE PRACTICES, CORRUPTION AND FRAUD

Arkema has put in place a compliance and business ethics program, whose cornerstone is the Code of Conduct. The compliance program mainly covers antitrust, export control and anti-corruption legislation. It defines and describes guidelines, procedures and risk management processes applicable throughout the Group.

To ensure that the program runs smoothly, the following resources have been implemented:

- training to build employee awareness of the need to comply with competition rules, export control regulations and anti-bribery practices;
- a practical guide to competition covering rules and recommended behaviors issued to employees;
- the verification of business intermediaries prior to appointment, according to the business intermediary procedure, to minimize the risks of corruption-prone situations arising;
- systematic prior approval required for any export to countries subject to commercial or financial restrictions, according to the export control procedure;
- an e-learning module on the Code of Conduct; and
- a compliance statement signed by all employees potentially exposed to these risks, attesting that they will abide by the Code of Conduct's principles.

Application of the compliance program is overseen by the compliance committee. This committee, whose members are appointed by the Chairman and Chief Executive Officer and which reports to the Executive Committee, consists of the Internal Audit and Internal Control Vice-President, a Human Resources department representative, the Sustainable Development Vice-President, the Group Safety and Environment Vice-President, a representative of the Legal Affairs department, a representative of the Finance/Treasury/Tax department and a member of the Executive Committee.

It is responsible for monitoring compliance Group-wide in the following areas: antitrust laws, business intermediaries, fraud, business practices and integrity, work environment integrity and environmental stewardship. The Compliance Committee met five times in 2017.

For all practical questions regarding an ethical issue in general, and any problem in applying the Code of Conduct in particular, an application may be made to the Compliance Committee either by executive management or by an employee.

To strengthen its business ethics compliance program, Arkema has introduced a whistleblowing system that enables any Group employee (or equivalent) or anyone working with the Group on an external or occasional basis (subcontractor, intermediary, supplier, customer) to report any suspected wrongdoing that might involve Arkema. The reports are handled, in the strictest confidentiality, by the whistleblower committee, which has now replaced the ethics mediator. The whistleblower committee, whose members are appointed by the Chairman and Chief Executive Officer, consists of the Internal Audit and Internal Control Vice-President, the Sustainable Development Vice-President, a representative from the Legal Affairs department and the head of Institutional Affairs.

In the host regions, the regional Vice-Presidents are appointed as correspondents to the whistleblower committee.

In the area of personal data protection, the Group has initiated a project to bring it into compliance with the EU regulation of 27 April 2016 on protecting personal data, which will come into force on 25 May 2018.

Lastly, as part of the global risk management process, the Internal Audit and Internal Control department regularly performs audits in the subsidiaries. These include an analysis of the management processes to help detect possible risks of fraud and to define, where appropriate, the necessary corrective measures. For more information on the global risk management process, see section 1.7.1 of this document.

2.7.4 Commitment to human rights

Arkema recognizes the importance of protecting human rights wherever the Group operates, both in conducting its business and in its supplier relationships.

The Group has undertaken to comply with the main international texts and standards presented in section 2.1.1 of this document. It also endeavors to comply with the constitutional texts, treaties, conventions, laws and regulations in force in its host countries and regions.

Arkema therefore ensures that human rights are upheld in its relations with its employees, contractors, temporary workers and suppliers. The Group opposes all forms of forced labor, child labor, discrimination and harassment and upholds the fundamental rights of a decent minimum wage, health and safety, respect for private life, freedom of association, the right to strike and the right to collective bargaining.

The Group wishes to extend its commitment to human rights and fundamental freedoms by enhancing and harmonizing its management processes across all geographies.

The Group's vigilance in the area of human rights also applies across its value chain and more particularly to its suppliers and subcontractors. Human rights compliance is an integral part of the commitments expected of the Group's partners, expressed through their adherence to the Supplier Code of Conduct, as well as one of the criteria for assessing and managing suppliers. For further details, see section 2.7.5 of this document.

2.7.5 Procurement, suppliers and subcontracting

The Group has integrated labor, environmental and social issues into its procurement process and strives to build long-term, balanced, sustainable, trust-based relationships with its suppliers and subcontractors. These relationships are managed transparently and in accordance with negotiated contractual terms, including those related to intellectual property. In support, the following resources have been deployed.

THE SUPPLIER CODE OF CONDUCT

The Group's responsible procurement process is guided by the ethical principles expressed in the Code of Conduct described in section 2.7.3 of this chapter. The Group has also signed the national inter-company charter of the French purchasing managers'organization and the state-sponsored inter-company mediation initiative *Médiation Inter-Entreprises*, which is based on ten responsible procurement commitments. As part of this process, a dedicated Code of Conduct for suppliers summarizing all of the related CSR aspects has been issued.

The Supplier Code of Conduct's guidelines particularly cover environmental stewardship and the quality and safety of supplied products and services. As part of the focus on business integrity and transparency, suppliers must comply with laws governing competition, corruption, conflicts of interest, confidentiality and the transparency and accuracy of reported information. The Code can be accessed on the Group's website.

When selecting a new supplier, the Group looks for the bid that offers the best combination of performance, cost and quality, while also taking into account the supplier's CSR performance. New suppliers are systematically informed of the Code's provisions.

RESPONSIBLE PURCHASING TRAINING AND AWARENESS

Group buyers are all trained to apply the Supplier Code of Conduct, with regular follow-up meetings to inform and maintain awareness.

ASSESSMENTS BY THREE PROCUREMENT DEPARTMENTS

The Goods and Services Procurement department regularly assesses the employee safety performance of the leading contractors working on Group sites. As explained in section 2.3 of this chapter, the safety of contractor employees is considered just as important as that of Group personnel, and their incidents are recorded in the consolidated indicator.

Logistics services contracts are awarded on the basis of the provider's safety, security and environmental performance, while highway hazardous materials transporters are selected based on third-party assessments, such as the Safety and Quality Assessment System (SQAS) in Europe and the Road Safety and Quality Assessment System (RSQAS) in China. Similarly, vessels chartered worldwide for the bulk transportation of Group products are first vetted by a third party.

To assess raw materials suppliers, pre-approval questionnaires are used to assess their management system, compliance with the principles of the Responsible Care® program and certification to ISO-type standards.

FOCUS

"PRAGATI, sustainable castor caring for environmental and social standards"

In May 2016, the Group and three other partners – BASF, Jayant Agro and NGO Solidaridad – launched the PRAGATI initiative to promote sustainability in the castor oil supply chain. The aim is to improve the living and working conditions of castor bean farmers in India, the world's largest producing country, and to reduce their environmental impact while improving crop yields. The farmers involved in the program benefit from training and support during the growing season.

SUPPLIER AND PROCUREMENT PROCESS AUDITS

Under the Supplier Code of Conduct, suppliers agree to meet all of the Group's CSR expectations and to cooperate with its audits of their Code compliance.

Supply chain service providers, for example, are regularly audited through visits to transportation companies and outside warehouses and assessments of their performance. These audits are supported by third-party assessments, such as the Safety & Quality Assessment System (SQAS) for overland transportation, the Chemical Distribution Institute for maritime shipping, and the European Barge Inspection Scheme for river shipping.

In addition, every year, the Internal Audit and Internal Control department audits subsidiaries by conducting a range of tests on supplier approval and assessment processes and on the practices and risks associated with raw materials and goods and services procurement.

MEMBERSHIP OF THE TOGETHER FOR SUSTAINABILITY (TFS) INITIATIVE

To base its requirements on accepted standards and avoid the need for duplicate supplier assessment procedures, in 2014 the Group joined the Together for Sustainability (TfS) initiative, founded by six European chemical companies. This global program is designed to encourage social responsibility across the chemical industry service chain, in line with the principles of the United Nations Global Compact and the Responsible Care® Global Charter. It enables member companies to share the findings of assessments or audits of their suppliers' CSR performance conducted by Ecovadis or independent third parties. Ecovadis analyzes supplier documents and questionnaires on the basis of CSR criteria in line with international standards, and ensures a 360° watch on information reported by external stakeholders.

A procurement representative is specifically designated to lead the TfS drive within the Group. A TfS Steering Committee has been set up, bringing together representatives from the procurement departments (goods and services/logistics/raw materials) and the Sustainable Development department. It meets at least once each quarter and the issues discussed during its meetings are reported to the CSR Steering Committee and the Risk Review Committee.

At the end of 2017, more than 1,000 of the Group's suppliers and subcontractors had been assessed with regard to CSR criteria. Thanks to these assessments, the Group has identified certain suppliers or subcontractors whose CSR performance is below standard and has requested that they improve their practices in this area. The resulting initiatives are tracked over time by the Group's procurement teams in liaison with the suppliers and subcontractors in question. The results of these assessments are also taken into account by procurement teams during the supplier selection process.

In 2018, the Group will continue to perform voluntary assessments, with a particular focus on the suppliers that are most at risk according to such criteria as activity, location or the portion of the Group's total purchases that they represent.

THE IMPACT OF SUBCONTRACTING

The Group subcontracts for two main purposes: for maintenance operations, and, to a very limited extent, for the production of certain finished products. Subcontracting therefore accounts for part of the €242 million in capital expenditure dedicated to safety, the environment and the maintenance of industrial units.

Under the Group's procurement policy, contractors are bound by the Supplier Code of Conduct and its general purchasing conditions.

2.7.6 Direct and indirect socio-economic impact

In the 50 countries where it operates, the Group's business operations are contributing to develop the local economy, by creating and maintaining direct and indirect jobs, developing local skills and expertise, purchasing local goods and services, forming business partnerships and paying taxes.

In particular, the Group focuses on hiring locally at every level of the business, including the senior management teams of its non-French subsidiaries. In this way, more than 80% of the executives at the main operating facilities outside France were hired locally.

As seen in this document, and particularly chapter 4, the Group's economic contribution to host communities includes a wide range of components – sales, capital expenditure, operating expenses, wages and salaries and payroll taxes, income and other business taxes, dividends, etc. – that together make up the Group's economic and social footprint.

In addition to contributing to the local economy, the Group deploys a policy of revitalizing regional labor markets and supporting scientific research upstream from industrial innovation.

REVITALIZATION OF REGIONAL LABOR MARKETS

The Group pays close attention to the possible consequences of business relocation. When such reorganization is called for in France, the Group endeavors to offset any job losses, wherever possible, and contributes to revitalize the impacted labor markets. These initiatives are legally defined in accordance with the revitalization agreements signed with public authorities and include a variety of measures, such as:

- financial support for the creation or acquisition of companies; and
- a search for new business activities and support for their development.

More generally, the Group has a policy of supporting innovative small and medium-sized enterprises (SMEs) in related business areas through joint projects and equity investments. Each research center, for example, works closely with neighboring schools or laboratories as part of clusters while creating possibilities for partnerships with local SMEs. The Group is a founding member of Axelera, a world-class competitiveness cluster in the field of chemistry and the environment that brings together and coordinates players from industry, research and education in the Auvergne Rhône-Alpes region in France.

These kinds of local partnerships are contributing to stimulate innovation, while deepening the Group's local roots. For example, at the Lacq site in France, the Group provides technical and infrastructure support to innovative young businesses setting up in the Chemstart'up business incubator.

It is also positioned as a key early-stage player in strategically crucial industries such as thermoplastic composite materials, renewable raw materials and new energies.

SUPPORT FOR SCIENTIFIC RESEARCH

Under its ambitious innovation policy, the Group maintains close ties with the scientific and educational ecosystems in its host regions worldwide, in particular through a wide variety of partnerships with universities and public and private research laboratories, such as the CNRS and the CEA in France. These partnerships, such as the ones in France with Compiègne Technology University for the Smart House by Arkema and with Hydro Québec in Lacq, are described in section 1.4 of this document, which looks at open-innovation programs.

In 2016, Arkema opened an innovation center in South Korea within the HanYang University in Seoul. The center is specialized in high performance polymers and renewable energies, areas in which the university excels. The decision to locate the center on a university campus reflects the Group's vision of partner-based research as a bridge between industry and academia.

2.7.7 Corporate citizenship and philanthropy

As a responsible company in an increasingly interconnected world, the Group is particularly attentive to the need to nurture close ties with all its stakeholders. Around the world, the Group is deploying nearness communication initiatives to foster high-quality, trust-based relationships with host communities. This open dialogue also helps the Group to better understand the expectations of people living in nearby communities and ensure that they are properly addressed in its CSR strategy.

THE COMMON GROUND® INITIATIVE

Formalized and introduced nearly 15 years ago, the pioneering Common Ground® initiative takes community relations beyond the legal minimum requirements by actively encouraging local dialogue and exchange in every host country. It is based on three key principles, designed to improve the social acceptability of chemical plants:

- **Listening to understand expectations**. Understanding the concerns of people living in nearby communities is key to effectively addressing their concerns about industrial and chemical risks;
- **Engaging in dialogue and informing communities about the Group's activities**. At the core of the initiatives are events and tours that enable neighbors to discover what the plant does, the products it makes and the processes it uses, and get a reassuring first-hand view of how the site runs and what its projects are; and
- **Risk prevention and progressing**. In addition to continuously improving the safety, health and environmental performance of its production facilities, the Group is deploying a risk prevention culture in every host country. As part of this proactive approach, incident or accident drills are regularly organized to test emergency response resources and procedures, along with the systems for alerting, informing and protecting employees and the local community.

Building better relations around the world

In 2017, more than 1,011 Common Ground® initiatives were carried out worldwide, with 78% of production plants actively participating. These initiatives break down by region as follows over the past three years:

NUMBER OF COMMON GROUND® INITIATIVES BY REGION

	2017	2016*	2015*
GROUP TOTAL	**1,011**	**866**	**1,014**
Europe	359	328	353
North America	409	376	542
Asia	204	124	96
Rest of the world	39	38	23

* *Excluding Den Braven.*

In all, 85% of production plants took part in these initiatives in the United States, 73% in Europe, and 64% in Asia.

These initiatives are primarily aimed at local communities, academia and associations, as shown in the following breakdown over the past three years.

NUMBER OF COMMON GROUND® INITIATIVES BY STAKEHOLDER CATEGORY

	2017	2016*	2015*
Local communities	379	334	577
Education	293	240	292
Associations	339	292	145

* *Excluding Den Braven.*

The number of Common Ground® initiatives rose from 866 in 2016 to 1,011 in 2017, primarily reflecting increased involvement by the Group's sites. Progress was made across all three stakeholder categories. In France, for example, the increase in educational initiatives stems from a partnership with the C. Génial foundation.

The percentage of production plants participating in the Common Ground® program decreased in 2017 due to the recent integration of Den Braven sites. However, the program is expected to be phased in at the new sites over time.

Initiatives involving local communities and the public

In 2017, around 72% of Group facilities conducted public tours, in particular to explain how the solutions offered by chemistry and chemicals can benefit everyone in their daily lives.

In the United States and Asia, many plants also take part in information meetings organized by local resident associations.

In recent years, the Group has partnered two important science and industry events in France:

- the *Fête de la Science*, an initiative of the French Ministry of Higher Education and Research to encourage interaction between research scientists and the general public; and
- the *Semaine de l'Industrie*, a week-long event that gives young people and career seekers insights into the world of industry and its job opportunities.

The Group also supports environmental initiatives. For example, in 2017, the Navi Mumbai site in India participated in a mass tree planting day organized by authorities and NGOs, during which 1,500 trees were planted.

Educational initiatives

Around the world, the Group gives priority attention to strengthening its ties with schools and universities.

Programs and events are regularly conducted in cooperation with schools, to provide young people with information on careers in the chemicals industry and to promote the development of a scientific culture. Locally, the production facilities periodically organize tours for school groups, take part in educational initiatives, and speak at conferences at higher education venues, such as Rho University in Italy.

The Group also offers opportunities for socially disadvantaged young people, and helps them to earn academic qualifications. To promote access to the prestigious ENSIC chemical engineering school, Fondation de France and the Group founded Fondation ENSIC to grant scholarships to students experiencing financial hardship. Since it opened, the foundation has provided support for around a hundred students.

In the United States, the Arkema Inc. Foundation, set up in 1996, runs a number of disinterested initiatives focused on science and education at all levels. Its yearly Science Teacher Program has reached hundreds of researchers and teachers.

In 2016, the Group began working with France's C. Génial Foundation to support its programs designed to promote and valorize sciences among middle and high school students in France. With the partnership, Arkema reaffirmed its commitment to attracting young people to science and developing bridges between business and academia by taking part in the Foundation's flagship initiatives.

Driven by its commitment to corporate social responsibility, Arkema created a fund for education on its 10th anniversary. The aim is to finance projects submitted by employees who volunteer on education-related initiatives. The fund is a way for the Group to support the volunteer work carried out by its employees, as well as their engagement and commitment to non-profit organizations. Nine education-related non-profits were selected for the first session launched in January 2017.

Initiatives involving associations

The Group's values of solidarity and responsibility show through in the initiatives being led in partnership with non-profit associations in its host regions. Many examples around the world attest to the dedication of Group employees to helping the neediest and to actively participating in their local communities.

The Group regularly leads or partners a broad range of community outreach initiatives in such areas as:

- jobs for the disabled, with support for several associations that are helping disabled people to enter the mainstream workforce;
- health and community, with corporate and employee participation in a large number of charitable campaigns; and
- the environment, with programs to improve biodiversity (see section 2.4.3 of this chapter).

2.8 REPORTING METHODOLOGY

2.8.1 Methodological note on environmental and safety indicators

2.8.1.1 ENVIRONMENTAL REPORTING TOOLS AND SCOPE

Absolute data

Absolute environmental data are compiled by its Reporting of Environmental and Energy Data (REED) system, which is accessible worldwide via the web platform of a service provider.

The values of the absolute indicators, once published after review by the independent third-party auditor, are not amended in the REED system. Any subsequent retroactive modifications made due to a change in the estimation method or a correction are addressed in section 2.4 of this document.

The data are entered by the plant Health, Safety and Environment departments and validated at two levels, geographic and corporate.

The scope of consolidation for environmental reporting covers all Group industrial sites for which operating and emissions permits were held in the name of the Group or a majority-owned subsidiary at 31 December 2017. On this basis, the scope covered 99% of the Group's industrial operations in 2017.

The scope of consolidation for environmental reporting covers all of the industrial sites operated by the Group or by majority-owned subsidiaries, head offices and research and development centers, corresponding to around 91% of the production base. It should be noted that this scope covers more specifically 98% of the industrial sites operated by the Group or by majority-owned subsidiaries.

Operations sold or discontinued in 2017 were removed from the scope of reporting for the year but remain in prior-year data.

For activities that were acquired in 2017, all operations for the year are included in the scope of reporting.

Operations that started up in 2016 reported data from their start-up date, except for operations of Den Braven, acquired in late 2016, which are not included in the 2016 environmental data.

Intensive data (EFPIs)

To manage its environmental performance more efficiently and report consolidated data that more accurately track this performance year by year, Arkema uses a methodology that enables production facilities to report relative indicators, known as Environmental Footprint Performance Indicators (EFPIs). This method of calculating the intensity of emissions or resource consumption relative to production volumes, compared with a baseline year, minimizes the impact of any changes in the business base and plant output, as well as any changes to the method used to estimate or calculate environmental footprint variables.

These relative environmental data are compiled by the same REED environmental reporting system, which is accessible worldwide via the web platform of a service provider.

EFPI data are entered by facility Health, Safety and Environment (HSE) departments and validated first by the Industrial Vice-President then at Group level. They are subject to a large number of consistency tests.

The scope of consolidation for EFPI reporting covers Group sites for which operations (and emissions) permits were held in the name of the Group or a majority-owned subsidiary at 31 December 2017 and which are among the biggest contributors of the Group's sites. In all, these sites account for around 80% of the total prior-year emissions or consumption.

Any activities sold or terminated in 2017 are not included in the scope of EFPI reporting for 2017, but are still included for previous years.

Operations started up in 2016 will be included in the scope of EFPI reporting in 2018, compared with their 2017 performance.

Operations acquired in 2017 will be included in the 2019 scope of EFPI reporting for all of their 2019 activities, compared with their 2018 performance.

The EFPI methodology allows new reporting units to be included in prior-year performance data. Should the inclusion of a large number of new units result in a significant change to the confidence interval in the calculation of the Group's EFPIs, consideration will be given to whether an adjustment factor should be applied or whether the use of a new baseline year should be used.

2.8.1.2 SAFETY DATA REPORTING TOOLS AND SCOPE

Safety data:

- are recorded in the SafetyLog application accessible on the employee intranet;
- are entered by the reporting units and validated at corporate level; and
- cover all of the industrial sites operated by the Group or by majority-owned subsidiaries, head offices and research and development centers, corresponding to around 99% of the scope. Den Braven's sites are not included in accident safety reporting (see section 2.8.1.4 of this document) or subject to peer observation.

2.8.1.3 CHOICE OF INDICATORS, MEASUREMENT METHODS AND USER INFORMATION

Group indicators have been designed to track the emissions and consumption levels that concern its operations, in accordance with the French New Reporting Requirement Act and its associated decree of 20 February 2002.

They were introduced at the time of the Group's creation and have been tracked since 2006.

They also comply with the standards defined in Articles L. 225-102-1 and R. 225-104 *et seq.* of the French Commercial Code as amended by the "Grenelle II" Law no. 2010-788 of 12 July 2010.

The environmental reporting system is governed by an Environmental Reporting directive, an EFPI Reporting directive and an Energy Reporting directive issued by the Group Safety and Environment (DSEG), Sustainable Development (DDD) and Energy Procurement (DAMPE) departments and accessible to all employees on the corporate intranet.

Calculation and estimation methods are subject to change, for example due to changes in national or international legislation, measures to improve consistency among regions, or problems with their application.

The directives may then be expressed in guidelines and handbooks, which are supported by training sessions in each region as required.

The safety reporting process is covered by a Monthly Safety Reporting directive issued by the Group Safety and Environment department and accessible to all employees on the intranet.

2.8.1.4 CLARIFICATIONS CONCERNING THE ENVIRONMENTAL AND SAFETY INDICATORS

The following information is provided to clarify the definition of the indicators applied by the Group.

Total acidifying substances

This indicator is calculated using sulfur oxide (SOx), ammonia (NH_3) and nitrogen oxide (NOx) emissions converted into tonnes of sulfur dioxide (SO_2) equivalent.

Volatile organic compounds (VOCs)

The list of products regarded as VOCs may vary from country to country, in particular between Europe and North America.

The VOC definitions used by the Group are those recommended in Europe by directive 2010/75/EU on industrial emissions, known as the Industrial Emissions Directive (IED).

Emissions from US sites are therefore obtained by adding products such as fluorinated organic compounds to national reported data.

Chemical oxygen demand (COD)

For reporting purposes, COD is measured in effluent released into the natural environment.

In cases where wastewater from a Group facility is treated in an external plant, the reported data takes into account the effectiveness of the treatment process.

In cases where a Group facility takes in COD-laden water, the reported data concerns the net COD load effectively introduced in the ecosystem by the Group (outgoing less incoming).

Waste

The distinction between hazardous and non-hazardous waste may vary from one region to another. The definitions used by the Group are those of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

By-products that are sold to third parties for reuse without processing at a Group site are not counted as waste.

Water use

All sources of water are included in the reported data, including groundwater/wells, rivers, seawater, public or private networks and drinking water, excluding rainwater collected in separate networks.

Energy use

Reported use corresponds to net energy purchases.

It does not include self-generated energy, which corresponds to the energy produced by exothermic chemical reactions and therefore does not draw down the planet's energy resources.

Sales of energy are deducted from purchases of energy. This is the case, for example, for facilities fitted with combined heat and power plants that generate steam and electricity from purchased gas (reported), then sell the electricity (deducted).

In cases where sites do not have any December data due to late reporting by energy providers, the values for the year are extrapolated from the data at end-November.

Direct greenhouse gas (GHG) emissions

For reporting purposes, direct GHG emissions correspond to those defined in the Kyoto Protocol.

Their impact is calculated in equivalent tonnes of carbon dioxide (t CO_2 eq.).

In this report, 2012 emissions have been calculated using the Global Warming Potential values published in 2007 by the Intergovernmental Panel on Climate Change (IPCC).

For relative data, EFPI calculations include fluorinated greenhouse gases that are not listed in the Kyoto Protocol but are listed in the Montreal Protocol.

Indirect greenhouse gas (GHG) emissions

For the purposes of this report, indirect Scope 2 CO_2 emissions were calculated using electricity and steam consumption and emission factors in tonnes per kilowatt-hour (KWh) or tonnes of steam reported by suppliers. Where this was not possible, they were calculated using figures provided by local authorities, such as those available in the EPA-2012 database in the United States, the 2013 Baseline Emission Factors for Regional Power Grids issued by China's National Development & Reform Council (NDRC) for China, SEMARNAT data issued by Mexico's Federal Environmental Agency for Mexico and data issued by the French environmental agency, ADEME, for a variety of countries.

For the purposes of this report, indirect Scope 3 CO_2 emissions were calculated using the default scenarios in the GHG Protocol calculation guidance for the chemical sector, issued by the World Business Council for Sustainable Development (WBCSD). Indirect Scope 3 emissions relate to the Group's value chain, including both upstream and downstream emissions, and have been calculated for seven categories. A detailed explanation of the calculation methodology is available to stakeholders upon request.

- Category 2 – Capital goods: emissions are estimated based on the amount of capital expenditure and by applying the default rule described in the WBCSD guide when the composition of capital goods and their emission factors are not available. Capital expenditure is therefore split between 25% concrete and 75% steel and the emission factors are respectively 1.3kg of CO_2 and 2.85kg of CO_2 per euro spent.
- Category 5 – Waste generated: the emissions calculated are those related to the waste generated during the Group's operations. The WBCSD default rule is applied: emissions are estimated based on the Group's waste treatment breakdown – incinerated, landfilled and recycled waste – and on the corresponding default emission factors. Calculations are based on the actual quantities of waste from each site that is treated in the various ways. As a first step, all of the landfilled waste was considered as organic waste and therefore totally decomposed.
- Category 6 – Business travel: the emissions calculated correspond to travel by plane (the mode of transportation that emits the most GHGs) by Group employees representing 90% of the global scope. Data were provided by the travel agency, which used the calculation method developed jointly by the Department of Energy & Climate Change (DECC) and the Department for Environment, Food & Rural Affairs (DEFRA) in the United Kingdom.
- Category 7 – Employee commuting: emissions were estimated using the least favorable scenario, *i.e.*, assuming that all 20,000 employees use their own car to get to work, traveling an average distance of 50km per day. The emission factor used corresponds to the average CO_2 emissions per kilometer by vehicle type and fuel type reported by the United Kingdom's department for Business, Energy and Industrial Strategy (September 2016 version, Passenger vehicles table).
- Category 8 – Upstream leased assets: the assets taken into account in this category are leased real estate assets (head offices, sales offices and research centers), except for those already included in Scope 2 reporting. When energy use data were not provided directly, estimates were made based on the floor space leased and the emission factor by energy source, or by extrapolating data for the missing floor space based on the average space per employee and building type and applying an emission factor of 145kg of CO_2 per square meter per year, which corresponds to the maximum value of class F (the least favorable class) under French legislation on the energy performance assessment of existing buildings.
- Category 9 – Downstream transportation and distribution: the emissions were estimated using Group company logistics data, which account for 99% of consolidated shipments. By shipment, the Group means the transportation of products to customers as well as any post-production logistics. Emissions are calculated by taking such logistics data as tonnes transported, number of shipments, and average kilometers for each mode of transportation (road, rail, air, etc.) and applying the emission factors defined in the Guidelines for Measuring and Managing CO2 Emissions from Freight Transport Operations published by the European Chemical Transport Association (ECTA) and the European Chemical Industry Council (CEFIC) in March 2011, based on the work of Professor Alan McKinnon of Heriot-Watt University in Edinburgh, UK. The reporting period runs from 1 October to 30 September of the following year. To broaden the reporting scope and enhance the reliability of data, the methodology applied by the Group was significantly improved in 2017, particularly in the United States. Current reporting practices are showing their limits, particularly as concerns operations outside Europe and outside Arkema Inc. These limits mainly relate to reported distances, with average distances used in the absence of actual data, and emission factors, with standard factors used in the absence of transporter data. These methodological limits mean that 2017 data are accurate to within plus or minus 10%.
- Category 12 – End-of-life treatment of sold products: the products sold by the Group have been classified into 23 different product categories based on their chemical composition and, by extension, the GHG emissions that they

may generate. A scenario was applied to define the end-of-life treatment method for each product category: incineration, landfill or recycling. Emission factors were then applied in accordance with the WBCSD guide. For this first-time estimate of Category 12 emissions, all of the Group's products were taken into account except Fluorogases and Bostik products, which are still under review.

Accidents

Total recordable incident rates (TRIR) and lost-time incident rates (LTIR) are calculated for both Group and on-site subcontractor employees on the basis of US standard 29 CFR 1904.

The operations of Den Braven, acquired recently on 1 December 2016, were not included in the 2017 scope. The TRIR and LTIR data presented above do not include Group employees or subcontractor employees working on Den Braven sites for 2017.

Process safety

The safety performance of a plant's production processes is assessed by means of performance indicators that measure and analyze process safety incidents. The Group reports and classifies process safety indicators in accordance with European Chemical Industry Council (CEFIC) guidelines. Until the end of 2016, the definition used for process safety events was the one proposed by CEFIC. During 2016, the International Council of Chemical Associations (ICCA) proposed new criteria to be used globally. Like CEFIC, Arkema decided to use these new criteria to measure its process safety event (PSE) rate, starting in 2017.

AIMS-audited sites

The Group tracks the increase in the percentage of facilities that have been audited in accordance with the AIMS standard. Depending on their specific features and size, some sites have had the option since 2016 of performing simplified self-assessments. This is the case for Bostik in particular.

2.8.2 Note on methodology used for employment, social and R&D information/indicators

2.8.2.1 SCOPE AND REPORTING TOOLS

Employee data are taken from several different reporting processes.

The employee data presented in section 2.6 of this document:

- are recorded in the AREA 1 application accessible via the corporate intranet;
- are entered by the human resources managers or company Managing Directors (depending on their size);
- are validated at the Arkema, Altuglas International, Bostik, CECA, Coatex, Den Braven and MLPC group levels; and
- cover all companies in which the Group has at least a 50% interest.

The quantitative and qualitative data concerning other employee and social information:

- are recorded in the AREA 2 application accessible via the corporate intranet;
- are entered by human resources employees of the companies or regional organizations;
- are validated by the regional Human Resources directors or subsidiary managers; and
- cover all companies of 30 or more employees in which the Group has at least a 50% interest at 30 June of the reporting year, which accounts for 96.1% of the Group's total headcount.

Any modifications or corrections to prior-year data are noted in section 2.6 of this document.

2.8.2.2 CHOICE OF INDICATORS, MEASUREMENT METHODS AND USER INFORMATION

The Group has defined indicators that are relevant to its activities and its employee relations policies.

Indicators concerning employees and safety performance were introduced at the time of the Group's creation and have been tracked since 2006.

Additional employee information and indicators, and social data have been reported since 2012 via the AREA 2 compilation system. They were expanded in 2013, in particular with the tracking of reported training hours.

The information and indicators also comply with the regulatory requirements of Article 225-I of the French "Grenelle II" Law no. 2010-788 of 12 July 2010 and its implementing decree of 24 April 2012.

Employee data reporting is covered by different procedural documents in the form of AREA 1 and AREA 2 guidelines, which have been provided to all of the contributors and validators.

The calculation methods may have limitations and be subject to change, for example due to varying national labor legislation and practices, difficulties in reporting certain information in some regions, or the unavailability of certain data in some countries.

2.8.2.3 DETAILS ON EMPLOYEE INFORMATION AND INDICATORS

Headcount

For the purposes of reporting, the headcount includes employees on payroll (employees present and employees whose employment contract, of any type, has been suspended) at 31 December of the reporting year.

Permanent employees are defined as employees that have signed an employment contract for an indefinite period of time. Outside France, employees hired on fixed-term contracts for periods of more than 12 months and renewed more than once are also included among permanent employees.

Employee categories

Data are presented by professional category. In France, manager status (*cadre*) is determined by the collective bargaining agreements governing the company concerned. Outside France, employees with a Hay job level of 10 or more are considered managers.

New hires

These data cover only the hiring of employees under permanent contracts, including the transformation of contracts (fixed-term into permanent contracts in France, for example).

Compensation

Collective bonus components are defined as components that vary depending on overall business criteria and the business and financial results of the employee's company. In France, these take the form of incentive and profit-sharing schemes.

Health and welfare

Health and welfare cover refers to benefits from a collective or mutual insurance plan providing cover for incapacity/disability/death risks.

Training

The data relate to training hours recorded for Group employees excluding e-learning courses.

Absenteeism

The absenteeism rate corresponds to the total number of hours of absence in the year (due to sickness, injuries, maternity leave, strikes and unpaid leave but excluding paid leave) divided by the total number of hours worked in the year.

Departures

Since 2016, departures are recorded only when the person leaves the Group, so that reported data no longer include inter-subsidiary transfers. The 2015 data in this chapter have been recalculated using the method applied for the 2016 data.

2.8.2.4 DETAILS ON R&D INFORMATION AND INDICATORS

Sustainable Development Patents

Number of original patent applications filed in the reporting year by the Group in response to sustainable development issues related to the UN Sustainable Development Goals, as described in section 2.5 of this document.

R&D expenditure

R&D expenditure is expressed as a percentage of consolidated revenue for the year.

Number of non-disclosure, cooperation and intellectual property agreements

The number of contracts corresponds to the non-disclosure, cooperation and intellectual property contracts signed by Arkema France during the year and recorded by the R&D department in its Athena database.

2.8.3 Indicators

		2017	2016	2015
SAFETY (1)				
Total recordable injury rate (TRIR)	*per million hours worked*	1.6	1.5	1.5
Lost-time injury rate (LTIR)	*per million hours worked*	0.6	0.9	1.1
Percentage of sites audited according to Arkema Integrated Management System (AIMS) standards	*%*	69	63	61
Percentage of sites practicing peer observation	*%*	59	56	57
Safety, environment and maintenance expenditure	*€m*	242	240	203
Percentage of OHSAS 18001-certified sites	*%*	46	47	52
Percentage of OHSAS 18001-certified sites in Europe	*%*	45	54	51
Percentage of OHSAS 18001-certified sites in the Americas	*%*	43	45	60
Percentage of OHSAS 18001-certified sites in Asia	*%*	49	34	45
ENVIRONMENT (1)				
Percentage of ISO 14001/RCMS-certified sites	*%*	52	52	62
Percentage of ISO 14001-certified sites in Europe	*%*	53	56	69
Percentage of RCMS-certified sites in the Americas	*%*	48	57	60
Percentage of ISO 14001-certified sites in Asia	*%*	54	34	41
AIR EMISSIONS				
Acidifying substances	*t SO_2 eq.*	3,380	3,570	4,430
Carbon monoxide	*t*	860	690	1,900
Volatile organic compounds (VOCs)	*t*	4,280	4,800	5,010
Volatile organic compound (VOCs) EFPI		0.66	0.80	0.83
Dust	*t*	230	300	520
EFFLUENT RELEASES				
Chemical oxygen demand (COD)	*t O_2*	2,440	2,600	3,200
Suspended solids	*t*	920	770	870
Chemical oxygen demand (COD) EFPI		0.70	0.78	0.93
WASTE				
Hazardous waste (excluding material recovery)	*kt*	155	157	151
of which landfilled	*kt*	3.4	2.7	2.5
Hazardous waste recycled into materials	*%*	15	15	15
Hazardous waste burned as fuel	*%*	49	49	47
Non-hazardous waste	*kt*	242	256	231

		2017	2016	2015
RESOURCES				
Total water withdrawn	*millions of cu. m*	118	126	124
Net energy purchases	*TWh*	8.12	8.25	8.48
• of which in Europe	*TWh*	4.37	4.37	4.66
• of which in the Americas	*TWh*	2.47	2.64	2.69
• of which in the Rest of the world	*TWh*	1.28	1.24	1.12
Energy EFPI		0.89	0.92	0.98
Net energy purchases by type				
• fuel	*TWh*	4.11	4.42	4.69
• electricity	*TWh*	2.76	2.71	2.70
• steam	*TWh*	1.25	1.12	1.08
Natural gas in net purchases of fuels	*%*	93	91	89
Low-carbon electricity in net energy purchases	*%*	18	17	17
Number of energy efficiency audits launched or completed		70	75	62
• of which in Europe		46	54	46
• of which in North America		20	19	14
• of which in Asia		4	0	2
Number of Arkenergy investments		60	51	38
• of which in Europe		41	31	21
• of which in the Americas		11	9	10
• of which in the Rest of the world		8	11	7
Number of ISO 50001-certified sites		29	22	17
Number of sites working to achieve ISO 50001 certification		7	9	14
Direct greenhouse gas emissions corresponding to the Kyoto Protocol	*kt CO_2 eq.*	3,000	3,110	3,000
• of which CO_2	*kt CO_2 eq.*	1,430	1,540	1,440
• of which HFC	*kt CO_2 eq.*	1,530	1,530	1,510
Direct greenhouse gas emissions corresponding to the Kyoto Protocol, by region				
• Europe	*%*	33	32	33
• Americas	*%*	54	56	59
• Rest of the world	*%*	13	12	8
Scope 2 indirect greenhouse gas emissions of CO_2	*kt*	1,080	1,080	1,300
• of which in Europe	*kt*	302	255	272
• of which in the Americas	*kt*	378	425	521
• of which in the Rest of the world	*kt*	400	400	507
Scope 3 indirect greenhouse gas emissions of CO_2 (to within 10%)	*Mt*	3.56	0.26	0.20
Direct GHG emissions EFPI		0.52	0.60	0.62

		2017	2016	2015
ADAPTING TO THE CONSEQUENCES OF CLIMATE CHANGE				
Number of sites exposed to a severe risk of storms and/or flooding		22	22	21
Sales from products made in full or in part from renewable raw materials	%	9	10	N/A
EMPLOYMENT [1]				
HEADCOUNT				
Total headcount at 31 December		19,779	19,637	18,912
• of which permanent employees		18,701	18,607	17,801
• of which fixed-term employees		1,078	1,030	1,111
Managers	%	26.9	26.2	25.8
Women	%	25.0	24.6	23.8
Women in senior management and executive positions (Hay grade 15 or higher)	%	19	18	17
Non-French nationals in senior management and executive positions (Hay grade 15 or higher)	%	37	39	N/A
Recruitments		1,616	1,694	1,450
Women recruitments	%	28.5	24.7	25.4
New hires aged 50 and over	%	9.4	7.9	8.0
New hires aged under 30	%	38.5	42.0	41.6
Departures		1,705	2,023	1,914
• of which resignations		862	866	758
• of which dismissals		332	428	253
• of which following a divestment/merger		0	324	354
Part-time employees	%	3.7	3.8	3.1
TRAINING				
Number of training hours	*thousands*	484	465	463
Number of training hours per employee		25	26	25
Number of employees who received training, excluding e-learning		16,161	16,256	17,062
Number of employees who took an e-learning course		10,496	9,298	8,218
Number of safety training hours	*thousands*	207	181	173
Number of safety training hours per employee trained		15	14	12
Number of employees who received safety training (excluding e-learning)		13,556	12,862	14,582
Number of employees who took safety-related e-learning courses		6,276	4,479	5,538
Number of environment-related training hours		22,665	19,029	20,447
Number of environment-related training hours per employee trained		6.6	6.3	7.2
Number of employees who received environment-related training (excluding e-learning)		3,398	3,012	2,841
Percentage of work-study students (Arkema France)	%	3.5	3.9	4.2
Group companies conducting annual performance reviews	%	99	99	97

		2017	2016	2015
HEALTH AND WELFARE				
Absenteeism	%	3.9	3.7	3.4
Hours off work on medical grounds as a % of hours worked	%	2.8	2.6	2.4
Employees benefiting from medical care	%	94	92	95.2
Employees benefiting from supplementary disability cover	%	90	89	86
Employees benefiting from supplementary life cover	%	93	94	92
Employees covered by death benefits representing at least 18 months' salary	%	81	74	75
COMPENSATION				
Employees benefiting from minimum compensation guarantees	%	99.6	99.2	99.5
Employees benefiting from collective variable compensation components	%	67	68	60
Employees benefiting from individual variable compensation components	%	32	31	22
REPRESENTATION				
Percentage of employees benefiting from personnel representation and/or trade union representation	%	89	90	88.2
SOCIETAL (1)				
Number of Common Ground® initiatives		1,011	866	1,014
Group industrial sites taking part in Common Ground®	%	78	86	82
European industrial sites taking part in Common Ground®	%	73	84	88
North American industrial sites taking part in Common Ground®	%	85	92	90
Asian industrial sites taking part in Common Ground®	%	64	93	80
PRODUCT STEWARDSHIP				
Number of substances with REACH registration		406	317	277
Number of GPS sheets voluntarily published		145	145	145
INNOVATION (1)				
Sustainable development patents addressing SDGs		150	116	121
R&D expenditure as a percentage of consolidated revenues	%	2.8	2.9	2.5
Number of non-disclosure, cooperation and intellectual property agreements signed by Arkema France		415	276	286

(1) Indicators are defined in detail in the methodological notes in sections 2.8.1 and 2.8.2 of this document.

2.8.4 Grenelle II, GRI-G4 and SDG concordance table

The concordance table for social and environmental information corresponding to France's Grenelle II legislation may be found in section 7.3.3 of this document.

The GRI G4 in accordance option is "Essential Criteria".

CONCORDANCE TABLE FOR THE FOURTH GENERATION OF THE GLOBAL REPORTING INITIATIVE GUIDELINES (GRI G4) AND THE UN SUSTAINABLE DEVELOPMENT GOALS (SDG)

GRI indicator		Sustainable Development Goal	Reference document
GENERAL STANDARD DISCLOSURES			
STRATEGY AND ANALYSIS			
G4-1	Statement from most senior decision maker		2.1.1
G4-2	Description of key impacts, risks, and opportunities		1.1.2/1.3/1.4/1.5 /1.6/1.7/2.1.1 /2.2.2/2.2.3/2.2.4 /2.5/2.5.2
ORGANIZATIONAL PROFILE			
G4-3	Name of the organization		1.1
G4-4	Primary brands, products and services		1.2
G4-5	Location of the organization's headquarters		Last page
G4-6	Number of countries where the organization operates		1.1.1
G4-7	Nature of ownership and legal form		1.1.1
G4-8	Markets served, sectors served, and types of customers		1.2/1.5
G4-9	Scale of the organization		1.1.1
G4-10	Employment by contract type, work time and gender	SDG 8	2.6.2
G4-11	Collective bargaining agreements	SDG 8	2.6.4
G4-12	Supply chain		2.2/2.7.2
G4-13	Significant changes during the reporting period		1.2
G4-14	Position regarding the precautionary principle		1.7
G4-15	Adherence to charters, principles or other initiatives		2.2.3/2.7.3
G4-16	Memberships		2.7.2
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	Entities		2.2/2.8
G4-18	Process for defining the report content and the aspect boundaries		2.1.2
G4-19	Material aspects		2.2.2
G4-20	Boundary of material aspects within the organization		2.8.1/2.8.2
G4-21	Boundary of material aspects outside the organization		2.8.1/2.8.2
G4-22	Restatements of information		1.2
G4-23	Significant changes		1.2
STAKEHOLDER ENGAGEMENT			
G4-24	Stakeholder groups		2.2.2
G4-25	Identification and selection of stakeholders		2.2.2
G4-26	Approach to stakeholder engagement		2.2.2
G4-27	Key topics and concerns raised through stakeholder engagement		2.2.2

GRI indicator		Sustainable Development Goal	Reference document
REPORT PROFILE			
G4-28	Reporting period		2.2.2
G4-29	Date of most recent previous report		2.2.2
G4-30	Reporting cycle		2.2.2
G4-31	Contact persons		2.1.2/2.8.6
G4-32	GRI content for "in accordance"		2.1.2/2.8.5
G4-33	External assurance		2.1.2/2.8.5
GOVERNANCE			
G4-34	Governance structure		3/2.1.2
G4-56	Codes of conduct and codes of ethics	SDG 16	2.7.3
ECONOMY			
G4-DMA			2.5.1
ECONOMIC PERFORMANCE			
G4-EC1	Direct economic value	SDG 8	1.4/2.7.5/2.7.6
PROCUREMENT PRACTICES			
G4-EC7	Infrastructure investments and services supported	SDG 8	2.7.4
G4-EC9	Proportion of spending on local suppliers		2.7.4
ENVIRONMENT			
G4-DMA			2.2.3/2.4.1
MATERIALS			
G4-EN1	Materials used by weight or volume	SDG 12	2.4.2
ENERGY			
G4-EN3	Energy consumption within the organization	SDG 7	2.4.2
G4-EN6	Reduction of energy consumption	SDG 7	2.4.2
G4-EN7	Reduction in energy requirements of products and services	SDG 7	2.4.2
WATER			
G4-EN8	Total water withdrawal by source	SDG 9	2.4.2
G4-EN9	Water sources significantly affected by withdrawals	SDG 9	2.4.2
BIODIVERSITY			
G4-EN12	Impacts of activities on biodiversity	SDG 15	2.4.3
EMISSIONS			
G4-EN15	Total direct (Scope 1) GHG emissions in tonnes of CO_2 equivalent	SDG 13	2.4.4
G4-EN16	Total indirect (Scope 2) GHG emissions in tonnes of CO_2 equivalent	SDG 13	2.4.4
G4-EN17	Other indirect (Scope 3) GHG emissions in tonnes of CO_2 equivalent	SDG 13	2.4.4
G4-EN18	GHG emissions intensity		2.4.4
G4-EN19	Reduction of GHG emissions	SDG 13	2.4.4
G4-EN21	Other significant air emissions	SDG 13	2.4.4

GRI indicator		Sustainable Development Goal	Reference document
EFFLUENTS AND WASTE			
G4-EN22	Total water discharge	SDG 6	2.4.4
G4-EN23	Total weight of waste	SDG 6	2.4.4
G4-EN24	Significant spills	SDG 6	2.4.4
G4-EN25	Waste deemed hazardous	SDG 6	2.4.4
PRODUCTS AND SERVICES			
G4-EN27	Mitigation of environmental impacts of products and services	SDG 12	2.4.5
G4-EN28	Packaging materials reclaimed by category	SDG 12	2.4.5
TRANSPORT			
G4-EN30	Impacts of transporting products, goods and materials, and members of the workforce	SDG 12	2.4.5
SUPPLIER ENVIRONMENTAL ASSESSMENT			
G4-EN32	Suppliers screened using environmental criteria	SDG 11	2.7.4
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved	SDG 16	2.4.1/2.7.4
SOCIAL			
G4-DMA		SDG 8	2.6.1
EMPLOYMENT			
G4-LA1	Employee turnover	SDG 8	2.6.2
G4-LA2	Benefits provided to full-time employees		2.6.2
G4-LA4	Minimum notice periods regarding operational changes		2.6.4
OCCUPATIONAL HEALTH AND SAFETY			
G4-LA5	Health and safety committee	SDG 8	2.3
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities	SDG 8	2.3
G4-LA7	Workers exposed to diseases related to their occupation	SDG 8	2.3
G4-LA8	Health and safety topics covered in formal agreements with trade unions	SDG 8	2.3
TRAINING AND EDUCATION			
G4-LA9	Employee training	SDG 8	2.6.3
G4-LA10	Programs for skills management and lifelong learning	SDG 8	2.6.3
G4-LA11	Regular performance and career development reviews	SDG 8	2.6.3
DIVERSITY AND EQUAL OPPORTUNITY			
G4-LA12	Diversity	SDG 5	2.6.5
EQUAL REMUNERATION FOR WOMEN AND MEN			
G4-LA13	Ratio of basic salary and remuneration of women to men	SDG 5	2.6.5
G4-LA14	Suppliers screened using labor practices criteria	SDG 12	2.7.4
G4-LA15	Significant impacts for labor practices	SDG 12	2.7.4

GRI indicator		Sustainable Development Goal	Reference document
HUMAN RIGHTS			
DMA-HR			2.7.1
NON-DISCRIMINATION			
G4-HR1	Agreements and contracts that include human rights clauses		2.6.5
G4-HR4	Freedom of association and collective bargaining	SDG 8	2.6.4
G4-HR5	Child labor	SDG 16	2.7.1
G4-HR6	Forced or compulsory labor	SDG 8	2.7.1
SOCIETY			
DMA-SO			2.7.1
LOCAL COMMUNITIES			
G4-SO1	Operations with implemented local community engagement	SDG 1	2.7.5/2.7.6
COMPLIANCE			
G4-SO3	Operations assessed for risks related to corruption and the significant risks identified	SDG 16	2.7.3
G4-SO4	Communication and training on anti-corruption policies and procedures	SDG 12	2.7.3
G4-SO8	Compliance with laws and regulations	SDG 12	2.7.3
SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY			
G4-SO9	Suppliers that were screened using criteria for impacts on society	SDG 16	2.7.4
PRODUCT RESPONSIBILITY			
DMA-PR			2.2.3/2.3.5/2.4.5
CUSTOMER HEALTH AND SAFETY			
G4-PR1	Assessments of health and safety impacts	SDG 12	2.3.5
G4-PR2	Compliance with laws and regulations	SDG 16	2.3.5
PRODUCT AND SERVICE LABELING			
G4-PR3	Type of product and service information	SDG 12	2.3.5
G4-PR4	Compliance with laws and regulations	SDG 16	2.3.5/2.4.5/2.7.3
MARKETING COMMUNICATIONS			
G4-PR7	Incidents of non-compliance with regulations and voluntary codes concerning marketing communications	SDG 16	2.3.5/2.4.5/2.7.3

2.8.5 Independent third-party opinion pursuant to Article L. 225-102-1 of the French Commercial Code

REPORT BY ONE OF THE STATUTORY AUDITORS, APPOINTED AS INDEPENDENT THIRD PARTY, ON THE CONSOLIDATED SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION INCLUDED IN THE MANAGEMENT REPORT

This is a free English translation of the statutory auditors'report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

For the year ended 31 December 2017.

To the Shareholders,

In our capacity as statutory auditor of Arkema S.A., (hereinafter named the "Company"), appointed as independent third party and certified by COFRAC under number 3-1049 (1), we hereby report to you on the consolidated human resources, environmental and social information for the year ended 31 December 2017, included in the management report (hereinafter named "CSR Information"), pursuant to article L.225-102-1 of the French Commercial Code (*Code de commerce*).

Company's responsibility

The Board of Directors is responsible for preparing a company's management report including the CSR Information required by article R.225-105-1 of the French Commercial Code in accordance with the procedures used by the Company (hereinafter the "Guidelines"), summarised in the management report and available on request from the Company's head office.

Independence and quality control

Our independence is defined by regulatory texts, the French Code of ethics (*Code de déontologie*) of our profession and the requirements of article L.822-11-3 of the French Commercial Code. In addition, we have implemented a system of quality control including documented policies and procedures regarding compliance with the ethical requirements and applicable legal and regulatory requirements.

Independent third party's responsibility

On the basis of our work, our responsibility is to:

- attest that the required CSR Information is included in the management report or, in the event of non-disclosure of a part or all of the CSR Information, that an explanation is provided in accordance with the third paragraph of article R.225-105 of the French Commercial Code (Attestation regarding the completeness of CSR Information);
- express a limited assurance conclusion that the CSR Information taken as a whole is, in all material respects, fairly presented in accordance with the Guidelines (Conclusion on the fairness of CSR Information).

However, it is not our responsibility to pronounce on the compliance with the relevant legal provisions applicable if necessary, in particular those envisaged by article L. 225-102-4 of the French Commercial Code (Duty of care) and by the law n° 2016-1691 of 9 December 2016 known as Sapin II (fight against corruption).

Our work involved seven persons and was conducted between October 2017 and February 2018 during a fourteen-week period. We were assisted in our work by our CSR experts.

We performed our work in accordance with the order dated 13 May 2013 defining the conditions under which the independent third party performs its engagement and with the professional guidance issued by the French Institute of statutory auditors (Compagnie nationale des commissaires aux comptes) relating to this engagement and with ISAE 3000 (2) concerning our conclusion on the fairness of CSR Information.

(1) Which scope is available at www.cofrac.fr

(2) ISAE 3000 – Assurance engagements other than audits or reviews of historical financial information

1. Attestation regarding the completeness of CSR Information

Nature and scope of our work

On the basis of interviews with the individuals in charge of the relevant departments, we obtained an understanding of the Company's sustainability strategy regarding human resources and environmental impacts of its activities and its social commitments and, where applicable, any actions or programmes arising from them.

We compared the CSR Information presented in the management report with the list provided in article R.225-105-1 of the French Commercial Code.

For any consolidated information that is not disclosed, we verified that explanations were provided in accordance with article R.225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR Information covers the scope of consolidation, i.e. the Company, its subsidiaries as defined by article L.233-1, and the controlled entities as defined by article L.233-3 of the French Commercial Code within the limitations set out in the methodological note, presented in section 2.8 of the management report.

Conclusion

Based on the work performed and given the limitations mentioned above, we attest that the required CSR Information has been disclosed in the management report.

2. Conclusion on the fairness of CSR Information

Nature and scope of our work

We conducted around fourty interviews with the persons responsible for preparing the CSR Information and, where appropriate, responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Guidelines in terms of their relevance, completeness, reliability, neutrality and understandability, and taking into account industry best practices where appropriate;
- verify the implementation of data-collection, compilation, processing and control process to reach completeness and consistency of the CSR Information and obtain an understanding of the internal control and risk management procedures used to prepare the CSR Information.

We determined the nature and scope of our tests and procedures based on the nature and importance of the CSR Information with respect to the characteristics of the Company, the human resources and environmental challenges of its activities, its sustainability strategy and industry best practices.

Regarding the CSR Information that we considered to be the most important (see table below):

- at parent entity, we referred to documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions), performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the consolidation of the data. We also verified that the information was consistent and in agreement with the other information in the management report;
- at the level of a representative sample of sites selected by us [1] on the basis of their activity, their contribution to the consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are properly applied and to identify potential undisclosed data, and we performed tests of details, using sampling techniques, in order to verify the calculations and reconcile the data with the supporting documents. The selected sample represents 33% of headcount considered as material data of social issues, between 10% and 100% of environmental data considered as material data of environmental issues (listed in the table of environmental indicators below) and 22% of "Common ground" initiatives as a main characteristic of societal data.

(1) *Social information: Arkema France S.A.; Bostik S.A.; Arkema Thiochemicals Sdn. Bhd. (Malaysia)*

Environmental information: Arkema France S.A.: Plants in Lannemezan, Carling, Saint-Menet, Pierre-Bénite, Jarrie, La Chambre, Mont, Feuchy, Lacq; Bostik S.A.: Ribécourt; Arkema Thiochemicals Sdn. Bhd. (Malaysia): Kerteh; Arkema Srl (Italia): Spinetta; Arkema Delaware Inc. (USA): Calvert City.

Societal information: Arkema France S.A.; Arkema Delaware Inc. (USA): Calvert City.

SOCIAL INDICATORS
Total headcount as at 31/12 and breakdown by age, gender and geographical area
Recruits and leavers
Number of training hours
Absenteeism rate
TRIR (Total Recordable Injury Rate)
LTIR (Lost Time Injury Rate)
Percentage of sites implementing peer observation
Percentage of AIMS (Arkema Integrated Management System) audited sites
Percentage of employees benefiting of personnel representation and/or trade union representation
Percentage of employees benefiting from regular medical check-ups
Percentage of women in management position
Percentage of OHSAS 18001 certified sites
ENVIRONMENTAL INDICATORS
Net purchases of energy
Direct greenhouse gas emissions (Scope 1)
Indirect greenhouse gas emissions (Scope 2)
Indirect greenhouse gas emissions (Scope 3 – Category 9)
HFC emissions
VOC emissions (Volatile Organic Compounds)
Total substances contributing to acidification
Water withdrawn
Chemical Oxygen Demand (COD)
Hazardous waste
Percentage of ISO 14001 and ISO 50001 certified sites
Number of first patent applications filed by the Group in response to sustainable development issues
SOCIETAL INDICATORS
Number of "Common Ground®" initiatives

QUALITATIVE INFORMATION	
Social topics	Social dialogue Occupational health and safety conditions Measures taken to promote equal treatment
Environmental topics	Company organisation to take environmental issues into account and, as necessary, environmental evaluation and certification processes Resources dedicated to preventing environmental and pollution risks Measures to prevent, reduce or remedy discharges into the water, air and soil that have serious environmental effects Water consumption and water supply adapted to local constraints, in particular the "Optim'O" project initiated to strengthen the water resources management Energy consumption and measures implemented to improve energy efficiency and the use of renewable energy Significant greenhouse gas emissions items generated as a result of the Group's activity, particularly by the use of goods and services they provide
Societal topics	Relationships with individuals or organisations affected by the group's operations Importance of subcontracting and consideration, in the relationship with subcontractors and suppliers of their social and environmental responsibility Consideration of social and environmental issues in the Company's purchasing policy Actions taken to prevent corruption Measures implemented to promote consumers health and safety

For the remaining consolidated CSR Information, we assessed its consistency based on our understanding of the Company.

We also assessed the relevance of explanations provided for any information that was not disclosed, either in whole or in part.

We believe that the sampling methods and sample sizes we have used, based on our professional judgement, are sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures. Due to the use of sampling techniques and other limitations inherent to information and internal control systems, the risk of not detecting a material misstatement in the CSR information cannot be totally eliminated.

CONCLUSION

Based on the work performed, no material misstatement has come to our attention that causes us to believe that the CSR Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

EMPHASIS OF MATTER

Without qualifying the above conclusion, we draw your attention to the methodological limitations noted on the indicator "Greenhouse gas emissions related to the transport and distribution of products", as mentioned in paragraph 2.8.1 of the reference document including the management report. The improvement approach implemented made it possible to reduce the uncertainty associated with the reporting process of this data.

Paris-La Défense, 21 February 2018
French original signed by
KPMG S.A.

Anne Garans
Partner
Sustainability Services

François Quédiniac
Partner

2.8.6 Contacts

See section 7.2 of this document.

3

CORPORATE GOVERNANCE

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

This chapter 3 constitutes the Board of Directors' report on corporate governance as required under Article L. 225-37 paragraph 6 of the French Commercial Code (*Code de commerce*) as amended by Order no. 2017-1162 of 12 July 2017 containing various measures for simplifying and clarifying companies' disclosure requirements. This report was prepared by a working group comprising, in particular, the Secretary of the Company's Board of Directors and the Company's Investor Relations and Human Resources departments, having taken into consideration:

- the AFEP-MEDEF corporate governance code for listed companies, last revised in November 2016 (the "AFEP-MEDEF Code"), and its December 2016 Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com);
- the French financial markets authority (*Autorité des marchés financiers* – AMF) recommendations no. 2012-02 dated 9 February 2012 on corporate governance and executive compensation in listed companies, updated most recently in the AMF's 2017 report on corporate governance, executive compensation, internal control and risk management, published on 22 November 2017; and
- the recommendations of the AFEP-MEDEF *Haut Comité de Gouvernement d'Entreprise* set out in its annual report published in October 2017.

It was then reviewed by the Nominating, Compensation and Corporate Governance Committee prior to approval by the Company's Board of Directors.

The other information required under Articles L. 225-37, L. 225-37-4 and L. 225-37-5 of the French Commercial Code, namely, the table of delegations of authority currently in force that have been granted by the shareholders in relation to capital increases, the conditions of shareholder participation at general shareholders' meetings, information concerning the structure of the Company's share capital and factors likely to have an impact in the event of a takeover bid, are set out in sections 5.2.5, 5.5.1, 5.2.1, 5.3.1, 5.3.2 and 5.3.3, respectively, of this document.

With the exception of the commitment to the Chairman and Chief Executive Officer relating to compensation for termination of office, mentioned in the statutory auditors' report presented in section 6.1 of this document, there are no other agreements between any of the directors of the Company or of any of its shareholders holding more than 10% of the voting rights and a company of which the Company owns more than half of the share capital. For further details on this commitment, see section 3.4.2.1 of this document.

3.1 COMPLIANCE WITH THE CORPORATE GOVERNANCE SYSTEM

With regard to corporate governance, the Company refers to the recommendations of the AFEP-MEDEF Code and its Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com).

In accordance with the "comply or explain" rule provided under Article L. 225-37-4, § 8 of the French Commercial Code and section 27.1 of the AFEP-MEDEF Code, the Company considers, at the date of this document, that, barring exceptions for which explanations are provided in the following summary table, the Company complies with the corporate governance system in force in France.

Disregarded provisions of the AFEP-MEDEF Code	Explanations
17. The compensation committee *"[…] It is recommended […] that one of its members be an employee director."*	The director representing employees attends the Board of Directors' meetings during which compensation packages are reviewed and discussed. However, given that the Nominating, Compensation and Corporate Governance Committee deals with broader issues than merely compensation, the director representing employees is not a member of said committee. In addition, the Committee's minutes are very comprehensive and are provided in their entirety to the Board of Directors.

3.2 COMPOSITION OF ADMINISTRATIVE AND MANAGEMENT BODIES

3.2.1 Board of Directors

3.2.1.1 PRINCIPLES FOR THE COMPOSITION OF THE BOARD OF DIRECTORS

The composition and operating procedures of the Company's Board of Directors are determined by current laws and regulations, by the Company's Articles of Association, and by the Internal Rules of the Board of Directors.

The Company is run by a Board of Directors comprising twelve members, eight of whom are independent. The Board includes six women, one member who represents shareholder employees and one member representing employees.

Type of director	Method of appointment	Term of office	Number of directors	Reference text
Directors	Shareholders' general meeting	4 years	10	Article L. 225-18 of the French Commercial Code
Director representing shareholder employees	Shareholders' general meeting on a proposal by the Company mutual funds' (*Fonds Commun de Placement d'Entreprise*) Supervisory Boards	4 years	1	Article L. 225-23 of the French Commercial Code
Director representing employees	Designated by the French delegation of the European Group Works Council	4 years	1	Article L. 225-27-1 of the French Commercial Code

Policy on diversity within the Board of Directors

In accordance with the provisions of Article L. 225-37-4, § 6 of the French Commercial Code, the AFEP-MEDEF Code and the AMF recommendations on the composition of Boards of Directors, the Nominating, Compensation and Corporate Governance Committee regularly reviews the objectives relating to the diversification of the Board of Directors' membership, in terms of directors' independence, age and gender balance, as well as the range of experience, in particular international experience, and complementary skills. Consequently, the Committee aims to select and propose current and former executives with skills in areas such as industry, finance, research and information technology for Board approval. In terms of developing the Board's international dimension, and given the Group's brief history as an independent company, the Board of Directors has given priority to complementary skills and expertise and to the physical presence of members at its meetings while seeking candidates who have acquired significant international experience. However, the Board is willing to include a director with a foreign profile over the medium term. In light of the renewal dates of the terms of office of its members, the Board of Directors aims to appoint, by 2021, two directors with a foreign nationality or who have spent most of their careers outside France, in one or more countries that are strategic for the Group. At the date of this document, the Board of Directors considers that its members' skills and career paths are diverse enough to allow it to carry out its duties with the necessary independence and objectivity.

The professional expertise of each member of the Board of Directors, at the date of this document, is set out in sections 3.2.1.2 and 3.2.1.3 herein.

Independence of directors

As part of its process to assess its members' independence and to prevent risks of conflicts of interest between directors and management, the Company or the Group, the Board of Directors takes into account all the criteria of the AFEP-MEDEF Code, which are laid down in its Internal Rules. Accordingly, an independent director is one who, other than his position on the Board, has no relationship whatsoever with the Company, the Group or its management. In particular, the director must not:

1. be, or have been within the last five years:
   - an employee or executive director of the Company,
   - an employee, executive director or director of a company consolidated by the Company;
2. be an executive director of a company in which the Company holds a directorship, directly or indirectly, or in which one of its employees (designated as such) or executive director (currently or in the last five years) holds a directorship;

3. be, or be directly or indirectly linked to a major customer, supplier, corporate or investment banker of the Company or the Group, or for which the Company or Group represents a significant portion of the business;
4. have close family ties with an executive officer of the Company;
5. have been a statutory auditor of the Company in the previous five years;
6. have been a director of the Company for more than twelve years; or
7. be or represent a significant shareholder of the Company owning over 10% of the Company's share capital or voting rights.

The annual review of the independence of each member of the Board of Directors, in accordance with the AFEP-MEDEF Code and the Board of Directors' Internal Rules, took place at the Nominating, Compensation and Corporate Governance Committee meeting of 18 January 2018 and at the Board of Directors' meeting of 24 January 2018. At these meetings, the Nominating, Compensation and Corporate Governance Committee, and subsequently the Board of Directors, reviewed in particular the business relationships in place with companies with which one or several directors are associated and, in that respect, performed materiality tests to establish whether those relationships are significant. To that end, a summary of the transactions carried out between the Group and these companies was submitted to the Board of Directors in order to assess the volume of business between the Group and each of these companies, individually.

The Board of Directors thus reviewed the situation of Laurent Mignon, Chief Executive Officer of Natixis. The Board of Directors accordingly performed materiality tests to compare the fees received by all of the Group's banks and determine the share of the Group's credit commitments held by each one. These tests enabled the Board to establish that the business relationships between Arkema and Natixis were not material for Arkema and insignificant for Natixis in relation to the two companies' revenues, and that Natixis' lending commitments to Arkema represent around 13% of the Group's total confirmed credits. These commitments correspond solely to the syndicated credit facility set up for the first time by the Group in 2006, well before Laurent Mignon was appointed as Chief Executive Officer of Natixis. The Board also noted that, on renewal of this credit facility (representing only a fraction of the financial resources of the Group, which is primarily financed by bond issues), Natixis played the same role as five other banks under the same standard conditions for this type of transaction. In addition, as part of standard commercial banking relationships, the credit facility renewal was managed directly by the Group's Financing and Treasury department. Consequently, the Board of Directors concluded that no dependency relationship exists between the two companies and that Laurent Mignon continued to qualify as an independent director. In line with the Board of Directors' Internal Rules and with the AMF recommendations set out in its 2017 report on corporate governance, when potential conflict of interest situations arise, as was the case during the financing of the acquisition of the Bostik group in 2014, the director in question does not participate in any discussions or votes on the topic in question. For further details on the management of conflicts of interest, see section 3.2.3.3 of this document.

In light of the foregoing and as summarized below, the Board of Directors decided that, as at 31 December 2017, with the exception of Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, Patrice Bréant and Nathalie Muracciole, both employed by Arkema France, and Isabelle Boccon-Gibod, permanent representative of Fonds Stratégique de Participations, which holds more than 10% of the Company's voting rights, all members of the Board of Directors are independent.

In accordance with the AFEP-MEDEF Code, which provides that the director representing shareholder employees, Patrice Bréant, and the director representing employees, Nathalie Muracciole, should not be included when calculating the percentage of independent directors, the rate of independence of the Board of Directors is 80% (eight directors out of ten). This proportion is greater than the AFEP-MEDEF Code recommendation that at least half the Board members of widely-held companies without controlling shareholders be independent.

SITUATION OF DIRECTORS WITH REGARD TO THE INDEPENDENCE CRITERIA SET OUT IN THE AFEP-MEDEF CODE (AND IN THE BOARD OF DIRECTORS' INTERNAL RULES)

	Company employee or executive	Cross directorships	Business relationships	Family ties	Statutory auditor	Director for more than 12 years	Significant shareholder	Independent
Thierry Le Hénaff	√	X	X	X	X	X	X	NO
Yannick Assouad	X	X	X	X	X	X	X	**YES**
Patrice Bréant	√	X	X	X	X	X	X	NO
Marie-José Donsion	X	X	X	X	X	X	X	**YES**
François Enaud	X	X	X	X	X	X	X	**YES**
Victoire de Margerie	X	X	X	X	X	X	X	**YES**
Laurent Mignon	X	X	X	X	X	X	X	**YES**
Hélène Moreau-Leroy	X	X	X	X	X	X	X	**YES**
Thierry Morin	X	X	X	X	X	X	X	**YES**
Nathalie Muracciole	√	X	X	X	X	X	X	NO
Marc Pandraud	X	X	X	X	X	X	X	**YES**
Fonds Stratégique de Participations	X	X	X	X	X	X	√	NO

On 10 May 2018, Thierry Morin, Laurent Mignon and François Enaud will have been directors of the Company for twelve years and will therefore no longer be considered as independent directors. In this context and given its intent to maintain a high proportion of independent directors, the Board of Directors therefore stated at its meeting of 21 February 2018 that it will review the proposals put forth by the Nominating, Compensation and Corporate Governance Committee with a view to get a larger majority of independent directors at the close of the annual general meeting to be held in 2019 to approve the financial statements for the year ending 31 December 2018.

Gender balance on the Board of Directors

In accordance with Article L. 225-17, paragraph 2 of the French Commercial Code, the Board of Directors ensures that the principle of gender balance among its members is applied, particularly when renewing each director's term of office.

At the date of this document, the Company's Board of Directors includes six women among its twelve members, *i.e.*, 45% given that the director representing employees, Nathalie Muracciole is not taken into account when calculating the gender balance, in accordance with the AFEP-MEDEF Code.

Representation of employees and shareholder employees

In accordance with the applicable regulations, the Board of Directors includes a member representing shareholder employees, Patrice Bréant, whose term of office was renewed at the annual general meeting of 15 May 2014. Since his term of office is due to expire at the annual general meeting to be held on 18 May 2018 to approve the financial statements for the year ended 31 December 2017, the Board of Directors has decided, after thanking Patrice Bréant warmly for his active contribution to the Board's work since 2010, to propose and support the nomination of Jean-Marc Bertrand, member of the Supervisory Board of the Arkema Actionnariat France company mutual fund (FCPE) and the candidate designated by said fund. For further details on this proposal, see section 6.3 of this document.

In addition, pursuant to the provisions of Article L. 225-27-1 of the French Commercial Code, Nathalie Muracciole was appointed on 7 July 2016 as director representing employees. The Board of Directors has set out the content of her training program for the duration of her term as a director. She is thus entitled to at least 20 hours of training per year.

Other characteristics

According to the provisions of the Company's Articles of Association and/or the Board of Directors' Internal Rules:

- subject to the laws applicable to provisional appointments made by the Board of Directors, the directors shall serve a four-year term of office. In accordance with the recommendations of the AFEP-MEDEF Code, the directors' terms of office are staggered in order to avoid reappointment of the Board *en masse*, and ensure that the directors' reappointment process runs smoothly. As the terms of office of all directors are staggered, the general shareholders' meeting is called upon every year to decide on the renewal of one or more terms of office;

- each director must hold at least 450 of the Company's shares throughout their term of office except for the director representing shareholder employees and the director representing employees, who must hold, individually or through a company mutual fund (FCPE) governed by Article L. 214-165 of the French Monetary and Financial Code (*Code monétaire et financier*), at least one share in the Company, or a number of units of the said fund equivalent to at least one share in the Company;
- the age limit for directors set in the Company's Articles of Association is 70 years old and serving directors who reach this age limit are automatically considered as having resigned on their 70th birthday unless the Board decides that they may complete their term; and
- each director is subject to an obligation to report any potential direct or indirect conflicts of interest to the Company. (For further details, see section 3.2.3.3 below)

3.2.1.2 COMPOSITION OF THE BOARD OF DIRECTORS

At 31 December 2017, the composition of the Board of Directors was as follows:

	Nationality	Age	Independent director	Year of first appointment	Year current term expires	Other directorships in listed companies	Audit and Accounts Committee	Nominating, Compensation and Corporate Governance Committee	Expertise
Thierry Le Hénaff Chairman and Chief Executive Officer	French	54		2006	2020	None			Chairman and Chief Executive Officer
Yannick Assouad	French	59	◆	2017	2021	2			Executive management, industry and international
Patrice Bréant Director representing shareholder employees	French	64		2010	2018	None			Research and Development, knowledge of the Group as an employee
Marie-José Donsion	French and Spanish	46	◆	2016	2018	None	**Chairman**		Accounting, finance and industry
François Enaud Senior independent director	French	58	◆	2006	2019	None		●	Executive management, digital and international
Victoire de Margerie	French	55	◆	2012	2019	2		●	Chemistry, industry and significant experience outside France
Laurent Mignon	French	54	◆	2006	2019	2			Executive management, banking and international
Hélène Moreau-Leroy	French	53	◆	2015	2019	None	●		Industry, finance and significant experience outside France

◆ *In accordance with the AFEP-MEDEF Code criteria set out in the Board of Directors' Internal Rules and as assessed by the Board of Directors.*
● *Member.*

	Nationality	Age	Independent director	Year of first appointment	Year current term expires	Other directorships in listed companies	Audit and Accounts Committee	Nominating, Compensation and Corporate Governance Committee	Expertise
Thierry Morin	French	66	◆	2006	2021	1		**Chairman**	Executive management, industry and significant experience outside France
Nathalie Muracciole Director representing employees	French	53		2016	2020	None			Human resources, knowledge of the Group as an employee
Marc Pandraud	French	59	◆	2009	2021	None			Finance and international
Fonds Stratégique de Participations represented by				2014	2018	3			
Isabelle Boccon-Gibod	French	50				3	●		Industry and finance

◆ *In accordance with the AFEP-MEDEF Code criteria set out in the Board of Directors' Internal Rules and as assessed by the Board of Directors.*
● *Member.*

The following changes to the composition of the Board of Directors took place in 2017:

Annual general meeting of 23 May 2017	
Departures	Bernard Kasriel and Philippe Vassor
Appointments	Yannick Assouad and Marie-José Donsion*
Re-elections	Marc Pandraud and Thierry Morin

* *Ratification of the appointment of Marie-José Donsion by the Board of Directors on 9 November 2016 to replace Claire Pedini.*

At its meeting of 21 February 2018, the Board of Directors noted that the terms of office of Marie-José Donsion and Patrice Bréant were due to expire at the close of the annual general meeting of 18 May 2018. The Board of Directors would like to extend its warmest thanks to both of them for their active contribution to the work of the Board of Directors and, in the case of Marie-José Donsion, of the Audit and Accounts Committee as well.

Consequently, at the upcoming annual general meeting, shareholders will be invited to:

- appoint Marie-Ange Debon as director for a four-year term expiring at the close of the ordinary general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021;
- appoint Alexandre de Juniac as director for a four-year term expiring at the close of the ordinary general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021;
- re-elect Fonds Stratégique de Participations, whose permanent representative will continue to be Isabelle Boccon-Gibod, as director for a four-year term expiring at the close of the ordinary general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

The Board of Directors also decided to support the appointment of Jean-Marc Bertrand, member of the Supervisory Board of the Arkema Actionnariat France company mutual fund (FCPE) and candidate designated by said fund for the election at the annual general meeting of a director representing shareholder employees.

Subject to their appointment as directors by the annual general meeting, the Board of Directors also decided to appoint Marie-Ange Debon as member and Chairman of the Audit and Accounts Committee and Alexandre de Juniac as member of the Nominating, Compensation and Corporate Governance Committee.

These changes are summarized in the following table:

Annual general meeting of 18 May 2018

Departures	Patrice Bréant, director representing shareholder employees Marie-José Donsion, director and Chairman of the Audit and Accounts Committee
Appointments	Marie-Ange Debon, director Alexandre de Juniac, director Jean-Marc Bertrand, director representing shareholder employees* Uwe Michael Jakobs, director representing shareholder employees*
Re-election	Fonds Stratégique de Participations represented by Isabelle Boccon-Gibod

* *Pursuant to article 10.2 of the Company's Articles of Association, as there is only one position of director representing shareholder employees to be filled, only the candidate having obtained at least the majority of votes shall be appointed.*

For further details on the resolutions proposed to the annual general meeting of 18 May 2018, see section 6.2.2 of this document.

3.2.1.3 INFORMATION ON THE MEMBERS OF THE BOARD OF DIRECTORS AT 31 DECEMBER 2017

Thierry Le Hénaff
CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Date of first appointment: 6 March 2006

Date of last renewal: 7 June 2016

Date appointment expires: AGM held to approve financial statements for 2019 financial year

Nationality: French

Number of shares held at 31 December 2017: 178,443

Business address: Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1963, Thierry Le Hénaff is a graduate of France's École polytechnique and École nationale des ponts et chaussées and holds a master's degree in Industrial Management from Stanford University in the United States. Thierry Le Hénaff was appointed Chairman and Chief Executive Officer of Arkema on 6 March 2006 and Chairman of the Board of Directors of Arkema France on 18 April 2006. He is also a member of the Board of Directors of the École polytechnique Foundation.

After starting his career with Peat Marwick Consultants, in 1992 he joined Bostik, Total's adhesives division, where he held a number of operational positions in France and worldwide. In July 2001, he was appointed Chairman and Chief Executive Officer of Bostik Findley, the new entity resulting from the merger of Total's and Elf Atochem's adhesives divisions. On 1 January 2003, he joined Atofina's Executive Committee, where he was in charge of three business units (Agrochemicals, Fertilizers and Thiochemicals) and three corporate departments. In 2004, he became a member of Total's management committee. On 6 March 2006, he was appointed Chairman and Chief Executive Officer of Arkema and led the Company's stock market listing on 18 May 2006.

OTHER OFFICES CURRENTLY HELD

France

Within the Group

- Chairman of the Board of Directors, Arkema France

International

- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017

- None

Expired from 2013 to 2016

- Director, Eramet*

* *Listed company.*
** *Outside the Arkema Group.*

Yannick Assouad
INDEPENDENT DIRECTOR

Date of first appointment: 23 May 2017

Date appointment expires: AGM held to approve financial statements for 2020 financial year

Nationality: French

Number of shares held at 31 December 2017: 450

Business address: Latécoère, 135 rue de Périole, 31079 Toulouse Cedex 5

PROFESSIONAL EXPERIENCE

Born in 1959, Yannick Assouad is a graduate of the Institut National des Sciences Appliquées (INSA) based in Lyon, France, and holds a Ph.D. in aeronautical engineering from the Illinois Institute of Technology (IIT) in the United States. She is Chief Executive Officer of Latécoère group.

She started her career in 1986 with Thomson-CSF (now Thalès) where she was head of the thermal and mechanical analysis group until 1998. She then served successively as Technical Director and then as Chief Executive Officer of SECAN, a subsidiary of Honeywell Aerospace before being appointed as Chairman. In 2003, she joined Zodiac Aerospace, as Chief Executive Officer of Intertechnique Services, a position she held until 2008. Appointed to Zodiac Aerospace's Executive Committee that same year, she was selected to create the group's Services business segment, which she headed until 2010, when she was appointed Chief Executive Officer of its Aircraft Systems segment. In May 2015, she was appointed Chief Executive Officer of Zodiac Aerospace's newest segment, Zodiac Cabin. She was appointed Chief Executive Officer of Latécoère group in November 2016.

OTHER OFFICES CURRENTLY HELD**

France
- Chief Executive Officer and director of the Latécoère group*
- Director and member of the audit committee of Vinci*

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- Member of the Executive Board of Zodiac Aerospace
- Chairman and director of companies in the Aircraft Systems division and later the Cabin division of Zodiac Aerospace
- Director of the *Institut de recherche technologique* Saint-Exupéry

Patrice Bréant
DIRECTOR REPRESENTING SHAREHOLDER EMPLOYEES

Date of first appointment: 1 June 2010

Date of last renewal: 15 May 2014

Date appointment expires: AGM held to approve financial statements for 2017 financial year

Nationality: French

Number of FCPE units held at 31 December 2017: 389

Business address: Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1954 in Rouen, Patrice Bréant is a graduate of the Institut national supérieur de la chimie industrielle de Rouen and holds a Ph.D. in organic chemical engineering. He is an expert engineer in experimental methodology and statistical process control.

He started his career in 1983 at the Nord Research Center of CDF Chimie (which later became Orkem), as a polyethylene formulation and modification research engineer. In 1990, he joined the Cerdato Research Center in Serquigny, France, and later the Materials Research Laboratory's technical polymers department.

He has been a member of the Serquigny site Works Council and of the Central Works Council since 1994. He was *rapporteur* to the research commission of the Central Works Council of Arkema France from 1994 to 2007. He has also been the union representative for Arkema France's Serquigny site and the CFE-CGC central trade union representative for Arkema France since 2004. He serves as a member of the Supervisory Board of the FCPE Arkema Actionnariat France company mutual fund (*Fonds Commun de Placement d'Entreprise*).

OTHER OFFICES CURRENTLY HELD

France
Within the Group
- Member of the Supervisory Board, FCPE Arkema Actionnariat France

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- None

* *Listed company.*
** *Outside the Arkema Group.*

Marie-José Donsion
INDEPENDENT DIRECTOR AND CHAIRMAN OF THE AUDIT AND ACCOUNTS COMMITTEE

Date of first appointment: 9 November 2016

Date appointment expires: AGM held to approve financial statements for 2017 financial year

Nationality: French and Spanish

Number of shares held at 31 December 2017: 450

Business address: Alstom, 48 rue Albert Dhalenne, 93400 Saint-Ouen

PROFESSIONAL EXPERIENCE

Born in 1971, Marie-José Donsion is a graduate of France's École supérieure de commerce de Paris (ESCP Europe). She is currently Senior Vice-President Finance of Alstom and a member of its Executive Committee.

Prior to this, she held a number of operational financial positions in Alstom's subsidiaries in France and around the world. Before joining Alstom, Marie-José Donsion began her career at Coopers & Lybrand where she worked in the audit division between 1994 and 1997.

OTHER OFFICES CURRENTLY HELD**

France
- Senior Vice-President Finance, Alstom*

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- None

François Enaud
INDEPENDENT DIRECTOR, MEMBER OF THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE AND SENIOR INDEPENDENT DIRECTOR

Date of first appointment: 10 May 2006

Date of last renewal: 2 June 2015

Date appointment expires: AGM held to approve financial statements for 2018 financial year

Nationality: French

Number of shares held at 31 December 2017: 551

Business address: Arkema,
420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1959, François Enaud is a graduate of France's École polytechnique and graduated as a civil engineer from the École nationale des ponts et chaussées.

Between 1998 and March 2015, he was successively Chairman and Chief Executive Officer of Steria SA, Managing Partner of Steria SCA and Chief Executive Officer of the Sopra Steria Group. After spending two years as a works engineer at Colas (1981-1982), François Enaud joined Steria in 1983 where he held several management positions (Technical and Quality divisions Manager, Chief Executive Officer of subsidiaries, Transport division manager and Telecoms division manager) before being appointed Chief Executive Officer of Steria in 1997 and Chairman in 1998. In September 2014, François Enaud was appointed Chief Executive Officer of the Sopra Steria Group, which was formed following the merger of Sopra and Steria.

In September 2015, François Enaud set up the FE Développement consultancy whose corporate purpose is to develop and support a network of innovative companies in the digital economy.

OTHER OFFICES CURRENTLY HELD**

France
- Chairman, FE Développement SAS
- Chairman, Dejamobile
- Chairman, Shadline
- Partner and Director, Aston i Trade Finance
- Partner and Director, Premium Peers
- Senior Advisor, Oddo Finance
- Chairman of the Board of Directors, *Agence nouvelle des solidarités actives* (ANSA)
- Director, FONDACT (Association under French law 1901 for participative management, employee savings plans, and responsible share ownership)
- Director, LinkbyNet
- Senior Advisor, Bearing Point

International
- Director, KLM

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- Chief Executive Officer and Director, Sopra Steria Group*
- Chief Executive Officer, Groupe Steria SA*
- Chairman and Chief Executive Officer and Director, Steria SA
- Managing Partner, Groupe Steria SCA

* *Listed company.*
** *Outside the Arkema Group.*

Victoire de Margerie
INDEPENDENT DIRECTOR AND MEMBER OF THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE

Date of first appointment: 7 November 2012

Date of last renewal: 2 June 2015

Date appointment expires: AGM held to approve financial statements for 2018 financial year

Nationality: French

Number of shares held at 31 December 2017: 450

Business address: Rondol Industrie, 2 allée André Guinier, 54000 Nancy

PROFESSIONAL EXPERIENCE

Born in 1963, Victoire de Margerie is a graduate of France's École des hautes études commerciales (HEC) and Institut d'Études Politiques (IEP), holds a DESS in Private Law from the Université de Paris 1 - Panthéon - Sorbonne, and a Ph.D. in Management Science from the Université de Paris 2 - Panthéon - Assas. She has been Chairman and principal shareholder of Rondol Industrie, a micromechanics SME, since 2012. She is also Vice-Chairman of the World Materials Forum and a director of Eurazeo (France) and Babcock International (United Kingdom).

She previously held operational positions in industry in Germany, France and the United States at Elf Atochem, CarnaudMetalbox and Pechiney. Between 2002 and 2011, Victoire de Margerie also taught strategy and technology management at the Grenoble École de Management business school.

OTHER OFFICES CURRENTLY HELD**

France
- Chairman, Rondol Industrie
- Member of the Supervisory Board, Eurazeo*
- Member of the Supervisory Board, Banque Transatlantique

International
- Director, member of the nominating and compensation committee and member of the audit and risk committee of Babcock International Group Plc.*

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- Chairman of the Board of Directors, Soitec*

Expired from 2013 to 2016
- Director, Écoemballages
- Director, Morgan Advanced Materials* (United Kingdom)
- Director, Italcementi* (Italy)
- Director, Norsk Hydro* (Norway)

Laurent Mignon
INDEPENDENT DIRECTOR

Date of first appointment: 10 May 2006

Date of last renewal: 2 June 2015

Date appointment expires: AGM held to approve financial statements for 2018 financial year

Nationality: French

Number of shares held at 31 December 2017: 300

Business address: Natixis, 30 avenue Pierre Mendès France, 75013 Paris

PROFESSIONAL EXPERIENCE

Born in 1963, Laurent Mignon is a graduate of France's École des hautes études commerciales (HEC) and the Stanford Executive Program. He is Chief Executive Officer of Natixis S.A. and member of the Management Board of BPCE.

For over ten years he held a number of positions in the banking sector at Banque Indosuez, from trading to investment banking. In 1996, he joined Schroders in London, followed by AGF in 1997 as Finance Director, and was appointed member of the Executive Committee in 1998. In 2002, he was given responsibility for investments at AGF Asset Management and AGF Real Estate successively, and, in 2003, of the Life and Financial Services as well as Credit Insurance departments. From September 2007 to May 2009, he was Managing Partner, alongside Philippe Oddo, of Oddo & Cie.

OTHER OFFICES CURRENTLY HELD**

France
Within the BPCE group
- Chief Executive Officer, Natixis SA*
- Chairman of the Board of Directors, Natixis Global Asset Management
- Member of the Executive Board, BPCE
- Chairman of the Board of Directors, Coface SA*
- Chairman of the Board of Directors, Natixis Assurance

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- Director, Sequana*
- Director, Lazard Ltd*

* *Listed company.*
** *Outside the Arkema Group.*

Hélène Moreau-Leroy
INDEPENDENT DIRECTOR AND MEMBER OF THE AUDIT AND ACCOUNTS COMMITTEE

Date of first appointment: 2 June 2015

Date appointment expires: AGM held to approve financial statements for 2018 financial year

Nationality: French

Number of shares held at 31 December 2017: 450

Business address: Safran, 46 rue Camille Desmoulins, 92130 Issy les Moulineaux

PROFESSIONAL EXPERIENCE

Born in 1964, Hélène Moreau-Leroy is a graduate of the Institut National des Sciences Appliquées (INSA) based in Lyon, France, and holds a Master in International Business Administration from Australia's University of New England. She is an APICS-Certified Supply Chain Professional and is currently director of the Zodiac Aerospace integration project at Safran.

Hélène Moreau-Leroy has held various management positions in the areas of research and development, project management, procurement and production with different industrial groups and spent 14 years in international positions outside France. She joined the Safran group in 2003, as a member of the Snecma SA group purchasing department. She was subsequently given responsibility for organizing Messier-Bugatti Dowty's supply chain in emerging markets, before becoming the company's programs director and a member of its Management Committee. She held the position of Chief Executive Officer of Safran Transmission Systems from 2013 to 1 December 2017, when she was appointed to head up the integration of Zodiac Aerospace.

She is also a member of the management committee of the French association of aerospace and military equipment manufacturers (*Groupement des Équipementiers de l'Aéronautique et de la Défense* – GEAD) and of various networks and associations set up to promote workplace diversity.

OTHER OFFICES CURRENTLY HELD**

France
- Director, SEM-MB

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- Chief Executive Officer, Safran Transmission Systems

Expired from 2013 to 2016
- None

Thierry Morin
INDEPENDENT DIRECTOR AND CHAIRMAN OF THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE

Date of first appointment: 10 May 2006

Date of last renewal: 23 May 2017

Date appointment expires: AGM held to approve financial statements for 2020 financial year

Nationality: French

Number of shares held at 31 December 2017: 1,281

Business address: Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1952, Thierry Morin holds a degree in management from the Université de Paris IX - Dauphine. He is Chairman of Thierry Morin Consulting and of TM France.

Thierry Morin joined the Valeo group in 1989, where he held various positions, including divisional finance director and director of financial control, strategy and purchasing, before becoming Executive Vice-President in 1997, Chief Executive Officer in 2000, Chairman of the Management Board in 2001, and then Chairman and Chief Executive Officer from March 2003 to March 2009. Prior to that, he held various positions at Burroughs, Schlumberger and Thomson Consumer Electronics. He has also been Chairman of the Board of Directors of the Université de Technologie de Compiègne (until 2017) and Chairman of the Board of Directors of INPI (*Institut national de la propriété industrielle*).

OTHER OFFICES CURRENTLY HELD**

France
- Chairman, Thierry Morin Consulting (TMC)
- Manager, TM France
- Chairman of the Supervisory Board, Elis*

International
- Chairman, TMPARFI SA (Luxembourg)

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- Chairman of the Board of Directors, Université de Technologie de Compiègne

Expired from 2013 to 2016
- Chairman of the Board of Directors, *Institut national de la propriété industrielle* (INPI)

* *Listed company.*
** *Outside the Arkema Group.*

Nathalie Muracciole
DIRECTOR REPRESENTING EMPLOYEES

Date of first appointment: 7 July 2016

Date appointment expires: AGM held to approve financial statements for 2019 financial year

Nationality: French

Number of FCPE units held at 31 December 2017: 105

Business address: Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1964, Nathalie Muracciole holds a degree in Law from the Université de Créteil in France. Since 15 January 2018, she has been responsible for developing the Group's skills sets within the human resources development department.

She began her career in 1983 in the Total group as an executive assistant with CDF Chimie (which later became Orkem). She then became career manager for the professional markets division at Sigma Kalon. After several years as recruitment/employment and training/communication manager with Mapa Spontex, she joined Atofina in 2003. She was appointed corporate training manager with Arkema in 2004, served as human resources and employee relations manager for the headquarters between 2006 and 2012 and was in charge of change management as part of the Ambition project between 2012 and 2018.

OTHER OFFICES CURRENTLY HELD**

France
- None

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- None

Marc Pandraud
INDEPENDENT DIRECTOR

Date of first appointment: 15 June 2009

Date of last renewal: 23 May 2017

Date appointment expires: AGM held to approve financial statements for 2020 financial year

Nationality: French

Number of shares held at 31 December 2017: 500

Business address: JP Morgan, 28th Floor, 25 Bank Street, London E14 5JP, United Kingdom

PROFESSIONAL EXPERIENCE

Born in 1958, Marc Pandraud is a graduate of France's École supérieure de commerce de Paris (ESCP Europe). He has been Vice-Chairman of investment banking for Europe, the Middle East and Africa at JP Morgan since 14 April 2016. Marc Pandraud began his career as an auditor with Peat Marwick Mitchell (1982-1985). He was subsequently Vice-Chairman of Bear Stearns & Co Inc. (1985-1989), Chief Executive Officer of SG Warburg France S.A. (1989-1995) and Chief Executive Officer of Deutsche Morgan Grenfell (1995-1998). He then joined Merrill Lynch as Managing Director of Merrill Lynch & Co Inc. (1998) and Chief Executive Officer of Merrill Lynch France (1998) before becoming Chairman of Merrill Lynch France (2005-2009). In 2009, he moved to Deutsche Bank to take up a position as Chairman of the bank's French operations, going on to serve as Vice-Chairman of Deutsche Bank Europe, Middle East and Africa between June 2013 and January 2016.

OTHER OFFICES CURRENTLY HELD**

France
- Vice-Chairman of investment banking for Europe, the Middle East and Africa at JP Morgan

International
- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017
- None

Expired from 2013 to 2016
- Vice-Chairman, Deutsche Bank Europe – Middle East and Africa

* *Listed company.*
** *Outside the Arkema Group.*

Fonds Stratégique de Participations

DIRECTOR REPRESENTED BY ISABELLE BOCCON-GIBOD

Date of first appointment: 15 May 2014

Date appointment expires: AGM held to approve financial statements for 2017 financial year

Number of shares held at 31 December 2017: 4,759,008

Business address: 47 rue du Faubourg Saint-Honoré, 75401 Cedex 08 Paris

PROFESSIONAL EXPERIENCE

Fonds Stratégique de Participations (FSP) is a SICAV, or open-ended investment company, which is registered with the French financial markets authority (AMF) and which seeks to promote long-term equity investments by acquiring strategic stakes in French companies. FSP's Board comprises eight members, including seven insurance companies shareholders and the Edmond de Rothschild group.

FSP is divided into five sub-funds, each of which holds an interest in the capital of one company.

FSP is an independent investment body with its own governance structure. Its portfolio is managed by a dedicated team within Edmond de Rothschild Asset Management, part of the Edmond de Rothschild group, which is responsible for the financial monitoring of the companies in which FSP has invested and relations with the FSP's permanent representatives on those companies' boards of directors. FSP does not act in concert with other shareholders and votes independently at annual general meetings. FSP appointed Isabelle Boccon-Gibod as its permanent representative on the Company's Board of Directors.

OTHER OFFICES CURRENTLY HELD**

France

- Director, SEB S.A.*
- Director, Zodiac Aerospace*
- Director, Eutelsat Communications*

International

- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017

- None

Expired from 2013 to 2016

- None

Isabelle Boccon-Gibod

PERMANENT REPRESENTATIVE OF FSP AND MEMBER OF THE AUDIT AND ACCOUNTS COMMITTEE

Date appointed: 15 May 2014

Nationality: French

Business address: Arkema, 420, rue d'Estienne d'Orves, 92700 Colombes

PROFESSIONAL EXPERIENCE

Born in 1968, Isabelle Boccon-Gibod is a graduate of the École Centrale de Paris in France and the University of Columbia in the United States. She is a member of the national investment strategy Board (*Conseil national d'orientation*) of BPI France, Vice-President of the MEDEF Economic Commission, director of the Paprec group, director of Sequana, director of Legrand and permanent representative of Fonds Stratégique de Participations, a director of Zodiac Aerospace.

She was Executive Vice-President of Arjowiggins and an Executive Director of Sequana and also chaired Copacel, the French Association of Paper Industries, until the end of 2013. Isabelle Boccon-Gibod is also a photographer and author.

OTHER OFFICES CURRENTLY HELD**

France

- Director, Sequana*
- Director, Legrand*
- Permanent representative of Fonds Stratégique de Participations, a director of Zodiac Aerospace*
- Member of the national investment strategy Board (*Conseil national d'orientation*), BPI France
- Vice-President of the Economic Commission, MEDEF
- Director, Paprec
- Director, Centre Technique du Papier

International

- None

OTHER OFFICES HELD IN THE PAST FIVE YEARS BUT NOW EXPIRED**

Expired in 2017

- None

Expired from 2013 to 2016

- Chairman, Copacel

* *Listed company.*
** *Outside the Arkema Group.*

3.2.2 Executive management

3.2.2.1 CHAIRMAN AND CHIEF EXECUTIVE OFFICER

In 2006, the Board of Directors decided not to separate the roles of Chairman of the Board and Chief Executive Officer in order to put in place a simple, reactive and responsible decision-making process. In 2016, when renewing the term of office as director of Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, the Board decided unanimously that the positions of Chairman and of Chief Executive Officer should continue to be combined, as recommended by the Nominating, Compensation and Corporate Governance Committee. Consequently, the Board re-appointed Thierry Le Hénaff as Chairman and Chief Executive Officer of the Company following the annual general meeting of 7 June 2016.

The decision to maintain a unified governance structure, in compliance with the AFEP-MEDEF Code, was based on a detailed analysis by the Board of Directors taking into account both the way Arkema's governance structures have operated since its stock market listing and the Group's specific needs. In 2016, when renewing the term of office as Chairman and Chief Executive Officer of the Company, the Board of Directors considered that Arkema's governance structures operated very efficiently in strict respect of the balance of powers between the Board and management thanks to the robust control mechanisms set up within the Group, such as:

- limitations of the powers of the Chairman and Chief Executive Officer, who is required to inform the Board of Directors of the most significant transactions or submit them to the Board of Directors for prior approval. These limitations are set out in detail in section 3.3.1 of this document;
- the appointment in March 2016 of a senior independent director whose primary role is to oversee the efficient running of the Company's governance structure and to assist the Chairman and Chief Executive Officer as needed, in particular in his relations with shareholders on governance issues. The senior independent director's role and responsibilities are described in detail in the Board of Directors' Internal Rules available on the Company's website, www.arkema.com. They are set out in section 3.3.3 of this document;
- a majority of independent directors on the Board of Directors and its committees;
- a Chairman and Chief Executive Officer who is not a member of any of the specialized committees of the Board of Directors; and
- close involvement of all members of the Board of Directors in the Group's strategy, notably during the annual strategy seminar.

It should also be noted that the Nominating, Compensation and Corporate Governance Committee regularly reviews the existing governance structure – in particular, each time the Chairman and Chief Executive Officer's term of office is renewed – and verifies that the chosen structure continues to be the most appropriate. Its conclusions are presented to the Board of Directors, which then decides whether or not to maintain the structure in place.

In the course of the annual assessment of the Board of Directors carried out by consulting firm Spencer Stuart in early 2016, the directors expressed their satisfaction with the current organization of the governance structure and with the Board's open, adversarial and constructive discussion of the issues put before it. The directors appreciate, in particular, their complete freedom of expression and the quality of the discussions, which they attribute to the Board's diversity and its members' complementary skill-sets.

3.2.2.2 EXECUTIVE COMMITTEE

The Chairman and Chief Executive Officer has put in place an Executive Committee.

The Executive Committee is in charge of the Group's operational management supervision as well as the coordination and monitoring of the implementation of strategy within the Group. It is a decision-making body that focuses on strategic matters and performance monitoring, and reviews significant organizational matters and large projects. It also ensures the effective implementation of internal control. The Executive Committee meets twice a month.

COMPOSITION OF THE EXECUTIVE COMMITTEE AT 31 DECEMBER 2017

Name	Position	Area of responsibility	Year of appointment
Thierry Le Hénaff	**Chairman and Chief Executive Officer**		**2006**
Operational Executive Vice-Presidents			
Christophe André	Executive Vice-President, advanced materials	Technical Polymers and Performance Additives Business Lines, digital transformation within the Group* and commercial excellence	2016
Vincent Legros	Executive Vice-President, Bostik	Bostik	2016
Marc Schuller	Executive Vice-President, Coating Solutions and Industrial Specialties	Coating Solutions, Industrial Specialties and raw materials and energy procurement	2006
Functional Executive Vice-Presidents			
Luc Benoit-Cattin	Executive Vice-President, Industry	Industrial safety, environment and sustainable development, technology, logistics, quality and goods and services procurement	2011
Bernard Boyer	Executive Vice-President, Strategy	Planning, economic studies, acquisitions/divestitures, internal audit and internal control, insurance and risk management	2006
Michel Delaborde	Executive Vice-President, Human Resources and Communication	Human resources and communication	2006
Thierry Lemonnier	Chief Financial Officer	Accounting, management control, treasury management, legal affairs, taxation, financial communication and IT	2006

* *A Digital Transformation department was created on 1 March 2018, reporting directly to the Chairman and Chief Executive Officer. For more information, see section 1.1.1.2 of this document.*

Biographies of the Executive Committee members can be found on the Company's website (www.arkema.com) in the Investor Relations – Governance section.

In addition, the Chairman and Chief Executive Officer wanted the R&D department and the Digital Transformation department to report to him directly given their importance to the Group's strategy.

3.2.2.3 THE GROUP MANAGEMENT COMMITTEE

Since 1 September 2016, the Chairman and Chief Executive Officer has put in place a Group Management Committee.

The duties of the Group Management Committee entail in particular the quarterly review of the Group's performance (HSE, financial and operational) and follow-up on the Group's major projects and priorities. This committee also discusses the Group's medium- and long-term orientations. It meets four times a year.

At 31 December 2017, the Group Management Committee was made up of twenty members, including eight Executive Committee members, seven Vice-Presidents of Business Lines, two Vice-Presidents of corporate functions and two regional Vice-Presidents.

3.2.3 Additional information concerning members of the Board of Directors and executive management

3.2.3.1 ABSENCE OF FAMILY TIES

To the best of the Company's knowledge, and at the date of this document, there are no family ties between (i) the members of the Board of Directors, (ii) the members of the Executive Committee, and (iii) the members of the Board of Directors and those of the Executive Committee.

3.2.3.2 ABSENCE OF ANY CONVICTION FOR FRAUD, INVOLVEMENT IN A BUSINESS FAILURE, OR PUBLIC INCRIMINATION AND/OR SANCTION

To the best of the Company's knowledge, and at the date of this document, no member of the Board of Directors or the Executive Committee has been:

- convicted of fraud during the past five years;
- implicated in a bankruptcy, receivership or liquidation as a member of an administrative, management or supervisory body during the past five years; or
- charged with any offense or had any official public sanction imposed on them by statutory or regulatory authorities during the past five years.

To the best of the Company's knowledge, during the past five years, no executive officer has been prohibited by a court from serving as a member of the administrative, management or supervisory body of an issuer, or from participating in the management or governance of an issuer's business.

3.2.3.3 ABSENCE OF CONFLICTS OF INTEREST

The Company has put in place measures to prevent potential conflicts of interest between the directors and the Company.

In accordance with corporate governance best practice and the recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules provide that:

- each director must undertake to maintain under all circumstances their independence of analysis, judgment, decision-making and action and, to this end, must not seek or accept any advantages likely to be considered as compromising their independence from the Company or any associated company, either directly or indirectly. Each director undertakes to notify the Board of Directors of any agreement between them and the Company, entered into directly, indirectly or via an intermediary, prior to entering into such agreement. Furthermore, each director must undertake not to assume any duties in companies or business activities that are in competition with the Company without previously notifying the Board of Directors and the Chairman of the Nominating, Compensation and Corporate Governance Committee; and
- in the event of a conflict of interest, the director in question must abstain from voting on any resolution submitted to the Board and from participating in the discussion preceding the vote. The Chairman may ask such director not to attend while the topic is addressed.

Directors must confirm the absence of any conflicts of interest (even potential) when they take up office, each year when so requested for the preparation of the reference document, and at any time, upon request by the Chairman and Chief Executive Officer.

To the best of the Company's knowledge, there are no potential cases of conflicts of interest between the duties of members of the Board of Directors or of executive management *vis-à-vis* the Company and their private interests. To the best of the Company's knowledge, no arrangements or agreements resulting in the selection of a member of the Board of Directors or of executive management have been made with the Company's main shareholders, customers or suppliers.

To the best of the Company's knowledge, there are no restrictions accepted by the members of the Board of Directors or executive management concerning the transfer of their holding in the Company's share capital, other than those set out in sections 3.4.2.1 and 3.4.3.1 of this document.

3.2.3.4 INFORMATION REGARDING SERVICE CONTRACTS

To the best of the Company's knowledge, there are no service contracts between the members of the Board of Directors or the Executive Committee and the Company or any of its subsidiaries providing for the granting of benefits under the terms of such a contract. The members of the Executive Committee, however, are all employees of the Company except for Thierry Le Hénaff.

3.3 OPERATING PROCEDURES OF ADMINISTRATIVE AND MANAGEMENT BODIES

The duties and operating rules of the Company's administrative and management bodies are defined by law, by the Company's Articles of Association and by the Internal Rules of the Board of Directors. The latter documents can be found on the Company's website (www.arkema.com) under Investor Relations – Governance.

3.3.1 Management and limitation of powers of the Chairman and Chief Executive Officer

3.3.1.1 POWERS OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The Chairman and Chief Executive Officer is vested with the most extensive powers to act in the Company's name in all circumstances. He exercises these powers within the limits of the Company's corporate purpose and subject to those powers expressly vested by law in the general shareholders' meetings and the Board of Directors. He represents the Company in its relations with third parties.

The Board of Directors may set limits on the powers of the Chairman and Chief Executive Officer. In 2006, the Board of Directors introduced a right of prior approval or post review by the Board of Directors. The Chairman and Chief Executive Officer must therefore inform the Board of the most significant transactions or submit them to the Board for prior approval, as follows:

Prior approval by the Board of Directors	Post review by the Board of Directors
• Overall capital expenditure budget • Any industrial investment in excess of €80 million • Any acquisition or divestment project with an enterprise value in excess of €130 million • Any annual capital expenditure budget overrun in excess of 10%	• Any industrial investment in excess of €30 million • Any acquisition or divestment project with an enterprise value in excess of €50 million

The general powers of the Chairman and Chief Executive Officer were confirmed by the Board of Directors when his term of office was renewed in 2016.

3.3.1.2 DEPOSITS, COMMITMENTS AND GUARANTEES

Every year, the Board of Directors authorizes the Chairman and Chief Executive Officer, or any person duly authorized to act on his behalf, to issue deposits, commitments and guarantees to third parties in the Company's name. At its meeting on 18 January 2017, the Board of Directors granted said authorization to issue new deposits, commitments and guarantees up to a limit of €90 million, and to continue the deposits, commitments and guarantees previously made.

The authorization was renewed on the same terms for 2018.

3.3.2 Duties and operating procedures of the Board of Directors

3.3.2.1 DUTIES

The Board of Directors is a collegiate body which takes decisions collectively. It is mandated by and accountable to all of the shareholders.

The Company's Board of Directors exercises the powers assigned by law in order to act in the Company's best interests in all circumstances. It decides the Company's overall business strategy and oversees its implementation. Subject to those powers expressly conferred upon the shareholders and within the limits of the Company's corporate purpose, the Board of Directors considers any issue involving the proper operation of the Company and decides on any issue concerning the Company.

To this end, it must in particular monitor and review the Group's strategic developments, appoint the executive officers responsible for managing the Company in line with the corporate strategy, monitor the implementation of this strategy, take decisions regarding major transactions, ensure the quality of information supplied to shareholders and the markets, particularly in the financial statements, and guarantee the quality of its operations.

The Board of Directors can decide to set up one or more specialized committees. It defines the composition and remit of these committees, which operate under the responsibility of the Board of Directors. In accordance with the Internal Rules of the Board of Directors and each of its committees, some matters are therefore subject to prior review by the appropriate committee before being submitted to the Board of Directors for approval.

3.3.2.2 OPERATING PROCEDURES

The operating procedures of the Board of Directors are determined by current laws and regulations, the Company's Articles of Association and its Internal Rules as updated most recently on 27 February 2017 in order to ensure compliance with the AFEP-MEDEF Code.

The Board of Directors meets at least four times a year and whenever the interests of the Company so require. Meetings are convened by its Chairman. The convening notice may be delivered by any means, even verbally, eight days before the date of the meeting and, in urgent cases, without notice. It specifies where the meeting will take place. Since 2017, the convening notice and meeting support documents are made available *via* a digital format that enables the secure exchange of data. In principle, meetings take place at the Group's head office but may in certain cases be held by conference call in accordance with the law, the Company's Articles of Association and the Board of Directors' Internal Rules.

The Board of Directors' meetings are chaired by the Chairman of the Board or, in his absence, by the oldest director in attendance.

The Board of Directors may legitimately deliberate even in the absence of a notice of meeting if all members are present or represented. In accordance with its Internal Rules, in all cases permitted by law and if specified in the notice of meeting, directors attending the meeting by means of videoconferencing or any other telecommunication method that meets the requisite technical specifications set by current laws and regulations are deemed present for the purpose of quorum and majority requirements.

Decisions are taken by majority vote of the members present, deemed present or represented. In the case of a split vote, the Chairman has the casting vote.

In accordance with corporate governance best practice and the recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules also set out the rights and obligations of the directors and notably impose that:

- before accepting their duties as director of the Company, the directors must ensure that they are familiar with the Company's Articles of Association, the Board of Directors' Internal Rules, and the legal and regulatory provisions governing the functions of a director of a French joint stock corporation (*société anonyme*), and in particular the rules relating to the definition of the powers of the Board of Directors, multiple directorships, the agreements falling within the scope of Article L. 225-38 of the French Commercial Code, the holding and use of insider information, the declarations of trading in the Company's shares and the black-out periods during which directors may not trade in those shares;
- the directors are elected by all the shareholders and must act in all circumstances in the Company's best interests;
- the directors must devote the necessary time and attention to their duties. Consequently, the directors may not hold more than four other directorships in listed companies, including foreign companies, outside the Group. Accordingly, the directors undertake to inform the Chairman of the Nominating, Compensation and Corporate Governance Committee of any new non-executive or executive directorship that they might accept in a company outside the Group or outside the group of which he or she is a member, including their participation in the committees of these companies' Boards; executive directors may not hold more than two other directorships in listed companies outside the Group and must seek the opinion of the Board of Directors prior to accepting any new directorship in a listed company;
- the directors must be committed and, where possible, take part in all the Company's Board of Directors' meetings and the meetings of the committees to which they have been appointed, as well as annual general meetings;
- prior to each Board of Directors' meeting, except in the event of an emergency justified by exceptional circumstances, the agenda and information on items on the agenda that require special analysis and prior consideration are sent to each director with the notice of meeting or at least in sufficient time before the meeting, whenever this can be accomplished without any breach of confidentiality. The directors may also request from the Chairman and Chief Executive Officer any additional information they may consider necessary to properly fulfill their duties, particularly in the light of the meetings' agenda;

- if they deem it necessary, the directors may also request additional training on the Group's specific features, businesses, and sector of activity, at the time of their appointment or during their term of office. This training is organized by the Company, which pays the related costs;
- all documents provided for Board of Directors' meetings and all information collected during or outside Board of Directors' meetings are confidential, without exception, whether or not the information collected is presented as being confidential. In this regard, the directors must consider themselves bound by strict professional confidentiality beyond the simple duty of discretion provided for by the law. Furthermore, the directors undertake not to express their individual views outside the boardroom on matters discussed during Board of Directors' meetings, or on the opinions expressed by individual directors; and
- as required by law and regulations, the directors must refrain from trading in the Company's securities (including derivative financial instruments) insofar as, by virtue of their duties, they have access to insider information. They are therefore added, as soon as they take up their duties, to the list of people subject to the black-out periods implemented by the Company. Furthermore, the directors must disclose any transactions they have entered into in respect of the Company's securities.

The Internal Rules also provide that, when the positions of Chairman and Chief Executive Officer are held by the same person, the Board of Directors shall appoint one of the independent directors to serve as senior independent director, based on the recommendation of the Nominating, Compensation and Corporate Governance Committee. For further details, see section 3.3.3 of this document.

In accordance with the AFEP-MEDEF Code and with best governance practices, the Chairman and Chief Executive Officer does not take part in any discussions concerning his term of office and compensation. The other Board members therefore have the opportunity to conduct discussions in an executive session, without his presence, at least once a year. Since 2016 the Board's Internal Rules have also provided that following the annual assessment of the Board of Directors' operating procedures, the senior independent director may organize another meeting of non-executive directors, from which executive or employee directors are excluded.

3.3.2.3 ACTIVITIES OF THE BOARD OF DIRECTORS

The Board of Directors met eight times in 2017, as in 2016. Attendance rate at these meetings was 90.5% (versus 95% in 2016 and 93% in 2015). On average, the meetings lasted approximately three hours.

The following table summarizes the individual attendance rates of directors at the meetings of the Board of Directors and its committees in 2017.

	Board of Directors		Audit and Accounts Committee		Nominating, Compensation and Corporate Governance Committee	
Directors	**Attendance rate**	**Number of meetings**	**Attendance rate**	**Number of meetings**	**Attendance rate**	**Number of meetings**
Thierry Le Hénaff	100%	8/8	-	-	-	-
Yannick Assouad	100%	5/5	-	-	-	-
Patrice Bréant	87.5%	7/8	-	-	-	-
Marie-José Donsion	100%	8/8	100%	6/6	-	-
François Enaud	87.5%	7/8	-	-	100%	4/4
Victoire de Margerie	50%	4/8	-	-	100%	4/4
Laurent Mignon	62.5%	5/8	-	-	-	-
Hélène Moreau-Leroy	100%	8/8	83.5%	5/6	-	-
Thierry Morin	87.5%	7/8	-	-	100%	4/4
Nathalie Muracciole	100%	8/8	-	-	-	-
Marc Pandraud	100%	8/8	-	-	-	-
Fonds Stratégique de Participations represented by Isabelle Boccon-Gibod	100%	8/8	100%	6/6	-	-
TOTAL	**90.5%**	**8**	**96%**	**6**	**100%**	**4**

The agenda of the Board of Directors' meetings included recurring annual topics as well as more specific topics.

Operations, strategy and risk management	**Recurring annual topics** • review and approval of the strategy and main operational priorities presented during the annual seminar • review and, where necessary, updating of the risk map • presentation and approval of the insurance program • changes in the competitive environment **Specific topics in 2017** • integration of Den Braven and progress in the implementation of synergies • various strategic projects: acquisition of XL Brands, investments in specialty polyamides in Asia and project to double thiochemical production capacity in Malaysia • report on the situation and analysis of the financial and non-financial impacts of Hurricane Harvey on the Group's sites in the United States • review of the Group's position in terms of cybersecurity • progress report on the Group's digital objectives
Accounting and financial situation	**Recurring annual topics** • approval of the annual budget • approval of the annual consolidated and Company financial statements, proposed allocation of profit and distribution of dividends • approval of the management report and, more generally, of the reference document • preparation of the annual general meeting including approval of the draft resolutions • approval of management forecast documents • approval of the half-yearly financial statements and review of quarterly financial information • review of reports on the work carried out by the Audit and Accounts Committee • approval of draft results press releases • review of the Company's needs in terms of financial resources and therefore of the Euro Medium Term Notes (EMTN) program and definition of the maximum issue amount • feedback from roadshows **Specific topics in 2017** • renewal of the Euro Medium Term Notes (EMTN) program for a maximum amount of €2.75 billion
Corporate governance and compensation	**Recurring annual topics** • assessment of the Board of Directors' operating procedures • assessment of the independence of directors • review of directors' terms of office and proposal of renewals/appointments • review of reports on the work carried out by the Nominating, Compensation and Corporate Governance Committee • review of related-party agreements and agreements entered into and authorized during previous years which were implemented during the year • definition of the amount and the principles for allocating attendance fees • policy on the Chairman and Chief Executive Officer's compensation • compensation due or awarded to the Chairman and Chief Executive Officer for the prior year • compensation for Executive Committee members (fixed compensation, variable compensation for the prior year and criteria used to determine variable compensation) • definition of stock-based compensation for Group employees (performance share plan, capital increase reserved for employees, etc.) • changes in the Executive Committee and its succession plan, including for the Chairman and Chief Executive Officer, as well as career management policy for executives • definition of the Chairman and Chief Executive Officer's powers to issue deposits, commitments and guarantees • approval of the report on corporate governance **Specific topics in 2017** • appointment of Yannick Assouad and renewal of the terms of office as directors of Marc Pandraud and Thierry Morin • appointment of Marie-José Donsion as Chairman of the Audit and Accounts Committee • acknowledgment of the fulfillment of the performance conditions applicable to the 2013 performance share plan • 2017 performance share plan • 2018 capital increase reserved for employees
Corporate social responsibility	**Recurring annual topics** • the Group's situation in terms of safety and the environment • human resources policy • the Group's CSR initiatives

At each meeting, the Chairman reviews the transactions concluded since the previous meeting and seeks the authorization of the Board of Directors for the main projects underway that are likely to be completed before the next meeting.

Once a year, the Board of Directors dedicates a day to reviewing Arkema's strategy in the presence of the Executive Committee members and the head of R&D. During this meeting, the directors are given detailed presentations on key components of the Group's strategy, including R&D, with a demonstration of the recent innovations in various areas, the acquisition strategy, safety and sustainable development, the digital strategy, the competitive landscape, and specific operational risks. This is also an opportunity for the Board to analyze the main challenges of the coming years and changes in the Group's profile. At the end of the seminar, the directors meet with around 20 of the Group's senior executives and high potentials.

In 2017, the Board of Directors traveled to Honfleur (France) in late April for a tour of the new molecular sieve production unit and a comprehensive presentation on the business, and to Serquigny (France) for a tour of the Group's performance materials Cerdato R&D center and a presentation on innovations in the area of Technical Polymers. It also visited the Group's polyamide production unit there. Lastly, in September 2017, the Board of Directors visited L'Atelier 4.20 by Arkema, a new showroom located at the Company's headquarters, which presents the innovative solutions and advanced materials developed by Arkema's research teams.

Since the beginning of 2018, the Board of Directors has met twice, with an attendance rate of 92%. In addition to recurring topics such as the approval of the 2018 annual budget, the approval of the annual consolidated and Company financial statements for 2017, the proposal of allocation of profit and distribution of dividends and, more generally, the preparation of the annual general meeting including approval of the proposed resolutions, these meetings focused in particular on:

- changes to the composition of the Board of Directors, the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee, with proposals for the appointment of Marie-Ange Debon and Alexandre de Juniac, the renewal of office of Fonds Stratégique de Participation and support for Jean-Marc Bertrand's appointment as director representing shareholder employees; and
- the application of the provisions relating to compliance set out in the Sapin II Law.

3.3.2.4 ASSESSMENT OF THE OPERATING PROCEDURES OF THE BOARD OF DIRECTORS

In accordance with the AFEP-MEDEF Code and its internal rules, the Board of Directors conducts an annual assessment of its operating procedures by means of a formal questionnaire. Every three years in principle, an assessment is conducted by an external consultant. The form and terms of the Board's assessment are discussed by the Nominating, Compensation and Corporate Governance Committee every year.

An assessment of the Board of Directors was carried out in early 2016 by consulting firm Spencer Stuart, which conducted individual interviews of each director based on a guide that was approved by the Chairman of the Nominating, Compensation and Corporate Governance Committee and the Secretary of the Board of Directors. Prior to the interviews, each director was invited to complete an online questionnaire. This external assessment showed that the operating procedures of the Board of Directors are very good and that the Board has demonstrated its maturity and efficiency and continued to improve since the previous independent assessment conducted by an external consultant in 2012. Following the assessment and the presentation of the report, certain areas for improvement were identified and agreed by the Board. They related primarily to the introduction of periodic site visits, the continuation of the work carried out on the Board's composition, in particular to maintain the diversity of expertise among its members, and stricter monitoring of risks by the Board. They have all been taken into account, as demonstrated during the assessment carried out in 2017.

For 2017, the annual assessment of the Board of Directors was carried out on the basis of a questionnaire prepared by the Nominating, Compensation and Corporate Governance Committee, which notably included questions about the Board's composition, its collective performance during the year, the individual contributions of each director and the quality of the Board's discussions. The assessment was discussed at the Board of Directors' meetings on 24 January 2018 and 21 February 2018. After it had analyzed the answers given by the directors, the Nominating, Compensation and Corporate Governance Committee presented a report to the Board of Directors showing that the directors continue to be very satisfied overall with the operating procedures of the Board and that the main recommendations made after the previous assessment had all been taken into account. The areas for improvement identified during the assessment and agreed upon by the Board include enhancing the Board's international dimension over the medium term (see section 3.2.2.1 of this document for more information) and pursuing work on succession plans and talent management. In 2018, the assessment of the Board's operating procedures will be carried out by an independent advisory firm.

3.3.3 Senior independent director

As part of the drive to constantly improve its governance and in line with best practice, the Board of Directors created the position of senior independent director in 2016. The primary role of the senior independent director is to oversee the efficient running of the Company's governance structures and the absence of conflicts of interest, and to ensure that shareholders' concerns on corporate governance matters are taken into consideration. François Enaud was appointed senior independent director on 2 March 2016.

In accordance with the Board of Directors' Internal Rules, a senior independent director is appointed when the Chairman of the Board of Directors also serves as Chief Executive Officer. The senior independent director is selected from among the independent members of the Board, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, and is appointed for his or her term as a director. He or she may be re-appointed.

The senior independent director's duties and responsibilities are as follows:

1. Concerning the operating procedures of the Board of Directors

- He or she may propose the inclusion of additional items on the agenda of Board meetings, if necessary;
- he or she may ask the Chairman of the Board of Directors to call a Board meeting with a specific agenda under exceptional circumstances;
- he or she oversees the application of the Internal Rules for the preparation of Board meetings as well as during the meetings;
- following the annual assessment of the Board of Directors' operating procedures led by the Nominating, Compensation and Corporate Governance Committee, he or she may organize and chair a meeting of non-executive directors, without the presence of executive or employee directors, to discuss the operating procedures of the Company's governance structures; he or she reports the meeting's conclusions to the Chairman and Chief Executive Officer; and
- he or she reports on his or her activities to the Board of Directors at least once a year and at any time if he or she considers it necessary.

2. Concerning conflicts of interest

He or she advises his or her fellow directors on the related risks. He or she reviews with the Chairman of the Board of Directors and the Nominating, Compensation and Corporate Governance Committee any potential conflicts of interest that he or she has identified or been informed of, and informs the Board of Directors of his or her thoughts on the matter as well as those of the Chairman.

3. Concerning shareholder relations

He or she is informed of comments and suggestions received from significant shareholders not represented on the Board of Directors about corporate governance matters. He or she oversees that they receive answers to their questions and, after consulting the Chairman and Chief Executive Officer, makes himself or herself available to communicate with them if necessary. The Board of Directors is informed about these contacts.

Activity report of the senior independent director for 2017

François Enaud, senior independent director since 2 March 2016, reported to the Board of Directors on his role at the meeting of 21 February 2018 and stated that he had not encountered any particular difficulties. Since the assessment of the operating procedures of the Board of Directors and of the committees had not identified any problems, no executive session has been organized following this assessment, by agreement with all of the directors.

As mentioned in section 3.2.1.1 of this document, on 10 May 2018, François Enaud will have been a director of Arkema for twelve years and will therefore no longer qualify as independent. However, in light of his recent appointment as senior independent director, a role created on 2 March 2016, and to ensure continuity in the exercise of these duties, particularly *vis-à-vis* shareholders, the Board of Directors decided at its meeting of 21 February 2018 – on an exceptional basis and by derogation to its Internal Rules – to allow François Enaud to continue to serve as senior independent director until his term of office expires at the close of the annual general meeting to be held in 2019 to approve the financial statements for the year ending 31 December 2018. The Board will then appoint a new senior independent director.

3.3.4 Committees of the Board of Directors

The Board of Directors has two permanent specialized committees: the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee. The role of the committees is to examine and prepare certain matters to be discussed by the Board of Directors. Accordingly, the committees put forward their opinions, proposals and recommendations to the Board.

Each committee's role, organization and operating procedures are set out in their respective internal rules, as defined and approved by the Board of Directors. The internal rules of each committee state that:

- the term of office of committee members corresponds to their term of office as directors, although the Board of Directors may modify the composition of the committees at any time;
- at least two members must be present for a meeting of the committees to be valid;
- no committee member may be represented by another person; and
- each committee reports on its work to the Board of Directors and presents an annual assessment of its operating procedures drawn up on the basis of the requirements of its Internal Rules, as well as any suggestions for improving its operating procedures.

Committee members may only receive attendance fees from the Company in respect of their term of office as directors and members of a committee.

3.3.4.1 THE AUDIT AND ACCOUNTS COMMITTEE

Composition and operating procedures

At 31 December 2017, the Audit and Accounts Committee was made up of three directors: Marie-José Donsion (Chairman), Isabelle Boccon-Gibod (permanent representative of Fonds Stratégique de Participations (FSP)) and Hélène Moreau-Leroy.

All members of this committee were qualified as independent by the Board of Directors except for Isabelle Boccon-Gibod, permanent representative of FSP.

In accordance with the AFEP-MEDEF Code, none of the members of the Audit and Accounts Committee holds an executive position within the Company. In addition, all the members of the Audit and Accounts Committee have financial or accounting expertise. They have also all benefited from a presentation focusing on the Group's accounting, financial and operational specifics. For further details, see biographies of the committee members in sections 3.2.1.2 and 3.2.1.3 of this document.

The appointment of Marie-José Donsion as Chairman of the Audit and Accounts Committee on 23 May 2017, to replace Philippe Vassor, was subject to particular scrutiny by the Board of Directors. In compliance with Article L. 823-19 of the French Commercial Code, Marie-José Donsion has specific financial and accounting expertise, having spent most of her career in different financial positions within the Alstom group.

Since Marie-José Donsion's term of office expires at the annual general meeting of 18 May 2018, the Board of Directors has decided that Marie-Ange Debon will replace her as member and Chairman of the Audit and Accounts Committee, subject to her appointment as a director by the annual general meeting on 18 May 2018. Marie-Ange Debon's biography is presented in section 6.3 of this document.

The Audit and Accounts Committee generally meets six times a year, in particular to review the consolidated financial statements. Two of these meetings are primarily devoted to discussing internal control matters. The committee meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The annual schedule of Audit and Accounts Committee meetings is set by its Chairman during the prior year. The Chairman of the Audit and Accounts Committee has appointed the Chief Financial Officer as secretary to the committee.

The head of the Accounting and Controlling department attends all meetings relating to the financial statements. The statutory auditors are invited to every Audit and Accounts Committee meeting and give their conclusions after each meeting in the absence of the Company's representatives. The committee also meets privately with the Internal Audit and Internal Control Vice-President after the committee meetings attended by him.

The Chairman and Chief Executive Officer does not take part in the meetings of the Audit and Accounts Committee.

Unless there is a decision to the contrary by the Board of Directors, no Audit and Accounts Committee member may be a member of the Audit and Accounts Committees of more than two other listed companies in France or abroad. The Board also ensures that it does not appoint to this committee a director from a company that has appointed one of the Company's directors to its own Audit and Accounts Committee.

Duties and activity of the Audit and Accounts Committee

In order to enable the Company's Board of Directors to ensure the quality of internal control and the reliability of information provided to shareholders and to the financial markets, the Audit and Accounts Committee exercises the prerogatives of a specialized committee as defined under Article L. 823-19 of the French Commercial Code and in the AMF working group's final report on the audit committee dated 22 July 2010.

The Audit and Accounts Committee met six times in 2017, with an attendance rate of 96%.

As part of the duties set out in its Internal Rules, which were updated in 2018 to include in particular compliance topics, the Audit and Accounts Committee is more specifically in charge of the following:

Duties	Activity of the Audit and Accounts Committee
Monitoring the financial information preparation process	**Recurring topics** • review of the annual consolidated financial statements, the half-yearly and quarterly financial information and the annual Company financial statements and forecasts prior to their consideration by the Board of Directors • assessment of the suitability and consistency of accounting principles and policies • review of the options and assumptions used in the preparation of the financial statements • review of provisions • review of draft results press releases, particularly the accounting content • review of the Company's management forecast documents • review of the impact of major transactions planned by the Group • review of liabilities related to pensions and similar benefits, off-balance sheet commitments (particularly the most significant new contracts) and derivative instruments • preparation and submission of reports as set out in the Internal Rules of the Board of Directors, including the draft management report and draft reference document • review of Arkema's corporate social responsibility policy and changes to the policy as part of certification by the independent third party • monitoring of the Group's cash and debt positions • review of the Group's tax situation **Specific topics in 2017** • allocation of the purchase price of Den Braven • project to acquire XL Brands • review of the cybersecurity situation with François Enaud • review of the financial impacts of Hurricane Harvey • monitoring of the SAP Ambition project • application of new IFRSs • review of the new provisions relating to statutory auditors' annual reports
Overseeing the efficiency of internal control and risk management systems	**Recurring topics** • review of the Group's risks and of the risk map • review of internal control procedures • review of internal auditor work programs and their conclusions • assessment of the organization of delegations of authority • regular updates on developments of significant claims and disputes • preparation and submission of the section of the management report on internal control and risk management • review of the Group's compliance situation (particularly in terms of anti-trust, embargoes, anti-corruption and duty of care) **Specific topics in 2017** • monitoring of the application of the provisions set out in the Sapin II Law, particularly those relating to anti-corruption and duty of care
Monitoring relations with statutory auditors and their independence	**Recurring topics** • oversight of the audit of the annual consolidated and Company financial statements by the statutory auditors • review of external auditor work programs and their conclusions • submission of recommendations on the appointment of the statutory auditors and their fees, in compliance with independence requirements • review of compliance with all applicable laws and regulations when statutory auditors are commissioned to perform work other than auditing the financial statements • review of statutory auditors' fees and declaration of independence and approval of permitted non-audit services

Since the beginning of 2018, the Audit and Accounts Committee has met once with an attendance rate of 100%. In addition to recurring topics such as the review of the annual consolidated and Company financial statements for 2017, the meeting primarily focused on the review of the statutory auditors' additional report to the Audit and Accounts Committee for the year ended 31 December 2017.

In accordance with the AFEP-MEDEF Code and its internal rules, the Audit and Accounts Committee conducts an annual self-assessment of its work. The assessment for 2017 shows that the committee members were very satisfied with meeting preparation and proceedings.

3.3.4.2 THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE

Composition and operating procedures

As at 31 December 2017, the Nominating, Compensation and Corporate Governance Committee is made up of three directors: Thierry Morin (Chairman), François Enaud and Victoire de Margerie. In accordance with the AFEP-MEDEF Code, none of its members holds an executive position in the Company. All members of this committee were qualified as independent by the Board of Directors.

As mentioned in section 3.2.1.1 of this document, on 10 May 2018, Thierry Morin and François Enaud will have been directors of Arkema for twelve years and will therefore no longer qualify as independent. In light of Alexandre de Juniac's appointment as a member of the Nominating, Compensation and Corporate Governance Committee, subject to the ratification of his appointment as a director by the annual general meeting, the committee will once again mostly comprise independent members at the close of said meeting.

The Nominating, Compensation and Corporate Governance Committee generally meets three times a year. It meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The annual schedule of meetings is set by the committee Chairman during the prior year. The Chairman of the Nominating, Compensation and Corporate Governance Committee has appointed the Group's Executive Vice President Human Resources and Communication as secretary to the committee.

The Chairman and Chief Executive Officer attends the committee's meetings and is closely involved in its discussions on nominations, governance issues and the compensation policy for Executive Committee members. However, he does not take part in the committee's discussions relating to him.

Duties and activity of the Nominating, Compensation and Corporate Governance Committee

The Nominating, Compensation and Corporate Governance Committee met four times in 2017, with an attendance rate of 94%.

As part of its duties, the Nominating, Compensation and Corporate Governance Committee is more specifically in charge of the following:

Duties	Activity of the Nominating, Compensation and Corporate Governance Committee
Nominations	**Recurring topics** • submission to the Board of Directors of recommendations on the composition of the Board of Directors and its committees • annual review of the appointment process and succession plan for Executive Committee members and more particularly the Chairman and Chief Executive Officer; monitoring of the appointment of the Group's managers and submission of recommendations in this regard • annual review and submission to the Board of Directors of the list of directors who can be considered independent **Specific topics in 2017** • proposed appointments of Yannick Assouad as a director and Marie-José Donsion as Chairman of the Audit and Accounts Committee
Compensation	**Recurring topics** • review of the compensation of the Company's executives (Executive Committee members, including any executive directors), as well as their pension schemes, death/disability insurance and benefits in kind • submission of recommendations and proposals to the Board of Directors on the Group's policies on compensation, pension schemes and death/disability insurance, benefits in kind, and allocations of performance shares • definition of the criteria, characteristics and beneficiaries of performance share plans, and acknowledgment of the fulfillment of criteria • review of the principles for allocating attendance fees among members of the Board of Directors and the rules governing their expense reimbursements • preparation and submission to the Board of Directors of the reports provided for in the Internal Rules and, more generally, any documents required under the applicable regulations **Specific topics in 2017** • review of the policy on the Chairman and Chief Executive Officer's compensation in accordance with the provisions of the Sapin II Law and the proposed resolutions to be submitted to the annual general meeting • review of the criteria for determining the Chairman and Chief Executive Officer's variable compensation for 2017 • review of the proposed 2018 capital increase reserved for employees

Corporate governance	**Recurring topics** • monitoring and analysis of the main changes to corporate governance principles and review of best practices • preparation of the annual assessment of the Board of Directors' work • review of any conflicts of interest • review of any corporate governance or ethical issues referred by the Board of Directors or its Chairman for review • review of the Code of Conduct and Business Ethics and proposal of modifications when necessary • review of the draft Board of Directors' report on corporate governance • review of feedback from governance roadshows • analysis of the annual reports of the AMF and the *Haut Comité de Gouvernement d'Entreprise* and of any new laws and regulations relating to corporate governance

Since the beginning of 2018, the Nominating, Compensation and Corporate Governance Committee has met twice, with an attendance rate of 89%.

In addition to recurring topics such as the components of compensation of the Chairman and Chief Executive Officer and the Executive Committee members, the meeting focused primarily on the proposals for appointment as new directors of Marie-Ange Debon and Alexandre de Juniac, the renewal of office of Fonds Stratégique de Participation, whose permanent representative is Isabelle Boccon-Gibod, and the proposals for appointment as director representing shareholder employees of Jean-Marc Bertrand and Uwe Michael Jakobs.

In accordance with the AFEP-MEDEF Code and its internal rules, the Nominating, Compensation and Corporate Governance Committee conducts an annual self-assessment of its work. The assessment for 2017 shows that the committee members were very satisfied with meeting preparation and proceedings.

3.4 COMPENSATION AND BENEFITS AWARDED TO EXECUTIVES AND DIRECTORS

The principles and rules for determining the compensation and benefits awarded to executives and directors of the Company are set out by the Company's Board of Directors based on recommendations by the Nominating, Compensation and Corporate Governance Committee which mostly comprises independent directors.

The following information is disclosed in application of Articles L. 225-37-2 and L. 225-37-3 *nouveau* of the French Commercial Code as amended and created respectively by Order no. 2017-1162 of 12 July 2017, the AFEP-MEDEF Code, the recommendations of the *Haut Comité de Gouvernement d'Entreprise* in its activity report of October 2017, and AMF recommendation no. 2012-02 on corporate governance and executive compensation in listed companies referring to the AFEP-MEDEF Code – Consolidated presentation of the recommendations contained in the AMF annual reports, including the 2017 report, as published in November 2017.

3.4.1 Compensation of non-executive directors

The annual general meeting of 15 May 2014 set the maximum annual amount of attendance fees that the Board of Directors may allocate between its members and those of the specialized committees at €550,000.

The attendance fees payable to directors were determined in 2017 as follows (unchanged since 2014):

- an annual fixed amount of €20,000 per director paid on a *pro rata* basis in the event of a change during the year; and
- a predominant variable amount based on directors' attendance, as follows:
  - €3,000 per director present at a Board of Directors' meeting, except for exceptional meetings held by conference call and of a shorter duration for which the variable amount is set at €1,500 per director present, and
  - €2,000 per member present at a meeting of one of the specialized committees, except for the Chairman of each committee who receives €4,000. When exceptional meetings are held by conference call and are of a shorter duration, the variable portion is set at €1,000 per member in attendance and €2,000 for the Chairman.

The senior independent director receives an additional annual amount of directors' fees of €10,000.

Attendance fees awarded to directors for 2017 therefore amounted to €457,700 (compared to €472,700 for 2016), allocated as follows:

TABLE OF ATTENDANCE FEES AND OTHER COMPENSATION RECEIVED BY NON-EXECUTIVE DIRECTORS (TABLE 3 OF AMF RECOMMENDATIONS)

(In euros)	Amounts paid for 2017	Amounts paid for 2016
Yannick Assouad, director Attendance fees	25,400 (1)	None
Isabelle Boccon-Gibod, permanent representative of the FSP, director Attendance fees	53,000	53,000
Patrice Bréant, director representing shareholder employees Attendance fees	None (2)	None (2)
Marie-José Donsion, director Attendance fees	61,000	3,700 (3)
François Enaud, director Attendance fees	55,000	55,500
Bernard Kasriel, director Attendance fees	21,400 (4)	44,000

(In euros)	Amounts paid for 2017	Amounts paid for 2016
Victoire de Margerie, director Attendance fees	39,000	45,500
Laurent Mignon, director Attendance fees	33,500	36,500
Hélène Moreau-Leroy, director Attendance fees	51,000	53,000
Thierry Morin, director Attendance fees	52,000	50,000
Nathalie Muracciole, director representing employees Attendance fees	None (5)	None (5)
Marc Pandraud, director Attendance fees	41,000 (6)	41,000 (6)
Philippe Vassor, director Attendance fees	25,400 (4)	65,000
TOTAL	**457,700**	**472,700**

(1) Yannick Assouad has been a director of the Company since 23 May 2017.
(2) Patrice Bréant is on the payroll of Arkema France and, as such, does not receive any attendance fees.
(3) Marie-José Donsion has been a director of the Company since 9 November 2016.
(4) The terms of office of Bernard Kasriel and Philippe Vassor expired at the close of the annual general meeting of 23 May 2017.
(5) Nathalie Muracciole is on the payroll of Arkema France, and, as such, does not receive any attendance fees.
(6) Marc Pandraud declines all amounts due to him in return for his work as a director of Arkema and requests that the Company donate his attendance fees to charity.

With the exception of Patrice Bréant, director representing shareholder employees, and Nathalie Muracciole, director representing employees, who are each paid a salary by Arkema France, the non-executive directors received no other compensation or benefits in 2017 from the Company. Furthermore, no compensation other than that mentioned above and paid by the Company was paid to non-executive directors by other Group companies during the year.

On the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided at its meeting of 24 January 2018 to increase the annual fixed amount per director to €25,000, it being noted that the variable amount and method of allocation of attendance fees remain unchanged. As a result, the Board of Directors will ask shareholders at the annual general meeting of 18 May 2018 to increase the maximum annual amount of attendance fees that the Board of Directors may allocate between its members and those of the specialized committees to €650,000 (13th resolution). For further details on this resolution, see sections 6.2.2 and 6.3 of this document.

3.4.2 Compensation of executive officers

At the date of this document, the Chairman and Chief Executive Officer is the Company's sole executive director.

3.4.2.1 COMPENSATION PRINCIPLES

The policy and principles governing the compensation of the Chairman and Chief Executive Officer are globally defined by the Board of Directors at each renewal of his term of office and for the duration of his term of office, on the recommendation by the Nominating, Compensation and Corporate Governance Committee which mostly comprises independent directors, in accordance with the AFEP-MEDEF Code recommendations. The Board of Directors conducts an overall assessment of the Chairman and Chief Executive Officer's compensation package as well as a detailed review of its components, to ensure that the compensation package remains simple, easy to understand, balanced and consistent. In particular, it ensures that the compensation policy is aligned with the Group's medium- and long-term strategic priorities and is linked both to the Group's financial performance and to the Chairman and Chief Executive Officer's individual performance and responsibilities.

The Chairman and Chief Executive Officer does not take part in the discussions of the Nominating, Compensation and Corporate Governance Committee or those of the Board of Directors concerning his compensation.

The compensation policy for the Chairman and Chief Executive Officer aims to provide incentives and to secure loyalty, in accordance with market practice for equivalent positions in similar French and international chemical companies and in French companies with similar market capitalizations, and to align the Company's compensation structure with those of such companies. It is also consistent with the policy applicable to all executives of the Group.

On the basis of the above, in accordance with the decision of the Board of Directors of 2 March 2016, the structure of the Chairman and Chief Executive Officer's compensation, for the duration of his term of office as renewed on 7 June 2016, comprises (i) annual fixed compensation, (ii) annual variable compensation linked to the achievement of specific objectives reflecting the Group's performance for the year, and (iii) long-term compensation in the form of an annual award of performance shares. A component enabling the Chairman and Chief Executive Officer to build up his retirement completes this package since the termination of the supplementary defined benefit pension scheme from which he benefited up until 7 June 2016. These components are divided in a balanced manner between short-term and long-term components, in line with the compensation of the Group's other executives and employees. They are mostly linked to the achievement of specific, quantified targets that reflect the Group's performance and are supporting the Company's development and the value creation over the long term, thus ensuring that the interests of the executive officer are aligned with those of the shareholders and all stakeholders. In addition, the Chairman and Chief Executive Officer benefits from a termination indemnity in the event of forced departure.

The policy and principles set out in this section have been defined for the position of Chairman and Chief Executive Officer, as exercised at the date of this document and based on the current business scope of the Group. In the event that the Chairman and Chief Executive Officer was to be replaced during the year, for any reason whatsoever, the components and general principles of this policy should continue to be applicable. They may, however, be adjusted, if necessary, to reflect the duties and responsibilities of the new executive officer as well as the circumstances in which he took up office.

In compliance with the provisions of Articles L. 225-37-2 and R. 225-29-1 of the French Commercial Code, the policy and principles of the Chairman and Chief Executive Officer's compensation were approved by the Company's shareholders at the annual general meeting of 23 May 2017 and will be submitted to the shareholders' vote again at the annual general meeting to be held on 18 May 2018 (11th resolution). They remain unchanged for 2018. For further details on the corresponding resolution, see section 6.2.2 of this document.

Annual fixed compensation

In accordance with the AFEP-MEDEF Code, the annual fixed compensation is reviewed each time the Chairman and Chief Executive Officer's term of office is renewed, *i.e.*, once every four years. It is determined by taking into account the duties and responsibilities of the Chairman and Chief Executive Officer and changes in the Group's size and profile. In addition, it is benchmarked with the compensation level of chief executive officers of comparable industrial companies. This compensation was last modified when the Chairman and Chief Executive Officer's term of office as director was renewed by the annual general meeting on 7 June 2016.

Annual variable compensation

Annual variable compensation is determined taking into account the achievement of specific, precise and demanding quantifiable and qualitative targets aligned with the Group's strategy and priorities. These targets are set on an annual basis by the Board of Directors on recommendation by the Nominating, Compensation and Corporate Governance Committee.

The annual variable compensation may represent up to 150% of the annual fixed compensation.

The criteria adopted are as follows:

- three quantifiable criteria representing a maximum of 110% of annual fixed compensation (and 73.5% of the criteria used to determine the variable compensation):
  - EBITDA, for a maximum of 55% of annual fixed compensation, which aligns the compensation of the Chairman and Chief Executive Officer with the annual financial performance of the Group and in particular rewards the success of the actions undertaken, the ability to adapt to changing market conditions and, more generally, the good management of the Group by the Chairman and Chief Executive Officer,
  - recurring cash flow, for a maximum of 27.5% of annual fixed compensation, which rewards the Group's ability to generate the cash necessary to finance its strategic ambitions and in particular its capital expenditure plans, acquisition program and dividend policy while maintaining a solid balance sheet, and
  - contribution of new developments, for a maximum of 27.5% of annual fixed compensation, which promotes innovation, the development of new customers and the launch of new applications as well as the completion of major investment projects in line with the Group's targeted growth strategy.

It should be noted that although the targets to be met are set out in detail and quantified on an annual basis, the amounts involved are not disclosed for confidentiality purposes, in particular with regard to competitors. However, the Group does disclose every year the achievement rates for each criterion; and

- qualitative criteria representing a maximum of 40% of annual fixed compensation (and 26.5% of the criteria used to determine the variable compensation). These criteria are defined precisely each year and are mainly linked to the implementation of the Group's long-term strategy by the Chairman and Chief Executive Officer and the day-to-day management of the Group. Around one third of these criteria are based on quantifiable components.

In accordance with the provisions of Article L. 225-37-2 of the French Commercial Code, the payment of this annual variable compensation is subject to the approval by the annual general meeting of the Chairman and Chief Executive Officer's compensation components in accordance with the conditions provided for under Article L. 225-100 of said code.

Long-term compensation: performance shares

Like a number of Group employees, the Chairman and Chief Executive Officer receives an annual allocation of performance shares that directly links a significant portion of his compensation to the Company's long-term performance.

The number of shares allocated each year is reviewed each time the Chairman and Chief Executive Officer's term of office is renewed, *i.e.*, once every four years, as part of the overall review of his compensation structure. The allocation comprises a fixed number of shares set for the duration of his term of office, taking into account, as for the annual fixed compensation, the grantee's duties and responsibilities and changes in the Group's size and profile. It was also assessed, on renewal of the Chairman and Chief Executive Officer's term of office and based on its fair value, in view of the percentage of the total compensation of the Chairman and Chief Executive Officer it accounts for, so that it represents a significant part of this latter, *i.e.*, around 40%.

In accordance with the law, the AFEP-MEDEF Code and market recommendations:

- performance shares awarded to the Chairman and Chief Executive Officer only vest subject to a condition of presence and to performance conditions evaluated over a period of at least three years, which is followed by a two-year holding period, *i.e.*, a total vesting-holding period of five years;
- since 2016, the shares awarded to the Chairman and Chief Executive Officer in respect of performance share plans may not exceed 10% of all shares awarded in any one year;
- the Chairman and Chief Executive Officer is required to retain at least 30% of his vested shares for as long as he remains in office, as well as a number of shares obtained upon exercise of stock options corresponding to at least 40% of the net capital gain on acquisition. These obligations are suspended once the total value of the Arkema shares held, whatever their origin, is equivalent to 200% of his annual gross fixed compensation. However, when the total value of the shares held by the Chairman and Chief Executive Officer, whatever their origin, represents the equivalent of two years of his gross annual fixed compensation, he is required to hold:
  - at least 10% of the shares that vest after this threshold is reached, and
  - a number of shares corresponding to at least 10% of the net capital gain on acquisition from the exercise of stock options and the sale of the resulting shares;
- the annual performance share plans provide that, as is the case for any other grantee within the Group, in the event of departure of the Chairman and Chief Executive Officer, except in the case of serious or gross misconduct, the Board of Directors may decide, in line with current good governance practice, to maintain the benefit of the shares awarded at the date of termination of his functions that are not fully vested at that date, the final vesting rate still remaining subject to the achievement of the performance criteria provided for in the plans concerned.

The performance criteria for the vesting of the performance shares to the Chairman and Chief Executive Officer are aligned with the Group's long-term objectives, as presented during its Capital Markets Day in July 2017. They should continue to relate to:

- REBIT margin, which reflects the Group's transformation and, in particular, its ambition to strongly develop the share of adhesives in its business mix, and helps monitor the progress made by the Group in reducing its capital intensity and enhancing its resilience;
- EBITDA to cash conversion rate;
- comparative Total Shareholder Return (TSR) which helps benchmark the Arkema share performance against a peer group by factoring in both changes in share price and dividends. This criterion helps align even more closely the interests of beneficiaries with those of shareholders. The composition of the peer group is validated each year by the Board of Directors and may evolve to take account of changes in the competitive landscape; and
- return on capital employed (ROCE), which helps assess the profitability of investments made and therefore the Group's discipline in selecting its investments and using its resources and its ability to create value over the long term.

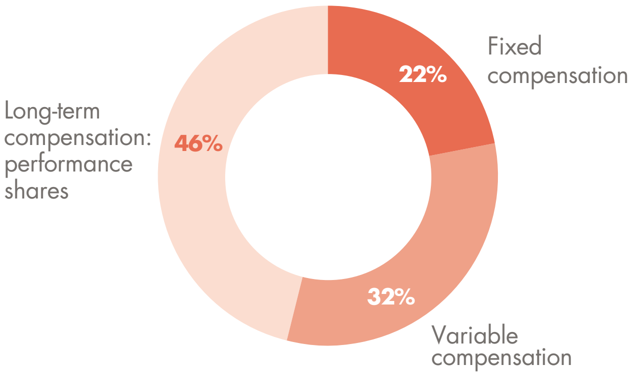
Taking into account all four criteria and the reward for outperformance if the Group significantly exceeds its targets, the overall vesting rate may represent up to a maximum of 110% of the initial grant.

The targets set for these criteria are fully consistent with the medium- and long-term targets announced to the financial market and are similar to the internal targets.

The details of these criteria as defined for the 2017 performance share plan are presented by way of example in section 3.5.1 of this document.

In accordance with the recommendations of the AFEP-MEDEF Code, each year the Chairman and Chief Executive Officer formally undertakes not to use any financial instruments to hedge the risk of losses on the performance shares that he has been granted by the Company during his term of office as Chairman and Chief Executive Officer and as long as he remains in office.

By way of illustration, subject to the approval of the Chairman and Chief Executive Officer's compensation by the Company's shareholders in accordance with the conditions provided for under Article L. 225-100 of the French Commercial Code, thereby enabling payment of his annual variable compensation, and based on the valuation of the performance shares awarded in November 2017, the breakdown of the three components of the Chairman and Chief Executive Officer's compensation for 2017 was as follows:



Pension benefits

Since the Chairman and Chief Executive Officer's term of office was renewed in June 2016, when the supplementary defined benefit pension scheme governed by Article L. 137-11 of the French Social Security Code (*Code de la sécurité sociale*) from which he benefited since 2006 was terminated, the Chairman and Chief Executive Officer receives an additional annual payment corresponding to 20% of his total fixed and variable compensation for the year concerned, to enable him to build up his supplementary retirement benefits year after year.

Thierry Le Hénaff has committed to invest this amount, net of any contributions and tax, in investment vehicles dedicated to the financing of his supplementary retirement benefits.

Termination indemnity

The Chairman and Chief Executive Officer is entitled to compensation for termination of office in the event of forced departure, regardless of the form of the departure, including dismissal before the end of the term of office or non-renewal of such term of office on expiry, linked to a change in control or strategy, subject to the conditions approved by the annual general meeting of 7 June 2016. No compensation for termination of office will be paid in the event of serious or gross misconduct. The compensation amount would be calculated by reference to the achievement of five quantitative criteria (total recordable injury rate, annual variable compensation, comparative EBITDA margin, working capital and return on capital employed) and cannot exceed twice his total annual gross fixed and variable compensation. The calculation base would correspond to the fixed annual compensation for the year in which the forced departure occurs and the average of the last two years of variable compensation paid prior to the departure.

The maximum termination indemnity that would be payable is reduced to 18 months of total annual gross compensation (fixed and variable) beyond 60 years old, and to 12 months beyond 62-and-a-half years old. No compensation would be paid in the event of departure beyond the age of 65.

Other benefits

The Chairman and Chief Executive Officer has the use of a company car and is covered by executive officer unemployment insurance.

In accordance with the provisions of Article L. 225-37-2 of the French Commercial Code, as amended by Order no. 2017-1162 of 12 July 2017, the compensation principles stated above are subject to the approval of the Company's shareholders at the annual general meeting of 18 May 2018 (11th resolution).

3.4.2.2 IMPLEMENTATION OF COMPENSATION POLICY

3.4.2.2.1 2018 variable compensation criteria

In accordance with the compensation policy of the Chairman and Chief Executive Officer described in section 3.4.2.1 of this document, the Chairman and Chief Executive Officer's annual variable compensation for 2018 may reach, as was the case in previous years, a maximum of 150% of his annual fixed compensation. It will continue to be based on quantifiable criteria of the same type as in previous years, relating to EBITDA, recurring cash flow and contribution of new developments, and on qualitative criteria relating to the Group's priorities.

For the 2018 qualitative criteria, the Board of Directors will focus in particular on progress on major investment projects for the Group (doubling thiochemical production capacity in Malaysia; plan to invest around €300 million in specialty polyamides in Asia; 30% increase in Sartomer's production capacity in China); in adhesives, further implementation of integration synergies between Bostik and Den Braven, the integration of XL Brands and additional bolt-on acquisitions; adaptation to the rising costs of raw materials; the start-up of increased PVDF and PEKK production capacities; the ramp-up of the digital transformation program, the further implementation of the divestment program and the progress made on the main planned development projects which have not yet been announced by the Group. The Board will also pay particular attention to the Group's ability to maintain its current very good safety record, its management of fixed costs, progress made in the area of corporate social responsibility, and initiatives relating to operational excellence and talent development.

In accordance with the provisions of Article L. 225-37-2 of the French Commercial Code, payment of the annual variable compensation due for 2018 will take place subject to the approval of the Chairman and CEO compensation components by the Company's 2019 annual general meeting in accordance with the provisions of Article L. 225-100 of said code.

3.4.2.2.2 Components of compensation due or awarded to the Chairman and Chief Executive Officer for 2017 submitted to a shareholder vote

In accordance with the provisions of Article L. 225-100 of the French Commercial Code as amended by the Sapin II Law and by Order no. 2017-1162 of 12 July 2017, the following presentation of the components of compensation due or awarded to Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, for the year ended 31 December 2017, is submitted to the shareholders' vote at the annual general meeting of 18 May 2018 (12th resolution).

COMPONENTS OF COMPENSATION DUE OR AWARDED TO THIERRY LE HÉNAFF FOR 2017

Components of compensation due or awarded for 2017	Amounts or accounting valuation submitted to vote	Presentation
Fixed compensation	€900,000	In accordance with the renewal of the term of office as a director of Thierry Le Hénaff, approved at the annual general meeting of 7 June 2016, his annual fixed compensation was set at €900,000 per year, from this date and for the duration of his term as a director.
Annual variable compensation	€1,350,000	The amount of the variable part due for 2017, which could represent up to 150% of the annual fixed compensation, was set by the Board of Directors on 21 February 2018, on the basis of the quantifiable and qualitative criteria set by the Board of Directors in 2017 and the fulfillment of these criteria noted on 31 December 2017, as follows: • **concerning the three quantifiable criteria linked** to the Group's financial performance, the achievement rates by criterion were as follows: ◦ 100% for EBITDA, whose weighting represents 55%, taking into account the excellent performance of the Group, with EBITDA up 17% in 2017 at €1,391 million in an economic environment characterized by higher raw material prices and the strengthening of the euro, in particular against the US dollar. Arkema has therefore largely exceeded the target announced in 2014 to increase EBITDA to €1.3 billion in 2017 compared to €784 million in 2014; ◦ 100% for recurring cash flow, whose weighting represents 27.5%. Recurring cash flow reached an excellent level again in 2017, totaling €629 million versus €477 million in 2016. This cash generation enabled the Group to significantly reduce its net debt to €1,056 million (versus €1,482 million at 31 December 2016). This performance reflects the further strict management of capital expenditure and working capital in a significantly less favorable raw material context; and ◦ 100% for the contribution of new developments, whose weighting represents 27.5%. The Board of Directors took into account the commercial successes of the main innovation platforms such as 3D printing, materials for rechargeable batteries and photovoltaic cells, innovative solutions in consumer electronics and sport, lighter materials for the automotive industry, several products that enhance home efficiency and insulation including large-format tile adhesives and high-thickness leveling screeds, adhesives for thinner diapers and encapsulation hot-melts for the automotive industry, as well as the diversification of the Group's downstream acrylics into higher value-added products and the Group's strengthened presence at key strategic customers with high development potential. As a result, the variable compensation due in respect of quantifiable criteria amounted to 110% of annual fixed compensation; and • **concerning the qualitative criteria relating** for the most part to the implementation of the Group's strategy and operating priorities, the performance was once again deemed excellent at the end of a year 2017 marked by the successful integration of Den Braven and the implementation of initial synergies, as well as the acquisition of XL Brands. The Board of Directors also acknowledged the completion or progress of several industrial projects that are complex, significant and key for the Group's long-term positioning, such as the doubling of specialty molecular sieve production capacity at the Honfleur site in France, the ramp-up of PEKK in the United States and the development of thiochemicals in Malaysia. In addition, the Board of Directors noted the persistently strict management of fixed costs, working capital (with the ratio of working capital to sales historically low at 13.1% versus 14.5% in 2016, excluding Den Braven, acquired at end-2016) and capital intensity (in 2017, recurring capital expenditure represented 5.2% of sales versus 5.6% in 2016). Lastly, the Group's safety record was maintained at a very good level (TRIR of 1.6 accidents per million hours worked). In light of all the Group's achievements, and in particular those presented above, the achievement rate of these qualitative criteria was set at 100%. Consequently, the variable compensation due in respect of qualitative criteria was set at 40% of the annual fixed compensation. In total, the variable compensation for 2017 amounts to €1,350,000. It reflects the very strong performance for the year and the continued transformation of the Group's profile. It represents 150% of the 2017 annual fixed compensation and an overall achievement rate of 100%. The payment of this annual variable compensation is subject to the shareholders' approval at the annual general meeting to be held on 18 May 2018 (12th resolution).
Deferred variable compensation	N/A	Thierry Le Hénaff receives no deferred variable compensation.

Components of compensation due or awarded for 2017	Amounts or accounting valuation submitted to vote	Presentation
Exceptional compensation	N/A	Thierry Le Hénaff receives no exceptional compensation.
Attendance fees	N/A	Thierry Le Hénaff receives no attendance fees from Arkema.
Stock options	N/A	Thierry Le Hénaff does not receive any stock options.
Performance shares	€1,907,700	Making use of the authorization granted by the annual general meeting of 7 June 2016 (17th resolution), at its meeting of 8 November 2017, the Board of Directors awarded 30,000 performance shares (representing 0.04% of share capital) to Thierry Le Hénaff (out of a total of 360,100 shares granted to around 1,400 grantees, representing 8.3% out of a maximum of 10%). The shares will vest at the end of a three-year period subject to a presence condition and if four performance targets are met: REBIT margin, EBITDA to cash conversion rate, comparative Total Shareholder Return and return on capital employed. Each criterion applies for 25% of the awarded rights. The vesting period is followed by a two-year mandatory holding period. Further details on the criteria may be found in section 3.5.1 of this document.
Pension	€450,000	Since 7 June 2016, when the supplementary defined benefit pension scheme (governed by Article L. 137-11 of the French Social Security Code) from which he benefited was terminated, Thierry Le Hénaff benefits from an additional annual payment corresponding to 20% of his total fixed and variable compensation for the year concerned, to enable him to build up his supplementary retirement benefits, year after year. Thierry Le Hénaff has committed to invest this entire amount, net of any contributions and tax, in investment vehicles dedicated to the financing of his supplementary retirement benefits.
Benefits in kind	€6,720	Thierry Le Hénaff has the use of a company car.

COMPONENTS OF COMPENSATION PAID OR AWARDED FOR 2017 ALREADY APPROVED BY THE ANNUAL GENERAL MEETING

Termination indemnity	*No payment*	*Thierry Le Hénaff benefits, as part of his term of office, from a termination indemnity in an amount not exceeding two years' gross fixed and variable compensation, calculated based on the achievement of five quantitative criteria set by the Board of Directors and approved by the shareholders' general meeting (total recordable injury rate (TRIR), annual variable compensation, comparative EBITDA margin, working capital and return on capital employed).* *The amount of this indemnity will be calculated on the basis of the fulfillment of the following five demanding performance conditions:* • *TRIR: the total recordable injury rate (TRIR) would have to have decreased by at least 5% per year (average compound rate) between 31 December 2010 and the date at which the performance condition is assessed;* • *annual variable compensation: on average, the annual variable compensation paid during the three years preceding departure would have to be at least 50% of the maximum amount payable;* • *return on capital employed: the average of net operating income over capital employed ((recurring operating income - actual income tax) (1)/(capital employed - provisions)) for the last three years prior to the termination date would have to exceed the Group's cost of capital for the year preceding his re-election, i.e.: 7% in 2015. Capital employed and provisions are those at year-end, and recurring operating income of companies acquired during the year would be included on a full year basis and that of divested companies would be excluded;* • *working capital: the year-end working capital over annual sales ratio would have to have decreased by at least 2.5% per year (average compound rate) between 31 December 2005 and the date at which the performance condition is assessed; and* • *comparative EBITDA margin: this financial performance indicator will continue to be measured against that of competitors in the chemicals industry comparable to the Arkema Group. The growth in the Group's EBITDA margin would have to be at least equal to the average growth in the EBITDA margin of the companies in the peer group between 31 December 2005 and the date at which the performance condition is assessed.* *The value of the end-of-period index to be taken into account for the computation of the above criteria would be the average of the indices calculated at Group level over the three years for which financial statements have been published prior to the termination date.*

(1) On recurring income (in particular excluding the impact of M&A, restructuring operations).

		The termination indemnity allocation scale is determined as follows: • *if 5 conditions were met, Thierry Le Hénaff would receive 100% of the maximum of the termination indemnity;* • *if 4 out of 5 conditions were met, Thierry Le Hénaff would receive 90% of the maximum of the termination indemnity;* • *if 3 out of 5 conditions were met, Thierry Le Hénaff would receive 70% of the maximum of the termination indemnity;* • *if 2 out of 5 conditions were met, Thierry Le Hénaff would receive 40% of the maximum of the termination indemnity;* • *if fewer than two conditions were met, no termination indemnity would be paid.* *In addition, the Board of Directors has decided to gradually reduce the maximum termination indemnity that would be payable to 18 months of total annual gross compensation (fixed and variable) beyond 60 years old, and 12 months of total annual gross compensation (fixed and variable) beyond 62-and-a-half years old. No compensation would be paid in the event of departure beyond the age of 65.* *In accordance with the related-party agreements and commitments procedure, this commitment was authorized by the Board of Directors'meeting of 2 March 2016, and approved by the annual general meeting of 7 June 2016 (5th resolution).*
Non-compete compensation	*N/A*	*Thierry Le Hénaff is not entitled to any non-compete compensation.*

3.4.2.3 SUMMARY TABLES DRAWN UP IN ACCORDANCE WITH THE AFEP-MEDEF CODE AND AMF RECOMMENDATIONS

SUMMARY OF COMPENSATION, STOCK OPTIONS AND SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER, EXCLUDING COMPENSATION INDEMNITIES (TABLES 1 AND 2 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	2017		2016	
(Gross amounts in euros)	Due for the year	Paid during the year	Due for the year	Paid during the year
Fixed compensation	900,000	900,000	835,000 (1)	835,000 (1)
Variable compensation (2)	1,350,000	1,252,500	1,252,500	1,125,000
Exceptional compensation	None	None	None	None
Attendance fees	None	None	None	None
TOTAL	**2,250,000**	**2,152,500**	**2,087,500**	**1,960,000**
Pension (3)	450,000	254,250	254,250	102,000
Benefits in kind – car	6,720	6,720	6,720	6,720
Executive officer unemployment insurance	17,189	16,921	16,921	16,921
Performance shares (4)		1,907,700		1,410,000

(1) Annual fixed base as from 7 June 2016: €900,000.

(2) Variable compensation is paid in the year following the period for which it is calculated based on the criteria set out in section 3.4.3.2 of this document and, since 2017, subject to shareholder approval of the components of compensation paid or awarded for the period, in accordance with the provisions of Article L. 225-100 of the French Commercial Code.

(3) 20% of the annual compensation (fixed and variable) since 7 June 2016.

(4) Value of performance share rights awarded during the year calculated according to the method used in the consolidated financial statements, detailed in note 27.2 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

PERFORMANCE SHARES GRANTED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER IN 2017 (TABLE 6 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	No. and date of plan	Number of shares granted in 2017	Vesting date/End of holding period	Value of shares according to the method used in the consolidated financial statements
Thierry Le Hénaff	2017 plan of 8 November 2017 (three-year vesting period + two-year holding period)	30,000 [1]	9 November 2020 and 9 November 2022	€1,907,700

(1) Representing 0.04% of share capital.

In 2017, following the acknowledgment by the Board of Directors of the fulfillment, for 71%, of the performance conditions applicable to the 2013 performance share plan, 18,525 performance shares awarded to Thierry Le Hénaff under this plan vested. These shares are not subject to a holding period.

PERFORMANCE SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER FOR WHICH THE HOLDING PERIOD EXPIRED IN 2017 (TABLE 7 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	No. and date of plan	Number of shares for which the holding period ended in 2017	Vesting conditions
Thierry Le Hénaff	2012 plan no. 2 of 9 May 2012	13,000 subject to compliance with the specific holding requirements	Conditions of presence and performance: 2012 EBITDA (50%) and growth in the Group's 2012/2013 average margin compared to a peer group (50%)
	2013 plan of 6 November 2013	18,525 subject to compliance with the specific holding requirements	Conditions of presence and performance: 2016 EBITDA (50%) and growth in the Group's 2013/2016 average EBITDA margin compared to a peer group (50%)

STOCK OPTIONS EXERCISED DURING 2017 BY THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER (TABLE 5 OF AMF RECOMMENDATIONS)

	No. and date of plan	Number of options exercised	Exercise price
Thierry Le Hénaff	2010 plan of 10 May 2010	21,286	€29.33
	2011 plan of 4 May 2011	10,772	€65.92

In accordance with the AFEP-MEDEF Code and AMF recommendations, the history of stock options and performance share awards, for the plans in place, is set out in the tables presented in section 3.5 of this document.

SUMMARY OF EMPLOYMENT CONTRACT, PENSION BENEFITS AND OTHER BENEFITS IN 2017 (TABLE 11 OF AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	Employment contract		Supplementary defined benefit pension scheme		Compensation or benefits due or potentially due upon termination or change of position		Indemnities resulting from non-compete agreement	
	Yes	No	Yes	No	Yes	No	Yes	No
Thierry Le Hénaff		X		X	X			X

3.4.3 Compensation of Executive Committee members other than the Chairman and Chief Executive Officer

3.4.3.1 COMPENSATION PRINCIPLES

Every year, the Nominating, Compensation and Corporate Governance Committee reviews the fixed and variable compensation structure proposed by the Chairman and Chief Executive Officer for Executive Committee members. This compensation comprises:

(i) two short-term components:

- an annual fixed compensation based on the scope of the respective duties and responsibilities of each Executive Committee member,
- an annual variable amount, that may represent up to 85% of the annual fixed compensation, based on general quantifiable targets identical to those set for the Chairman and Chief Executive Officer, and closely aligned with the Group's financial performance and the implementation of its strategy, and quantitative and qualitative targets designed to reward the individual performance of each Executive Committee member within their respective area of responsibility; and

(ii) a long-term incentive through the award of performance share rights fully subject to performance conditions.

In the past, Executive Committee members also received stock options (see section 3.5 and note 27 to the consolidated financial statements for the year ended 31 December 2017 in section 4.3.3 of this document).

Since 2010, Executive Committee members have been required to retain at least 20% of their vested shares in registered form for as long as they remain in office, as well as a number of shares obtained upon the exercise of stock options corresponding to at least 40% of the net capital gain on acquisition. These obligations are suspended once the total value of the Arkema shares held, whatever their origin, is equivalent to 150% of their gross annual fixed compensation. The Chairman and Chief Executive Officer is subject to specific individual holding requirements (see section 3.4.2.1 of this document).

Each year Executive Committee members certify that they have not used any financial instruments to hedge the risk of losses on the stock options or performance share rights that have been, or will be, awarded to them by the Company.

The amount and structure of Executive Committee members' compensation packages are regularly compared to the market practices for equivalent positions in companies operating in the same industry with similar market capitalizations.

Executive Committee members do not receive any attendance fees as directors of Group companies.

3.4.3.2 ANNUAL COMPENSATION OF EXECUTIVE COMMITTEE MEMBERS OTHER THAN THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

The total gross fixed compensation awarded by the Company to Executive Committee members for 2017 amounted to €2,313,000.

The total variable compensation paid by the Company to Executive Committee members in 2017 in respect of 2016 amounted to €1,809,595.

Based on the targets approved by the Board of Directors at its meeting on 27 February 2017, namely (i) general quantifiable targets identical to those that apply to the Chairman and Chief Executive Officer and relating to growth in EBITDA, recurring cash flow, and margin on variable costs of new developments, and (ii) individual quantitative and qualitative targets for each member, the Board of Directors' meeting of 21 February 2018, on recommendation by the Nominating, Compensation and Corporate Governance Committee, approved Executive Committee members' variable compensation for 2017, which could amount to up to 85% of the fixed compensation for each member. The total annual variable compensation awarded to Executive Committee members for 2017 stood at €1,857,720.

In addition, on recommendation by the Nominating, Compensation and Corporate Governance Committee, the Board of Directors set the Executive Committee members' compensation for 2018 as follows:

- total gross fixed compensation has been set at €2,393,000, in line with market practices and with the changes to the Group's compensation policy for the 2018 financial year;
- variable compensation will continue to be based on general quantifiable criteria related to the Group's financial performance as measured by targets for EBITDA, recurring cash flow and margin on variable costs of new developments, as well as on quantifiable and qualitative criteria specific to each member. Variable compensation may represent up to 85% of fixed compensation for each member.

Consequently, compensation due and paid to Executive Committee members, excluding the Chairman and Chief Executive Officer, for 2017 and 2016 was as follows:

	2017		2016	
(Gross amounts in euros)	Due for the year	Paid during the year	Due for the year	Paid during the year
Fixed compensation	2,313,000	2,313,000	2,185,000	2,185,000
Variable compensation	1,857,720	1,809,595	1,809,595	1,627,787
TOTAL	**4,170,720**	**4,122,595**	**3,994,595**	**3,812,787**

3.4.3.3 BENEFIT SCHEMES

Executive Committee members are covered by the same benefit schemes (death/disability and health insurance) as employees of Arkema France. They also benefit from a defined contribution pension scheme based on the part of their compensation that exceeds eight times the annual ceiling for social security contributions and is excluded from the contribution base for compulsory pension schemes. No Executive Committee member benefits from a supplementary defined benefit pension scheme.

3.4.4 Stock transactions by the Company's executives

Pursuant to article 223–26 of the AMF general regulation, the following table details the transactions declared by the individuals concerned by Article L. 621-18-2 of the French Monetary and Financial Code in 2017:

	Type of financial instrument	Acquisition	Subscription	Sale	Exchange	Exercise of stock options
Luc Benoit-Cattin	Arkema shares	-	-	3,800	-	5,300
	FCPE* units	-	-	1,061.2246	-	-
Bernard Boyer	Arkema shares	-	-	4,500	-	8,928
	FCPE* units	-	-	414.3922	-	-
Michel Delaborde	Arkema shares	-	-	12,532	-	13,961
	FCPE* units	-	-	-	-	-
Marie-José Donsion	Arkema shares	450	-	-	-	-
Thierry Le Hénaff	Arkema shares	-	-	23,807	-	32,058
Thierry Lemonnier	Arkema shares	-	-	10,035	-	20,535
	FCPE* units	-	-	-	-	-
Marc Schuller	Arkema shares	-	-	12,896	-	10,720
	FCPE* units	-	-	775.1922	-	-

* *FCPE invested in Arkema shares.*

3.5 STOCK-BASED COMPENSATION

Since the Company's stock market listing in 2006, Arkema has been eager to put in place stock-based compensation instruments in order to secure the loyalty of executives and certain employees, and involve them more closely in the Group's future growth as well as its stock market performance.

Accordingly, the Board of Directors put in place, from 2006, stock option and performance share plans.

No stock option plans have been set up since 2012.

STOCK-BASED COMPENSATION PRINCIPLES

The principles of the stock-based compensation policy by way of performance share grants, adopted by the Board of Directors on recommendation by the Nominating, Compensation and Corporate Governance Committee, and amended in 2016 as part of the renewal of the authorization to grant performance shares submitted to the annual general meeting of 7 June 2016, are as follows:

- closely involving executives, senior managers and certain employees who have performed exceptionally well or whom the Group wants to retain, in the Group's future growth and stock market performance in the medium term. In 2017, there were around 1,400 beneficiaries;
- setting a vesting period of three years for performance shares awarded to the Chairman and Chief Executive Officer and the members of the Executive Committee, followed by a holding period of two years, *i.e.*, a total vesting-holding period of five years;
- submitting the vesting of performance shares to demanding performance criteria. At the date of this document, awards without performance conditions have been limited to allocations representing no more than 70 shares. The threshold was 100 shares until 2015 and 80 shares in 2016;
- rewarding outperformance if targets are significantly exceeded, with the maximum achievement rate for each criterion ranging from 120% to 130% depending on the criterion, leading to a global allocation representing up to 110% of the grant;
- limiting the rights awarded to the Chairman and Chief Executive Officer in respect of annual performance share plans to a maximum of 10% of all rights awarded in any annual plan (versus 12% until 2016);
- avoiding any dilution for shareholders by allocating existing shares acquired under the share buyback program to holders of performance share rights; and
- in accordance with the AFEP-MEDEF Code, granting performance share plans at the same period every year, *i.e.*, in November since 2013.

In addition, in accordance with law and the AFEP-MEDEF Code, the Board of Directors sets a fixed number of shares obtained upon the exercise of stock options or vested shares that must be retained by the Chairman and Chief Executive Officer and by each Executive Committee member (see sections 3.4.2.1 and 3.4.3.1 of this document).

PERFORMANCE CRITERIA

Since 2016, the performance share plans are subject to four demanding performance criteria, each applying to 25% of the total award:

- REBIT margin (recurring operating income as a percentage of sales);
- EBITDA to cash conversion rate;
- comparative Total Shareholder Return; and
- return on capital employed (recurring operating income over average capital employed at the end of years Y and Y-1).

All the targets set for these criteria are fully consistent with the medium- and long-term targets announced to the financial market and are similar to the internal targets.

The performance criteria applied to performance share plans have been continuously strengthened since 2013 to take into account the significant changes to the Group's profile as well as demands from shareholders.

The accounting treatment of these stock-based compensation instruments is described in note 27 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

BLACK-OUT PERIODS

In compliance with regulation (EU) no. 596/2014 of 16 April 2014 on market abuse (known as the Market Abuse regulation or MAR), the AMF general regulation and the AFEP-MEDEF Code, and in order to prevent insider trading, Arkema has introduced black-out periods. During these periods, any person who has regular or one-time access to undisclosed accounting or financial information relating to Arkema and its subsidiaries is prohibited from trading in Arkema shares:

- 30 calendar days before the publication of the annual and half-yearly financial statements, as well as the day of publication; and
- 15 calendar days before the publication of quarterly financial information, as well as the day of publication.

These black-out periods notably apply to the Executive Committee and Management Committee members.

3.5.1 Free share and performance share plans

2017 PERFORMANCE SHARE PLANS

In accordance with the stock-based compensation policy in force within the Group and making use of the authorization given by the annual general meeting of 7 June 2016, the Board of Directors decided, at its meeting on 8 November 2017, to award 360,100 performance shares to some 1,400 beneficiaries, including the Chairman and Chief Executive Officer and the Executive Committee members.

For employees in France, the vesting period is three years, followed by a two-year holding period. For employees outside France, the vesting period is four years, with no holding period, so that the vesting of the shares may correspond to the chargeability of the related taxes.

The vesting of the shares is, for all beneficiaries, subject to their continued presence within the Group. In addition, for awards of more than 70 shares, vesting is entirely subject to the achievement of four demanding performance criteria.

The performance criteria and relative weighting are unchanged from the 2016 performance share plan. They relate to the REBIT margin, the EBITDA to cash conversion rate, the comparative Total Shareholder Return (TSR) and return on capital employed. For each of these criteria, performance will be assessed over a three-year period, from 2017 to 2019. However, for the REBIT margin and comparative TSR criteria, the vesting scales have been adapted as described below.

Accordingly, the four performance criteria applicable for the 2017 plan, each applying to 25% of the total award, are as follows:

- REBIT margin (recurring operating income as a percentage of sales)

Performance in respect of this criterion will be evaluated using the average REBIT margins for 2017, 2018 and 2019 ("average margin").

The targets for this criterion have been increased so that it continues to measure the Company's progress over the coming years, in line with the 2023 objectives presented at Arkema's Capital Markets Day held in July 2017. As a result, the vesting scale is now as follows:

Average margin	Vesting rate
9%	25%
9.25%	50%
9.75%	75%
10.25%	100%
10.75%	125%

Between these different values, the vesting rate will be determined based on a linear scale. If the average margin is below 9%, no share will vest in respect of this criterion.

The recurring operating income used for this criterion is the one published in the Group's annual consolidated financial statements.

- EBITDA to cash conversion rate (net cash flow over EBITDA)

Net cash flow corresponds to cash flows from operations and investments excluding the impact of acquisitions and divestments, exceptional investments, payment of dividends, cost of hybrid bonds, and any unrealized exchange differences on foreign currency funding of exceptional investments, with no impact on net debt. It will be restated to offset the impact of the raw material environment on changes in working capital.

The achievement rate will be determined using the average conversion rate for 2017, 2018 and 2019.

The vesting scale will be as follows:

Conversion rate	Vesting rate
25%	0%
35%	100%
40%	120%

Between these different values, the vesting rate will be determined based on a linear scale.

- Comparative Total Shareholder Return (TSR)

TSR will be determined over a three-year period.

With the addition of HB Fuller, one of the main players in the adhesives market and Arkema's direct competitor in this business, the peer group now comprises AkzoNobel, BASF, Clariant, DSM, Evonik, HB Fuller, Lanxess, Solvay and the CAC 40 index.

The vesting scale has been made more demanding and is now as follows:

Arkema's ranking by descending order of TSR	Vesting rate
1st and two percentage points above 2nd	130%
1st	120%
2nd	110%
3rd	100%
4th	75%
5th	50%
6th	25%
7th to 10th	0%

The TSR continues to be calculated as follows:

TSR = (share price at the end of the period - share price at the beginning of the period + sum of the dividends per share paid out during the period)/share price at the beginning of the period.

To minimize the effects of market volatility on stock prices, the share price used to determine prices at beginning and end of the period will be a six-month average; and

- return on capital employed or ROCE (recurring operating income over average capital employed at the end of years Y and Y-1)

The indicator used ("average ROCE") will be the average of ROCE for 2017, 2018 and 2019.

The vesting scale will be as follows:

Average ROCE	Vesting rate
10%	0%
11.5%	100%
12.5%	125%

Between these different values, the vesting rate will be determined based on a linear scale.

To determine ROCE in the context of performance share plans, recurring operating income and capital employed will be restated, in the event of a significant acquisition, to exclude the impact of such acquisition in the year of acquisition and the following two years.

The various indicators used to measure fulfillment of the performance criteria (recurring operating income, sales, net cash flow, EBITDA and capital employed) will be based on the annual consolidated financial statements published by Arkema in accordance with the international financial reporting standards (IFRS) applicable at the date on which the Board of Directors approved the performance share plan.

The overall award rate for all four criteria may not exceed 110%. Hence, the maximum number of shares that may be awarded is 396,110, *i.e.*, 27% of the total number of performance shares that may be awarded pursuant to the authorization granted by the annual general meeting on 7 June 2016.

It is also recalled that in accordance with the law and the AFEP-MEDEF Code, the Chairman and Chief Executive Officer and the members of the Executive Committee are subject to an additional requirement to retain the shares they have been awarded.

SUMMARY OF 2017 PERFORMANCE SHARE PLANS

	Plan for employees in France	Plan for employees outside France
Date of annual general meeting	7 June 2016	7 June 2016
Authorized performance share awards as a % of the Company's share capital	1.94%	
Date of the Board of Directors' meeting	8 November 2017	8 November 2017
Number of rights awarded	230,695	129,405
of which to the Chairman and CEO	30,000	-
Total by authorization	787,915 shares, *i.e.*, 1.04% of the share capital at the date of the annual general meeting (1)	
Origin of shares to be awarded when the rights vest	-	
Number of canceled rights (2)	20	190
Number of vested shares (3)	-	-
Number of rights still to vest at 31 December 2017	230,675	129,215
Vesting period	3 years	4 years
Holding period	2 years	None
Performance conditions	REBIT margin over the period from 2017 to 2019 (25%) EBITDA to cash conversion rate over the period from 2017 to 2019 (25%) Comparative TSR over the period from 2017 to 2019 (25%) Return on capital employed over the period from 2017 to 2019 (25%)	
Vesting rate	-	

(1) 2016 and 2017 plans. Maximum number of shares that may be awarded, taking into account the potential award of up to 110% of the share rights subject to performance conditions.
(2) Performance share rights canceled because the holders left the Group.
(3) Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example).

3

PREVIOUS FREE SHARE PLANS

The plans implemented from 2006 to 2013 have all expired.

2016 PERFORMANCE SHARE PLANS

	Plan for employees in France	Plan for employees outside France
Date of annual general meeting	7 June 2016	7 June 2016
Authorized performance share awards as a % of the Company's share capital	1.94%	
Date of the Board of Directors' meeting	9 November 2016	9 November 2016
Number of rights awarded	235,835	122,080
of which to the Chairman & CEO	30,000	-
Total by authorization	391,805 shares, *i.e.*, 0.52% of the share capital at the date of the annual general meeting [1]	
Origin of shares to be awarded when the rights vest	-	-
Number of canceled rights [2]	1,850	450
Number of vested shares [3]	500	-
Number of rights still to vest at 31 December 2017	233,485	121,620
Vesting period	3 years	4 years
Holding period	2 years	None
Performance conditions	REBIT margin over the period from 2016 to 2018 (25%) EBITDA to cash conversion rate over the period from 2017 to 2018 (25%) Comparative TSR over the period from 2016 to 2018 (25%) Return on capital employed over the period from 2016 to 2018 (25%)	
Vesting rate	-	

(1) Maximum number of shares that may be awarded, taking into account the potential award of up to 110% of the share rights subject to performance conditions.
(2) Performance share rights canceled because the holders left the Group.
(3) Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example).

2013, 2014 AND 2015 PERFORMANCE SHARE PLANS

	2013	2014	2015
Date of annual general meeting		4 June 2013	
Authorized performance share awards as a % of the Company's share capital		2%	
Date of the Board of Directors' meeting	6 November 2013	13 November 2014	9 November 2015
Number of rights awarded	250,000	275,000	345,120
of which to the Chairman & CEO	26,000	26,000	26,000
Total by authorization		887,238 shares, *i.e.*, 1.41% of the share capital at the date of the annual general meeting [1]	
Origin of shares to be awarded when the rights vest	-	-	-
Number of canceled rights [2]	53,186	650	3,220
Number of vested shares [3]	190,552	-	650
Number of rights still to vest at 31 December 2017	0	269,025	337,760
Vesting period	4 years	4 years	4 years
Holding period	None	None	None
Performance conditions	EBITDA growth by 2016 (50%), growth in average EBITDA margin over the period from 2013 to 2016 compared to that of a peer group (50%)	EBITDA growth by 2017 (35%), 2017 EBITDA margin compared to a peer group (30%), comparative TSR over the period from 2015 to 2017 (35%)	EBITDA growth by 2018 (35%), EBITDA to cash conversion rate in 2017 and 2018 (30%), comparative TSR over the period from 2016 to 2018 (35%)
Vesting rate	EBITDA growth: 67.5% Growth in EBITDA margin: 75% Overall achievement rate: 71.3%	EBITDA growth: 100% Comparative EBITDA margin: - Comparative TSR over the period from 2015 to 2017: 100% Overall achievement rate: -	-

(1) 2013, 2014 and 2015 plans.
(2) Performance share rights canceled because the holders left the Group or because the performance conditions were not met.
(3) Shares awarded to the grantees (including shares awarded before the end of the vesting period, in the event of death for example).

3.5.2 Stock option plans

In accordance with the stock-based compensation policy, no stock option plan has been granted since 2012.

Under the terms and conditions of the plans decided in 2010 and 2011, which are the only plans still in place, and in accordance with the AFEP-MEDEF Code and stakeholder requirements in this regard:

- stock options were made subject to performance criteria chosen to align medium-term stock-based compensation with the Group's strategy; and
- the exercise price was set by taking the average opening price of the shares during the twenty trading days prior to the date of the Board of Directors' meeting, with no discount applied.

As part of these plans, the Board of Directors authorized the grant of a number of options representing 1% of the Company's share capital at the date of the annual general meeting that authorized the plans.

At 31 December 2017, 146,333 stock options from the 2010 and 2011 plans were still outstanding, *i.e.*, 0.19% of the Company's share capital on that date.

In accordance with the law, and in order to preserve the beneficiaries' rights, an adjustment was made to the number of outstanding options and their exercise price as a result of the capital increase with preferential subscription rights carried out on 15 December 2014.

HISTORY OF STOCK OPTION PLANS (TABLE 8 IN THE AMF RECOMMENDATIONS AND AFEP-MEDEF CODE)

	2010		2011	
Date of annual general meeting	15 June 2009	15 June 2009	15 June 2009	15 June 2009
Maximum authorized stock option grants as a % of the Company's share capital		5%		
Date of the Board of Directors' meeting	10 May 2010	10 May 2010	4 May 2011	4 May 2011
Number of stock options granted	225,000	225,000	105,000	105,000
of which to the Chairman and CEO	35,000	35,000	29,250	29,250
Number of options granted following adjustments	230,044	233,513	109,082	109,082
of which to the Chairman and CEO following adjustments	36,361	36,361	30,386	30,386
Number of outstanding options at 31 December 2017	22,849	24,020	27,178	72,286
Total by authorization		660,000, *i.e.*, 1% of the share capital at the date of the annual general meeting		
Vesting period [(1)]	2 years	5 years	2 years	4 years
Holding period [(2)]	2 years	-	2 years	-
Expiry date	10 May 2018	10 May 2018	4 May 2019	4 May 2019
Exercise price *(in euros)*	30.47	30.47	68.48	68.48
Exercise price *(in euros)* following adjustments	29.33	29.33	65.92	65.92
Performance conditions (other than the exercise price)	2010 EBITDA (50%), growth in the Group's 2010/2011 average EBITDA margin versus 2005 compared to a peer group (50%)	2014 EBITDA margin	2011 ROCE	2011/2014 average EBITDA margin
Vesting rate	100%	93.3%	100%	100%

(1) Provided that the grantee is still employed by the Group when the options are exercised.
(2) From end of vesting period.

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FINANCIAL AND ACCOUNTING INFORMATION

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

4.1 COMMENTS AND ANALYSIS ON THE CONSOLIDATED FINANCIAL STATEMENTS

This section should be read jointly with the notes to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document, and in particular with the accounting policies described in note B.

All figures contained in this section are provided on a consolidated basis and in accordance with the Group's organization into three business divisions.

4.1.1 Indicators used in management analysis

The main alternative performance indicators used by the Group are defined in note C.1 to the consolidated financial statements presented in section 4.3.3 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):

- **effect of changes in scope of business:** effects of changes in scope of business arise on acquisition or disposal of an entire business or on first-time consolidation or deconsolidation of an entity. An increase or reduction in capacity is not analyzed as creating a change in the scope of business;
- **effect of foreign currency movements:** the effect of foreign currency movements is the mechanical impact of consolidating financial statements denominated in currencies other than the euro at different exchange rates from one period to another. The effect of foreign currency movements is calculated by applying the foreign exchange rates of the prior period to the figures of the current period;
- **effect of changes in prices:** the impact of changes in average sales prices is estimated by comparing the average weighted unit net sales price of a range of related products in the reference period with their average weighted unit net sales price in the prior period, multiplied, in both cases, by the volumes sold in the reference period;
- **effect of changes in volumes:** the impact of changes in volumes is estimated by comparing quantities delivered in the reference period with the quantities delivered in the prior period, multiplied, in both cases, by the average weighted unit net sales prices in the prior period.

4.1.2 Impact of seasonality

Due to the standard pattern of its business, the Group is exposed to seasonal effects. For example:

- demand for products manufactured by the Group is generally weaker 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 Europe;
- in some of the Group's businesses, particularly those serving the paint 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, both halves of the year are more balanced; and
- major multi-annual maintenance turnarounds at the Group's production plants, which are generally carried out in the second half of the year, also have an impact on seasonality.

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

4.1.3 Impact of changes to accounting standards

Changes to accounting standards and any related impacts are disclosed in note B. "Accounting policies" to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

4.1.4 Description of the main factors which affected sales and results in the period

In 2017, Arkema exceeded its medium-term financial targets set in 2014 and reported its best financial performance since its stock market listing in 2006. This confirms the quality of the Group's portfolio of businesses and strategy, the strength of its growth projects in its specialty businesses, the strong positioning in its intermediate chemical businesses and a balanced geographic presence.

In a volatile but buoyant macroeconomic environment, several factors contributed to the year-on-year growth in EBITDA:

- Bostik's growth, fueled in particular by the integration of Den Braven which was acquired in late 2016. Since the acquisition of Bostik in early 2015, the Group has actively developed its adhesives, which now generate 24% of its sales and for which EBITDA increased by 53% versus the €158 million achieved by Bostik in 2014;
- volume growth in advanced materials, driven by strong customer demand, in particular in Asia, for lighter materials, new energies and consumer goods (consumer electronics and sports). The start-up of new units, including the two-fold increase in specialty molecular sieve production capacity at Honfleur (France), and the additional 25% in PVDF production capacity at Changshu (China), also contributed to this performance;
- the Group achieved its objective of improving the EBITDA performance of its Fluorogases one year ahead of schedule, thus returning back to very good level of results in this Business Line. This improvement reflects both regulatory changes in Europe and a more intense environmental policy in China; and
- the ongoing rollout of the operational excellence program which, by combining measures to optimize variable costs and productivity, has helped to partly offset the impact of inflation on fixed costs.

Over and above these improvements reflecting the implementation of the Group's strategic priorities, a number of specific parameters also had a material impact on the Group's financial performance in 2017:

- stricter environmental regulations in China resulted in the temporary or permanent shutdown of certain production units which impacted the supply and demand balance in the region, thus triggering pressure and volatility in the prices of certain product lines such as acrylic monomers and fluorogases;
- increases, which in some cases were significant, in the price of energy and of certain raw materials which, despite the Group's actions to raise its selling prices, had a temporary negative impact on unit margins of the most downstream businesses;
- the gradual improvement in the balance between supply and demand for acrylic monomers (10% of Group sales) whose unit margins increased, as expected by the Group, from the low points seen in 2016 to a position between the low- and mid-point of the cycle in 2017. Margins should continue to improve in 2018 to the mid-point of the cycle;
- market conditions in the MMA/PMMA chain benefited from an even tighter supply/demand balance than in 2016, which was already a very good year. In view of the expected start-up of new units in 2018, notably in the Middle East, market conditions should normalize, at least partially, in 2018 compared to the excellent levels of 2017; and
- the euro strengthened against the US dollar during 2017, especially in the second half, to reach a rate of 1.20 at the end of the year. The average exchange rate for 2017 was 1.13, close to that of 2016 (1.11), resulting in a slightly negative translation effect for the year as a whole. However, this effect was amplified somewhat due to the weakening of a number of other currencies against the euro, such as the pound sterling and the Chinese renminbi.

4.1.5 Group income statement analysis

(In millions of euros)	2017	2016	Year-on-year change
Sales	**8,326**	**7,535**	**+10.5%**
Operating expenses*	(6,467)	(5,926)	+9.1%
Research and development expenses	(235)	(222)	+5.9%
Selling and administrative expenses	(727)	(691)	+5.2%
Other income and expenses*	(52)	21	–
Operating income	**845**	**717**	**+17.9%**
Equity in income of affiliates	1	8	-87.5%
Financial result	(103)	(103)	–
Income taxes	(162)	(193)	-16.1%
Net income	**581**	**429**	**+35.4%**
Of which non-controlling interests	5	2	–
Net income – Group share	**576**	**427**	**+34.9%**
EBITDA	**1,391**	**1,189**	**+17.0%**
Recurring operating income (REBIT)	**942**	**734**	**+28.3%**
Adjusted net income	**592**	**418**	**+41.6%**

* *In the consolidated income statement, depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the purchase price allocation process have been reclassified from "Other income and expenses" to "Operating expenses".*

SALES

Sales totaled €8,326 million in 2017, up 10.5% on 2016. At constant exchange rates and business scope, the increase was 8.9%. Volumes, which were 2.4% higher year on year, significantly increased in High Performance Materials (+4.4%) driven by Asia, the Group's innovation drive and the start-up of new units. The price effect was positive for all three divisions with a positive 6.5% price effect overall. This reflects the actions taken by the Group to raise selling prices in specialty businesses (which accounted for 71% of Group sales for the year) and positive market conditions in intermediate chemical businesses (which contributed 29% to the Group's sales figure [1]). The scope effect added 3.3% to sales and included the contribution of Den Braven as well as the impact of the divestment of the activated carbon and filter aid business and the oxo alcohols business. The currency effect was a negative 1.7%, primarily due to the appreciation of the euro against the US dollar.

High Performance Materials represented 46% of Group sales excluding corporate sales [2], stable year on year, Industrial Specialties 31% (30% in 2016) and Coating Solutions 23% (24% in 2016).

Broken down geographically, Europe represented 38% of Group sales (36% in 2016), North America 32% (34% in 2016), Asia 26% (25% in 2016) and the rest of the world 4% (5% in 2016).

EBITDA AND RECURRING OPERATING INCOME

At €1,391 million, EBITDA reached an all-time high, up 17% year on year, and materially exceeded the €1.3 billion target that the Group set itself in 2014 for 2017. All three divisions reported EBITDA rises despite higher raw materials costs than in 2016. This performance was led by Bostik's growth, with in particular the contribution of Den Braven, the benefits of sustainability innovations and new manufacturing units for advanced materials, excellent results from the Industrial Specialties division, improvements in the acrylic cycle and operational excellence initiatives.

EBITDA margin increased to 16.7% from 15.8% in 2016, in line with the Group's medium- and long-term targets.

Operating expenses stood at €6,467 million against €5,926 million in 2016. This increase was mainly attributable to the integration of Den Braven and higher raw materials costs which largely offset the favorable currency effect, while the ongoing rollout of the operational excellence program fully offset the impact of inflation on fixed costs. Operating expenses also included €45 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets carried out as part of the Bostik and Den Braven purchase price allocation processes (€38 million in 2016).

(1) Acrylics, Fluorogases and PMMA.

(2) As defined in note C.2 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.

Research and development expenses reached €235 million, *i.e.*, 2.8% of sales, against €222 million and 2.9% of sales in 2016. In addition to the impact of inflation on fixed costs, this higher figure is also attributable to the increase in innovation-related expenditure by certain Business Lines such as Bostik.

Selling and administrative expenses stood at €727 million against €691 million in 2016. Excluding a favorable currency effect, this increase reflects the integration of Den Braven and the portion of wage inflation not offset by cost savings.

Recurring operating income amounted to €942 million, compared to €734 million in 2016, in line with the increase in EBITDA. It included €449 million in recurring depreciation and amortization expense, which was stable overall compared to 2016 (€455 million).

Recurring operating income represented 11.3% of Group sales in 2017 (9.7% in 2016).

OPERATING INCOME

At €845 million, operating income was up 17.9% year on year. It included €52 million in net other expenses, mainly attributable to:

- the consequences of hurricane Harvey in the United States for a negative amount of €24 million, including €18 million for the insurance deductible retained;
- €10 million in net restructuring costs booked in particular by Coating Solutions and Bostik; and
- the impact of divestment and acquisition operations amounting to -€9 million, including -€5 million in fair value adjustments to Den Braven inventories.

In 2016, other income and expenses mainly corresponded to (i) the impact of divestment and acquisition operations amounting to +€63 million, which primarily included the capital gain on the sale of the carbon and filter aid business, (ii) €43 million in asset impairment expense, (iii) €22 million in net restructuring costs, and (iv) the financial impact of changes made to certain pension schemes within the Group for a net amount of +€26 million.

EQUITY IN INCOME OF AFFILIATES

Equity in income of affiliates came to €1 million compared to €8 million in 2016, reflecting primarily the contribution of CJ Bio Malaysia Sdn. Bhd. in which the Group owns a 14% stake.

FINANCIAL RESULT

Financial result represented a net expense of €103 million, unchanged from 2016. The temporary increase in cost of debt following a €900 million bond issue with a yearly 1.5% coupon in the second quarter of 2017 and before the repayment in the fourth quarter of 2017 of a €500 million bond with a yearly 4% coupon, was offset by favorable currency effects on the debt of certain foreign subsidiaries denominated in currencies other than their accounting currency.

INCOME TAXES

Income taxes represented a net expense of €162 million in 2017 and included the following exceptional items:

- a gain of €41 million with no cash impact arising from the adjustment of deferred taxes following the decrease in corporate tax rates in the United States (€36 million) and in France (€5 million);
- a €14 million tax gain booked following the cancellation of the 3% contribution due in France on cash dividends paid between 2013 and 2016; and
- reversal of provisions totaling €11 million for deferred tax liabilities recognized in connection with the Bostik and Den Braven purchase price allocation processes.

Excluding exceptional items, the tax rate corresponded to 26% of recurring operating income, down significantly on the 29% rate for 2016 due to the more balanced geographic split of the Group's results in 2017.

At end-2017, unrecognized deferred tax assets amounted to €523 million.

In view of the strong position that the Group has built up in the United States and based on its 2017 results, under the US tax reform, Arkema will benefit from an estimated tax saving representing around 6% of its adjusted net income, which will reduce its tax rate to around 23% of recurring operating income. This tax saving comes at a time when the Group is substantially increasing its capital expenditure in the United States.

In 2016, income tax expense amounted to €193 million. This amount included a €19 million tax gain recognized in connection with the Bostik purchase price allocation process, part of which corresponded to an adjustment of deferred tax assets and liabilities due to changes in corporate income tax rates in France from 2020. It also included a €4 million tax on the dividend paid in cash for 2015.

NET INCOME GROUP SHARE AND ADJUSTED NET INCOME

Net income – Group share rose to €576 million from €427 million in 2016.

Excluding the post-tax impact of non-recurring items, adjusted net income amounted to €592 million versus €418 million in 2016, representing €7.82 per share (€5.56 per share in 2016).

4.1.6 Analysis of results by division

4.1.6.1 HIGH PERFORMANCE MATERIALS

(In millions of euros)	2017	2016	Year-on-year change
Sales	**3,830**	**3,422**	**+11.9%**
EBITDA	**632**	**570**	**+10.9%**
EBITDA margin	***16.5%***	***16.7%***	-
Recurring operating income (REBIT)	**474**	**416**	**+13.9%**
REBIT margin	*12.4%*	*12.2%*	-
Other income and expenses	(19)	60	-
Depreciation and amortization related to the revaluation of assets carried out as part of the purchase price allocation processes	(45)	(38)	-
Operating income	**410**	**438**	**-6.4%**

Sales generated by the High Performance Materials division totaled €3,830 million, up 11.9% on 2016. The scope effect was a positive 8.0%, reflecting the integration of Den Braven and the CMP business within Bostik as well as the divestment of the activated carbon and filter aid business. At constant exchange rates and business scope, year-on-year sales growth was 5.9%, led by a 4.4% increase in volumes. Volumes rose for all the division's businesses, driven in particular by very high demand in Asia for lighter materials, new energies (batteries and photovoltaics) and consumer goods (sports and consumer electronics) as well as by the contribution of the new specialty molecular sieves unit in Honfleur (France). The price effect was a positive 1.5%, reflecting the actions undertaken by the Group to raise its selling prices. The currency effect was a negative 2.1%.

At €632 million, EBITDA increased 10.9% year on year, supported by strong volume momentum for advanced materials (Technical Polymers and Performance Additives), as well as by Bostik's growth fueled by the integration of Den Braven and the benefits of first synergies. This strong rise was achieved despite the significant impact of higher costs for certain raw materials and the stronger euro versus the US dollar.

At 16.5%, EBITDA margin held firm compared with the 16.7% margin for 2016.

In line with the sharp increase in EBITDA, recurring operating income (REBIT) rose to €474 million from €416 million in 2016, and included €158 million in depreciation and amortization expense, similar to the prior-year period (€154 million).

Operating income came in at €410 million and included €19 million in net other expenses, corresponding mainly to (i) the consequences of hurricane Harvey in the United States, (ii) fair value adjustments to Den Braven inventories consumed over the first half of the year, and (iii) net restructuring expenses booked by Bostik. It also included €45 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets carried out as part of the Bostik and Den Braven purchase price allocation processes.

4.1.6.2 INDUSTRIAL SPECIALTIES

(In millions of euros)	2017	2016	Year-on-year change
Sales	**2,545**	**2,316**	**+9.9%**
EBITDA	**585**	**473**	**+23.7%**
EBITDA margin	***23.0%***	***20.4%***	**-**
Recurring operating income (REBIT)	**411**	**300**	**+37.0%**
REBIT margin	*16.1%*	*13.0%*	-
Other income and expenses	(9)	(61)	-
Depreciation and amortization related to the revaluation of assets carried out as part of the purchase price allocation processes	-	-	-
Operating income	**402**	**239**	**+68.2%**

Industrial Specialties sales were up 9.9% year on year to €2,545 million. At constant exchange rates and business scope, sales growth was 11.3%, driven by a 9.6% positive price effect reflecting higher prices for certain fluorogases, particularly in Europe and Asia, and positive market conditions in the MMA/PMMA chain. Volumes were 1.7% higher than in 2016, driven mainly by good demand in Thiochemicals. The currency effect was a negative 1.4%.

At €585 million, EBITDA increased 23.7% year on year and EBITDA margin reached 23% in a market boosted by robust global growth and a more intense environmental policy in China.

Against this backdrop, the division's results reflect the return of Fluorogases to a very good level of results, a tight supply/demand balance in the MMA/PMMA business, and a solid performance by Thiochemicals and Hydrogen Peroxide.

Recurring operating income amounted to €411 million and included €174 million in depreciation and amortization expense, stable year on year (€173 million in 2016).

Operating income amounted to €402 million and included €9 million in net other expenses, corresponding mainly to the consequences of hurricane Harvey in the United States.

4.1.6.3 COATING SOLUTIONS

(In millions of euros)	2017	2016	Year-on-year change
Sales	**1,924**	**1,771**	**+8.6%**
EBITDA	**244**	**208**	**+17.3%**
EBITDA margin	***12.7%***	***11.7%***	**-**
Recurring operating income (REBIT)	**135**	**83**	**+62.7%**
REBIT margin	*7.0%*	*4.7%*	-
Other income and expenses	(8)	2	-
Depreciation and amortization related to the revaluation of assets carried out as part of the purchase price allocation processes	-	-	-
Operating income	**127**	**85**	**+49.4%**

At €1,924 million, sales for the Coating Solutions division rose 8.6% on 2016, led by a 12.1% positive price effect thanks to a better acrylic cycle as well as measures taken to raise selling prices across the entire chain. Volumes were generally stable year on year (edging down just 0.4%), as higher volumes in the division's downstream businesses offset the impact in the Acrylics business of maintenance turnarounds. The divestment of the oxo alcohol business resulted in a 1.5% negative scope effect and the currency effect was a negative 1.5%.

The division's EBITDA amounted to €244 million, up 17.3% year on year, and EBITDA margin rose to 12.7%. As the Group expected, unit margins for acrylic monomers gradually improved from the low points seen in 2016, and were positioned in 2017 between the low- and mid-point of the cycle. This more than offset the impact of higher input costs on downstream businesses.

Recurring operating income reached €135 million and included €109 million in depreciation and amortization expense, down on 2016 (€125 million) due to the shutdown of two reactors at the Clear Lake site (United States) which resulted in an asset impairment booked at end-2016.

Operating income amounted to €127 million and included €8 million in net other expenses, corresponding mainly to restructuring costs.

4.1.7 Group cash flow analysis

(In millions of euros)	2017	2016
Cash flow from operating activities	1,008	821
Cash flow from investing activities	(448)	(664)
Net cash flow	**560**	**157**
Cash flow from financing activities	192	(256)
Change in cash and cash equivalents	752	(99)

EBITDA can be reconciled to net cash flow as follows:

(In millions of euros)	2017	2016
EBITDA	**1,391**	**1,189**
Taxes	(208)	(206)
Cash elements included in the financial result	(92)	(89)
Recurring capital expenditure	(431)	(423)
Change in working capital (1)	(48)	2
Change in fixed asset payables (2)	2	14
Other	15	(10)
Recurring cash flow (3)	**629**	**477**
Exceptional investments	(10)	-
Other non-recurring items in cash flow from operating activities and investing activities	(54)	(51)
Free cash flow (4)	**565**	**426**
Net cash flow from portfolio management operations	(5)	(269)
Net cash flow	**560**	**157**

(1) Excluding flows related to non-recurring items or portfolio management operations totaling a positive €7 million in 2017.
(2) Excluding flows related to non-recurring items or portfolio management operations totaling a negative €4 million in 2017.
(3) Net cash flow excluding impact of portfolio management and non-recurring items.
(4) Net cash flow excluding impact of portfolio management.

FREE CASH FLOW AND NET CASH FLOW

In 2017, the Group generated a high level of net cash flow (cash flow from operating activities less cash flow from investing activities) totaling €560 million (€157 million in 2016).

Free cash flow, which corresponds to net cash flow excluding the impact of portfolio management operations amounting to a negative €5 million, grew by €139 million year on year to €565 million (€426 million in 2016). This increase reflects the significant rise in EBITDA (up €202 million on 2016) and tight control of working capital excluding non-recurring items despite rising raw materials costs (down €50 million on 2016).

Free cash flow included €431 million in recurring capital expenditure, representing 5.2% of Group sales (5.6% in 2016), in line with Arkema's intent of maintaining its capital intensity at around 5.5% of sales. It also included €10 million in exceptional investments for the initial work undertaken as part of the project to double thiochemical production capacity in Malaysia.

Finally, free cash flow included -€54 million in non-recurring items primarily relating to the consequences of hurricane Harvey in the United States and restructuring costs. In 2016, non-recurring items comprised restructuring costs and the impact of transferring certain pension schemes to external management. Excluding non-recurring items and portfolio management operations, recurring cash flow totaled €629 million (€477 million in 2016).

Free cash flow excluding exceptional investments represented 41% of EBITDA for 2017, thus exceeding the Group's target of a 35% EBITDA conversion rate into cash. Arkema has achieved an average conversion rate of almost 40% over the past three years, in line with the objectives presented by the Group at its Capital Markets Day in June 2015 of increasing its cash generation and significantly lifting its conversion rate from an average of 25% to around 35%. This progress reflects the actions implemented by the Group to reduce its capital intensity and to keep a tight control on its working capital.

Portfolio management operations represented a net cash outflow of just €5 million in 2017, with the impact of the purchase of the assets of CMP Specialty Products in the adhesives business almost entirely offsetting the effect of the divestment of the oxo alcohols business. In 2016, these operations generated a net cash outflow of €269 million and mainly included the cost of acquiring shares in Den Braven (net of cash acquired), the impact of the divestment of the carbon and filter aid business, and the impact of agreements entered into with Jurong in acrylics in China.

CASH FLOW FROM FINANCING ACTIVITIES

Cash flow from financing activities totaled €192 million in 2017 (against a €256 million cash outflow in 2016) and mainly included (i) a bond issue for a total net amount of €891 million, (ii) the repayment of a bond that had reached maturity for a net amount of €494 million, (iii) the payment of a €2.05 per-share dividend totaling €155 million, and (iv) a €33 million coupon paid on a hybrid bond.

In 2016, cash flow from financing activities mostly included the payment of a dividend, a share capital increase reserved for employees and a coupon paid on a hybrid bond.

4.1.8 Financing sources

4.1.8.1 BORROWING TERMS AND CONDITIONS AND GROUP'S FINANCING STRUCTURE

The Group has diversified financing resources including bond issues, multi-currency credit facilities and a negotiable commercial paper program, as detailed below. At the date of this document and without taking into account the issue of perpetual hybrid bonds completed on 29 October 2014 and classified as equity, these resources amounted to some €3,100 million.

Bond issues

As part of the Group's long-term financing policy aimed at diversifying its financing resources as well as extending the maturity of its debt, the Company regularly carries out bond issues and four bonds are currently outstanding at the date of this document:

- on 26 April 2012, a bond issue for €230 million over eight years with a 3.85% interest rate and on 5 October 2012, the issue of an additional €250 million tranche, bringing the total of the bond issue to €480 million. The prospectus for this bond issue was filed with the French financial markets authority (*Autorité des marchés financiers* – AMF) under no. 12-478 and includes an interest rate adjustment clause in the event of a downgrading of the Group's credit rating to non-investment grade;
- on 6 December 2013, a bond issue for €150 million over ten years with a 3.125% interest rate;
- on 20 January 2015, a bond issue for €700 million over ten years with a 1.5% interest rate; and
- on 11 April 2017, a bond issue for €700 million over ten years with a 1.5% interest rate and on 23 June 2017, the issue of an additional €200 million tranche, bringing the total of the bond issue to €900 million.

Since 2013, bond issues have been part of the Euro Medium Term Notes ("EMTN") program put in place by the Group in 2013 in order to gain easier access to the bond markets and renewed each year since, most recently in November 2017. The prospectus for this program and for its renewal was filed with the AMF under no. 13-535 on 9 October 2013, and under no. 17-616 on 28 November 2017, respectively. The prospectus includes usual bond default cases, in particular non-payment, early repayment subsequent to non-payment, insolvency proceedings, or cessation of activity of the issuer or a major subsidiary. These default cases may be conditional upon thresholds being exceeded or grace periods expiring.

Furthermore, all four bond issues are accompanied by an early repayment option at bondholders' request in the event of a change of control of Arkema also involving a downgrading of its credit rating to non-investment grade, or a simple downgrading thereof if it was non-investment grade prior to the change of control.

For the purpose of financing the acquisition of Bostik, on 29 October 2014 the Company issued perpetual hybrid bonds in a total amount of €700 million. These bonds contain an initial early repayment option exercisable on 29 October 2020 and carry an annual coupon of 4.75% until that date. The coupon will then be reset every five years. These bonds are subordinated to any senior debt and are accounted for as equity in accordance with IFRS rules. They are treated as equity for 50% of their amount by rating agencies Standard and Poor's and Moody's, which have rated them BB+ and Ba1 respectively. The prospectus for this issue was filed with the AMF on 27 October 2014 under no.14-574.

Further details may be found in the EMTN program base prospectus and in the above-mentioned prospectuses, all being available on the Company's website (www.finance.arkema.com) in the "Financials/Debt" section.

Revolving multi-currency credit facility for €900 million

On 29 October 2014, the Company and Arkema France (the "Borrowers") and a syndicate of banks signed a revolving multi-currency credit facility in the maximum amount of €900 million which can be used in renewable drawings. This credit facility (the "Facility") was signed for an initial period of five years but has since been extended to seven years following the exercise by the banks of their option to extend it for one additional year in 2015 and then once again in 2016. The purpose of the Facility is to finance, in the form of drawings and bank guarantees, the Group's general corporate purposes, and serves as a back-up facility for the commercial paper program. The Facility had not been drawn down at 31 December 2017.

Other Group companies have the possibility to become borrowers under the Facility, in the same capacity as the Company and Arkema France.

The Facility provides for early repayment in certain cases, including a change of control over the Company (defined as any person, acting alone or in concert, holding, directly or indirectly, more than one-third of the voting rights of the Company). Should this clause be triggered by a lender, it could lead to early repayment and the cancellation of the commitments to such lender.

The Facility contains representations to be made by each Borrower relating, among other things, to its financial statements, legal proceedings, or the absence of default events. Some of these representations have to be reiterated at the time of each utilization request.

The Facility also contains the standard undertakings for this type of agreement, including:

- information undertakings (mainly accounting and financial information);
- undertakings relating, among other things, to certain restrictions in connection with (but not limited to) the granting of securities, the completion of merger or restructuring transactions, the sale or purchase of assets, and the Group's debt. Depending on the case, such restrictions will not apply to ordinary operations or to transactions involving amounts below certain thresholds; and
- a financial undertaking: the Company undertakes to maintain a ratio of consolidated net debt to consolidated EBITDA (tested twice a year) equal to or less than 3.5.

The Facility also provides for default cases similar to those described in the prospectus of the above-mentioned bond issues.

Lastly, Arkema guarantees on a joint and several basis to the banks the obligations of Arkema France under the terms of the Facility, as well as those of the other borrowers, where applicable. The Facility is not subject to any other personal guarantee or security.

Negotiable commercial paper program

In April 2013, the Group put in place a negotiable commercial paper program with a ceiling of €1 billion. This program was unused at 31 December 2017.

4.1.8.2 INFORMATION ON RESTRICTIONS ON THE USE OF CAPITAL THAT HAVE SIGNIFICANTLY INFLUENCED OR MAY SIGNIFICANTLY INFLUENCE, DIRECTLY OR INDIRECTLY, THE GROUP'S BUSINESS

Subject to the stipulations of the syndicated facility described above, the Group is not subject to any restrictions on the use of capital that may significantly influence, either directly or indirectly, its business.

4.1.8.3 ANTICIPATED SOURCES OF FINANCING FOR FUTURE INVESTMENTS

Given the Group's cash position at 31 December 2017 and the financing resources described in section 4.1.8.1 of this document, the Group considers that it is in a position to finance its future investments, in particular those described in section 1.3 of this document.

4.1.9 Balance sheet analysis

(In millions of euros)	31 December 2017	31 December 2016	Year-on-year change
Non-current assets (1)	5,460	5,724	-4.6%
Working capital	1,094	1,105	-1.0%
Capital employed	**6,554**	**6,829**	**-4.0%**
Deferred tax assets	150	171	-12.3%
Provisions for pensions and employee benefits	460	520	-11.5%
Other provisions	409	419	-2.4%
Total provisions	**869**	**939**	**-7.5%**
Long-term assets covering some provisions	72	76	-5.3%
Total provisions net of non-current assets	**797**	**863**	**-7.6%**
Deferred tax liabilities	271	285	-4.9%
Net debt	**1,056**	**1,482**	**-28.7%**
Shareholders' equity	**4,474**	**4,249**	**+5.3%**

(1) Excluding deferred tax and including pension assets.

Between 31 December 2016 and 31 December 2017, non-current assets decreased by €264 million, primarily due to:

- €431 million in recurring capital expenditure [1] corresponding to:
  - growth projects, notably in advanced materials, such as a 25% increase in fluorinated polymers capacity and a 30% increase in photocure resins capacity, both in China,
  - projects to strengthen production unit competitiveness, such as the project to replace two end-of-life acrylic-acid reactors with annual capacities of 45,000 tonnes each at the Clear Lake site in the United States with a single new reactor with an annual capacity of 90,000 tonnes,
  - investments in plant maintenance, security and the environment;
- €10 million in exceptional investments for the initial work undertaken as part of the project to double thiochemical production capacity at the Kerteh site in Malaysia;
- net depreciation, amortization and impairment expense totaling €501 million including (i) €45 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets carried out as part of the Bostik and Den Braven purchase price allocation processes and (ii) €7 million impairment resulting from restructuring projects or projects to enhance competitiveness;
- a negative translation effect of €257 million, primarily due to the appreciation of the euro against the US dollar at the year-end; and
- the impact of acquisition and divestment operations amounting to €48 million resulting from the finalization of the Den Braven purchase price allocation process, the integration of the assets of CMP and the disposal of the assets of the oxo alcohols business.

At 31 December 2017, working capital decreased by €11 million compared to 31 December 2016 including a negative €74 million translation effect resulting from the depreciation of the US dollar against the euro at the year-end. Excluding the currency effect, the increase reflected a stronger activity and significant increases in raw materials prices compared to the prior year. At 31 December 2017, the working capital to annual sales ratio [2] stood at a historically low level of 13.1% compared to 14.5% at 31 December 2016 (excluding the impact of Den Braven acquisition in late 2016). This ratio, which was positively impacted by the appreciation of the euro, mainly reflects the Group's strict operational discipline as well as optimization measures implemented in several businesses.

Consequently, between 31 December 2016 and 31 December 2017, the Group's capital employed decreased by €275 million to €6,554 million. In 2017, the breakdown of capital employed by division (excluding corporate) was as follows: 58% for High Performance Materials (57% in 2016), 23% for Industrial Specialties (24% in 2016), and 19% for Coating Solutions (19% in 2016). The breakdown of capital employed by region was as follows: the share of Asia and the rest of the world stood at 22% (22% in 2016), the share of North America at 23% (25% in 2016), and the share of Europe at 55% (53% in 2016).

(1) See definition in note C.1 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document.
(2) For 2016, 2016 sales – sales of the activated carbon and filter aid business over the first ten months of 2016.

Deferred tax assets amounted to €150 million at 31 December 2017, €21 million down on 31 December 2016, mainly reflecting adjustments following the decrease in corporate tax rates in the United States.

At 31 December 2017, gross provisions amounted to €869 million. Some of these provisions, accounting for a total of €72 million, are covered by the guarantee facility granted by Total and described in note 29.2 to the consolidated financial statements at 31 December 2017 (section 4.3.3 of this document) and therefore by long-term assets recognized in the balance sheet. These consist mainly of provisions related to former industrial sites in the United States. Accordingly, at 31 December 2017, provisions net of these non-current assets amounted to €797 million against €863 million at 31 December 2016.

The breakdown of net provisions by type was as follows: pension liabilities of €321 million (€366 million in 2016), other employee benefit obligations of €139 million (€154 million in 2016), environmental contingencies of €132 million (€131 million in 2016), restructuring provisions of €42 million (€47 million in 2016), and other provisions of €163 million (€165 million in 2016).

Between 31 December 2016 and 31 December 2017, net provisions for pension liabilities decreased by €45 million thanks to the positive impact of financial market trends on plan assets and a favorable currency effect. Provisions for employee benefit obligations (mainly healthcare costs, welfare costs, long-service awards) decreased by €15 million over the period, primarily due to an update of the people concerned and a favorable currency effect. The other net provisions were globally stable over the same period.

Long-term deferred tax liabilities amounted to €271 million at 31 December 2017, down €14 million on 31 December 2016. This decrease mainly reflects adjustments to provisions following the decrease in corporate tax rates in the United States together with a currency effect, which largely offset deferred tax liabilities recognized in connection with the Den Braven purchase price allocation process.

Net debt amounted to €1,056 million at 31 December 2017 (against €1,482 million at 31 December 2016). The decrease can be explained by cash flows, as detailed in section 4.1.7 of this chapter, and by the positive currency effect on the portion of the Group's debt converted through swaps into US dollars. The Group's gearing decreased to 24% (from 35% at end-December 2016) and net debt (which excludes the hybrid bond accounted for in equity) represented 0.8 times EBITDA for the year (the ratio at end-2016 was 1.2).

Shareholders' equity amounted to €4,474 million against €4,249 million at the end of 2016. The €225 million increase primarily corresponded to (i) €581 million in net income for the period, (ii) the payment of a dividend of €2.05 per share totaling €155 million, (iii) a €33 million coupon paid in relation to the €700 million hybrid bond and accounted for under "cash dividend", and (iv) a negative €200 million translation effect primarily due to the appreciation of the euro against the US dollar. In 2017, a €24 million actuarial gain was recognized in respect of provisions for pension liabilities in shareholders' equity.

4.2 TRENDS AND OUTLOOK

4.2.1 Trends

4.2.1.1 MAIN TRENDS

At the date of this document, the business environment in which the Group operates is characterized by (i) robust demand in the three main geographic regions in which the Group operates, (ii) a continuing rise in the prices of energy and petrochemical raw materials, (iii) a strengthening of the euro against the US dollar, and (iv) volatility in the foreign exchange rates of currencies in emerging countries.

The current global environment is also characterized by continuing regulatory and legislative changes in different parts of the world. In China, the environmental policy has intensified, leading to temporary plant shutdowns and additional costs for certain players in the country. This situation is helping to foster a more robust environment for intermediate chemical businesses in the region. Thanks to tax reform in the United States and based on its 2017 results, the Group should benefit from an estimated tax saving representing around 6% of its adjusted net income, which will reduce its tax rate to around 23% of recurring operating income. This tax saving comes at a time when the Group is substantially increasing its capital expenditure in the United States. Other developments, of which the Group is not currently aware, could also impact performances.

The major sustainable development trends, such as lightweight materials, access to drinking water, development of new energies, and the use of renewable raw materials will continue to represent promising development opportunities for the Group over the medium and long term.

In early 2018, the Group should benefit from the factors described above and continues to witness similar market conditions to those observed in late 2017.

At the date of this document, there is nothing to indicate that the long-term trends of the Group's main markets as described in chapter 1 of this document might be significantly and durably affected. However, given the uncertainties surrounding the economic environment, the markets in which the Group operates, the cost of raw materials and energy and exchange rates, as well as continuous developments in the regulatory environment, there is no guarantee that these trends will endure.

4.2.1.2 FACTORS LIKELY TO AFFECT THE GROUP'S OUTLOOK

Some of the statements regarding the Group's outlook contained in this document are based on the current opinions and assumptions of the Group's executive management. This information could be influenced by certain risks, both known and unknown, and by uncertainties, one consequence of which might be that actual results, performance or events may differ substantially from such outlook. The various factors that may influence future results include but are not limited to:

- general market and competition-related factors on a global, national or regional scale;
- changes in the competitive, customer, supplier and regulatory environment in which the Group operates;
- fluctuations in raw materials and energy prices;
- the Group's sensitivity to fluctuations in interest rates and in currencies other than the euro, particularly the US dollar and currencies influenced by the US dollar;
- the Group's capacity to introduce new products and to continue to develop its production processes;
- concentration of customers and of the market;
- risks and uncertainties of conducting business in many countries that may in the future be exposed or have recently been exposed to economic or political instability;
- changes in economic and technological trends; and
- potential complaints, costs, commitments or other obligations relating to the environment.

4.2.2 Outlook

In 2017, Arkema exceeded the medium-term financial targets that it set itself in 2014, with EBITDA of €1,391 million (versus a target of €1.3 billion) and a gearing of 24% (target of 40%).

In 2018, demand in the three main geographic regions should remain well oriented and the environment characterized by a marked strengthening of the euro versus the US dollar [(1)] and higher and volatile raw materials costs.

Against this backdrop, the Group will benefit from its strong innovation drive in advanced materials, from Bostik's growth with the integration of XL Brands and from a market environment expected to remain globally robust for its intermediate chemical businesses. It will continue to implement its major manufacturing projects, as presented during its Capital Markets Day, for thiochemicals, specialty polyamides, fluoropolymers and Sartomer.

Lastly, the Group will continue its actions to pass on in its selling prices the continuous rises in raw materials costs as well as the rollout of its operational excellence initiatives to partly offset inflation on its fixed costs.

Supported by a good start to the year and this strong internal momentum, and despite the euro's current strength, Arkema is confident in its ability to increase its EBITDA in 2018 compared to the excellent performance achieved in 2017.

At its Capital Markets Day in July 2017, the Group reminded investors of its ambition to achieve €10 billion in sales and an EBITDA margin of close to 17% by 2020. It also announced its long-term targets for 2023 of achieving REBIT margin of between 11.5% and 12.5% – significantly higher than in 2016 – and maintaining an EBITDA conversion rate into free cash flow of 35%. The achievement of this ambition also entails the following financial principles: a net debt to EBITDA ratio of less than 2, a return on capital employed of at least 10%, and maintaining a solid investment grade rating with the rating agencies.

This ambition relies on stepping up the development of specialty businesses, which should represent over 80% of Group sales by 2023. In this context, the Group is aiming for a two-fold increase in Bostik sales between 2016 and 2023, when this business is expected to account for more than one-third of Arkema sales, as well as a REBIT margin of between 12.5% and 13% in this business. In advanced materials, which are expected to account for more than 25% of Group sales in 2023, Arkema is aiming for a REBIT margin of between 14% and 15%.

Geographically, the Group aims to have in the longer term a perfectly balanced breakdown between Europe, North America, and Asia/Rest of the world, with one-third of its sales in each of these three regions.

All of these objectives have been formulated based on normalized market conditions and in accordance with the IFRS standards currently in force. The Group also notes that the achievement of its objectives is based on assumptions deemed reasonable by the Group, as of the date of this document and within this time frame (in particular regarding future development of global demand, conditions relating to raw materials and energy costs, balance between supply and demand for products marketed by the Group and their price levels, and currency exchange rates). However, it takes no account of the occurrence, as the case may be, of certain risks described in section 1.7.2 of this document, or any unknown factors related to the economic, financial, competitive or regulatory environment in which the Group operates, which could affect the achievement of its objectives.

(1) A 10% increase in the euro/US dollar exchange rate has a negative translation impact of €50 million on EBITDA.

4.3 CONSOLIDATED FINANCIAL STATEMENTS

4.3.1 Statutory auditors' report on the consolidated financial statements

This is a translation into English of the statutory auditors' report on the consolidated financial statements of the Company issued in French and it is provided solely for the convenience of English speaking users.

This statutory auditors' report includes information required by European regulation or French law, such as information about the appointment of the statutory auditors or verification of the information concerning the Group presented in the management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

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Département de KPMG S.A.
Tour EQHO
2, avenue Gambetta
92066 Paris-La Défense Cedex
775 726 417 R.C.S. Nanterre

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

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S.A.S. à capital variable
344 366 315 R.C.S. Nanterre
Statutory auditor
Member of the *Compagnie Régionale de Versailles*

Arkema

Year ended 31 December 2017

Statutory auditors' report on the consolidated financial statements

To the annual general meeting of Arkema,

Opinion

In compliance with the engagement entrusted to us by your annual general meetings, we have audited the accompanying consolidated financial statements of Arkema for the year ended 31 December 2017.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at 31 December 2017 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for opinion

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the "Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements" section of our report.

Independence

We conducted our audit engagement in compliance with independence rules applicable to us, for the period from 1 January 2017 to the date of our report, and specifically we did not provide any prohibited non-audit services referred to in article 5(1) of regulation (EU) No. 537/2014 or in the French Code of Ethics *(Code de déontologie)* for statutory auditors.

Justification of assessments – Key audit matters

In accordance with the requirements of articles L. 823-9 and R. 823-7 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Valuation of intangible assets and property, plant and equipment

KEY AUDIT MATTER

Every year, the Group performs impairment tests on its intangible assets and property, plant and equipment. The methods for this testing are described in chapter B, note 6 to the consolidated financial statements. As at 31 December 2017, these fixed assets, including goodwill, amounted to €5,170 million, or 53.9% of total assets.

The valuation of these fixed assets is a key audit matter due to their materiality in the consolidated financial statements of the Group and because the determination of their recoverable amount – usually based on future discounted cash flow projections – rely on the use of assumptions, as stated in chapter B, note 6 to the consolidated financial statements.

OUR RESPONSE

We assessed the compliance of the method applied by the Group with the accounting standards in force (IAS 36), particularly with regard to the identification of groups of assets at the level at which the impairment tests are performed.

We involved our valuation specialists in order to analyze the conditions of implementation for these impairment tests as well as the data and assumptions used. In particular, we:

- analyzed the quality of the process for developing the cash flow projections used in the plan prepared by the Group for the purpose of impairment testing. We made sure that these projections had been approved by the general management;
- compared the assumptions used for these tests with those in the strategic plan validated by the Executive Committee;
- compared the previous estimates with the actual figures;
- verified the mathematical accuracy of the calculations and controlled the sensitivity tests;
- compared, against external references, the assumption consisting in using only one discount rate for all assets tested;
- analyzed the consistency of the information and the parameters used in these models, firstly with regard to our knowledge of the sectors in which the Group operates and, secondly, with regard to our assessment of the strategic plan and our interviews with the Group's management controllers;
- confirmed the compliance of the information provided in the Notes to the consolidated financial statements with IAS 36.

Among the assets tested, we paid particular attention to certain specific assets which present their own uncertainties.

Assessment of environmental risks

KEY AUDIT MATTER

The areas of activity in which the Group operates present a risk of incurring its environmental liability. The Group assesses its exposure to these risks and presents, in its consolidated financial statements, an estimate of its liabilities and contingent liabilities relating to costs arising from commitments or legal, regulatory or contractual obligations, or those arising from the Group's practices or public commitments, as described in chapter C, notes 19.2, 19.3 and 20.1 to the consolidated financial statements. As at 31 December 2017, these provisions amounted to €189 million. The contingent liabilities are listed in chapter C, note 20.1 to the consolidated financial statements.

We considered the valuation and presentation in the Notes of these liabilities and contingent liabilities to be a key audit matter, in light of the fact that they are estimates, their sensitivity to regulatory and technological developments, and their materiality in the consolidated financial statements.

OUR RESPONSE

In the context of our audit of the consolidated financial statements, our work, with the help of our environmental risk assessment specialists, consisted in:

- assessing the procedures for identifying and listing the risks of incurring the Group's liability on environmental matters;
- familiarizing ourselves with the risk analysis carried out by management, and the corresponding documentation;
- assessing the main risks identified and the assumptions used by management to estimate exposure to those risks and the amount of the provisions or their character of contingent liabilities;
- comparing the information provided in the Notes to the consolidated financial statements with that required by IFRS.

Recognition of future tax savings in France

KEY AUDIT MATTER

Future tax savings relating to tax loss carry-forwards are only recorded if the Group has deferred tax liabilities for the same amount of these potential tax savings or if it considers it probable that it will in the future have sufficient taxable profits to use these tax loss carry-forwards as described in chapter B, note 13.2 to the consolidated financial statements. As at 31 December 2017, the Group recorded an amount of €150 million in deferred tax assets in the consolidated balance sheet for the entire global scope. The overall amount of indefinite tax loss carry-forwards stands at €1,685 million, which mostly originates from the French tax consolidation, and is presented in chapter C, note 6.4 to the consolidated financial statements.

The ability of the Group to use its French tax loss carry-forwards is assessed by management at the close of each period, taking account of the taxable income forecasts. These forecasts are based on assumptions, which are developed on the basis of management's judgment and the history of taxable income.

We considered the recognition of deferred tax assets relating to French tax loss carry-forwards to be a key audit matter due to their materiality and the degree of judgment used by the management to assess the justification for recording the related deferred tax assets.

OUR RESPONSE

Our audit approach consisted in going over the documentation used by management to estimate the likelihood of being able to make future use of the tax loss carry-forwards generated at the closing date, notably with regard to:

- existing deferred tax liabilities which could be offset against existing tax loss carry-forwards before their expiry, if any; and
- the ability of the companies comprising the scope of the French tax consolidation to generate sufficient future taxable profits to allow absorption of the tax loss carry-forwards.

We familiarized ourselves with the method used by management to identify existing tax loss carry-forwards at the closing date. In order to assess future taxable profits, we familiarized ourselves with and reviewed the forecasting process by:

- taking a critical look at the procedure for developing and approving the last taxable income forecast used for estimates;
- comparing the forecasts made over several years with the actual taxable income;
- analyzing trends in the results of the companies comprising the scope of the French tax consolidation, and assessing the consistency of the assumptions used by management to draw up the taxable income forecasts used to value deferred taxes with, firstly, those applied to the impairment testing of non-current assets and, secondly, those used in the strategic plan.

Verification of the information pertaining to the Group presented in the management report

As required by law we have also verified in accordance with professional standards applicable in France the information pertaining to the Group presented in the Board of Directors' management report.

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

Report on other legal and regulatory requirements

Appointment of the statutory auditors

We were appointed as statutory auditors of Arkema by your annual general meeting held on 23 June 2005 for KPMG Audit, département de KPMG S.A., and on 10 May 2006 for ERNST & YOUNG Audit.

As at 31 December 2017, KPMG Audit, département de KPMG S.A., was in the thirteenth year of total uninterrupted engagement (including twelve years since the shares of the Company were admitted to trading on a regulated market) and ERNST & YOUNG Audit was in the twelfth year.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risks management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Statutory auditors' responsibilities for the audit of the consolidated financial statements

Objectives and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As specified in article L. 823-10-1 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the consolidated financial statements;
- assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein;
- evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;
- obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed on these consolidated financial statements.

Report to the Audit Committee

We submit a report to the Audit Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in article 6 of regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France such as they are set out in particular by articles L. 822-10 to L. 822-14 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics *(Code de déontologie)* for statutory auditors. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Défense, 21 February 2018

The statutory auditors

French original signed by

KPMG Audit *Département de KPMG S.A.*		ERNST & YOUNG Audit
Bertrand Desbarrières Partner	François Quédiniac Partner	Denis Thibon Partner

4.3.2 Consolidated financial statements at 31 December 2017

CONSOLIDATED INCOME STATEMENT

(In millions of euros)	Notes	2017	2016
Sales	(C2&C3)	**8,326**	**7,535**
Operating expenses		(6,467)	(5,926)*
Research and development expenses		(235)	(222)
Selling and administrative expenses		(727)	(691)
Other income and expenses	(C4)	(52)	21*
Operating income	(C2)	**845**	**717**
Equity in income of affiliates	(C11)	1	8
Financial result	(C5)	(103)	(103)
Income taxes	(C6)	(162)	(193)
Net income		**581**	**429**
Of which: non-controlling interests		5	2
Net income – Group share		**576**	**427**
*Earnings per share (amount in euros)***	(C8)	*7.17*	*5.24*
*Diluted earnings per share (amount in euros)***	(C8)	*7.15*	*5.22*

* *Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses previously included in "Other income and expenses" (see note C4 "Other income and expenses") have been reclassified as "Operating expenses".*

** *From 2017, 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). The 2016 figures have been restated accordingly.*

The accounting policies applied in preparing the consolidated financial statements at 31 December 2017 are identical to those used in the consolidated financial statements at 31 December 2016, except for the policies described at the start of note B "Accounting policies".

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(In millions of euros)	Notes	2017	2016
Net income		**581**	**429**
Hedging adjustments		20	(6)
Other items		(4)	(6)
Deferred taxes on hedging adjustments and other items		-	(2)
Change in translation adjustments	(C17.6)	(200)	7
Other recyclable comprehensive income		**(184)**	**(7)**
Actuarial gains and losses	(C18.2)	32	13
Deferred taxes on actuarial gains and losses		(11)	(12)
Other non-recyclable comprehensive income		**21**	**1**
TOTAL INCOME AND EXPENSES RECOGNIZED DIRECTLY THROUGH EQUITY		**(163)**	**(6)**
Comprehensive income		**418**	**423**
Of which: non-controlling interests		5	0
Comprehensive income – Group share		**413**	**423**

CONSOLIDATED BALANCE SHEET

(In millions of euros)	Notes	31 December 2017	31 December 2016
ASSETS			
Intangible assets, net	(C9)	2,706	2,777
Property, plant and equipment, net	(C10)	2,464	2,652
Investments in equity affiliates	(C11)	30	35
Other investments	(C12)	30	33
Deferred tax assets	(C6)	150	171
Other non-current assets	(C13)	230	227
TOTAL NON-CURRENT ASSETS		**5,610**	**5,895**
Inventories	(C14)	1,145	1,111
Accounts receivable	(C15)	1,115	1,150
Other receivables and prepaid expenses	(C15)	181	197
Income taxes recoverable	(C6)	70	64
Other current financial assets	(C23)	17	10
Cash and cash equivalents	(C16)	1,438	623
TOTAL CURRENT ASSETS		**3,966**	**3,155**
TOTAL ASSETS		**9,576**	**9,050**
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital	(C17)	759	757
Paid-in surplus and retained earnings		3,575	3,150
Treasury shares		(2)	(4)
Translation adjustments	(C17.6)	101	301
SHAREHOLDERS' EQUITY – GROUP SHARE		**4,433**	**4,204**
Non-controlling interests		41	45
TOTAL SHAREHOLDERS' EQUITY		**4,474**	**4,249**
Deferred tax liabilities	(C6)	271	285
Provisions for pensions and other employee benefits	(C18)	460	520
Other provisions and non-current liabilities	(C19)	443	464
Non-current debt	(C21)	2,250	1,377
TOTAL NON-CURRENT LIABILITIES		**3,424**	**2,646**
Accounts payable	(C24)	965	932
Other creditors and accrued liabilities	(C24)	377	402
Income taxes payable	(C6)	82	62
Other current financial liabilities	(C23)	10	31
Current debt	(C21)	244	728
TOTAL CURRENT LIABILITIES		**1,678**	**2,155**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**9,576**	**9,050**

CONSOLIDATED CASH FLOW STATEMENT

(In millions of euros)	Notes	2017	2016
Net income		581	429
Depreciation, amortization and impairment of assets		501	530
Provisions, valuation allowances and deferred taxes		(41)	(56)
(Gains)/losses on sales of assets		(2)	(106)
Undistributed affiliate equity earnings		2	(5)
Change in working capital	(C28)	(41)	11
Other changes		8	18
Cash flow from operating activities		**1,008**	**821**
Intangible assets and property, plant, and equipment additions		(459)	(445)
Change in fixed asset payables		6	(37)
Acquisitions of operations, net of cash acquired		(1)	(338)
Increase in long-term loans		(60)	(62)
Total expenditures		**(514)**	**(882)**
Proceeds from sale of intangible assets and property, plant, and equipment		10	118
Change in fixed asset receivables		0	0
Proceeds from sale of operations, net of cash sold		11	43
Proceeds from sale of unconsolidated investments		0	19
Repayment of long-term loans		45	38
Total divestitures		**66**	**218**
Cash flow from investing activities		**(448)**	**(664)**
Issuance (repayment) of shares and paid-in surplus		3	51
Issuance of hybrid bonds	(C17.2)	-	-
Purchase of treasury shares	(C17.3)	(17)	(6)
Dividends paid to parent company shareholders	(C17.4)	(155)	(143)
Interest paid to bearers of subordinated perpetual notes	(C17.2)	(33)	(33)
Dividends paid to non-controlling interests		(4)	(4)
Increase in long-term debt	(A2)	902	32
Decrease in long-term debt	(A2)	(32)	(570)
Increase / decrease in short-term debt		(472)	417
Cash flow from financing activities		**192**	**(256)**
Net increase/(decrease) in cash and cash equivalents		752	(99)
Effect of exchange rates and changes in scope		63	11
Cash and cash equivalents at beginning of period		623	711
CASH AND CASH EQUIVALENTS AT END OF PERIOD	**(C16)**	**1,438**	**623**

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 2016	**745**	**1,172**	**689**	**1,003**	**294**	**(3)**	**3,900**	**49**	**3,949**
Cash dividend	-	-	-	(176)	-	-	(176)	(4)	(180)
Issuance of share capital	12	39	-	-	-	-	51	-	51
Purchase of treasury shares	-	-	-	-	-	(6)	(6)	-	(6)
Grants of treasury shares to employees	-	-	-	(5)	-	5	-	-	-
Share-based payments	-	-	-	12	-	-	12	-	12
Other	-	-	-	-	-	-	-	-	-
Transactions with shareholders	**12**	**39**	**-**	**(169)**	**-**	**(1)**	**(119)**	**(4)**	**(123)**
Net income	-	-	-	427	-	-	427	2	429
Total income and expenses recognized directly through equity	-	-	-	(11)	7	-	(4)	(2)	(6)
Comprehensive income	**-**	**-**	**-**	**416**	**7**	**-**	**423**	**-**	**423**
At 31 December 2016	**757**	**1,211**	**689**	**1,250**	**301**	**(4)**	**4,204**	**45**	**4,249**

(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 2017	**757**	**1,211**	**689**	**1,250**	**301**	**(4)**	**4,204**	**45**	**4,249**
Cash dividend	-	-	-	(188)	-	-	(188)	(4)	(192)
Issuance of share capital	2	5	-	-	-	-	7	-	7
Purchase of treasury shares	-	-	-	-	-	(17)	(17)	-	(17)
Grants of treasury shares to employees	-	-	-	(19)	-	19	-	-	-
Share-based payments	-	-	-	13	-	-	13	-	13
Other	-	-	-	1	-	-	1	(5)	(4)
Transactions with shareholders	**2**	**5**	**-**	**(193)**	**-**	**2**	**(184)**	**(9)**	**(193)**
Net income	-	-	-	576	-	-	576	5	581
Total income and expenses recognized directly through equity	-	-	-	37	(200)	-	(163)	-	(163)
Comprehensive income	**-**	**-**	**-**	**613**	**(200)**	**-**	**413**	**5**	**418**
At 31 December 2017	**759**	**1,216**	**689**	**1,670**	**101**	**(2)**	**4,433**	**41**	**4,474**

4.3.3 Notes to the consolidated financial statements

A. Highlights

1. PORTFOLIO MANAGEMENT

In March 2017, the Group announced that it had completed the sale to INEOS of its 50% stake in Oxochimie, their oxo alcohols manufacturing joint venture, and the associated business assets.

In May 2017, the Group announced the acquisition in the United States of CMP Specialty Products, a flooring and floor preparation business with annual sales of around US$ 15 million. The impacts of this operation are detailed in note C.7 "Business combination".

2. OTHER HIGHLIGHTS

On 11 April 2017, Arkema completed a €700 million bond issue with a 10-year maturity at a coupon of 1.5%. This operation enabled the Group to refinance and extend the average maturity of its financial resources, taking advantage of favourable market conditions. A €200 million tap issue was carried out on 23 June 2017.

In October 2017, the Group redeemed at maturity a €500 million bond that carried an annual coupon of 4%.

B. Accounting policies

Arkema is a French limited liability company *(société anonyme)* with a Board of Directors, subject to the provisions of book II of the French Commercial Code and all other legal provisions applicable to French commercial companies.

The Company's head office is at 420 rue d'Estienne d'Orves, 92700 Colombes (France). It was incorporated on 31 January 2003 and the shares of Arkema have been listed on the Paris stock exchange (Euronext) since 18 May 2006.

The Group's consolidated financial statements at 31 December 2017 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved by the Board of Directors of Arkema on 21 February 2018. They will be submitted to the approval of the shareholders' general meeting of 18 May 2018.

The consolidated financial statements at 31 December 2017 were prepared in accordance with the international accounting standards issued by the IASB (International Accounting Standards Board) as released at 31 December 2017 and the international standards endorsed by the European Union at 31 December 2017.

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 31 December 2017 are identical to those used in the consolidated financial statements at 31 December 2016, except for IFRS standards, amendments and interpretations, as adopted by the European Union and the IASB, that are obligatorily applicable for accounting periods commencing on or after 1 January 2017 (and which had not been applied early by the Group), namely:

Amendments to IAS 12	Recognition of Deferred Tax Assets for Unrealised Losses	Adopted by the European Union on 9 November 2017
Amendments to IAS 7	Disclosure Initiative	Adopted by the European Union on 9 November 2017

The standards, amendments and interpretations published by the IASB and the IFRS IC (IFRS Interpretations Committee) which were not yet in force for years beginning on or after 1 January 2017 and have not been applied early by the Group, are:

Amendments to IFRS 9, IFRS 7 and IAS 39	Mandatory effective date and transition disclosures	Not adopted by the European Union at 31 December 2017
Amendments to IFRS 9	Hedge accounting and amendments to IFRS 9, IFRS 7 and IAS 39	Not adopted by the European Union at 31 December 2017
Amendments to IFRS 9	Prepayment features with negative compensation	Not adopted by the European Union at 31 December 2017
Amendments to IFRS 10 and IAS 28	Sale or contribution of assets between an investor and its associate/joint venture	Not adopted by the European Union at 31 December 2017
Amendments to IFRS 2	Classification and measurement of share-based payment transactions	Not adopted by the European Union at 31 December 2017
Amendments to IAS 28	Long-term interests in associates and joint ventures	Not adopted by the European Union at 31 December 2017
IFRS 9	Financial instruments	Adopted by the European Union on 29 November 2016
IFRS 15	Revenue from contracts with customers	Adopted by the European Union on 29 October 2016
Clarifications to IFRS 15	Revenue from contracts with customers	Adopted by the European Union on 9 November 2017
IFRS 16	Leases	Adopted by the European Union on 9 November 2017
IFRS 17	Insurance contracts	Not adopted by the European Union at 31 December 2017
IFRIC 22	Foreign currency transactions and advance consideration	Not adopted by the European Union at 31 December 2017
IFRIC 23	Uncertainty over income tax treatments (IAS 12)	Not adopted by the European Union at 31 December 2017
	Annual improvements to IFRS standards – 2014-2016 cycle	Not adopted by the European Union at 31 December 2017

The Group has not identified any impact other than non-significant impacts resulting from application of IFRS 9 and IFRS 15. Details of progress on the Group's work concerning IFRS 16, which is applicable from 1 January 2019, are provided in note C29.1.2 "Lease commitments". Arkema has not applied IFRS 9 and IFRS 15 early, and does not plan to apply IFRS16 early.

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

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

The principal accounting policies applied by the Group are presented below.

1. CONSOLIDATION PRINCIPLES

All material transactions between consolidated companies, and all intercompany profits, have been eliminated.

1.1 Control and joint control

The Group controls an entity when all of the three following conditions are fulfilled:

(i) the Group holds power over the entity (has effective rights conferring a current ability to direct the entity's relevant activities);

(ii) the Group is exposed or entitled to variable returns; and

(iii) the Group has the ability to use its power over the investee to influence the amount of the returns received.

Joint control is the contractually agreed sharing of control over an arrangement. It exists only when the decisions about the relevant activities require the unanimous consent of the parties sharing control.

1.2 Full consolidation

Companies controlled directly or indirectly by the Group are fully consolidated.

1.3 Joint arrangements

A joint arrangement is an operation over which two or more parties have joint control.

There are two categories of joint arrangements:

- a joint operation is a joint arrangement in which the parties have rights to the assets and obligations for the liabilities. The Group recognizes the assets, liabilities, income and expenses in proportion to its percentage of interest in the capital of the joint operation; and
- a joint venture is a joint arrangement in which the parties have rights to the net assets of the arrangement. The Group applies the equity method to this type of joint arrangement.

To determine the type of joint arrangement, the Group must take the following factors into consideration:

- the structure of the joint arrangement (identifying whether it takes the form of a separate vehicle); and
- when the joint arrangement takes the form of a separate vehicle: the legal form, the terms of the contractual arrangements and other facts and circumstances.

Assessment of other facts and circumstances has led the Group to classify a certain number of joint arrangements as joint operations.

1.4 Investments in associates

An associate is an entity over which the Group exercises significant influence. If the Group directly or indirectly holds 20% or more of the voting rights in the issuing entity, it is presumed to exercise significant influence. If it holds less than 20%, significant influence must be demonstrated.

Investments in associates are accounted for under the equity method.

1.5 Non-controlling interest

Shares owned in companies which do not meet the criteria set out in 1.1 to 1.4 are included in Other investments and recognized as available-for-sale assets in accordance with IAS 39 (see note B7.1, "Other investments").

2. FOREIGN CURRENCY TRANSLATION

2.1 Translation of financial statements of foreign companies

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.

2.2 Transactions in foreign currencies

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.

3. GOODWILL AND BUSINESS COMBINATIONS

Operations after 1 January 2010

The Group uses the acquisition method for the recognition of business combinations, in accordance with IFRS 3 (Revised).

The identifiable assets acquired and liabilities assumed are stated at fair value at the acquisition date.

Where the business combination agreement provides for a purchase price adjustment, the Group includes the fair value of this adjustment at the acquisition date in the cost of the business combination, even if the adjustment is optional.

Non-controlling interests are measured at the acquisition date, either at fair value (the full goodwill method) or the NCI's proportionate share of net assets of the entity acquired (the partial goodwill method). The decision of which option to use is made for each business combination. Subsequent acquisitions of investments are always recorded in equity, regardless of the choice made at the time of the acquisition.

At the acquisition date, goodwill is measured as the difference between:

- the acquisition price plus the amount of any non-controlling interests in the acquired entity and the fair value of the acquirer's previously-held equity interest in that acquired entity; and
- the fair value of identifiable assets and liabilities.

Goodwill is recognized in the balance sheet assets. Contingent liabilities are recognized in the balance sheet when the obligation concerned is current at the acquisition date and their fair value can be reliably measured.

Any negative goodwill arising on an acquisition on favourable terms, and direct acquisition expenses, are recognized immediately in the income statement under "Other income and expenses" (see note B12 "Income statement items").

The Group has a maximum of 12 months to finalize determination of the acquisition price and goodwill.

Operations prior to 31 December 2009

The Group applied IFRS 3. The main points affected by IFRS 3 (revised) are the following:

- goodwill was calculated as the difference between the purchase price, as increased by related costs, of shares of consolidated companies and the Group share of the fair value of their net assets and contingent liabilities at the acquisition date;
- for any subsequent acquisition in the same entity, the difference between the acquisition cost and book value of non-controlling interests was included in goodwill;
- price adjustments were included in the cost of the business combination if the adjustment was probable and could be measured reliably; and
- contingent liabilities arising from potential obligations were recognized.

4. INTANGIBLE ASSETS

Intangible assets principally include goodwill, patents and technologies, trademarks, software and IT licences, capitalized contracts, leasehold rights, customer relations, and capitalized research expenses. Intangible assets are recognized in the balance sheet at their acquisition or production cost, less any accumulated amortization and impairment losses recognized.

Intangible assets other than goodwill and trademarks with indefinite useful lives are amortized on a straight-line basis over 3 to 20 years depending on the pattern according to which the entity envisages using the future economic benefits related to the asset.

The main categories of intangible assets and the amortization periods applied by the Group are as follows:

- patents: residual period until expiry of patent protection;
- technologies: average useful life;
- software: 3 to 10 years;
- licences: term of the contract;
- capitalized contracts: term of the contract;
- customer relations: average useful life;
- capitalized research expenses: useful life of the project;
- REACH registration fees: protection period of study data.

4.1 Goodwill

Goodwill is not amortized. It is subject to impairment tests as soon as any indicators of potential impairment are identified. Impairment tests are performed at least annually. The methodology used for the performance of impairment tests is described in paragraph B6 "Impairment of long-lived assets".

Goodwill is measured and recognized as described in note B3 "Goodwill and business combinations".

4.2 Trademarks

Trademarks are valued by the relief-from-royalty method.

4.3 Software and IT licences

Software development expenses for the design, programming and test phases are capitalized.

Training costs, expenses related to change management, data transfer and subsequent maintenance costs are recorded as expenses.

4.4 Capitalized research and development costs

Under IAS 38 "Intangible assets", development costs are capitalized as soon as the Group can demonstrate, in particular:

- its intention and its financial and technical ability to complete the development project;
- that it is probable that future economic benefits attributable to the development costs will flow to the enterprise, which also implies having successfully completed the main non-toxicity studies relating to the new product; and
- that the cost of the asset can be measured reliably.

Grants received in respect of development activities are recognized as a deduction from capitalized development costs if they have been definitively earned by the Group. The Group also receives public financing in the form of repayable advances for the development of certain projects. Repayment of these advances is generally related to the future revenues generated by the development. The Group recognizes these advances in balance sheet liabilities (in the "Other non-current liabilities" caption) taking account of the probability of their repayment.

4.5 REACH

As no specific IFRS IC interpretations exist on the subject, the Group applies the following methods based on IAS 38:

- when most of the tests required for preparing the registration file have been acquired from a third party, the Group records an operating right in the intangible assets;
- when most of the expenses involved in preparing the registration file have been carried out internally or outsourced, the Group capitalizes the development costs that meet the requirements for capitalization defined by IAS 38 (see B4.4 "Capitalized Research and development costs").

5. PROPERTY, PLANT & EQUIPMENT

5.1 Gross value

The gross value of items of property, plant and equipment corresponds to their acquisition or production cost in accordance with IAS 16 "Property, plant & equipment". Gross value is not subject to revaluation.

Equipment subsidies are deducted directly from the cost of the assets which they financed. With effect from 1 January 2009 and in accordance with the revised version of IAS 23, borrowing costs that are directly attributable to financing tangible assets that necessarily take a substantial period of time to get ready for their intended use or sale are eligible for capitalization as part of the cost of the assets for the portion of the cost incurred over the construction period.

Routine maintenance and repairs are charged to income in the period in which they are incurred. Costs related to major maintenance turnarounds of industrial facilities which take place at intervals greater than 12 months are capitalized at the time they are incurred and depreciated over the period between two such turnarounds.

Fixed assets which are held under finance lease contracts, as defined in IAS 17 "Leases", which have the effect of transferring substantially all the risks and rewards inherent to ownership of the asset from the lessor to the lessee, are capitalized in assets at their market value or at the discounted value of future lease payments if lower (such assets are depreciated using the methods and useful lives described below). The corresponding lease obligation is recorded as a liability. Leases which do not meet the above definition of finance leases are accounted for as operating leases.

5.2 Depreciation

Depreciation is calculated on a straight-line basis on the basis of the acquisition or production cost. Assets are depreciated over their estimated useful lives by category of asset. The principal categories and useful lives are as follows:

- machinery and tools 5 - 10 years;
- transportation equipment: 5 - 20 years;
- specialized complex installations: 10 - 20 years;
- buildings: 10 - 30 years.

These useful lives are reviewed annually and modified if expectations change from the previous estimates. Such changes in accounting estimate are accounted for on a prospective basis.

6. IMPAIRMENT OF LONG-LIVED ASSETS

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

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

Tests are performed for each autonomous group of assets, termed Cash Generating Units (CGUs). A CGU is a group of assets whose continued use generates cash flows that are substantially independent of cash flows generated by other groups of assets. They are worldwide business operations, which bring together groups of similar products in strategic, commercial and industrial terms. For the Group, the CGUs are the activities as presented in note C2 "Information by business division". 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 2017, the terminal value was determined on the basis of a perpetuity annual growth rate of 1.5% (the same rate as used in 2016) 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 2017 (the same rate as used in 2016). 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 2017 evaluating the impact of reasonable changes in the basic assumptions, and in particular the impact of a change of plus or minus 1 point in the discount rate and plus or minus 0.5 point in the perpetuity growth rate, have confirmed the carrying amounts of the different CGUs.

7. FINANCIAL ASSETS AND LIABILITIES

Financial assets and liabilities principally comprise:

- other investments;
- loans and financial receivables included in other non-current assets;
- accounts receivable;
- cash and cash equivalents;
- debt and other financial liabilities (including accounts payable); and
- derivatives, reported as part of other current assets and liabilities.

7.1 Other investments

These securities are accounted for, in accordance with IAS 39, as available-for-sale assets and are thus recognized at their fair value. In cases where fair value cannot be reliably determined, the securities are recognized at their historical cost. Changes in fair value are recognized directly through shareholders' equity.

If an objective indicator of impairment in the value of a financial asset is identified, an irreversible impairment loss is recognized, in general through recurring operating income. Such impairment is only reversed via income at the date of disposal of the securities.

7.2 Loans and financial receivables

These financial assets are recognized at amortized cost. They are subject to impairment tests involving a comparison of their carrying amount to the present value of estimated recoverable future cash flows. These tests are carried out as soon as any indicator inferring that the present value of these assets is lower than their carrying amount is identified. As a minimum such tests are performed at each balance sheet date. Any impairment loss is recognized in recurring operating income.

7.3 Accounts receivable

Accounts receivable are initially recognized at their fair value. Subsequent to initial recognition, they are recognized at amortized cost. If required, a bad debt provision is recognized on the basis of the risk of non-recovery of the receivables.

7.4 Cash and cash equivalents

Cash and cash equivalents are liquid assets and assets which can be converted into cash within less than 3 months that are subject to a negligible risk of change in value.

7.5 Non-current and current debt (including accounts payable)

Non-current and current debt (other than derivatives) is recognized at amortized cost.

7.6 Derivatives

The Group may use derivatives to manage its exposure to foreign currency risks and risks of changes in the prices of raw materials and energy. Derivatives used by the Group are recognized at their fair value in the balance sheet, in accordance with IAS 39. The fair value of these unlisted derivatives is determined by reference to current prices for contracts with similar maturity. They therefore correspond to the "Level 2" category defined in IFRS 7.

Changes in the fair value of these derivatives are recognized within operating income and, for foreign currency instruments, in financial result for the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the differences between the spot exchange rate and the forward exchange rate, except for those on instruments which are considered to meet the criteria for cash flow hedge accounting or hedge accounting of a net investment in a foreign operation under IAS 39.

For items that qualify for cash flow hedge accounting, the effective portion of the change in fair value is recognized in shareholders' equity under the "Income and expense recognized directly through equity" caption until such time as the underlying hedged item is recognized through the income statement. Any ineffective portion is recognized in operating income.

A hedge of a net investment in a foreign operation hedges the exposure to foreign exchange risk of the net assets of the foreign operation (IAS 21, "The effects of changes in foreign exchange rates"). The effects of this hedge are recorded directly in shareholders' equity under the "Income and expense recognized directly through equity" caption.

8. INVENTORIES

Inventories are valued in the consolidated financial statements at the lower of cost and net realizable value, in accordance with IAS 2 "Inventories". Cost of inventories is generally determined using the weighted average cost (WAC) method.

Cost of manufactured products inventories includes raw material and direct labour costs, and an allocation of production overheads and depreciation based on normal production capacity. Start-up costs and general and administrative costs are excluded from the cost of manufactured products inventories.

The net realizable value is the sale price as estimated for the normal course of business, less estimated costs for completion and sale.

9. PROVISIONS FOR PENSIONS AND OTHER LONG-TERM BENEFITS

In accordance with IAS 19 (Revised) "Employee benefits":

- payments made in the context of defined contribution plans are recognized in expenses of the period; and
- obligations in respect of defined benefit plans are recognized and valued using the actuarial projected unit credit method.

Post-employment benefits

For defined benefit plans, the valuation of obligations under the projected unit credit method principally takes into account:

- an assumption concerning the date of retirement;
- a discount rate which depends on the geographical region and the duration of the obligations;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs; and
- the most recent mortality statistics for the countries concerned.

Returns on plan assets are in line with discount rates.

Differences which arise between the valuation of obligations and forecasts of such obligations (on the basis of new projections or assumptions) and between forecasts and outcomes of returns on plan assets are termed actuarial gains and losses, and are recorded in other non-recyclable comprehensive income.

When a plan is amended or created, the entire past service cost is immediately recognized in the income statement.

A pension asset may be generated where a defined benefit plan is overfunded. The amount at which such an asset is recognized in the balance sheet may be subject to a ceiling, in application of IAS 19.64 and IFRIC 14.

Other long-term benefits

In respect of other long-term benefits, and in accordance with applicable laws and regulations, provisions are recognized using a simplified method. Thus, if an actuarial valuation using the projected unit cost method is required, actuarial gains and losses and all past service costs are recognized immediately in the provision, with a corresponding entry being recognized to the income statement.

The net expense related to pension benefit obligations and other employee benefit obligations is recognized in recurring operating income, with the exception of:

- the effect of curtailments or settlements of plans, which are presented under the "Other income and expenses" caption in the case of substantial modifications to such plans; and
- the net interest expense and the actuarial gains and losses related to changes in the discount rate on other long-term benefits, which are classified within the financial result caption.

10. OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

A provision is recognized when:

- the Group has a legal, regulatory or contractual obligation to a third party resulting from past events. An obligation can also result from Group practices or public commitments that create a reasonable expectation among the third parties in question that the Group will assume certain responsibilities;
- it is certain or probable that the obligation will lead to an outflow of resources to the benefit of the third party; and
- its amount can be estimated reliably and corresponds to the best possible estimate of the commitment. In exceptional cases where the amount of the obligation cannot be measured with sufficient reliability, disclosure is made in the notes to the financial statements in respect of the obligation (see note C20 "Liabilities and contingent liabilities").

Provisions for protection of the environment, which are established or reviewed when a business is closed down or upon a formal request from the authorities, are the subject of an internal review every two years. These provisions are recognized or updated by a dedicated team which calls in specialized external assistance as and when required by the matters identified.

When it is expected that the Group will obtain partial or total reimbursement of the cost that was provided against, the expected reimbursement is recognized in receivables if, and only if, the Group is virtually certain of the receipt.

Long-term provisions, other than provisions for pensions and post-employment benefit obligations, are not inflation-indexed or discounted as the Group considers that the impact of such adjustments would not be significant.

The current (less than one year) portion of provisions is maintained within the "Other provisions and other non-current liabilities" caption.

11. GREENHOUSE GAS EMISSIONS ALLOWANCES (EUAS) AND CERTIFIED EMISSION REDUCTIONS (CERS)

In the absence of an IFRS standard or interpretation relating to accounting for CO_2 emissions allowances, the following treatment has been adopted:

- allowances allocated without payment of consideration are recognized for a nil value; and
- transactions carried out in the market are recognized at the transaction amount.

At this point, greenhouse gas emissions allowances (EUAs) allocated are adequate to cover the operational needs of the Group's European entities and a deficit is not currently forecast. The Group does not have any trading activity in respect of CO_2 emissions allowances. However, in the normal course of its operations, the Group may carry out cash or forward sales of its surpluses. These sales do not enter into the scope of application of IAS 39 because of the "own use" exception.

The CERs produced by the Group in the context of projects to reduce its greenhouse gas emissions are recognized in inventories, and sales are recorded at their net-of-tax value on delivery of the CERs.

12. INCOME STATEMENT ITEMS

12.1 Sales

Sales are measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates. Sales are recognized on transfer to the purchaser of the risks and rewards related to ownership of the goods, which is determined mainly on the basis of the terms and conditions of the sales contracts.

12.2 Operating expenses

Operating expenses correspond to the full cost of sales excluding research and development expenses and selling and administrative expenses which are reported on specific lines.

12.3 Research and development expenses

Research and development expenses include salaries, purchases, external services and amortization, and are recognized as incurred. Grants received are recognized as a deduction from research expenses.

The Group recognizes the research tax credit as a deduction from operating expenses.

12.4 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. These items of income and expense notably include:

- impairment losses in respect of property, plant and equipment and intangible assets;
- gains or losses on sale of assets, acquisition costs, negative goodwill on acquisitions on favourable terms and the valuation difference on inventories between their fair value at the acquisition date and their production cost;
- large restructuring and environmental expenses which would hamper the interpretation of recurring operating income (including substantial modifications to employee benefit plans and the effect of onerous contracts); and
- expenses related to litigation and claims or major damages, whose nature is not directly related to ordinary operations.

From 2017, depreciation and amortization related to the revaluation of identifiable tangible and intangible assets as part of the allocation of the purchase price of businesses are included in operating expenses. The 2016 figures have been restated accordingly.

12.5 Recurring operating income

The recurring operating income is calculated as all income and expenses not relating to the financial result, equity affiliates or income taxes.

12.6 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.

13. INCOME TAXES

13.1 Current taxes

Current taxes are the amount of income taxes that the Group expects to pay in respect of taxable profits of consolidated companies in the period. They also include adjustments to current taxes in respect of prior periods.

The French tax consolidation regime enables certain French companies in the Group to offset their taxable results in determining the tax charge for the entire French tax group. The overall tax charge is payable by Arkema, as the parent company of the tax group. Tax consolidation regimes also exist in countries outside France.

The French Finance Act for 2010 introduced the local tax named CET *(Contribution EconomiqueTerritoriale)*. One of its components is the contribution based on companies' value added (*Cotisation sur la Valeur Ajoutée des Entreprises* – CVAE). After analyzing the methods for determining this contribution in the light of the positions of the IFRS IC and France's Accounting Standards Authority ANC *(Autorité des normes comptables)* in late 2009, the Group considered that in this specific case, the contribution meets the requirements to be treated as a current tax under IAS 12. The CVAE has therefore been classified under "Income taxes" since 1 January 2010.

13.2 Deferred taxes

The Group uses the liability method whereby deferred taxes are recognized based upon the temporary differences between the financial statement and tax basis of assets and liabilities, as well as on tax loss carry forwards and other tax credits, in accordance with IAS 12 "Income taxes".

Deferred tax assets and liabilities are valued at the tax rates that are expected to apply in the year in which the asset will be realized or the liability settled, on the basis of tax rates (and tax legislation) that have been enacted or virtually enacted at the balance sheet date. The effect of any changes in tax rates is recognized in income for the period, unless it relates to items that were previously debited or credited through equity. Deferred tax assets and liabilities are not discounted.

Deferred tax assets are recognized to the extent that their recovery is probable. In order to assess the likelihood of recovery of such assets, account is notably taken of the profitability outlook determined by the Group and historical taxable profits or losses.

A deferred tax liability is recognized for all taxable temporary differences related to investments in subsidiaries, associates and joint ventures, unless:

- the Group controls the timing of the reversal of the temporary difference; and
- it is probable that this difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are offset if a legally enforceable right to offset current tax assets and liabilities exists and if they relate to income taxes levied by the same tax authority.

14. CASH FLOW STATEMENT

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). In consequence, cash flows cannot be recalculated on the basis of the amounts shown in the balance sheet.

15. SHARE-BASED PAYMENTS

In application of IFRS 2 "Share-based payments", the stock options and free shares granted to management and certain Group employees are measured at their fair value at the date of grant, which generally corresponds to the date of the Board of Directors' meeting that granted the stock options and free shares.

The fair value of the options is calculated using the Black & Scholes model, adjusted, in the case of the last plans granted in 2011, for an illiquidity cost due to the non-transferability of instruments; the expense is recognized in personnel expenses on a straight-line basis over the period from the date of grant to the date from which the options can be exercised.

The fair value of rights under free share grants corresponds to the opening market price of the shares on the day of the Board of Directors' meeting that decides on the grant, adjusted for dividends not received during the vesting period and an illiquidity cost related to the period of non-transferability. The expense recognized also reflects the probability that the presence condition will be fulfilled. This expense is included in personnel expenses on a straight-line basis over the vesting period of the rights.

C. Notes to the consolidated financial statements

Note 1 ALTERNATIVE PERFORMANCE INDICATORS

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

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

1.1 RECURRING OPERATING INCOME (REBIT) AND EBITDA

(In millions of euros)	Notes	2017	2016
OPERATING INCOME		**845**	**717**
- Depreciation and amortization related to the revaluation of tangible and intangible assets as part of the allocation of the purchase price of businesses		(45)	(38)
- Other income and expenses	(C4)	(52)	21
RECURRING OPERATING INCOME (REBIT)		**942**	**734**
- Recurring depreciation and amortization		(449)	(455)
EBITDA		**1,391**	**1,189**

Details of depreciation and amortizations:

(In millions of euros)	Notes	2017	2016
Depreciation and amortization	(C9.2 & C10)	**(501)**	**(530)**
Of which: Recurring depreciation and amortization		(449)	(455)
Of which: Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses		(45)	(38)
Of which: Impairment included in other income and expenses	(C4)	(7)	(37)

1.2 ADJUSTED NET INCOME AND ADJUSTED EARNINGS PER SHARE

(In millions of euros)	Notes	2017	2016
NET INCOME – GROUP SHARE		**576**	**427**
- Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses		(45)	(38)
- Other income and expenses	(C4)	(52)	21
- Other income and expenses attributable to non-controlling interests		-	3
- Taxes on depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses		12	10
- Taxes on other income and expenses		14	4
- One-time tax-effects*		55	9
ADJUSTED NET INCOME		**592**	**418**
Weighted average number of ordinary shares		75,682,844	75,201,739
Weighted average number of potential ordinary shares	(C8)	75,895,729	75,429,599
ADJUSTED EARNINGS PER SHARE *(€)*		**7.82**	**5.56**
DILUTED ADJUSTED EARNINGS PER SHARE *(€)*		**7.80**	**5.54**

* *One-time tax-effects for 2017 correspond to the impacts on deferred taxes of the decrease in the corporate income tax rates in the United States and France, and the cancellation and reimbursement of the 3% contribution which was payable in France on cash dividends.*
One-time tax-effects for 2016 correspond to the impact of the change in the corporate income tax rate in France from 2020 recognized in connection with the acquisition of Bostik.

1.3 FREE CASH FLOW

(In millions of euros)	2017	2016
Cash flow from operating activities	1,008	821
+ Cash flow from investing activities	(448)	(664)
NET CASH FLOW	**560**	**157**
- Net cash flow from portfolio management operations	(5)	(269)
FREE CASH FLOW	**565**	**426**

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

1.4 RECURRING CAPITAL EXPENDITURE

(In millions of euros)	2017	2016
INTANGIBLE ASSETS AND PROPERTY, PLANT, AND EQUIPMENT ADDITIONS	**459**	**445***
- Exceptional investments	10	-
- Investments relating to portfolio management operations	18	-
- Investments with no impact on net debt	-	22
RECURRING CAPITAL EXPENDITURE	**431**	**423**

* *The 2016 figures have been corrected by €2 million, in coherence with the cash flow statement.*

Exceptional investments correspond to a very limited number of investments that the Group presents separately in its financial reporting due to their unusual size or nature. In 2017 they concern the initial work done for the project to double thiochemical production capacities at the Kerteh site in Malaysia.

Investments relating to portfolio management operations reflect the impact of acquisition operations. In 2017 they concern the acquisition of the assets of CMP Specialty Products in the adhesives sector in the United States (see note A.1 "Highlights").

Investments with no impact on net debt correspond to investments financed by non-Group entities, or reclassifications of assets. In 2016 these investments principally concerned fixed assets reassigned as part of the operations undertaken with Canada Fluorspar Inc.

1.5 WORKING CAPITAL

(In millions of euros)	Notes	2017	2016
Inventories	(C14)	1,145	1,111
Accounts receivable	(C15)	1,115	1,150
Other receivables including income taxes	(C15 & C6)	251	261
Accounts payable	(C24)	(965)	(932)
Other liabilities including income taxes	(C24 & C6)	(459)	(464)
Derivatives	(C23)	7	(21)
WORKING CAPITAL		**1,094**	**1,105**

1.6 CAPITAL EMPLOYED

(In millions of euros)	Notes	2017	2016
Goodwill, net	(C9)	1,525	1,703
Intangible assets other than goodwill, and property, plant and equipment, net	(C9 & C10)	3,645	3,726
Investments in equity affiliates	(C11)	30	35
Other investments and other non-current assets	(C12 & C13)	260	260
Working capital		1,094	1,105
CAPITAL EMPLOYED		**6,554**	**6,829**

Note 2 INFORMATION BY BUSINESS DIVISION

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

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

The content of the business divisions is as follows:

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

  High Performance Materials provide innovative solutions with high value added, used in varied sectors such as transport, oil extraction, renewable energies (photovoltaics, lithium-ion batteries), consumer goods (beauty products, sports equipment, packaging, etc), electronics, construction, coatings and water treatment;
- Industrial Specialties groups the following Business Lines:
  - Thiochemicals,
  - Fluorochemicals,
  - PMMA,
  - Hydrogen Peroxides.

  These integrated industrial niche markets on which the Arkema Group is among the world leaders concern products used in several industrial sectors such as production of cold (refrigeration and air conditioning), petrochemicals, refining, paper pulp, animal nutrition, electronics and the automotive industry;
- Coating Solutions comprises the following Business Lines:
  - Acrylics,
  - Coatings Resins and Additives, comprising the coatings resins and Coatex rheological additives activities.

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

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

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

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

2017 *(In millions of euros)*	**High Performance Materials**	**Industrial Specialties**	**Coating Solutions**	**Corporate**	**Total**
Non-Group sales	**3,830**	**2,545**	**1,924**	**27**	**8,326**
Inter-division sales	7	141	72	-	
Total sales	**3,837**	**2,686**	**1,996**	**27**	
EBITDA*	**632**	**585**	**244**	**(70)**	**1,391**
Recurring depreciation and amortization*	(158)	(174)	(109)	(8)	(449)
Recurring operating income (REBIT)*	**474**	**411**	**135**	**(78)**	**942**
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	(45)	-	-	-	(45)
Other income and expenses	(19)	(9)	(8)	(16)	(52)
Operating income	**410**	**402**	**127**	**(94)**	**845**
Equity in income of affiliates	1	-	-	-	1
Intangible assets and property, plant, and equipment additions	186	165	88	20	459
*Of which: recurring investments**	*168*	*155*	*88*	*20*	*431*
Employees at year end	**10,688**	**5,794**	**3,153**		**19,635**
Goodwill, net	1,134	89	295	7	1,525
Intangible assets other than goodwill, and property, plant and equipment, net	1,863	1,072	660	50	3,645
Investments in equity affiliates	9	21	-	-	30
Other investments and other non-current assets	69	55	24	112	260
Working capital*	630	270	236	(42)	1,094
Capital employed*	**3,705**	**1,507**	**1,215**	**127**	**6,554**
Provisions and other non-current liabilities	(314)	(284)	(79)	(226)	(903)

* *See C1 "Alternative performance indicators".*

2016 *(In millions of euros)*	**High Performance Materials**	**Industrial Specialties**	**Coating Solutions**	**Corporate**	**Total**
Non-Group sales	**3,422**	**2,316**	**1,771**	**26**	**7,535**
Inter-division sales	14	109	56	-	
Total sales	**3,436**	**2,425**	**1,827**	**26**	
EBITDA*	**570**	**473**	**208**	**(62)**	**1,189**
Recurring depreciation and amortization	(154)	(173)	(125)	(3)	(455)
Recurring operating income (REBIT)*	**416**	**300**	**83**	**(65)**	**734**
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	(38)	-	-	-	(38)
Other income and expenses	60	(61)	2	20	21
Operating income	**438**	**239**	**85**	**(45)**	**717**
Equity in income of affiliates	1	7	-	-	8
Intangible assets and property, plant, and equipment additions	175	175	82	13	445
*Of which: recurring investments**	*173*	*155*	*82*	*13*	*423*
Employees at year end	**10,611**	**5,774**	**3,090**		**19,475**
Goodwill, net	1,306	90	299	8	1,703
Intangible assets other than goodwill, and property, plant and equipment, net	1,779	1,166	734	47	3,726
Investments in equity affiliates	9	26	-	-	35
Other investments and other non-current assets	70	55	23	112	260
Working capital*	623	288	222	(28)	1,105
Capital employed*	**3,787**	**1,625**	**1,278**	**139**	**6,829**
Provisions and other non-current liabilities	(368)	(297)	(80)	(239)	(984)

* *See C1 "Alternative performance indicators".*

Breakdown of non-Group sales by Business Line:

	2017	2016
High Performance Materials	**46%**	**46%**
Technical Polymers	10%	11%
Performance Additives	12%	14%
Bostik	24%	21%
Industrial Specialties	**31%**	**30%**
Thiochemicals	8%	9%
Fluorochemicals	9%	8%
PMMA	10%	9%
Hydrogen Peroxides	4%	4%
Coating Solutions	**23%**	**24%**
Acrylics	10%	10%
Coatings Resins and Additives	13%	14%

Note 3 INFORMATION BY GEOGRAPHICAL AREA

Non-Group sales are presented on the basis of the geographical location of customers. Capital employed, Intangible assets and property, plant, and equipment additions, and Employees at year end are presented on the basis of the location of the assets.

2017 *(In millions of euros)*	France	Rest of Europe	NAFTA*	Asia	Rest of the world	Total
Non-Group sales	662	2,498	2,649	2,149	368	8,326
Capital employed	2,647	986	1,509	1,357	55	6,554
Intangible assets and property, plant, and equipment additions	164	38	178	76	3	459
Employees at year end	7,144	3,627	3,742	4,539	583	19,635

2016 *(In millions of euros)*	France	Rest of Europe	NAFTA*	Asia	Rest of the world	Total
Non-Group sales	628	2,092	2,568	1,901	346	7,535
Capital employed	3,060	568	1,673	1,465	63	6,829
Intangible assets and property, plant, and equipment additions	207	38	118	77	3	443
Employees at year end	7,126	3,527	3,694	4,487	641	19,475

* *NAFTA: USA, Canada, Mexico.*

Note 4 OTHER INCOME AND EXPENSES

	2017			2016		
(In millions of euros)	Expenses	Income	Net	Expenses	Income	Net
Restructuring and environment	(25)	10	(15)	(28)	6	(22)
Goodwill impairment	-	-	-	-	-	-
Asset impairment (other than goodwill)	(4)	-	(4)	(43)	-	(43)
Litigation and claims	(24)	-	(24)	(3)	-	(3)
Gains (losses) on sales and purchases of assets	(12)	3	(9)	(23)	86	63
Other	-	-	-	-	26	26
TOTAL OTHER INCOME AND EXPENSES	**(65)**	**13**	**(52)**	**(97)**	**118**	**21**

* *Other income and expenses for 2016 shown in this table have been restated to reflect the reclassification of depreciation and amortization related to the revaluation of identified tangible and intangible assets as part of the allocation of the purchase price for businesses, amounting to -€38 million.*

In 2017, restructuring and environment expenses include provisions for restructuring, particularly in the Coating Solutions and Bostik segments, and an additional provision for restoration of certain sites. Income mainly concerns the adjustment, following the reduction in the corporate income tax rate in the United States, of the long-term receivable related to the guarantee mechanism provided by Total for former industrial sites in the United States as part of the Spin-Off (see note C.13 "Other non-current assets" and C.29.2 "Commitments received"). Litigation costs correspond to the consequences of Hurricane Harvey in the United States, particularly the total insurance deductible which amounts to €18 million. Gains and losses on sales and purchases of assets principally comprise the impact of revaluation of inventories in connection with the acquisition of Den Braven.

In 2016, restructuring and environment expenses include a provision of €10 million for the closure of the R134a unit at the Pierre Bénite site in France, and additional provisions for restructuring prior to 2016, principally in the PMMA Business Line (Bostik). Asset impairment mainly concerns intangible assets relating to projects the Group decided to discontinue. The gains and losses on sales and purchases of assets principally include the gain on the sale of the activated carbon and filter aid business, and expenses and provisions associated with portfolio management operations. Other income principally concerns the financial consequences of the termination from 7 June 2016 of the Chairman and CEO's complementary defined-benefit pension plan, and the final phase of transfers of pensions in the Netherlands to external management (see note C18, "Provisions for pensions and other employee benefits").

The total impairment included in other income and expenses amounts to -€7 million at 31 December 2017 compared to -€37 million at 31 December 2016.

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Note 5 FINANCIAL RESULT

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

(In millions of euros)	2017	2016
Cost of debt	(77)	(64)
Financial income/expenses on provisions for pensions and employee benefits	(11)	(14)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(17)	(28)
Capitalized interest	2	2
Other	-	1
FINANCIAL RESULT	**(103)**	**(103)**

Note 6 INCOME TAXES

6.1 INCOME TAX EXPENSE

The income tax expense is broken down as follows:

(In millions of euros)	2017	2016
Current income taxes	(207)	(205)
Deferred income taxes	45	12
TOTAL INCOME TAXES	**(162)**	**(193)**

The income tax expense amounts to €162 million for 2017 including €15 million for the CVAE, compared with €193 million for 2016 including €14 million for the CVAE (see B.13 "Income taxes").

In 2017, current income taxes include income of €14 million due to cancellation of the 3% contribution payable, in France, on dividends paid in cash for the period 2013 to 2016. Deferred income taxes include income resulting from the announcement of a reduction in corporate income tax rates in the United States from 2018, and a gradual reduction in France from 2019, amounting to €36 million and €5 million respectively.

6.2 ANALYSIS BY SOURCE OF NET DEFERRED TAX ASSETS (LIABILITIES)

The analysis by source of the net deferred tax assets (liabilities) is as follows, before offset of assets and liabilities at fiscal entity level:

(In millions of euros)	31/12/2016	Changes in scope/ Reclassifications	Changes recognized in shareholders' equity	Changes recognized in the income statement	Translation adjustments	31/12/2017
Tax loss and tax credit carryforwards	3	-	1	4	(1)	7
Provisions for pensions and similar benefits	144	0	(14)	(22)	(7)	101
Other temporarily non-deductible provisions	216	0	(8)	(9)	(11)	188
Deferred tax assets	**363**	**0**	**(21)**	**(27)**	**(19)**	**296**
Valuation allowance on deferred tax assets	**(13)**	**(1)**	**9**	**(23)**	**0**	**(28)**
Excess tax over book depreciation	162	7	(3)	(46)	(15)	105
Other temporary tax deductions	302	38	3	(49)	(10)	284
Deferred tax liabilities	**464**	**45**	**0**	**(95)**	**(25)**	**389**
NET DEFERRED TAX ASSETS (LIABILITIES)	**(114)**	**(46)**	**(12)**	**45**	**6**	**(121)**

In 2017, the reclassification of deferred tax liabilities mainly relates to the final allocation of goodwill on the acquisition of Den Braven.

After offsetting assets and liabilities at fiscal entity level, deferred taxes are presented as follows in the balance sheet:

(In millions of euros)	31/12/2017	31/12/2016
Deferred tax assets	150	171
Deferred tax liabilities	271	285
NET DEFERRED TAX ASSETS (LIABILITIES)	**(121)**	**(114)**

As the Group is able to control the timing of the reversal of temporary differences related to investments in subsidiaries and joint ventures, it is not necessary to recognize deferred taxes in respect of these differences.

6.3 RECONCILIATION BETWEEN INCOME TAX EXPENSE AND PRE-TAX INCOME

(In millions of euros)	2017	2016
Net income	581	429
Income taxes	(162)	(193)
Pre-tax income	743	622
French corporate income tax rate	34.43%	34.43%
Theoretical tax expense	(256)	(214)
Difference between French and foreign income tax rates	12	4
Tax effect of equity in income of affiliates	0	3
Permanent differences	105	3
Change in valuation allowance against deferred tax assets ceiling	(17)	(1)
Deferred tax assets not recognized (losses)	(6)	10
INCOME TAX EXPENSE	**(162)**	**(193)**

The French corporate income tax rate includes the standard tax rate (33.33%) and the additional social contribution. The overall income tax rate therefore stands at 34.43%.

The net impact of the CVAE is included in permanent differences.

6.4 EXPIRY OF TAX LOSS CARRYFORWARDS AND TAX CREDITS

The Group's unrecognized tax loss carryforwards and tax credits can be used up to their year of expiry, indicated in the table below:

	31/12/2017		31/12/2016	
(In millions of euros)	Base	Income taxes	Base	Income taxes
2017	-	-	34	8
2018	18	4	36	9
2019	39	10	50	13
2020	37	9	74	18
2021	48	12	43	11
2022 and beyond	40	10	-	-
Tax losses that can be carried forward indefinitely*	1,685	450	1,844	533
TOTAL	**1,867**	**495**	**2,081**	**592**

* *Essentially in France.*

The Group's unrecognized tax loss carryforwards and tax credits take into account the changes in the tax rates.

Note 7 BUSINESS COMBINATION

7.1 DEN BRAVEN

On 1 December 2016 Arkema finalized the acquisition of Den Braven for an enterprise value of €485 million and a final purchase price of €427 million.

In compliance with IFRS 3 (revised), the Group used the acquisition method for the accounting treatment of this operation.

The value recorded in the financial statements at 31 December 2017 for the identifiable assets acquired and liabilities assumed at the acquisition date breaks down as follows:

(In millions of euros)	**Fair value acquired from Den Braven**
Intangible assets	167
Property, plant and equipment	63
Deferred tax assets	2
Other non-current assets	5
Total non-current assets	**237**
Inventories	33
Accounts receivable	52
Other current assets	4
Cash and cash equivalents	90
Total current assets	**179**
Total assets	**416**
Deferred tax liabilities	47
Provisions and other non-current liabilities	1
Non-current debt	58
Total non-current liabilities	**106**
Accounts payable	40
Other current liabilities	101
Total current liabilities	**141**
Fair value of net assets	**169**
Goodwill	**258**

Intangible assets stated at fair value mainly consist of the Den Braven® brand, technologies and customer relations, the two latter assets being amortized over 15 years. The revalued inventories were consumed during the first half of 2017.

The expenses incurred for this operation are recorded in "Other income and expenses" at the amount of €5 million, of which €3 million were recognized in 2016.

The goodwill of €258 million resulting from allocation of the purchase price is final. It principally comprises the expected synergies and the step-up in business activity thanks to geographical, technological and commercial complementarities between Bostik and Den Braven.

7.2 CMP SPECIALTY PRODUCTS

In May 2017, Arkema acquired CMP Specialty Products for an enterprise value of €18 million.

In compliance with IFRS 3 (revised), the Group used the acquisition method for the accounting treatment of this operation.

The amount recorded in the financial statements at 31 December 2017 for the identifiable assets acquired and liabilities assumed at the acquisition date breaks down as follows:

(In millions of euros)	**Fair value acquired from CMP Specialty Products**
Intangible assets	5
Total non-current assets	**5**
Goodwill	**13**

The goodwill of €13 million, resulting from allocation of the purchase price, is final.

Note 8 EARNINGS PER SHARE

	2017	2016
Weighted average number of ordinary shares	75,682,844	75,201,739
Dilutive effect of stock options	114,080	165,146
Dilutive effect of free share grants	98,805	62,714
Weighted average number of potential ordinary shares	75,895,729	75,429,599

In 2017, 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). The 2016 figures have been restated accordingly.

(In millions of euros)	2017	2016
Net income – Group share	576	427
Interest on subordinated perpetual notes, net of tax	(33)	(33)
Net income used in calculating earnings per share	543	394

	2017	2016
Earnings per share *(€)*	7.17	5.24
Diluted earnings per share *(€)*	7.15	5.22

Note 9 INTANGIBLE ASSETS

9.1 GOODWILL

	31/12/2017			31/12/2016
(In millions of euros)	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Goodwill	2,040	(515)	1,525	1,703

The breakdown by segment, with allocation by Business Line and CGU, is as follows:

Goodwill by Business Line	*by CGU (in millions of euros)*	**31/12/2017 Net book value**	**31/12/2016 Net book value**
Bostik	*Bostik*	830	984
Performance Additives		167	179
of which	*Adsorption*	*34*	*34*
	Organic peroxides	*23*	*25*
	Sartomer	*110*	*120*
Technical Polymers	*Technical polymers (specialty polyamides and PVDF)*	137	143
High Performance Materials		**1,134**	**1,306**
PMMA	*PMMA and methacrylates (Altuglas)*	-	-
Thiochemicals	*Thiochemicals*	7	8
Fluorochemicals	*Fluorochemicals*	41	41
Hydrogen Peroxides	*Hydrogen Peroxides*	41	41
Industrial Specialties		**89**	**90**
Acrylics	*Acrylics*	169	172
Coatings Resins and Additives		126	127
of which	*Rheological additives (Coatex)*	*96*	*96*
	Coatings resins	*30*	*31*
Coating Solutions		**295**	**299**
Corporate		**7**	**8**
TOTAL		**1,525**	**1,703**

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

(In millions of euros)	**2017**	**2016**
At 1 January	**1,703**	**1,320**
Acquisitions	-	-
Impairment	-	-
Disposals	-	-
Changes in scope	-	390
Translation adjustments	(58)	(7)
Reclassifications	(120)	-
At 31 December	**1,525**	**1,703**

Changes in goodwill in 2017 principally relate to the final allocation of goodwill on the acquisitions of Den Braven and CMP Specialty products (see note C7 "Business combination").

In 2016, the change in goodwill principally reflected the acquisition of Den Braven (see note C7 "Business combination").

9.2 OTHER INTANGIBLE ASSETS

(In millions of euros)	31/12/2017 Gross book value	31/12/2017 Accumulated amortization and impairment	31/12/2017 Net book value	31/12/2016 Net book value
Patents and technologies	403	(165)	238	233
Trademarks	532	(4)	528	440
Software and IT licences	295	(186)	109	111
Capitalized REACH costs	51	(21)	30	29
Other capitalized research expenses	11	(3)	8	3
Capitalized contracts	295	(237)	58	63
Asset rights	49	(18)	31	43
Customer relations	94	(13)	81	52
Other intangible assets	38	(18)	20	12
Intangible assets in progress	101	(23)	78	88
TOTAL	**1,869**	**(688)**	**1,181**	**1,074**

Trademarks essentially comprise the Bostik® and Den Braven® trademarks, which are part of the Bostik Business Line.

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

(In millions of euros)	2017	2016
At 1 January	**1,074**	**1,090**
Acquisitions	70	83
Amortization	(81)	(68)
Impairment	(5)	(26)
Disposals	0	(1)
Changes in scope	0	(14)
Translation adjustments	(32)	0
Reclassifications	155	10
At 31 December	**1,181**	**1,074**

Note 10 PROPERTY, PLANT AND EQUIPMENT

	31/12/2017			31/12/2016
(In millions of euros)	Gross book value	Accumulated depreciation and impairment	Net book value	Net book value
Land and buildings	1,844	(1,179)	665	729
Complex industrial facilities	3,419	(2,727)	692	774
Other property, plant and equipment	2,927	(2,137)	790	844
Construction in progress	329	(12)	317	305
TOTAL	**8,519**	**(6,055)**	**2,464**	**2,652**

Other property, plant and equipment at 31 December 2017 mainly comprise machinery and tools with a gross value of €2,262 million (€2,270 million at 31 December 2016), and accumulated depreciation and provisions for impairment of €1,680 million (€1,624 million at 31 December 2016).

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

(In millions of euros)	2017	2016
At 1 January	**2,652**	**2,727**
Acquisitions	389	362
Depreciation	(408)	(413)
Impairment	(7)	(23)
Disposals	(5)	(7)
Changes in scope	(10)	20
Translation adjustments	(153)	3
Other	-	(7)
Reclassifications	6	(10)
At 31 December	**2,464**	**2,652**

The figures above include the following amounts in respect of assets held under finance lease arrangements:

	31/12/2017			31/12/2016		
(In millions of euros)	Gross book value	Depreciation and impairment	Net book value	Gross book value	Depreciation and impairment	Net book value
Complex industrial facilities and buildings	30	(17)	13	27	(15)	12

They mainly correspond to leases of a hydrogen production unit located at Lacq and a production unit at Carling.

Note 11 EQUITY AFFILIATES

The amounts of the Group's commitments to joint ventures and associates are non-significant.

11.1 ASSOCIATES

	2017				2016			
(In millions of euros)	% ownership	Equity value	Equity in income (loss)	Sales	% ownership	Equity value	Equity in income (loss)	Sales
Arkema Yoshitomi Ltd.	49%	4	1	16	49%	4	1	17
CJ Bio Malaysia Sdn. Bhd.	14%	20	(1)	216	14%	24	5	218
Ihsedu Agrochem Private Ltd.	25%	5	0	221	25%	4	0	143
TOTAL		**29**	**0**			**32**	**6**	

11.2 JOINT VENTURES

	2017				2016			
(In millions of euros)	% ownership	Equity value	Equity in income (loss)	Sales	% ownership	Equity value	Equity in income (loss)	Sales
Daikin Arkema Refrigerants Asia Ltd.	40%	1	1	37	40%	2	1	28
Daikin Arkema Refrigerants Trading Ltd.	40%	0	0	48	40%	1	1	35
TOTAL		**1**	**1**			**3**	**2**	

Note 12 OTHER INVESTMENTS

The main movements in 2016 and 2017 are as follows:

(In millions of euros)	2017	2016
At 1 January	**33**	**29**
Acquisitions	2	0
Disposals	0	0
(Increases) / Reversals of impairment	0	0
Changes in scope	(5)	4
Translation adjustments	0	-
Other changes	-	-
At 31 December	**30**	**33**

Changes in scope in 2016 reflect the impact of the acquisition of Den Braven.

Note 13 OTHER NON-CURRENT ASSETS

(In millions of euros)	31/12/2017			31/12/2016		
	Gross value	Impairment	Net value	Gross value	Impairment	Net value
Loans and advances	218	(15)	203	216	(16)	200
Security deposits paid	27	-	27	27	-	27
TOTAL	**245**	**(15)**	**230**	**243**	**(16)**	**227**

Loans and advances include amounts receivable from the French tax authorities in respect of the research tax credit (CIR), and the tax credit for competitiveness and employment (CICE). Loans and advances also include €43 million of receivables on Total related to the remediation costs in respect of closed industrial sites in the United States (see note C19.3 "Other Provisions and other non-current liabilities / Provisions for environmental contingencies").

The CIR and CICE for 2013, amounting to €25 million, were reimbursed during the third quarter of 2017.

The CIR and CICE for 2014, amounting to €27 million, will be reimbursed during 2018.

Note 14 INVENTORIES

(In millions of euros)	31/12/2017	31/12/2016
INVENTORIES (COST)	**1,254**	**1,220**
Valuation allowance	(109)	(109)
INVENTORIES (NET)	**1,145**	**1,111**
Of which:		
Raw materials and supplies	*353*	*341*
Finished products	*792*	*770*

Note 15 ACCOUNTS RECEIVABLE, OTHER RECEIVABLES AND PREPAID EXPENSES

At 31 December 2017, accounts receivable are stated net of a bad debt provision of €34 million (€37 million at 31 December 2016). Other receivables and prepaid expenses notably include receivables from governments in an amount of €135 million at 31 December 2017 (€130 million at 31 December 2016), including €104 million of VAT. Details of accounts receivable net of valuation allowances are presented in note C22.4 "Credit risk".

Note 16 CASH AND CASH EQUIVALENTS

(In millions of euros)	31/12/2017	31/12/2016
Short-term cash advances	11	15
Monetary mutual funds	672	386
Available cash	755	222
CASH AND CASH EQUIVALENTS	**1,438**	**623**

Note 17 SHAREHOLDERS' EQUITY

At 31 December 2017, Arkema's share capital amounted to €759 million, divided into 75,870,506 shares with nominal value of €10.

17.1 CHANGES IN SHARE CAPITAL AND PAID-IN SURPLUS

Following the exercise of 152,559 share subscription options, the Company undertook two capital increases in the total nominal amount of €6 million.

	2017	2016
Number of shares at 1 January	**75,717,947**	**74,472,101**
Issuance of shares following the capital increase reserved for employees	-	998,072
Issuance of shares following the exercise of subscription options	152,559	247,774
Number of shares at 31 December	**75,870,506**	**75,717,947**

17.2 HYBRID BONDS

As part of the financing of the acquisition of Bostik, Arkema issued a perpetual hybrid bond (subordinated perpetual notes) in October 2014 in the total amount of €689 million net of an issuance premium of €7 million and €4 million arrangement costs. These bonds include a first call option on 29 October 2020 and carry an annual coupon of 4.75% until that date. The coupon will then be reset every 5 years. At each coupon date, the interest can be paid or carried over at the issuer's convenience. Coupons carried over generate late payment interest and become due in the event of certain contractually defined circumstances under the control of the issuer.

In compliance 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 in the Group's consolidated financial statements.

Arkema paid out a coupon of €33 million in 2017 (€33 million in 2016).

17.3 TREASURY SHARES

Arkema bought back 180,000 treasury shares in 2017. In November 2017, Arkema definitively granted 212,598 free shares to Group employees, principally in application of plans 2013, 2014-1, 3 and 2016-3.

	2017	2016
Number of treasury shares at 1 January	65,823	36,925
Repurchases of treasury shares	180,000	100,617
Grants of treasury shares	(212,598)	(71,719)
Number of treasury shares at 31 December	33,225	65,823

17.4 DIVIDENDS

The combined shareholders' general meeting of 23 May 2017 approved the distribution of a €2.05 dividend per share in respect of the 2016 financial year, or a total amount of €155 million. This dividend was paid out on 29 May 2017.

17.5 NON-CONTROLLING INTERESTS

Non-controlling interests do not represent a significant share of the Group's consolidated financial statements.

17.6 TRANSLATION ADJUSTMENTS

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

Note 18 PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS

(In millions of euros)	2017	2016
Pension obligations	321	366
Healthcare and similar coverage	75	93
Post-employment benefits	**396**	**459**
Long service awards	57	56
Other	7	5
Other long-term benefits	**64**	**61**
PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS	**460**	**520**

In accordance with the laws and practices of each country, the Group participates in employee benefit plans offering retirement, healthcare and similar coverage, and special termination benefits. These plans provide benefits based on various factors including length of service, salaries, and contributions made to the national bodies responsible for the payment of benefits.

These plans are either defined contribution plans or defined benefit plans. In certain cases they can be either partly or totally funded by investments in dedicated plan assets, mutual funds, general funds of insurance companies or other assets.

Post-employment benefits are detailed in the tables in 18.1, 18.2, and 18.3 below.

The main features of the principal defined benefit plans are as follows:

- in the United States, the largest defined benefit plan is the "Employee Pension Plan". This plan is now frozen and no new rights can be earned except in the case of a few employees. Under this plan, beneficiaries receive a lump sum or an annuity when they retire. The plan is pre-funded, and the assets funding it are subject to the minimum funding rules laid down in the federal Pension Protection Act. A complementary healthcare plan covering certain medical expenses or insurance premiums for retired employees and their dependants is still open to new members; this plan is not pre-funded;

- in France, the top hat pension plans are closed to new members. One of these plans is managed by an insurance company and pre-funded by plan assets. The other plan has been terminated insofar as it concerns the Chairman and CEO, following the resolution adopted at the Company's shareholders' general meeting held on 7 June 2016.The portion of the plan related to other beneficiaries was closed and transferred to external management in 2016. The impacts of these changes are recorded in Other income and expenses in the financial statements at 31 December 2016 (see note C4, "Other income and expenses");
- the retiree top-up healthcare plan is also closed and is not pre-funded. Other benefit plans (bonuses, long service awards and retirement gratuities) pay out lump sums; they are open to all employees and are partly pre-funded;
- in Germany, all defined benefit plans are closed to new members. Plan participants receive a monthly payment once they retire (the normal retirement age is set at 65). Only certain plans are pre- funded, involving non-significant amounts;
- in the Netherlands, the defined benefit plans for Arkema and Bostik were open until 31 December 2015 and were then replaced by defined contribution plans from 1 January 2016; rights vested at 31 December 2015 were transferred to external management. The impacts of changes to the Arkema plan are recorded in Other income and expenses in the financial statements at 31 December 2016 (see note C4, "Other income and expenses");
- in the United Kingdom, no further rights can now be earned under any existing plan. The UK plans are pre-funded through a pension fund.

18.1 EXPENSE IN THE INCOME STATEMENT

The expense related to defined benefit plans is broken down as follows:

	2017			2016		
(In millions of euros)	**Total**	**Pension obligations**	**Healthcare and similar coverage**	**Total**	**Pension obligations**	**Healthcare and similar coverage**
Current service cost	17	15	2	17	14	3
Past service cost	(4)	-	(4)	0	-	0
Settlements	-	-	-	(47)	(47)	-
Interest expense	25	22	3	28	25	3
Expected return on plan assets	(14)	(14)	-	(15)	(15)	-
Other	-	-	-	0	0	0
(INCOME) / EXPENSE	**24**	**23**	**1**	**(17)**	**(23)**	**6**

18.2 CHANGE IN NET PROVISIONS OVER THE PERIOD

	Pension obligations		Healthcare and similar coverage		Total post-employment benefits	
(In millions of euros)	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Net liability (asset) at beginning of year	**366**	**388**	**93**	**123**	**459**	**511**
(Income)/Expense for the year	23	(23)	1	6	24	(17)
Contributions made to plan assets	(19)	(17)	-	-	(19)	(17)
Net benefits paid by the employer	(9)	(9)	(4)	(4)	(13)	(13)
Changes in scope	-	0	-	-	0	0
Other	-	7	-	1	-	8
Translation adjustments	(16)	-	(6)	-	(22)	0
Actuarial gains and losses recognized in shareholders' equity	(24)	20	(9)	(33)	(33)	(13)
Net liability (asset) at end of year	**321**	**366**	**75**	**93**	**396**	**459**

18.3 VALUATION OF OBLIGATIONS AND PROVISIONS AT 31 DECEMBER

a) Present value of benefit obligations

(In millions of euros)	Pension obligations 2017	Pension obligations 2016	Healthcare and similar coverage 2017	Healthcare and similar coverage 2016
Present value of benefit obligations at beginning of year	**771**	**836**	**93**	**123**
Current service cost	15	14	2	3
Net interest expense	22	25	3	3
Past service cost (including curtailments)	-	-	(4)	-
Settlements	(1)	(120)	-	-
Plan participants' contributions	-	-	-	-
Benefits paid	(56)	(45)	(4)	(4)
Actuarial (gains) and losses	9	43	(9)	(33)
Changes in scope	-	0	-	-
Other	-	18	-	-
Translation adjustments	(56)	0	(6)	1
Present value of benefit obligations at end of year	**704**	**771**	**75**	**93**

b) Change in fair value of plan assets

Plan assets are mainly located in the United States, France and the United Kingdom.

(In millions of euros)	Pension obligations 2017	Pension obligations 2016
Fair value of plan assets at beginning of year	**(405)**	**(448)**
Interest income	(14)	(15)
Settlements	1	73
Plan participants' contributions	-	0
Employer contributions	(19)	(17)
Benefits paid from plan assets	47	36
Actuarial (gains) and losses	(33)	(23)
Changes in scope	-	-
Other	-	(14)
Translation adjustments	40	3
Fair value of plan assets at end of year	**(383)**	**(405)**

c) Provisions in the balance sheet

	Pension obligations		Healthcare and similar coverage	
(In millions of euros)	**2017**	**2016**	**2017**	**2016**
Present value of unfunded obligations	195	203	75	93
Present value of funded obligations	509	568	-	-
Fair value of plan assets	(383)	(405)	-	-
(Surplus) / Deficit of assets relative to benefit obligations	**321**	**366**	**75**	**93**
Asset ceiling	-	-	-	-
Net balance sheet provision	**321**	**366**	**75**	**93**
Provision recognized in liabilities	321	366	75	93
Amount recognized in assets	-	0	-	-

Changes in recent years in the obligation, the value of the plan assets and actuarial gains and losses are as follows:

(In millions of euros)	**2017**	**2016**	**2015**	**2014**
Obligations for pensions, healthcare and similar coverage	779	864	959	734
Plan assets	(383)	(405)	(448)	(330)
Net obligations	**396**	**459**	**511**	**404**
Actuarial (gains) / losses on accumulated rights				
• experience adjustments	(22)	2	3	(18)
• effects of changes in financial assumptions	22	45	(84)	117
• effects of changes in demographic assumptions	0	(37)	0	17

d) Pre-tax amount recognized through equity (SORIE) during the valuation period

	Pension obligations		Healthcare and similar coverage	
(In millions of euros)	**2017**	**2016**	**2017**	**2016**
Actuarial (gains) and losses generated in the period (A)	(24)	20	(9)	(33)
Effect of the surplus cap and the asset ceiling (B)	-	-	-	-
Total amount recognized in equity (A+B)	**(24)**	**20**	**(9)**	**(33)**
Cumulative actuarial (gains) and losses recognized in equity	**140**	**164**	**(69)**	**(33)**

e) Composition of the investment portfolio

	Pension obligations							
	At 31 December 2017				At 31 December 2016			
	France	UK	Rest of Europe	USA	France	UK	Rest of Europe	USA
Shares	19%	30%	29%	45%	19%	34%	27%	42%
Bonds	18%	34%	27%	37%	26%	32%	24%	41%
Property	2%	-	7%	8%	2%	-	7%	7%
Monetary/Cash assets	-	-	12%	3%	1%	0%	11%	3%
Investment funds	-	35%	4%	7%	-	32%	-	7%
Funds held by an insurance company	61%	1%	11%	-	52%	1%	10%	-
Other	-	-	10%	-	-	1%	20%	-

Pension assets are mainly invested in listed financial instruments.

f) Actuarial assumptions

The main assumptions for pension obligations and healthcare and similar coverage are as follows:

	2017				2016			
	France	UK	Rest of Europe	USA	France	UK	Rest of Europe	USA
Discount rate	1.95	2.60	1.90	3.70	1.70	2.60	1.70	4.25
Rate of increase in salaries	2.30-2.50	N/A	1.50-3.50	3.90	2.30-2.50	N/A	1.50-3.50	3.80

The discount rate is determined based on indexes covering bonds by issuers with an AA credit rating, for maturities consistent with the duration of the above obligations.

The rate of increase in healthcare costs has a negligible impact in the United States as a ceiling has been applied since mid-2006, and in Europe since 2008 the impact has been limited to the rate of inflation during the period over which rights vest.

A change of plus or minus 0.50 points in the discount rate has the following effects on the present value of accumulated benefit obligations at 31 December:

Pension obligations, healthcare and similar coverage *(In millions of euros)*	2017	
	Europe	USA
Increase of 0.50	(26)	(24)
Decrease of 0.50	29	25

A change of plus or minus 0.50 points in the discount rate has the following effects on the present value of accumulated benefit obligations at 31 December:

Pension obligations, healthcare and similar coverage *(In millions of euros)*	2017	
	Europe	USA
Increase of 0.50	9	4
Decrease of 0.50	(9)	(2)

g) Provisions by geographical area

2017	France	Germany	Rest of Europe	USA	Rest of the world	Total
Pension obligations	106	84	17	105	9	321
Healthcare and similar coverage	31	-	-	44	-	75

2016	France	Germany	Rest of Europe	USA	Rest of the world	Total
Pension obligations	109	88	33	128	8	366
Healthcare and similar coverage	37	-	-	56	-	93

h) Cash flows

The contributions to be paid by the Group in 2018 for funded benefits are estimated at €14 million.

The benefits to be paid by the Group in 2018 in application of defined benefit plans are valued at €10 million for pension obligations, and €4 million for healthcare and similar coverage.

Note 19 OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

19.1 OTHER NON-CURRENT LIABILITIES

Other non-current liabilities amount to €34 million at 31 December 2017 as against €45 million at 31 December 2016.

19.2 OTHER PROVISIONS

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
At 1 January 2017	**194**	**47**	**178**	**419**
Increases in provisions	28	9	56	93
Reversals from provisions on use	(15)	(12)	(31)	(58)
Reversals of unused provisions	(8)	(1)	(16)	(25)
Changes in scope	-	-	-	-
Translation adjustments	(10)	(1)	(9)	(20)
Other	-	-	-	-
At 31 December 2017	**189**	**42**	**178**	**409**
Of which less than one year	20	21	65	106
Of which more than one year	169	21	113	303

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

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
Total provisions at 31 December 2017	**189**	**42**	**178**	**409**
Portion of provisions covered by receivables or deposits	**43**	**-**	**15**	**58**
Deferred tax asset related to amounts covered by the Total indemnity	14	-	0	14
Provisions at 31 December 2017 net of non-current assets	**132**	**42**	**163**	**337**

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
At 1 January 2016	**194**	**51**	**162**	**407**
Increases in provisions	12	17	64	93
Reversals from provisions on use	(15)	(18)	(45)	(78)
Reversals of unused provisions	-	(2)	(5)	(7)
Changes in scope	-	-	-	-
Translation adjustments	3	-	2	5
Other	-	(1)	-	(1)
At 31 December 2016	**194**	**47**	**178**	**419**
Of which less than one year	19	16	54	89
Of which more than one year	175	31	124	330

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

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
Total provisions at 31 December 2016	**194**	**47**	**178**	**419**
Portion of provisions covered by receivables or deposits	**40**	**-**	**13**	**53**
Deferred tax asset related to amounts covered by the Total indemnity	23	-	0	23
Provisions at 31 December 2016 net of non-current assets	**131**	**47**	**165**	**343**

19.3 PROVISIONS FOR ENVIRONMENTAL CONTINGENCIES

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

- in France for €92 million (€81 million at 31 December 2016);
- in the United States for €77 million (€88 million at 31 December 2016), of which €57 million in respect of former industrial sites covered 100% by the Total group indemnity (receivable recognized in "Other non-current assets" for an amount of €43 million and €14 million recognized in deferred tax assets).

19.4 RESTRUCTURING PROVISIONS

Restructuring provisions are mainly in respect of restructuring measures in France for €28 million (€33 million at 31 December 2016), in Europe outside France for €10 million (€8 million at 31 December 2016) and in the United States for €4 million (€6 million at 31 December 2016).

Increases in such provisions in the year principally correspond to the restructuring plans described in note C4 "Other income and expenses".

19.5 OTHER PROVISIONS

Other provisions amount to €178 million and mainly comprise:

- provisions for labour litigation for €55 million (€53 million at 31 December 2016);
- provisions for commercial litigation and warranties for €53 million (€50 million at 31 December 2016);
- provisions for tax litigation for €38 million (€36 million at 31 December 2016);
- provisions for other risks for €32 million (€39 million at 31 December 2016).

Note 20 LIABILITIES AND CONTINGENT LIABILITIES

20.1 ENVIRONMENT

The Group's business activities are subject to constantly changing local, national and international regulations on the environment and industrial safety, which entail meeting increasingly complex and restrictive requirements. In this regard, these activities can involve a risk of the Group's liability being called upon, particularly in respect of clean-up of sites and industrial safety.

Taking account of the information available, agreements signed with Total, and the provisions for environmental contingencies recognized, the Group's general management considers that the environmental liabilities identified at this point are valued and recognized to the best of their knowledge in the financial statements. However if laws, regulations or government policy in respect of environmental matters were to change, the Group's obligations could change, which could lead to additional costs.

Clean-up of sites

The competent authorities have made, are making or may in the future make specific demands that the Group rehabilitate or control emissions at certain sites that it is currently operating, or that it operated or disposed of in the past, at neighbouring sites or at sites where the Group stored or disposed of waste.

20.1.1 Sites currently in operation

The Group has many sites of which a certain number are probably polluted in view of their age and the range of activities that are carried out on them, or that were carried out on them in the past. As regards these sites, certain situations have been identified and the Group has already carried out certain clean-up work, or otherwise developed action plans and recognized provisions in order to cover future clean-up work.

However, in the light of (i) the uncertainties over the technical means to be implemented, (ii) potential issues that are unknown, (iii) uncertainties over the actual time required for remediation compared with the estimated time (*e.g.* "pump and treat"), and (iv) potential changes in regulations, the possibility that the expenses the Group will incur will be higher than the amounts covered by provisions cannot be excluded. These potential excess costs relate mainly to the sites in Antwerp (Belgium), Calvert City (United States), Carling (France), Chauny (France), Günzburg (Germany), Jarrie (France), Lannemezan (France), Leicester (United Kingdom), Lesgor (France), Loison (France), Mont (France), Pierre-Bénite (France), Porto Marghera (Italy), Ribecourt (France), Rion-des-Landes (France), Riverview (United States), Rotterdam (the Netherlands), Saint-Auban (France), and Vlissingen (Netherlands) and could adversely affect the Group's business, results and financial condition.

20.1.2 Closed industrial sites (former industrial sites)

Total directly or indirectly took over some closed industrial sites at the date of the Spin-Off of Arkema's Businesses on 10 May 2006.

Since the Spin-Off, the businesses exercised on the former sites of Dorlyl SNC (France), Pierrefitte (France) and Bonn (Germany) have been closed and the land sold. The businesses exercised on the sites of Wetteren (Belgium), Bénouville (France), Ibos (France), Miranda (Spain) and Zaramilo (Spain) have also been closed, without selling the land, and where relevant are covered by provisions for amounts that the Group considers adequate.

In addition, the Prefect of Haute Savoie issued a decision on 1 December 2017 ordering investigations on the Chedde site (France) where the Group had a perchlorate production business in the past.

20.1.3 Sites in operation that have been sold

Saint-Fons (Arkema France)

In the sale of the Group's vinyls activities to the Klesch Group in early July 2012, all industrial installations on the Saint-Fons site were transferred to Kem One, apart from the land, which is held under a long-term lease. The agreements for the sale stipulated that Arkema France remains liable for legacy pollution to the site.

The Prefect of the Rhône region issued decisions on 14 May 2007 and 19 and 27 June 2012, ordering Arkema France to carry out quality monitoring on underground water and propose a plan to manage the legacy pollution affecting the site (T112 and other pollutants).

A provision has been established in the consolidated financial statements in connection with this matter.

Parrapon mining concession (SCIA Parapon)

Under a prior commitment made by the Arkema Group to the French authorities in connection with the transfer of the Parrapon mining concession to Kem One SAS, which was authorized by a ministerial decision of 13 January 2016, the Group will bear the costs that may be payable by Kem One SAS, as concession operator, as a result of surveillance and safety measures for the 31 salt mines which were permanently closed down on 12 February 2014.

To meet the requirements of the authorities, Kem One sent a proposal to the DREAL in a letter dated 21 August 2017 setting out a programme of work to be done over the period 2017 to 2020 for some of these salt mines, and the costs of surveillance beyond 2020. A provision considered adequate by the Group has been established in the financial statements.

20.2 LITIGATION, CLAIMS AND PROCEEDINGS IN PROGRESS

20.2.1 Labour litigation

a) Occupational illness (France)

In the manufacture of its products, the Group uses and has used toxic or hazardous substances. Despite the safety and monitoring procedures that have been instituted at Group level and for each production site, Group employees may have been exposed to such substances and may develop specific pathologies as a result of such exposure.

In this respect, like most industrial companies, in the past, the Group has used a variety of insulating or heat-proofing materials containing asbestos in its production facilities. Consequently, certain employees may have been exposed to such materials before they were gradually eliminated and replaced with substitute products.

At its French sites, the Group anticipated the regulatory provisions applicable to asbestos (Decrees No. 96-97 and 96-98 of 7 February 1996 and Decree No. 96-1133 of 24 December 1996). The Group made an inventory of building materials within its premises that contained asbestos, notified employees of the results of these investigations and took the collective and individual protective measures required by the applicable laws. However, claims for occupational illness related to past asbestos exposure have been filed against the Group, mostly for periods before 1980. Given the latency period of asbestos-related pathologies, a large number of claims for occupational illness are likely to be filed in the years ahead.

The Group has recognized provisions to cover the risks of employer liability claims related to notified cases of occupational illness.

b) Prejudice related to asbestos (Arkema France)

A large number of former employees of Arkema France, who worked on sites included in the list of establishments whose workers were eligible for the early retirement system for asbestos workers, are parties to proceedings before the employee claims court, claiming compensation for the prejudice allegedly caused by the possible risk of developing a malignant condition in the future.

In a ruling of 11 May 2010, the labour chamber of the French Supreme Court *(Cour de Cassation)* recognized the existence of a prejudice of anxiety, eligible for compensation, for employees exposed to asbestos during their working life. However, it rejected the existence of an economic prejudice resulting from departure under the early retirement system. It also decided that the compensation awarded for a prejudice of anxiety covers all psychological distress associated with the risk of an illness arising at any time during an indefinite period, including the prejudice of upheaval in living conditions that had been argued.

It is possible that other former employees of Arkema France who may have been exposed to asbestos during their employment on sites listed after 2010 May also bring action before an employee claims court to claim compensation for the prejudice of anxiety. 206 compensation claims for the prejudice of anxiety are currently in process before the employee claims courts.

A provision has been recognized in the financial statements in respect of the litigations currently in progress, for an amount that the Group considers adequate.

20.2.2 Tax litigations

Arkema Quimica Ltda

Following a declaration as to the unconstitutional nature of certain taxes, Arkema's Brazilian subsidiary Arkema Quimica Ltda offset certain tax assets and liabilities commencing in 2000. The Brazilian government contests the justification for this offset and in 2009 claimed repayment of 19.5 million reais (around €6 million).

Arkema Quimica Ltda lodged a counter-claim in mid-June 2009 for cancellation of the tax administration's demands concerning the current portion of the liability. During the first quarter of 2010 Arkema Química Ltda applied to benefit from the tax amnesty law that would allow it to pay only part of its overall tax liability. The tax authorities accepted the terms for payment of the liability subject to amnesty, and only an amount of 9.2 million reais or around €3 million remains concerned by an appeal before the courts, which the Group considers has reasonable chances of success. The government introduced a new amnesty in mid-2017; Arkema Quimica Ltda reassessed its risk and decided to opt into this programme, and as a result the amounts payable have been reduced to 6 million reais, to be paid in instalments.

Arkema Srl

In 2013 the Lombardy Regional Tax office (Italy) conducted a tax inspection of Arkema Srl for the 2008, 2009 and 2010 financial years, subsequently extended to 2011 and 2012, after which among other observations, it contested the purchase prices of products for resale and the level of commission paid to the Company in intragroup transactions, and applied a withholding tax on intragroup financing. The tax reassessments notified for 2008, 2009, 2010, 2011 and 2012 amount to €12 million including interest and penalties. Arkema Srl is contesting all of these reassessments. A provision considered adequate by the Group has been established in the financial statements.

20.2.3 Other litigation

TGAP (Arkema France)

The French customs authorities issued a tax demand of €6.7 million to Total, covering the years 2003 to 2006, for non-payment of the French general tax on polluting activities (*taxe générale sur les activités polluantes*, or TGAP) which, according to the authorities, should have been applied to the injections of effluent made by Total on its own behalf and for other industrial operators such as Arkema, into a cavity called Crétacé 4000. Following rejection on 27 May 2015 by the French Supreme Court *(Cour de Cassation)* of Total's appeal, which had already been rejected by the Appeal Court, in late March 2016 Total sent Arkema an invoice for a portion of the TGAP due for the years concerned by the tax demand. Arkema sent Total a letter on 22 April 2016 in which it contested the justification for this invoice. Since then, the parties have met and negotiated a memorandum of understanding that was signed on 7 March 2017, putting an end to the dispute.

Harvey (Arkema Inc.)

As a result of Hurricane Harvey, Arkema's Crosby, Texas plant experienced unprecedented flooding leading to a loss of power, the loss of back up refrigeration, the decomposition of certain organic peroxides products that require refrigeration and, ultimately, a series of fires at the plant. Floodwaters also caused wastewater releases. Since September 2017, two civil lawsuits have been filed against Arkema Inc. and other defendants and in particular one to which the Company is a named defendant. At this time, the Company cannot estimate any potential losses associated with this lawsuit, and will vigorously defend it. A number of U.S., Texas, and local regulatory authorities are reviewing the incident at the Crosby plant, including Arkema's compliance with environmental regulatory requirements, and the planning and actions taken to ensure the safety of the site, the surrounding community and environment. The Harris County District Attorney's office has publicly announced that they have opened a criminal investigation. Arkema is cooperating with the regulators and the District Attorney's office as they investigate.

Asbestos risk (Arkema Inc.)

In the United States, Arkema Inc. is involved in a substantial number of asbestos-related proceedings in various State courts. No notable developments have arisen in the proceedings concerning claims by third parties (other than employees) relating to (i) alleged exposure to asbestos on the Group's sites, or (ii) exposure to products containing asbestos and sold by former subsidiaries of the Group in the United States and elsewhere. Most proceedings by employees against Arkema Inc. concerning alleged exposure to asbestos in the United States are covered by the employee insurance policy in each State. However, in 2015 Arkema settled two disputes concerning former employees' alleged exposure to asbestos before State courts. When claims are not covered by insurance policies, provisions have been made for such claims in an amount which the Group considers sufficient. However, due to the continuing uncertainties as to the outcome of these proceedings, the Group is not, as at the date of these financial statements, in a position, having regard to the information available to it, to estimate the total amount of the claims that might finally be upheld against it by the various competent courts after the exhaustion of any avenues of appeal.

Kem One

The Group sold its vinyls activities, grouped into the Kem One Group, to the Klesch Group with effect from 1 July 2012.

On 27 March 2013, insolvency proceedings were opened against the company Kem One SAS. In a ruling of 20 December 2013, the Lyon commercial court designated the new owner of Kem One SAS, and put to an end the insolvency proceedings concerning the company.

An arbitration procedure was initiated against Arkema France by Klesch Chemicals Ltd and Klesch Group Ltd on 4 March 2013. In its decision issued on 24 November 2015, the International Chamber of Commerce Court of Arbitration dismissed all the claims made by Klesch Chemicals Ltd and Klesch Group Ltd against Arkema France, and ordered Klesch Chemicals Ltd to pay Arkema France €73.6 million in damages and Klesch Chemicals Ltd and Klesch Group Ltd to reimburse the majority of the costs incurred for this arbitration procedure. A petition by Klesch Chemicals Ltd and Klesch Group Ltd for cancellation of this arbitration ruling was filed with the Paris Appeal Court on 9 December 2015. Given the small number and specificity of cases in which this type of action gives rise to proceedings, Arkema is confident that it should be rejected by the Appeal Court. The appeal should come to court during 2018.

Meanwhile, the works council of Kem One SAS' Fos-sur-Mer site brought an action on 9 July 2013 before the Lyon district court against Arkema, certain Kem One group entities and the Klesch group, for alleged fraudulent collusion. As part of the takeover of Kem One SAS, the new owner stated that it would handle withdrawal of this action by the works council. This withdrawal is not yet effective. No provision has been booked in the financial statements.

Also, on 29 April 2014, Kem One employees brought an action before the Lyon district court against Arkema and certain Klesch group entities, claiming damages on the grounds of the allegedly fraudulent nature of the agreements signed between Arkema and Klesch in connection with the sale of the vinyls activities. No provision has been booked in the financial statements.

Coem (Arkema France)

As there were no product supplies by Kem One SAS to the Italian company Coem, Coem in August 2012, and subsequently to its industrial shareholder Industrie Generali in March 2016, issued written complaints to Arkema France and Kem One that they had suffered injury through breach of commercial relations. On 27 June 2017 Industrie Generali brought a tort action before the Nanterre commercial court claiming €8.9 million from Arkema France in compensation for the banks' activation of the guarantees it had provided when Coem was placed in receivership. Arkema considers that these claims have no legal foundation, and no provision has been booked in the financial statements.

20.2.5 Personal Training Credits

Under the French personal training credit system (*Compte Personnel de Formation* or CPF) employees earn entitlements to hours of training, up to a maximum 150 hours each year. These entitlements are used at the employee's initiative, with the consent of the employer, when the CPF is used during working time; it can also be used outside working time.

The Arkema Group's investment in training represented approximately 3.5% of payroll costs in 2017.

Note 21 DEBT

Group net debt amounted to €1,056 million at 31 December 2017, taking account of cash and cash equivalents of €1,438 million.

21.1 ANALYSIS OF NET DEBT BY CATEGORY

(In millions of euros)	31/12/2017	31/12/2016
Bonds	2,219	1,328
Finance lease obligations	1	1
Bank loans	16	27
Other non-current debt	14	21
Non-current debt	**2,250**	**1,377**
Bonds	-	500
Finance lease obligations	1	0
Syndicated credit facility	-	-
Negotiable European Commercial Paper	-	-
Other bank loans	202	194
Other current debt	41	34
Current debt	**244**	**728**
Debt	**2,494**	**2,105**
Cash and cash equivalents	1,438	623
NET DEBT	**1,056**	**1,482**

Bonds

- In April 2012, the Group issued a €230 million bond that will mature on 30 April 2020, with a fixed coupon of 3.85%. A further €250 million tap issue was undertaken in October 2012, bringing the total amount of this bond issue to €480 million.

  At 31 December 2017 the fair value of this bond is €522 million.
- 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 31 December 2017 the fair value of this bond is €167 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 31 December 2017 the fair value of this bond is €727 million.

- In April 2017, the Group issued a €700 million bond that will mature on 20 April 2027, with a fixed coupon of 1.5%. A further €200 million tap issue was undertaken on June 2017, bringing the total amount of this bond issue to €900 million.

  At 31 December 2017 the fair value of this bond is €919 million.

The last three issues are part of the Group's Euro Medium Term Notes (EMTN) programme introduced in October 2013. The ceiling of the EMTN programme was raised to €2.75 billion in November 2017.

Negotiable European Commercial Paper

In April 2013 the Group introduced an annually-renewed Negotiable European Commercial Paper programme with a ceiling of €1 billion.

Issues outstanding as part of this programme amount to nil at 31 December 2017.

Syndicated credit facility

On 29 October 2014, the Group put in place a multi-currency syndicated credit facility of €900 million, with an initial duration of five years maturing on 29 October 2019, and the possibility of two one-year extensions subject to approval by the lenders, exercisable at the end of the first and the second year. The Group was authorized by its lenders to exercise these two extensions, bringing the maturity of this credit facility to 29 October 2021. This credit facility is intended to finance the Group's general requirements as a substitute line for the Negotiable European Commercial Paper programme, and includes an early repayment clause in the event of certain situations including a change in control of the Arkema Group. It includes: (i) standard information undertakings and commitments for this type of financing, and (ii) a financial undertaking by the Arkema Group to maintain the ratio of consolidated net debt to consolidated EBITDA (tested twice a year) at below 3.5.

21.2 ANALYSIS OF DEBT BY CURRENCY

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

(In millions of euros)	31/12/2017	31/12/2016
Euros	2,305	1,871
Chinese Yuan	142	188
US Dollars	12	12
Other	35	34
TOTAL	**2,494**	**2,105**

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 31 December 2017 the swapped portion, principally in US dollars, represented approximately 37% of gross debt.

21.3 ANALYSIS OF DEBT BY MATURITY

The breakdown of debt, including interest costs, by maturity is as follows:

(In millions of euros)	31/12/2017	31/12/2016
Less than 1 year	268	765
Between 1 and 2 years	55	42
Between 2 and 3 years	535	43
Between 3 and 4 years	35	522
Between 4 and 5 years	30	23
More than 5 years	1,853	922
TOTAL	**2,776**	**2,317**

Note 22 MANAGEMENT OF RISKS RELATED TO FINANCIAL ASSETS AND LIABILITIES

The Arkema Group's businesses expose it to various risks, including market risks (risk of changes in exchange rates, interest rates and the prices of raw materials, energy and equities), credit risk and liquidity risk.

22.1 FOREIGN CURRENCY RISK

The Group is exposed to transaction risks and translation risks related to foreign currencies.

The Group hedges the transaction risk mainly through spot foreign currency transactions or through forward transactions over short maturities generally not exceeding two years.

The fair value of the Group's forward foreign currency contracts is an asset of €10 million.

The amount of foreign exchange gains and losses recognized in recurring operating income at 31 December 2017 is a positive €0.4 million (negative €2 million at 31 December 2016).

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 is recorded in financial result. It amounts to a negative €21 million at 31 December 2017 (negative €21 million at 31 December 2016).

At 31 December 2017, the Group's balance sheet exposure in transaction currencies other than the euro is as follows:

Group exposure to operating foreign currency risk

(In millions of euros)	USD	CNY	Other currencies
Accounts receivable	408	100	176
Accounts payable	(273)	(53)	(74)
Bank balances and loans/borrowings	185	(70)	30
Off balance sheet commitments (forward currency hedging)	(702)	(48)	(229)
NET EXPOSURE	**(382)**	**(71)**	**(97)**

This net exposure comprises all Group companies' outstanding amounts stated in any of the above currencies, whether their accounting currency is one of those currencies or a different currency.

22.2 INTEREST RATE RISK

Exposure to interest rate risk is managed by the Group's Central Treasury department and simple derivatives are used as hedging instruments. The Group has not entered into any interest rate hedges at 31 December 2017.

An increase (decrease) of 1% (100 basis points) in interest rates would have the effect of decreasing (increasing) the interest on net debt by €4 million.

At 31 December 2017, debt is distributed between variable and fixed rates as follows:

	Variable rates	Fixed rates		
In millions of euros	Overnight-1 year	1-5 years	Over 5 years	Total
Current and non-current debt	(254)	(485)	(1,755)	(2,494)
Cash and cash equivalents	1,438	-	-	1,438
Net exposure before hedging	1,184	(485)	(1,755)	(1,056)
Hedging instruments	-	-	-	-
Off-balance sheet items	-	-	-	-
NET EXPOSURE AFTER HEDGING	**1,184**	**(485)**	**(1,755)**	**(1,056)**

22.3 LIQUIDITY RISK

The Group's Central Treasury department manages the liquidity risk associated with the Group's debt.

Liquidity risk is managed with the main objective of providing the Group with sufficient financial resources to honour its commitments, and, in the context of meeting this objective, optimizing the annual financial cost of the debt.

In almost all cases, Group companies obtain their financing from, and manage their cash with, Arkema France or other Group entities that manage cash pooling mechanisms.

The Group reduces the liquidity risk by spreading maturities, favouring long maturities and diversifying its sources of financing. The Group thus has:

- a €900 million bond maturing on 20 April 2027;
- a €700 million bond maturing on 20 January 2025;
- a €150 million bond maturing on 6 December 2023;
- a €480 million bond maturing on 30 April 2020; and
- a €900 million syndicated credit facility maturing on 29 October 2021. This credit facility is used particularly as a substitute line for the Negotiable European Commercial Paper programme (see note C21, "Debt").

Apart from a change of control, the main circumstances in which early repayment or termination could occur concern the syndicated credit facility (see note C21 "Debt"), if the ratio of consolidated net debt to consolidated EBITDA exceeds 3.5.

At 31 December 2017, the Group's debt maturing in more than one year is rated BBB/stable outlook by Standard & Poor's and Baa2/stable outlook by Moody's.

Negotiable European Commercial Paper issues are rated A-2 by Standard & Poor's.

The Group's net debt at 31 December 2017 amounts to €1,056 million and represents 0.8 times the consolidated EBITDA for the last 12 months.

At 31 December 2017, the amount of the unused syndicated credit facility is €900 million and the amount of cash and cash equivalents is €1,438 million.

Note C21 "Debt" provides details of the maturities of debt.

22.4 CREDIT RISK

The Group is potentially exposed to credit risk on its accounts receivable and as regards its banking counterparties.

Credit risk on accounts receivable is limited because of the large number of its customers and their geographical dispersion. No customer represented more than 3% of Group sales in 2017. The Group's general policy for managing credit risk involves assessing the solvency of each new customer before entering into business relations: each customer is allocated a credit limit, which constitutes the maximum level of outstandings (receivables plus orders) accepted by the Group, on the basis of the financial information obtained on the customer and the analysis of solvency carried out by the Group. These credit limits are revised regularly and, in any case, every time that a material change occurs in the customer's financial position. Customers who cannot obtain a credit limit because their financial position is not compatible with the Group's requirements in terms of solvency only receive deliveries when they have paid for their order.

For several years, the Group has covered its accounts receivable credit risk through a global credit insurance programme. On account of the statistically low bad debt rate experienced by the Group, the rate of cover is significant. Customers with whom the Group wishes to continue commercial relations but which are not covered by this insurance are subject to specific centralized monitoring. This credit risk insurance programme is currently being rolled out in the Den Braven companies acquired in late 2016.

In addition, the Group's policy for recognizing bad debt provisions in respect of receivables not covered by credit insurance, or the portion of receivables that are not so covered, has two components: receivables are individually provided against as soon as a specific risk of loss (economic and financial difficulties of the customer in question, entry into receivership, etc.) is clearly identified. The Group may also recognize general provisions for receivables that are overdue for such a period that the Group considers that a statistical risk of loss exists. These periods are adapted depending on the Business Lines and the geographical regions in question.

At 31 December 2017, accounts receivable net of provisions are distributed as follows:

Accounts receivable net of provisions *(In millions of euros)*	**31/12/2017**	**31/12/2016**
Receivables not yet due	1,036	1,063
Receivables overdue by 1-15 days	36	44
Receivables overdue by 16-30 days	34	26
Receivables overdue by more than 30 days	9	17
TOTAL NET RECEIVABLES	**1,115**	**1,150**

Banking credit risk is related to financial investments, derivatives and credit facilities granted by banks. The Group limits its exposure to credit risk by only investing in liquid securities with first-class commercial banks.

The net carrying amount of financial assets indicated in note C23 "Presentation of financial assets and liabilities" represents the maximum exposure to credit risk.

22.5 RISK RELATED TO RAW MATERIALS AND ENERGY

The prices of certain raw materials used by the Group can be highly volatile, with fluctuations leading to significant variations in the cost price of the Group's products; in addition, because certain of its manufacturing processes have significant requirements in terms of energy resources, the Group is also sensitive to changes in the price of energy. In order to limit the impact of the price volatility of the principal raw materials it uses, the Group may decide to use derivatives matched with existing contracts, or negotiate fixed price contracts for limited periods.

Recognition of these derivatives generated an expense of €4 million in the income statement at 31 December 2017 (expense of €4 million at 31 December 2016).

22.6 EQUITY RISK

At 31 December 2017 the Company held 33,225 of its own shares. These shares are used to cover its free share grant plans.

In compliance with IAS 32, changes in share price have no impact on the Group's consolidated net assets.

The equity risk is not material for the Company.

Note 23 PRESENTATION OF FINANCIAL ASSETS AND LIABILITIES

23.1 FINANCIAL ASSETS AND LIABILITIES BY ACCOUNTING CATEGORY

2017

IAS 39 category: Class of instrument *(In millions of euros)*	Notes	Assets/liabilities measured at fair value through profit or loss	Assets/liabilities measured at fair value through shareholders' equity	Assets/ liabilities measured at amortized cost	Available-for-sale assets	Total net carrying amount
Other investments	(C12)	-	-	-	30	30
Other non-current assets (loans and advances, security deposits paid)	(C13)	-	-	112	-	112
Accounts receivable	(C15)	-	-	1,115	-	1,115
Cash and cash equivalents	(C16)	1,438	-	-	-	1,438
Derivatives*	(C23.2)	17	0	-	-	17
FINANCIAL ASSETS		**1,455**	**0**	**1,227**	**30**	**2,712**
Current and non-current debt	(C21)	-	-	2,494	-	2,494
Accounts payable	(C24)	-	-	965	-	965
Derivatives*	(C23.2)	8	2	-	-	10
FINANCIAL LIABILITIES		**8**	**2**	**3,459**	**0**	**3,469**

* *Derivatives are carried in the balance sheet in "Other current financial assets" and "Other current financial liabilities".*

2016

IAS 39 category: Class of instrument *(In millions of euros)*	Notes	Assets/liabilities measured at fair value through profit or loss	Assets/liabilities measured at fair value through shareholders' equity	Assets/ liabilities measured at amortized cost	Available-for-sale assets	Total net carrying amount
Other investments	(C12)	-	-	-	33	33
Other non-current assets (loans and advances, security deposits paid)	(C13)	-	-	124	-	124
Accounts receivable	(C15)	-	-	1,150	-	1,150
Cash and cash equivalents	(C16)	623	-	-	-	623
Derivatives*	(C23.2)	8	2	-	-	10
FINANCIAL ASSETS		**631**	**2**	**1,274**	**33**	**1,940**
Current and non-current debt	(C21)	-	-	2,105	-	2,105
Accounts payable	(C24)	-	-	932	-	932
Derivatives*	(C23.2)	8	23	-	-	31
FINANCIAL LIABILITIES		**8**	**23**	**3,037**	**0**	**3,068**

* *Derivatives are carried in the balance sheet in "Other current financial assets" and "Other current financial liabilities".*

At 31 December 2017 as at 31 December 2016, the fair value of financial assets and liabilities is approximately equal to the net carrying amount, except in the case of bonds.

23.2 DERIVATIVES

The main derivatives used by the Group are as follows:

(In millions of euros)	Notional amount of contracts at 31/12/2017			Notional amount of contracts at 31/12/2016			Fair value of contracts	
	< 1 year	<5 years and >1 year	> 5 years	< 1 year	<5 years and >1 year	> 5 years	31/12/2017	31/12/2016
Forward foreign currency contracts	1,959	-	-	1,452	-	-	8	(17)
Commodities and energy swaps	9	7	-	24	7	-	(2)	(3)
TOTAL	**1,968**	**7**	**-**	**1,476**	**7**	**-**	**6**	**(20)**

23.3 IMPACT OF FINANCIAL INSTRUMENTS ON THE INCOME STATEMENT

The income statement includes the following items related to financial assets (liabilities):

(In millions of euros)	2017	2016
Total interest income (expenses) on financial assets and liabilities*	(75)	(61)
Impact on the income statement of valuation of derivatives at fair value	(8)	7
Impact on the income statement of operations on available-for-sale assets	4	15

* *Excluding interest costs on pension obligations and the expected return on related plan assets.*

The amount of foreign exchange gains and losses recognized in recurring operating income in 2017 is a positive €0.4 million (negative €2 million at 31 December 2016).

23.4 IMPACT OF FINANCIAL INSTRUMENTS ON SHAREHOLDERS' EQUITY

At 31 December 2017, the impact of financial instruments net of deferred taxes on the Group's shareholders' equity is nil (negative impact of €19 million at 31 December 2016), essentially reflecting the net-of-tax fair value of foreign currency hedges of future cash flows and commodities.

Note 24 ACCOUNTS PAYABLE, OTHER CREDITORS AND ACCRUED LIABILITIES

Accounts payable amount to €965 million at 31 December 2017 (€932 million at 31 December 2016).

Other creditors and accrued liabilities mainly comprise employee-related liabilities for €232 million at 31 December 2017 (€247 million at 31 December 2016) and amounts owing to governments for €92 million at 31 December 2017 (€80 million at 31 December 2016), including €42 million of VAT (€30 million at 31 December 2016).

Note 25 PERSONNEL EXPENSES

Personnel expenses, including stock options and free share grants (see note C27 "Share-based payments"), amount to €1,354 million in 2017 (€1,309 million in 2016).

They comprise €1,007 million of wages and salaries and IFRS 2 expenses (€968 million in 2016) and €347 million of social charges (€341 million in 2016).

Note 26 RELATED PARTIES

26.1 TRANSACTIONS WITH NON-CONSOLIDATED OR EQUITY ACCOUNTED COMPANIES

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

26.2 COMPENSATION OF KEY MANAGEMENT PERSONNEL

Key management personnel of a group, as defined in IAS 24, are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity.

The key management personnel of the Group are the directors and the members of its Executive Committee (Comex).

The compensation and benefits of all kinds recognized in expenses by the Group are as follows:

(In millions of euros)	2017	2016
Salaries and other short-term benefits	7	8*
Pensions, other post-employment benefits and contract termination benefits	-	-
Other long-term benefits	-	-
Share-based payments	4	5**

* *Including the cash payment to the Chairman and CEO in compensation for the termination on 7 June 2016 of the complementary defined benefit pension plan.*

** *Including the shares awarded to the Chairman and CEO in compensation for the termination on 7 June 2016 of the complementary defined benefit pension plan.*

Salaries and other short-term benefits comprise all types of remuneration recorded, including variable amounts, bonuses, attendance fees and benefits in kind.

The Chairman and CEO is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of two years' total gross compensation (fixed and variable), subject to achievement of performance criteria.

Note 27 SHARE-BASED PAYMENTS

27.1 STOCK OPTIONS

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

Movements in the stock option plans granted in previous years and still outstanding at 31 December 2017 are as follows:

Plan	Total number of options granted*	Exercise price*	Number of options exercised in 2017	Number of options cancelled in 2017	Total number of options exercised	Total number of options outstanding	Final year for exercising options
2010-1	230,044	29.33	41,421	-	200,195	22,849	2018
2010-2	233,513	29.33	59,726	-	187,319	24,020	2018
2011-1	109,082	65.92	32,485	-	81,904	27,178	2019
2011-2	109,082	65.92	18,927	-	36,796	72,286	2019

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

Valuation method

The fair value of the options granted was determined using the Black & Scholes method on the basis of assumptions. The main assumptions are as follows:

	Plan 2010-1	Plan 2010-2	Plan 2011-1	Plan 2011-2
Volatility	35%	32%	32%	32%
Risk-free interest rate	0.34%	0.34%	1.29%	1.29%
Maturity	4 years	5 years	4 years	4 years
Exercise price *(in euros)*	30.47	30.47	68.48	68.48
Fair value of stock options *(in euros)*	**6.69**	**6.67**	**12.73**	**12.73**

The volatility assumption was determined on the basis of observation of historical movements in the Arkema share since its admission to listing, restated for certain non-representative days in order to better represent the long-term trend.

The maturity adopted for the options corresponds to the period of unavailability for tax purposes.

The amount of the IFRS 2 expense recognized in respect of stock options at 31 December 2017 was nil (also nil at 31 December 2016).

27.2 FREE SHARE GRANTS

On 8 November 2017, the Board of Directors decided to put in place two performance share plans for the benefit of Group employees, particularly employees with responsibilities whose exercise influences the Group's results.

Movements in the free share grant plans existing at 31 December 2017 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 2017	Number of shares cancelled in 2017	Total number of shares still to be granted at 31/12/2017
2013	6 Nov 2013	4 years	-	**250,000**	182,810	51.60	190,552	53,188	-
2014-1, 3	6 May 2014	3-4 years	0-3 years	**17,118**	-	53.63	3,579	40	**13,144**
2014-2	13 Nov 2014	4 years	-	**275,000**	203,535	33.41	650	2,450	**269,025**
2015-1	9 Nov 2015	4 years	-	**285,525**	285,525	42.31	650	2,500	**279,825**
2015-2	9 Nov 2015	4 years	-	**59,595**	-	42.31	-	720	**57,935**
2016-1, 2	10 May 2016	3-4 years	0-3 years	**43,278**	-	22.91-39.70	-	-	**43,278**
2016-3	7 Jun 2016	1-3 years	2 years	**50,000**	-	41.04-53.53	16,667	-	**33,333**
2016-4	9 Nov 2016	3 years	2 years	**235,835** (1)	226,040	47.31	500	1,850	**233,485**
2016-5	9 Nov 2016	4 years	-	**122,080** (2)	112,860	50.01	-	460	**121,620**
2017-1	8 Nov 2017	3 years	2 years	**230,695** (3)	218,255	63.59	-	20	**230,675**
2017-2	8 Nov 2017	4 years	-	**129,405** (4)	114,845	67.88	-	190	**129,215**

(1) May be raised to 258,439 in the event of outperformance.
(2) May be raised to 133,366 in the event of outperformance.
(3) May be raised to 252,521 in the event of outperformance.
(4) May be raised to 140,890 in the event of outperformance.

The amount of the IFRS 2 expense recognized in respect of free shares at 31 December 2017 is €14 million (€12 million at 31 December 2016).

Note 28 INFORMATION ON CASH FLOWS

Additional information on amounts received and paid as operating cash flows are presented below:

(In millions of euros)	31/12/2017	31/12/2016
Interest paid	68	81
Interest received	0	1
Income taxes paid	182	231

Details of the monetary change in working capital are as follows:

(In millions of euros)	31/12/2017	31/12/2016
Inventories	(90)	46
Accounts receivable	(45)	(54)
Other receivables including income taxes	(9)	(42)
Accounts payable	74	50
Other liabilities including income taxes	29	11
CHANGE IN WORKING CAPITAL	**(41)**	**11**

Note 29 OFF-BALANCE SHEET COMMITMENTS

29.1 COMMITMENTS GIVEN

29.1.1 Off-balance sheet commitments given in the Group's operating activities

The main commitments given are summarized in the table below:

(In millions of euros)	31/12/2017	31/12/2016
Guarantees granted	76	73
Comfort letters	-	-
Contractual guarantees	11	3
Customs and excise guarantees	14	14
TOTAL	**101**	**90**

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

29.1.2 Contractual commitments related to the Group's operating activities

Irrevocable purchase commitments

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.

The total amount of the Group's financial commitments is €464 million at 31 December 2017, maturing as follows:

(In millions of euros)	31/12/2017	31/12/2016
2017	-	190
2018	207	63
2019	77	54
2020	55	34
2021 until expiry of the contracts	125	68
TOTAL	**464**	**409**

Lease commitments

In the context of its business, the Arkema Group has signed lease contracts, of which the majority are operating lease agreements. Lease agreements signed by the Group are mainly in respect of property rental (head offices, land) and transportation equipment (rail cars, containers).

The amounts presented in the table below correspond to the future minimum payments that will need to be made in accordance with these contracts (only the irrevocable portion of future lease payments has been valued).

Non-capitalized leases *(in millions of euros)*	**31/12/2017**	**31/12/2016**
2017	-	26
2018	25	23
2019	21	19
2020	17	16
2021 and beyond	48	45
NON-DISCOUNTED VALUE OF FUTURE LEASE PAYMENTS	**111**	**129**

From 1 January 2019, the Group's lease commitments will be recorded in application of IFRS 16 "Leases". In the balance sheet, the Group will recognize an asset corresponding to the right to use the leased asset, and an equivalent financial liability for the future lease payments. In the income statement, the lease expense will be replaced by an amortization expense and an interest expense.

The Group is continuing its work to identify and analyse its leases, assess the impact of the standard and introduce an IT solution for management of its contracts.

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

Warranties related to sales of businesses

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

The cumulative residual amount of capped warranties in respect of unrecorded liabilities granted by the Group amounts to €83 million at 31 December 2017 (€132 million at 31 December 2016). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

29.1.4 Off-balance sheet commitments related to Group financing

These commitments are described in note C21 "Debt".

29.2 COMMITMENTS RECEIVED

Commitments received from Total in 2006

In connection with the Spin-Off of Arkema's Businesses, Total S.A. and certain Total companies extended certain indemnities, or assumed certain obligations, for the benefit of the Arkema Group. Some are still in application 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. The guarantee relating to tax matters was terminated in 2017. Details of these guarantees are provided below.

29.2.1 Obligations and indemnities given in respect of Former Industrial Sites

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

Pursuant to these agreements, the obligations and environmental responsibilities associated with these former industrial sites in France and at Rieme in Belgium were transferred to Total S.A. group companies.

Agreement relating to certain former industrial sites located in the United States

In March 2006, Arkema Amériques SAS completed the acquisition from Elf Aquitaine Inc. and Arkema France of Arkema Delaware Inc., a holding company for most of the Group's operations in the United States. The negotiated terms of the stock purchase agreement among Elf Aquitaine Inc., Legacy Site Services and Arkema Amériques SAS, dated 7 March 2006 (the Arkema Delaware Main SPA) required Elf Aquitaine Inc. to use $270 million to capitalize a new subsidiary, Legacy Site Services LLC, that performs remediation services and indemnify the Group against the cost of environmental contamination liabilities incurred by the Group entities covered by this indemnity, and related personal injury and property damage claims associated with contamination at 35 of the Group's closed and formerly operated facilities and 24 third party sites where the Group's liability arises solely out of waste shipments from the sites other than currently operated sites. In exchange for this indemnification, Arkema Amériques SAS agreed to grant to Legacy Site Services LLC control over remediation activities and the defence of claims relating to contamination liabilities at these facilities and sites.

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

The Legacy Site Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defence and settlement costs and personal injury, property and natural resource damages. The indemnity does not cover liabilities unrelated to site remediation, in particular liabilities in respect of products manufactured on the said sites, liability arising from certain dangerous and potentially dangerous substances, particularly asbestos exposure and criminal liability.

The indemnity described above is capped at $270 million. The amount received by Arkema under this indemnity amounts to $101 million. At the same time as the stock purchase agreement and the indemnity described above, Legacy Site Services LLC and Arkema Inc. entered into a supplemental contamination indemnity agreement pursuant to which Legacy Site Services LLC will indemnify the liabilities of the Group in excess of $270 million, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

29.2.2 Tax Indemnity granted by Total S.A.

The final litigation fully covered by the Total Tax Indemnity was settled during the first half of 2017, and this Total Tax Indemnity is now terminated.

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Note 30 STATUTORY AUDITORS' FEES

(In millions of euros)	KPMG 2017	KPMG 2016	Ernst & Young 2017	Ernst & Young 2016
AUDIT				
Auditing, certification, review of individual and consolidated financial statements	**2.7**	**2.7**	**2.8**	**2.9**
Issuer	0.6	0.6	0.6	0.6
Fully consolidated subsidiaries	2.1	2.1	2.2	2.3
Other due diligence work and services directly related to the auditors' mission	**0.3**	**0.5**	**0.1**	**0.3**
Issuer	0.1	0.1	0	0
Fully consolidated subsidiaries	0.2	0.4	0.1	0.3
SUB-TOTAL	**3.0**	**3.2**	**2.9**	**3.2**
Other services provided by the networks to fully consolidated subsidiaries	-	-	-	-
TOTAL	**3.0**	**3.2**	**2.9**	**3.2**

In application of an internal rule validated by the Audit Committee, the amount of fees for other due diligence work and services directly related to the auditors' mission shall not exceed 30% of fees for the audit of the individual and consolidated financial statements.

Note 31 SUBSEQUENT EVENTS

In line with its strategy to continue to expand in adhesives, in November 2017 Arkema announced the planned acquisition by Bostik of the assets of XL Brands® in the United States. This transaction was based on a US$205 million enterprise value and was finalized on 2 January 2018.

D. Scope of consolidation at 31 December 2017

(a) Companies sold in 2017.
(b) Companies merged in 2017.
(c) Companies liquidated in 2017.
(d) Companies consolidated for the first time in 2017.
(e) Companies for which the percentage ownership was changed in 2017, with on change to control.

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

AEC Polymers	(d)	France	100.00	FC
Altuglas International Denmark A/S		Denmark	100.00	FC
Altuglas International Mexico Inc.		United States	100.00	FC
Altuglas International SAS		France	100.00	FC
American Acryl LP		United States	50.00	JO
American Acryl NA LLC		United States	50.00	JO
Arkema		South Korea	100.00	FC
Arkema		France	100.00	FC
Arkema Afrique SAS		France	100.00	FC
Arkema Amériques SAS		France	100.00	FC
Arkema Asie SAS		France	100.00	FC
Arkema BV		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 Coating Resins Malaysia Sdn. Bhd.		Malaysia	100.00	FC
Arkema Coatings Resins UK		United Kingdom	100.00	FC
Arkema Co. Ltd		Hong Kong	100.00	FC
Arkema Daikin Advanced Fluorochemicals Co. Ltd		China	60.00	JO
Arkema Delaware Inc.		United States	100.00	FC
Arkema Europe		France	100.00	FC
Arkema France		France	100.00	FC
Arkema GmbH		Germany	100.00	FC
Arkema Hydrogen Peroxide Co. Ltd. Shanghai		China	66.67	FC
Arkema Inc.		United States	100.00	FC
Arkema Insurance Ltd		Ireland	100.00	FC
Arkema KK		Japan	100.00	FC
Arkema Kimya Sanayive Ticaret AS		Turkey	100.00	FC

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

Arkema Ltd.		United Kingdom	100.00	FC
Arkema Mexico SA de CV		Mexico	100.00	FC
Arkema Mexico Servicios SA de CV		Mexico	100.00	FC
Arkema PEKK Inc.	(b)	United States	100.00	FC
Arkema Peroxides India Private Limited		India	100.00	FC
Arkema Pte Ltd.		Singapore	100.00	FC
Arkema Pty Ltd.		Australia	100.00	FC
Arkema Quimica Ltda		Brazil	100.00	FC
Arkema Quimica SA	(e)	Spain	100.00	FC
Arkema Shanghai Distribution Co. Ltd		China	100.00	FC
Arkema Spar NL Limited Partnership	(c)	Canada	100.00	FC
Arkema sp Z.o.o		Poland	100.00	FC
Arkema Srl		Italy	100.00	FC
Arkema Taixing Chemicals		China	100.00	FC
Arkema Thiochemicals Sdn Bhd		Malaysia	86.00	FC
Arkema Yoshitomi Ltd.		Japan	49.00	SI
ATO Findley Deutschland Gmbh	(b)	Germany	100.00	FC
Bostik AB (Sweden)		Sweden	100.00	FC
Bostik AS	(c)	Estonia	100.00	FC
Bostik Argentina		Argentina	100.00	FC
Bostik AS (Denmark)		Denmark	100.00	FC
Bostik AS (Norway)		Norway	100.00	FC
Bostik Australia		Australia	100.00	FC
Bostik Belux NV SA		Belgium	100.00	FC
Bostik BV		Netherlands	100.00	FC
Bostik Canada		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 Holding Australia Ltd	(c)	Australia	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 Korea Ltd.		South Korea	100.00	FC
Bostik Ltd.		United Kingdom	100.00	FC
Bostik Mexicana SA de CV		Mexico	100.00	FC
Bostik Nederland BV		Netherlands	100.00	FC
Bostik New Zealand		New Zealand	100.00	FC

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

Bostik-Nitta Co. Ltd.		Japan	66.00	FC
Bostik OOO		Russia	100.00	FC
Bostik OY		Finland	100.00	FC
Bostik Philippines Inc.		Philippines	100.00	FC
Bostik Polska sp Z.o.o		Poland	100.00	FC
Bostik SA		France	100.00	FC
Bostik SA (Spain)		Spain	100.00	FC
Bostik SIA	(c)	Latvia	100.00	FC
Bostik Shanghai Management Co. Ltd.		China	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
CECA Belgium		Belgium	100.00	FC
CECA LC	(b)	France	100.00	FC
CECA SA	(b)	France	100.00	FC
CECA Watan Saudi Arabia		Saudi Arabia	51.00	FC
Cekomastik Kimya Sanayi Ve Ticaret A.S		Turkey	100.00	FC
Changshu Coatex Additives Co. Ltd.		China	100.00	FC
Changshu Haike Chemicals Co. Ltd.		China	49.00	FC
CJ Bio Malaysia Sdn. Bhd.		Malaysia	14.00	SI
Coatex Asia Pacific		South Korea	100.00	FC
Coatex Central Eastern Europe sro		Slovakia	100.00	FC
Coatex Inc.		United States	100.00	FC
Coatex Latin America Industria et Comercio Ltda		Brazil	100.00	FC
Coatex Netherlands BV		Netherlands	100.00	FC
Coatex SAS		France	100.00	FC
Daikin Arkema Refrigerants Asia Ltd.		Hong Kong	40.00	JV
Daikin Arkema Refrigerants Trading (Shanghai) Co. Ltd.		China	40.00	JV
DBEW Holding BV		Netherlands	100.00	FC
Debratec GmbH		Germany	100.00	FC
Den Braven Aerosols GmbH		Germany	100.00	FC
Den Braven Beheer BV		Netherlands	100.00	FC
Den Braven Belgium N.V.		Belgium	100.00	FC
Den Braven Benelux BV		Netherlands	100.00	FC
Den Braven East sp Z.o.o		Poland	100.00	FC
Den Braven Endustriel		Turkey	100.00	FC
Den Braven France Sarl		France	100.00	FC
Den Braven Hellas SA		Greece	100.00	FC
Den Braven Holding BV		Netherlands	100.00	FC
Den Braven OG BV		Netherlands	100.00	FC
Den Braven Productos Quim. Ldo.		Portugal	100.00	FC

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

Den Braven Romania Srl		Romania	100.00	FC
Den Braven Sealants Espana SL		Spain	100.00	FC
Den Braven Sealants GmbH		Austria	100.00	FC
Den Braven Sealants South Africa Pty Ltd		South Africa	100.00	FC
Delaware Chemicals Corporation		United States	100.00	FC
Distri Mark France SAS		France	100.00	FC
Febex SA		Switzerland	96.77	FC
Hebei Casda Biomaterials Co. Ltd		China	100.00	FC
Ihsedu Agrochem Private Ltd		India	24.90	SI
Jiangsu Bostik Adhesive Co. Ltd		China	100.00	FC
Maquiladora General de Matamoros SA de CV	(b)	Mexico	100.00	FC
MEM BAUCHEMIE Gmbh		Germany	100.00	FC
Michelet Finance, Inc.		United States	100.00	FC
MLPC International		France	100.00	FC
Mydrin Srl		Italy	100.00	FC
Odor-Tech LLC		United States	100.00	FC
Oxochimie	(a)	France	50.00	JO
Ozark Mahoning Company		United States	100.00	FC
PT Bostik Indonesia		Indonesia	100.00	FC
Sartomer Asia Limited		Hong Kong	100.00	FC
Sartomer Guangzhou Chemical Co. Ltd.		China	100.00	FC
Sartomer Shanghai Distribution Company Limited		China	100.00	FC
Seki Arkema		South Korea	51.00	FC
Siroflex Inc.		United States	100.00	FC
Siroflex Ltd		United Kingdom	100.00	FC
Société Marocaine des Colles		Morocco	97.01	FC
Sovereign Chemicals Ltd		United Kingdom	100.00	FC
Suzhou Hipro Polymers Co. Ltd		China	100.00	FC
Taixing Sunke Chemicals		China	55.00	JO
Tamer Endustriyel Madencilik Anonim Sirketi		Turkey	50.00	FC
Turkish Products, Inc.		United States	100.00	FC
Usina Fortaleza Industria E commercio de massa fina Ltda		Brazil	100.00	FC
Vetek	(e)	Argentina	100.00	FC
Viking chemical company		United States	100.00	FC
Zhuhai Bostik Adhesive Ltd		China	100.00	FC

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

4.4 COMPANY'S ANNUAL FINANCIAL STATEMENTS

4.4.1 Statutory auditors' report on the financial statements

This is a translation into English of the statutory auditors' report on the consolidated financial statements of the Company issued in French and it is provided solely for the convenience of English speaking users.

This statutory auditors' report includes information required by European regulation or French law, such as information about the appointment of the statutory auditors or verification of the information concerning the Group presented in the management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

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Département de KPMG S.A.
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2, avenue Gambetta
92066 Paris-La Défense Cedex
775 726 417 R.C.S. Nanterre

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

ERNST & YOUNG Audit
Membre du réseau Ernst & Young Global Limited
Tour First
TSA 14444
92037 Paris-La Défense Cedex
S.A.S. à capital variable
344 366 315 R.C.S. Nanterre

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

Arkema

Year ended 31 December 2017

Statutory auditors' report on the financial statements

To the annual general meeting of Arkema,

Opinion

In compliance with the engagement entrusted to us by your general meetings, we have audited the accompanying financial statements of Arkema for the year ended 31 December 2017.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at 31 December 2017 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the "statutory auditors' Responsibilities for the Audit of the Financial Statements" section of our report.

Independence

We conducted our audit engagement in compliance with independence rules applicable to us, for the period from 1 January 2017 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in article 5(1) of regulation (EU) No. 537/2014 or in the French Code of Ethics *(Code de déontologie)* for statutory auditors.

Justification of assessments - Key audit matters

In accordance with the requirements of articles L. 823-9 and R.823-7 of the French Commercial Code *(Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the financial statements.

Valuation of investments in the entity Arkema France

Risk identified

As at 31 December 2017, the investments in affiliates recorded in the balance sheet at a net carrying amount of €2,341 million, including investments in the entity Arkema France in the amount of €1,027 million, represent 33% of total assets. Investments in affiliates are initially recognized in the balance sheet at the lower of acquisition cost or value in use.

As disclosed in Note B1 to the financial statements, value in use of investments held is determined based on the share of equity owned, or, where such methods provide more relevant information, by reference to an external valuation or by reference to discounted future cash flows. In particular, investments in the entity Arkema France are valued using the multiples method applied to the EBITDA of the Company and its subsidiaries, adjusted for net debt within Arkema France.

Estimates of the value in use of these investments require Management's judgement in choosing the information to consider in relation to the investments concerned. Given the weight of investments in the entity Arkema France in the balance sheet and the importance of Management's judgement in determining the assumptions on which estimates of the value in use will be based, we considered the valuation of investments in affiliates to be a key audit matter.

Audit procedures implemented to address the risk identified

In order to assess the reasonable basis of the estimates of the value in use of investments in affiliates, our work consisted primarily of:

- verifying that value in use as estimated by Management is supported by appropriate justification of the valuation method and amounts used;
- verifying the consistency of the valuation method used;
- reconciling the data used in valuing investments in Arkema France (determining the EBITDA multiple used, contribution of EBITDA and net debt within Arkema France) with data from the accounting records, and verifying that adjustments made, if applicable, to these data are based on appropriate documentation;
- verifying the arithmetical accuracy of calculations.

Verification of the management report and of the other documents provided to the shareholders

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

Information given in the management report and in the other documents provided to the shareholders with respect to the financial position and the financial statements

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the Board of Directors' management report and in the other documents provided to the shareholders with respect to the financial position and the financial statements.

Information relating to Corporate Governance

We certify the existence, in a section of the Board of Directors' management report relating to Corporate Governance, of information required by articles L. 225-37-3 and L. 225-37-4 of the French Commercial Code *(Code de commerce)*.

Concerning the information given in accordance with the requirements of article L. 225-37-3 of the French Commercial Code *(Code de commerce)* relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your Company from controlling and controlled companies. Based on this work, we attest the accuracy and fair presentation of this information.

Concerning the information given relating to the factors that your Company considered likely to have an impact in the event of a public offering or public exchange offer, disclosed pursuant to the provisions of article L. 225-37-5 of the French Commercial *(code de commerce)*, we have verified their compliance with underlying documents that were communicated to us. Based on this work, we have nothing to report on this information.

Other informations

In accordance with French law, we have verified that the required information concerning the identity of the shareholders and holders of the voting rights has been properly disclosed in the management report.

Report on other legal and regulatory requirements

Appointment of the statutory auditors

We were appointed as statutory auditors of Arkema by your annual general meeting held on 23 June 2005 for KPMG Audit, Département de KPMG S.A., and on 10 May 2006 for ERNST & YOUNG Audit.

As at 31 December 2017, KPMG Audit, Département de KPMG S.A., was in the thirteenth year of total uninterrupted engagement (including twelve years since securities of the Company were admitted to trading on a regulated market) and ERNST & YOUNG Audit in the twelfth year.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with French accounting principles and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risks management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The financial statements were approved by the Board of Directors.

Statutory auditors' responsibilities for the audit of the financial statements

Objectives and audit approach

Our role is to issue a report on the financial statements. Our objective is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As specified in article L. 823-10-1 of the French Commercial Code *(Code de commerce)*, our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the financial statements;
- assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein;
- evaluates the overall presentation of the financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

4

Report to the audit committee

We submit a report to the Audit Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in article 6 of regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France such as they are set in particular by articles L. 822-10 to L. 822-14 of the French Commercial Code *(Code de commerce)* and in the French Code of Ethics *(Code de déontologie)* for statutory auditors. Where appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Paris-La Défense, 21 February 2018

The statutory auditors

French original signed by

KPMG Audit *Département de KPMG S.A.*		ERNST & YOUNG Audit
Bertrand Desbarrières Partner	François Quédiniac Partner	Denis Thibon Partner

4.4.2 Parent Company financial statements at 31 December 2017

BALANCE SHEET

(In millions of euros)		31/12/2017			31/12/2016
ASSETS	Note	Gross	Depreciation and impairment	Net	Net
Investments	D 1	3,356	1,015	2,341	1,841
Other financial assets	D 1	2,968	-	2,968	2,562
TOTAL FIXED ASSETS		**6,324**	**1,015**	**5,309**	**4,403**
Advances		0	-	0	0
Trade receivables	D 2	68	-	68	15
Other receivables	D 2	164	-	164	219
Subsidiary current accounts	D 2	1,469	-	1,469	1,602
Treasury shares	D 2	2	-	2	4
Cash and cash equivalents		-	-	-	-
TOTAL CURRENT ASSETS		**1,703**	**-**	**1,703**	**1,840**
Bond premium and issuing costs	D 2	22	-	22	15
Prepaid expenses					
TOTAL ASSETS		**8,049**	**1,015**	**7,034**	**6,258**

LIABILITIES AND SHAREHOLDERS' EQUITY		31/12/2017	31/12/2016
Share capital		759	757
Paid-in surplus		1,216	1,212
Legal reserve		76	74
Retained earnings		1,264	653
Net income for the year		485	767
TOTAL SHAREHOLDERS' EQUITY	**D 3**	**3,800**	**3,463**
ADDITIONAL EQUITY	**D 4**	**700**	**700**
PROVISIONS	**D 5**	**67**	**48**
Bonds and other financial debt	D 6	2,274	1,869
Subsidiary current accounts	D 8		
Trade payables	D 8	55	9
Tax and employee-related liabilities	D 8	13	9
Other payables	D 8	125	160
TOTAL LIABILITIES		**2,467**	**2,047**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**7,034**	**6,258**

INCOME STATEMENT

(In millions of euros)	Note	2017	2016
Services billed to related companies	D 2.a	66	19
Other purchases and external expenses	D 2.a	(60)	(11)
Taxes other than income taxes		(1)	(1)
Personnel expenses		(16)	(9)
Other operating expenses		(0)	0
Increases and reversals from provisions	D 5	0	(6)
Operating income		**(11)**	**(8)**
Dividends from investments		59	522
Interest income		100	92
Interest expenses		(93)	(87)
Net foreign exchange gains (losses)		0	(0)
Impairment of investments		500	150
Increases and reversals of provisions for financial risks	D 5	(3)	(2)
Financial result	**D 10**	**563**	**675**
Income before tax and exceptional items		**552**	**667**
Increases and reversals from exceptional provisions	D 5	(19)	8
Other exceptional income		5	0
Income and (expenses) on capital transactions		(1)	3
Exceptional items		**(15)**	**11**
Income taxes	D 11	(51)	89
Net income		**485**	**767**

CASH FLOW STATEMENT

(In millions of euros)	**2017**	**2016**
Net income	485	767
Changes in provisions	(477)	(150)
Changes in impairment		(0)
(Gains)/losses on sales of assets		0
Gross operating cash flow	**8**	**617**
Change in working capital	8	(28)
Cash flow from operating activities	**16**	**589**
Cost of acquisition of investments	0	0
Change in loans	(405)	0
Sale of investments	0	0
Cash flow from investing activities	**(405)**	**0**
Increase in bonds	405	(2)
Increase in additional equity	0	0
Change in share capital and other equity	6	51
Dividends paid to shareholders	(155)	(143)
Cash flow from financing activities	**256**	**(94)**
Change in net cash	**(133)**	**495**
Net cash at beginning of period*	1,602	1,107
Net cash at end of period*	1,469	1,602

* *Including subsidiary current accounts.*

TABLE OF SUBSIDIARIES AND INVESTMENTS AT 31/12/2017

Subsidiaries and investments	Share capital (in €m)	Shareholders' equity other than capital, excluding net income (in €m)	Gross value of shares owned (in €m)	Net carrying amount of shares owned (in €m)	Number of shares owned	Ownership interest (in %)	Loans, advances & current accounts – gross value (in €m)	Guarantees given by the company (in €m)	Sales (excl taxes) for 2017 (1) (in €m)	Net income for 2017 (1) (in €m)	Dividends received by the company (in €m)
French subsidiaries											
Arkema France 420, rue d'Estienne d'Orves 92705 Colombes Cedex	270	379	2,023	1,027	1,584,253	99.99	4,399	1,048	2,774	192	-
Arkema Amériques SAS 420, rue d'Estienne d'Orves 92705 Colombes Cedex	1,049	106	1,044	1,044	104,354,000	99.46	-	-	-	221	51
Arkema Europe SA 420, rue d'Estienne d'Orves 92705 Colombes Cedex	548	19	188	188	12,370,920	34.32	-	-	-	93	8
Arkema Asie SAS 420, rue d'Estienne d'Orves 92705 Colombes Cedex	120	18	71	71	39,420	59.40	-	-	-	8	-
Arkema Afrique SAS 420, rue d'Estienne d'Orves 92705 Colombes Cedex	30	(19)	30	11	300,370	100.00	-	-	-	0	-
TOTAL INVESTMENTS			**3,356**	**2,341**			**4,399**	**1,048**	**2,774**	**514**	**59**

(1) Financial statements not yet approved by the shareholders at the general meeting.

4.4.3 Notes to the Company's financial statements at 31 December 2017

A. Highlights

- On 11 April 2017 Arkema completed a €700 million bond issue with a 10-year maturity at a coupon of 1.5%. This operation enabled the Group to refinance and extend the average maturity of its financial resources, taking advantage of favourable market conditions.

  A €200 million tap issue was carried out on 23 June 2017.

  In October 2017, the Group redeemed at maturity a €500 million bond that had an annual coupon of 4%.
- On 23 May 2017 the combined general meeting of Arkema's shareholders approved the distribution of a €2.05 dividend per share in respect of the 2016 financial year.

B. Accounting policies

The annual financial statements of Arkema S.A. were prepared under the responsibility of the Chairman and CEO of Arkema S.A. and were approved by the Board of Directors on 21 February 2018.

The annual financial statements of Arkema S.A. have been prepared in accordance with French laws and regulations. It is specified that the presentation of the balance sheet and the income statement have been adapted to the holding activity exercised by the Company.

The usual French accounting conventions have been applied, in compliance with the conservatism principle, under the following basic assumptions:

- going concern;
- consistency of accounting policies from one financial year to the next; and
- accruals basis of accounting and cut-off.

The basic method used to value items recorded in the accounting records is the historical cost method.

The main accounting policies used by the Company are presented below.

1. INVESTMENTS

Investments are stated at the lower of acquisition cost and value in use. Investment acquisition expenses are recognized in the income statement as incurred.

The value in use of the investments held by Arkema S.A. is assessed by reference to the share held in the investee's net assets. However, value in use may be assessed:

- by reference to an external valuation; or
- by standard valuation methods (multiples, discounted future cash flows) when these methods provide more relevant information than the share held in the investee's net assets.

In particular, the value of the investment in Arkema France was assessed by the multiples method applied to the EBITDA of the company and its subsidiaries, adjusted for the net debt of Arkema France. The multiple of EBITDA used is established by reference to Arkema S.A.'s market capitalization, after corrections relating to certain specificities of Arkema France to take into consideration the operational activities and geographical markets concerned by the entity's operations.

2. COSTS OF CAPITAL INCREASES

In accordance with opinion 2000D of the urgent issues committee of the French National Accounting Board (*Conseil National de la Comptabilité* – CNC), issued on 21 December 2000, the Company opted to recognize the costs of capital increases as a deduction from issue premiums.

3. RECEIVABLES

Receivables are recognized at their nominal value. A bad debt provision is recognized when the net realizable value is lower than the book value. Receivables denominated in foreign currencies are translated at the exchange rate at 31 December.

4. TREASURY SHARES

Treasury shares held by Arkema S.A. are recognized at acquisition cost in current assets. They are valued in accordance with the FIFO (first-in first-out) method. Treasury shares are normally written down, if necessary, on the basis of the average market price on the Paris stock exchange for the last month preceding the balance sheet date. By exception, and in accordance with opinion n°2008-17 of the CNC issued on 6 November 2008, these shares are not written down on the basis of their market value where they have been allocated to a plan, because of the commitment to make grants to employees and the provision recognized in this respect in liabilities.

Treasury shares initially allocated to cover share grants to employees are reclassified as financial fixed assets in a "Treasury shares for cancellation" sub-account when a decision is taken to cancel the shares. They are then recorded at their net carrying amount at the date on which their allocation is changed.

5. BONDS

Bonds are recognized at nominal value in the balance sheet liabilities.

Bond issuing costs and bond premiums (arising when the bond is issued at a price below its nominal value) are recognized in the balance sheet as a separate asset. However, if the bond is issued at a price higher than the nominal value, the difference between the issue price and the nominal value minus issuing costs is recognized as a liability under the heading *Bonds*.

Issuing costs comprise bank charges for setting up the bond and legal fees. They are spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in operating income.

The bond premium is also spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in financial result. If the bond is issued at a price higher than the nominal value, the same method is applied to the difference between the issue price and the nominal value, with the corresponding income recognized in financial result.

The effective interest rate corresponds to the interest rate which, when used to determine the discounted value of expected cash outflows till maturity date, leads to the initial book value of the bond.

6. PERPETUAL HYBRID BONDS

Perpetual bonds whose redemption remains under the exclusive control of the issuer are recorded as "Additional equity".

Costs and the premium related to issuance of such instruments are recorded in the balance sheet assets as prepaid expenses, and will be spread over the duration of the relevant tranche.

The expense resulting from spreading issuing costs is recognized in the operating income by a direct credit to the bond issuing cost account (only the net amount is shown in the balance sheet).

The expense resulting from spreading issue premiums is recognized in financial expenses by a direct credit to the bond issue premium account (only the net amount of the premiums is shown in the balance sheet).

Accrued interest not yet due is included in Debt.

The annual interest expense on these instruments is included in financial expenses in the income statement.

7. STOCK OPTIONS AND FREE SHARE GRANTS

7.1 Stock options

Stock options are accounted for, at the date of exercise, as a capital increase for an amount corresponding to the subscription price paid by the stock option holders. Any difference between the subscription price and the nominal value of the shares created represents an issue premium.

7.2 Free share grants

Arkema S.A. shares will be definitively granted to beneficiaries at the end of a vesting period subject to the beneficiary remaining with the company and any performance conditions set by the Board of Directors.

7.2.1 Issue of new shares

When a free share grant is carried out by issuing new shares, the capital increase by means of a transfer from reserves of the nominal amount of the shares created is recognized in the financial statements at the end of the defined vesting period.

7.2.2 Buybacks of existing shares

When a free share grant is carried out through buybacks of existing shares (following a decision taken by the Board of Directors in relation to the plan in question), a provision representing the obligation to deliver the shares is recognized at year-end. The amount of this provision is equal to the probable purchase price, valued on the basis of the closing share price if the shares have not yet been purchased, or the net carrying amount of the treasury shares if they have already been purchased. On delivery at the end of the vesting period, the purchase price paid by the company for the shares granted is recognized in exceptional expenses and the provision previously recorded is reversed. However, the expense related to delivery of definitively granted shares to Arkema S.A. personnel under performance share plans is reclassified from exceptional items to operating income.

The provision is recognized on a time-proportion basis over the vesting period and takes into account, where relevant, the probability of remaining with the company and fulfilling the performance conditions set by the Board of Directors.

7.3 Social security tax on stock options and free share grants

The 2008 French social security financing act (law 2007-1786 of 19 December 2007) created a new employer contribution on stock options and free share grants. This contribution is payable to the mandatory health insurance schemes to which the beneficiaries are affiliated.

For stock options, the contribution is calculated, at the company's choice, on the basis of either (i) the fair value of the options as estimated in the consolidated financial statements or (ii) 25% of the value of the shares to which these options relate at the date of the Board of Directors' decision to grant them.

For free share grants, starting from the 2016 plan the contribution is calculated on the basis of the value of the shares granted at their vesting date, and is payable the month after the shares vest to the beneficiary. The provision for expenses corresponding to the contribution payable for Arkema S.A. personnel is established progressively over the vesting period.

8. PROVISIONS FOR PENSIONS AND SIMILAR BENEFITS

The complementary "top-hat" defined benefit pension plan was terminated during 2016 following a decision by the Board of Directors on 9 March 2016. Other non-pension benefits (lump sum payments on retirement, long service awards, death and disability benefits, contributions to healthcare bodies) remain unchanged, and provisions are recognized through contingency and loss provisions.

The amount of the provision corresponds to the actuarial value of employees' vested rights at the balance sheet date.

The valuation of obligations under the projected unit credit method principally takes into account:

- a discount rate which depends on the duration of the obligations (1.95% at 31/12/2017 compared to 1.70% at 31/12/2016);
- an assumption concerning the date of retirement;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs.

Actuarial gains and losses are fully recognized in the income statement.

9. TAX CONSOLIDATION

The tax consolidation agreements signed between Arkema S.A. and the other companies in the tax consolidation group refer to a neutrality principle in accordance with which each tax consolidated subsidiary must recognize in its own financial statements, during the entire period of its inclusion in the tax consolidation group, a tax expense (or income) corresponding to income tax and additional levies, identical to that which it would have recognized had it not formed part of the tax consolidation group.

In its accounting records, Arkema S.A. recognizes:

- in "other receivables", with an offsetting entry to income taxes, the amount of income taxes due by profitable companies in the tax consolidation group;
- in "other payables", with an offsetting entry to income taxes, the amount of taxes due by the tax consolidation group.

The tax consolidation agreements also state that Arkema S.A. will benefit from the tax savings generated by the use of its subsidiaries' tax losses without any obligation to refund them (even if the said subsidiaries leave the tax consolidation group). On this basis, in accordance with opinion 2005-G of the urgent issues committee of the French National Accounting Board (CNC), Arkema S.A. does not recognize any provision for taxes.

C. Subsequent events

None.

D. Notes to the parent company financial statements

The figures presented in the notes to the parent company financial statements are expressed in millions of euros (unless otherwise indicated).

Note 1 INVESTMENTS AND OTHER FINANCIAL ASSETS

1.1 INVESTMENTS

(In millions of euros)	31/12/2016	Increase	Decrease	31/12/2017
Gross value	3,356	-	-	3,356
Impairment	(1,515)		(500)	(1,015)
NET VALUE	**1,841**	**-**	**(500)**	**2,341**

The change in investments results from the reversal of €500 million of impairment in respect of shares in Arkema France, in view of the company's improved prospects.

1.2 OTHER FINANCIAL ASSETS

Arkema S.A. has transferred to its subsidiary Arkema France the cash received from the various bond issues (see notes D4 and D6), in the form of loans with the same maturity and same effective interest rates.

The corresponding loans total €2,930 million (excluding accrued interest) at 31 December 2017.

Note 2 CURRENT ASSETS

2.1 BREAKDOWN OF RECEIVABLES

The breakdown by maturity of the Company's receivables at 31 December 2017 is as follows:

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing after 1 year
Operating receivables and VAT [1]	68	68	-
Cash advances to subsidiaries [2]	1,469	1,469	-
Other receivables [3]	164	73	91
TOTAL	**1,701**	**1,610**	**91**

(1) In 2017, Arkema S.A. invoiced support functions to all Arkema Group entities, leading to an increase in invoiced sales and an identical change in external expenses.
(2) Arkema France current account.
(3) Mainly income tax receivables.

2.2 TREASURY SHARES

At 31 December 2017, Arkema S.A. owns 33,225 treasury shares which are recorded at the total value of €2.3 million. These shares are allocated to the free share grant plans (see note D13).

No impairment was therefore recognized in the financial statements at 31 December 2017.

2.3 BOND PREMIUMS AND COSTS

The following amounts are recognized in this item:

(In millions of euros)	31/12/2016	Increase	Decrease	31/12/2017
Bonds				
Issue premiums	6.4	9.9	1.7 [1]	14.6
Issuing costs	2.1	1.4	0.7 [1]	2.8
SUBTOTAL	**8.5**	**11.3**	**2.4**	**17.4**
Perpetual hybrid bonds				
Issue premiums	4.8		1.2 [1]	3.6
Issuing costs	1.9		0.5 [1]	1.4
SUBTOTAL	**6.7**	**0**	**1.7**	**5**
TOTAL	**15.2**	**11.3**	**4.1**	**22.4**

(1) Amount charged to expenses for the period.

Note 3 SHAREHOLDERS' EQUITY

At 31 December 2017, the share capital is composed of 75,870,506 shares with a nominal value of 10 euros, compared to 75,717,947 shares with a nominal value of 10 euros at 31 December 2016.

Changes in shareholders' equity are as follows:

(In millions of euros)	Opening balance at 01/01/2017	Appropriation of 2016 net income	Distribution of dividends [(1)]	2017 net income	Capital increase due to subscriptions [(2)]	31/12/2017 before appropriation
Share capital	757.2				1.5	758.7
Issue premium	460.9				4.8	465.7
Paid-in surplus	625.9					625.9
Merger surplus	124.8					124.8
Legal reserve	74.4	1.3				75.7
Other reserves	0					0
Retained earnings	653.0	765.8	(155.1)			1,263.7
2016 net income	767.1	(767.1)				0
2017 net income		-		485.0		485.0
TOTAL SHAREHOLDERS' EQUITY	**3,463.3**	**0**	**(155.1)**	**485.0**	**6.3**	**3,799.5**

(1) On 23 May 2017 the shareholders' general meeting adopted a resolution proposing to distribute a dividend of €2.05 per share, or a total amount of €155 million, in respect of the 2016 financial year.

(2) Capital increases resulting from the exercise of stock options in 2017.

On 30 June 2017, the company undertook a capital increase of €0.5 million with a €1.3 million increase in the issue premium, following the exercise of stock options between 1 January and 30 June 2017.

On 31 December 2017, the company undertook a capital increase of €1 million with a €3.5 million increase in the issue premium, following the exercise of stock options between 1 July and 31 December 2017.

Following completion of these operations, the share capital of Arkema S.A. was increased to €758.7 million divided into 75,870,506 shares.

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Note 4 ADDITIONAL EQUITY

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing after 1 year
Issuance of perpetual hybrid bonds	700		700

As part of the refinancing of its acquisition of Bostik, Arkema S.A. issued a perpetual hybrid bond in October 2014 in the total amount of €700 million with an issue premium and issuing costs (see Note 2.3). These bonds include a first call option on 29 October 2020 and will carry an annual coupon of 4.75% until that date. The coupon will then be reset every 5 years.

At each coupon date, the interest can be paid or carried over at the issuer's convenience. Coupons carried over generate late payment interest and become due in the event of certain contractually defined circumstances under the control of the issuer. The coupon of €33 million was paid in full on 31 October 2017.

Note 5 PROVISIONS

Changes in provisions recognized in the Company's balance sheet are set out in the table below:

(In millions of euros)	31/12/2016	Increase	Decrease	31/12/2017
Provisions for pensions and similar benefits [1]	2.1	0.2	0.2	2.1
Provisions for long service awards	0.4	0.1	0.1	0.4
Provision for free share grants [2]	45.4	32.9	16.2 [3]	62.1
Provisions for risks related to subsidiaries	-	-	-	
Provisions for other risks	0.1	2.7	-	2.8
TOTAL	**48.0**	**35.9**	**16.5**	**67.4**

(1) The increase mainly corresponds to entitlements earned over the year.
(2) Increases and reversals from these provisions are recorded in exceptional items.
(3) Reversal corresponding to an effective expense relating to delivery in June and November of performance shares under the first section of plan 2016-3, plan 2014-1, 3 and plan 2013.

These movements break down as follows:

Recognized in operating income	0.3	(0.3)
Recognized in financial result	0	0
Recognized in exceptional items	35.6	(16.2)
TOTAL	**35.9**	**(16.5)**

Note 6 BONDS AND OTHER FINANCIAL DEBT

This heading covers:

- the bond issued in April 2012 that will mature on 30 April 2020, with fixed coupon of 3.85% and the tap issue undertaken in October 2012 bringing its total amount to €480 million;
- the €150 million bond issued in December 2013 with fixed coupon of 3.125% that will mature on 6 December 2023;
- the €700 million bond issued in January 2015 with fixed coupon of 1.5%, that will mature on 20 January 2025;
- the bond issued in April 2017 that will mature on 20 April 2027 with fixed coupon of 1.5%, and the tap issue undertaken in June 2017 bringing its total amount to €900 million;
- these last three issues are part of the Group's €2.75 billion Euro Medium Term Notes (EMTN) programme introduced in October 2013;
- the difference between the issue price and the nominal value of the 2012 bond, initially recognized in liabilities at the amount of €13.7 million (net of issuing costs); after a €1.8 million charge to the period, the balance of this difference amounts to €4.6 million at 31 December 2017;
- the difference between the issue price and the nominal value of the 2017 bond, recorded in liabilities at the amount of €2.2 million (net of issuing costs); after a €0.1 million charge to the period, the balance of this difference amounts to €2.1 million at 31 December 2017;
- the accrued interest on bonds, amounting to €31.6 million;
- the accrued interest on the perpetual hybrid bond, amounting to €5.8 million.

Note 7 NEGOTIABLE EUROPEAN COMMERCIAL PAPER

In April 2013 the Group introduced a Negotiable European Commercial Paper programme with a ceiling of €1 billion.

Issues outstanding as part of this programme amount to nil at 31 December 2017.

Note 8 DEBT

The breakdown by maturity of the Company's debt at 31 December 2017 is as follows:

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing in 1 to 5 years	Maturing after 5 years
Bonds and other financial debt	2,274	44 (1)	480 (2)	1,750 (2)
Trade payables	55	55	-	-
Tax and employee-related liabilities	13	13	-	-
Other payables	125 (3)	43	82	-
TOTAL	**2,467**	**155**	**562**	**1,750**

(1) €44 million of accrued interest on bonds and the perpetual hybrid bond.
(2) Long-term bonds issued by Arkema S.A. (see note D6).
(3) Income tax payables owed to companies in the tax consolidation group.

Note 9 DETAILS OF ITEMS CONCERNING RELATED COMPANIES

(In millions of euros)	
Investments	
Investments in other companies	2,341
Receivables related to subsidiaries	2,968
Receivables	
Trade receivables	67
Other receivables (incl. current accounts)	1,469
Other amounts receivable	32
Liabilities	
Financial debt	-
Trade payables	54
Other payables	125
Sales	
Services billed to related companies	65
Financial income and expenses	
Dividends from investments	59
Income on loans and current accounts	94

Note 10 FINANCIAL RESULT

Arkema S.A. received dividends for a total amount of €58.8 million, of which €51.1 million were from Arkema Amériques SAS and €7.7 million were from Arkema Europe SAS.

Interest income corresponds to the remuneration of the amounts made available to Arkema France in the context of the Group's cash pooling system.

Note 11 INCOME TAXES

In 2017, application of the French tax consolidation system resulted in tax income (negative expense) of €10.9 million for Arkema S.A. This amount corresponds to the income taxes of the profitable companies.

Arkema S.A has expensed and paid the 3% additional contribution on distributed income related to the cash dividend paid for 2016, amounting to €4.7 million.

On 6 October 2017 the Constitutional Council declared that this contribution, introduced in 2012, was invalid. Since Arkema is claiming reimbursement from the government for the amounts paid over the period 2013 to 2017, Arkema S.A. has recognized tax income for that period of €19 million (including €1.7 million in interest on arrears) and reimbursed €73.8 million to the companies concerned in the tax consolidation group. At 31 December 2017 Arkema S.A. had received €15 million in reimbursement of the 3% contribution paid over the period 2013 to 2017.

Note 12 DEFERRED TAX POSITION

Temporarily non-deductible expenses relating to provisions for pensions and similar benefits at 31 December 2017 amount to €0.2 million, down by €1.9 million from 31 December 2016.

The tax loss carry-forward of the Company's tax consolidation group at 31 December 2017 amounts to €1,649 million, and can be used indefinitely.

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Note 13 STOCK OPTION PLANS AND FREE SHARE GRANTS

STOCK OPTIONS

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

Movements in the stock option plans granted in previous years and still outstanding at 31 December 2017 are as follows:

Plan	Total number of options granted*	Exercise price (in €)*	Number of options exercised in 2017	Number of options cancelled in 2017	Total number of options exercised	Total number of options outstanding	Final year for exercising options
2010-1	230,044	29.33	41,421	-	200,195	22,849	2018
2010-2	233,513	29.33	59,726	-	187,319	24,020	2018
2011-1	109,082	65.92	32,485	-	81,904	27,178	2019
2011-2	109,082	65.92	18,927	-	36,796	72,286	2019

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

FREE SHARE GRANTS

On 8 November 2017, the Board of Directors decided to put in place two performance share plans for the benefit of Group employees, particularly employees with responsibilities whose exercise influences the Group's results.

Movements in the free share grant plans existing at 31 December 2017 are as follows:

Plan	Grant date	Vesting period	Conservation period	Total number of free shares granted	Number subject to performance conditions	Number of shares definitively granted in 2017	Number of shares cancelled in 2017	Total number of shares still to be granted at 31/12/2017
2013	6 Nov 2013	4 years	-	**250,000**	182,810	190,552	53,188	-
2014-1, 3	6 May 2014	3-4 years	0-3 years	**17,118**	-	3,579	40	**13,144**
2014-2	13 Nov 2014	4 years	-	**275,000**	203,535	650	2,450	**269,025**
2015-1	9 Nov 2015	4 years	-	**285,525**	285,525	650	2,500	**279,825**
2015-2	9 Nov 2015	4 years	-	**59,595**	-	-	720	**57,935**
2016-1, 2	10 May 2016	3-4 years	0-3 years	**43,278**	-	-	-	**43,278**
2016-3	7 Jun 2016	1-3 years	2 years	**50,000**	-	16,667	-	**33,333**
2016-4	9 Nov 2016	3 years	2 years	**235,835** (1)	226,040	500	1,850	**233,485**
2016-5	9 Nov 2016	4 years	-	**122,080** (2)	112,860	-	460	**121,620**
2017-1	8 Nov 2017	3 years	2 years	**230,695** (3)	218,255	-	20	**230,675**
2017-2	8 Nov 2017	4 years	-	**129,405** (4)	114,845	-	190	**129,215**

(1) May be raised to 258,439 in the event of high performance.
(2) May be raised to 133,366 in the event of high performance.
(3) May be raised to 252,521 in the event of high performance.
(4) May be raised to 140,890 in the event of high performance.

INCOME AND EXPENSES IN THE FINANCIAL YEAR IN RESPECT OF THE 2013 TO 2017 PLANS

The delivery of shares in respect of the 1st section of plan 2016 and plan 2013 led to recognition in the 2017 exceptional items of a net expense of €2.7 million (€18.9 million exceptional expense offset by a €16.2 million reversal from provisions).

The provision for free share grants was increased by €32.9 million (of which €1.9 million relates to the 2017 plans).

The total amount of provisions in respect of all plans is €62.1 million at 31 December 2017.

Note 14 OFF-BALANCE SHEET COMMITMENTS

The information set out below concerns Arkema S.A. or certain of its subsidiaries, and is disclosed on account of Arkema S.A.'s holding company status.

14.1 COMMITMENTS GIVEN

Syndicated credit facility

On 29 October 2014, Arkema France and its parent company mère Arkema S.A., which also acted as guarantor for its subsidiary, put in place a multi-currency syndicated credit facility of €900 million, with an initial duration of five years maturing on 29 October 2019, and the possibility of two one-year extensions subject to approval by the lenders, exercisable at the end of the first and the second year. After an initial one-year extension in 2015, on 9 September 2016 Arkema France and Arkema S.A. were authorized by their lenders to extend this maturity to 29 October 2021. This credit facility is intended to finance the Group's general requirements as a substitute line for the Negotiable European Commercial Paper programme, and includes an early repayment clause in the event of certain situations including a change in control of the Arkema Group. It includes: (i) standard information undertakings and commitments for this type of financing, (ii) a financial undertaking by the Arkema Group to maintain the ratio of consolidated net debt to consolidated EBITDA (tested twice a year) at 3.5 or less.

14.2 COMMITMENTS RECEIVED

Commitments received from TOTAL in 2006

In connection with the Spin-Off of Arkema's Businesses, Total S.A. and certain Total companies extended certain indemnities, or assumed certain obligations, for the benefit of Arkema relating to certain tax matters. The final litigation fully covered by the Total Tax Indemnity was settled during the first half of 2017, and this indemnity is now terminated.

Note 15 LIABILITIES AND CONTINGENT LIABILITIES

As a result of Hurricane Harvey, Arkema 's Crosby, Texas plant experienced unprecedented flooding leading to a loss of power, the loss of back up refrigeration, the decomposition of certain organic peroxides products that require refrigeration and, ultimately, a series of fires at the plant. Floodwaters also caused wastewater releases. Since September 2017, two civil lawsuits have been filed against Arkema Inc. and other defendants and in particular one to which the Company is a named defendant. At this time, the Company cannot estimate any potential losses associated with this lawsuit, and will vigorously defend it.

Note 16 EMPLOYEES

The average number of employees by category of personnel is as follows:

Engineers and managerial:	9
Supervisors and technicians	0
TOTAL	**9**

Note 17 TRANSACTIONS WITH RELATED PARTIES

The compensation of directors and members of its Executive Committee (Comex) recognized in expenses by Arkema S.A. is as follows:

(In millions of euros)	2017	2016
Salaries and other short-term benefits (1)	7	8
Pensions, other post-employment benefits and contract termination benefits	-	-
Other long-term benefits	-	-
Share-based payments (2)	4	5

(1) In 2016, this amount includes the cash payment to the Chairman and CEO in compensation for the rights earned under the complementary pension plan which was terminated on 9 March 2016 by decision of the Board of Directors.

(2) In 2016, this amount includes the shares awarded to the Chairman and CEO in compensation for rights earned under the complementary pension plan which was terminated on 9 March 2016 by decision of the Board of Directors.

Salaries and other short-term benefits comprise all types of remuneration recorded, including variable amounts, bonuses, attendance fees and benefits in kind.

The Chairman and CEO is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of two years' total gross compensation (fixed and variable), subject to achievement of performance criteria.

Other transactions with related parties involve subsidiaries directly or indirectly wholly-owned by Arkema S.A. and do not fall within the scope of the article 831-3 of regulation n° 2014-03 of 5 June 2014 of the French National Accounting Authority *(Autorité des normes comptables)*.

4.4.4 Results of the Company in the last five years (Articles R. 225-81, R. 225-83 and R. 225-102 of the French Commercial Code)

In millions of euros (unless otherwise indicated)	2013	2014	2015	2016	2017
Type of disclosures					
I - Financial position at year end					
a) Share capital	630	728	745	757	759
b) Number of shares issued	63,029,692	72,822,695	74,472,101	75,717,947	75,870,506
II - Operations and results					
a) Sales (excluding VAT)	13	15	18	19	66
b) Income before tax, depreciation, impairment and provisions	206	70	703	528	60
c) Income taxes	26	28	52	89	(51)
d) Employee profit sharing					
e) Income after tax, depreciation impairment and provisions	212	189	754	767	485
f) Amount of dividends distributed	117	135	143	155	NC
III - Earnings per share *(in euros)*					
a) Income after tax but before depreciation, impairment and provisions	3.69	1.34	10.14	8.15	0.12
b) Income after tax, depreciation, impairment and provisions	3.37	2.59	10.12	10.13	6.39
c) Net dividend per share	1.85	1.85	1.90	2.05	NC
IV - Employee data					
a) Number of employees	7	7	7	9	9
b) Total payroll	4	5	7	8	7
c) Amounts paid to employee benefit bodies in the year	3	3	4	5	4

5

INFORMATION ABOUT THE COMPANY AND ITS SHARE CAPITAL

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

5.1 LEGAL PRESENTATION OF THE GROUP

5.1.1 Information about the Company

Arkema was established in October 2004 within Total's Chemical business to bring together the Vinyl Products, Industrial Chemicals and Performance Products businesses. On 18 May 2006, the Company's stock market listing marked the Group's independence.

Since 2006, a number of significant operations, as mentioned below, have enabled the Group to strengthen its portfolio of businesses and to refocus on specialty chemical activities.

Dates	Nature of operation	Company	Businesses	Division
October 2007	Acquisition	Coatex	Rheology additives	Coating Solutions
January 2010	Acquisition	Certain assets of The Dow Chemical Company in North America	Acrylics and emulsions	Coating Solutions
July 2011	Acquisition	Cray Valley, Cook Composites & Polymers Sartomer	Coating resins Photocure resins	Coating Solutions High Performance Materials
February 2012	Acquisition	Suzhou Hipro Polymers Co. Ltd. Hebei Casda Biomaterials Co. Ltd.	Specialty polyamides	High Performance Materials
July 2012	Divestment	Vinyl Products division	Vinyls	Vinyl Products
October 2014	Joint venture	Taixing Sunke Chemicals in China	Acrylics	Coating Solutions
February 2015	Acquisition	Bostik	Adhesives	High Performance Materials
December 2016	Acquisition	Den Braven	High performance sealants	High Performance Materials
January 2018	Acquisition	XL Brands in the United States	Adhesives	High Performance Materials

Arkema is a French joint stock corporation *(société anonyme)* with a share capital of €758,705,060 and its registered office at 420, rue d'Estienne d'Orves, 92700 Colombes (phone: +33 1 49 00 80 80). It is governed by French law and, as a result, is subject to the legislative and regulatory provisions of the French Commercial Code *(Code de commerce)*.

The Company is registered with the Nanterre Trade and Companies Registry *(Registre du commerce et des sociétés)* under number 445 074 685. Its SIRET number is 445 074 685 00030. Its NAF code is 6420 Z.

The Company was incorporated on 31 January 2003 for a fixed period of 99 years from its date of registration at the Trade and Companies Registry, until 31 January 2102, unless the term is extended or the Company is wound up earlier.

The Company's corporate purpose (article 3 of its Articles of Association), directly or indirectly, in any country is:

- to carry out all operations directly or indirectly relating to research, production, processing, distribution and marketing of all chemical and plastic products and their derivatives, by-products thereof and of all parachemical products;
- to acquire, hold and manage all securities, negotiable or otherwise, in French and foreign companies, through newly-created companies, contributions, limited partnerships, or by subscribing for or purchasing securities or corporate rights, or through mergers, combinations, joint venture companies, or by obtaining the use of or providing any property or rights under a lease or lease management agreement or otherwise; and
- more generally, to enter into all financial, commercial, industrial, real or personal property transactions that may be directly or indirectly related to any of the objects referred to above or to any other similar or connected objects, and designed to promote the Company's purpose, expansion or development.

The Company's Articles of Association, minutes of annual general meetings, statutory auditors' reports and other Company documents may be consulted at the Group's Legal department at the registered office located at 420, rue d'Estienne d'Orves, 92700 Colombes, France. Furthermore, historical financial information, regulated information, reference documents, annual and sustainable development reports and others are available on the Company's website: www.arkema.com.

5.1.2 Subsidiaries and shareholdings of the Company

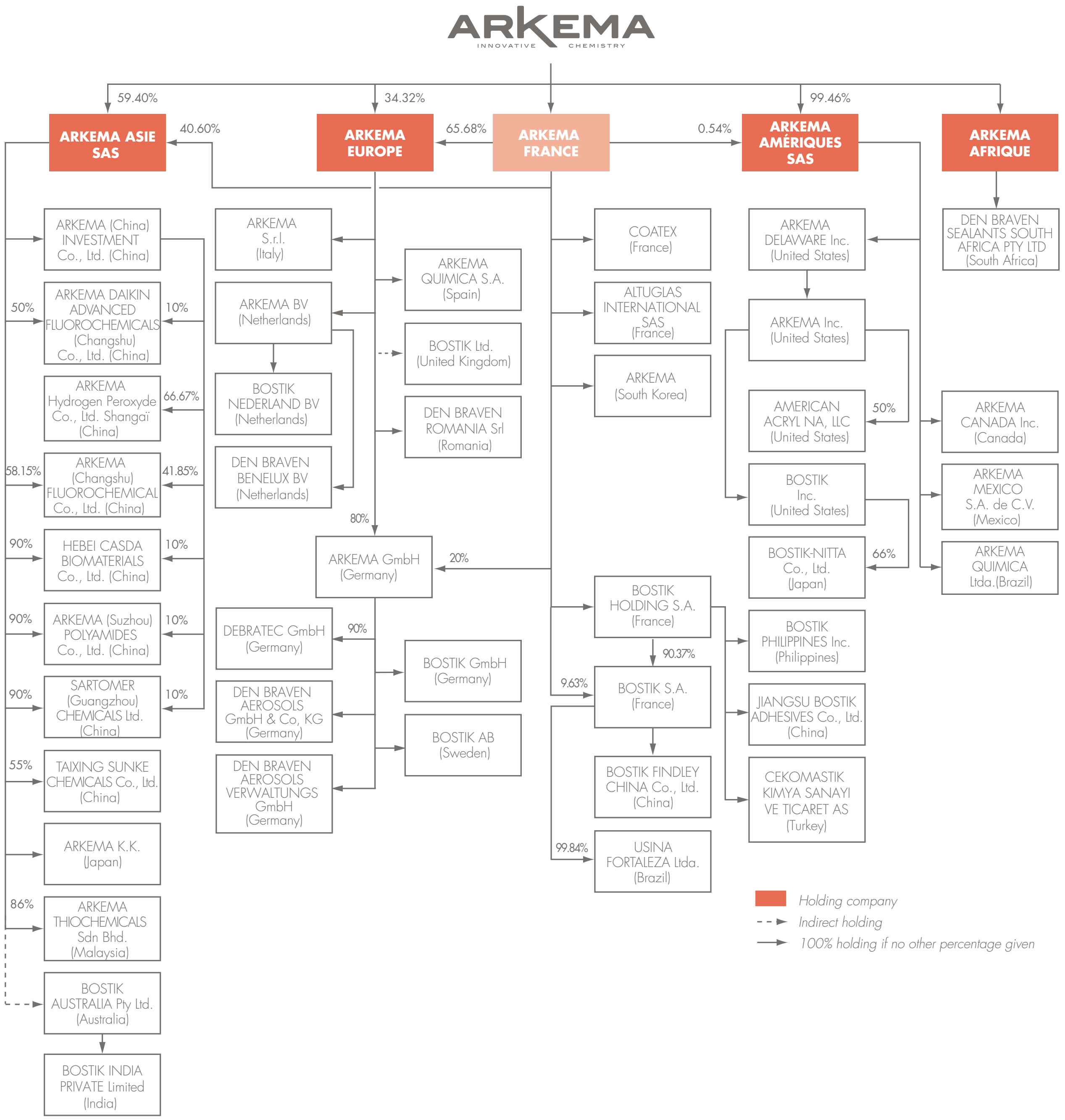
The Company is the Group's ultimate parent company. It is also the head of the French tax group put in place between companies subject to French corporation tax.

The Company is a holding company that does not have its own operational or industrial activity.

The Company indirectly holds – *via* French sub-holding companies, including Arkema France – all the Group's French and foreign subsidiaries, which are grouped by region (France, America, Africa, Asia and Europe).

Arkema France is both a holding and an operating company and holds in particular all of the Group's French operational subsidiaries.

The Company's main direct and indirect subsidiaries at the date of this document are shown in the following simplified organizational chart:



A comprehensive list of all of the Group's consolidated subsidiaries and their geographical location is given in the notes to the consolidated financial statements in section 4.3.3 of this document.

Detailed information on the Company's main subsidiaries is also given in section 4.4.2 of this document.

Information on the Group's structure is given in sections 1.1 and 1.2 of this document. The results of each division are presented in chapter 4 of this document.

5.1.3 Related-party transactions

Arkema, the Group's ultimate parent company, is a holding company and provides administrative services to Group companies. The related service agreements are not material and are entered into under ordinary conditions comparable to those applicable to similar transactions with third parties.

Some of the Group's non-consolidated companies sell products or provide services to consolidated Group companies. In addition, certain consolidated Group companies sell products or provide services to certain non-consolidated companies.

These transactions, taken separately or together, are not material. They are carried out under ordinary conditions comparable to those applicable to similar transactions with third parties.

A description of related-party transactions is provided in note 26 to the consolidated financial statements at 31 December 2017 in section 4.3.3 of this document and in the statutory auditors' special report on related-party agreements and commitments, which is included in chapter 6 of this document.

5.2 SHARE CAPITAL

5.2.1 Amount of share capital

At 31 December 2017, the Company's share capital was €758,705,060 divided into 75,870,506 fully paid-up shares of the same class, with a par value of €10 per share. At that date, 33,225 shares were held in treasury. At 1 January 2017, the Company's share capital was made up of 75,717,947 shares.

In 2017, the number of shares increased by 152,559 resulting from the exercise of the same number of stock options.

5.2.2 History of the Company's share capital over the past three years

Date	Amount of capital	Total number of shares	Nature of operation	Number of shares issued	Capital increase	Share premium
30 June 2015	€743,607,230	74,360,723	Exercise of stock options	107,140	€1,071,400	€3,103,652.13
			Payment in shares of the 2014 dividend	1,430,888	€14,308,880	€73,891,056.32
31 December 2015	€744,721,010	74,472,101	Exercise of stock options	111,378	€1,113,780	€2,414,639.94
26 April 2016	€754,701,730	75,470,173	Capital increase reserved for employees	998,072	€9,980,720	€32,097,995.52
30 June 2016	€755,811,250	75,581,125	Exercise of stock options	110,952	€1,109,520	€3,115,639.70
31 December 2016	€757,179,470	75,717,947	Exercise of stock options	136,822	€1,368,220	€4,483,416.76
30 June 2017	€757,738,650	75,773,865	Exercise of stock options	55,918	€559,180	€1,329,706.94
31 December 2017	€758,705,060	75,870,506	Exercise of stock options	96,641	€966,410	€3,500,423.61

5.2.3 Pledges, guarantees, securities

At 31 December 2017, existing pledges on the Company's direct registered shares and administered registered shares respectively concerned 347 shares held by 4 shareholders, and 38,907 shares held by 5 shareholders, representing 0.05% of the share capital.

The Company has no knowledge of pledges concerning other shares of its share capital.

The shares held by the Company in its subsidiaries have not been pledged.

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5.2.4 Treasury shares

At 31 December 2017, the Company directly held 33,225 treasury shares.

This section includes (i) a review of the share buyback program authorized in 2017, and (ii) the information that must be given in the description of the share buyback program in accordance with article 241-2 of the general regulations of the French financial markets authority (*Autorité des marchés financiers* – AMF) as well as information required under article L. 225-211 of the French Commercial Code.

REVIEW OF SHARE BUYBACK PROGRAM AUTHORIZED ON 23 MAY 2017 (2017 SHARE BUYBACK PROGRAM)

The annual general meeting of 23 May 2017 authorized the Board of Directors to implement a share buyback program capped at 10% of the share capital and subject to a maximum purchase price per share of €125. This authorization, which supersedes the unused portion of the authorization granted by the annual general meeting of 7 June 2016, was granted for an 18-month period from the annual general meeting of 23 May 2017, *i.e.*, until 22 November 2018. It is therefore still in force at the date of this document.

The maximum amount of funds to be allocated to the implementation of the share buyback program may not exceed €125 million.

At its meeting of 27 February 2017, the Board of Directors decided to implement the share buyback program subject to the authorization of the annual general meeting of 23 May 2017.

TRANSACTIONS CARRIED OUT AS PART OF THE 2017 SHARE BUYBACK PROGRAM

At 23 May 2017, when the annual general meeting approved the 2017 share buyback program, the Company held, directly or indirectly, 62,244 treasury shares.

The following tables give a summary of the transactions carried out as part of the 2017 share buyback program:

Summary statement at 31 January 2018	
Number of shares comprising the Company's share capital at 23 May 2017	75,741,589
Treasury shares held directly or indirectly at 23 May 2017	62,244
Number of shares purchased between 23 May 2017 and 31 January 2018	180,000
Weighted average gross price of shares purchased *(in euros)*	93.15
Number of treasury shares at 31 January 2018	33,225
Number of shares canceled in the last 24 months	None
Book value of portfolio *(in euros)*	2,290,257
Market value of portfolio *(in euros)* based on closing price at 31 January 2018, *i.e.* €102.90	3,418,853

Summary of transactions carried out through the program between 23 May 2017 and 31 January 2018	**Aggregate gross movements**		**Open positions at 31 January 2018**	
	Purchases	**Sales/transfers**	**Open buying positions**	**Open selling positions**
Number of shares	180,000	209,019	-	-
Average price of transaction *(in euros)*	93.15	-	-	-
Amounts *(in euros)*	16,767,827	-	-	-

BREAKDOWN OF THE TREASURY SHARES BY OBJECTIVE

At 31 January 2018, the Company's 33,225 treasury shares were allocated for the purpose of covering the Company's plans to grant free shares to its employees and executive officers and those of its affiliated companies.

SHARE BUYBACK PROGRAM SUBMITTED TO THE ANNUAL GENERAL MEETING OF 18 MAY 2018 (2018 SHARE BUYBACK PROGRAM)

The Board of Directors would like the Company to continue to have a share buyback program.

To this end, the Board of Directors proposes to the annual general meeting of 18 May 2018 to cancel the 11th resolution voted by the annual general meeting of 23 May 2017, for its unused portion, and to authorize the implementation of a new share buyback program in accordance with the provisions of European Council regulation no. 2273/2003 dated 22 December 2003 pertaining to the terms of application of European directive no. 2003/6/EC dated 28 January 2003.

In accordance with article 241-2 of the AMF's general regulations, the following sections give a description of the share buyback program subject to the authorization of the Company's next annual general meeting.

Objectives of the 2018 share buyback program

As part of the 2018 share buyback program that is submitted to the annual general meeting of 18 May 2018, the Company is considering repurchasing its own shares for any purpose permitted by law either now or in the future, and notably for the following purposes (unchanged compared to the previous program):

- implementing market practices allowed by the AMF such as (i) purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment as part of any potential external growth operations, it being specified that shares acquired in view of subsequently tendering them as consideration of mergers, spin-offs or contributions may not exceed 5% of the share capital at the time of the acquisition, or (ii) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as (iii) any market practice subsequently permitted by the AMF or by law;

- putting in place and complying with obligations notably delivering shares upon the exercise of rights attached to negotiable securities giving access by any means, whether immediately or in the future, to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations (or those of one of its subsidiaries) related to such negotiable securities, under the conditions provided for by the market authorities and at the times that the Board of Directors or its delegated representative deems appropriate;
- covering stock option plans granted to employees or executive officers of the Company or its Group;
- granting free shares in the Company to the employees or executive officers of the Company or its Group, notably under the conditions provided for in articles L. 225-197-1 *et seq.* of the French Commercial Code;
- offering employees the opportunity to acquire shares, whether directly or via a company savings plan *(Plan d'Épargne Entreprise)*, under the terms provided for by law, and notably articles L. 3332-1 *et seq.* of the French Labor Code *(Code du travail)*; and
- canceling all or part of the purchased shares in order to reduce the Company's share capital.

Purchased shares may be canceled under the 12th resolution approved by the annual general meeting of 23 May 2017 which will remain in force until 22 May 2019.

Maximum portion of share capital to be repurchased and maximum number of shares that may be acquired under the 2018 share buyback program

The maximum portion of the share capital that can be repurchased under the 2018 share buyback program shall be 10% of the total number of shares making up the Company's share capital (*i.e.*, 75,870,506 shares at 31 January 2018).

In accordance with article L. 225-210 of the French Commercial Code, the number of shares held by the Company at any given date may not be greater than 10% of the shares constituting the Company's share capital on that date.

The securities that the Company is considering acquiring are shares.

Maximum unit purchase price authorized

The maximum purchase price would be €135 per share, it being specified that this purchase price may be adjusted to account for the impact on the share price resulting from transactions such as a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or to the issuance and distribution of free shares as well as a stock split or reverse stock split or any other transaction affecting equity.

The maximum amount of cash allocated to the 2018 share buyback program would be €135 million.

Terms and conditions for the 2018 share buyback program

The shares may be purchased or transferred at any time, except during a takeover bid for the Company's shares, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction concerned, by any and all means, including on the market or over the counter, by way of block trades or by way of derivatives traded on a regulated or over-the-counter market, under the conditions permitted by the market authorities and at the times that the Board of Directors or its delegated representative deems appropriate.

Duration of the 2018 share buyback program

In accordance with the resolution to be submitted for the approval of the annual general meeting of 18 May 2018, the 2018 share buyback program would be authorized for a period of 18 months from the date of its approval, *i.e.*, until 17 November 2019.

5.2.5 Summary of authorizations and their application

At 31 December 2017, there were no securities, other than the Company's shares, giving access to the Company's share capital.

The following table gives a summary of the outstanding delegations of authority and authorizations granted by the annual general meeting to the Board of Directors, in particular to increase the share capital, as well as their use.

Type of authorization	Description	Date of annual general meeting	Duration of authorization	Maximum authorized nominal amount	Use at 31 December 2017 *(unless otherwise specified)*
Capital increase	Issue shares in the Company and/or securities giving access to shares in the Company or one of its subsidiaries, **with** preferential subscription rights*	7 June 2016	26 months	€372 million €750 million (debt securities)	None
Capital increase	Issue shares in the Company and/or securities giving access to shares in the Company or one of its subsidiaries, by means of a public offering, **without** preferential subscription rights*	7 June 2016	26 months	10% of the Company's share capital at 7 June 2016 €750 million (debt securities)	None
Capital increase	Increase the Company's share capital, **without** preferential subscription rights, through the issue of shares and/or securities giving access to shares in the Company, via an offering referred to in article L. 411-2 II of the French Monetary and Financial Code (*Code monétaire et financier*) (A)*	7 June 2016	26 months	10% of the Company's share capital at 7 June 2016 €750 million (debt securities)	None
Capital increase	In the event of the issue of shares **without** preferential subscription rights, set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period (B)*	7 June 2016	26 months	10% of the Company's share capital at 7 June 2016	None
Capital increase	Issue shares in the Company, within the limit of 10% of the share capital, as compensation for contributions in kind (C)*	7 June 2016	26 months	10% of the Company's share capital at 7 June 2016	None
Capital increase	In the event of a capital increase with or without preferential subscription rights, increase the number of shares to be issued*	7 June 2016	26 months	15% of the initial issue subject to the limit stated in the resolution authorizing the issue	None
Capital increase	Overall limit of authorizations to increase the Company's share capital immediately and/or in the future*	7 June 2016	26 months	€372 million and 10% of the Company's share capital at 7 June 2016 for authorizations (A) + (B) + (C)	None
Capital increase	Carry out share issues reserved for members of a company savings plan*	7 June 2016	26 months	€12 million	See section 5.2.7 of this document
Share buyback	Carry out a share buyback program*	23 May 2017	18 months	€125 per share €125 million (up to 10% of the share capital at any time)	Use at 31 January 2018: see section 5.2.4 of this document
Performance shares	Grant free shares in the Company subject to performance conditions	7 June 2016	38 months	1,450,000 shares (less than 2% of the share capital at 7 June 2016)	Grant of 357,915 shares** (9 November 2016) Grant of 360,100 shares*** (8 November 2017)
Capital reduction	Reduce the share capital by canceling shares	23 May 2017	24 months	10% of the share capital	None

* *This new authorization is detailed in chapter 6 of this document and will be submitted to the vote of the annual general meeting of 18 May 2018.*
** *This number could be increased to 391,805 in case of outperformance.*
*** *This number could be increased to 396,110 in case of outperformance.*

The Company's share capital at 31 December 2017, which was €758,705,060, divided into 75,870,506 shares, could be increased by 146,333 shares resulting from the exercise of 146,333 stock options, representing a potential maximum dilution of less than 1%.

There are no other securities giving access to the Company's capital either immediately or in the future (see section 5.2.6 of this document for a description of these options).

5.2.6 Stock options and performance share plans

In order to retain executives and certain employees and to involve them more closely in the Group's future growth as well as its stock market performance, the Board of Directors put in place stock option plans and free performance share plans, subject to performance conditions.

In accordance with the applicable stock-based compensation policy, the Board of Directors ceased to grant stock subscription and purchase options in 2013.

Furthermore, since 2007, as the free performance share plans in place are covered by the buyback of shares as part of the Company's share buyback program, these plans do not result in any potential dilution for shareholders.

Additional information on the stock option and performance share plans put in place by the Group is given in section 3.5 of this document as well as in note 27 to the consolidated financial statements for the year ended 31 December 2017 set out in section 4.3.3 of this document.

5.2.7 Share capital increase reserved for employees

The Board of Directors regularly reaffirms its intention to pursue a dynamic employee share ownership policy by regularly offering Group employees the opportunity to purchase Arkema shares with the following preferential terms: 20% discount, with a maximum subscription of 1,000 shares and the allocation of free shares to employees in countries outside France participating in the operation in order to make the offer more attractive.

Consequently, in accordance with the delegation of authority granted by the annual general meeting of 7 June 2016, by delegation of the Board of Directors at 8 November 2017, the Chairman and Chief Executive Officer decided on 6 March 2018 to carry out a share capital increase reserved for employees. The share capital increase took place in 31 countries in which the Group is present, from 9 to 22 March 2018 inclusive.

The subscription conditions were as follows:

- subscription price of €81.97 corresponding to the average opening price quoted in the 20 trading days preceding 6 March 2018, to which a 20% discount was applied;
- for employees of Group companies outside France, allocation of one free share for every four subscribed, up to a maximum of 25 free shares, with a vesting period of four years, with no holding period required, except in Italy and Spain where the shares will vest after three years, followed by a three-year holding period;
- for employees of French companies, possibility of subscribing to the capital increase using sums from the incentive scheme or the profit-sharing scheme, supplemented, as the case may be, by the employer; and
- possibility of spreading payment for the shares over 24 months.

5.3 SHARE OWNERSHIP

5.3.1 Breakdown of share ownership and voting rights at 31 December 2017

The breakdown of the share capital was established on the basis of a total number of 75,870,506 shares at 31 December 2017, carrying 85,632,241 voting rights (including double voting rights and after deduction of treasury shares), the threshold disclosures made to the AMF or the Company, and an analysis carried out by the Company based on identifiable bearer shares (*Titres au Porteur Identifiable* – TPI). TPI procedures were carried out at the end of 2017, 2016 and 2015.

To the best of the Company's knowledge, the breakdown of Arkema's share ownership and voting rights at 31 December 2017 was as follows:

	% of share capital	% of voting rights	% of theoretical voting rights*
Main shareholders owning at least 5% of the share capital and/or voting rights:			
Fonds Stratégique de Participations [(1)]	6.3	11.1	11.1
BlackRock Inc.	5.9	5.2	5.2
Employee share ownership** [(2)]	5.1	8.6	8.6
Treasury shares	0.0	0.0	0.0
Public	82.7	75.1	75.1
TOTAL	**100**	**100**	**100**

* *Pursuant to article 223-11 of the AMF's general regulations, the number of theoretical voting rights is calculated on the basis of all shares.*

** *See details presented in section 5.3.4 of this chapter.*

(1) *Fonds Stratégique de Participations (FSP) is a member of the Board of Directors and is represented by Isabelle Boccon-Gibod (see section 3.2.1.2 of this document).*

(2) *To the Company's knowledge, the Arkema Actionnariat France and Arkema Actionnariat International company mutual funds (Fonds Commun de Placement d'Entreprise – FCPE) held 5.1% of the Company's share capital at 31 December 2017, representing 8.9% of the Company's voting rights. These funds include the shareholdings of employees of the Arkema Group (see section 5.3.4 of this chapter), Total and Kem One (a business divested in 2012).*

To the Company's knowledge, based on its registers and except for the pledges described in section 5.2.3 of this chapter, no shares of the Company have been pledged nor used as a guarantee or a surety.

The Company has also put in place an American Depositary Receipt (ADR) program in the United States. In this regard, it entered into a deposit agreement with Bank of New York Mellon on 18 May 2006. At 31 December 2017, 1,216,143 shares were held by Bank of New York Mellon on behalf of ADR bearers.

5.3.2 Control of the Company

At the date of this document:

- the Company is not controlled, either directly or indirectly, by any single shareholder; and
- to the Company's knowledge, there is no agreement nor pact between shareholders, the implementation of which would result in the takeover of the Company.

5.3.3 Clauses likely to have an effect on the control of the Company

No provision of the Articles of Association can delay, defer or prevent a change of control over the Company. However, there are provisions pertaining to double voting rights and limitations on voting rights in articles 17.3 and 17.4 of the Articles of Association, which are presented in section 5.5.2 of this document.

5.3.4 Employee share ownership

According to the definition of employee share ownership under the terms of article L. 225-102 of the French Commercial Code, the number of Arkema shares held by employees at 31 December 2017 was 3,887,099 representing 5.1% of the share capital and, taking account of double voting rights, 8.6% of the voting rights. This may be broken down as follows:

Shares held by Group employees within the Arkema Actionnariat France FCPE	2,469,592
Shares held by Group employees within the Arkema Actionnariat International FCPE	286,095
Direct registered shares held within a group savings plan (*Plan d'Épargne Groupe*)	265,696
Shares arising from the exercise of stock options and held as direct registered shares within a group savings plan	218,834
Free shares	646,882
TOTAL EMPLOYEE SHARE OWNERSHIP	**3,887,099**

5.3.5 Legal threshold disclosures

The following legal threshold disclosures were made to the AMF in 2017 and up to the date of this document:

Company	Date threshold crossed	Threshold crossed
BlackRock Inc.	23 February 2017	dropped below the 5% voting rights threshold
BlackRock Inc.	24 February 2017	exceeded the 5% voting rights threshold
Norges Bank	28 March 2017	dropped below the 5% voting rights threshold
Norges Bank	4 April 2017	exceeded the 5% voting rights threshold
Norges Bank	7 April 2017	dropped below the 5% voting rights threshold
Norges Bank	14 April 2017	exceeded the 5% voting rights threshold
Norges Bank	17 April 2017	dropped below the 5% voting rights threshold
Norges Bank	25 April 2017	exceeded the 5% voting rights threshold
Norges Bank	27 April 2017	dropped below the 5% voting rights threshold
Norges Bank	2 May 2017	exceeded the 5% voting rights threshold
Norges Bank	3 May 2017	dropped below the 5% voting rights threshold
Norges Bank	8 May 2017	dropped below the 5% share capital threshold
BlackRock Inc.	23 February 2018	exceeded the 10% share capital threshold
BlackRock Inc.	27 February 2018	dropped below the 10% share capital threshold
BlackRock Inc. (1)	2 March 2018	exceeded the 10% share capital threshold
BlackRock Inc.	5 March 2018	dropped below the 10% share capital threshold

(1) At the time, BlackRock made the following statement: "BlackRock Inc. exceeded the 10% threshold of Arkema's share capital in the ordinary course of its business as a portfolio management company, which it carries out without intending to implement any particular strategy with respect to the company or to exercise, for this purpose, specific influence over the latter. BlackRock Inc. is not acting in concert with a third party and has no intention to take over the Company or request that it, or any other person or persons, be appointed as a director, Executive Board member or Supervisory Board member of the Company."

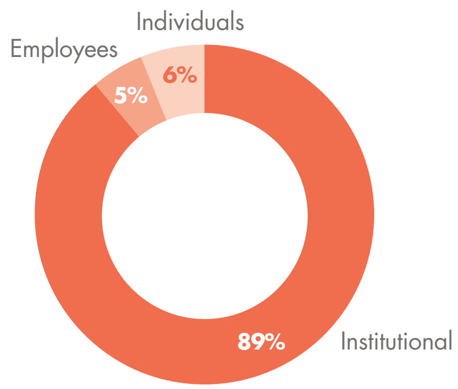
5.3.6 Breakdown of share ownership and voting rights

To the best of the Company's knowledge, Arkema's estimated share ownership at 31 December 2017, 2016 and 2015 was as follows [1]:

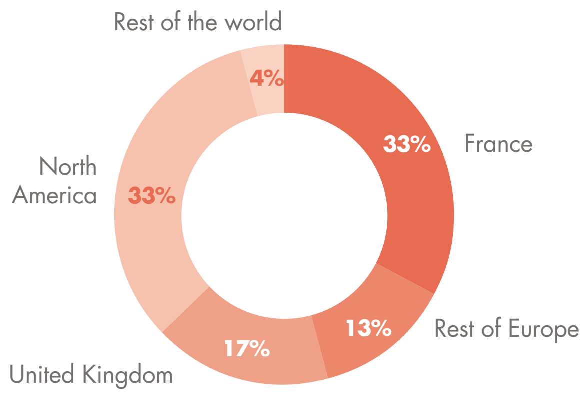
	31 December 2017		31 December 2016		31 December 2015	
	% of share capital	% of voting rights	% of share capital	% of voting rights	% of share capital	% of voting rights
Fonds Stratégique de Participations	6.3	11.1	6.3	11.1	6.4	10.5
BlackRock Inc.	5.9	5.2	5.6	5.0	N/A	N/A
Norges Bank	N/A	N/A	5.7	5.0	5.0	4.5
Other institutional shareholders	76.5	67.8	70.8	62.7	75.7	67.9
Individual shareholders	6.2	7.3	6.1	7.2	7.9	9.0
Employee share ownership	5.1	8.6	5.4	9.0	5.0	8.1
Treasury shares	0	0	0.1	0	0	0
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**
Number of shares/voting rights	75,870,506	85,632,241	75,717,947	85,516,494	74,472,101	83,010,787

(1) Only shareholdings in excess of 5% of the share capital threshold are shown in the table above.

BREAKDOWN OF SHARE OWNERSHIP BY SHAREHOLDER TYPE (AT 31 DECEMBER 2017)



BREAKDOWN OF SHARE OWNERSHIP BY REGION (AT 31 DECEMBER 2017)



5.4 STOCK MARKET

5.4.1 Stock market information

The Arkema share is listed on Euronext Paris, compartment A. It is eligible for the Deferred Settlement Service (*Système de Règlement Différé* – SRD) as well as the Personal Equity Savings Plan *(Plan d'Épargne en Actions)*.

An American Depositary Receipt (ADR) program has been in place in the United States since 18 May 2006. Each ADR represents one American Depositary Share (ADS), and each ADS in turn represents one Arkema share.

CODES

ISIN	FR0010313833
Ticker	AKE
Reuters	AKE.PA
Bloomberg	AKE FP

INDEXES

The Arkema share is included in the following indexes:

- CAC Next 20;
- CAC Large 60;
- SBF 120;
- Euro Stoxx Chemicals; and
- MSCI.

ARKEMA SHARE PERFORMANCE

	2017	2016	2015
Market capitalization at year-end *(in billions of euros)*	7.7	7.0	4.8
Performance since 1 January (*situation at 31 December*)	+9.3%	+43.9%	+17.3%
Last closing price of the year *(in euros)*	101.55	92.94	64.59
Average of last 30 closing prices *(in euros)*	103.12	91.75	65.27
Highest price of the year *(in euros)*	110.60	95.28	75.75
Lowest price of the year *(in euros)*	87.69	48.17	50.43

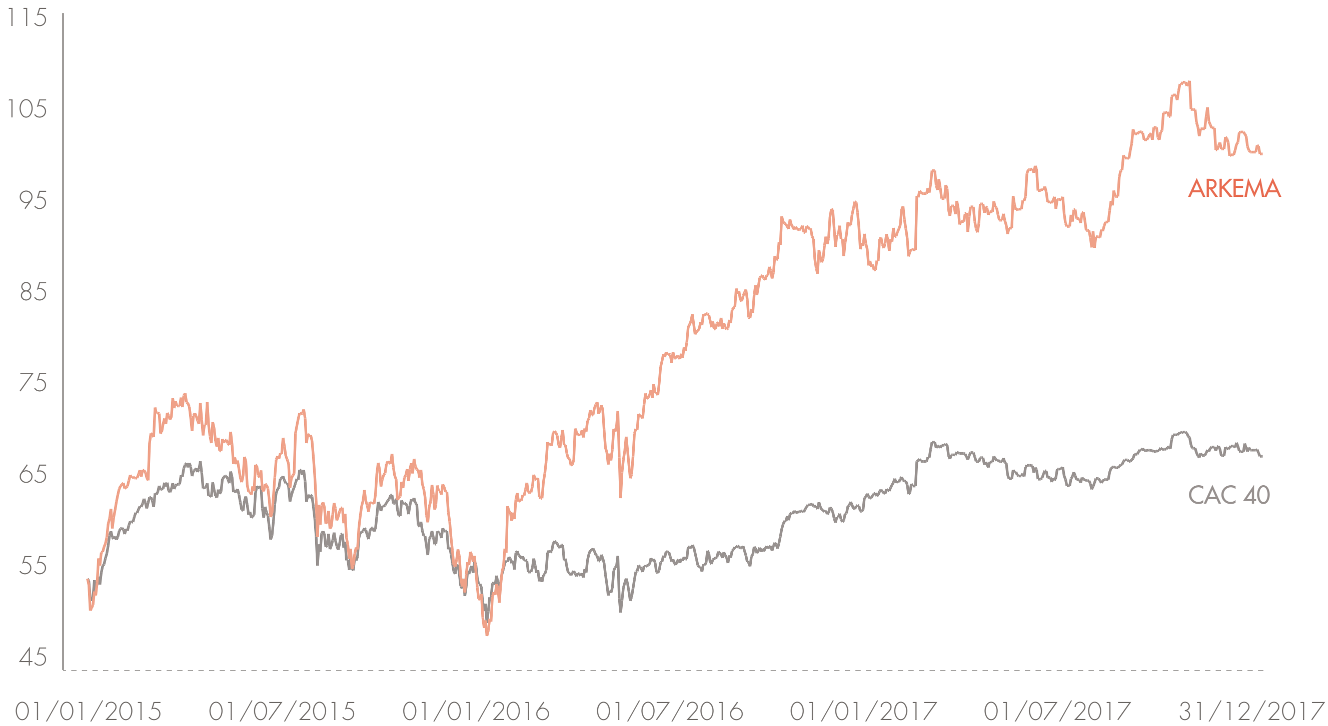
ARKEMA SHARE PRICE CHANGES SINCE 1 JANUARY 2017

Month	Number of securities traded *(Euronext volumes)* (1)	Trading volume on Euronext *(in millions of euros)* (1)	Highest price *(in euros)*	Lowest price *(in euros)*
January 2017	4,554,758	418.21	95.62	88.00
February 2017	4,626,521	431.72	97.24	88.90
March 2017	5,842,131	531.52	93.46	87.69
April 2017	4,435,568	417.88	97.91	90.22
May 2017	5,210,806	502.92	99.98	93.02
June 2017	4,729,753	447.52	96.88	92.04
July 2017	4,621,905	450.88	101.65	94.28

Month	Number of securities traded *(Euronext volumes)* [1]	Trading volume on Euronext *(in millions of euros)* [1]	Highest price *(in euros)*	Lowest price *(in euros)*
August 2017	5,719,010	538.51	99.06	89.72
September 2017	4,589,502	449.39	104.50	91.07
October 2017	3,936,530	413.02	108.85	102.80
November 2017	5,110,209	539.71	110.60	101.55
December 2017	3,619,994	371.38	104.95	100.55
January 2018	5,744,061	598.76	108.10	100.10
February 2018	6,339,964	648.33	109.80	94.82

(1) Source: Euronext monthly statistics.

ARKEMA SHARE PRICE CHANGES SINCE 1 JANUARY 2015



5.4.2 Financial communication

The Group regularly provides information on its activities, results and outlook to its shareholders, investors and analysts, and to the financial community at large. Group press releases, financial reports and presentations, and minutes of annual general meetings are available in the "Investor Relations" section on the Group's website (www.finance.arkema.com). Every year, the Group files a reference document with the AMF. This document is available on the AMF website (www.amf-france.org) and on the Group's website (www.finance.arkema.com). A French version of this reference document is also available on the Group's website.

5.4.3 Relations with institutional investors and financial analysts

The Group is committed to maintaining an active and permanent dialogue with institutional investors and financial analysts, in particular through roadshows and conferences. Representatives from the Group's executive management, primarily the Chairman and Chief Executive Officer and the Chief Financial Officer, regularly meet with portfolio managers and financial analysts in the main financial hubs in Europe, North America and, since 2016, Asia. The Investor Relations team also regularly meets with the financial community. The purpose of these various meetings is to inform the market of the Group's results and main operations and improve investors and analysts' understanding of its activities, strategy and outlook.

On the publication of its quarterly, half-yearly and annual results, a conference call with the financial community is hosted by the Chairman and Chief Executive Officer or by the Chief Financial Officer.

In 2017, the Group held some 430 meetings and took part in a number of industry conferences, notably in Paris and London. The Group also organized a Capital Markets Day in France on 10 and 11 July 2017, which was attended by around 40 participants. On 10 July, attendees visited Bostik's R&D center in Venette and were given a presentation of the Group's latest innovations in adhesives and sealants. On 11 July, the Chairman and Chief Executive Officer gave a presentation of the changes to the Group's profile, its strategy and its long-term ambition. Several members of the Executive Committee also gave presentations throughout the day on the Group's strategy and ambition in two major pillars of its future expansion – advanced materials and adhesives – and provided details about projects that were already ongoing or that were announced at the event.

5.4.4 Relations with individual shareholders

The Group aims to inform its individual shareholders about its strategy, results and activities, with an emphasis on open dialogue, discussion and meetings.

Arkema meets with its individual shareholders on a regular basis, in particular at the annual general meeting which is a special opportunity for information and dialogue about the Group's strategy and development. In 2017, Arkema also participated in the Actionaria investor fair in Paris.

Additionally, through its Shareholders' Club, the Group organizes various activities throughout the year that give its members the opportunity to discover the world of chemistry, and the innovations and applications of chemical products in everyday life.

Presentations, interviews, reports and shareholder newsletters are available in the "Individual shareholders" section of the Group's website (www.finance.arkema.com).

5.4.5 Investor relations contacts

Institutional investor relations department

Phone:

+33 (0)1 49 00 74 63

Email address: investor-relations@arkema.com

Individual shareholder relations department

Phone:

0 800 01 00 01 (free to call within France)

+33 (0) 1 71 29 81 70 (outside France)

Email address: actionnaires-individuels@arkema.com

5.4.6 Registered shares

Arkema shares can be registered in the name of the holders. In this case, shareholders are identified by Arkema in its capacity as issuer, or by its agent BNP Paribas Securities Services, which is responsible for the shareholders' register.

Advantages of registered shares include:

- double voting rights if shares are held for two years continuously (see section 5.5.2 of this chapter); and
- the possibility of directly receiving the notice of the annual general meeting.

Contact details for registered shares

BNP Paribas Securities Services

CTS – Services aux Émetteurs
Les Grands Moulins de Pantin
9, rue du Débarcadère
93761 Pantin Cedex – France

Phone:

- 0 800 115 153 (within France)
- +33 (0)1 55 77 41 17 (outside France)

Email address:

paris_bp2s_arkema_actionnaires@bnpparibas.com

5.4.7 Dividend policy

Dividends are a key component of the Group's shareholder return policy. Therefore, the Company aims to pay a stable to growing dividend each year.

Taking into account this policy and the Group's performance in 2017, the Board of Directors decided, at its meeting on 21 February 2018, after closing the financial statements at 31 December 2017, to propose to the annual general meeting of 18 May 2018 the payment of a cash-only dividend of €2.30 per share, up 12% compared to 2016.

Shares will be traded ex-dividend on 25 May 2018 and the dividend will be paid as from 29 May 2018.

	2017 (1)	2016	2015	2014	2013
Dividend per share *(in euros)* (2)	2.30	2.05	1.90	1.85	1.85
Payout ratio (dividend per share/adjusted net income per share)	29%	37%	45%	51%	32%

(1) In 2017, dividend proposed to the annual general meeting of 18 May 2018.
(2) Dividend eligible for the 40% deduction provided for in article 158.3-2° of the French Tax Code (Code général des impôts).

Since 2007, the first year during which the Group distributed a dividend, the dividend has increased by an average of 12% a year.

5.5 EXTRACT FROM THE ARTICLES OF ASSOCIATION

The following provisions are included in the Company's Articles of Association as of the date of this document.

5.5.1 Annual general meetings (articles 16, 17.1 and 17.2 of the Articles of Association)

CONVENING NOTICE – PLACE OF MEETING – ADMISSION

Annual general meetings are called under the conditions provided for by applicable laws and regulations.

Meetings are held at the registered office or at any other place indicated in the notice of meeting.

In compliance with current regulatory requirements, all shareholders have the right to attend annual general meetings and to participate in the deliberations or to be represented, regardless of the number of shares they own, provided that it can be proven in accordance with legal and regulatory provisions that the shares have been registered in his or her name or in that of an intermediary duly authorized on their behalf under the terms of paragraph seven of article L. 228-1 of the French Commercial Code, within the regulatory period, either in the registered share accounts held by the Company or in the bearer securities accounts held by an authorized intermediary.

The registration or accounting entry of the shares in bearer securities accounts held by the authorized intermediary shall be evidenced by a shareholding certificate issued by the intermediary holding the account under applicable legal and regulatory conditions.

EXERCISE OF VOTING RIGHTS

As from the time the meeting is called, any shareholder may request from the Company in writing a paper absentee ballot, or, if the Board of Directors provides for this option in both the announcement and notice of meeting, an electronic absentee ballot. Such requests must be delivered to or received at the registered office of the Company no later than six days before the date of the meeting. The Board of Directors has the power to reduce or waive this period.

Paper absentee ballots must be delivered to or received by the Company at least three days before the date of the annual general meeting. Electronic absentee ballots may be delivered to or received by the Company until 3:00 p.m. (CET) on the eve of the annual general meeting. The Board of Directors or Chairman, if so authorized by delegation, has the power to reduce or waive this period.

REPRESENTATION

A shareholder may be represented at annual general meetings by another shareholder, his or her spouse, civil union partner, or by any other person or legal entity under the terms provided for in articles L. 225-106 *et seq.* of the French Commercial Code.

Shareholders that are legal entities attend meetings through their legal representatives or any proxy appointed for this purpose.

Any member of the meeting who wishes to be represented by proxy must send a proxy form to the Company, either on paper, or, if the Board of Directors provides for this option in both the announcement and convening notice, in electronic format, at least three days before the meeting. However, the Board of Directors, or by delegation, the Chairman, has the power to reduce or waive such notice periods and to accept proxy forms that do not fall within this limit.

Proxies in electronic format may be filed or received by the Company no later than 3:00 p.m. (CET) on the eve of the annual general meeting. The Board of Directors, or by delegation, the Chairman, has the power to reduce or waive this period.

USE OF TELECOMMUNICATIONS

The Board of Directors has the power to decide that shareholders who take part in the annual general meeting by video conference or other means of telecommunication that enable them to be identified and where the nature and conditions of such means of participation are determined by the French Commercial Code, shall be deemed present for the purposes of calculating the quorum and majority.

CHAIRMAN OF THE ANNUAL GENERAL MEETING

Annual general meetings are chaired by the Chairman of the Board of Directors or, in his or her absence, by a director who is appointed specifically for this purpose by the Board of Directors. Failing this, the meeting elects its own Chairman.

QUORUM AND MAJORITY

Annual general meetings, whether they are ordinary, extraordinary, combined or special, are duly constituted when they meet the quorum and majority conditions provided for by applicable laws and regulations governing such meetings, and exercise the powers ascribed to them by the law.

5.5.2 Voting rights (articles 17.3 and 17.4 of the Articles of Association)

VOTING RIGHTS, DOUBLE VOTING RIGHTS (ARTICLE 17.3 OF THE ARTICLES OF ASSOCIATION)

Subject to the provisions set forth below, each member of the meeting is entitled to as many voting rights and votes as the number of shares he owns or represents, providing that all payments due for such shares have been met.

However, double voting rights are conferred on all fully paid up shares in registered form that have been registered in the name of the same shareholder for at least two years, under the conditions applicable by law and by regulations.

Furthermore, in the event of a capital increase by capitalization of reserves, profits or share premiums, double voting rights are conferred, as of their issue, to shares in registered form allocated to shareholders on the basis of existing shares held by such shareholders and conferring such entitlement.

The merger or spin-off of the Company has no effect on double voting rights, which may be exercised within the beneficiary company or companies if the Articles of Association of such company provide for such rights.

Any share converted to a bearer share or the ownership of which is transferred loses the double voting rights gained under the three provisions above. However, transfer resulting from inheritance, the separation of assets between spouses or an *inter vivos* gift to a spouse or close relative does not result in the loss of rights acquired nor interrupt the qualifying period indicated above.

LIMITATION ON VOTING RIGHTS (ARTICLE 17.4 OF THE ARTICLES OF ASSOCIATION)

In an annual general meeting, no shareholder may, directly or through a proxy, express more than 10% of the total voting rights attached to the Company's shares, taking into account single voting rights attached to shares that he directly or indirectly holds and to the powers conferred to him. However, if such a shareholder also holds double voting rights personally or as a proxy, the 10% limit may be exceeded, taking into account only the additional voting rights resulting therefrom, and the combined voting rights expressed shall not exceed 20% of the total voting rights attached to the Company's shares.

In application of the foregoing provisions:

- the total number of voting rights attached to the Company's shares that is taken into consideration is calculated as of the date of the annual general meeting and the shareholders are notified thereof at the beginning of the annual general meeting;
- the number of voting rights held directly or indirectly means those that are attached to shares held by an individual, either personally or jointly, or by a company, group, association or foundation, and those that are attached to shares held by a company that is controlled within the meaning of article L. 233-3 of the French Commercial Code, by another company or by an individual, association, group or foundation; and
- a shareholder's proxy returned to the Company without stating the name of the proxy is subject to the foregoing limitations. However, such limitations do not apply to the Chairman of an annual general meeting who is voting by virtue of all such proxies combined.

The limitations provided in the foregoing paragraphs have no impact on the calculation of the total number of voting rights, including double voting rights, which are attached to the Company's shares and which must be taken into account when applying the legal, regulatory or statutory provisions providing for specific obligations by reference to the number of voting rights existing in the Company or the number of shares having voting rights.

The limitations set forth above shall lapse, without any need for a new resolution by an extraordinary general meeting, whenever an individual or a legal entity, acting separately or in concert with one or more individuals or legal entities, should come to hold at least two thirds of the total number of shares in the Company following a takeover bid for all of the Company's shares. The Board of Directors then recognizes that the limitations have lapsed, and carries out the related formalities to amend the Articles of Association.

5.5.3 Appropriation of earnings (article 20 of the Articles of Association)

The following sums are allocated from the Company's profits for the year, less any retained losses, in the following order:

1. at least 5% is allocated to the legal reserve fund; once the legal reserve fund amounts to one-tenth of the share capital, this allocation is no longer mandatory;
2. any amounts that the shareholders have resolved to transfer to reserves, for which they will determine the allocation or use; and
3. any amount that the annual general meeting shall decide to allocate to retained earnings.

Any remaining balance is paid out to the shareholders as dividends. The Board of Directors may pay interim dividends under the conditions provided for by applicable laws and regulations.

The annual general meeting called to approve the accounts for the financial year may grant each shareholder the option to receive all or part of the dividends or interim dividends in cash or in shares.

The annual general meeting may, at any time, on the Board of Directors' recommendation, decide to distribute all or part of the amounts contained in the reserve fund accounts either in cash or in shares in the Company.

5.5.4 Rights and obligations attached to the shares (article 9 of the Articles of Association)

In addition to the right to vote, each share gives the holder the right of ownership of a portion of the Company's assets, profits and winding-up dividends *(boni de liquidation)*, determined proportionately to the shareholding it represents.

Ownership of a share entails compliance with the Articles of Association of the Company and with all resolutions approved by the Company's shareholders at annual general meetings.

Any changes to the rights attached to the shares are subject to legal provisions.

5.5.5 Form and transfer of shares (article 7 of the Articles of Association)

Shares may be held in registered or bearer form as required by the shareholder, unless stipulated otherwise by legal or regulatory provisions.

The shares are freely negotiable. They are registered in an account and may be transferred from one account to another, in accordance with applicable laws and regulations.

5.5.6 Identification of shareholders (article 8.1 of the Articles of Association)

The Company may at any time make use of all applicable laws and regulations to identify the holders of securities that confer immediate or future voting rights in its annual general meetings.

For the purposes of identifying the holders of shares in bearer form, the Company has the right, under the conditions provided for by the applicable laws and regulations, to request at any time, at its own expense, that the central depository in charge of its securities issue account provide, as the case may be, the name or company name, nationality, year of birth or of incorporation and the address of the holders of securities giving immediate or future access to voting rights at its annual general meetings as well as the number of securities held by each and any restrictions that may apply to such securities. If such information is not received within the period of time stipulated by the applicable regulations or if the information provided by the custodian account-holder is incomplete or erroneous, the central depository may request that the President of the district court *(Président du tribunal de grande instance)* order such information to be provided under financial compulsion in a summary proceeding *(en référé)*.

The information obtained by the Company cannot be transferred thereby, even at no charge, subject to the criminal sanctions provided for by article 226-13 of the French Criminal Code *(Code pénal)*.

Under the conditions specified by applicable laws and regulations (particularly those concerning time limits), the intermediary registered on behalf of holders of securities in registered form who are not domiciled on the French territory is required to disclose the identity of the holders of such securities and of the number of securities held by each, at the request of the Company or of its representative, which may be submitted at any time.

As long as the Company deems that certain holders of securities in bearer form or in registered form whose identity has been communicated to the Company hold such shares on behalf of third parties, it has the right to request such holders to disclose the identity of the owners of these securities and the number of securities held by each such owner under the conditions indicated above. When a person who has received a request in accordance with the foregoing provision fails to provide the information thus requested within the time specified by laws and regulations, or has provided incomplete or erroneous information either with regard to his own role, the owners of the securities, or the number of securities held by each, the shares or securities giving immediate or future access to the share capital and for which that person was registered shall be disqualified for voting purposes at any annual general meeting that may be held until the date on which all such information is made accurate, and payment of the corresponding dividend shall be postponed until such date.

Moreover, in the event that a registered person should knowingly fail to comply with the above provisions, the court having jurisdiction in the territory of the Company's registered office may, at the request of the Company or of one or more shareholders holding at least 5% of the share capital, partially or completely disqualify the questionable shares from voting and potentially from receiving the dividend, for a total of no more than five years.

Furthermore, without prejudice to the disclosure requirements set forth in article 8.2 of the Articles of Association, the Company may ask any legal entity that holds shares in the Company for more than one-fortieth of the share capital or voting rights to disclose the identity of persons who directly or indirectly hold more than one-third of the share capital or of the voting rights which are liable to be exercised at annual general meetings of such legal entity.

5.5.7 Thresholds (article 8.2 of the Articles of Association)

In addition to the legal obligation to inform the Company of any shareholdings or voting rights that they may hold, any individual or legal entity acting alone or in concert that has come into possession, within the meaning of articles L. 233-9 and L. 233-10 of the French Commercial Code, either directly or indirectly, of a percentage of the share capital or voting rights equal to or greater than 1%, is required to inform the Company, by registered mail with return receipt, of the total number of shares, voting rights and securities giving future access to the Company's capital, as well as the voting rights attached thereto, whether they are held alone or in concert, directly or indirectly, within five stock market trading days starting on the date on which it crossed this threshold.

Above this 1% threshold and up to 30%, this disclosure requirement must be fulfilled under the conditions set forth above, each time the shareholder crosses a multiple of 0.5% of the share capital or voting rights.

Failure to make the threshold disclosures as set forth in the first two paragraphs above shall result in those shares that should have been disclosed being disqualified for voting purposes at annual general meetings, if such failure is acknowledged and if so requested at a meeting by one or more shareholders together holding at least 3% of the Company's share capital or voting rights.

All shareholders, whether natural persons or legal entities, must also notify the Company in the manner and within the time limits indicated in the first two paragraphs above, whenever their direct, indirect or joint holdings fall below any of the thresholds mentioned in the said paragraphs.

6

ANNUAL GENERAL MEETING

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

6.1 STATUTORY AUDITORS' SPECIAL REPORT ON RELATED-PARTY AGREEMENTS AND COMMITMENTS

This is a translation into English of a report issued in French and it is provided solely for the convenience of English-speaking users.

This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

KPMG Audit
Département de KPMG S.A.
Tour EQHO
2, avenue Gambetta
92066 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

ERNST & YOUNG Audit
Membre du réseau Ernst & Young Global Limited
Tour First
TSA 14444
92037 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

Arkema

Annual General Meeting held to approve the financial statements for the year ended 31 December 2017

Statutory auditors' report on related party agreements and commitments

To the annual general meeting of Arkema,

In our capacity as statutory auditors of your Company, we hereby present to you our report on related party agreements and commitments.

We are required to inform you, on the basis of the information provided to us, of the terms and conditions of those agreements and commitments indicated to us, or that we may have identified in the performance of our engagement, as well as the reasons justifying why they benefit the Company. We are not required to give our opinion as to whether they are beneficial or appropriate or to ascertain the existence of other agreements and commitments. It is your responsibility, in accordance with article R. 225-31 of the French Commercial Code *(Code de commerce)*, to assess the relevance of these agreements and commitments prior to their approval.

We are also required, where applicable, to inform you in accordance with article R. 225-31 of the French Commercial Code *(Code de commerce)* of the implementation, during the year ended 31 December 2017, of the agreements and commitments already approved by the annual general meeting.

We performed those procedures which we deemed necessary in compliance with professional guidance issued by the French Institute of statutory auditors *(Compagnie nationale des commissaires aux comptes)* relating to this type of engagement. These procedures consisted in verifying the consistency of the information provided to us with the relevant source documents.

AGREEMENTS AND COMMITMENTS SUBMITTED FOR APPROVAL TO THE ANNUAL GENERAL MEETING

We hereby inform you that we have not been notified of any agreements or commitments authorized during the year ended 31 December 2017 to be submitted to the annual general meeting for approval in accordance with article L. 225-38 of the French Commercial Code *(Code de commerce)*.

AGREEMENTS AND COMMITMENTS ALREADY APPROVED BY THE ANNUAL GENERAL MEETING

We hereby inform you that we have not been notified of any agreements or commitments previously approved by the annual general meeting, whose implementation continued during the year ended 31 December 2017.

In addition, we have been notified that the following agreements and commitments, which were approved by the annual general meeting in prior years, were not implemented during the year ended 31 December 2017.

With Mr Thierry Le Hénaff, the Chief Executive Officer of Arkema

In its meeting on 2 March 2016, your Board of Directors decided to renew the commitment relating to the termination of the duties of Mr Thierry Le Hénaff, Chief Executive Officer, in the event of a forced departure. In accordance with article L. 225-42-1 of the French Commercial Code *(Code de commerce)*, the granting of this indemnity was submitted for the approval of your general meeting of shareholders, held on 7 June 2016.

The Chief Executive Officer shall only benefit from a departure indemnity in the event of a forced departure, regardless of the form this departure takes, notably in the event of removal before the end of his term or non-renewal of his term as Chief Executive Officer at the end thereof, relating to a change in control or strategy. The indemnity shall not be due in the event of serious or wilful misconduct.

The amount of this indemnity shall not exceed two years' total annual gross remuneration (fixed and variable), it being specified that the basis for calculating the latter shall be the fixed remuneration for the year during which the forced departure occurs, and the average of the last two amounts of variable annual remuneration paid prior to the departure.

The methods for calculating this indemnity are specified in our special report dated 11 March 2016.

Paris-La Défense, 21 February 2018

The statutory auditors

French original signed by

KPMG Audit

François Quédiniac
Partner

Bertrand Desbarrières
Partner

ERNST & YOUNG Audit

Denis Thibon
Partner

6.2 PROPOSED AGENDA AND PROPOSED RESOLUTIONS SUBMITTED TO THE ANNUAL GENERAL MEETING

6.2.1 Proposed agenda for the annual general meeting of 18 May 2018

RESOLUTIONS SUBMITTED TO THE ORDINARY GENERAL MEETING

- Approval of the Company's financial statements for the year ended 31 December 2017.
- Approval of the consolidated financial statements for the year ended 31 December 2017.
- Allocation of profit for the year ended 31 December 2017 and distribution of dividends.
- Statutory auditors' special report on related-party agreements and commitments referred to in articles L. 225-38 *et seq.* of the French Commercial Code *(Code de commerce)*.
- Re-election of Fonds Stratégique de Participations as a member of the Board of Directors.
- Appointment of Marie-Ange Debon as a member of the Board of Directors.
- Appointment of Alexandre de Juniac as a member of the Board of Directors.
- Appointment of Jean-Marc Bertrand as director representing shareholder employees*.
- Appointment of Uwe Michael Jakobs as director representing shareholder employees*.
- Re-appointment of Ernst & Young Audit as statutory auditor.
- Approval of the principles and criteria for setting, allocating and awarding the fixed, variable and exceptional components of the total compensation and benefits of any kind to be awarded to the Chairman and Chief Executive Officer.
- Approval of the components of compensation due or awarded to the Chairman and Chief Executive Officer for the year ended 31 December 2017.
- Determination of the total amount of attendance fees.
- Authorization granted to the Board of Directors to carry out a share buyback program.

RESOLUTIONS SUBMITTED TO THE EXTRAORDINARY GENERAL MEETING

- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, with preferential subscription rights.
- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, by means of a public offering, without preferential subscription rights but with a mandatory priority period.
- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code *(Code monétaire et financier)*.
- Authorization granted to the Board of Directors, in the event of the issue of shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, to set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period.
- Delegation of authority granted to the Board of Directors to issue shares in the Company as compensation for contributions in kind.
- Authorization granted to the Board of Directors to increase the number of shares to be issued with or without preferential subscription rights, in the event of a capital increase pursuant to the five foregoing resolutions.
- Overall limit on authorizations to issue shares in the Company immediately and/or in the future.
- Delegation of authority granted to the Board of Directors to carry out capital increases reserved for members of a company savings plan *(Plan d'Épargne Entreprise)*, without preferential subscription rights.
- Powers to carry out formalities.

* *As there is only one position of director representing shareholder employees to be filled, only the candidate having obtained at least the majority of votes shall be appointed.*

6.2.2 Proposed resolutions submitted to the annual general meeting of 18 May 2018

RESOLUTIONS SUBMITTED TO THE ORDINARY GENERAL MEETING

First resolution

(Approval of the Company's financial statements for the year ended 31 December 2017)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Company's financial statements for the year ended 31 December 2017, the Board of Directors' management report and the statutory auditors' reports, approves said financial statements as well as the transactions reflected therein and described in said reports.

In accordance with the provisions of article 223 *quater* of the French Tax Code *(Code général des impôts)*, the annual general meeting formally notes that no expenses or charges referred to in article 39-4 of said Code were incurred during the past financial year.

Second resolution

(Approval of the consolidated financial statements for the year ended 31 December 2017)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the consolidated financial statements for the year ended 31 December 2017, the Board of Directors' Group management report and the statutory auditors' report on the consolidated financial statements, approves said financial statements as well as the transactions reflected therein and described in said reports.

Third resolution

(Allocation of profit for the year ended 31 December 2017 and distribution of dividends)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having noted that the Company's financial statements for the year ended 31 December 2017 show a profit of €484,996,465.43 decides, as recommended by the Board of Directors, to allocate the profit for the financial year as follows:

Profit for the period	€484,996,465.43
Prior retained earnings	€1,263,790,178.57
Allocation to legal reserve	€24,249,823.27
Distributable profit	€1,724,536,820.73
Dividend distribution [1]	€174,502,163.80

(1) The total dividend distribution is calculated on the basis of the number of shares carrying dividend rights at 1 January 2017 and existing on the date of the Board of Directors' meeting adopting the proposed resolution and therefore granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares held by the Company and the capital increase reserved for employees decided by the Board of Directors on 8 November 2017 within the limit of 1,200,000 shares.

Accordingly, the annual general meeting decides to pay a dividend of €174,502,163.80 with regard to the 75,870,506 shares carrying dividend rights on 1 January 2017 and existing on the date of the Board of Directors' meeting adopting the proposed resolutions, corresponding to a distribution of two euros and thirty cents (€2.30) per share, it being specified that full powers are granted to the Board of Directors to set the definitive total amount of the dividend, the balance of distributable income and consequently the amount to be allocated to retained earnings.

The shares will be traded ex-dividend as of 25 May 2018 and the dividend for the 2017 financial year will be paid as of 29 May 2018.

The dividend is eligible for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

The dividend paid for the last three financial years was as follows:

Financial year	2017	2016	2015
Net dividend per share *(in euros)*	2.30*	2.05*	1.90*

* *Eligible in full for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.*

Fourth resolution

(Approval of the statutory auditors' special report on related-party agreements and commitments referred to in articles L. 225-38 et seq. of the French Commercial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the statutory auditors' special report provided for in article L. 225-40 of the French Commercial Code, in which no new agreement is identified, duly notes the information relating to the agreements entered into and the commitments made during the financial year and prior financial years and approved by the annual general meeting.

Fifth resolution

(Re-election of Fonds Stratégique de Participations as a member of the Board of Directors)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, having considered the Board of Directors' report and noting that the term of office as director of *Fonds Stratégique de Participations* expires on the date of this meeting, decides to re-elect it for a term of four (4) years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Sixth resolution

(Appointment of Marie-Ange Debon as a member of the Board of Directors)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, decides to appoint Marie-Ange Debon as director for a term of four (4) years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Seventh resolution

Appointment of Alexandre de Juniac as a member of the Board of Directors

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, decides to appoint Alexandre de Juniac as director for a term of four (4) years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Eighth resolution*

(Appointment of Jean-Marc Bertrand as director representing shareholder employees)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, decides, pursuant to article 10.2 of the Company's Articles of Association, to appoint Jean-Marc Bertrand as director representing shareholder employees for a term of four (4) years expiring at the close of the ordinary general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Ninth resolution*

(Appointment of Uwe Michael Jakobs as director representing shareholder employees)

Resolution not approved by the Board of Directors

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, decides, pursuant to article 10.2 of the Company's Articles of Association, to appoint Uwe Michael Jakobs as director representing shareholder employees for a term of four (4) years expiring at the close of the ordinary general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Tenth resolution

(Re-election of Ernst & Young Audit as statutory auditor)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having noted that the term of office of Ernst & Young Audit as statutory auditor is due to expire at the close of this meeting, decides to re-elect it for a term of six (6) financial years, *i.e.*, until the ordinary general meeting to be held in 2024 to approve the financial statements for the year ending 31 December 2023.

Eleventh resolution

(Approval of the principles and criteria for setting, allocating and awarding the fixed, variable and exceptional components of the total compensation and benefits of any kind to be awarded to the Chairman and Chief Executive Officer)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings pursuant to article L. 225-37-2 of the French Commercial Code, and having considered the Board of Directors' report on corporate governance provided for in article L. 225-37 of the French Commercial Code, approves the principles and criteria for setting, allocating and awarding the fixed, variable and exceptional components of the total compensation and benefits of any kind to be awarded, in the exercise of his term of office, to the Chairman and Chief Executive Officer.

* *8th and 9th resolutions: pursuant to article 10.2 of the Company's Articles of Association, as there is only one position of director representing shareholder employees to be filled, only the candidate having obtained at least the majority of votes shall be appointed.*

Twelfth resolution

(Approval of the components of compensation due or awarded to the Chairman and Chief Executive Officer for the year ended 31 December 2017)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings pursuant to article L. 225-100 of the French Commercial Code, and having considered the Board of Directors' report on corporate governance provided for in article L. 225-37 of the French Commercial Code, approves the fixed, variable and exceptional components of the total compensation and benefits of any kind due or awarded to Thierry Le Hénaff, Chairman and Chief Executive Officer, for the year ended 31 December 2017, as set out in said report.

Thirteenth resolution

(Setting of the total amount of attendance fees to be paid to the directors)

The general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, after reviewing the Board of Directors' report, decides to increase the total annual amount of attendance fees from €550,000 to €650,000. This decision applies for the current financial year and for subsequent financial years until another decision is made by the general meeting in this respect.

Fourteenth resolution

(Authorization granted to the Board of Directors to carry out a share buyback program for a period of 18 months)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meetings, and having considered the Board of Directors' report, authorizes the Board of Directors, or any person duly authorized to act on its behalf, to purchase or arrange to have purchased shares in the Company in accordance with articles L. 225-209 *et seq.* of the French Commercial Code, European Commission regulation no. 2273/2003 dated 22 December 2003 and Title IV of Book II of the general regulations of the French financial markets authority (*Autorité des marchés financiers* – AMF). The number of shares that may be held by the Company under this authorization at any given date may not be greater than 10% of the share capital. The number of shares held by the Company may be adjusted as necessary to take into account transactions that affect the share capital occurring after this meeting. The authorization is given under the following conditions:

(i) the maximum purchase price is €135 per share.

However, the Board of Directors may adjust the purchase price to account for the impact on the share price of transactions such as a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or the issuance and award of free shares, a stock split or reverse stock split, or any other transaction affecting shareholders' equity;

(ii) the maximum amount that may be dedicated to this share buyback program is €135 million;

(iii) under no circumstances can the Company hold, directly or indirectly, more than 10% of its share capital as a result of the purchases made pursuant to this authorization;

(iv) the shares redeemed and held by the Company shall have no voting or dividend rights;

(v) such shares may be purchased or transferred at any time, except from the date of a takeover bid until the end of the offer period, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction in question, by any and all means, including on the market or over the counter, by way of block trades or derivative financial instruments or warrants traded on a regulated or over-the-counter market, under the conditions permitted by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate.

The annual general meeting decides that these share purchases can be made for any purpose permitted by law either now or in the future, and notably for the following purposes:

(i) implementing market practices allowed by the AMF such as (a) purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment as part of any potential external growth transactions, it being specified that the shares acquired for this purpose may not exceed 5% of the Company's share capital at the time of the acquisition or (b) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the Code of Conduct approved by the AMF, as well as (c) any market practice subsequently permitted by the AMF or by law;

(ii) putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to securities giving immediate or future access by any means to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations regarding such securities, in accordance with the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;

(iii) covering stock option plans granted to employees or executive officers of the Company or its Group;

(iv) granting free shares in the Company to employees or executive officers of the Company or its Group, particularly under the conditions provided for in articles L. 225-197-1 *et seq.* of the French Commercial Code;

(v) offering employees the opportunity to acquire shares, whether directly or via a company savings plan *(Plan d'Épargne Entreprise)* under the terms provided for by law, and notably articles L. 3332-1 *et seq.* of the French Labor Code *(Code du travail)*; and

(vi) canceling all or part of the purchased shares in order to reduce the Company's share capital.

The annual general meeting grants full powers to the Board of Directors, with the possibility to sub-delegate such powers under the conditions set by law, to ensure the implementation of this authorization, and in particular to set the terms and conditions thereof, carry out the share buyback program and notably place all stock market orders, enter into any agreements, prepare and amend any documents, in particular information documents, carry out all formalities, including assigning or reassigning the purchased shares to the various purposes pursued, make all declarations to the AMF and any other bodies and, in general, do whatever may be necessary.

The annual general meeting decides that this authorization is granted for a period of eighteen (18) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the annual general meeting of 23 May 2017 in its 11th resolution.

RESOLUTIONS SUBMITTED TO THE EXTRAORDINARY GENERAL MEETING

Fifteenth resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months, to issue shares in the Company and/or securities giving immediate or future access to shares in the Company, with preferential subscription rights)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report on corporate governance and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-132, and L. 228-91 *et seq.*:

(i) authorizes the Board of Directors to carry out one or more capital increases via the issue, with preferential subscription rights, in France or other countries, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, including warrants, issued against payment or free of consideration, which can be subscribed either in cash or by offsetting receivables;

(ii) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is three hundred and seventy-nine (379) million euros, which will be included in the overall maximum nominal amount provided for in the 21st resolution and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(iii) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one (1) billion euros or the euro equivalent in a foreign currency or unit of account at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) applies to all the debt securities that may be issued pursuant to the 15th to 20th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(iv) decides that existing shareholders shall have, in proportion to their shareholding, preferential rights to subscribe for the shares and securities issued pursuant to this resolution and that the Board of Directors may grant shareholders a right to subscribe for additional shares or securities corresponding to their subscription rights and within the limit of their requests;

(v) decides that, if subscriptions made by shareholders on the basis of the shares they hold and, where applicable, for additional shares or securities, have not covered the full number of shares or securities issued, the Board of Directors will be able to make use of the possibilities provided for in article L. 225-134 of the French Commercial Code or certain of them in the order it chooses;

(vi) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(vii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;

(viii) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase, and
- generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 9th resolution.

Sixteenth resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months, to issue shares in the Company and/or securities giving immediate or future access to shares in the Company, by means of a public offering, without preferential subscription rights but with a minimum three-day priority period)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report on corporate governance and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-135, L. 225-136, and L. 228-91 *et seq.*:

(i) authorizes the Board of Directors to carry out one or more capital increases via the issue, without preferential subscription rights, by means of a public offering in France or other countries, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, which can be subscribed either in cash or by offsetting receivables;

(ii) decides to cancel the shareholders' preferential subscription rights to the securities to be issued pursuant to this resolution;

(iii) decides that the shareholders will benefit, in accordance with the provisions of article L. 225-135 of the French Commercial Code and without giving rise to a negotiable right, from a priority period of at least three (3) days for subscriptions in proportion to their shareholding and for any additional subscriptions; any remaining unsubscribed securities may be the subject of a public placement in France or any other country, or on the international market;

(iv) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall maximum nominal amount provided for in the 21st resolution and may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one (1) billion euros or the euro equivalent in a foreign currency or unit of account at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) applies to all the debt securities that may be issued pursuant to the 15th to 20th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(vi) decides that if the subscriptions, including where applicable those by shareholders, have not covered the full amount of the issue, the Board of Directors will be able to limit the amount of the transaction under the conditions provided for in article L. 225-134 of the French Commercial Code;

(vii) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities that could be issued pursuant to this delegation of authority;

(viii) decides that the issue price of shares issued or resulting from securities issued pursuant to this delegation of authority will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less a discount of 5%) after correction, if any, of this amount to take into account the difference in the dividend entitlement date;

(ix) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;

(x) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase, and

- generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 10th resolution.

Seventeenth resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months, to increase the share capital via the issue of shares in the Company and/or securities giving immediate or future access to shares in the Company, without preferential subscription rights, in the context of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-135, L. 225-136, and L. 228-91 *et seq.*:

(i) authorizes the Board of Directors to carry out one or more capital increases via the issue, without preferential subscription rights, in France or any other country, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, in the context of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code, which may be subscribed either in cash or by offsetting receivables;

(ii) decides that these issues may only be made in order to (a) directly or indirectly finance an external growth transaction, (b) issue convertible bonds, or (c) repay a financing arrangement put in place by the Company;

(iii) decides to cancel the shareholders' preferential subscription right to the shares and other securities to be issued pursuant to this resolution;

(iv) decides that the maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which is included in the overall limit for issues without preferential subscription rights provided for in the 21st resolution below and that may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is one (1) billion euros or the euro equivalent in a foreign currency or unit of account at the date of the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) applies to all the debt securities that may be issued pursuant to the 15th to 20th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;

(vi) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this resolution;

(vii) decides that the issue price of shares issued or resulting from securities issued pursuant to this delegation of authority will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less a discount of 5%) after correction, if any, of this amount to take into account the difference in the dividend entitlement date;

(viii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;

(ix) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to *inter alia*:

- set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
- carry out the planned issues and, where applicable, suspend them,
- deduct the costs of issuing shares in the Company and the fees related to their admission to trading on a regulated market from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase, and
- generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 11th resolution.

Eighteenth resolution

(Authorization granted to the Board of Directors for a period of 26 months, in the event of the issue of shares in the Company or securities giving access to shares in the Company, without preferential subscription rights, to set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with article L. 225-136 of the French Commercial Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, in the event of implementation of the 16th and 17th resolutions, to deviate from the terms for setting the issue price for ordinary shares outlined in the aforementioned resolutions and to set the price based on the following terms:

- the issue price of shares to be issued or resulting from securities to be issued under the aforementioned resolutions will, at the Board of Directors' discretion, be equal to: (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price is set, less, as the case may be, in either case a maximum discount of 5%,
- the issue price of securities giving immediate or future access to shares in the Company shall be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned above,
- the maximum nominal amount of capital increases resulting from the implementation of this resolution is 10% of the share capital over a 12-month period, and will be included in the limit provided for in the 16th or 17th resolutions as applicable and in the overall limits provided for in the 21st resolution below; and

(ii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

This authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 12th resolution.

Nineteenth resolution

(Delegation of authority granted to the Board of Directors to issue shares in the Company, within the limit of 10% of the total share capital, as compensation for contributions in kind)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular article L. 225-147:

(i) gives full powers to the Board of Directors to carry out one or more capital increases via the issue of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, as compensation for contributions in kind granted to the Company in the form of shares or securities carrying rights to shares in another company, when the provisions of article L. 225-148 do not apply;

(ii) decides that the maximum nominal amount of the capital increase that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit on the nominal amount provided for in the 17th resolution of this annual general meeting;

(iii) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this resolution;

(iv) decides that the Board of Directors, or any person duly authorized to act on its behalf, will have full powers to implement this delegation of authority;

(v) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 13th resolution.

Twentieth resolution

(Authorization granted to the Board of Directors to increase the number of shares to be issued in the event of excess demand)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with article L. 225-135-1 of the French Commercial Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to decide, in the event of the use of the delegations of authority granted by the 15th to 19th resolutions set out above and within thirty days of the close of the subscription period for the initial issue, to increase the number of shares to be issued, within the limit of 15% of the initial issue and at the same price as that applied for the initial issue and up to the limit provided for in the resolution authorizing the issue;

(ii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the annual general meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;

(iii) gives full powers to the Board of Directors to implement this authorization in accordance with the law and the regulations.

The annual general meeting decides that this authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 14th resolution.

Twenty-first resolution

(Overall limit on authorizations to issue shares in the Company immediately and/or in the future)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report, decides to set:

- the maximum global nominal amount of the immediate or future capital increases that may be carried out pursuant to the delegations of authority and authorizations granted by the 15th to 20th resolutions at three hundred and seventy-nine (379) million euros, *i.e.*, approximately 50% of the share capital on the date of this annual general meeting;
- the overall limit for issues without preferential subscription rights that may be carried out pursuant to the delegations of authority and authorizations granted by the 17th to 19th resolutions at 10% of the share capital on the date of this annual general meeting;

on the understanding that, where applicable, the nominal amount of the shares to be issued pursuant to adjustments made to protect holders of rights attached to securities giving access to shares in the Company shall be added to these nominal amounts.

Twenty-second resolution

(Delegation of authority granted to the Board of Directors to carry out capital increases reserved for members of a company savings plan (Plan d'Épargne Entreprise), without preferential subscription rights)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meetings, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with articles L. 225-129, L. 225-129-2, L. 225-129-6, L. 228-92, L. 225-138 I and II and L. 225-138-1 of the French Commercial Code and articles L. 3332-18 *et seq.* of the French Labor Code:

(i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to carry out one or more capital increases via the issue, in the proportions and at the times that it deems appropriate, of shares or securities giving access to existing shares or shares to be issued in the Company, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan (hereinafter, the "**Beneficiaries**");

(ii) decides to cancel the shareholders' preferential subscription rights to the shares and securities giving access to shares to be issued pursuant to this delegation of authority and, where applicable, to the shares and other securities granted free of consideration pursuant to this delegation of authority;

(iii) duly notes that this delegation of authority automatically entails a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this delegation of authority;

(iv) decides that within the limit of the applicable legal and regulatory provisions, the Board of Directors may provide for the free grant of new or existing shares or of securities giving access to existing shares or shares to be issued in the Company, as employer's additional contribution or, where applicable, as discount;

(v) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is thirteen million five hundred thousand (13,500,000) euros. This limit does not include the nominal amount of any shares issued pursuant to the adjustments made to protect the holders of rights attached to securities giving access to shares in the Company, in accordance with the law and any applicable contractual provisions;

(vi) decides that the subscription price of the shares to be issued will be equal to the average of the Arkema share's Euronext Paris opening trading prices for the twenty (20) trading days prior to the date of the decision setting the subscription period opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision. The

Board of Directors may however, if it considers it appropriate, reduce or eliminate the abovementioned discount, in order to take into account, in particular, the local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country;

(vii) decides that the Board of Directors will be able to grant free shares or securities giving access to shares in the Company to replace all or part of the abovementioned discount. The total benefit resulting from this grant may not exceed the limits provided for by the laws or regulations;

(viii) decides that the Board of Directors will be able to provide for the free grant of existing shares or securities giving access to existing shares in the Company provided that the total benefit resulting from this grant and, where applicable, the abovementioned discount does not exceed the limits provided for by law, and that, taking into account the equivalent monetary value of the free shares or securities giving access to shares in the Company, assessed at the subscription price, the limits provided for by law are not exceeded.

The annual general meeting decides that the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, will have full powers to implement this resolution and in particular to:

- decide on the characteristics, amount and terms and conditions of any issue or free grant of shares;
- determine that the subscriptions can be carried out directly by the Beneficiaries or via a mutual fund or any other collective undertaking authorized by the regulations;
- establish, under the conditions required by law, the list of companies or groups whose employees and former employees will be able to subscribe to the shares or securities issued and, where applicable, receive the shares or securities granted free of consideration;
- determine the nature and terms and conditions of capital increases, and the terms and conditions of the issue or the free grant;
- set the subscription price of the shares and the length of the subscription period;
- determine the length of service conditions that must be met by the Beneficiaries of new shares or securities resulting from the capital increase(s) or of the shares awarded by each free grant and covered by this resolution;
- determine the terms and conditions of the issues of shares or securities that will be made pursuant to this delegation of authority and, in particular, their dividend entitlement date and the terms and conditions for paying them up;
- determine the opening and closing dates of the subscription periods and receive subscriptions;
- record the completion of the capital increase for the amount of the shares that will actually be subscribed;
- determine, where appropriate, the nature of the free shares, as well as the terms and conditions of the grant;
- determine, where appropriate, the amount of the sums to be capitalized within the limit set above, the shareholders' equity account(s) from which they will be deducted and the dividend entitlement date of the shares created;
- at its sole discretion and as it deems appropriate, charge the costs of capital increases against the share premium amounts relating thereto and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase;
- take all necessary measures to complete the capital increases, carry out the related formalities, particularly those concerning the listing of the shares created, amend the Articles of Association accordingly, and generally do whatever may be necessary.

The annual general meeting decides that this authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 7 June 2016 in its 16th resolution.

Twenty-third resolution

(Powers to carry out formalities)

The annual general meeting grants full powers to the bearer of an original, a copy or an excerpt of the minutes of this annual general meeting for the purposes of performing all filing, publicity or other formalities that may be required.

6.3 BOARD OF DIRECTORS' REPORT ON THE RESOLUTIONS SUBMITTED TO THE ANNUAL GENERAL MEETING OF 18 MAY 2018

The Board of Directors proposes to submit the resolutions described below to the vote of the shareholders at the annual general meeting of 18 May 2018.

RESOLUTIONS SUBMITTED TO THE ORDINARY GENERAL MEETING

Approval of the annual financial statements (1st and 2nd resolutions)

The purpose of the **1st and 2nd resolutions** is to approve the Company's financial statements and the Group's consolidated financial statements for the year ended 31 December 2017, respectively.

In the **1st resolution**, the Board recommends that you approve the Company's financial statements for the year ended 31 December 2017 as presented in the Board of Directors' management report, as well as all the transactions reflected or described therein. You are also asked to acknowledge that no expenses or charges referred to in article 39-4 of the French Tax Code were incurred during the past financial year. In the **2nd resolution**, in accordance with the provisions of article L. 225-100 of the French Commercial Code, the Board recommends that you approve the consolidated financial statements for the year ended 31 December 2017, as well as all the transactions reflected or described therein.

Allocation of profit and distribution of dividends (3rd resolution)

The purpose of the **3rd resolution** is to decide the allocation of the Company's profit for the year ended 31 December 2017 of €484,996,465.43, as presented in the Company's financial statements. The Board of Directors recommends that the profit be allocated as follows:

Profit for the period	€484,996,465.43
Prior retained earnings	€1,263,790,178.57
Allocation to legal reserve	€24,249,823.27
Distributable profit	€1,724,536,820.73
Dividend distribution (1)	€174,502,163.80

(1) The total dividend distribution is calculated on the basis of the number of shares carrying dividend rights at 1 January 2017 and existing on the date of the Board of Directors' meeting adopting the proposed resolution and therefore granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares held by the Company and the capital increase reserved for employees decided by the Board of Directors on 8 November 2017 within the limit of 1,200,000 shares.

The payment of the dividend of €174,502,163.80 with regard to the 75,870,506 shares carrying dividend rights at 1 January 2017 and existing on the date of the Board of Directors' meeting adopting the proposed resolutions, would correspond to a distribution of two euros and thirty cents (€2.30) per share.

The shares would be traded ex-dividend as of 25 May 2018 and the dividend for the 2017 financial year would be paid as of 29 May 2018.

The dividend would be eligible for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

The dividend paid for the last three financial years was as follows:

Financial year	2017	2016	2015
Net dividend per share *(in euros)*	2.30 (1)	2.05 (1)	1.90 (1)

(1) Eligible in full for the 40% tax relief available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

The distribution of this two euros and thirty cents (€2.30) per share dividend would represent a 12% increase compared with 2016 and would reaffirm the importance of dividends as a key component of the Group's shareholder return policy. The recommendation takes into account the Company's performance in 2017 and reflects the Board of Directors' confidence in the Group's growth prospects and in its solid cash flow generation and balance sheet.

Approval of the agreements and commitments referred to in articles L. 225-38 *et seq.* of the French Commercial Code (4th resolution)

In accordance with the law, the Board of Directors performed its annual review of agreements entered into and authorized during previous years and implemented in the year ended 31 December 2017. It noted that (i) the only agreement entered into and authorized during previous years and implemented in the year ended 31 December 2017 is the commitment related to the early termination of the Chairman and Chief Executive Officer's term of office, and that (ii) no new agreements or commitments that had not already received the approval of the annual general meeting were entered into during the 2017 financial year. In the **4th resolution**, you are invited to duly note the information relating to the agreements entered into and the commitments made during the 2017 financial year and prior financial years and approved by the annual general meeting, as set out in the statutory auditors' special report in section 6.1 of this document.

Composition of the Board of Directors: re-elections and appointment (5th to 9th resolutions)

At its meeting on 21 February 2018, the Board of Directors noted that the terms of office of Marie-José Donsion, of Fonds Stratégique de Participations, whose permanent representative is Isabelle Boccon-Gibod, and of Patrice Bréant, director representing shareholder employees, were due to expire at the close of the annual general meeting of 18 May 2018. The Board of Directors would like to extend its warmest thanks to Marie-José Donsion and Patrice Bréant for their support during the different steps in the Group's transformation and for their active contribution to the work of the Board of Directors and, for Marie-José Donsion, to the work of the Audit and Accounts Committee.

Consequently, in the **5th to 8th resolutions**, the Board of Directors, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, recommends the following re-election and appointments.

At the close of the annual general meeting, and subject to approval of these resolutions, six of the thirteen members of the Board of Directors would thereby be women, *i.e.* 42% (excluding the director representing employees).

Re-election of Fonds Stratégique de Participations as member of the Board of Directors (5th resolution)

In the **5th resolution**, the Board of Directors recommends that you re-elect Fonds Stratégique de Participations (FSP) as director for a term of four years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the financial year ending 31 December 2021.

FSP, whose permanent representative is Isabelle Boccon-Gibod, has been a director and member of the Audit and Accounts Committee since 15 May 2014. In 2017, Isabelle Boccon-Gibod attended all the meetings of the Board of Directors and the Audit and Accounts Committee.

Isabelle Boccon-Gibod is fully independent of the insurance companies that founded FSP and of the Edmond de Rothschild group, which has an entity that manages FSP and monitors the financial performance of the companies in which FSP has invested. Subject to the re-election of FSP, Isabelle Boccon-Gibod will continue to represent it at Board of Directors and Audit and Accounts Committee meetings. Through an assignment letter, FSP asked its permanent representative to make sure that the Company's executive management reports regularly and in a satisfactory manner to its Board of Directors on the way it implements its industrial strategy and on the shareholder return prospects which attracted FSP to invest in Arkema, in particular the strategic objectives for 2020 and ambitions for 2023. Isabelle Boccon-Gibod, the team of Edmond de Rothschild Asset Management (EdRAM) dedicated to FSP and FSP established a regular dialogue for this purpose and discuss together the positions to be taken with regard to important decisions concerning the points submitted to the Company's Board of Directors. Feedback on the contribution of the permanent representative to Arkema's Board of Directors is provided to the shareholders / directors of FSP by the dedicated team within EdRAM.

Thus, alongside the other directors, Isabelle Boccon-Gibod participated collectively in determining the Group's strategic orientations and ensuring their implementation. She also ensured that the decisions made by the Board of Directors were in line with the Company's corporate interests and the applicable regulations.

The only compensation received by Isabelle Boccon-Gibod consisted in attendance fees paid by Arkema.

This re-election would allow the Board of Directors to further benefit from having a reference shareholder that fully supports the strategy implemented by Arkema and from Isabelle Boccon-Gibod's experience as a high level executive in the industry sector and her knowledge of Arkema and its major priorities developed over the past several years.

The education and professional experience of Isabelle Boccon-Gibod and information about Fonds Stratégique de Participations are set out in section 3.2.1.3 of this document.

Appointments of Marie-Ange Debon and Alexandre de Juniac as members of the Board of Directors (6th and 7th resolution)

In the **6th resolution**, the Board of Directors recommends that you appoint Marie-Ange Debon as a director for a term of four years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021 to replace Marie-José Donsion.

Marie-Ange Debon will qualify as an independent director. Her appointment would allow the Board of Directors to benefit from her experience as a high level executive in the public and private sectors and her large accounting and finance experience gained throughout her career. Her current responsibilities outside France and in the water sector will be genuine assets for her contribution to the work of the Board of Directors.

Subject to her appointment by the annual general meeting, the Board of Directors decided to appoint Marie-Ange Debon as member and Chairman of the Audit and Accounts Committee to replace Marie-José Donsion.

Born in 1965, Marie-Ange Debon is a graduate of France's *École des hautes études commerciales* (HEC) and *École nationale de l'administration* (ENA), and holds a master's degree in law. She is Group Deputy CEO of the Suez Group in charge of the International segment (Water and Waste, except Europe) since 2013 and member of the Management Committee since 2008.

Before joining Suez Environnement in 2008, Marie-Ange Debon held several positions in both the public and private sector: as auditor and then as magistrate at the Court of Auditors (*cour des comptes*) from 1990 to 1994. She served as Deputy Chief Executive Officer at France 3 from 1994 to 1998. In 1998, she began working with Thomson group as Deputy Chief Financial Officer, and in July 2003 became General Secretary and member of the Executive Committee. In 2008, she joined Suez Environnement as General Secretary in charge of Legal and Audit and member of the Management Committee. Since 2009 she has also been responsible for water and waste projects, information systems, risks, investments, insurance and purchasing. She was a member of the decision-making body of the French financial markets authority *(Collège de l'Autorité des marchés financiers)* from 2008 to 2014 and Chairman of the MEDEF Corporate Law Committee from 2009 to 2013.

Marie-Ange Debon also serves as independent director on the Board of Directors of Technip-FMC and as Chairman of its Audit Committee.

In the **7th resolution**, the Board of Directors recommends that you appoint Alexandre de Juniac as a director for a term of four years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

Alexandre de Juniac will qualify as an independent director. His appointment would allow the Board of Directors to benefit fully from his experience as a high level executive in various industry sectors, as Chairman and Chief Executive Officer of a large, publicly traded group and Director General and CEO of a global organization involved in a wide range of high-stakes issues.

Subject to his appointment by the annual general meeting, the Board of Directors decided to appoint Alexandre de Juniac as member of the Nominating, Compensation and Corporate Governance Committee.

Born in 1962, Alexandre de Juniac holds degrees from France's *École polytechnique de Paris* and *École nationale de l'administration* (ENA). He is CEO of the International Air Transport Association (IATA) since 1 September 2016.

Alexandre de Juniac began his career with the French Council of State *(Conseil d'État)* from 1988 to 1993, where he served as auditor, counsel and then deputy general secretary. From 1993 to 1995, he served as technical advisor and then deputy Chief of Staff to Nicolas Sarkozy, then France's Budget Minister. In 1995, he joined Thomson SA (now Thalès) as director of the development plan. He was appointed head of sales of Thalès Avionics in 1997, then Secretary and General Counsel of Thalès (1999-2004), Chief Operating Officer of Thalès Air Systems (2004-2008) and Chief Executive for Asia, Africa, Middle East and Latin America in May 2008. From June 2009 to September 2011, he served as Chief of Staff under Christine Lagarde, France's Minister for the Economy, Finance and Employment. He was Chairman and Chief Executive Officer of Air France from 2011 to 2013, then in July 2016 became Chairman and Chief Executive Officer of Air France-KLM. Alexandre de Juniac was also a member of Vivendi's Supervisory Board from 2013 to 2017.

Appointment of a director representing shareholder employees (8th and 9th resolutions)

As Patrice Bréant's term of office as director is due to expire at the close of the annual general meeting, and given that the Board of Directors has noted that employee share ownership, within the meaning of article L. 225-102 of the French Commercial Code, represented 5.1% of the Company's share capital at 31 December 2017, it is recommended that you appoint a director representing shareholder employees for a term of four years expiring at the close of the annual general meeting to be held in 2022 to approve the financial statements for the year ending 31 December 2021.

The following candidates are put forward for your approval:

- Jean-Marc Bertrand (**8th resolution**). Jean-Marc Bertrand has been a member of the Supervisory Board of the Arkema Actionnariat France company mutual fund *(Fonds Commun de Placement d'Entreprise)* since 2016 and his candidacy is proposed by this fund.

  Jean-Marc Bertrand, currently project manager with the IT Infrastructure team of the *iTeam* department of Arkema, has held several positions in the IT department since 2006. He has also served in several roles on employee representative bodies, namely as representative of the CFE-CGC labor union and secretary of the Arkema France Central Works Council; or
- Uwe Michael Jakobs (**9th resolution**). Uwe Michael Jakobs has been a member of the Supervisory Board of the Arkema Actionnariat International company mutual fund since 2016 and his candidacy is proposed by this fund.

  Uwe Michael Jakobs, business development manager of the Technical Polymers Business Line in Germany since 2015, has held various management positions in charge of key accounts for the Technical Polymers Business Line and previously for the PMMA Business Line in Germany. He is also member of the Works Council of Arkema GmbH.

In accordance with article 10.2 of the Company's Articles of Association, the candidate who obtains the greatest number of votes from the shareholders present or represented at the annual general meeting will be appointed as director representing shareholder employees, provided that the resolution relating to his/her appointment has also obtained a majority vote.

Taking account of the number of shares held by the Arkema Actionnariat France company mutual fund (3,386,066 or 4.5% of the share capital and 88% of the total number of shares held at 31 December 2017 through the company mutual funds by the employees), the Board recommends **appointing Jean-Marc Bertrand** as director representing shareholder employees and approves the proposed **8th resolution**. Accordingly, the Board of Directors has not approved the 9th resolution.

Re-election of the statutory auditors (10th resolution)

In the **10th resolution**, the Board of Directors invites you to duly note that the term of office of Ernst & Young Audit as statutory auditor is due to expire at the close of the annual general meeting and recommends that you re-elect it for a term of six financial years, *i.e.*, until the close of the annual general meeting to be held in 2024 to approve the financial statements for the year ending 31 December 2023.

Approval of the principles and criteria for setting, allocating and awarding the fixed, variable and exceptional components of the total compensation and benefits of any kind to be awarded to the Chairman and Chief Executive Officer (11th resolution)

In the **11th resolution**, and in accordance with article L. 225-37-2 of the French Commercial Code, the Board of Directors recommends that you approve the principles and criteria for setting, allocating and awarding the fixed, variable and exceptional components of the total compensation and benefits of any kind to be awarded, in the exercise of his term of office, to the Chairman and Chief Executive Officer as defined by the Board of Directors on the recommendation of the Nominating, Compensation and Corporate Governance Committee and presented in the report on corporate governance provided for in article L. 225-37 of said Code.

The components of the compensation of the Chairman and Chief Executive Officer and the related allocation criteria are determined upon each renewal of his term of office, for the full term of office, by the Board of Directors on the recommendation of the Nominating, Compensation and Corporate Governance Committee, which is mainly comprised of independent directors, in accordance with the recommendations of the AFEP-MEDEF Code. Accordingly, they were determined at the Board of Directors' meeting of 2 March 2016, at the time of the renewal of Thierry Le Hénaff's term of office as Chairman and Chief Executive Officer by the annual general meeting of 7 June 2016, and presented during this meeting as part of the submission to shareholder approval of his re-election as a director. They were re-submitted unchanged from 2016 to the annual general meeting of 23 May 2017, in accordance with article L. 225-37-2 of the French Commercial Code, and are set out in detail, unchanged, in section 3.4.2.1 of this document.

Approval of the components of compensation due or awarded to each of the Company's executive directors for the year ended 31 December 2017 (12th resolution)

Pursuant to article L. 225-100 of the French Commercial Code, the purpose of the **12th resolution** is to submit to the approval of shareholders the components of compensation due or awarded to each of the Company's executive directors for the financial year ended 31 December 2017. Payment of the annual variable compensation due for the past financial year is subject to the approval of this resolution.

The Board of Directors recommends that you approve the components of the fixed, variable and exceptional compensation and benefits of any kind due or awarded for the year ended 31 December 2017 to Thierry Le Hénaff, Chairman and Chief Executive Officer and only executive director of the Company. These components are set out in detail in section 3.4.2.2 of this document.

Determination of the total amount of attendance fees (13th resolution)

In order to take account of the appointment of another director on the Board of Directors, as submitted for your approval pursuant to the terms of the 7th resolution, and the change in the amount of the fixed part of the attendance fees paid to the Directors decided by the Board of Directors on 24 January 2018, an amount which has not been revised since 2014, we propose in the **13th resolution** that you increase the total amount of attendance fees allocated to the Board of Directors from €550,000 to €650,000. The current amount of €550,000 was set by the ordinary general meeting on 15 May 2014.

Share buyback (14th resolution)

Until 31 January 2018, the Company acquired 180,000 shares in the Company under the authorization to trade in the Company's shares granted by the 11th resolution of the annual general meeting of 23 May 2017. The shares were purchased to cover employee free share plans and ensure that performance shares could be awarded without a dilutive effect on the share capital.

As the authorization granted to the Board of Directors by the annual general meeting of 23 May 2017 is shortly due to expire, in the **14th resolution**, the Board of Directors recommends that you renew its authorization to purchase or arrange to have purchased shares in the Company at any time for a period of 18 months, **except during a takeover bid for the Company's shares**, at a maximum price of **€135** per share. The maximum amount that may be dedicated to this share buyback program would be €135 million.

This authorization would enable the Board of Directors to acquire a number of shares representing **up to 10% of the Company's share capital**.

These share purchases could be made for any purpose permitted by law, and would primarily be allocated for the purpose of covering the Company's employee performance share plans.

This new authorization would render ineffective, as from the date of this general meeting, the unused portion of the 11th resolution of the annual general meeting of 23 May 2017.

Details of share buyback programs in progress or planned can be found in section 5.2.4 of this document.

RESOLUTIONS SUBMITTED TO THE EXTRAORDINARY GENERAL MEETING

As the delegations of authority and authorizations granted to the Board of Directors by the annual general meeting of 7 June 2016 are due to expire on 6 August 2018, you are invited to renew them. If you vote in favor of the delegations of authority and authorizations that are submitted to you to replace the aforementioned delegations, they will render ineffective the delegations of authority previously granted for the same purpose, from the date of this annual general meeting.

The delegations of authority and authorizations submitted to you would make it possible to carry out, pursuant to a decision of the Board of Directors, the issue of shares and/or securities giving access to shares in the Company, with or without preferential subscription rights, in France, in another country and/or on the international markets, depending on the opportunities offered by the financial markets and in the interests of the Company and its shareholders. This would offer the Board of Directors the possibility to issue convertible bonds or finance recapitalization operations related to potential external growth transactions in the most appropriate manner.

The delegations of authority granted in the **15th to 19th resolutions may not be used by the Board of Directors** without prior authorization from the annual general meeting **from the date a takeover bid for the Company's shares is filed by a third party** until the end of the offer period.

Delegations of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, with or without shareholders' preferential subscription rights (15th to 21st resolutions)

Issues with preferential subscription rights (15th resolution)

The purpose of the **15th resolution** is to grant the Board of Directors a delegation of authority to carry out capital increases, in the proportion and at the times that it deems appropriate, via the issue, **with preferential subscription rights**, in France or any other country, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, such as convertible bonds, bonds with equity warrants attached or stock warrants issued on a standalone basis. Your approval would entail the waiver by the shareholders of their preferential right to subscribe for the shares that may result from the securities initially issued pursuant to this resolution.

The **maximum nominal amount of the capital increases** that may be carried out pursuant to this delegation of authority would be **three hundred and seventy-nine (379) million euros**, *i.e.*, approximately 50% of the share capital on the date of this annual general meeting. This maximum nominal amount would be included in the overall limit of €379 million that is proposed in the 21st resolution, and which would include all the issues decided pursuant to the 15th to 20th resolutions described below.

The **maximum nominal amount of debt securities** giving immediate or future access to shares in the Company that may be issued pursuant to this delegation of authority would be **one (1) billion euros** or the euro equivalent in a foreign currency in the event of an issue in other currencies or units of account at the date of the decision to carry out the issue. This amount would apply to all the debt securities that may be issued pursuant to the 15th to 20th resolutions submitted to this annual general meeting and described below, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Issues without preferential subscription rights (16th to 19th resolutions)

In order to be able to seize any financial opportunity offered, particularly by the diversity of the financial markets in France and any other country, the Board of Directors may be required to carry out issues that may be placed with investors interested in certain types of financial products. This means that the Board of Directors will have to be able to carry out these issues without preferential subscription rights.

Pursuant to the terms of the **16th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out capital increases, in the proportion and at the times that it deems appropriate, via the issue, **without preferential subscription rights**, in France or any other country, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, **by means of a public offering**. Your approval would entail the waiver by the shareholders of their preferential rights to subscribe for the shares that may result from the securities issued pursuant to this resolution. However, the shareholders would benefit, in accordance with the provisions of article L. 225-135 of the French Commercial Code and without giving rise to a negotiable right, from **a priority period of at least three (3) days for subscriptions in proportion to their shareholding and for any additional subscriptions**.

The **maximum nominal amount of the capital increase** resulting immediately or in the future from all the issues made pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of this annual general meeting, which would be included in the overall limit of three hundred and seventy-nine (379) million euros provided for in the 21st resolution.

The **maximum nominal amount of debt securities** that may be issued pursuant to this resolution would be **one (1) billion euros** or the euro equivalent in a foreign currency in the event of an issue in other currencies or units of account at the date of the decision to carry out the issue. This amount would be included in the overall limit of **one (1) billion euros** for the issue of debt securities pursuant to the 15th to 20th resolutions submitted to this annual general meeting, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

The issue price of shares issued or resulting from securities issued pursuant to this resolution would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less **a discount of 5%**) after correction, if any, of this amount to take into account the difference in the dividend entitlement date.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Pursuant to the terms of the **17th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out capital increases, in the proportion and at the times that it deems appropriate, via the issue, **without preferential subscription rights**, in France or any other country, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, **by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code**.

These issues may only be made in order to (a) directly or indirectly finance an external growth transaction, (b) issue convertible bonds, or (c) repay an external financing arrangement put in place by the Company.

The **maximum nominal amount of the capital increase** resulting immediately or in the future from all the issues made pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of this annual general meeting, which would be included in the overall limit of three hundred and seventy-nine (379) million euros and the one of 10% provided for issues without preferential subscription rights provided for in the 21st resolution.

The **maximum nominal amount of debt securities** that may be issued pursuant to this resolution would be **one (1) billion euros** or the euro equivalent in a foreign currency in the event of an issue in other currencies or units of account at the date of the decision to carry out the issue. This amount would be included in the overall limit of one (1) billion euros for the issue of debt securities pursuant to the 15th to 20th resolutions submitted to this annual general meeting, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

The issue price of shares issued or resulting from securities issued pursuant to this resolution would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less **a discount of 5%**) after correction, if any, of this amount to take into account the difference in the dividend entitlement date.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Pursuant to the terms of the **18th resolution**, it is recommended that, in the event of an issue of shares or securities giving immediate or future access to existing shares or shares to be issued in the Company under the aforementioned 16th and 17th resolutions, you authorize the Board of Directors to deviate from the terms for setting the issue price for the shares provided for in the aforementioned resolutions and to set the price based on the following terms:

- the issue price of shares to be issued or resulting from securities to be issued under the aforementioned resolutions would, at the Board of Directors' discretion, be equal to: (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price is set, less, in either case, a maximum discount of 5%;
- the issue price of securities giving immediate or future access to shares in the Company should be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned above.

The maximum nominal amount of capital increases resulting from the implementation of this resolution would be 10% of the share capital over a 12-month period, and would be included in the limit provided for in the 16th or 17th resolutions as applicable and in the overall limits provided for in the 21st resolution below.

This authorization would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Finally, pursuant to the terms of the **19th resolution**, it is recommended that you grant the Board of Directors a delegation of authority to carry out one or more capital increases via the issue of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, as compensation for contributions in kind granted to the Company in the form of shares or securities carrying rights to shares in another company, when the provisions of article L. 225-148 do not apply.

This delegation of authority would automatically entail a waiver by the shareholders of their preferential right to subscribe for the Company shares that result from the securities giving access to shares in the Company that could be issued pursuant to this resolution.

The maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority would be **10% of the Company's share capital** at the date of this annual general meeting, which would be included in the overall limit on the nominal amount provided for in the 17th resolution of this annual general meeting.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Increase in the number of shares to be issued with or without preferential subscription rights in the event of a capital increase (Greenshoe option) (20th resolution)

In the **20th resolution**, it is recommended that you delegate to the Board of Directors the authority to decide, for each of the issues carried out pursuant to the 15th to 19th resolutions described above, to increase the number of shares to be issued, at the same price as that used for the initial issue, within the limit of 15% of the initial issue and within thirty days of the close of the subscription period for the initial issue, subject to compliance with the limit provided for in the resolution authorizing the issue and the overall limits provided for in the 21st resolution.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Overall limit on authorization amounts (21st resolution)

The purpose of the **21st resolution** is to set an **overall limit** on the nominal amount of the capital increases to be carried out with or without preferential subscription rights, immediately or in the future, which may be implemented by the Board of Directors pursuant to the 15th to 20th resolutions described above.

The maximum nominal amount of capital increases mentioned in the 15th to 20th resolutions would be **three hundred and seventy-nine (379) million euros, *i.e.*, approximately 50% of the Company's share capital at the date of this annual general meeting**.

This may be increased by the additional nominal amount of shares to be issued to preserve the rights of holders of securities giving access to shares in the Company in accordance with the legal provisions.

The maximum nominal amount of capital increases mentioned in the 17th to 19th resolutions would be **10% of the Company's share capital at the date of this annual general meeting**.

Delegation of authority to carry out capital increases reserved for members of a company savings plan (22nd resolution)

In the **22nd resolution**, it is recommended that you delegate to the Board of Directors the authority to carry out issues without preferential subscription rights of shares and/or securities giving access to shares in the Company, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan in place in the Company or Group.

The **maximum nominal amount of the capital increase** resulting immediately or in the future from all the issues made pursuant to this delegation of authority would be **13.5 million euros**, *i.e.*, around 2% of the Company's share capital at the date of this annual general meeting.

The issue price would be equal to the average of the Arkema share's Euronext Paris opening trading prices for the twenty (20) trading days prior to the date of the decision setting the subscription period opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision. The Board of Directors may however, if it considers it appropriate, reduce or eliminate the abovementioned discount, in order to take into account, in particular, the local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country.

This delegation of authority would be granted for a period of **twenty-six (26) months** from the date of this annual general meeting.

Powers to carry out formalities

In the **23rd resolution**, the Board of Directors recommends that you grant full powers to the bearer of a copy or an excerpt of the minutes of this annual general meeting for the purpose of performing all formalities that may be required.

This report contains the main provisions of the proposed resolutions. We ask that you consider issuing a favorable vote on these proposed resolutions.

The Board of Directors

6.4 STATUTORY AUDITORS' REPORT ON THE ISSUANCE OF ORDINARY SHARES AND/OR MARKETABLE SECURITIES RESERVED FOR EMPLOYEES SUBSCRIBING TO A COMPANY SAVINGS PLAN

This is a translation into English of a report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

KPMG Audit

Département de KPMG S.A.

Tour EQHO
2, avenue Gambetta
92066 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

ERNST & YOUNG Audit

Membre du réseau Ernst & Young Global Limited

Tour First
TSA 14444
92037 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

Arkema

Combined general meeting of 18 May 2018 - Twenty-second resolution

Statutory auditors' report on the issuance of ordinary shares and/or marketable securities reserved for employees subscribing to a company savings plan

To the annual general meeting of Arkema,

In our capacity as statutory auditors of your Company and in accordance with the terms of the engagement defined by articles L. 228-92 et L. 225-135 *et seq.* of the French Commercial Code *(Code de commerce)*, we hereby report on the proposal to authorize your Board of Directors to decide whether to proceed with a capital increase, in one or more occasions, by issuing ordinary shares or marketable securities giving access to existing shares or shares to be issued with cancellation of your preferential subscription rights, reserved for employees and former employees of your Company and companies or French and foreign groups connected thereto within the meaning of the articles L. 225-180 of the French Commercial Code *(Code de commerce)* and L. 3344-1 of the French Labor Code *(Code du travail)*, subscribing to a company savings plan, for a maximum nominal amount of €.13,500,000, an operation upon which you are called to vote.

This capital increase is submitted to your approval in accordance with articles L. 225-129-6 of the French Commercial Code *(Code de commerce)* and L. 3332-18 *et seq.* of the French Labor Code *(Code du travail)*.

Your Board of Directors proposes, on the basis of its report, to delegate thereto, for a period of twenty-six months, the authority to decide in favor of one or several capital increase operations and to cancel your preferential subscription rights to the ordinary shares or marketable securities giving access to existing shares to be issued. Where applicable, the Board of Directors shall definitely set the conditions of these issues.

It is the responsibility of your Board of Directors to prepare a report in accordance with articles R. 225-113 *et seq.* of the French Commercial Code *(Code de commerce)*. It is our responsibility to express an opinion on whether the information issued from the financial statements is fairly stated, on the proposal to cancel the preferential subscription right, and on various others information dealing with the issuance, provided in this report.

We performed the procedures that we considered necessary to comply with the professional guidance issued by the French Institute of statutory auditors *(Compagnie nationale des commissaires aux comptes)* for this type of engagement. These procedures consisted in verifying the information provided in the Board of Directors' report relating to this operation and the methods used for determining the subscription price of the shares to be issued.

Subject to our further examination of the conditions of the share capital increase that may be decided, we have no matters to report on the methods used for determining the subscription price of the shares to be issued provided in the Board of Directors' report.

As the final conditions of the proposed share capital increase have not yet been determined, we do not express any opinion on the final conditions and, accordingly, on the proposal to cancel the shareholders' preferential subscription right.

In accordance with article R. 225-116 of the French Commercial Code *(Code de commerce)*, we will issue an additional report, if necessary, when your Board of Directors has exercised this authorization in case of the issuance of shares or marketable securities giving access to existing shares or shares to be issued.

Paris-La Défense, 26 February 2018

The statutory auditors

French original signed by

KPMG Audit		ERNST & YOUNG Audit
François Quédiniac	Bertrand Desbarrières	Denis Thibon
Partner	Partner	Partner

6.5 STATUTORY AUDITORS' REPORT ON THE ISSUE OF SHARES AND/OR VARIOUS SECURITIES WITH OR WITHOUT CANCELLATION OF PREFERENTIAL SUBSCRIPTION RIGHTS

This is a translation into English of a report issued in French and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

KPMG Audit

Département de KPMG S.A.

Tour EQHO
2, avenue Gambetta
92066 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

ERNST & YOUNG Audit

Membre du réseau Ernst & Young Global Limited

Tour First
TSA 14444
92037 Paris-La Défense Cedex

Statutory auditor
Member of the *Compagnie Régionale de Versailles*

Arkema

Combined general meeting of 18 May 2018

Fifteenth to twentieth resolutions

Statutory auditors' report on the issue of shares and/or various securities with or without cancellation of preferential subscription rights

To the Shareholders,

In our capacity as statutory auditors of your Company and in compliance with articles L. 228-92 and L. 225-135 *et seq.* of the French Commercial Code *(Code de commerce)*, we hereby report on the proposed delegations of authority allowing your Board of Directors to decide whether to proceed with various issues of shares and/or various securities, and the delegation of powers to implement their practical conditions, an operation upon which you are called to vote.

Your Board of Directors proposes that, on the basis of its report:

- it be delegated, with the option to sub-delegate, for a period of twenty-six months, the authority to decide on whether to proceed with the following operations and determine the final conditions of these issues, in France and abroad, and proposes, where applicable, to cancel your preferential subscription rights:
  - the issue of shares and/or securities that give access, immediately or in the future, to existing shares or shares to be issued of your Company, (fifteenth resolution),
  - the issue, through public offering, of shares and/or securities that give access by all means, immediately or in the future, to existing shares or shares to be issued of your Company, with cancellation of your preferential subscription rights (sixteenth resolution),
  - the issue of shares and/or securities through offerings in accordance with article L. 411-2 of the French Financial and Monetary Code (*Code monétaire et financier*) of your Company's shares and/or securities giving access, immediately or in the future, to shares of your Company, with cancellation of your preferential subscription rights (seventeenth resolution);
- it be authorized, under the eighteenth resolution, within the scope of the implementation of the delegation of authorization referred to in the sixteenth and seventeenth resolutions, to determine the issue price within the legal annual limit of 10% of share capital;
- it be delegated, with the option to sub-delegate, for a period of twenty-six months, the powers necessary to issue, in one or more instalments, ordinary shares and/or securities that give access, immediately or in the future, to existing shares or shares to be issued of your Company within the limit of 10% of share capital in consideration for the contributions in kind granted to the Company and consisting of capital securities or securities that give access to the capital of other companies (nineteenth resolution).

The total nominal amount of the increases in capital that may be implemented immediately or in the future may not exceed €379 million under the fifteenth to twentieth resolutions. In particular, capital increases that may be implemented immediately or in the future may not exceed 10% of the amount of your Company's share capital as at the date of this shareholders' meeting under the sixteenth resolution and 10% of the amount of your Company's share capital as at the date of this shareholders' meeting under the seventeenth to nineteenth resolutions.

The total nominal amount of the securities representing debt securities likely to be issued, giving access immediately or in the future to your Company's capital, may not exceed €1 billion or the equivalent value of this amount in the event of an issue in a different currency or in a unit of account on the date of the issue decision, under the fifteenth to twentieth resolutions.

These ceilings reflect the additional number of shares to be created, within the limit of 15% of the initial issue, within the scope of the implementation of the delegations referred in the fifteenth to nineteenth resolutions, in accordance with article L. 225-135-1 of the French Commercial Code *(Code de commerce)*, if you adopt the twentieth resolution.

It is the responsibility of the Board of Directors to prepare a report in accordance with articles R. 225-113 *et seq.* of the French Commercial Code *(Code de commerce)*. Our role is to report on the fairness of the financial information taken from the accounts, on the proposed cancellation of preferential subscription rights and on other information relating to these operations provided in the report.

We have performed those procedures which we considered necessary to comply with the professional guidance issued by the French Institute of statutory auditors *(Compagnie nationale des commissaires aux comptes)* for this type of engagement. These procedures consisted in verifying the information provided in the Board of Directors' report relating to these operations and the methods used to determine the issue price of the capital securities to be issued.

Subject to a subsequent examination of the conditions for the issue that may be decided, we have no matters to report as to the methods used to determine the issue price of the capital securities to be issued provided in the Board of Directors' report with regard to the sixteenth and seventeenth resolutions.

Moreover, as the methods used to determine the issue price of the capital securities to be issued, in accordance with the fifteenth resolution, are not specified in that report, we cannot report on the choice of constituent elements used to determine this issue price.

As the final conditions in which the issues would be performed have not yet been determined, we cannot report on these conditions and, accordingly, on the proposed cancellation of preferential subscription rights for the sixteenth, seventeenth and eighteenth resolutions.

In accordance with article R. 225-116 of the French Commercial Code *(Code de commerce)*, we will issue an additional report, if necessary, when your Board of Directors has exercised these authorizations in the event of the issue of ordinary shares and/or securities, giving access immediately or in the future to shares of your Company, with or without cancellation of preferential subscription rights.

Paris-La Défense, 8 March 2018

The statutory auditors

French original signed by

KPMG Audit		ERNST & YOUNG Audit
François Quédiniac	Bertrand Desbarrières	Denis Thibon
Partner	Partner	Partner

7

INFORMATION ABOUT THE REFERENCE DOCUMENT

The different parts constituting the annual financial report are identified in the table of contents by the pictogram AFR

7.1 PERSON RESPONSIBLE FOR THE REFERENCE DOCUMENT AND PERSONS RESPONSIBLE FOR AUDITING THE FINANCIAL STATEMENTS

7.1.1 Person responsible for the reference document

Thierry Le Hénaff, Chairman and Chief Executive Officer of Arkema.

7.1.2 Declaration by the person responsible for the reference document

"I hereby declare, having taken all reasonable care to ensure that such is the case, that the information in this reference document is, to the best of my knowledge, in accordance with the facts and contains no omission likely to affect its meaning.

I further declare that, to the best of my knowledge, (i) the financial statements 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, and (ii) the management report, consisting of the sections of this reference document listed in the cross-reference table on pages 340 and 341 of this reference document, includes a fair review of the development of the business, the results and the financial position of the Company and all of the companies included in the scope of consolidation as well as a description of the main risks and uncertainties to which they are exposed.

I have obtained a statement from the statutory auditors, KPMG Audit and Ernst & Young Audit, confirming that they have completed their work and verified information relating to the financial position and the financial statements contained in this reference document and that they have read the document in its entirety. Their statement does not contain any observations regarding this reference document."

Colombes, 29 March 2018.

Thierry Le Hénaff

Chairman and Chief Executive Officer

7.1.3 Persons responsible for auditing the financial statements

Statutory auditor	Statutory auditor
KPMG Audit Department of KPMG S.A. Represented by Bertrand Desbarrières and François Quédiniac Tour EQHO, 2, avenue Gambetta, CS 60055 92066 Paris La Défense Cedex – France Appointed at the annual general meeting of 15 May 2014. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2019.	**Ernst & Young Audit** Represented by Denis Thibon Tour First TSA 14444 92037 Paris La Défense Cedex Appointed at the annual general meeting of 23 May 2012. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2017.

Substitute statutory auditor	Substitute statutory auditor
KPMG Audit IS 2 rue Gambetta, 92400 Courbevoie – France Appointed at the annual general meeting of 15 May 2014. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2019.	**AUDITEX** 1-2 place des Saisons 92400 Courbevoie – Paris La Défense 1 – France Appointed at the annual general meeting of 23 May 2012. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2017.

7.2 PERSON RESPONSIBLE FOR THE INFORMATION

Questions concerning Arkema and its activities should be addressed to:

Sophie Fouillat, Vice-President, Investor Relations

Arkema

420, rue d'Estienne d'Orves

92700 Colombes – France

Telephone: +33 (0)1 49 00 74 63

7.3 CONCORDANCE AND CROSS-REFERENCE TABLES

7.3.1 Incorporation by reference

Pursuant to article 28 of European Commission (EC) rule no. 809/2004, this reference document incorporates by reference the following information:

- the consolidated financial statements and the statutory auditors' report related thereto, the annual financial statements and the statutory auditors' report related thereto, as well as the financial information included in the management report appearing respectively on pages 207 *et seq.*, 271 *et seq.*, and 332 of the reference document for the year ended 31 December 2016 granted visa number D.17-0259 by the *Autorité des marchés financiers* on 30 March 2017;
- the consolidated financial statements and the statutory auditors' report related thereto, the annual financial statements and the statutory auditors' report related thereto, as well as the financial information included in the management report appearing respectively on pages 197 *et seq.*, 265 *et seq.*, and 352 of the reference document for the year ended 31 December 2015 granted visa number D.16-0263 by the *Autorité des marchés financiers* on 4 April 2016.

7.3.2 Concordance table

Information required under Annex I of EC regulation no. 809/2004 of 29 April 2004		Reference document	
No.	**Heading**	**Reference**	**Page(s)**
1.	**Persons responsible**	**Chapter 7**	**333-334**
1.1.	Persons responsible for the information in the reference document	7.1.1	334
1.2.	Declaration by persons responsible for the reference document	7.1.2	334
2.	**Statutory auditors**	**7.1.3**	335
2.1.	Names and addresses of the Company's statutory auditors	7.1.3	335
2.2.	Statutory auditors having resigned, been removed or not reappointed during the period covered by the reference document	None	
3.	**Selected financial information**	**1.8**	65
3.1.	Selected historical financial information	1.8	65
3.2.	Selected financial information for interim periods	None	
4.	**Risk factors**	**1.7**	**45-64**
5.	**Information about the Company**	**5.1.1**	**290**
5.1.	The Company's history and development	5.1.1	290
5.1.1.	The Company's legal and commercial name	5.1.1	290
5.1.2.	Place of registration and registration number	5.1.1	290
5.1.3.	Date of incorporation and length of life of the Company	5.1.1	290
5.1.4.	Registered office and legal form of the Company, legislation governing its activities, country of incorporation, address and telephone number	5.1.1	290
5.1.5.	Important events in the development of the Company's business	5.1.1	290
5.2.	Capital expenditure	1.3	30
5.2.1.	The Company's main capital expenditure projects for each financial year for the period covered by the historical financial information up to the date of the reference document	1.3.1	30
5.2.2.	Main capital expenditure projects in progress	1.3.2	31
5.2.3.	Information on the Company's main future capital expenditure projects to which its management bodies are already firmly committed	1.3.3	31

Information required under Annex I of EC regulation no. 809/2004 of 29 April 2004		Reference document	
No.	**Heading**	**Reference**	**Page(s)**
6.	**Business overview**	**Chapter 1**	**10-44**
6.1.	Principal activities	1.1 and 1.2	10, 29
6.1.1.	Nature of operations and principal activities	1.1 and 1.2	10, 29
6.1.2.	Significant new products or services introduced onto the market	1.2 and 1.4	17, 32
6.2.	Principal markets	1.1 and 1.2	10, 29
6.3.	Exceptional factors influencing principal activities and principal markets	None	
6.4.	Dependence on patents and licenses, industrial, commercial or financial contracts or new manufacturing processes	1.4.3, 1.7.2.2, 1.7.2.3 and 1.7.2.4	34 53-54 57
6.5.	Basis for any statements made by the Company regarding its competitive position	1.2	17
7.	**Organizational structure**	**5.1.2**	**291**
7.1.	Description of the Group and the Company's position within the Group	5.1.2	291
7.2.	List of the Company's significant subsidiaries	4.3.3 and 5.1.2	263, 291
8.	**Property, plant and equipment**		
8.1.	Existing or planned material property, plant and equipment	1.3.4	31
8.2.	Environmental issues that may affect the Company's use of property, plant and equipment	2.4	87
9.	**Operating and financial review**	**4.1**	**188-198**
9.1.	Financial position, changes in financial position and operating results during each financial year and interim period for which historical financial information is required	4.1	188
9.2.	Operating results	4.1.5	190
9.2.1.	Significant factors, including unusual or infrequent events or new developments, that materially affect the Company's operating income	4.1.1, 4.1.2, 4.1.3 and 4.1.4	188 189
9.2.2.	Reasons for material changes in net sales or revenue	4.1.4, 4.1.5 and 4.1.6	189 192
9.2.3.	Governmental, political, economic, financial and monetary policies or factors that have materially affected, or could materially affect, directly or indirectly, the Company's operations	4.1.1, 4.1.2 and 4.1.3	188 189
10.	**Capital resources**	**4.1.8**	**195-196**
10.1.	Information on the Company's capital resources (short and long term)	4.1.8 and 4.1.9	195,197
10.2.	Source, amounts and description of the Company's cash flows	4.1.9	197
10.3.	Information on the Company's borrowing terms and funding structure	4.1.8.1	195
10.4.	Information on any restrictions on the use of capital resources that have materially affected, or could materially affect, directly or indirectly, the Company's operations	4.1.8.2	196
10.5.	Information on anticipated sources of funds required to honor principal future investments and significant property, plant and equipment expenses	4.1.8.3	196
11.	**Research and development, patents and licenses**	**1.4**	**32-39**
12.	**Trend information**	**4.2**	**199-200**
12.1.	Principal trends in production, sales, inventory, costs and selling prices from the end of the last financial year up to the date of the reference document	4.2.1	199
12.2.	Known trends, uncertainties, demands, commitments or events that could materially affect the Company's outlook for at least the current financial year	4.2	199
13.	**Profit forecasts or estimates**	**None**	

Information required under Annex I of EC regulation no. 809/2004 of 29 April 2004		Reference document	
No.	**Heading**	**Reference**	**Page(s)**
14.	**Administrative, management and supervisory bodies and executive management**	**3.2**	**145-159**
14.1.	Names, business addresses, functions and main activities outside the issuing company of (a) members of the administrative, management or supervisory bodies; (b) partners with unlimited liability, in the case of a limited partnership with a share capital (*société en commandite par actions*); (c) founders, if the company has been established for fewer than five years; and (d) any member of executive management who is relevant to establishing that the issuing company has the appropriate expertise and experience for the management of the issuer's business. The nature of any family ties between any of those persons. In the case of each member of the administrative, management or supervisory bodies and each person mentioned in points (b) and (d) of the first subparagraph, details of that person's relevant management expertise and experience and (a) the names of all companies and partnerships of which such person has been a member of the administrative, management or supervisory bodies or partner at any time in the previous five years; (b) any convictions for fraud for at least the previous five years; (c) details of any bankruptcies, receiverships or liquidations for at least the previous five years; (d) details of any offense or official public sanction of such person by statutory or regulatory authorities and whether such person has ever been prohibited by a court of law from serving as a member of the administrative, management or supervisory bodies of an issuer or from participating in the management or governance of any issuer's business for at least the previous five years.	3.2.1.2	148
14.2.	Conflicts of interest, commitments related to appointments, restrictions on the transfer of holdings in the Company's share capital	3.2.1.1 and 3.2.3	145, 159
15.	**Compensation and benefits**	**3.4**	**170-180**
15.1.	Compensation paid and benefits in kind granted by the Company and its subsidiaries	3.4	170
15.2.	Total amounts set aside or accrued by the Company or its subsidiaries to provide pension, retirement or similar benefits	3.4.1, 3.4.2, 3.4.3 and note 19 to the consolidated financial statements	170, 171 179, 244
16.	**Operating procedures of administrative and management bodies**		
16.1.	Expiration date of the current term of office and the period during which the person has served	3.2.1.2	148
16.2.	Members of the administrative, management or supervisory bodies' service contracts with the Company or its subsidiaries, providing for benefits upon termination or an appropriate negative statement	3.2.3.4	159
16.3.	Information on the Company's Audit Committee and Compensation Committee	3.3.4.1 and 3.3.4.2	166 168
16.4.	Statement of compliance with the corporate governance regime in force in France	3.1	144
17.	**Employees**	**2.6**	**105-118**
17.1.	Number of employees at the end of each period covered by the historical financial information and breakdown of employees by main activity and location	2.6.2.1	105
17.2.	Shareholdings and stock options	2.6.2.5 and 5.2.6	111, 297
17.3.	Arrangements for involving employees in the capital of the Company	2.6.2.5 and 5.2.7	111, 297
18.	**Major shareholders**	**5.3**	**298-300**
18.1.	The name of any person other than a member of the administrative, management or supervisory bodies who, directly or indirectly, has an interest in the Company's capital or voting rights which is notifiable under the Company's national law, together with the amount of each such person's interest or, if there are no such persons, an appropriate negative statement	5.3.1	298
18.2.	Different voting rights or an appropriate negative statement	5.3.3	299
18.3.	Direct or indirect ownership or control over the Company	5.3.2	298
18.4.	Any arrangements, known to the Company, the operation of which may at a subsequent date result in a change in its control	5.3.2	298
19.	**Related-party transactions**	**5.1.3**	**292**
20.	**Financial information concerning the Company's assets and liabilities, financial position and profits and losses**	**4.3 and 4.4**	**201-267**
20.1.	Historical financial information	1.8 and 7.3.1	65, 336
20.2.	*Pro forma* financial information	None	
20.3.	Financial statements	4.3.2 and 4.4.2	205, 271
20.4.	Auditing of historical annual financial information	4.3.1 and 4.4.1	201, 267
20.4.1.	Statement that the historical financial information has been audited	4.3.1 and 4.4.1	201, 267

Information required under Annex I of EC regulation no. 809/2004 of 29 April 2004		Reference document	
No.	**Heading**	**Reference**	**Page(s)**
20.4.2.	Other information in the reference document audited by the statutory auditors	None	
20.4.3.	Source of unaudited financial data in the reference document not extracted from the Company's audited financial statements	None	
20.5.	Date of the latest audited financial information	4.3.2 and 4.4.2	205, 271
20.6.	Interim and other financial information	None	
20.6.1.	Quarterly or half-yearly financial information published since the last financial statements and, where appropriate, the audit or review report	None	
20.6.2.	Interim audited or unaudited financial information, covering at least the first six months of the financial year if the reference document is dated more than nine months after the last audited financial year	None	
20.7.	Dividend policy	5.4.6	304
20.7.1.	Dividend per share	5.4.6	304
20.8.	Legal and arbitration proceedings	1.7.2.4 and note 20.2 to the consolidated financial statements	57 247
20.9.	Significant change in the financial or trading position	None	
21.	**Additional information**	**Chapter 5**	**289-308**
21.1.	Share capital	5.2.1	292
21.1.1.	The amount of issued capital, the number of shares authorized, the number of shares issued and fully paid, the number of shares issued but not fully paid, the par value per share and a reconciliation of the number of outstanding shares at the beginning and end of the year	5.2.1	292
21.1.2.	The number and main characteristics of any shares not representing capital	None	
21.1.3.	The number, book value and par value of shares held by the Company, on behalf of the Company or by subsidiaries of the Company	5.2.4	293
21.1.4.	Convertible securities, exchangeable securities or securities with warrants	5.2.6	297
21.1.5.	Information about and terms of any acquisition rights or obligations over authorized but unissued capital or an undertaking to increase the capital	None	
21.1.6.	Information about the capital of any member of the Group which is under option or agreed conditionally or unconditionally to be put under option	None	
21.1.7.	History of share capital for the period covered by the historical financial information	5.2.2	293
21.2.	Memorandum and Articles of Association	5.1.1 and 5.5	290, 305
21.2.1.	Company purpose	5.1.1	290
21.2.2.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws concerning the members of administrative, management and supervisory bodies	3.2 and 3.3	145, 160
21.2.3.	Rights, preferential rights and restrictions attaching to each class of existing shares	5.5.4	307
21.2.4.	Action necessary to change shareholder rights	5.5.2	306
21.2.5.	Conditions, including conditions of admission, governing the manner in which annual general meetings and extraordinary general meetings are called	5.5.1	305
21.2.6.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws that would have an effect of delaying, deferring or preventing a change in control	5.5.2	306
21.2.7.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws governing the ownership threshold above which shareholdings must be disclosed	5.5.6 and 5.5.7	307, 308
21.2.8.	Conditions imposed by the Company's Memorandum, Articles of Association, charter or bylaws governing changes in the capital, where such conditions are stricter than is required by law	None	
22.	**Material contracts**	**1.5**	**40-42**
23.	**Third-party information, statements by experts and declarations of interest**	**None**	
24.	**Documents on display**	**5.1.1**	**290**
25.	**Information on investments**	**4.3.2, 4.4.2 and 5.1.2**	**205-271 291**

7.3.3 Cross-reference table

This reference document includes all the items of the Company and Group management report as required by articles L. 225-100 and L. 225-100-1 of the French Commercial Code *(Code de commerce)*, as amended by Order no. 2017-1162 of 12 July 2017 on the various measures for simplifying and clarifying companies' disclosure requirements (hereinafter, the "**Order**") and articles L. 232-1 II, L. 233-16, L. 233-26 and R. 225-102 of the same code (I). It also contains all the information of the annual financial report referred to in article L. 451-1-2 of the French Monetary and Financial Code *(Code monétaire et financier)* and article 222-3 of the AMF general regulations (II).

In order to facilitate the reading of the management report and the annual financial report mentioned above, the following cross-reference table has been prepared to identify the sections constituting these reports.

Additionally, in accordance with AMF recommendation no. 2010-13, the cross-reference table helps to identify corporate social responsibility data required pursuant to articles R. 225-105 and R. 225-105-1 of the French Commercial Code (III).

The cross-reference table also helps to identify the required information in the Board of Directors' report on corporate governance pursuant to articles L. 225-37 of the French Commercial Code and the new articles L. 225-37-3, L. 225-37-4 and L. 225-37-5 of the same code, as amended and created respectively by the Order (IV).

Finally, the cross-reference table lists other reports prepared by the Board of Directors or the statutory auditors (V).

No.	Information	Reference
I	MANAGEMENT REPORT	
1	Position and activity of the Company and, where applicable, its subsidiaries and companies under its control, over the past financial year	1.1 and 1.2
2	Results of operations of the Company, its subsidiaries and companies under its control	4.1.5
3	Key financial performance indicators	1.8
4	Review of the business, results of operations and financial position (notably debt)	4.1 and 4.2
5	Description of main risks and uncertainties (including the Company's exposure to financial and market risks)	1.7.2
6	Notes on the use of financial instruments and the Company's financial and market risk management policies and objectives	1.7.2.5
7	Significant events that have occurred since the end of the reporting period	Note 31 to the consolidated financial statements
8	Planned development	4.2
9	Research and development activities	1.4
10	Existing branches	Not applicable
11	Review of employee profit sharing and of stock options and free shares granted to employees	5.3.4
12	Transactions by executives on the Company's securities	3.4.4
13	Information on the manner in which the Company takes into account the social and environmental impact of its operations	See III of cross-reference table
14	Corporate social and environmental responsibility and societal commitments in favor of sustainable development, the circular economy, the fight against food waste, anti-discrimination and the promotion of diversity	See III of cross-reference table
15	Collective bargaining agreements signed within the Company and their impact on its economic performance and on employee working conditions	2.6.4

No.	Information	Reference
16	Shareholdings in companies with registered offices in France and representing over 1/20, 1/10, 1/5, 1/3, 1/2 or 2/3 of these companies' capital or voting rights	5.1.2 and note D to the consolidated financial statements
17	Transfer or disposal of shares undertaken to regularize cross shareholdings	Not applicable
18	Individual persons or corporate bodies holding directly or indirectly over 1/20, 1/10, 3/20, 1/5, 1/4, 1/3, 1/2, 2/3, 18/20 or 19/20 of the Company's share capital or voting rights at general shareholders' meetings	5.3.1, 5.3.2, 5.3.5 and 5.3.6
19	Injunctions or fines for antitrust practices	1.7.2.4 and note 20.2.2 to the consolidated financial statements
20	Calculation and results of adjustment of conversion bases or of exercising of securities giving access to capital and stock subscription and purchase options	3.5.2 and 5.2.6
21	Information on share buyback programs	5.2.4
22	Five-year financial summary	4.4.4
23	Dividends paid during the last three financial years and dividends eligible for the 40% tax rebate	5.4.7
24	Loans of less than two years granted by the Company, outside the scope of its main business activities, to micro-enterprises, SMEs or intermediate-sized enterprises and justified by the economic relations it has with the entities	Not applicable
25	Information on non-tax-deductible sumptuary expenses (article 223 quater of the French General Tax Code [*Code général des impôts*])	None (see 6.2.2)
26	Details of trade payables and receivables (article D. 441-4 of the French Commercial Code)	Note D.8 to the annual financial statements
27	Information on financial risks linked to climate change and measures taken by the Company to reduce them	1.7.2.3
28	Internal control and risk management procedures put in place by the Company, in particular those relating to the preparation and processing of accounting and financial information	1.7.1
29	Duty of care plan pursuant to article L. 225-102-4 of the French Commercial Code as created by Law no. 2017-399 of 27 March 2017 on the duty of care of parent companies and contracting firms and amended by Order no. 2017-1162 of 12 July 2017.	2.1.2.3
II	**ANNUAL FINANCIAL REPORT**	
1	Company financial statements	4.4.2 and 4.4.3
2	Consolidated financial statements	4.3.2 and 4.3.3
3	Statutory auditors' report on the parent company financial statements	4.4.1
4	Statutory auditors' report on the consolidated financial statements	4.3.1
5	Management report including, at minimum, the information mentioned in articles L. 225-100-1 and L. 225-211 paragraph 2 of the French Commercial Code	See I of this cross-reference table, and in particular sections 4, 5, 6, 7, 13, 16, 17 and IV, 13 of this table
6	Board of Directors' report on corporate governance	See IV of this cross-reference table
7	Declarations by the persons responsible for the annual financial report	7.1.2
8	Statutory auditors' fees	Note 30 to the consolidated financial statements
9	Statutory auditors' report on corporate governance prepared in accordance with article L. 225-235 of the French Commercial Code	4.4.1

No.	Information	Reference
III	**CONCORDANCE TABLE FOR SOCIAL AND ENVIRONMENTAL INFORMATION**	
1	**Key environmental and social indicators**	**2.2, 2.4, 2.6 and 2.8**
2	**Social information**	
	Employment	
	• Total headcount and breakdown by gender, age and region	2.6.2.1
	• New hires and departures	2.6.2.2
	• Compensation and changes in compensation	2.6.2.5
	Work organization (I)	
	• Organization of working time	2.6.2.3
	Employee relations	
	• Organization of social dialogue, particularly employee information, consultation and negotiation procedures	2.6.4.1
	• Collective bargaining agreements	2.6.4.3
	Health and safety (I)	
	• Occupational health and safety	2.3.2.4
	• Bargaining agreements signed with trade unions and employee representatives concerning occupational health and safety	2.3.2.4
	Training	
	• Training policies	2.6.3.1 and 2.6.3.2
	• Total number of training hours	2.6.3.1
	Equal treatment	
	• Measures to promote the employment and integration of people with disabilities	2.6.5.3
	• Measures to promote gender equality	2.6.5.2
	• Anti-discrimination policy	2.6.2.2, 2.7.3, 2.6.5 and 2.7.4
	Work organization (II)	
	• Absenteeism	2.6.2.4
	Health and safety (II)	
	• Occupational injuries, particularly frequency and severity, and occupational illness	2.3.2.1 and 2.3.2.2
	Promotion and compliance with the provisions of the core conventions of the International Labour Organization regarding	
	• Freedom of association and the right to collective bargaining	2.7.3
	• Elimination of employment and occupation discrimination	2.7.3
	• Elimination of forced or compulsory labor	2.7.3
	• Abolition of child labor	2.7.3
3	**Environmental information**	
	Overall environmental policy (I)	
	• Organization of the Company to address environmental concerns, and, where applicable, environmental assessment or certification procedures	2.1 and 2.4.1
	• Initiatives taken to train and raise awareness among employees on environmental protection	2.4.1 and 2.6.3.2
	• Resources used to prevent environmental risks and pollution	2.4.1
	Pollution	
	• Measures to prevent, reduce or rectify emissions into air, water and soil that have a serious impact on the environment	2.4.4
	• Consideration of noise pollution and any other form of pollution specific to an activity	2.4.4.4
	Circular economy	
	• Waste prevention and management (measures to prevent, recycle, reuse, recover in other ways and eliminate waste; actions to prevent food waste)	2.4.4.3, 5.4.5.2 and 2.7.5
	• Sustainable use of resources (water consumption and water supply according to local constraints; consumption of raw materials and measures taken to improve their efficient use; energy consumption, measures taken to improve energy efficiency and use of renewable energy sources)	2.4.2

No.	Information	Reference
	Climate change	
	• Significant emissions of greenhouse gases generated by the Company's operations	2.4.4.1
	Protection of biodiversity	
	• Measures to protect or develop biodiversity	2.4.3.2
	Overall environmental policy (II)	
	• Amount of provisions and guarantees for environmental risks	2.4.3.1 and note 19.3 to the consolidated financial statements
	Sustainable use of resources (II)	
	• Land use	2.4.3.1
	Climate change (II)	
	• Adaptation to the consequences of climate change	2.4.4.1
	• Information on the technological accident risk prevention policy, the Company's ability to cover its civil liability in terms of property and people due to classified facilities, and resources provided to oversee the processing of victim compensation in the event of a technological accident for which the Company can be held liable	1.7.2.3 and 2.3.3
4	**Information on societal commitments to promote sustainable development**	
	Regional, economic and social impact of the Company's activities	
	• On employment and regional development	2.7.6
	• On local communities	2.7.6
	Relations with the people and organizations interested in the Company's activities, in particular job placement organizations, educational establishments, environmental associations, consumer associations and local communities	
	• Dialogue with stakeholders	2.7.7
	• Partnerships and sponsorship initiatives	2.7.7
	Subcontracting and suppliers (I)	
	• Consideration of social and environmental issues in the procurement policy	2.7.5
	Subcontracting and suppliers (II)	
	• Scale of subcontracting and consideration of social and environmental responsibilities of suppliers and subcontractors	2.7.5
	Fair practices	
	• Steps taken to prevent corruption	2.7.3
	• Steps taken to promote consumer health and safety	2.3.5
	• Steps taken to protect and promote human rights	2.7.3
IV	**BOARD OF DIRECTORS' REPORT ON CORPORATE GOVERNANCE**	
1	Composition of the Board of Directors and diversity policy implemented including the principle of gender balance	3.2.1.1 and 3.2.1.2
2	Conditions for the preparation and organization of the work of the Board of Directors	3.3.2 to 3.3.4
3	List of positions held and duties performed by each executive officer in all companies during the reporting period	3.2.1.2
4	Potential limitations imposed by the Board on the powers of the CEO	3.3.1
5	Agreements entered into between an executive officer or a significant shareholder and a Company subsidiary	Not applicable
6	Summary table showing the authorizations to increase the share capital currently in force	5.2.5
7	Company's management structure (only in the event of amendments)	Not applicable
8	Where a company voluntarily refers to a corporate governance code drawn up by business organizations: provisions that were disregarded and the reasons, as well as how the code may be consulted	3.1
9	Where applicable, the reasons for the Company disregarding all the provisions of a corporate governance code and rules respected in addition to the legal requirements	Not applicable

No.	Information	Reference
10	Specific conditions for shareholder participation in general shareholders' meetings or referral to the provisions of the Articles of Association that provide for these conditions	5.5.1 and 5.5.2
11	Presentation of draft resolutions relating to the compensation policy for executive officers	3.4.2.1
12	Total compensation and benefits in kind paid to each executive officer during the reporting period (1)	3.4.1 and 3.4.2
13	Commitments of any kind entered into by the Company in favor of its executive officers, corresponding to items of compensation, indemnities or benefits due or expected to be due as a result of the commencement, termination or change of duties or due post-termination, in particular pension commitments and other lifetime advantages	3.4.1 and 3.4.2
14	Factors likely to have an impact in the event of a public offering	
	Structure of the Company's capital	5.2.1 and 5.3.1
	Restrictions under the Articles of Association on the exercise of voting rights and share transfers, clauses of agreements brought to the Company's attention pursuant to Article L. 233-11 of the French Commercial Code	5.5.2
	Direct or indirect interests in the Company's share capital, of which it is aware pursuant to Articles L. 233-7 and L. 233-12 of the French Commercial Code	5.3.1, 5.3.2 and 5.3.4
	List and description of bearers of securities with special controlling rights	Not applicable
	Control mechanisms in place for an employee shareholding scheme where controlling rights are not exercised by the employees	Not applicable
	Agreements between shareholders of which the Company is aware and which can entail restrictions on the exercise of voting rights and share transfers	Not applicable
	Rules applicable to the appointment and replacement of members of the Board of Directors, and to amendments to the Company's Articles of Association	3.2.1.1, 3.2.3 and 3.3.2.2
	Powers of the Board of Directors, in particular regarding share issuance and buybacks	3.3.1, 3.3.2.1, 5.2.4 and 5.2.5
	Company agreements which are amended or lapse in the event of a change of control (2)	1.5.4 and note 29.2 to the consolidated financial statements
	Compensation agreements for members of the Board of Directors or employees who resign or are made redundant without just cause or who are terminated as a result of a public offering	3.4.2.1 and 3.4.2.2
V	**OTHER DOCUMENTS**	
1	Special report of the statutory auditors on related-party agreements and commitments	6.1
2	Proposed agenda for the annual general meeting of 18 May 2018	6.2.1
3	Proposed resolutions submitted to the annual general meeting of 18 May 2018	6.2.2
4	Board of Directors' report to the annual general meeting of 18 May 2018	6.3
5	Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital with or without preferential subscription rights	6.5
6	Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital without preferential subscription rights reserved for members of a Group Savings Plan	6.4
7	Declaration that the social and environmental information required in the management report in respect of legal and regulatory commitments has been properly disclosed	2.8.5

(1) This includes compensation and employee benefits granted by the Company and its subsidiaries, including in the form of allocation of share capital, debt securities, or securities giving access to the Company's share capital. A distinction should be made between the fixed, variable and exceptional components making up these items of compensation and employee benefits, as well as the criteria used to calculate them or the circumstances in which they have been established.

(2) Except if this disclosure, other than where required by law, would have a significant negative impact on the Company's interests.

GLOSSARY

Term	Definition
Absolute indicator	An indicator expressed in absolute value (in tonnes of emissions, in millions of cubic meters or terawatt-hours of consumption).
Acrylic acid	An acid derived from propylene and mainly used as an intermediate in the preparation of superabsorbents and derivatives used in the manufacture of paints, inks and adhesives.
Acrylic esters	Acrylic acid esters.
Activated carbon	Processed charcoal used for its properties as an adsorption agent.
Adsorption	The retention of molecules of a gas or substance in solution or suspension on the surface of a solid.
AIMS	Arkema Integrated Management System, an audit system that includes the Group's own requirements as well as those featured in standards endorsed by the Group, such as ISO 9001, ISO 14001 and OHSAS 18001. In order to obtain external certifications, AIMS audits are conducted by mixed teams made up of Group auditors and auditors from a third-party accreditation body.
Amine	A compound obtained by substituting monovalent hydrocarbon radicals for one of the hydrogen atoms of ammonia.
CEFIC	The European Chemical Industry Council.
CO_2	Carbon dioxide.
COD	Chemical oxygen demand, a parameter for measuring water pollution by organic materials, the decomposition of which consumes oxygen.
CoRAP	The European Union's Community Rolling Action Plan, part of REACH.
Crosslinking	The process by which transverse bonds are created to change a linear polymer into a tridimensional polymer.
Debottlenecking	A modification made to an industrial facility in order to increase production capacity.
DMDS	Dimethyldisulfide.
EBITDA	Recurring operating income (REBIT) plus recurring depreciation and amortization of property, plant and equipment and intangible assets, the computation of which is detailed in note C.1 "Alternative performance indicators" to the consolidated financial statements.
EBITDA to cash conversion rate	Free cash flow excluding exceptional investments/EBITDA.
EC regulation 1107/2009	Regulation (EC) no. 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the authorization, commercialization, use and control of plant protection products within the European Community.
ECHA	The European Chemicals Agency, which is responsible for overseeing the REACH system.
EFPI (Environmental Footprint Performance Indicator)	The relative indicator used by the Group to offset the impact of changes in production scope or volume and to monitor changes in its environmental performance with respect to the Group's 2025 targets compared with 2012.
Elastic bonding	Elastomeric adhesive technology used primarily in hardwood flooring, transportation, assembly and flexible packaging applications.
Emulsions	Binders for paints, adhesives and varnishes produced by polymerization of monomers (acrylic, vinyl and other) and forming a stable dispersion in water of polymer particles which, coated and dried, form a continuous film.
Exceptional investments	A very limited number of investments that the Group presents separately in its financial reporting due to their unusual size or nature.
Free cash flow	Cash flow from operating and investing activities excluding the impact of portfolio management.
GHG	Greenhouse gas.
GHS	The Globally Harmonized System of Classification and Labeling of Chemicals, a major United Nations initiative designed to replace the various chemical classification and labeling standards used in different countries with a global system based on consistent criteria.
H_2S	Hydrogen sulfide.
HCFCs	Hydrochlorofluorocarbons.

Term	Definition
HF	Hydrofluoric acid.
HFCs	Hydrofluorocarbons; Hydrogen-, carbon- and fluorine-based products that are mainly used in refrigeration as substitutes to chlorofluorocarbons (CFCs), following the introduction of the Montreal Protocol.
Hot melt PSA (Pressure Sensitive Adhesives)	Pressure sensitive hot melts.
Hot melts	Thermoplastic adhesives.
HPV	High Production Volume, an international ICCA program designed to deliver globally-harmonized data sets and initial hazard assessments for around 1,000 chemical substances.
Hydrazine hydrate	A nitrogen-, hydrogen- and water-based product used as an intermediate in agrochemicals, pharmaceuticals, chemical synthesis, water treatment and blowing agents for plastics and elastomers.
ICCA	The International Council of Chemical Associations.
Impact modifiers	Additives introduced into certain products, in particular PVC, to make them more impact-resistant.
Incentive scheme in France	A scheme set up to complement the profit-sharing plans required under French law in all of the Group's companies in France. It gives all employees a share of Group profits and provides incentives to meet certain performance objectives that promote the Group's growth. Schemes vary from subsidiary to subsidiary but most are based on the same principles. Incentives consist of (i) a bonus based on economic results, and (ii) a performance bonus defined by each facility in line with its specific objectives.
Initiators	Products used to initiate chemical reactions.
Intensive indicator	An indicator of intensity relative to production volumes.
Interface agents	Products used in the formulation of additives.
IRT	*Institut de recherche technologique*, a French technological research institute.
ISO 14001	An international standard that defines the criteria for introducing an environmental management system in companies.
Kyoto Protocol	An international agreement, entered into by 84 countries on 11 December 1997 in Kyoto (Japan), which was intended to supplement the May 1992 United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol entered into effect on 16 February 2005.
Mercaptans	Thio-alcohols and phenols.
Methyl methacrylate	An essential raw material in the manufacture of polymethyl methacrylate (PMMA) pellets and sheets for the automotive, construction and equipment industries. Methyl methacrylate is used not only in the manufacture of PMMA, but also in the fields of acrylic emulsions and plastic additives.
Molecular sieves	Synthesized mineral products used to purify liquids and gases by the selective adsorption of molecules.
Non-woven	Textiles whose fibers are aligned in a random fashion.
NOx	Nitrogen oxides.
ODP (Ozone Depletion Potential)	An index measuring the impact of a given mass of gas in terms of contribution to the depletion of the ozone layer, expressed in relation to the impact of a chlorofluorocarbon.
OECD	Organization for Economic Co-operation and Development.
Organic peroxides	Oxidizing organic products used as initiators for polymerization and as crosslinking agents.
Oxo alcohols	Alcohols derived from propylene and used as synthesis intermediates.
Oxygenated solvents	Substances such as alcohols, ketones and ethers that contain oxygen atoms and have the ability to dissolve other substances without modifying them chemically.
Photocure resins	Synthetic resins that harden under the effect of ultraviolet light.
PMMA	The ISO code for polymethyl methacrylate.
Polyamide	A polymer obtained by the reaction of a diacid on a diamine, or from the polymerization of a monomer with both an acid and an amine function.
Polyamide 10 (PA10), Polyamide 11 (PA11), and Polyamide 12 (PA12)	Thermoplastic polyamides, whose monomers have 10, 11 and 12 carbon atoms, respectively.

Term	Definition
Polyethylene	A plastic obtained by the polymerization of ethylene.
Polymer modified binders	Adhesives based on hydraulic binders.
Polymerization	The union of several molecules of one or more compounds (monomers) to form a large molecule.
Polymers	Products made by polymerization.
Polyphthalamide (PPA)	A thermoplastic material from the polyamide family, obtained by polymerization of aromatic diacids and aliphatic diamines, and characterized by a high melting point and high mechanical rigidity.
PPRT	Technological Risk Prevention Plan (*plan de prévention des risques technologiques*), a government designed and implemented plan introduced by French Act no. 2003-699 of 30 July 2003 and the relevant application decrees, which strengthened the obligations imposed on companies operating Seveso sites in France. PPRTs aim to control urban development around potentially dangerous sites and to limit the impact of potential accidents.
Processing aids	Products that improve the processability of polymers during molding and extrusion.
PSE	Process safety events.
PTFE	The ISO code for polytetrafluoroethylene.
PVC	The ISO code for vinyl polychloride or polyvinyl chloride.
PVDF	The ISO code for polyvinylidene fluoride.
RCMS	The Responsible Care® Management System.
REACH (Registration, Evaluation and Authorization of Chemicals)	Regulation (EC) no. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, evaluation, authorization and restriction of chemicals.
REBIT	Recurring operating income, the computation of which is detailed in note C.1 "Alternative performance indicators" to the consolidated financial statements.
REBIT margin	Recurring operating income (REBIT) as a percentage of sales.
Responsible Care®	A voluntary initiative by the world chemical industry to achieve continuous progress in safety, health and environment, managed in France by the UIC under the name of *Engagement de progrès®* (Commitment to progress).
SDGs	The Sustainable Development Goals, also known as the Global Goals, a United Nations worldwide initiative to end poverty, protect the planet and ensure peace and prosperity for all (UN definition).
SDS	Safety Data Sheet.
Sebacic acid	A diacid derived from castor oil, used as an intermediate in the manufacture of bio-based polymers, plastics, lubricants, and anti-corrosion agents.
Seveso III Directive	European directive no. 2012/18/EU of 4 July 2012 on the control of major-accident hazards involving dangerous substances.
SO_2	Sulfur dioxide.
Sodium chlorate	Sodium salt used in the treatment of paper pulp, as a herbicide, or as a synthesis intermediate.
Sodium perchlorate	Sodium salt used as a synthesis intermediate.
SOx	Sulfur dioxides.
Spin-Off of Arkema's Businesses	The transaction that is the subject of the prospectus which received from the French financial markets authority (*Autorité des marchés financiers* – AMF), visa No. 06-106 on 5 April 2006.
SPOM	Suspended particulate organic matter present in water that can be recovered by physical or mechanical means, such as filtration and sedimentation.
SVHC	Substance of Very High Concern, a chemical substance that has been placed on the candidate list for authorization under REACH.
Surfactants	Compounds that increase the spreading and wetting properties of a liquid by lowering its surface tension.
UIC	*Union des industries chimiques* (Union of Chemical Industries). The professional body of the chemical industry in France.
Unsaturated polyesters	Esters with high molecular weights produced by the linking of numerous ester molecules that have double bonds between carbon atoms.
VOC	Volatile organic compound.

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ARKEMA

INNOVATIVE CHEMISTRY

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