



# 2023

## ANNUAL REPORT

---

Pursuant to Section 4.03 of the Indenture dated September 24, 2020, by and between SNF Group (formerly SPCM SA) and BNY Mellon Corporate Trustee Services Limited, as Trustee, The Bank of New York Mellon, London Branch, as Paying Agent, and The Bank of New York Mellon SA/NV, Luxembourg Branch, as Transfer Agent and Registrar

**2.000% Senior Notes due 2026**  
**2.625% Senior Notes due 2029**

Pursuant to Section 4.03 of the Indenture dated September 20, 2021, by and between SNF Group (formerly SPCM SA) and BNY Mellon Corporate Trustee Services Limited, as Trustee, The Bank of New York Mellon, London Branch, as Paying Agent, and The Bank of New York Mellon SA/NV, Dublin Branch, as Transfer Agent and Registrar

**3.125% Senior Notes due 2027**  
**3.375% Senior Notes due 2030**

# TABLE OF CONTENTS

Summary	5
Selected Historical Consolidated Financial Information	9
Risk Factors	11
Management’s Discussion and Analysis of Financial Condition and Results of Operations	46
Business	58
Management	72
Principal Shareholders	75
Glossary of Selected Terms in the Annual Report	76

## FORWARD-LOOKING STATEMENTS

Various statements contained in this annual report constitute “forward-looking statements” as that term is defined under the U.S. Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact included in this annual report, including, without limitation, statements regarding our future financial position, strategy, anticipated investments, costs and results (including growth prospects in particular regions), plans, projects to enhance efficiency, impact of governmental regulations or actions, litigation outcomes and timetables, future capital expenditures, liquidity requirements, the successful integration of acquisitions and joint ventures into our group, and objectives of management for future operations, may be deemed to be forward-looking statements. When used in this annual report, the words “believe,” “anticipate,” “should,” “intend,” “plan,” “will,” “expect,” “estimates,” “positioned,” “strategy,” “aims,” “projects,” “forecasts,” “foresees,” “seeks,” “likely,” “may,” “might,” “could,” “intends,” and similar expressions identify these forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements or industry results to be materially different from those contemplated, projected, forecasted, estimated or budgeted, whether expressed or implied, by these forward-looking statements.

These factors include those set forth in the section of this annual report captioned “Risk Factors”, which include, among others:

- difficulties in securing the supplies of certain raw materials we use, and our ability to raise prices in response to increases in raw material prices;
- potential substitution of another product for polyacrylamide, or “PAM”;
- the impact of the COVID-19 pandemic;
- the ability of our reseller and distributor customers to change suppliers;
- our ability to react to disruptions or closures of our manufacturing facilities;
- fluctuation in oil prices and, thus, demand for our oil recovery applications;
- our ability to respond to the changing needs of the markets in which we operate;
- significant competition in the markets in which we operate;
- our ability to protect our intellectual property rights;
- risks associated with our worldwide operations, including economic downturns and local business risks;
- fluctuations in currency exchange rates;
- our ability to retain key personnel and maintain good relations with our workforce;
- changes to environmental, health and safety regulations and concerns;
- climate change may affect our operations and product sales;
- operating hazards in our production facilities;
- damages based on product liability claims; and
- our substantial leverage.

The risks included here are not exhaustive. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for us to predict all such risk factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Given these risks and uncertainties, investors should not place any undue reliance on forward-looking statements as a prediction of actual results.

In addition, descriptions of any law, regulation or legislation, including but not limited to tax laws, presented in this annual report are summarized descriptions only. Such descriptions are not exhaustive, investors are advised to seek their own professional advice in relation to the risk factors relating to those laws, regulations or legislations.

We assume no obligation to update the forward-looking statements contained in this annual report to reflect actual results, changes in assumptions or changes in factors affecting these statements.

## INDUSTRY AND MARKET DATA

Information relating to markets, market size, market share, market position, growth rates, average prices and other industry data pertaining to our business contained in this annual report consists of estimates based on data reports compiled by professional organizations and analysts, on data from other external sources, on our knowledge of our sales and markets and on our own calculations based on such information. In many cases, there is no readily available external information (whether from trade associations, government bodies or other organizations) to validate market-related analyses and estimates, thus requiring us to rely on internally developed estimates. While we have compiled, extracted and reproduced market or other industry data from external sources, including third parties or industry or general publications, neither we nor the Initial Purchasers have independently verified the data. Similarly, while we believe our internal estimates to be reasonable, they have not been verified by any independent sources, and we cannot assure you as to their accuracy.

## PRESENTATION OF FINANCIAL INFORMATION

We have prepared the financial statements contained in this annual report in accordance with International Financial Reporting Standards, IFRS, as issued by the International Accounting Standards Board (“IASB”) and with IFRS as adopted by the European Union, as of December 31, 2023.

This annual report contains references to certain non-IFRS financial measures, including EBITDA and other financial ratios, each as defined by the Issuer.

We use EBITDA in its business operations to, among other things, evaluate the performance of its operations, develop budgets, and measure its performance against those budgets. We find EBITDA to be a useful tool to assist in evaluating performance because it eliminates items related to depreciation and amortization, interest expense, taxes and other non-cash charges. We define EBITDA as EBIT (Running operating income) before taxes plus depreciation, amortization and changes to provisions.

While the amounts included in EBITDA are derived from our audited consolidated financial statements, EBITDA is not a financial measure determined in accordance with IFRS and, accordingly, should not be considered as an alternative to net income or operating income as an indication of our performance or as an alternative to cash flows as a measure of our liquidity.

In addition, we believe that EBITDA is a measure commonly used by investors. However, EBITDA, as presented in this annual report, may not be comparable to similarly titled measures reported by other companies due to differences in the way these measures are calculated.

Certain numerical figures set out in this annual report, including financial data presented in millions or thousands and percentages describing market shares, have been subject to rounding adjustments and, as a result, the totals of the data in this annual report may vary slightly from the actual arithmetic totals of such information.

---

The terms the «Company,» «we,» «our,» «us» and «issuer» refer to SNF Group (formerly SPCM SA), or SNF, and all of its consolidated subsidiaries, unless the context suggests otherwise. The term «investors» generally refers to a prospective purchaser of our notes or to a current holder of our notes.

References to «euros,» «Euros» or «€» are to the lawful currency of the European Monetary Union and references to «U.S. dollars,» «dollars» or «\$» are to the lawful currency of the United States.

# SUMMARY

## OUR COMPANY

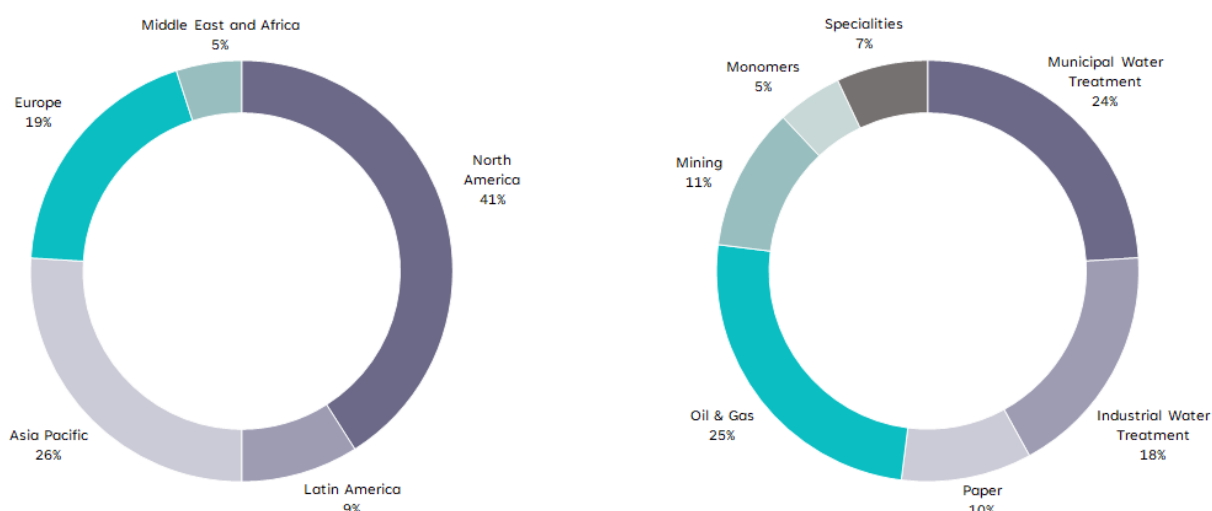
We believe that we are the world's largest producer of polyacrylamide, or PAM, a water-soluble specialty chemical used in water treatment, oil and gas applications (including enhanced oil recovery, or EOR), mineral extraction, pulp and paper manufacturing and other industries. PAM has a broad variety of industrial and commercial uses as a flocculant, which facilitates the separation of suspended solids from water, as a viscosity modifier, which alters the thickness of liquids, and as a drag reducer, which decreases the pressure drop along a segment of pipe. In addition to PAM, of which we estimate we produced 56% of global output in 2023 and from which we generated approximately 83% of our 2023 net revenue, we also produce and sell related specialty chemicals such as coagulants, which are used primarily in water treatment, and monomers. We also sell dispersants, which are used in the paper, household products and mining industries; and equipment that facilitates the utilization of PAM. For the year ended December 31, 2023, we had net revenue of €4.5 billion and EBITDA of €0.9 billion.

Since we were founded in 1978, we have implemented a strategy of organic growth and selective acquisitions of manufacturing operations to create an international manufacturing and sales platform that has enabled us to achieve a leading global share of our chosen markets. We benefit from large modern manufacturing facilities in France, the United States, China, India and South Korea and several smaller manufacturing facilities around the world, and from a direct sales force that reaches more than 45,000 customers. We also benefit from a distribution network that consists of approximately 800 independent resellers around the world. We believe that our products are sold in more than 140 countries and that we reach more than 450,000 end users worldwide.

We offer a large product portfolio of more than 1,090 product formulations tailored to address end-user requirements, which we sell to a diversified customer base across multiple industries. Of our 2023 net revenue, we estimate that municipal water applications accounted for approximately 24%, industrial water treatment applications accounted for approximately 18%, oil and gas applications accounted for approximately 25%, mining applications accounted for approximately 11%, pulp and paper applications accounted for approximately 10%, other specialty applications, such as agricultural aids, construction chemicals, textile, home and personal care products, accounted for approximately 7%, and monomer sales accounted for approximately 5%.

In 2023, our sales were also geographically diverse and, of our 2023 net revenue, 41% came from North America, 9% from Latin America, 26% from Asia Pacific, 19% from Europe, 5% from the Middle East and Africa.

## 2023 NET REVENUE BY GEOGRAPHY AND INDUSTRY



## COMPETITIVE STRENGTHS

We believe that we have the following key strengths:

### World Leader with 56% of Production Capacity.

We believe we are the world's largest producer of PAM, accounting for approximately 56% of global production capacity in 2023. At our 21 facilities, we currently have the capacity to produce approximately 1,465,000 metric tons of PAM per year in active equivalent ("active equivalent" is determined based on the concentration of PAM in its different forms to reconcile its dilution in liquid, emulsion or powder in determining production and capacity). Our leading market position has allowed us to develop expertise in the research and development, production, marketing and sales of PAM that ultimately benefits a broad end user base. We are also a market leader in each of the principal regions we address, including North America, Europe/Africa and Asia-Pacific, with approximately 71%, 49% and 50% of the production capacity in such regions, respectively.

### Large Product Range.

We have a range of more than 1,090 product formulations. These formulations take a number of different physical forms such as powders, beads, emulsions, liquids and dispersions, depending on their end use. Our products also have a number of different chemical properties (anionic, cationic, non-ionic) and a number of different molecular forms (linear, branched, cross-linked, comb, star). Our knowledge in combining these different characteristics gives us the ability to tailor our products to specific applications and the specific requirements of end users. We industrialized more than 150 new products in 2023.

We have broadened our product range by diversifying into additional products in industries where end users require bundled products. We can provide our primary product, PAM, in connection with other products, such as coagulants, which are also used in water treatment. We have successfully employed this strategy for many end users, especially municipal and mining end users. Furthermore, for water treatment applications, we sell certain products to our resellers who have their own specialized product lines that complement ours to better serve markets such as the boiler or cooling water treatment markets.

### Diversified Business Model.

Our business model is diversified across industries, applications, customers and geographies. We market and sell our products in four primary markets: water treatment, oil and gas, mining, and paper industries, complemented by several other niche markets including agricultural, construction, textile and home and personal care industries. Our primary product, PAM, has a variety of industrial and commercial applications in these industries as a flocculant, viscosity modifier and drag reducer. We also produce a range of other products, including coagulants, monomers, dispersants, activated car-

bon, inorganic coagulants and defoamers, which also support different applications across the industries we service.

We sell to approximately 45,000 customers, including approximately 800 distributors and resellers, and we believe that in total we reach more than 450,000 end users. In 2023, no single customer accounted for more than 3% of our net revenue, and our ten largest customers represented approximately 14% of our net revenue. Our business is also globally diversified as described under "— Global Sales Effort Across Market Segments" below.

### Stable and Loyal Customer Base.

Our customers represent a variety of stable consumer, municipal and industrial end markets. Our customers include municipalities, pulp and paper companies, oil and gas companies, mining companies and companies in several other industries that use our products for water treatment and, in the case of oil and gas and mining companies, to improve the extraction of oil and minerals. In particular, we sell PAM and other products to numerous municipalities and major cities in Europe and North America for treatment of their water. Most of our customers have had relationships with us for a number of years, and we believe that our customer retention rate is high.

### Modern and Geographically Diverse Production Capacity.

We have designed and built large, cost-effective and high-quality manufacturing facilities in France, the United States, South Korea, India and China that we believe are among the most modern in the industry. We have eight major plants in France, the United States, India, China, and South Korea, as well as thirteen additional production sites. By having major manufacturing sites in our key markets, we are able to provide our products more quickly to our customers and end users, and have chosen sites where we will be able to expand. Additionally, our costs in any particular currency in these markets generally match the currency in which sales are realized, thereby reducing our exchange risks for these markets. We have also established a standard design for our main production lines, which has enabled us to shorten construction time, to simplify maintenance across our different sites and to provide the flexibility to shift production from region to region as needed.

### Global Sales Effort Across Market Segments and Efficient Pass-through Pricing Policies.

We directly sell our products in more than 55 countries through our local subsidiaries and through our own sales team of approximately 600 salespeople. We also benefit from a global network of resellers who distribute our products in more than 140 countries. We have implemented a strategy that has enabled us to cover our market segments globally. We have established operations in three key markets: Europe, North America and Asia-Pacific, with the ability to service

clients directly from manufacturing sites located in each of these areas.

While we are exposed to raw material price fluctuations, including fluctuations in the price of propylene, we are able to pass such cost increases on to our customers through formula-based contracts and price lists that are regularly updated to reflect market costs of raw materials, each of which represented 35% and 42% of our sales in 2023, respectively. Fixed price contracts are mainly used in the municipal water treatment end-market, while contracts used in our oil & gas and industrial water treatment end-markets are well balanced between price lists and formula-based contracts. Our pass-through pricing policies allow us to maintain control of our margins.

Our marketing efforts are generally tailored to customer type:

- high volume and low service end users are approached directly by our global sales team. These end users are typically required to deal directly with product manufacturers, not resellers, and include many large municipalities, as well as mining and oil companies; and
- lower volume and more specialized end users are often covered by our network of resellers, giving us access to a substantial extended global sales force. In addition, we have established strategic relationships with a number of the large service-driven resellers who provide high-end services to their customers.

In recent years we have increased the share of net revenue generated by our direct sales force from an estimated 25% in 2005 to an estimated 68% in 2023, which has contributed to our enhanced profitability.

### World Class Technical Expertise and Research.

We continuously monitor technical feedback from end users to enhance and expand our product range, and we develop new production formulations by working closely with targeted end users. We have three main research and development centers and ten application laboratories at which we develop and test new product formulations. Our technical experts from research and development and on-field technical support represent a group of about 275 field specialists and, 445 scientists and technicians, of which approximately 40% are located in France, with the remainder being split between the United States, China and our other field operations. We introduce more than 150 new product formulations every year and have approximately 1,717 active patents in multiple jurisdictions. Our technical know-how relates to the production of PAM and our other products and involves

expertise in monomer development, the polymerization process, and polymer production as well as performance applications for our customers. We have leveraged our technical expertise and research efforts to develop our sixth generation of bacteria used for the production of monomers and our fourth generation of polymer production units, enabling significant improvements in our production capacity and efficiency across our global operations. We also work with our customers in order to develop and provide tailored applications for our products and to optimize their ability to end users.

### Leading sustainability platform.

We have been dedicated to sustainability and have placed significant focus on minimizing the environmental impact of our activities and reducing the footprint of all our industrial sites.

Our products address the issue of water scarcity, which is exacerbated by population growth, increasing urbanization and standards of living and more complex regulation. We aim to preserve natural resources in all our markets through water treatment, extraction of key minerals and optimization of hydrocarbon resources. More specifically, we are instrumental in water treatment for about 1 billion people and in cleaning and recycling water for over 12,000 industrial sites. We constantly strive to optimize our mining processes which can be potentially pivotal to the energy transition, achieving lower levels of water consumption and hydrocarbon emissions for the production of oil.

Our focus on clean water and sanitation, climate action, responsible consumption and production and life on land, and the overall alignment of our activities with the United Nations Sustainable Development Goals (“SDGs”), has been recognized with awards, high sustainability ratings and metrics, consistently superior to our peers across the environmental Key Performance Indicators (“KPIs”).

### Experienced Management.

We believe our experience helps us identify growth and investment opportunities in new areas, products lines and target industries in order to strengthen our leading position in the industry. We have a professional and committed management team, consisting of executives with significant experience in the chemical industry, marketing, product development and acquisitions, who are focused on successfully implementing our business strategy and have a successful track record of growing our business and enhancing our profitability. Our chief executive officer has over 25 years of experience in the specialty chemical industry.

## BUSINESS STRATEGY

### Help Battle Water Scarcity and Preserve Natural Resources.

We are focused on geographic and industry specific markets with high volume growth potential for our products driven by the increased scarcity of natural resources, especially water. Indeed, by providing products to treat water for use in both industrial and municipal application, optimize mining processes, enhance oil recovery for existing reserves and reduce water needs for mining and oil and gas extraction processes, we prove instrumental in battling water scarcity and preserving natural resources.

In the water treatment market, which represented 42% of our sales for the twelve months ended December 31, 2023, we treat water for over 1 billion people, and clean and recycle water at over 12,000 industrial sites.

In the mining market, which represented 11% of our sales for the twelve months ended December 31, 2023, our products are used for the optimization of mining processes and reduction of water needs as well as the extraction of key materials essential to the energy transition.

In the oil and gas market, which represented 25% of our sales for the twelve months ended December 31, 2023, oilfield operators using our polymers in their polymer flooding operations for EOR are able to reduce the water and CO<sub>2</sub> needed to produce a barrel of oil. Polymer floods lead to three to six times less water and two to six times less CO<sub>2</sub> per barrel of oil, as compared to water flooding. These reductions are primarily achieved through a more efficient sweep of oil within the reservoir, resulting in water cut reduction and, ultimately, a decrease in required pumping energy at the producers and less taxing on fluid separation equipment and processes.

In addition to our role in battling water scarcity and preserving natural resources in our end-markets, we also strive to minimize the environmental impact of our own activities and reducing our footprint on all our industrial sites. Our efforts to reduce our water consumption have allowed us to use 20% less water than we needed ten years ago to produce one ton of finished product. We constantly monitor our water consumption by installing flow meters, detecting leaks and upgrading fire circuits and are focused on finding ways to optimize our use of water by, for example, recovering rainwater and recycling water from boiler washings or condensates.

We are also committed to preserving natural resources by continuous improvement of our manufacturing sites to reduce energy needs, including through the design and purchase of

energy-efficient equipment. We have developed a range of more than one thousand products that help to preserve our natural resources, promote recycling and improve the efficiency of industrial processes. Our key focus areas are aligned to the United Nations 2030 Agenda for Sustainable Development.

In July 2023, Moody's Analytics assigned an ESG overall score of 62 to SNF Group. According to the Moody's Analytics report, we display a strong willingness and capacity to integrate environment, social and governance factors into our strategy (receiving a score of 67 in "Environmental," compared to the sector average of 49 and 67 in "Social," compared to the sector average of 51), operations and risk management, with robust results on managing risks related to human capital and legal security.

### Maintain our Chemical and Engineering Technical Leadership.

We believe that our technical capabilities in the applications for PAM result from our knowledge of the needs of end users and from our ability to continually adapt our product range to provide innovative solutions to our customers. We have also continued to develop specific products for value-added resellers. Some of our most innovative resellers are also focusing on niche markets for our products that could represent potential new markets. We are supporting these needs, so long as we stay within our core chemical and manufacturing competencies and address the needs of our customers and we constantly seek to improve the quality of our products.

### Reinvest Cash Flow in Operations.

We have historically invested a very significant majority of our cash flow from operations back into our business in order to increase our production capacity, improve the quality of our operations, and make investments in existing projects and new strategies, such as our EOR business. We have a history of very low dividend distribution, and we plan to follow this pattern in the future.

### Focus on Low Cost Production Advantage.

We continue to seek to reduce our costs of production. We also continue to focus on internal volume growth in order to increase our revenue and achieve economies of scale. We strive to enhance manufacturing productivity and will continue to make investments to achieve this aim. We will seek to increase plant capacity at existing plants to spread our fixed costs and to build new plant capacity in new markets where we believe there is strong market demand, such as the United Kingdom, Brazil, India, France and China.



# SELECTED HISTORICAL CONSOLIDATED FINANCIAL INFORMATION

The selected consolidated financial information presented below for the years ended December 31, 2021, 2022 and 2023 was derived from our consolidated financial statements audited by our independent statutory auditors, Deloitte & Associés and BM Audit. Our consolidated financial statements have been prepared in accordance with IFRS.

CONSOLIDATED INCOME STATEMENT (MEUR)	TWELVE MONTHS ENDED DECEMBER 31			
	2021	2022	2023	%
<b>Revenue, net</b>	<b>3,615</b>	<b>4,911</b>	<b>4,519</b>	<b>-8.0%</b>
Raw materials and transportation costs	(2,399)	(3,240)	(2,678)	
<b>Gross profit</b>	<b>1,217</b>	<b>1,671</b>	<b>1,841</b>	<b>10.2%</b>
<b>% Revenue, net</b>	<b>33.7%</b>	<b>34.0%</b>	<b>40.7%</b>	
Production costs	(654)	(813)	(860)	5.8%
<i>Marketing &amp; distribution costs</i>	<i>(141)</i>	<i>(148)</i>	<i>(175)</i>	18.5%
<i>Local supporting R&amp;D</i>	<i>(51)</i>	<i>(59)</i>	<i>(63)</i>	6.2%
<i>General &amp; administrative costs</i>	<i>(83)</i>	<i>(114)</i>	<i>(125)</i>	9.9%
Selling, general & administrative costs	(275)	(321)	(363)	13.2%
% Revenue, net	7.6%	6.5%	8.0%	
<b>EBIT</b>	<b>288</b>	<b>537</b>	<b>618</b>	<b>15.0%</b>
<b>% Revenue, net</b>	<b>8.0%</b>	<b>10.9%</b>	<b>13.7%</b>	
Depreciation & amortization	227	266	284	
<b>EBITDA</b>	<b>515</b>	<b>803</b>	<b>902</b>	<b>12.3%</b>
<b>% Revenue, net</b>	<b>14.2%</b>	<b>16.3%</b>	<b>20.0%</b>	
Non recurring income (loss)	(23)	(89)	(64)	
Financial Income / (Loss)	(31)	(106)	(64)	
Non-consolidated subsidiaries	4	2	1	
Tax on income	(47)	(80)	(118)	
<b>Income after tax</b>	<b>191</b>	<b>264</b>	<b>373</b>	
Minority interests	(3)	(10)	(8)	
<b>Net income</b>	<b>188</b>	<b>254</b>	<b>365</b>	<b>43.8%</b>
<b>% Revenue, net</b>	<b>5.2%</b>	<b>5.2%</b>	<b>8.1%</b>	

## Selected historical consolidated financial information

<b>CONSOLIDATED BALANCE SHEET (MEUR)</b>	<b>December 31, 2021</b>	<b>December 31, 2022</b>	<b>December 31, 2023</b>
Goodwill	79	92	99
Tangible assets, net	2,234	2,415	2,558
Cash, at bank and on hand	308	370	517
Total assets	4,575	5,181	5,319
Shareholder's equity	1,910	2,221	2,492
Borrowings	1,696	1,907	1,867

<b>OTHER FINANCIAL DATA (MEUR)</b>	<b>December 31, 2021</b>	<b>December 31, 2022</b>	<b>December 31, 2023</b>
EBITDA <b>(1)</b>	515	803	902
LTM Interest expenses	46	51	59
Adjusted net debt <b>(2)</b>	1,360	1,545	1,363
Net debt to LTM EBITDA <b>(3)(5)</b>	2.64x	1.92x	1.51x
Interest expense ratio <b>(4)</b>	11.3x	15.8x	15.2x
Net debt to shareholder's equity	0.7x	0.7x	0.5x

- (1)** EBITDA is defined as operating income plus depreciation, amortization and changes to provisions.
- (2)** Net debt is adjusted to reflect the average exchange rate between EUR and USD for the year, as per our revolving credit facility.
- (3)** Net debt to EBITDA is the ratio of total debt less cash and cash equivalents at December 31 over EBITDA.
- (4)** Interest expense ratio is the ratio of EBITDA to cash interest expense.
- (5)** As of December 31, we are within the limit of our covenants under our revolving credit facility.

# RISK FACTORS

An investment in the Notes involves a high degree of risk. Investors should carefully consider the risks described below before deciding to invest in the Notes. In assessing these risks, investors should also refer to the other information in this annual report, including the financial statements and related notes. These risks and uncertainties are not the only ones we face. Additional risks and uncertainties that are not currently known to us or that we currently consider immaterial could also impair our business, financial condition, results of operations and our ability to make payments on the Notes. Various statements in this annual report, including the following risk factors, constitute forward-looking statements.

## RISKS RELATED TO OUR BUSINESS

### ***We may experience difficulties in securing the supply of certain raw materials we use to manufacture some of our products.***

We obtain a significant portion of our raw materials from selected key suppliers. Some of the raw materials used by us and other competitors have faced supply limitations in previous periods. In some cases because of various disruptions or transportation issues, some of our raw material vendors have been unable to supply sufficient amounts of raw materials for short periods. Many of the employees at the companies and other entities that we buy from and which transport our raw materials are also unionized and/or are located in France, and any outbreaks of contagious diseases, strikes or work stoppages at their facilities could also potentially have an adverse effect on our ability to obtain raw materials or other key supplies. For example, we utilize railway transportation for our raw materials in France, and strikes are a regular threat on the French railways. If any such disruptions occur, we risk revenue shortfalls and potential claims from end users and/or our distributors or resellers if we are unable to fully meet contractual requirements. Further, if any of these suppliers is unable to meet their obligations under present supply agreements, we may be forced to pay higher prices to obtain necessary raw materials or pay increased costs for alternative transportation. Also, because many of our agreements with suppliers are not documented by contracts, or, if they are documented, do not contain exclusivity provisions, we are exposed to changes in suppliers, or to changes in prices of our raw materials, which may force us to either accept higher costs or change suppliers. Any interruption of supply or any price increases in raw materials could have a material adverse effect on our results of operations or cash flows.

### ***If sudden increases in the price of the raw materials we use to manufacture our products should occur, we may be unable to raise our prices immediately in response.***

We are exposed to commodity price risks relating to raw materials and supplies, which accounted for approximately half of our sales in 2023. The majority of the raw materials we use to manufacture our products, such as acrylonitrile, are based on propylene, a petroleum derivative. Petroleum prices and propylene prices are subject to significant volatility. In the first months of 2022, the war between Russia and Ukraine has increased the already inflated cost environment coming from 2021. Propylene prices have remained especially high in Europe and in the US, both regions in which we have introduced several price increases. Since May 2022, propylene prices have started to decline but have remained higher in Europe. This decline, however, has been offset by skyrocketing energy prices in the third quarter 2022, especially in Europe, region in which we had to introduce a new price increase in October. At the end of November 2022, China eventually lifted its zero-Covid policy after several months of strict enforcement. Over 2023, Asian propylene prices, benefiting from a large offer, have remained on average 25% cheaper than in Europe, region that still suffered from high cost position. In the USA, propylene prices have been quite volatile all over 2023. In January 2024, propylene prices in Europe and in USA were 29% and 35% higher than in Asia, respectively.

We have taken steps in recent years to mitigate the risk of increasing raw material prices by (i) regularly increasing prices of our products, in order to pass on raw material price increases to customers, and (ii) changing customer billing cycles, so that raw material price increases can be passed on to customers at the time the products are delivered to customers and not at the time they place their orders. We have also negotiated pricing arrangements with customers to permit regular increases in prices to reflect increases in raw material costs. Although we believe that we are partially protected as a result of historical acceptance of price increases in our customer base, there may be periods in which we are not able to recover all or part of the increases in the cost of raw materials due to weakness in demand for, or oversupply of, our products. Even when we do have the ability to pass on these increased costs to our customers, there may be delays in the implementation of such pass-through of costs to customers. Therefore, increases in petroleum, propylene or acrylonitrile prices could have a material adverse effect on our results of operations or cash flows.

***COVID-19, or the outbreak of other contagious diseases, may have a material adverse effect on our business, results of operations financial condition and cash flows and has adversely affected our operations and financial results.***

Any outbreak of severe communicable diseases, including COVID-19, may materially affect our business and results of operations. Concerns about the outbreak and rapid spread of such contagious diseases, including COVID-19 and its variants, have caused governments to take measures to prevent the spread of the virus. The outbreak of communicable diseases on a global scale has caused significant disruption to economies around the world, resulted in sporadic volatility in global capital markets.

Significant outbreaks of contagious diseases, including the outbreak of COVID-19, its variants or other diseases, may result in widespread health crises that could adversely affect the economies and financial markets of many countries, leading to substantial declines in consumer purchasing power and an economic downturn that could affect demand for our products, our ability to collect against existing trade receivables and our operating results. In particular, in response to the COVID-19 pandemic, on March 17, 2020, the French government imposed a nationwide lockdown, together with several other measures, which have had a material adverse impact on the overall French economy and our results of operations and financial condition. As a result of these restrictive measures in France, and other similar measures in the other markets in which we operate, we transitioned some eligible employees to remote working. We also implemented enhanced health and safety measures in our operations in line with public health rules and guidelines and industry practices to combat the spread of the COVID-19 pandemic.

Despite the lifting of the strict lockdown in France on May 11, 2020, significant restrictions and social distancing measures remain in place, which continue to adversely affect the overall French economy and, in turn, our operations. The full impact of the lockdown on the French economy is not yet known. Similar measures remain in place in the other markets where we operate, including each of the United States, China, India and South Korea, where we have major production facilities. If a significant portion of our workforce is unable to work effectively due to prolonged illness, quarantines, shelter-in-place arrangements, government actions, facility closures or other reasons in connection with the COVID-19 pandemic, our operations could be further materially impacted. We may also be unable to perform fully on our contracts and carry out new sales activity, and some of our costs may not be fully recoverable or adequately covered by insurance.

In addition, social distancing measures and restrictions imposed in response to the COVID-19 pandemic in countries where our suppliers are located, may also result in a slow-down of their production activities, including as a result of their inability to operate their businesses for a prolonged and indeterminate period of time, which would impact our operations. It is possible that the continued spread of COVID-19, further waves of infection, or a renewed or extended lockdown, if materialized, will cause further disruption in our business operations, cause delay or limit the ability of suppliers to perform under their existing contracts. Customers may experience significant losses due to the COVID-19 outbreak and may terminate their existing contracts or postpone or ultimately cancel future planned orders and contracts due to those losses. Both domestic and international travel may be further restricted to certain areas which may limit our ability to obtain new customers and enter new markets, to provide services in the areas in which our customers are currently located or otherwise conduct our operations as we would do under normal circumstances. The outlook for the world economy following the outbreak of COVID-19 remains subject to unprecedented uncertainty and such uncertainty may be prolonged in many of the markets in which we operate.

***Our business could be adversely affected by the substitution of other products for PAM.***

Approximately 83% of our 2023 net revenue came from the sale of PAM.

There are a number of technologies that could potentially replace PAM to a certain extent, which could include:

- natural flocculants (starch, guar gum, alginates);
- natural functionalized flocculants (cationized guar gums, chitosan (derived from crustacean shells), biological flocculants);
- other synthetic polymers; or
- the replacement of PAM use generally by the use of other flocculation or treatment methods.

While generally we believe that PAM is the most cost-effective product in its various applications in terms of performance, ease of use and price, there is a risk that the above products, or others that may be developed in the future, could be substituted for PAM.

***We conduct a portion of our business with a limited number of resellers and distributors, who have the ability to change suppliers.***

While we sell directly to a number of end users, a significant portion of our business is done through resellers and distributors, who buy our products for sale to end users along with related services. In particular, for industries that require a significant amount of services along with the chemicals they purchase, we rely on service-driven resellers to reach end users. We do not have any long-term contracts with these resellers or distributors, and rely on repeated purchase orders from them. If our resellers or distributors switch to another supplier, we might be unable to replace the loss in revenue generated by these resellers or distributors.

***We are dependent on our manufacturing facilities for the production of our products, and disruptions to, closures of or an inability to complete expected expansions of one or more of these facilities could have a material adverse effect on our business.***

We have major production facilities in each of France, the United States, China, India and South Korea. A significant interruption of production at any one of these facilities could cause disruptions in our ability to serve our markets, by rendering it impossible or commercially impracticable to deliver our products. For example, the damage that resulted from Hurricane Katrina in 2005 halted the shipment of our products from, and the delivery of raw materials to, affected plants in the United States for a period of several weeks, and transportation costs from the United States to Europe increased our costs. Further disruptions were caused by the COVID-19 pandemic, see “—COVID-19, or the outbreak of other contagious diseases, may have a material adverse effect on our business, results of operations financial condition and cash flows and has adversely affected our operations and financial results.” These disruptions could have a material adverse effect on our business, financial condition and results of operations. Moreover, we plan to increase our manufacturing capacity in the next several years. Disruptions in our ability to achieve this expansion will impact our growth strategy.

***Fluctuations in oil prices could cause a decrease in market demand for our oil recovery applications.***

The demand for the products we produce for the oil and gas industry, which composed approximately 25% of our 2023 net revenue, depends in large part on oil and gas prices. For example, we sell PAM for use in chemical flooding in the oil industry (in a process known as enhanced oil recovery, or “EOR”). The total cost per barrel for EOR technique ranges from approximately \$3 to \$6 per barrel. While current oil prices make it cost-effective for oil producers to use EOR techniques, despite the significant decline in oil prices in recent months, if there is a significant drop in oil prices, our product might no longer be economically viable for oil producers.

Oil prices can vary as a result of various factors, including excess supply, natural disasters, political instability or conflicts, economic conditions or actions taken by major oil-exporting countries. A material drop in oil prices may result in less demand and lower prices for our products as oil and petroleum customers become less willing to pay for the products that we currently sell and those relating to EOR.

***If we are unable to respond to the changing needs of a particular industry and to anticipate, respond to or utilize new technologies and develop additional product offerings, it could become more difficult for us to respond to the needs of the customers we supply and result in us being less competitive.***

We have historically been able to maintain our market positions and margins through continuous innovation of products and development of additional products to create value for the end users and resellers we supply. We may not be successful in continuing to produce creative new products in the future. Our future operating results will likely depend on our ability to continue to introduce new products and applications and to develop new offerings that offer distinct value for the end users and resellers we supply. We cannot assure investors that:

- we will be successful in developing new products or systems or bringing them to market in a timely manner;
- products or technologies developed by others will not render our offerings obsolete or non-competitive;
- customers will accept our innovations;
- we will have sufficient resources to research and develop new technologies and products; or
- our significant research and development efforts and expenditures for new products will ultimately prove successful.

***Significant competition in our industry may adversely affect our competitive position, revenue and overall operations.***

The markets for most of our products are highly competitive. We are exposed to the competitive characteristics of several different geographic markets and industries. We compete on a number of considerations, such as product innovation, product quality, timing of deliveries and price. Some of our competitors have greater financial, technical and marketing resources than us and may be able to compete better than we do. Further, if a competitor is able to sell directly to end users, rather than through resellers or distributors, it may be in a better position to respond to the needs of end users and may be better able to compete than we are. As the markets for our products expand, we expect that existing competitors may commit more resources to the markets in which we participate. We cannot assure investors that we will be able to compete effectively in these markets in the future.

***Our future success will depend in part on our ability to protect our intellectual property rights, and our inability to enforce these rights could permit others to offer products competitive with ours.***

We rely on the patent, trademark, copyright and trade secret laws of several countries to protect our intellectual property rights. However, we may be unable to prevent third parties from using our intellectual property without our authorization. The use of our intellectual property by others could reduce any competitive advantage we have developed or otherwise harm our business. If we had to litigate to protect these rights, any proceedings could be costly, and we may not prevail.

In particular, we have the benefit of patent licenses, on some of which we rely for the production of certain of our products and/or our production processes. We may not be able to maintain or renew these licenses in the future, which could have a material adverse effect on our business.

We regularly obtain and apply for several worldwide patent and trademark registrations, and will continue to evaluate the registration of additional service marks, trademarks and patents, as appropriate. Our pending applications may not be approved by the applicable governmental authorities and, even if the applications are approved, third parties may seek to oppose or otherwise challenge these registrations. A failure to obtain trademark and patent registrations could limit our ability to protect our trademarks and impede our marketing efforts in those jurisdictions.

***Our worldwide operations expose us to global economic and political changes that could impact our profitability.***

We have significant worldwide operations, which include joint ventures and other relationships. There are inherent risks in our international operations, including:

- exchange controls and currency restrictions;
- the possibility of currency fluctuations and devaluations;
- tariffs and trade barriers;
- export duties and quotas;
- changes in local economic conditions;
- changes in laws and regulations;
- difficulties in managing international operations and the burden of complying with local laws;
- exposure to possible expropriation or other government actions;
- restrictions on our ability to repatriate dividends from our subsidiaries; and
- unsettled political conditions.

Our international operations also expose us to different local political and business risks and challenges. For example, in certain countries, such as China, we face periodic political issues which could result in foreign exchange risks or the risk that we are required to include local ownership or management in our businesses. We also face the risk of economic uncertainty, which may impact our business in these countries. Other risks in international business also include difficulties in staffing and managing local operations, including our obligations to design local solutions to manage credit risk to local end users and distributors.

Other risks of international operations include trade barriers, tariffs, exchange controls, national and regional labor strikes, social and political risks, general economic risks, required compliance with a variety of laws, including tax laws and the difficulty of enforcing agreements and collecting receivables through legal systems in certain jurisdictions. Our overall success as a global business depends, in part, upon our ability to succeed in differing economic, social and political conditions. We may not continue to succeed in developing and implementing policies and strategies that are effective in each location where we do business, which could negatively affect our business and financial condition.

***We are exposed to currency fluctuation risks as well as to economic downturns and local business risks in several different countries that could adversely affect our profitability.***

Because we operate globally, our financial results are subject to both translation and transaction effects resulting from fluctuations in currency exchange rates. The primary currency exchange risk we face is translation risk. In preparing our consolidated financial statements, we convert the results of our subsidiaries located outside the Eurozone at the spot rate as of each balance sheet date and for statement of income items, at the average rate over the period. When the value of the euro increases in relation to a non-euro currency, those results are, all else being equal, lower due to the translation effect. For example, in 2023, we generated 41% of net revenue in North America.

We are also exposed to transaction risk when our revenue is denominated in currencies that are different from those in which we purchase our raw materials and incur production costs although the majority of our raw materials and production costs are incurred in the same currency in which we earn our revenue. If the value of the currency in which the selling price is denominated declines relative to the currency in which we incur our costs, the profit margin for any such transaction would be reduced. In countries where we sell our products in currencies other than the euro, we aim to incur a large portion of the costs associated with those sales in the same non-euro currency. This partial matching of costs to revenue creates a natural hedge that protects us to a degree against the transaction effects of exchange rate fluctuation. Nevertheless, a short-to-medium-term decline in the value of the U.S. dollar and other currencies relative to the euro could weaken our competitive position as compared to competitors who incur a larger portion of their costs in the currencies of their export markets.

***Our success depends on the continued service of certain key personnel.***

Our success depends in significant part upon the continued service of our directors and senior management, as well as senior management at each of our material subsidiaries, including our Chairman and Chief Executive Officer, Pascal Remy; René Pich, our Senior Executive Vice President and one of our two original founders; Cédric Favero, our R&D Director; and Philippe Le-cointre, our Chief Quality Officer. Our future growth and success also depend on our ability to attract, train, retain and motivate skilled managerial, sales, administration, operating and technical personnel. The loss of one or more of our key management or operating personnel, or the failure to attract and retain additional key personnel, could have a material adverse impact on our business.

***We depend on good relations with our workforce, and any significant disruption in our workforce could adversely affect us.***

As of December 31, 2023, we employed 8,151 people, some of whom are members of labor unions, of whom 1,628 are located in France. From time to time, we have taken advantage of government programs in the markets where we operate designed to favor employment, including government furlough schemes. There can be no assurance that such programs will not adversely affect our relationship with our workforce.

If we were to make any changes to the terms of employment for any of our employees and such employees were to react adversely to these changes, we could experience labor disputes and work stoppages at one or more of our sites. More generally, some of our operations are located in France, and although we have had limited labor union issues in the past, there is a history of labor disputes and work stoppages among workers in France. A labor disturbance or work stoppage at any of our facilities could have an adverse effect on that facility's operations and, potentially, on our business.

***Environmental, safety and production regulations or concerns could cause our plants to be seized or our operations to be interrupted, require us to modify our operations, subject us to liability for fines or damages, and increase our manufacturing and delivery costs.***

We are subject to the requirements of environmental and occupational safety and health laws and regulations in the United States and other countries. These include laws and regulations pertaining to the discharge of materials into the environment, pertaining to the manufacture, transportation, storage, handling and disposal of hazardous substances and hazardous wastes, or otherwise relating to the protection of human health and the environment.

Under some of these laws and regulations, a current or previous owner or operator of a facility may be liable for the removal or remediation of hazardous materials at the facility and nearby areas. Such laws typically impose liability without regard to fault. In addition, under various laws governing the generation, transportation, treatment, storage or disposal of solid and hazardous wastes, owners and operators of facilities may be liable for investigation or remediation at areas where hazardous materials have been released. The costs of investigation of remediation may be substantial. The presence of hazardous materials in the environment at any of our facilities, or the failure to abate such materials promptly or properly, may adversely affect our ability to operate such facilities. Certain of these laws also impose liability for investigation or remediation on persons who dispose of or arrange for the disposal of hazardous substances at facilities owned or operated by third parties. In certain instances, liability for such costs is retroactive, strict, and joint and several; it may also include obligations to investigate and clean up environmental contamination on or from our current or former properties or at off-site locations to which we sent wastes. Under these laws and regulations, we may have these obligations without regard to fault or the legality of the conduct that contributed to the contamination, and liability for the entire cost of a cleanup can be imposed on any responsible party.

The activities and plants at our production facilities are subject to a variety of laws and regulations, including requirements relating to the emission of pollutants into the ground, waters and the atmosphere and the generation, transportation, treatment, storage, and disposal of solid and hazardous wastes. We are also subject to laws that regulate the manufacture, processing and distribution of chemical substances and mixtures, as well as the disposition of certain hazardous substances. Further, non-compliance or alleged non-compliance with environmental and product safety regulations may result in our being forced to modify plant operations, or even result in the seizure of raw materials or product or the permanent or temporary discontinuation of the operations of our non-conforming plants.



We have made, and will continue to make, capital and other expenditures to comply with these environmental requirements. Although we believe we are in material compliance with environmental requirements, we may not have been and may not at all times be in complete compliance with all of these requirements, and we may incur material fines, damages, or liabilities in connection with these requirements in excess of amounts we have reserved, or our operations at nonconforming plants may be interrupted or discontinued by administrative or court orders. In addition, these requirements are complex, change frequently and tend to become more stringent over time. In addition, in the future, we may discover previously unknown contamination that could subject us to additional expense and liability.

Our products, including the raw materials we handle, are subject to rigorous industrial and environmental safety and health regulations and investigations. There is a risk that a key raw material, chemical or substance or one of our products may be re-characterized as having a toxicological or health related impact on the environment, on the end users and resellers we supply, or our employees. Industrial and environmental safety and health regulations are continually strengthened and if such re-characterization occurred, the relevant raw material, chemical or product may be banned or we may incur increased costs in order to comply with new requirements. Changes in industrial and environmental safety and hygiene regulations may also affect the marketability of certain of our products, and may have a material adverse effect on our business.

Production, waste and product regulations are subject to expansion or enhancement. Any new or tightened regulations could lead to increases in the direct and indirect costs we incur in manufacturing and delivering products to the end users and resellers we supply. For example, the European Parliament and Council adopted chemical legislation which went into force in 2007 and which impacts the manufacturers, importers, distributors and users of all chemicals, not just those chemicals which are considered to be hazardous to human health and the environment. The ongoing implementation of this regulation, referred to as REACH (Registration, Evaluation and Authorisation of Chemicals), means that all chemical manufacturers and importers are faced with additional costs to conduct their businesses in the European Union and the European Economic Area.

Under REACH, acrylamide, the main raw material for PAM, has been listed as a candidate for inclusion in the authorization process (Annex XIV). However, EU concerns about acrylamide were for its use in chemical grouting applications, which have now been banned in the EU. Therefore, the European Chemicals Agency (the "ECHA") has determined not to prioritize acrylamide for inclusion in Annex XIV at this time. Even if Authorisation should go forward, it would have no impact on acrylamide's use as a monomer in polymer manufacture, as such usage is exempt from the Authorisation process. No other raw material of ours is included in the EU REACH Candidate List of Substances of Very High Concern for Authorisation.

New or expanded chemical regulations are being implemented or considered in other areas of the world. In addition to an increase in costs in purchasing raw materials and manufacturing and delivering products, these new programs and any future changes in production regulations could result in interruptions to our business and potentially cause economic or consequential losses should we be unable to meet the related demands of end users and resellers of our products. For example, SNF was the Lead Registrant for acrylamide under K-REACH, a law in Korea similar to EU REACH. SNF completed the registration process in 2018, and we therefore expect no interruption to our business in Korea with consequent economic or consequential losses in relation to product registration requirements.

Further, our products are used as drag reducing agents in the hydraulic fracturing process used in the shale gas and shale oil extraction business. Hydraulic fracturing has come under increased regulatory scrutiny in recent years, and has been banned altogether in certain jurisdictions, including in France. Additionally, the U.S. federal government and several U.S. state governments have considered, proposed or implemented legislation and regulations requiring, among other things, the disclosure of chemicals used by the oil and natural gas industry in the hydraulic fracturing process, and there are ongoing agency studies of the process. Although we have not to date experienced effects from these activities, depending on the outcome of these regulatory and legislative processes (including increased disclosure of the chemical constituents in hydraulic fracturing fluid), participants in the hydraulic fracturing business (including us) could see increased regulatory scrutiny and potential associated litigation, which could result in decreased demand for our products and adversely affect our hydraulic fracturing business. Further, fracking has recently been the subject of negative media attention, criticized for its potentially negative impact on the environment. Such media reporting may cause decreased demand for our products as well as cause harm to our reputation, which may have an adverse impact on our business, financial position and results of operations

***Climate change may affect our operations and product sales.***

Climate change has increasingly become the subject of substantial international, national, regional, and local attention, and impacts will likely be driven by changes in physical climate parameters, regulations and public policy. For example, it is difficult to predict and assess the physical impacts that changing climate conditions, such as droughts, or more frequent and severe weather events, such as hurricanes, will have on our business (including impacts to our operating locations and supply chain). Environmental concerns have been progressing rapidly and have already transformed certain sectors. Due to concerns over the risk of climate change, a number of countries have adopted, or are considering the adoption of, regulatory frameworks to reduce greenhouse gas (“GHG”) emissions. These include adoption of cap and trade regimes, carbon taxes, restrictive permitting, increased efficiency standards, and incentives or mandates for renewable energy. We expect climate change in both developing and developed countries to become a growing concern over time, and therefore change laws, regulations, habits and processes in the future. At this stage, it is not possible to accurately estimate a timetable or future compliance costs relating to implementation of climate change-related laws and regulations. Such future changes in legislation and regulation, and related voluntary actions associated with climate change, may increase the likelihood that the Company’s manufacturing facilities will be impacted by carbon requirements, regulation of GHG emissions, and energy policy, which may in turn result in increased capital expenditures, increased costs for raw materials and energy, limitations on raw material and energy source and supply choices, and other compliance costs.

Our sales ultimately depend on several factors, and the demand for our customers’ end products, and consequentially our products, may be affected by the impact of behavioral and regulatory changes in France and other markets in which we operate. Any such changes as a result of climate change could reduce the demand for our customers’ end products, make our products more expensive, less competitive and less appealing, as well as shift demand towards different sources with lower environmental impact. Any such change could have an adverse effect on our business, results of operations and financial condition.

***Our operations are subject to hazards, which could result in significant liability to us.***

Our operations are subject to the hazards associated with chemical manufacturing and the related storage and transportation of raw materials, products and wastes. These hazards include explosions, fires, natural disasters, mechanical failure, remediation material and chemical spills, discharges or releases of toxic or hazardous substances or gases, and other environmental risks. These hazards can cause personal injury and loss of life, severe damage to or destruction of property and equipment and environmental damage, and may result in suspension of operations and the imposition of civil and criminal liabilities, as well as litigation in the United States and in the rest of the world.

***We may be liable for damages based on product liability claims.***

Because many of our products provide critical performance attributes to the applications and products of end users, the sale of these products involves the risk of product liability claims. A successful product liability claim or series of claims against us in excess of our insurance coverage for payments for which we are not otherwise indemnified could have a material adverse effect on our financial condition or results of operations.

## RISKS RELATED TO OUR CAPITAL STRUCTURE

### ***Our substantial indebtedness could harm our business by limiting our available cash and our access to additional capital.***

As a result of the issuance of our Senior Notes due 2026, our Senior Notes due 2027, our Senior Notes due 2029, our Senior Notes due 2030, our borrowings under our senior revolving credit facility and our other financing arrangements, we have substantial debt.

Our degree of indebtedness could have important consequences for investors, including the following:

- it may limit our and our subsidiaries' ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, acquisitions and investments, and general corporate or other purposes on favorable terms or at all;
- a substantial portion of our cash flows from operations must be dedicated to the payment of principal and interest on our indebtedness and thus will not be available for other purposes, including operations, capital expenditures and future business opportunities;
- the debt service requirements of our other indebtedness could make it more difficult for us to make payments on the Notes;
- it may limit our ability to adjust to changing market conditions and place us at a competitive disadvantage compared to those of our competitors that are less highly-leveraged;
- it may restrict our ability to make strategic acquisitions or cause us to make non-strategic divestitures; and
- we may be more vulnerable than a less leveraged company to a downturn in general economic conditions or in our business, or we may be unable to carry out capital spending that is important to our growth.

### ***Our debt agreements, and the indentures governing our Senior Notes contain, restrictions that limit our flexibility in operating our business.***

Our senior revolving credit facility and the indentures governing our Senior Notes due 2026, our Senior Notes due 2027, our Senior Notes due 2029, our Senior Notes due 2030, and our other financing arrangements, contain a number of significant covenants. These covenants, among other things, restrict our and our subsidiaries' ability to:

- incur or guarantee additional indebtedness;
- pay dividends on or make other distributions or repurchase our own shares;
- make certain investments;
- create certain liens;
- enter into new sale and leaseback transactions;
- enter into certain types of transactions with our affiliates;
- limit dividends or other payments by restricted subsidiaries;
- use assets as security in other transactions;
- repay the Notes;
- change substantially the nature of our business; and
- sell certain assets or merge with or into other companies.

In addition, under our senior revolving credit facility, we are required to satisfy and maintain specified financial ratios and tests. Events beyond our control may affect our ability to comply with those provisions and we may not be able to meet those ratios and tests. The breach of any of these covenants would result in a default under the senior revolving credit facility agreement and the lenders could elect to declare all amounts borrowed under our senior revolving credit facility, together with accrued interest and other ancillary amounts, to be due and payable. If any of our indebtedness were to be accelerated, our assets may not be sufficient to repay in full that indebtedness and the Notes.

Many of the covenants in the Indenture will be terminated if the Notes are rated investment grade with a stable outlook by both of S&P and Moody's Investor Service, Inc. ("Moody's"). The covenant termination will occur following S&P and Moody's rating change provided at such time no default under the Indenture has occurred and is continuing. There can be no assurance that the Notes will ever be rated investment grade, or that if they are rated investment grade, that they will maintain such ratings.

***We must rely on payments from our subsidiaries to fund payments of the Notes. Such funds may not be available in certain circumstances.***

We are primarily a holding company and all of our operations are conducted through our subsidiaries. Therefore, we depend on dividends or other payments from our subsidiaries to meet our obligations, including our obligations under the Notes. The ability of our subsidiaries to distribute funds to us by way of dividends, distributions, interest, return on investments or other payments (including loans) is subject to the availability of profits and funds, and various restrictions, including restrictions imposed by other indebtedness and, with respect to French subsidiaries, by their own corporate interest (intérêt social). Noteholders will not have a direct claim on the cash flows of our operating subsidiaries, and such subsidiaries are legally distinct and have no obligation and have made no guarantee, contingent or otherwise, to pay amounts due under the Notes or to make such funds available to us. If we do not have sufficient funds for payment of the interest, principal and additional amounts, if any, on the Notes when due, and unless we are able to obtain funds from a source other than our subsidiaries, we may not be able to satisfy our obligations under the Notes.

***We are controlled by a significant shareholder whose interests may conflict with investors.***

Substantially all of our shares (more than 99.99%) are owned by a U.S.-based irrevocable trust, the potential beneficiaries of which are charities. Our shares are locked and illiquid and, therefore, have no economic value. While 3 of our board members would be considered as "independent" of our shareholder or our management, the interests of our shareholder and/or our board of directors could conflict with investors' interests, particularly if we encounter financial difficulties or are unable to pay our debts when due.

***Our variable rate indebtedness and our indebtedness denominated in non-euro currencies subjects us to interest rate risks, which could cause our debt service obligations to increase significantly.***

Certain of our borrowings, primarily borrowings under our senior revolving credit facility, will be at variable rates of interest and will expose us to interest rate risk. If interest rates increase, our debt service obligations on the variable rate indebtedness would increase even though the amount borrowed remained the same, and our net income and cash available for servicing our indebtedness, including the Notes, would decrease.

Moreover, we have borrowed the amounts under our Senior Notes due 2027, our Senior Notes due 2030 and a part of our senior revolving credit facility in U.S. dollars. Other of our indebtedness is denominated in currencies other than euro. Depreciation of the euro against these currencies could result in increases in our total indebtedness and debt service requirements, which we record in euro.

***We may not be able to generate sufficient cash to service all of our indebtedness, including the Notes, and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.***

Our ability to make scheduled payments or to refinance our debt obligations depends on our financial and operating performance, which is subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We may not be able to maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, seek additional capital or seek to restructure or refinance our indebtedness, including the Notes. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service and other obligations. Our senior revolving credit facility and the Indenture governing the Notes will restrict our ability to use the proceeds from asset sales. We may not be able to consummate those asset sales to raise capital or sell assets at prices that we believe are fair and proceeds that we do receive may not be adequate to meet any debt service obligations then due.

***We may face risks related to taxation and changes to applicable tax regimes.***

We are subject to complex and evolving tax legislation in the countries in which we operate, international tax laws as well as tax compliance requirements (especially in the current international tax context tending towards enhanced mandatory disclosure obligations). Changes in tax laws or regulations or in their interpretations could adversely affect our tax position, such as our effective tax rate or tax payments.

In particular, European and French tax laws and regulations are extremely complex and are subject to varying interpretations. For example, the current incorporation into French tax law of the Organization for Economic Cooperation and Development's (the "OECD") principles related to base erosions and profit shifting ("BEPS") that were included in the final reports released by the OECD as well as the Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS signed in Paris on June 7, 2017, may increase the administrative efforts within our business and impact existing structures.

Furthermore, the European Union continues to harmonize the tax legislation of the Member States. In this respect, the Council of the European Union (the "Council of the European Union") adopted a directive "laying down rules against tax avoidance practices that directly affect the functioning of the internal market" on July 12, 2016 (Council Directive 2016/1164) (the "ATAD"). The ATAD was later amended on May 29, 2017 by the Council Directive (EU) 2017/952 (the "ATAD 2"), which, inter alia, extended the scope of the ATAD to hybrid mismatches involving third countries (subject to certain exceptions) as from January 1, 2020. Amongst the set of measures, the ATAD provides for a general interest limitation rule pursuant to which the tax deduction of net financial expenses is limited to 30% of the taxpayer's earnings before interest, tax, depreciation and amortization (EBITDA) or to a maximum amount of €3 million, whichever is higher (subject to several exceptions). Such rules are transposed under French tax law under Article 212-I-b of the French Tax Code (code général des impôts) (the "French Tax Code"). See "Risk factors— French tax legislation may restrict the deductibility, for French tax purposes, of all or a portion of the interest on our indebtedness incurred in France, thus reducing the cash flow available to service our indebtedness" for more details on this rule.

In addition, Article 108 of the French Finance Law for 2019 introduced under French tax law, the anti-abuse provision provided for by the ATAD with respect to French corporate income tax, which aims to address abusive tax practices that are not dealt with by specifically targeted provisions. Pursuant to this provision, the French tax authorities might ignore an arrangement, or a series of arrangements, which, having been put into place for the main purpose or one of the main purposes of obtaining a tax advantage that defeats the object or purpose of the applicable tax law, are not genuinely taking into account all relevant facts and circumstances.

Furthermore, rules on tax dispute resolution apply since July 1, 2019 following the transposition of Council Directive 2017/1852 of October 10, 2017 into French tax law as part of the French Finance Law for 2019. These regulations could impact our tax position in the future.

The European Commission has also published a corporate reform package proposal on October 25, 2016, including three new proposals that aim at (i) relaunching the Common Consolidated Corporate Tax Base ("CCCTB") which is a single set of rules to compute companies' taxable profits in the EU, (ii) avoiding loopholes associated with profit-shifting for tax between EU countries and non-EU countries, and (iii) providing new dispute resolution rules to relieve problems with double taxation for businesses. The directive proposal on the CCCTB requires unanimity in the Council of the European Union for its adoption following consultation of the European Parliament (special legislative procedure), which gave its favorable vote on March 15, 2018. It is expected to be implemented in two steps, with the common base being implemented as a first step and consolidation being put in place swiftly afterwards.

In a communication to the European Parliament and the Council of May 18, 2021 denominated "Business Taxation for the 21st Century", the European Commission announced additional measures in the field of corporate taxation to take into account the evolution of the context of the EU business taxation policy. In particular, the European Commission announced a new framework for income taxation for businesses in Europe ("Business in Europe: Framework for Income Taxation" or "BEFIT") that will replace the pending proposals under the CCCTB. BEFIT will be a single corporate tax rulebook for the EU and will consist in consolidating the profits of the EU members of a multinational group into a single tax base, which will then be allocated to Member States using a formula and be taxed at national corporate income tax rates. The preparation for this new proposal will be carried out by the European Commission alongside the Member States and the European Parliament and will give rise to consultations with the business sector and civil society groups.

Alongside BEFIT, the European Commission prepared a legislative set of rules to neutralize the misuse of shell entities for tax purposes and published a proposal of «Unshell» Directive («ATAD 3») on 22 December 2021. ATAD 3 aims to introduce a multiple-step filtering procedure to help Member States to identify entities located in the EU which have no or minimal economic activity, and which do not have minimal substance and are misused for the purpose of obtaining tax advantages. According to ATAD 3, in such circumstances, such shell company would no longer be eligible to the benefits of its tax treaty or any applicable EU directives

provisions and would no longer get the tax certificate (or one with a main statement). Moreover, the relevant income of the shell company will be taxed in the Member State where the shareholders are residing, as if that income had directly accrued to them. Information on EU shells will be exchanged automatically through an EU-wide central directory. ATAD 3 has been voted by European Parliament on 17 January 2023. However, ATAD 3 is still subject to adoption by the EU Council and no transposition deadline has been communicated by the EU authorities.

The European Commission also published a proposal of a Debt Equity Bias Reduction Allowance (“DEBRA”) Directive on 11 May 2022 in order to fight against tax incentives and to favorize the recourse to equity financing. The draft DEBRA Directive would apply to all corporate taxpayers apart from financial undertakings such as for instance credit institutions, investment funds and certain other regulated entities. The draft DEBRA Directive provides for two sets of rules: (i) the introduction under certain conditions of a notional interest deduction calculated on the increase of companies’ net equity observed between the end of financial year N and the end of financial year N-1 (it being noted that the net equity is defined as the sum of the company’s paid-up capital, share premium accounts, revaluation reserve and other reserves and profit or loss brought forward), and (ii) a new restriction on the deduction of net financial charges, whereby companies would be entitled to deduct the lower between (i) 85% of their net financial charges (ratio provided by DEBRA), or (ii) the amount deductible by virtue of the general cap limitation provided by ATAD. DEBRA Directive has been voted by European Parliament on 16 January 2024. However, DEBRA Directive is still subject to adoption by the EU Council and no transposition deadline has been communicated by the EU authorities.

In addition to the above work, the European Commission also published a proposal of Directive on 22 December 2021 to implement at EU level the minimum taxation component, known as «Pillar 2» of the OECD’s reform of international taxation. EU member states reached agreement in December 2022 in relation hereto. According to Pillar 2, profits made by the large multinational and domestic groups or companies (i.e. with a combined annual turnover of at least €750 million in at least two of the last four years) would be taxed at a minimum rate of 15% through the introduction of two rules, the income inclusion rule («IIR») and the under-taxed payments rule («UTPR»), collectively referred to as the GloBE rules. Under the IIR, where an entity’s effective tax rate in any jurisdiction is below the minimum 15% rate, the ultimate parent entity is primarily liable for a ‘top-up tax’ to bring the rate up to 15%. As a backstop, the UTPR can apply in cases where the effective tax rate in a country is below the minimum rate of 15%, but the IIR has not been fully applied. France transposed Pillar 2 into domestic law with 2024 Finance Bill dated 29 December 2023 in articles 223 VJ to 223 WZ of the French Tax Code, effective as from 1 January 2024 for the IIR and as from 1 January 2025 for the UTPR.

We often rely on generally available interpretations of tax laws and regulations in the jurisdictions in which we operate. We cannot be certain that the relevant tax authorities are in agreement with our interpretation of these laws. If our tax positions are challenged by relevant tax authorities, the imposition of additional taxes could require us to pay taxes that we currently do not collect or pay or increase the costs of our products or services to track and collect such taxes, which could increase our costs of operations and have a negative effect on our business, results of operations and financial condition.

***French tax legislation may restrict the deductibility, for French tax purposes, of all or a portion of the interest on our indebtedness incurred in France, thus reducing the cash flow available to service our indebtedness.***

The main limitations on deductibility of interest which could apply to us are outlined below. Such description is not exhaustive, holders of the Notes are advised to seek their own professional advice in relation to the risk factors relating to tax.

Please note that the below description is based on the rules currently in force under French tax legislation.

Interest paid by an entity to a direct shareholder are only tax deductible up to the rate referred to in Article 39-1-3 of the French Tax Code (i.e., the annual average of the average effective floating rates on bank loans to companies with an initial maturity exceeding two years). By derogation, Article 212 § I-a) of the French Tax Code provides that, with respect, to loans granted by a related party within the meaning of Article 39.12 of the French Tax Code, the interest is deductible up to the rate referred to in Article 39-1-3 of the French Tax Code or, up to the rate that the borrowing entity could have obtained from independent financial credit institutions in similar circumstances if higher than the rate referred to in Article 39-1-3 of the French Tax Code.

The anti-hybrid provisions, as amended by the Finance Law for 2020 implementing ATAD 2 are codified under Articles 205 B, 205 C and 205 D of the French Tax Code. As a general principle, hybrid schemes between associated companies (under the meaning of new Article 205 B, I 16° of the French Tax Code) originating a tax asymmetry effect (i.e., double deduction or deduction without inclusion) fall into those restrictions. As a result, interest paid by a French company to associated companies will not be deductible in France if (i) the same payment gives right to deduction in another jurisdiction (including if this results from a double tax residency of the debtor as provided by Article 205 D of the French Tax Code) or (ii) if said interest are nowhere included in the tax basis of the beneficiary. The tax asymmetry in this second instance (i.e., no inclusion) can result from (i) the difference in the

qualification of the hybrid instrument used between the respective jurisdictions of the debtor and beneficiary, (ii) the difference in the analysis of which entity should get the allocation of the income (hybrid beneficiary or beneficiary with various establishments or attribution of the income to a non-taxable establishment), or (iii) the difference in the analysis of an hybrid debtor according to which payment is disregarded in the jurisdiction of the beneficiary. Although the aim of those provisions is primarily to cover schemes between associated entities, it also includes payments to third parties in case of a structured scheme i.e., an hybrid scheme with a third party which terms reflect the benefit of the tax asymmetry and where all or part of the tax gain is in fine reallocated to an associated company.

A general cap limits the deduction of the net financial charges incurred by a company or a tax group in accordance with Article 212 bis § II of the French Tax Code. The cap applies at the company's level when the company is taxed on a stand-alone basis or at the tax group level when the company is a member of a tax consolidated group. The cap differs depending on various factual circumstances, namely (i) the net financial expenses of the company or tax consolidated group for a given fiscal year (i.e., difference between the financial expenses and the financial incomes acquired); (ii) their adjusted tax EBITDA for said fiscal year (corresponding to the taxable income before offset of carry forward tax losses and without taking into consideration net financial expenses and, to some extent, depreciation, provisions and capital gains/losses); (iii) the nature of the indebtedness (i.e., third party debt or intragroup debt appreciated between entities holding a stake of at least 50% or having de facto control); (iv) in case of intragroup debt, the average amount of related party debt exceeding 1.5 times the amount of its net equity where the company or the tax consolidated group will be regarded as thin-capitalized (i.e., "Thin-Capitalized Perimeter"); (v) the comparison between the total indebtedness of the company or the tax consolidated group with the one of the consolidated group, to which the company or tax consolidated group belongs (i.e., the "Indebtedness Safe Harbor"); and (vi) the comparison of the net equity ratio of the company or tax group over the assets compared to the one of the consolidated group to which the company or the tax group belongs (i.e., the "Financial Autonomy Safe Harbor"). As a principle, a company / tax consolidated group may deduct its net financial expenses within the limit of the higher between €3.0 million and 30% of the company / tax consolidated group's adjusted tax EBITDA. This general cap is increased by 75% of the portion of the net financial expenses which are non-deductible after application of the €3.0 million or 30% adjusted tax EBITDA limitation in three circumstances : (i) autonomous companies (i.e., companies which are not members of a consolidated group, have no establishment outside France and no associated company (appreciated between entities holding a stake of at least 25%); (ii) companies or tax consolidated groups belonging to a consolidated group which do not qualify as a Thin-Capitalized Perimeter and benefit from the Indebtedness Safe Harbor; and (iii) companies or tax consolidated groups belonging to a consolidated group which qualify as a Thin-Capitalized Perimeter but benefit from both the Indebtedness Safe Harbor and the Financial Autonomy Safe Harbor. A contrario, restrictive limitations may apply in case the company / tax consolidated group qualify as a Thin-Capitalized Perimeter (unless it benefits from the Indebtedness Safe Harbor) where the €3.0 million and 30% of the company / tax consolidated group's adjusted tax EBITDA is partially reduced to €1.0 million and 10% of the company / tax consolidated group's adjusted tax EBITDA for the portion of the net financial expenses corresponding to the intragroup debt in excess to the 1/1.5 debt to equity ratio.

Pursuant to the Bulletin Officiel des Finances Publiques-Impôts BOI-IS-BASE-35-40-10-20, § 20, dated May 13, 2020 and BOI-IS-BASE-35-40-20, § 240, dated May 13, 2020, the portion of interest that is not deductible by virtue of (i) Article 212 bis, I of the French Tax Code under the "30% adjusted tax EBITDA limitation" and/or (ii) Article 212 bis, VII of the French Tax Code under the thin-capitalization rules is not to be recharacterized as a "deemed distribution" pursuant to Articles 119 et seq. of the French Tax Code and, therefore, is not subject to the withholding tax set out under Article 119 bis 2 of the French Tax Code.

French tax legislation shall also transpose the new interest deduction limitation rule provided by DEBRA directive after adoption by EU Council. The deductibility of interest would be limited to the lower between the general cap above mentioned or 85 % of net financial charges. Upon transposition, it is expected that the new interest deduction limitation rule would apply as from 2027 and exclusively to groups that are not medium-sized groups and undertakings that are not small and medium-sized enterprises.

The limitations by the aforementioned tax rules of our ability to deduct interest accrued on our indebtedness may increase our tax burden and therefore negatively impact our financial condition, results of operations and future cash flows.

***We are able to incur substantially more debt under our debt covenants.***

We and our subsidiaries are able to incur substantial additional indebtedness. The terms of the Indenture governing the Notes will not fully prohibit us or our subsidiaries from doing so. Our revolving credit facility provides borrowing capacity of up to €750.0 million, all of which would rank equally with the Notes. If we incur any additional indebtedness that ranks equally with the Notes, the holders of that debt will be entitled to share ratably with the holders of the Notes in any proceeds distributed in connection with any insolvency, liquidation, reorganization, dissolution or other winding-up of our company. This may have the effect of reducing the amount of proceeds paid to investors. If new debt is added to our current debt levels, the related risks that we and our subsidiaries now face could intensify.

## RISKS RELATED TO THE NOTES

***Claims of the noteholders will be structurally subordinated to claims of creditors of our subsidiaries, and, as a result, in the event of our dissolution or similar event, we may not be able to satisfy investors' claims after satisfying the claims of the creditors of our subsidiaries.***

The Notes are not guaranteed by any of our subsidiaries. Accordingly, claims of holders of the Notes are structurally subordinated to the claims of creditors of our subsidiaries, including trade creditors. Upon a liquidation or other similar event, the obligations of our subsidiaries will have to be satisfied before any of the remaining assets of such subsidiaries would be available for distribution, upon a liquidation or otherwise, to holders of the Notes.

***If we default on our obligations to pay our other indebtedness, we may not be able to make payments on the Notes.***

Any default under the agreements governing our indebtedness, including a default under our senior revolving credit facility that is not waived by the required lenders, and the remedies sought by the holders of such indebtedness could make us unable to pay principal, premium, if any, and interest on the Notes and substantially decrease the market value of the Notes. If we are unable to generate sufficient cash flow and are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest and other ancillary amounts on our indebtedness, or if we otherwise fail to comply with the various covenants, including financial and operating covenants, in the instruments governing our indebtedness (including our senior revolving credit facility), we could be in default under the terms of the agreements governing such indebtedness. In the event of such default, the holders of such indebtedness could elect to declare all the funds borrowed thereunder to be due and payable, together with accrued and unpaid interest and other ancillary amounts, the lenders under our senior revolving credit facility could elect to terminate their commitments, cease making further loans and institute foreclosure proceedings against our assets, and we could be forced into bankruptcy or liquidation. If our operating performance declines, we may in the future need to seek to obtain waivers from the required lenders under our senior revolving credit facility to avoid being in default. If we breach our covenants under our senior revolving credit facility and seek a waiver, we may not be able to obtain a waiver from the required lenders. If this occurs, we would be in default under our senior revolving credit facility, the lenders could exercise their rights as described above, and we could be forced into bankruptcy or liquidation.

***Although we will be required to offer to repurchase the Notes upon a change of control, we may not have sufficient financial resources to purchase all Notes that are tendered.***

Upon the occurrence of specific kinds of change of control events, including the sale, lease or transfer of "all or substantially" all of our and our subsidiaries' assets, taken as a whole, we will be required to offer to repurchase all outstanding Notes at 101% of their principal amount, plus accrued and unpaid interest. However, we may not have sufficient financial resources to purchase all of the Notes that are tendered upon a change of control offer. Any such failure to repurchase the Notes could constitute a default under the Indenture governing the Notes.

The occurrence of a change of control could also constitute an event of default under our senior revolving credit facility. Our bank lenders may have the right to prohibit any such purchase or redemption, in which event we will seek to obtain waivers from the required lenders under our senior revolving credit facility, but may not be able to do so.

***Investors may not be able to enforce judgments obtained in U.S. courts against the Issuer or any of its directors, officers or subsidiaries.***

We are incorporated outside the United States. Most of our directors and executive officers are non-residents of the United States. Investors may be unable to effect service of process within the United States on our directors and executive officers. In addition, as most of our assets and those of our directors and executive officers are located outside of the United States, investors may be unable to enforce against them judgments obtained in the U.S. courts predicated upon the civil liability provisions of the federal securities laws of the United States.



The United States is not currently bound by a treaty providing for reciprocal recognition and enforcement of judgments, other than arbitral awards rendered in civil and commercial matters with France. There is, therefore, doubt as to the enforceability in France of civil liabilities based upon U.S. securities laws in an action to enforce a U.S. judgment in France. In addition, the enforcement in France of any judgment obtained in a New York court based on civil liabilities, whether or not predicated solely upon U.S. federal securities laws, will be subject to certain conditions. There is also doubt that a French court would have the requisite power or authority to grant remedies sought in an original action brought in France on the basis of U.S. securities laws violations.

***There are restrictions on investors' ability to transfer or resell the Notes, which may have an adverse effect on the value of the Notes.***

The Notes are being offered and sold pursuant to exemptions from registration under U.S. and applicable state securities laws. The Notes have not been and will not be registered under the Securities Act or any U.S. state securities laws and we have not undertaken to effect any exchange offer for the Notes in the future. The Notes and the Indenture will contain provisions that will restrict the Notes from being offered, sold or otherwise transferred except pursuant to the safe harbor available pursuant to Rule 144A and Regulation S, or other exceptions, under the U.S. Securities Act. Investors may transfer or resell the Notes in the United States only in a transaction registered under or exempt from the registration requirements of U.S. and applicable state securities laws. Therefore, investors may be required to bear the risk of their investment for an indefinite period of time. Furthermore, we have not registered the Notes under any other country's securities laws. It is investors obligation to ensure that their offers and sales of the Notes within the United States and other countries comply with applicable securities laws.

***The noteholders' ability to transfer the Notes may be limited by the absence of an active trading market, and there is no assurance that any active trading market will develop for the Notes.***

The Notes are securities for which there is no established public market, although we will apply to admit the Notes to trading on the Euro MTF market of Luxembourg Stock Exchange.

The Initial Purchasers have advised us that they intend to make a market in the Notes as permitted by applicable laws and regulations; however, the Initial Purchasers are not obligated to make a market in the Notes, and they may discontinue their market making activities at any time without notice. Therefore, we cannot assure noteholders that an active market for the Notes will develop or, if developed, that it will continue. Historically, the market for non-investment grade debt has been subject to substantial volatility in the prices of securities similar to the Notes. The market, if any, for the Notes may experience similar volatility. In addition, subsequent to their initial issuances the Notes may trade at discounts from their initial offering price, depending upon prevailing interest rates, the market for similar Notes, our financial and operating performance and other factors.

***The rights of a noteholder will be limited so long as the Notes are issued in book-entry interests.***

Owners of the book-entry interests will not be considered owners or holders of the Notes unless and until definitive Notes are issued in exchange for book-entry interests. Instead, the nominee for DTC will be the sole holder of the Notes.

Payments of principal, interest and other amounts owing on or in respect of the Notes in global form will be made to the Paying Agent, which will make payments to DTC. Thereafter, such payments will be credited to DTC participants' accounts that hold book-entry interests in the Notes in global form and credited by such participants to indirect participants. After payment to DTC none of us, the Trustee or any paying agent will have any responsibility or liability for any aspect of the records relating to or payments of interest, principal or other amounts to, or to owners of book-entry interests.

Owners of book-entry interests will not have the direct right to act upon our solicitations for consents or requests for waivers or other actions from holders of the Notes, including enforcement of security for the Notes. Instead, if you own a book-entry interest, you will be reliant on the nominee (as registered holder of the Notes) to act on your instructions and/or will be permitted to act directly only to the extent you have received appropriate proxies to do so from DTC or, if applicable, from a participant. We cannot assure you that procedures implemented for the granting of such proxies will be sufficient to enable you to vote on any requested actions or to take any other action on a timely basis.

***The liquidity of the market for the notes may be diminished if the proposed financial transactions tax or any similar tax were adopted.***

On February 14, 2013, the European Commission published a proposal for a Directive for a common FTT in Belgium, Germany, Greece, Spain, France, Italy, Austria, Portugal, Slovenia, Slovakia (the “Participating Member States”) and Estonia. However, Estonia officially announced its withdrawal from the negotiations and, on March 16, 2016, completed the formalities required to leave the enhanced cooperation on FTT.

The proposed FTT has a very broad scope and could, if introduced in its current form, apply to certain dealings in the Notes (including secondary market transactions) in certain circumstances, at a rate of at least 0.1% on all such transactions, generally determined by reference to the amount of consideration paid. Primary market transactions referred to in Article 5(c) of Regulation (EC) No 1287/2006 are exempt.

Under current proposals, the FTT could apply in certain circumstances to persons both within and outside of the Participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a Participating Member State. A financial institution may be, or be deemed to be, “established” in a Participating Member State in a broad range of circumstances, including: (a) by transacting with a person established in a Participating Member State; or (b) where the financial instrument which is subject to the dealings is issued in a Participating Member State.

Certain aspects of the proposal are controversial and, while the proposal initially identified the date of introduction of the FTT across the Participating Member States as being 1 January 2014, this anticipated introduction date has been extended on several occasions due to disagreement among the Participating Member States regarding a number of key issues concerning the scope and application of the FTT.

On October 10, 2016, the European Commission had been tasked with drafting the legislation to be submitted to the Participating Member States in view of reaching a political agreement on the FTT by the end of 2016. However, no agreement has been found between the Participating Member States so far. The Council of the European Union on Economic and Financial Affairs indicated on December 6, 2016 that the ten Participating Member States (excluding Estonia) agreed to pursue the ongoing work and discussions on the main features of the FTT during the first half of 2017. A written answer given by Pierre Moscovici in the European Parliament, speaking on behalf of the Commission on 8 March 2017, also confirmed that negotiations between Participating Member States on the Commission’s proposal are continuing with a number of key areas still open for discussion. On March 11, 2019, the Participating Member States decided to look at the Franco-German proposal for a tax modeled on an existing French levy “whose primary focus is taxing transactions of domestically issued shares.” In their road map for strengthening the euro area, the two countries said they aim to conclude negotiations swiftly on the levy at EU level. However, no final agreement has been reached yet.

Accordingly, the FTT proposal remains subject to negotiation between the Participating Member States and the scope of such tax is uncertain. It may therefore be altered prior to any implementation, the effective timing of which remains unclear. Additional EU Member States may decide to participate.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

If the proposed directive or any similar tax is adopted, transactions on the Notes would be subject to higher costs, and the liquidity of the market for the Notes may be diminished.

***Insolvency laws in France could limit investors’ ability to enforce noteholders’ rights under the Notes.***

The Issuer is incorporated in France. Consequently, it will be subject to French laws and proceedings affecting creditors, including Article 1343-5 of the French Civil Code (Code civil), court-assisted proceedings (mandat ad hoc proceedings or conciliation proceedings (procédure de conciliation), and court-administered proceedings (being safeguard proceedings (procédure de sauvegarde), accelerated safeguard proceedings (procédure de sauvegarde accélérée), judicial reorganization (procédure de redressement judiciaire) or liquidation proceedings (procédure de liquidation judiciaire). In general, French insolvency legislation favors the continuation of a business and protection of employment over the payment of creditors and could limit the ability of holders of the Notes to enforce their rights under the Notes.

Under the European Council Regulation (EC) No. 2015/848 on insolvency proceedings, if a debtor is located in the European

Union (other than Denmark), French courts shall have jurisdiction over the main insolvency proceedings if the debtor's center of main interests is situated in France. In the case of a debtor that is a legal person, the place of the registered office shall be presumed to be its center of main interests in the absence of proof to the contrary. This presumption however does not apply if the registered office has been moved to another Member State within the 3-month period prior to the request for the opening of insolvency proceedings. In determining whether the center of main interests of a debtor is in France, French courts will take into account a broad range of factual elements.

Insolvency proceedings opened (i) pursuant to the European insolvency regulation (main and secondary proceedings) as well as, (ii) conciliation or insolvency proceedings (x) with respect to debtors that exceed (directly or through the companies under their control) (a) 20 million euros of turnover and 250 employees or (b) 40 million euros of turnover or, (y) or with respect to debtors having their main center of interests within the jurisdiction of such specific courts, are handled by specific bankruptcy courts in France. The court that commences insolvency proceedings with respect to the member of a corporate group has jurisdiction over all the other members of this group. Accordingly, a court can supervise the insolvency proceedings of the whole group and may, for this purpose, appoint the same judicial administrator for all proceedings in respect of all members of the group.

Following the transposition of the directive 2019/1023 of the European Parliament and the Council of 20 June 2019 on preventive restructuring frameworks, on discharge of debt and disqualifications, and on measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt, and amending European directive 2017/1132 (directive on restructuring and insolvency) into French law by Ordinance No 2021-1193 dated 15 September 2021 (the «Transposition Ordinance»), French insolvency proceedings are significantly modified (particularly with regards to the process of adoption of restructuring plans under insolvency proceedings).

The transposition Ordinance has entered into force on 1st October 2021, subject to very limited exceptions, and is applicable to insolvency proceedings opened as from the said date.

The Transposition Ordinance has been completed by Decree No 2021-1218 dated 23 September 2021.

#### *Grace periods*

In addition to the insolvency legislation discussed below, holders of the Notes could, like any other creditors, be subject to Article 1343-5 of the French Civil Code (Code civil).

Pursuant to the provisions of this article, French courts may, in any civil or commercial proceedings involving the debtor, whether initiated by the debtor or the creditor, taking into account the debtor's financial position and the creditor's needs, defer or otherwise reschedule over a maximum period of two years the payment dates of payment obligations that are due and decide that any amounts, the payment date of which is thus deferred or rescheduled, will bear interest at a rate that is lower than the contractual rate (but not lower than the legal rate, as published semi-annually by the French government) or that payments made shall first be allocated to the repayment of principal. A court order made under Article 1343-5 of the French Civil Code will suspend any pending enforcement measures, and any contractual default interest or penalty for late payment will not accrue or be due during the grace periods ordered by the relevant judge. Creditors cannot contract out of such grace periods.

With respect to grace periods under Article 1343-5 of the French Civil Code, pursuant to Article L.611-7 of the French Commercial code (Code de commerce) in the event of the debtor is put on notice or sued by one of its creditor, or if a creditor has not accepted, by the deadline set by the conciliator, a request made by the latter to suspend payment of its claims, the debtor retains the right to petition the judge having commenced conciliation proceedings for grace periods under Article 1343-5 of the French Civil Code, in the latter case, the judge may defer or reschedule the payment of undue claims for the duration of the conciliator's mission, whereas due claims are deferred in accordance with Article 1343-5 of the French Civil Code.

If the debtor is engaged in conciliation proceedings or has reached a conciliation agreement that is in the course of being executed, special rules apply to the grant of grace periods (see “—Court-assisted proceedings” below).

#### *Insolvency test*

Under French law, a debtor is considered to be insolvent (en état de cessation des paiements) when it is unable to pay its due debts (passif exigible) with its immediately available assets (actif disponible) taking into account available credit lines, existing debt rescheduling agreements and moratoria.

The date of insolvency (date d'état de cessation des paiements) is generally deemed to be the date of the court ruling commencing the judicial reorganization or judicial liquidation proceedings, unless the court sets an earlier date, which may be carried back up to 18 months before the date of such court ruling. Except for fraud, the date of insolvency may not be fixed at an earlier date than the date of the final court decision that approved an agreement (homologation) in the context of conciliation proceedings. The date of insolvency marks the beginning of the hardening period (période suspecte).

#### *Court-assisted proceedings*

A French debtor facing difficulties may in certain conditions request the commencement of court-assisted proceedings (mandat ad hoc or conciliation), the aim of which is to reach an agreement with the debtor's main creditors and stakeholders e.g., an agreement to reduce or reschedule its indebtedness.

Mandat ad hoc proceedings are optional and may only be initiated by the debtor company itself, in its sole discretion, provided that it is not insolvent (see “—Insolvency test” above) and experiences or anticipates legal, economic or financial difficulties. The proceedings consist of informal negotiations between a company and its major creditors and are confidential by law (save for the disclosure of the court decision appointing the mandataire ad hoc to the statutory auditors, if any) and non-binding since the court-appointed officer has no power to force the parties to accept an agreement. They are carried out under the aegis of a court-appointed officer (mandataire ad hoc), whose name may be suggested by the debtor itself, under the supervision of the president of the court. The proceedings are not limited in time but the process usually lasts from one month to one year. The duties of the mandataire ad hoc are determined by the president of the court (usually the commercial court) who appoints him or her, usually to facilitate negotiations with creditors. Any agreement between the debtor and its creditors will be negotiated on a purely consensual and voluntary basis: those dissenting creditors not willing to take part cannot be bound by the agreement nor forced to accept it (no cram-downs can be imposed). Mandat ad hoc proceedings do not automatically stay any pending proceedings and creditors are not barred from taking legal action against the debtor to recover their claims but those who have accepted to take part in the proceedings usually accept not to do so for their duration. In any event, the debtor retains the right to petition the relevant judge for a grace period under Article 1343-5 of the French Civil Code (see “—Grace periods” above). The agreement reached is reported to the president of the court but is not formally approved by it. Unlike in conciliation proceedings, the court does not have the power to grant any specific consequences to such agreement. The debtor is not required to inform the social and economic committee of the appointment of the court-appointed officer (mandataire ad hoc).

Conciliation proceedings are optional and may only be initiated by a debtor itself if it faces actual or foreseeable difficulties of a legal, economic or financial nature but (at the time the conciliation proceedings are commenced) is not insolvent (see “Insolvency test” above) or has not been insolvent for more than 45 calendar days. Conciliation proceedings are confidential by law (save for the disclosure of the court decision commencing the proceedings to the statutory auditors, if any, and, if applicable, the homologation of the conciliation agreement). They are carried out under the aegis of a court-appointed conciliator (conciliateur), whose name may be suggested by the debtor itself, under the supervision of the president of the court. The debtor is not required to inform the social and economic committee of the opening of the conciliation proceedings.

The proceedings may last up to five months (after an initial period of a maximum of four months, upon request of the conciliateur, the president of the court may extend the conciliation period up to the absolute maximum of five months). If the debtor intends to have the conciliation agreement approved (homologué) or acknowledged (constaté), its request must be filed by the end of this five-month period, even though the hearing can take place afterwards, in which case the conciliation period will be extended until the decision of the president of the court or the court itself.

The duties of the conciliateur are to assist the debtor in negotiating an agreement with all or part of its creditors and/or trade partners and/or other stakeholders that puts an end to its difficulties, e.g., providing for the restructuring of its indebtedness. Any agreement between the debtor and its creditors/stakeholders will be negotiated on a purely consensual and voluntary basis: (i) those dissenting creditors not willing to take part cannot be bound by the agreement nor forced to accept it (no cram-downs can be imposed, unless an accelerated safeguard proceeding (sauvegarde accélérée) is subsequently opened). Conciliation proceedings do not automatically stay any pending proceedings and creditors are not barred from taking legal action against the debtor to recover their claims but those that have accepted to take part in the proceedings usually accept not to do so for their duration and (ii) creditors may not request the opening of insolvency proceedings (redressement judiciaire or liquidation judiciaire) against the debtor, for the duration of the conciliation proceedings.

Pursuant to Article L. 611-7 of the French Commercial Code, during the proceedings, the debtor retains the right to petition the judge that commenced them for a grace period (debt rescheduling for a maximum of two years) in accordance with Article

1343-5 of the French Civil Code (see “Grace periods” above) provided that (i) a creditor has formally put the debtor on notice to pay, or is suing for payment, or if the debtor faces enforcement measures from a creditor, or (ii) if a creditor does not accept, by the deadline set by the conciliateur, a request made by the conciliateur to defer payment of his claim. Moreover, if a creditor does not accept, by the deadline set by the conciliateur, a request made by the conciliateur to defer payment of its unmatured claim, the judge may defer or reschedule the payment of this unmatured claim for the duration of the conciliation proceedings (i.e. a maximum period of five months), whereas claims that are due may be deferred in accordance with Article 1343-5 of the French Civil Code (see “Grace periods” above). The judge will take his or her decision after having heard the conciliateur and may condition the duration of the measures it orders to reaching an agreement in the conciliation proceedings.

The conciliation agreement reached between the debtor and its creditors and/or trade partners and/or other stakeholders may be acknowledged (constaté) by the president of the Commercial Court at the request of the parties, which makes the agreement binding upon them (in particular, performance of the conciliation agreement prevents any action by the creditors party thereto against the debtor to obtain payment of claims governed by the conciliation agreement) and enforceable without further recourse to a judge (force exécutoire), but the conciliation proceedings remain confidential.

Alternatively, the conciliation agreement may be approved (homologué) by the court at the request of the debtor following a hearing held for that purpose, to which the social and economic committee, as the case may be, must be convened, if (i) the debtor is not insolvent or the conciliation agreement has the effect of putting an end to the debtor’s insolvency, (ii) the conciliation agreement effectively ensures that the company will survive as a going concern and (iii) the conciliation agreement does not impair the rights of the non-signatory creditors. The approved conciliation agreement is subject to challenges by third parties (tierce opposition) and appeal. Such approval by the court will have the same effect as its acknowledgement (constatation) as described above and, in addition:

- the decision of approval by the relevant Civil or Commercial court, which should only disclose the amount of any New Money Lien (see below) and the guarantees and security interests granted to secure the same, will be public but the agreement itself should otherwise remain confidential except vis-à-vis the social and economic committee that is informed of the content of the conciliation agreement and may have access to the full conciliation agreement at the clerk’s office (greffe) of the court;
- creditors that, in the context of the conciliation proceedings, provide new money, goods or services designed to ensure the continuation of the business of the debtor (other than shareholders providing new equity in the context of a capital increase) will enjoy a priority of payment over all pre-commencement and post-commencement claims (subject to certain exceptions including certain pre-commencement or post-commencement employment claims and procedural costs) (the “New Money Lien”), in the event of subsequent safeguard proceedings, accelerated safeguard proceedings, judicial reorganization proceedings or judicial liquidation proceedings;
- in the event of subsequent safeguard, accelerated safeguard, judicial reorganization or judicial liquidation proceedings, the claims benefiting from the New Money Lien may not, without their holders’ consent, be rescheduled or written off by a safeguard or reorganization plan (although such claims will not be paid before the safeguard or reorganization plan is adopted) or be affected by a debt-to-equity swap, not even by the classes of affected parties;
- when the debtor is submitted to statutory auditing, the conciliation agreement is communicated to its statutory auditors; and
- in the event of subsequent judicial reorganization proceedings or judicial liquidation proceedings, the date of insolvency (see “—Insolvency test” above), and therefore the starting date of the hardening period (période suspecte) (as defined below, see “The hardening period (période suspecte) in judicial reorganization and liquidation proceedings”) in judicial reorganization and liquidation proceedings, cannot be set by the court as of a date earlier than the date of the approval (homologation) of the agreement by the court (except in case of fraud).

Whether the conciliation agreement is acknowledged or approved, the court may, at the request of the debtor, appoint the conciliateur to monitor the implementation of the agreement (mandataire à l’exécution de l’accord) during its performance and while it is in force:

- any individual proceedings by creditors with respect to the claims included in the rescheduling agreement are suspended;
- interest accruing on the affected claims that are the subject to the conciliation agreement may not be compounded;

- pursuant to Article L. 611-10 1 of the French Commercial Code, the debtor retains the right, during the performance period of a conciliation agreement, to petition the judge having commenced conciliation proceedings to impose grace periods on creditors who were asked to participate in the conciliation proceedings (other than the tax and social security administrations) and have formally put the debtor on notice to pay or who are suing for payment of claims that were not dealt with in the conciliation agreement, such decision being made after hearing the conciliateur if he or she has been appointed to monitor the implementation of the agreement, and taking into account the conditions of its performance; and
- pursuant to Article L. 611-10 2 of the French Commercial Code, a joint-debtor and a third party having previously granted credit support (a guarantee (*sûreté personnelle*) or security interest (*sûreté réelle*)) with respect to the debtor's obligations may benefit from the provisions of the conciliation agreement as well as from grace periods granted to the debtor in the context of conciliation proceedings and during the performance of the conciliation agreement.

In the event of a breach of the conciliation agreement, any party to it may petition the president of the court or the court (depending on whether the agreement was acknowledged or approved) for its termination. If such termination is granted, grace periods granted in relation to the conciliation proceedings may be revoked. Conversely, provided the conciliation agreement is duly performed, any individual proceedings by creditors with respect to obtaining payment of the claims dealt with by the conciliation agreement are suspended and/or prohibited. The commencement of subsequent safeguard or insolvency proceedings will automatically put an end to the conciliation agreement, in which case the creditors will recover their claims (decreased by the payments already received) and pre-existing security interests or guarantees. Nevertheless, the termination of the conciliation agreement does not invalidate the provisions the purpose of which is to organize the consequences arising out of the termination of the conciliation agreement.

Conciliation proceedings, in the context of which a draft plan has been negotiated and is supported by a majority of creditors large enough to render likely to meet the threshold requirements for creditors' consent in safeguard, is a mandatory preliminary step of accelerated safeguard proceedings, as described below.

At the request of the debtor and after the participating creditors have been consulted on the matter, *mandat ad hoc* and conciliation proceedings may also be used to organize the partial or total sale of the debtor, in particular through a "plan for the disposal of the business" (*Prepack sale - plan de cession*) which would be implemented, as applicable, in the context of subsequent safeguard, judicial reorganization or liquidation proceedings. Provided that they comply with certain requirements, any offers received in this context by the *mandataire ad hoc* or the conciliateur may be directly considered by the court in the context of safeguard, judicial reorganization or judicial liquidation proceedings after consultation of the Public Prosecutor.

As a matter of law, two types of contractual provisions are deemed null and void: (i) any provision that modifies the conditions for the continuation of an ongoing contract by reducing the debtors' rights or increasing its obligations simply by reason of the appointment of a *mandataire ad hoc* or of the commencement of conciliation proceedings or of a request submitted to this end and (ii) any provision forcing the debtor to bear, by reason only of the appointment of a *mandataire ad hoc* or of the commencement of conciliation proceedings, more than three-quarters of the fees of the professional advisers whom the creditors have retained in connection with these proceedings.

Where the debtor cannot manage to reach an agreement with its creditors within the maximum time period allotted to court-assisted proceedings, the court will terminate those proceedings. The termination of amicable proceedings does not, in and of itself entail specific legal consequences for the debtor, in particular it does not result in the automatic commencement of insolvency proceedings. New conciliation proceedings cannot be commenced enduring a three-month period following the termination of the previous ones.

#### *Court-administered proceedings—safeguard*

A debtor that experiences difficulties that it is not able to overcome may, in its sole discretion, initiate safeguard proceedings (*procédure de sauvegarde*) with respect to itself, provided that it is not insolvent (see "Insolvency test" above). In particular, as established by case law, to be granted the benefit of safeguard proceedings, the debtor cannot be requested to characterize the difficulties as affecting its business activities. Where it is not demonstrated that the debtor is experiencing difficulties that it is not able to overcome, the court may invite the debtor to request the opening of conciliation proceedings. Creditors of the debtor are not notified of, nor invited to attend the hearing before the court at which the commencement of safeguard proceedings is requested even if they have a limited right to challenge the court decision commencing the proceedings through a third-party appeal (*tierce opposition*).

Following the commencement of safeguard proceedings, a court-appointed administrator (*administrateur judiciaire*) is appointed (except for small companies where the court considers that such appointment is not necessary) within the list of judicial administrators (whose name can be proposed by the debtor or the Public Prosecutor). At the request of the debtor or the Public Prosecutor, or by the court on its own, two or more administrators can be appointed. The appointment of several administrators becomes mandatory when the debtor (i) owns at least three establishments outside the jurisdiction of the court where it is registered, or (ii) holds or controls (as provided by Articles L. 233-1 or L. 233-3 of the French Commercial Code) at least two companies subject to court-administered proceedings, or (iii) is held or controlled (as provided by the same articles) by a company subject to court-administered proceedings, such company itself holding or controlling another company subject to such proceedings, and (iv) generates at least €20 million of annual net turnover (for (ii) and (iii)). In case *mandat ad hoc* or conciliation proceedings were commenced in the eighteen months preceding the commencement of court-administered proceedings, the Public Prosecutor can object to the appointment of the *mandataire ad hoc* or *conciliateur* as administrator. The administrator is appointed to investigate the business of the debtor during an “observation period” (being the period starting on the date of the court decision commencing the proceedings and ending on the date on which the court takes a decision on the outcome of the proceedings), which may last up to twelve months (a first six month period which can be renewed once at the request of either the debtor, the court-appointed administrator or the Public Prosecutor). The role of the court-appointed administrator is also to assist the debtor in preparing a draft safeguard plan (*projet de plan de sauvegarde*) that it will circulate to its creditors that may include a partial sale of the business. Creditors or Equity Holders (as defined below) do not have effective control over the proceedings, which remain in the hands of the debtor, assisted by the court-appointed administrator. The court-appointed administrator will either, in accordance with the terms of the judgment appointing him or her, exercise *ex-post facto* control over decisions made by the debtor (*mission de surveillance*) or assist the debtor with making some or all of the management decisions (*mission d’assistance*), under the supervision of the court.

A supervisory judge (*juge-commissaire*) and a creditors’ representative (*mandataire judiciaire*) are also appointed at the beginning of the proceedings, alongside the court-appointed administrator. Disposal decisions that fall outside the scope of the ordinary course of business, as well as decisions considered to be important under statute, require the prior approval of the supervisory judge (e.g., granting security interests or settling disputes). The supervisory judge can appoint one to five controllers (*contrôleurs*) among the creditors who have filed a request, provided they meet certain conditions (in particular no affiliation to the debtor). Controllers (*contrôleurs*) assist the creditors’ representative in his functions and the supervisory judge in his duty of supervising the progress of the insolvency proceedings. In order to protect creditors’ interests and under certain conditions, the controllers may act in the interests of the creditors when the creditors’ representative fails to take sufficient action.

If, after commencement of the proceedings, it appears that the debtor was insolvent (see “Insolvency test”) before their commencement, at the request of the debtor, the administrator, the creditors’ representative or the Public Prosecutor but, in any event, after having heard the debtor, the court may convert the safeguard proceedings into judicial reorganization proceedings.

In addition, pursuant to Article L. 622-10 of the French Commercial Code, at any time during the observation period, the court may convert safeguard proceedings into (i) judicial reorganization proceedings (a) if the debtor is insolvent or (b) in case no safeguard plan was approved by the relevant classes of affected parties and if the approval of a safeguard plan is manifestly impossible and if the company would shortly become insolvent should safeguard proceedings end, or (ii) judicial liquidation proceedings if the debtor is insolvent and its recovery is manifestly impossible.

The court may decide on the conversion upon its own initiative or at the request of the debtor, the administrator, the creditors’ representative or the Public Prosecutor, save in the case of (i) (b) above. In case of (i) (b) above, the court may decide the conversion (i) at the request of the administrator, the creditors’ representative or the Public Prosecutor.

In these two conversion cases, the court’s decision is only taken after having heard the debtor, the court-appointed administrator, the creditors’ representative, the creditors of the debtor appointed by the supervisory judge as controllers (*contrôleurs*) (if any), the Public Prosecutor and the social and economic committee (if any).

As soon as safeguard proceedings are commenced, any unpaid amount of share capital of the debtor becomes immediately due and payable.

Ordinance No. 2021-1193, dated September 15, 2021, created a new post money privilege as an incentive for new financings granted to debtors in the context of collective proceedings (the “Post Money Lien”).

The Post Money Lien applies exclusively to proceedings commenced from October 1, 2021. The Post Money Lien also applies in the event of an amendment to the safeguard plan or reorganization plan adopted in proceedings commenced before May 22, 2020.

The Post Money Lien is distinct from the existing statutory preference enjoyed by financing granted, with the approval of the supervisory judge (juge-commissaire), after commencement of the proceedings, for the needs of the proceedings or of the observation period:

- The Post Money Lien applies to all new cash contributions made, with the exception of those made through a share capital increase, by any person:
  - in order to ensure the continuity of debtor’s business and its sustainability during the observation period, in which case such cash contributions must be authorized by the supervisory judge and are published, or
  - for the implementation of the safeguard or reorganization plan, i.e., within the plan as approved or amended by the court, and for the purposes of its performance, it being specified that both the draft plan on which the affected parties are called upon to vote and the judgment must mention all claims benefiting from the privilege, as well as the relevant amounts.
- Claims benefiting from the Post Money Lien enjoy a priority of payment over pre-commencement and post-commencement claims (subject to certain exceptions including certain pre-commencement or post-commencement employment claims, procedural costs, claims benefiting of the New Money Lien as defined above and pre-petition claims secured by a real estate security interest (in judicial liquidation proceedings only)) in the event of on-going or subsequent safeguard proceedings, judicial reorganization proceedings or judicial liquidation proceedings.
- Such claims may not be termed-out or written-off without the consent of the relevant creditors (although such claims will not be paid before the safeguard or reorganization plan is adopted) in subsequent safeguard proceedings, judicial reorganization proceedings or liquidation proceedings.

Once safeguard proceedings have been commenced, there will be an automatic stay on certain claims. Payment by the debtor of any debts incurred (i) prior to the commencement of the proceedings or (ii) after the commencement of the safeguard proceedings and if they do not relate to expenses necessary for the debtor’s business activities during the observation period, are not for the requirements of the proceedings, or not in consideration for services rendered or goods delivered to the debtor during this period is prohibited, subject to very limited exceptions. For example, the supervisory judge can authorize payments for pre-commencement debts in order to discharge a lien on property needed to continue the debtor’s operation or to recover goods or rights transferred as collateral in a fiduciary estate (patrimoine fiduciaire) (see “—Status of creditors during safeguard, accelerated safeguard, judicial reorganization or judicial liquidation proceedings”). In addition, creditors are required to declare to the creditors’ representative the debts that arose prior to the commencement of the proceedings (as well as the post-petition non privileged claims) and are prohibited from engaging any court proceedings against the debtor for any payment default in relation to such debts. Also, the accrual of interest on loans with a term of less than one year (or on payments deferred for less than one year) is stopped. Debts duly arising after the commencement of the safeguard proceedings and which relate to expenses necessary for the requirements of the proceedings, or which are incurred in consideration for services rendered or goods delivered to the debtor during this period, must be paid as and when they fall due and, if not, will be given priority over debts incurred prior to the commencement of the safeguard proceedings (with certain limited exceptions) provided that they are duly made known, as the case may be, to the court-appointed administrator, the creditor’s representative of the plan commissioner within one year of the end of the observation period. This automatic stay does not apply to claims secured by a security interest conferring a retention right, claims assigned by way of Dailly assignment of receivables and claims secured by a trust (fiducie).

Creditors (and, if applicable, Equity Holders) must be consulted on the manner in which the debtor’s liabilities will be settled under the plan (debt write-offs, payment terms or debt-for-equity-swaps) prior to the plan being approved by the court. The rules governing consultation vary according to the size of the business. Liabilities to be taken into account in the draft plan shall include, provided that they are established on the basis of a certificate prepared by a chartered accountant or the statutory auditor, those claims admitted and not challenged as well as those “identifiable.”

Standard consultation: for debtors which have (i) less than 250 employees and less than an annual net turnover of at least €20 million or (ii) less than an annual net turnover of at least €40 million. This also applies in respect of debtors which own or control other entities within the meaning of Articles L. 233-1 and L. 233-3 of the French Commercial Code, who fall below these thresholds. If so requested by the debtor and with the consent of the supervisory judge, creditors may also be subject to the class-based consultation.



In the framework of a standard consultation, the court-appointed administrator notifies the proposals for the settlement of debts to the court-appointed creditors' representative, who seeks the agreement of each creditor who filed a claim, regarding the debt write-offs and payment schedules proposed. Creditors are consulted individually or collectively.

French law does not state whether the debt settlement proposals can vary according to the creditor and whether the principle of equal treatment of creditors is applicable at the consultation stage. According to legal commentaries and established practice, in the absence of a specific legislative prohibition, differing treatment as between creditors is possible, provided that it is justified by the specific position of the creditors and approved by the court-appointed creditors' representative. In practice, it is also possible at the consultation stage to make a proposal for a partial payment of the claim over a shorter time period instead of a full payment of such claim over the length of the plan.

Creditors whose payment terms are not affected by the plan or who are paid in cash in full as soon as the plan is approved do not need to be consulted.

Creditors that do not respond within 30 days of their receipt of the debt settlement proposal (other than debt-for-equity-swap which required the relevant creditor's individual acceptance) made to them in writing are deemed to have accepted it. The creditors' representative keeps a list of the responses from creditors, which is notified to the debtor, the court-appointed administrator and the controllers.

Within the framework of a standard consultation, if the creditors refuse the proposals that were submitted to them, the court that approves the safeguard plan (plan de sauvegarde) can impose on them a uniform rescheduling of their claims (subject to specific regimes such as the one applicable to claims benefiting from the New Money Lien or the Post Money Lien) over a maximum period of ten years (except for agricultural businesses where the maximum is fifteen years and for claims with maturity dates of more than the deferral period set by the court, in which case the maturity date shall remain the same), but no write-off of any claim or debt-for-equity swap may be imposed without the relevant creditor's individual acceptance.

Following a court imposed rescheduling, the first payment must be made within a year of the judgment adopting the plan (in the third and subsequent years, the amount of each annual instalment must be at least 5% of the amount of each claim and from the sixth year onwards, at least 10% of the claim (except for agricultural businesses)) or on the first payment date following the initial maturity of the claim if it is later than the first payment date provided for by the plan, in which case the amount of such first payment is equal to what the creditor would have received had he or she been paid in accordance with the uniform payment rescheduling applying to the other creditors.

If the draft plan provides for a modification of the share capital or the by-laws, the court may decide that the shareholders general meeting and, as the case may be, the general meetings of the holders of securities giving access to the share capital of the company shall vote, the first time the relevant meeting is convened, at a simple majority of the votes of the shareholders attending, or represented at, the meeting, provided that they hold at least half of the shares with voting rights. The second time the meeting is convened, the usual applicable legal provisions relating to quorum and majority shall apply.

If the plan provides for a share capital increase, the shareholders may pay up their subscription to such share capital increase by way of a set-off against their admitted claims against the debtor (as such claims may be reduced according to the provisions of the plan).

If the court adopts a safeguard plan, it can set a time-period (which cannot exceed the duration of the plan) during which the assets that it deems to be essential to the continuation of the business of the debtor may not be disposed of without the court's consent.

The plan adopted by the court may be modified during its implementation. However, when the modification is substantial and relates to the terms and conditions of the discharge of liabilities, the interested parties are consulted by registered letter with acknowledgment of receipt sent by the court clerk. Such interested parties shall answer to this consultation no later than 21 calendar days following the receipt. Failure to respond shall constitute acceptance of the proposed changes, except if they relate to debt write-offs or debt-to-equity swaps.

*Class-based consultation*

This applies to large companies with (i) at least 250 employees and an annual net turnover of at least €20 million or (ii) with an annual net turnover of at least €40 million, in both cases on a standalone basis or together with other entities they hold or control, within the meaning of Articles L. 233-1 and L. 233-3 of the French Commercial Code, or, in the case of a debtor that does not meet the aforementioned thresholds, upon said debtor's request and with the consent of the supervisory judge.

Are considered as "affected parties" (i) any creditors whose rights are directly affected by the restructuring plan, or (ii) any stakeholders which hold an instrument giving access either immediately or on a deferred basis to the debtor's share capital in the event of their stake in the debtor's capital, the debtor's articles of association, or such stakeholder's rights are modified by the draft plan (the "Equity Holders").

Only the affected parties can vote on the draft plan.

The affected parties shall inform the court-appointed administrator (administrateur judiciaire), within 10 days from receipt of the notice sent by the court-appointed administrator or the publication of such notice inviting the affected parties to notify the existence of any intercreditor or subordination agreement entered into before the commencement of the proceedings, of any such intercreditor or subordination. Failing this, these agreements are unenforceable towards the proceedings.

The composition of the classes of affected parties are determined in light of the claims and rights arising prior to the date of the judgment commencing the proceedings. The court-appointed administrator divides the affected parties into classes, which reflect sufficient commonality of economic interest, based on objective and verifiable criteria, provided that the following conditions are satisfied:

- creditors holding security interests over the debtor's assets, for their secured claims, and unsecured creditors are members of separate classes;
- composition of classes respects intercreditor agreements concluded before the commencement of the proceedings;
- Equity Holders and creditors are treated as separate classes;
- creditors that share sufficient commonality of economic interest will be in the same class and shall benefit from equal treatment under the plan.

Claims arising under employment contracts (including the French wage guarantee scheme (AGS claims)), pension rights acquired under a professional retirement scheme and essential needs claims (créances alimentaires) are excluded from the class-based consultation and therefore are not affected by the plan.

At least 21 days before the date of the vote on the draft plan, the court-appointed administrator must submit to each affected party the rules governing the class formation criteria and the voting rights with respect to the class or classes to which affected parties belong and the claims or rights that enable them to cast a vote. The amount of the claims taken into account shall be the amount indicated by the debtor and certified by its statutory auditor or, where no statutory auditor has been appointed, established by its chartered accountant. In the case of affected parties which are beneficiaries of a trust (fiducie) set up as a guarantee by the debtor, only the amounts of their claims not guaranteed by such a security shall be taken into account. Where there is an indexation clause, the amount of interest remaining due on the date of the judgment commencing the proceedings is calculated at the rate applicable on the date of that judgment. Foreign currency receivables are converted into euros at the exchange rate on the date of the judgment. In the event of disagreement, each affected party, the debtor, the Public Prosecutor, the creditors' representative or the court-appointed administrator can challenge the rules governing the class formation criteria or the voting rights before the supervisory judge (juge-commissaire), within 10 days from the notification or publication of such rules.

As a general matter, only the legal owner of the debt claim will be invited onto the class of affected parties. Accordingly, a person holding only an economic interest therein may not itself be a member of a class of affected parties (e.g. book entry interest holder). However, the right of an affected party to vote within a class being attached to its pre-commencement claim, it is assigned as a right alongside the claim itself notwithstanding any contrary clause.

The supervisory judge must rule on such challenge within 10 days. In the absence of a decision by the supervisory judge in the

10 days period, the matter may be referred to the court. Appeal against the supervisory judge's decision (or the court's decision as the case may be) has to be filed within 5 days of his/her order. The court of appeal then has 15 days to rule. There is no possibility to submit a challenge before the French Supreme Court.

The debtor, with the assistance of the court-appointed administrator, is in charge of preparing the draft plan. The draft plan shall be sent to the classes for a vote of affected parties for a vote. Affected parties may not submit alternative draft plans. The draft plan may, in particular, provide for rescheduling or cancellation of debts and/or debt-for-equity swaps. Where the thresholds applicable to specialized commercial courts are not met, the debtor's Equity Holders which are affected by the draft plan can make a non-monetary contribution to the restructuring (e.g. by providing their experience, reputation or professional contacts). The classes of affected parties must approve or reject the safeguard plan within 20 to 30 days of its submission. The period may be extended or shortened by the supervisory judge upon request from the debtor or the court-appointed administrator but may never be shorter than 15 days. The plan must be approved by a majority vote of each class of affected parties (two-thirds of the votes held by the members casting a vote).

The class or classes of Equity Holders vote in accordance with the provisions applicable to either extraordinary general meetings, shareholders' meetings and special meetings or bondholders' general meetings, as the case may be. Within a class, the vote on the adoption of the plan may be replaced by an agreement which, after consultation with its members, has received the approval of two-thirds of the voting rights. When the classes have adopted the draft plan, the court rules upon it and verifies that the following conditions are met:

- the plan has been adopted in accordance with the rules regarding the affected parties and their classification into classes;
- the affected parties sharing a sufficient community of interest within the same class benefit from equal treatment and are treated in proportion to their claim or right;
- all affected parties have been duly notified of the plan;
- if some affected parties have voted against the draft plan, none of these affected parties is worse off under the restructuring plan than such a creditor would be if the normal ranking of liquidation priorities were applied, either in the event of liquidation, whether piecemeal or by sale as a going concern (plan de cession), or in the event of the next-best-alternative scenario if the restructuring plan were not confirmed (the "Best Interest of Creditors Test"); and
- where applicable, any new financing is necessary to implement the plan and does not excessively affect the interests of the affected parties.

The court may refuse to approve the plan if it does not offer a reasonable prospect of avoiding the debtor's insolvency or of ensuring the viability of the business. The court must check that the interests of all creditors are "sufficiently protected." The judgement adopting the plan renders the plan enforceable against all (including the affected parties who did not vote or voted against the adoption of the plan).

As for plans adopted through a standard consultation, if the plan provides for a share capital increase, the shareholders may pay up their subscription to such share capital increase by way of a set-off against their admitted claims against the debtor (as such claims may be reduced according to the provisions of the plan).

If the plan is not approved by the required majority of each class of affected parties, it may be approved (arrêté) by the court at the request of the debtor or the court-appointed administrator with the agreement of the debtor and be imposed on the parties that voted against the draft plan ("Cross-Class Cram-Down"), where the plan meets the following conditions:

- the plan complies with the conditions for the adoption of the plan by the court mentioned above;
- the plan has been approved by:
  - a majority of the classes of affected parties entitled to vote, including at least one class of secured creditors or a class ranking higher than the class of unsecured creditors; or, if such condition is not met,
  - by at least one of the classes of affected parties entitled to vote, other than a class of Equity Holders or any other class

which, after determination of the value of the debtor as a going concern, it may reasonably be assumed it would not be entitled to any payment, if the order of priority of creditors for the distribution of the assets in liquidation proceedings or of the sale plan (plan de cession) were applied;

- the claims of a dissenting class of affected creditors shall be paid in full (by identical or equivalent means) before a more junior class receives any distribution or keeps any interest under the restructuring plan (the “absolute priority rule”). However, at the request of (i) the debtor or (ii) the court-appointed administrator with the agreement of the debtor, the court may decide to deviate from the application of the absolute priority rule where such deviations are necessary in order to achieve the aims of the restructuring plan and where such restructuring plan does not excessively prejudice the rights or interest of any affected party. In particular, claims of the debtor’s suppliers of goods or services, the Equity Holders and claims arising from the debtors’ tort liability may receive special treatment;
- under the safeguard plan, no class of affected parties may receive or retain more than the total amount of its claims or interests;
- if one or more dissenting classes of Equity Holders have been formed and have not approved the plan, this plan can be imposed on them provided that:
  - the formation of classes of affected parties was compulsory regarding the thresholds met by the debtor (i.e., 250 employees and an annual net turnover of at least €20 million or with an annual net turnover of at least €40 million at the group level);
  - it may reasonably be assumed, after determination of the value of the debtor as a going concern, that the dissenting classes of Equity Holders would not be entitled to any payment or retain any interest if the order of priority of creditors for the distribution of the assets in liquidation proceedings or of the sale plan (plan de cession) were applied;
  - if the draft plan provides for a share capital increase subscribed in cash (including by way of set off with payable claims), the shares to be issued are offered in preference to the existing shareholders, in proportion to the part of the share capital represented by their shares; and
  - the plan does not provide for the sale of all or part of the rights of the dissenting class or classes of Equity Holders (only forced dilution is possible).

The decision of the court shall constitute approval of the changes to the shareholding structure or to the rights of the Equity Holders or to the articles of association provided for in the plan. The court may appoint an agent to carry out the acts necessary for the implementation of these amendments.

As for plans adopted through a standard consultation, if the court adopts a safeguard plan, it can set up a time-period (which cannot exceed the duration of the plan) during which the assets that it deems to be essential to the continuation of the business of the debtor may not be disposed of without the court’s consent.

At the latest within 10 days from the vote of the classes on the draft plan, any affected party having voted against the draft plan and considering that:

- the Best Interest of Creditors Test criterion has not been met; or
- the condition relating to the adoption of the draft plan by at least one of the classes of affected parties entitled to vote (other than a class of Equity Holders or any other class which, after determining the value of the debtor as a going concern, it is reasonable to assume would not be entitled to any payment if the order of payment in a judicial liquidation was applied (whether in the event of a piecemeal sale or, a court-ordered sale plan)) has not been met; or
- in the event of a cross class-cram-down on Equity Holders, the condition relating to the debtor’s value criterion has not been met (i.e., it is reasonable to assume, after determining the value of the debtor as a going concern, that the Equity Holders of the dissenting class or classes would not be entitled to any payment or retain any interest if the order of payment applicable in a judicial liquidation was applied (whether in the event of a piecemeal sale or, of a court-ordered sale plan)), may petition the court to dispute the same. Following a hearing and after receiving the Public Prosecutor’s opinion, the court will, in the same decision, determine the value of the debtor (in respect of which the court is entitled to order the appointment of an expert) and

rule on compliance with the aforementioned conditions and on the adoption of the plan.

The decision made by the court regarding the adoption of the plan may be appealed under the ordinary procedure within 10 days from its notification by any affected party, the debtor, the court-appointed administrator, the creditors' representative (or of its communication if the appeal was lodged by the Public Prosecutor). The decision of the court of appeal may be challenged before the French Supreme Court.

In case of failure to adopt the plan in safeguard proceedings, the alternatives are either the termination of these proceedings or the conversion into judicial reorganization proceedings. The imposition of an alternative plan and payment terms is not possible.

Specific case - Creditors that are public institutions: public creditors (financial administrations, social security and unemployment insurance organizations) may agree to grant debt write-offs under conditions that are similar to those that would be granted under normal market conditions by a private economic operator placed in a similar position. Public creditors may also decide to enter into subordination agreements for liens or mortgages, or relinquish these security interests. Public creditors examine possible debt write-offs within the framework of a local administrative committee (Commission des Chefs de Services Financiers). The tax authorities may grant relief from all direct taxes. As regards indirect taxes, relief may only be granted from default interest, adjustments, penalties or fines.

Where the plan provides for debt write-offs or rescheduling affecting secured public creditors' claims, the court-appointed administrator can decide to gather those public creditors within a class (or classes) of affected parties called upon to vote on the proposed plan.

#### *Court-administered proceedings—accelerated safeguard*

A debtor that is engaged in conciliation proceedings may request the commencement of accelerated safeguard proceedings (procédure de sauvegarde accélérée). The accelerated safeguard proceedings are designed to “fast-track” difficulties faced by any debtor under Ordinance No. 2021-1193 dated September 15, 2021.

If the debtor does not meet the conditions that require the classes of affected parties to be constituted, the court opening accelerated safeguard proceedings must order such formation. In that regard, the court shall authorize such constitution for the commencement of accelerated safeguard proceedings.

To be eligible for accelerated safeguard proceedings, the debtor must fulfil the following conditions:

- its financial statements must have been certified by an auditor (commissaire aux comptes) or drawn-up by a chartered certified accountant (expert-comptable);
- the debtor must be subject to ongoing conciliation proceedings when it applies for the commencement of the proceedings;
- the debtor must have prepared a draft safeguard plan ensuring the continuation of its business as a going concern which is supported by enough affected parties involved in the proceedings to render its adoption by the relevant classes of affected parties likely within a maximum of two months, extendable for two months, following the commencement of accelerated safeguard proceedings;
- the debtor must not have been insolvent for more than 45 days when it initially applied for commencement of conciliation proceedings; and
- as is the case for regular safeguard proceedings, the debtor must face difficulties which it is not in a position to overcome.

The opening of accelerated safeguard proceedings only has effects with regards to the affected parties, i.e. those parties directly affected by the draft safeguard plan prepared by the debtor in the context of its conciliation proceedings.

When the debtor's accounts show that the nature of the indebtedness makes it likely that a plan will be adopted only by credi-

tors having the status of finance companies, credit institutions and equivalent (i.e. those institutions (i) referred to in Articles L. 511-1 and L. 518-1 of the French Monetary and Financial Code (Code monétaire et financier), (ii) operating under the freedom establishment or the freedom to provide services in the territory of the States parties to the agreement on the European Economic Area mentioned in Book V of the French Monetary and Financial Code and (iii) any other entity with which the debtor has entered into a credit transaction, the «Financial Institution»), as well as by all holders of a claim acquired from them or from a supplier of goods or services and, where applicable, bondholders, the debtor may request the commencement of safeguard proceedings, the effects of which are limited to these creditors. In such case, creditors that are not concerned by the procedure are therefore not affected by the plan. Such creditors will neither be subject to majority rules, nor to the rescheduling or cancellation of their debts.

The debtor will be prohibited from paying, to any creditor to whom the accelerated safeguard proceedings apply, any amounts (including interest) in respect of debts incurred (i) prior to the commencement of the proceedings or (ii) after the commencement of the proceedings if not incurred for the purposes of the proceedings or the observation period or in consideration of services rendered/goods delivered to the debtor (post-commencement non-privileged debts). Such amounts may be paid only after the judgment of the court approving the safeguard plan and in accordance with its terms. The other creditors' debts will continue to be due and payable in the ordinary course of business according to their contractual or legal terms.

The regime applicable to standard safeguard proceedings in relation to the constitution of classes of affected parties is broadly applicable to accelerated safeguard proceedings (for example, affected parties will be consulted by way of a class-based consultation on a draft accelerated safeguard plan (projet de plan de sauvegarde accélérée) and affected parties may not prepare alternative draft plans as described above (see “—Class-based consultation”), to the extent compatible with the accelerated timing, since the maximum duration of accelerated safeguard proceedings is four months (provided the court has decided to extend the initial two-month period).

However, certain provisions relating to ongoing contracts and to the recovery of assets by their owners do not apply in accelerated safeguard proceedings.

The plan in the context of accelerated safeguard proceedings is adopted following the same majority rules as in standard safeguard proceedings when classes of affected parties are set up and may notably provide for rescheduling, debt cancellation and conversion of debt into equity capital of the debtor (debt-for-equity swaps requiring relevant shareholder consent).

If a plan is not adopted by the affected parties and approved by the court within the applicable deadlines, the court shall terminate the proceedings. If the debtor then becomes insolvent, it must file for judicial reorganization (redressement judiciaire) or liquidation proceedings (liquidation judiciaire).

The list of claims (which shall also mention the subordination agreements communicated to the debtor by the creditors prior to the opening of the proceedings) of affected parties to the conciliation proceedings established by the debtor and certified by the statutory auditor or the chartered-accountant shall be deemed to constitute the filing of such claims for the purpose of accelerated safeguard proceedings, unless the affected parties otherwise elect to make such a filing (see “Status of creditors during safeguard, accelerated safeguard, judicial reorganization or judicial liquidation proceedings” below).

#### *Court-administered proceedings - judicial reorganization or liquidation proceedings*

Judicial reorganization (redressement judiciaire) or liquidation proceedings (liquidation judiciaire) may be initiated against (i.e., by the Public Prosecutor or by a creditor, whether secured or unsecured and regardless of the amount of its claims) or by a debtor only if it is insolvent and, with respect to liquidation proceedings only, if the debtor's recovery is manifestly impossible. The debtor is required to petition for judicial reorganization or liquidation proceedings within 45 days of becoming insolvent if it does not file for conciliation proceedings. If it does not, de jure managers (including directors) and, as the case may be, de facto managers are exposed to civil liability.

Where the debtor requested the commencement of judicial reorganization proceedings and the court, after having heard the debtor, considers that judicial liquidation proceedings would be more appropriate, it may propose to the debtor the commencement of judicial liquidation proceedings which it determines to be the most appropriate. The same would apply if the debtor requested the commencement of judicial liquidation proceedings and the court considered that judicial reorganization proceedings would be more appropriate. In addition, at any time during the observation period, upon request of the debtor, the court-appointed administrator, the creditors' representative (mandataire judiciaire), a controller, the Public Prosecutor or

upon its own initiative, the court may convert reorganization proceedings into liquidation proceedings if it appears that the debtor's recovery is manifestly impossible. In all cases, the court's decision is only taken after having heard the debtor, the court-appointed administrator, the creditors' representative, the controllers, the Public Prosecutor and the social and economic committee (if any).

The objectives of judicial reorganization proceedings are the sustainability of the business, the preservation of employment and the payment of creditors, in that order.

In the event of judicial reorganization proceedings, an administrator (*administrateur judiciaire*) is usually appointed by the court to investigate the business of the debtor during an observation period, which may last up to 18 months (instead of a maximum of 12 months under safeguard proceedings), and make proposals either for the reorganization of the debtor (by helping the debtor to elaborate a draft judicial reorganization plan, which is similar to a safeguard plan) or, unlike safeguard proceedings, if it appears that a reorganization plan is not possible, the sale of the business (which will occur through an open bid process organized by the administrator) or the liquidation of the debtor. The court-appointed administrator will assist the debtor in making management decisions (*mission d'assistance*) or may be empowered by the court to take over the management and control of the debtor (*mission d'administration*). Judicial reorganization proceedings broadly take place in a manner that is similar to safeguard proceedings, subject to certain specificities.

In particular, the rules relating to creditor consultation (either following a standard consultation or a class of affected parties-based consultation), especially the powers of the court adopting the judicial reorganization plan (*plan de redressement*) in the event of rejection by the creditors of proposals made to them, are similar, subject to certain exceptions including:

- if the debtor does not meet the required thresholds, the authorization to form classes of affected parties may also be requested from the supervisory judge by the court-appointed administrator, without the debtor's approval (in addition to being requested by the debtor);
- any affected party may also prepare a reorganization draft plan which shall be submitted, together with the plan drafted by the debtor, to the vote of the classes of affected parties;
- if the draft reorganization plan or the plan provides for a change in the equity structure or share transfers, prior approval clauses (*clauses d'agrément*) are deemed null and void;
- if the classes of affected parties do not approve the reorganization plan, it may be approved (*arrêté*) by the court at the request of the debtor, the court-appointed administrator (with the debtor's consent), or the court-appointed administrator with the approval of one affected party and be imposed on the classes that voted against the draft plan (the "Cross-Class Cram-Down"), where the plan meets the conditions of the Cross-Class Cram-Down mechanism;
- if the reorganization plan is not adopted by the classes of affected parties or according to the Cross-Class Cram-Down mechanism, the ability to impose an alternative plan according to the classic individual consultation and impose payment terms by the court is possible (following individual consultation, the court can impose a term-out plan on dissenting creditors for up to ten years).

At any time during the observation period, the court can, at the request of the debtor, the appointed administrator, the creditors' representative (*mandataire judiciaire*), the Public Prosecutor, any controller or at its own initiative, order the partial stop of the activity (*cessation partielle de l'activité*) or order the liquidation of the debtor if its recovery is manifestly impossible. At the end of the observation period, the outcome of the proceedings is decided by the court.

In addition, Ordinance No. 2021-1193, dated September 15, 2021 modified, the judicial reorganization proceedings to provide for the new Post Money Lien (as defined and detailed above see "—Court-administered proceedings—safeguard").

In judicial reorganization proceedings, in the framework of individual standard consultation, in case a shareholders' meeting needs to vote to bring the shareholders' equity to a level equal to at least one half of the share capital as required by Article L. 626-3 of the French Commercial Code, the court-appointed administrator may appoint a trustee (*mandataire de justice*) to convene a shareholders' meeting and to vote the restoration of the shareholders' equity up to the amount proposed by the court-appointed administrator on behalf of the shareholders that refuse to vote in favor of such a resolution if the draft restructuring plan provides for a modification of the equity to the benefit of a third party(ies) undertaking to comply with the reorganization plan.

If the proposed reorganization plans are manifestly not likely to ensure that the debtor will recover or if no reorganization plan is proposed, the court, upon the request of the court-appointed administrator, can order the total or partial transfer of the business in accordance with the process for a sale of the business described below.

In judicial reorganization proceedings if (i) the company has at least 150 employees, or if it controls (within the meaning of the French Labor Code) one or more companies having together at least 150 employees, (ii) the disappearance of the company is likely to cause serious harm to the national or regional economy and to local employment pool and (iii) the modification of the company's share capital seems to be the only credible way to avoid harm to the national or regional economy and to the employment pool and allows the continued operation of the business as a going concern, following the review of the options for a total or partial sale of the business, and at the request of the court-appointed administrator or the Public Prosecutor, if at least three months have elapsed as from the court decision commencing the proceedings, provided that the shareholders meetings required to approve the modification of the company's share capital required for adoption of the reorganization plan have refused such modification, the insolvency court may either:

- appoint a court officer (mandataire) in order to convene the shareholders meeting and vote the share capital increase in lieu of the shareholders having refused to do so, up to the amount provided for in the reorganization plan; or
- order, in favor of the persons who have undertaken to perform the reorganization plan, the sale of all or part of the share capital held by the shareholders having refused the share capital modification and holding, directly or indirectly a portion of the share capital providing them with a majority of the voting rights (including as a result of an agreement with other shareholders) or a blocking minority in the company's shareholders' meetings, any consent clause being deemed unwritten; the other shareholders have the right to withdraw from the company and request that their shares be simultaneously purchased by the transferees. Any consent clause (clause d'agrément) is deemed unwritten.

In the event of a sale ordered by the court, the price of the shares shall, failing agreement between the parties, be set by an expert designated by the court in summary proceedings.

In either of the above cases, the reorganization plan shall be subject to the undertaking of the new shareholders to hold their shares for a certain time period set by the court which may not exceed the duration of the reorganization plan.

If the court decides to order the judicial liquidation of the debtor, the court will appoint a liquidator, which is generally the former creditors' representative (mandataire judiciaire). There is no observation period in judicial liquidation proceedings, nor does the law limit their duration (except with respect to simplified judicial liquidation proceedings). The liquidator is vested with the power to represent the debtor and perform the liquidation operations (mainly liquidate the assets and settle the liabilities to the extent the proceeds from the liquidated assets are sufficient, in accordance with the creditors' priority order of payment). The liquidator will take over the management and control of the debtor and the managers of the debtor are no longer in possession.

Concerning the liquidation of the assets of the debtor, there are two possible outcomes of such liquidation scenario, both of which are decided by the court without a vote of the creditors:

- a sale of the business (cession d'entreprise) (in which case a court-appointed administrator (administrateur judiciaire) will usually be appointed to manage the debtor during a temporary period of continuation of the business operations ordered by the court (three months, renewable once) and organize such sale of the business as a going-concern via an asset sale, known as a "sale plan" (plan de cession)), any third party (as construed under French insolvency law) being entitled to present a bid on all or part of the debtor's business;
- as part of the bids submitted to the court, the third-party purchaser can cherry-pick assets (including the real estate assets, jobs, and contracts) without the liabilities pertaining to them (with exceptions). The price offered for the transferred assets (including the real estate assets) is usually at a significant discount compared to their in bonis market value. The court will tend to favor a credible sale plan, that ensures the sustainability of the business as a going concern, and the preservation of jobs, over the payment of creditors.
- subject to certain exceptions, the court can judicially impose such a sale plan on creditors, including secured creditors and mortgagees as a general principle, the payment of the purchase price operating to release their security interests. By way of exception:



- a purchaser is obliged to continue to pay the remaining instalments due to creditors having granted financing for the acquisition of assets, used as collateral for such creditors and included in the sale of the business plan, provided that such creditors have filed their claims. In this case, the debtor is released from the payment of these remaining instalments;
- the purchaser will be able to exercise the purchase option under a financial lease only if the outstanding amounts under such lease are repaid (but within the limit of the value of the leased asset as set by agreement between the parties or, failing such agreement, by the court); and
- only those secured creditors benefitting from a retention right (which is the case for pledges over inventory or certain types of pledges over shares, but not mortgages over real estate assets for example) would be entitled to retain their security interest over the asset on which they have such right (and therefore in practice prevent its sale) until repaid in full of their claim so secured or unless reaching an agreement with the relevant parties.

Third-party purchasers may also submit combined bids in respect of all or part of the business of several debtors subject to insolvency proceedings, in particular when the key assets are located in different legal entities subject to insolvency proceedings. Again, the price offered for the transferred assets could be significantly less than their in bonis market value:

- separate sales of the individual assets of the debtor, in which case the insolvency judge (liquidateur) may decide to:
  - launch auction sales (vente aux enchères (or adjudication amiable for real estate assets only));
  - sell on an amicable basis (vente de gré à gré) each asset for which spontaneous purchase offers have been received (the formal authorization of the supervisory judge being necessary to conclude the sale agreement with the bidder); or
  - request, under the supervision of the supervisory judge, all potential interested purchasers to bid on each asset, as the case may be, by way of a private competitive process whereby the bidders submit their offers only at the hearing without the proposed prices being disclosed before such hearing (procédure des plis cachetés).

If the court adopts a sale plan, it can set a time-period during which the assets that it deems to be essential to the continuation of the business of the debtor may not be sold without its consent.

The court will end the proceedings when (a) there are no remaining due liabilities and the liquidator has sufficient funds to pay off the creditors (extinction du passif), or (b) the continuation of the liquidation process becomes impossible due to insufficiency of assets (insuffisance d'actif).

The court may also terminate the proceedings when the interest of the continuation of the liquidation process is disproportionate compared to the difficulty of selling the assets or in the event where there are insufficient funds to pay off the creditors, by appointing a mandataire in charge of continuing ongoing lawsuits and allocating the amounts received from these lawsuits between the remaining creditors.

Law n°2021-689 May 31, 2021 has introduced a new insolvent procedure available until June 2, 2023, which is called “procédure de traitement de sortie de crise” and can be summarized as an accelerated and simplified judicial reorganization proceedings for small companies, i.e. companies that have less than 20 employees and whose reported liability amount excluding equity is lower than 3 million euros.

#### *The hardening period (période suspecte) in judicial reorganization and liquidation proceedings*

The date of insolvency (date de cessation des paiements) of a debtor is deemed to be the date of the court order commencing proceedings, unless, in this decision or a subsequent one, the court sets an earlier date, which may be no earlier than 18 months before the date of such court order. Also, except in the case of fraud, the date of insolvency may not be set at a date earlier than the date of the final court decision that approved an agreement (homologation) in the context of conciliation proceedings. The date of insolvency is important because it marks the beginning of the hardening period (période suspecte), being the period from the date of insolvency of the debtor to the court decision commencing the judicial reorganization or liquidation proceedings affecting it.

Certain transactions entered into during the hardening period are automatically void by the court (the court must declare these transactions void on petition by the court-appointed administrator, the creditor's representative, the plan commissioner, or the Public Prosecutor) or voidable by the court (subject to the court's discretionary decision on petition by the court-appointed administrator, the creditors' representative, the plan commissioner, or the Public Prosecutor).

- Automatically void transactions include transactions or payments entered into during the hardening period that may constitute voluntary preferences for the benefit of some creditors to the detriment of other creditors. These include transfers of assets for no consideration or for a nominal consideration, contracts under which the obligations of the debtor significantly exceed the reciprocal obligations of the other party, payments of debts not due at the time of payment, payments of debts that are due not made in cash, wire transfer, remittance of negotiable instruments, Dailly assignment of receivables or any other means commonly used in the ordinary course of business, deposits of cash or monetary instruments ordered by a court decision that has not yet become final to serve as bond or as a precautionary measure in accordance with Article 2350 of the French Civil Code (Code civil), contractual security interest or contractual rights of retention constituted on the debtor's assets or rights guaranteeing debts having previously incurred (unless they replace a security interest having at least the same nature and perimeter and with the exception of the Dailly assignment of a claim provided for in Articles L. 313-23 et seq. of the French Monetary and Financial Code, made in performance of a framework agreement concluded prior to the date of cessation of payments), for debts having previously incurred, provisional attachment or seizure measures (mesures conservatoires) (unless the attachment or seizure predates the date of insolvency), any grant, exercise, or resale relating to stock options made under Article L. 225-177 et seq. of the French Commercial Code, the transfer of any assets or rights to a trust arrangement (fiducie) (unless such transfer is made as security for a debt simultaneously incurred), any amendment to a trust arrangement (fiducie) that affects assets or rights already transferred in the trust as security for debt incurred prior to such amendment, and notarized declarations of exemption of assets from seizure (déclaration d'insaisissabilité) pursuant to Article L. 526-1 of the French Commercial Code., any statutory mortgage attached to judgments of condemnation constituted over the assets of the debtor for debts previously incurred and any assignment (or change in the assignment of the assets) resulting in the impoverishment of the debtor's assets to the benefit of another debtor's estate.

- Transactions that are voidable by the court include payments made on debts that are due, transactions for consideration, administrative seizure measures, notices of attachments made to third parties (avis à tiers détenteur), seizures (saisie attribution) and oppositions made during the hardening period, in each case if the court determines that the party dealing with the debtor knew that the debtor was insolvent at the relevant time. Transactions relating to the transfer of assets for no consideration and notarized declarations of exemption of assets from seizure (déclaration d'insaisissabilité) pursuant to Article L. 526-1 of the French Commercial Code are also voidable when entered into during the six-month period prior to the beginning of the hardening period. Unlike automatically void transactions, which must be set aside by the court if so requested, the court has discretion to decide whether or not it is appropriate to set aside transactions that are only "voidable." In addition, pursuant Article L. 632-1 of the French Commercial Code, the court may declare null and void any acts transferring the ownership of asset without any consideration and any notarized declarations of exemption of assets from seizure (déclaration d'insaisissabilité) entered into within six months prior to the date of insolvency (date de cessation des paiements).

Third party rights, including bona fide third parties, can be affected by those avoidance provisions.

There is no hardening period prior to successful safeguard or accelerated safeguard proceedings.

#### *Status of creditors during safeguard, accelerated safeguard, judicial reorganization or judicial liquidation proceedings*

Contractual provisions pursuant to which the commencement of the proceedings triggers the acceleration of the debt or the termination or cancellation of an ongoing contract are not enforceable against the debtor. Nor are "contractual provisions modifying the conditions of continuation of an ongoing contract, diminishing the rights or increasing the obligations of the debtor solely upon the opening of judicial reorganization proceedings" (in accordance with a decision of the French Supreme Court (Cour de cassation) dated January 14, 2014, No. 12-22.909 regarding a judicial reorganization proceedings and in accordance with a decision of the French Supreme Court dated February 22, 2017, No 15-15.942 regarding a safeguard proceedings, which case law may be extended to accelerated safeguard proceedings). The court-appointed administrator can unilaterally decide to terminate ongoing contracts (contrats en cours) which it believes the debtor will not be able to continue to perform. The court-appointed administrator can, conversely, require that other parties to a contract continue to perform their obligations even though the debtor may have been in default, but on the condition that the debtor fully performs its post-commencement contractual obligations (and provided that, in the case of reorganization or liquidation proceedings, absent consent to other

terms of payment, the debtor pays cash on delivery). The commencement of liquidation proceedings, however, automatically accelerates the maturity of all of a debtor's obligations unless the court orders the continued operation of the business with a view to the adoption of a "plan for the sale of the business" (plan de cession) (which it may do for a period of three months, renewable once), in which case the acceleration of the obligations will only occur on the date of the court decision adopting the "plan for the sale of the business" or on the date on which the continued operation of the business ends.

As from the court decision commencing the proceedings:

- accrual of interest is suspended, except in respect of loans for a term of at least one year, or of contracts providing for a payment which is deferred by at least one year (however, accrued interest can no longer be compounded);
- the debtor is prohibited from paying debts incurred prior to the date of the court decision commencing the proceedings, subject to specified exceptions (which essentially cover the set-off of related (connexes) debts and payments authorized by the supervisory judge (juge-commissaire) to recover assets (whether they are pledged, retained by a creditor based on a retention right or constitute collateral in a security trust estate (patrimoine fiduciaire)) required by the continued operation of the business or to pay a carrier requesting payment directly from the debtor);
- the debtor is prohibited from paying debts having arisen after the commencement of the proceedings unless they were incurred for the purposes of the proceedings or of the observation period or in consideration of services rendered/goods provided to the debtor;
- debts duly arising after the commencement of the proceedings and that were incurred for the purposes of the proceedings or of the observation period, or in consideration of services rendered/goods provided to the debtor during this period, must be paid as and when they fall due and, if not, will be given priority over debts incurred prior to the commencement of the proceedings (with certain limited exceptions, such as claims secured by a New Money Lien or a Post Money Lien), provided that they are duly brought to the attention of the judicial administrator or, failing one, the creditors' representative (mandataire judiciaire), or, should they both have ceased to be in office, the plan commissioner (commissaire à l'exécution du plan) or the judicial liquidator within one year of the end of the observation period;
- creditors (or beneficiaries of a security interest over tangible asset granted by a third-party to secure the debt of the debtor) may not initiate or pursue any individual legal action against the debtor or against a guarantor of the debtor where such guarantor is a natural person with respect to any claim arising prior to the court decision commencing the proceedings in the framework of a safeguard, an accelerated safeguard or a reorganization proceedings, if the objective of such legal action is:
  - to obtain an order for payment of a sum of money by the debtor to the creditor (however, the creditor may require that a court determine the amount due in order to file a proof of claim, as described below);
  - to terminate a contract for non-payment of pre-opening amounts owed to the creditor; or
  - to enforce the creditor's rights against any assets of the debtor, including if such assets secure third party debt, except (i) in judicial liquidation proceedings, by way of the applicable specific process for judicial foreclosure (attribution judiciaire) of the pledged assets or (ii) where such asset - whether tangible or intangible, movable or immovable - is located in another EU Member State within the European Union, in which case the rights in rem of creditors thereon would not be affected by the insolvency proceedings commenced in France, in accordance with the terms of Article 8 of the EU Insolvency Regulation (provided no secondary proceedings are commenced in such EU Member State). Similarly, the rights of a creditor on the debtor's assets located outside France and the EU would only be affected by the French insolvency proceedings if they were to be recognized by the local courts where the assets at stake are located (unless provided otherwise in a treaty to which France is a party).
- any increase to the base of a contractual security interest or a contractual retention right: (by any means whatsoever, by adding or supplementing assets or rights, in particular by registration of securities or proceeds supplementing the securities registered in a pledged securities account) is prohibited; any contrary provision, in particular relating to the transfer of future assets or rights of the debtor not yet in existence on the date of the judgment commencing the proceedings, will be held unenforceable as from the date of commencement of the proceedings; by exception, the increase in the base of a contractual security interest may however validly result from an assignment of professional receivables (Dailly assignment) pursuant to a master agreement entered into before commencement of the proceedings or from other specific contrary provisions of the

French Commercial Code regarding restructuring and insolvency, the French Monetary and Financial Code (Code monétaire et financier) or the French Insurance Code (Code des assurances); and

- in the context of reorganization or liquidation proceedings only, absent consent to other terms of payment, immediate cash payment for services rendered pursuant to an ongoing contract (contrats en cours), will be required.

A natural person that is the guarantor of the debtor may avail itself of the provisions of a safeguard plan (plan de sauvegarde) or a judicial reorganization plan (plan de redressement).

In accelerated safeguard proceedings, the above rules only apply to the creditors that fall within the scope of the proceedings. Debts owed to creditors that are not within the scope of the proceedings continue to be payable in the ordinary course of business.

As a general rule, creditors domiciled in metropolitan France whose claims and securities arose prior to the commencement of proceedings must file a proof of claim with the court-appointed creditors' representative within two months of the publication of the court decision in an official gazette (Bulletin officiel des annonces civiles et commerciales) (by exception, the deadline starts upon receipt of an individual notification for those creditors whose claim arose out of a published contract or who benefit from a published security interest); this period is extended to four months for creditors domiciled outside metropolitan France.

Creditors must also file a claim for the post-commencement non-privileged debts, with respect to which the two- or four-month period referred to above starts to run as from their maturity date. Creditors whose claims or securities have not been submitted during the relevant period, or claims that are not deemed filed with the creditors' representative, are, except for limited exceptions, barred from receiving distributions made in connection with the proceedings. Employees are not subject to such limitations and are preferred creditors under French law.

In addition, the holder of a security interest in rem granted by the debtor to secure the debt of a third party must also file a statement of claim with the creditors representative under the same conditions.

At the beginning of the proceedings, the debtor must provide the court-appointed administrator and the creditors' representative with the list of all its creditors and all of their claims. Where the debtor has informed the creditors' representative of the existence of a claim, the claim as reported by the debtor is deemed to be a filing of the claim with the creditors' representative on behalf of the creditor. Creditors are allowed to ratify or amend a proof of claim so made on their behalf until the supervisory judge (juge-commissaire) rules on the admissibility of the claim. They may also file their own proof of claim within the deadlines described above.

In accelerated safeguard proceedings, however the debtor draws a list of the claims of its creditors having taken part in the conciliation proceedings, which is certified by its statutory auditors (failing which, its chartered certified accountant). Although such creditors may file proofs of claim as part of the regular process, they may also avail themselves of this simplified alternative and merely adjust if necessary the amounts of their claims as set forth in the list prepared by the debtor (within the above two or four months' time limit). Creditors that did not take part in the conciliation proceedings would have to file their proofs of claim within the aforementioned deadlines.

If the court adopts a safeguard plan, accelerated safeguard plan or reorganization plan, claims of creditors included in the plan will be paid according to the terms of the plan.

If the court adopts a plan for the sale of the business (plan de cession) of the debtor whether partial (within the frame of safeguard, reorganization or liquidation proceedings) or total (within the frame of reorganization or liquidation proceedings), the proceeds of the sale will be allocated towards the repayment of its creditors according to the ranking of the claims. If the court decides to order the judicial liquidation of the debtor, the court will appoint a liquidator (usually the former creditor's representative) in charge of selling the assets of the debtor and settling its debts in accordance with their ranking. However, in practice, where the sale of the business is considered, the court will usually appoint a court-appointed administrator to manage the debtor during the temporary continuation of the business operations and to organize the sale of the business process.

French insolvency legislation assigns priority to the payment of certain preferred creditors, including employees, post-commencement legal costs (essentially, court official fees), creditors who benefit from a New Money Lien or a Post Money Lien, post-commencement privileged creditors and the French State (taxes and social charges). In the event of judicial liquida-

tion proceedings only, certain pre-commencement secured creditors whose claim is secured by real estate are paid prior to post-commencement privileged creditors. This order of priority does not apply to all creditors, for example it does not apply to creditors benefiting from a retention right over assets with respect to their claim related to such asset.

### *Creditors' liability*

Pursuant to Article L. 650-1 of the French Commercial Code (as interpreted by case law), where safeguard, judicial reorganization or judicial liquidation proceedings have been commenced, creditors may only be held liable for the losses suffered as a result of facilities granted to the debtor on the following grounds (and may only be held liable on those grounds) provided that such grant was itself wrongful and if the relevant creditor (i) committed a fraud, or (ii) wrongfully interfered (*immixtion caractérisée*) with the management of the debtor or (iii) obtained security or guarantees taken to support the facilities being disproportionate to such facilities. In addition, any security or guarantees taken to support facilities in respect of which a creditor is found liable on any of these grounds can be cancelled or reduced by the court.

If a creditor has repeatedly interfered in the company's management, it can be deemed a de facto manager of such company. In such case, Article L. 651-2 of the French Commercial Code provides that, if liquidation proceedings have been commenced against the debtor, such creditor being deemed de facto manager may be liable bearing the excess of liabilities over the company's assets, along with the other managers (whether de jure or de facto), as the case may be, if it is established that their mismanagement has contributed to the company's shortfall of assets. If such conditions are met, French courts will decide whether the managers should bear all or part of the shortfall amount. However, the liabilities of the company shall not be borne by the managers in case of "simple negligence" (*simple négligence*).

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*Investors should read the following discussion in conjunction with the consolidated financial statements, including the notes thereto, included elsewhere in this annual report.*

We believe that we are the world's largest producer of polyacrylamide, or PAM, a water-soluble specialty chemical used in water treatment, oil and petroleum applications (including enhanced oil recovery, or EOR), mineral extraction, pulp and paper manufacturing and other industries. PAM has a broad variety of industrial and commercial uses as a flocculant, which facilitates the separation of suspended solids from water, as a viscosity modifier, which alters the thickness of liquids, and as a drag reducer, which decreases the pressure drop along a segment of pipe. In addition to PAM, of which we estimate we produced 56% of global output in 2023 and from which we generated approximately 83% of our 2023 net revenue, we also produce and sell related specialty chemicals such as coagulants and monomers. We also sell dispersants, which are used in the paper, household products and mining industries; and equipment that facilitate the utilization of PAM.

We operate our business through four geographic zones: EMEA (Europe, the Middle East and Africa), North America, Latin America, and Asia Pacific. Our net revenue by geographic zone as a percentage of total revenue for the years ended December 31, 2020, 2021, 2022 and 2023 are set forth in the table below:

## NET REVENUE

	2020	2021	2022	2023
EMEA	28.2%	25.5%	24.7%	24.1%
North America	35.6%	36.5%	40.2%	41.0%
Latin America	7.8%	8.0%	8.6%	9.1%
Asia Pacific	28.4%	30.0%	26.5%	25.8%

## FACTORS AFFECTING OUR BUSINESS

### Raw Material Costs

We are exposed to commodity price risks relating to raw materials and supplies, which accounted for approximately half of our sales in 2023. Many of our raw materials are derived from propylene, a petroleum derivative. We purchase raw materials from a variety of sources through multi-year contracts (typically indexed on propylene prices). Propylene has historically been subject to significant price increases, driven in part by increases in petroleum prices and also by increased demand, without a comparable increase in the supply of propylene. Supply and demand for propylene can also, at times, vary by region. We have taken, steps in recent years to mitigate the risk of increasing raw material prices by (i) regularly increasing prices of our products, in order to pass on raw material price increases to customers, and (ii) changing customer billing cycles, so that raw material price increases can be passed on to customers at the time the products are delivered to customers and not at the time they place their orders. We have also negotiated pricing arrangements with customers to permit regular increases in prices to reflect increases in raw material costs.

As a result, increases in raw material prices can be passed on to customers more quickly than in the past. Petroleum prices and propylene prices are subject to significant volatility. In the first months of 2022, the war between Russia and Ukraine has increased the already inflated cost environment coming from 2021. Propylene prices have remained especially high in Europe

and in the US, both regions in which we have introduced several price increases. Since May 2022, propylene prices have started to decline but have remained higher in Europe. This decline, however, has been offset by skyrocketing energy prices in the third quarter 2022, especially in Europe, region in which we had to introduce a new price increase in October. At the end of November 2022, China eventually lifted its zero-Covid policy after several months of strict enforcement. Over 2023, Asian propylene prices, benefiting from a large offer, have remained on average 25% cheaper than in Europe, region that still suffered from high cost position. In the USA, propylene prices have been quite volatile all over 2023. In January 2024, propylene prices in Europe and in USA were 29% and 35% higher than in Asia, respectively.

We will continue to face some delays in passing on any raw material price increases to our customers because not all of our customer contracts allow such price increases. For example, with respect to our water treatment contracts with municipalities, we typically agree to a fixed price contract over a set period of time, often one year. We however have a very large number of municipal contracts, which are renewed throughout the year, thus enabling us to progressively adapt to market prices.

### End User Demand

We have long-term contracts with some of our customers, especially in the oil industry. We typically receive orders for our products and deliver them within two to four weeks of the order being made. Customers may not order our products at regular intervals during the year, as they may draw upon their own inventories for longer periods of time. We tend to shift production from one product to another to fulfill customer orders. As a result, there can be short term fluctuations in sales from one product line compared to another, due to these variations in order flow.

While we have increased the prices of our products over the last eight years significantly, we have not experienced a lower demand for our products. Our products are typically critical or necessary products for our customers and there are currently no cost-effective substitutes available. Moreover, our products typically represent a small portion of end users' cost of goods sold, so price increases of our products have less financial impact on these end users.

### Foreign Exchange Exposure

Our financial results are impacted by both translation and transaction currency effects resulting from changes in currency exchange rates. Our reporting currency is the euro.

Translation currency effects occur when the financial results of our subsidiaries outside the euro region, as measured in their non-euro local currencies, are translated into euro using the exchange rate prevailing during the relevant period. The resulting impact of such a translation can affect our results when compared to other periods translated at different foreign exchange rates.

Translation currency effects also have a strong impact on the valuation of those of our assets that are held in non-euro zones or liabilities denominated in non-euro currencies.

We may also be affected by currency effects when we sell a product in one currency and incur manufacturing costs in another currency. In general, notwithstanding the global nature of our business, we believe we experience lessened translation currency effects because we have large manufacturing capabilities in our three key geographic sales areas, North America, Europe and Asia, and often incur the costs of manufacturing in the same currency in which we receive sales proceeds.

### Relationships with Distributors

We make approximately 24% of our sales through our relationships with approximately 800 distributors, who can provide broad coverage of the end-user market through an extended sales force.

Generally, we have non-exclusive agreements with these distributors, who typically supply technical assistance and on-site service to end users. Such distributors also often service niche markets, such as boiler and cooling water applications. These distributors are typically not exclusively PAM distributors, but rather general chemical distributors, who package our products with other chemical products to on-sell them to end users.

### Industry Trends

Generally, the demand for our products in the municipal water treatment market is quite stable and relatively insensitive to economic cycles.

Our products are used by end users in a variety of industrial end markets, which vary in their sensitivity to changes in the general economic environment. The market for the PAM we sell for eventual use in the mining industry, for example, is driven by demand for mining products. Recently, this industry has increased its demand significantly, although such demand in this market has historically been cyclical. Similarly, demand for oil and gas products, especially in the fracking industry, and pulp and paper products will also affect the demand for our products that end users in each of these respective industries use.

The remainder of our sales is to markets such as the cosmetics and personal care, textiles and agriculture markets, which are also characterized by less cyclical.

The market for EOR has a long time horizon, as decisions by end users to use the EOR polymer injection process, given the large capital commitment required, results in a long term need for our product by such end users, thus demand for EOR products is not likely to be cyclical.

Despite the severe economic conditions that prevailed throughout 2009, our volume of sales for 2009 declined by only 3%, thus demonstrating the stability of our markets.

### Critical Accounting Policies and Estimates

Our significant accounting policies or changes in accounting policies are summarized in the notes to our audited consolidated financial statements included herein. We prepare our consolidated financial statements in conformity with IFRS.

## CONSOLIDATED RESULTS OF OPERATIONS

The following table summarizes our consolidated results of operations for 2021, 2022 and 2023:

YEAR TO DATE CONSOLIDATED INCOME STATEMENT (MEUR)	TWELVE MONTHS ENDED DECEMBER 31			
	2021	2022	2023	%
<b>Revenue, net</b>	<b>3,615</b>	<b>4,911</b>	<b>4,519</b>	<b>-8.0%</b>
Raw materials and transportation costs	(2,399)	(3,240)	(2,678)	
<b>Gross profit</b>	<b>1,217</b>	<b>1,671</b>	<b>1,841</b>	<b>10.2%</b>
<b>% Revenue, net</b>	<b>33.7%</b>	<b>34.0%</b>	<b>40.7%</b>	
Production costs	(654)	(813)	(860)	5.8%
Marketing & distribution costs	(141)	(148)	(175)	18.5%
Local supporting R&D	(51)	(59)	(63)	6.2%
General & administrative costs	(83)	(114)	(125)	9.9%
Selling, general & administrative costs	(275)	(321)	(363)	13.2%
% Revenue, net	7.6%	6.5%	8.0%	
<b>EBIT</b>	<b>288</b>	<b>537</b>	<b>618</b>	<b>15.0%</b>
<b>% Revenue, net</b>	<b>8.0%</b>	<b>10.9%</b>	<b>13.7%</b>	
Depreciation & amortization	227	266	284	
<b>EBITDA</b>	<b>515</b>	<b>803</b>	<b>902</b>	<b>12.3%</b>
<b>% Revenue, net</b>	<b>14.2%</b>	<b>16.3%</b>	<b>20.0%</b>	
Non recurring income (loss)	(23)	(89)	(64)	
Financial Income / (Loss)	(31)	(106)	(64)	
Non-consolidated subsidiaries	4	2	1	
Tax on income	(47)	(80)	(118)	
<b>Income after tax</b>	<b>191</b>	<b>264</b>	<b>373</b>	
Minority interests	(3)	(10)	(8)	
<b>Net income</b>	<b>188</b>	<b>254</b>	<b>365</b>	<b>43.8%</b>
<b>% Revenue, net</b>	<b>5.2%</b>	<b>5.2%</b>	<b>8.1%</b>	



The following table summarizes our consolidated results of operations for the three months ended December 31, 2023 and the three months ended December 31, 2022:

**QUARTERLY CONSOLIDATED INCOME STATEMENT  
(MEUR)**
**THREE MONTHS ENDED DECEMBER 31**

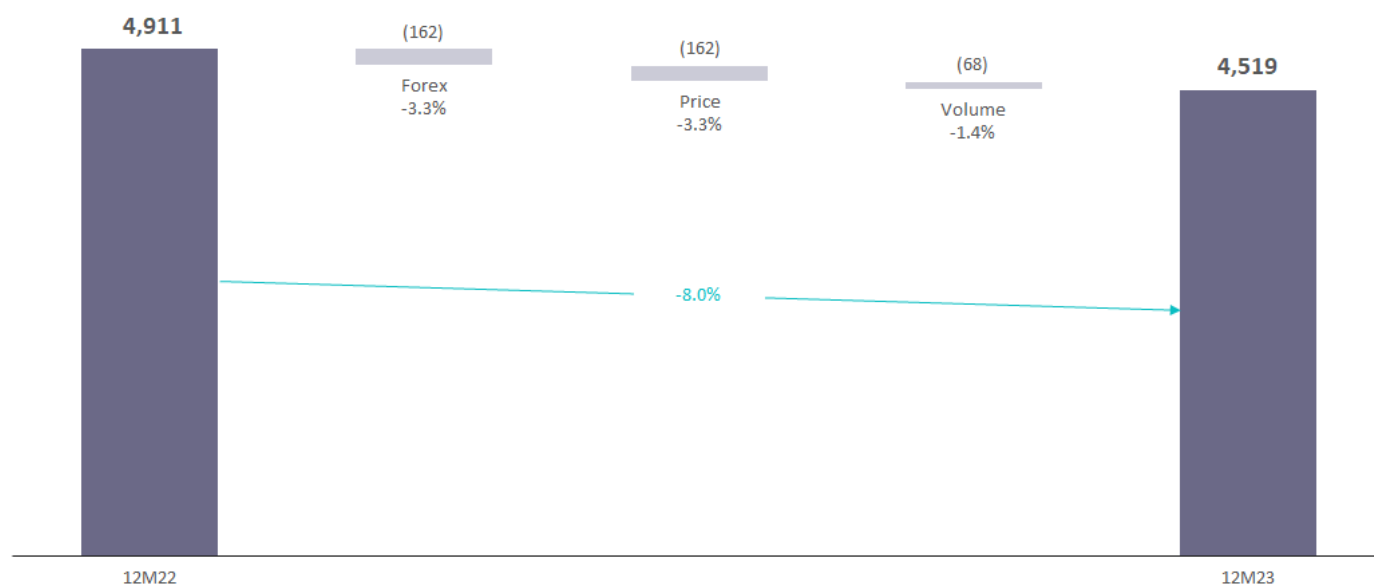
	2022	2023	%
<b>Revenue, net</b>	<b>1,210</b>	<b>1,063</b>	<b>-12.1%</b>
Raw materials and transportation costs	(788)	(619)	
<b>Gross profit</b>	<b>421</b>	<b>444</b>	<b>5.3%</b>
<b>% Revenue, net</b>	<b>34.8%</b>	<b>41.7%</b>	
Production costs	(216)	(215)	-0.4%
<i>Marketing &amp; distribution costs</i>	(41)	(42)	2.8%
<i>Local supporting R&amp;D</i>	(17)	(15)	-7.1%
<i>General &amp; administrative costs</i>	(33)	(29)	-12.2%
Selling, general & administrative costs	(90)	(86)	-4.5%
% Revenue, net	7.5%	8.1%	
<b>EBIT</b>	<b>115</b>	<b>143</b>	<b>23.9%</b>
<b>% Revenue, net</b>	<b>9.5%</b>	<b>13.4%</b>	
Depreciation & amortization	76	77	
<b>EBITDA</b>	<b>192</b>	<b>220</b>	<b>14.9%</b>
<b>% Revenue, net</b>	<b>15.8%</b>	<b>20.7%</b>	
Non recurring income (loss)	(31)	(37)	
Financial Income / (Loss)	(17)	(12)	
Non-consolidated subsidiaries	1	0	
Tax on income	(25)	(27)	
<b>Income after tax</b>	<b>44</b>	<b>66</b>	
Minority interests	(3)	(2)	
<b>Net income</b>	<b>41</b>	<b>65</b>	<b>58.4%</b>
<b>% Revenue, net</b>	<b>3.4%</b>	<b>6.1%</b>	

Year and quarter ended December 31, 2023 compared to the year and quarter ended December 31, 2022

## NET REVENUE

We had total net revenue of €4,519 million for the twelve months of 2023, representing a decrease of (8.0)% over total net revenue of €4,911 million for the twelve months of 2022. Foreign exchange rate translation had a negative impact of about (3.3)% for the twelve months of the year, reflecting primarily the depreciation of the US dollar and the Chinese yuan versus the Euro. Our total growth in constant currency was therefore a decrease of (4.7)% , broken down as a price decrease of (3.3)% and a volume decrease of (1.4)%.

THE FOLLOWING GRAPH BREAKS DOWN THE SALES VARIATION FOR 2023 (IN MEUR):



For the three months ended December 31, 2023, we had total net revenue of €1,063 million, representing a decrease of (12.1)% over total net revenue of €1,210 million for the three months ended December 31, 2022. Foreign exchange rate translation had a negative impact of about (4.0)% for the quarter, reflecting primarily the depreciation of the US dollar and the Chinese yuan versus the Euro. Our total growth in constant currency was therefore a decrease of (8.1)% , broken down as a price decrease of (6.6)% and a volume decrease of (1.5)%.

THE FOLLOWING GRAPH BREAKS DOWN THE SALES VARIATION BETWEEN 4Q22 AND 4Q23 (IN MEUR):



## GROSS PROFIT

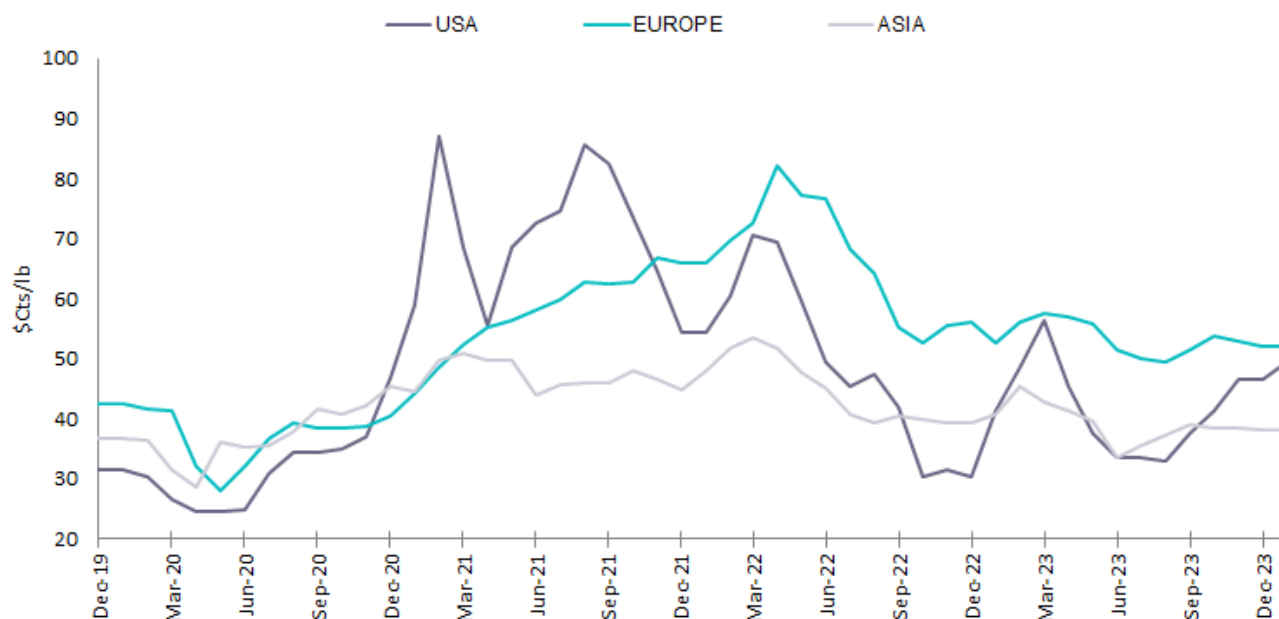
Gross profit increased by 10.2% to €1,841 million in 2023, compared with €1,671 million in 2022. As a percentage of net revenue, gross profit margin was 40.7% in 2023, compared with 34.0% in 2022.

For the three months ended December 31, 2023, gross profit increased by 5.3% to €444 million, compared with €421 million for the three months ended December 31, 2022. As a percentage of net revenue, gross profit was 41.7% for the three months ended December 31, 2023, as compared to 34.8% for the three months ended December 31, 2022.

THE FOLLOWING TABLE ILLUSTRATES THE EVOLUTION OF OUR GROSS PROFIT MARGIN IN THE PAST EIGHT QUARTERS:

(MEUR)	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23
Sales	1,094	1,304	1,303	1,210	1,141	1,183	1,132	1,063
<b>Gross profit</b>	<b>354</b>	<b>432</b>	<b>464</b>	<b>421</b>	<b>436</b>	<b>476</b>	<b>485</b>	<b>444</b>
% sales	32.4%	33.1%	35.6%	34.8%	38.3%	40.2%	42.8%	41.7%

THE FOLLOWING GRAPH ILLUSTRATES THE EVOLUTION OF PROPYLENE PRICES, OUR MAIN FEEDSTOCK, SINCE THE END OF 2019:



In the first months of 2022, the war between Russia and Ukraine has increased the already inflated cost environment coming from 2021. Propylene prices have remained especially high in Europe and in the US, both regions in which we have introduced several price increases. Since May 2022, propylene prices have started to decline but have remained higher in Europe. This decline, however, has been offset by skyrocketing energy prices in the third quarter 2022, especially in Europe, region in which we had to introduce a new price increase in October. At the end of November 2022, China eventually lifted its zero-Covid policy after several months of strict enforcement.

Over 2023, Asian propylene prices, benefiting from a large offer, have remained on average 25% cheaper than in Europe, region that still suffered from high cost position. In the USA, propylene prices have been quite volatile with an increase of 26.0 \$Cts/lb between December 2022 and March 2023, followed by a decrease of (23.5) \$Cts/lb between March 2023 and August 2023, and by another increase of 16.5 \$Cts/lb between August 2023 and January 2024.

In January 2024, propylene prices in Europe and in USA were 29% and 35% higher than in Asia, respectively.

## PRODUCTION COSTS

Production costs increased by 5.8% to €860 million in 2023, compared with €813 million in 2022. As a percent of net revenue, production costs were 19.0% in 2023, compared with 16.6% in 2022.

For the three months ended December 31, 2023, production costs decreased by (0.4)% to €215 million, compared with €216 million for the three months ended December 31, 2022. As a percent of net revenue, production costs were 20.2% in the fourth quarter of 2023, compared with 17.8% in the fourth quarter of 2022.

## MARKETING AND DISTRIBUTION EXPENSES

Marketing and distribution expenses increased by 18.5% to €175 million in 2023, compared with €148 million in 2022. As a percent of net revenue, marketing and distribution expenses were 3.9% in 2023, compared with 3.0% in 2022.

For the three months ended December 31, 2023, marketing and distribution expenses increased by 2.8% to €42 million, compared with €41 million for the three months ended December 31, 2022.

## RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses increased by 6.2% to €63 million in 2023, compared with €59 million in 2022. As a percent of net revenue, research and development expenses were 1.4% in 2023, compared with 1.2% in 2022.

For the three months ended December 31, 2023, research and development expenses decreased by (7.1)% to €15 million, compared with €17 million for the three months ended December 31, 2022.

## GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses increased by 9.9% to €125 million in 2023, compared with €114 million in 2022. As a percent of net revenue, general and administrative expenses were 2.8% in 2023 and 2.3% in 2022.

For the three months ended December 31, 2023, general and administrative expenses decreased by (12.2)% to €29 million, compared with €33 million for the three months ended December 31, 2022.

## SELLING, GENERAL AND ADMINISTRATIVE EXPENSES (SG&A)

SG&A increased by 13.2% to €363 million in 2023, compared with €321 million in 2022. SG&A expenses as a percentage of net revenue were 8.0% in 2023 and 6.5% in 2022.

For the three months ended December 31, 2023, SG&A expenses decreased by (4.5)% to €86 million, compared with €90 million for the three months ended December 31, 2022. As a percent of net revenue, SG&A expenses were 8.1% in the fourth quarter of 2023, compared with 7.5% for the fourth quarter of 2022.

## DEPRECIATION AND AMORTIZATION

Depreciation and amortization charges were €284 million in 2023, compared with €266 million in 2022.

For the three months ended December 31, 2023, depreciation and amortization charges totaled €77 million, compared with €76 million for the three months ended December 31, 2022.

## EARNINGS BEFORE INTEREST AND TAXES (EBIT)

EBIT increased by 15.0% to €618 million in 2023, compared with €537 million in 2022. EBIT as a percentage of net revenue was 13.7% in 2023 and 10.9% in 2022.

For the three months ended December 31, 2023, EBIT increased by 23.9% to €143 million, compared with €115 million for the three months ended December 31, 2022. As a percent of net revenue, EBIT was 13.4% in the fourth quarter of 2023, compared with 9.5% in the fourth quarter of 2022.

## EARNINGS BEFORE INTEREST, TAXES, DEPRECIATION AND AMORTIZATION (EBITDA)

EBITDA increased by 12.3% at €902 million in 2023, compared with €803 million in 2022. EBITDA as a percentage of net revenue was 20.0% in 2023 and 16.3% in 2022.

For the three months ended December 31, 2023, EBITDA increased by 14.9% to €220 million, compared with €192 million for the three months ended December 31, 2022. As a percent of net revenue, EBITDA was 20.7% in the fourth quarter of 2023, compared with 15.8% in the fourth quarter of 2022.

## NON RECURRING INCOME/(LOSS)

Non recurring loss totaled €(64) million in 2023, compared with €(89) million in 2022. Out of this 2023 total amount, €23 million to the write-off of some Russian assets, €9 million to the write-off of some receivables mainly located in hyperinflationary economies, and €5 million pertain to the closure of our xanthate business. Those three items are non-cash costs.

For the three months ended December 31, 2023, non-recurring loss was €(37) million. Out of this balance, €18 million are non-cash costs.

## FINANCIAL INCOME/(LOSS)

Financial loss totaled €(64) million in 2023, compared with €(106) million in 2022. Out of this 2023 total, interest expense on our debt accounted for €(65) million. Foreign exchange gains and others had a positive impact of about €4 million.

For the three months ended December 31, 2023, financial loss was €(12) million, compared with a financial loss of €(17) million for the three months ended December 31, 2022. Out of this 2023 total, interest payments on our debt amounted to €(15) million and foreign exchange gains and other charges had a positive impact of about €3 million.

THE FOLLOWING TABLE SUMMARIZES THE BREAKDOWN OF OUR FINANCIAL RESULT FOR THE LAST FIVE QUARTERS AND FOR THE LAST COUPLE OF YEARS BY NATURE:

FINANCIAL (MEUR)	4Q22	1Q23	2Q23	3Q23	4Q23	2022	2023
Interest expenses	(13)	(15)	(19)	(17)	(15)	(49)	(65)
Exchange gain and others	(3)	1	(9)	9	3	(55)	4
IFRS 16 impact	(1)	(1)	(1)	(0)	(1)	(2)	(2)
<b>Total</b>	<b>(17)</b>	<b>(14)</b>	<b>(28)</b>	<b>(9)</b>	<b>(12)</b>	<b>(106)</b>	<b>(64)</b>

## CORPORATE INCOME TAX

Corporate income tax totaled an expense of €(118) million in 2023, compared with an expense of €(80) million in 2022. The average corporate income tax rate has been 24% in 2023.

For the three months ended December 31, 2023, corporate income tax totaled an expense of €(27) million, compared with an expense of €(25) million for the three months ended December 31, 2022.

## MINORITY INTERESTS

Minority interests totaled €(8) million in 2023, compared with (10) million in 2022.

For the three months ended December 31, 2023, minority interests totaled €(2) million, compared with €(3) million for the three months ended December 31, 2022.

## NET INCOME

Net income totaled €365 million in 2023, compared with €254 million in 2022. As a percent of net revenue, net income was 8.1% in 2023, compared with 5.2% in 2022.

For the three months ended December 31, 2023, net income totaled €65 million, compared with €41 million for the three months ended December 31, 2022.

## LIQUIDITY AND CAPITAL RESOURCES

Our principal sources of funds have been cash generated from our operating activities and long-term borrowings. Our ability to service our capital needs, to service our obligations under our indebtedness and to fund our ongoing operations will depend upon our ability to generate cash. Our principal uses of cash are to fund capital expenditures, working capital and debt service obligations, and also to fund existing and potential expenditures relating to joint ventures, including purchasing outstanding interests from third parties. We have traditionally required significant amounts of capital to build new manufacturing facilities, although ongoing capital requirements for maintenance of existing facilities are limited. As we continue to grow both organically and through strategic acquisitions, we constantly evaluate opportunities to add manufacturing assets in key markets.

### CONSOLIDATED CASH FLOW STATEMENT

THE FOLLOWING TABLE SUMMARIZES OUR CONSOLIDATED CASH FLOW STATEMENT FOR THE YEARS ENDED DECEMBER 31, 2021, 2022 AND 2023:

CASH FLOW (MEUR)	Year 2021	Year 2022	Year 2023
Cash flow	490	777	865
Net cash from operating activities	89	392	738
Net cash used in investing activities	(333)	(434)	(538)
Net cash from financing activities	99	122	(32)
Cash at end of the period	307	370	517

For the full year 2023, our cash flow totaled €865 million, compared with €777 million in 2022.

Net cash from operating activities totaled €738 million in 2023, compared with €392 million in 2022. The operating cash flow has been positively impacted by our working capital that has decreased by €35 million during 2023. Working capital as a percentage of the fourth quarter 2023's annualized sales was 27%, compared with 26% for the fourth quarter of 2022.

Net cash used in investing activities in 2023 was €538 million, compared with €434 million for 2022. Out of this 2023 total, €452 million pertain to capital expenditures in our tangible assets, in line with our investment plan.

Net cash from financing activities was €(32) million for the twelve months ended December 31, 2023.

As of December 31, 2023, we had cash and cash equivalents of €517 million on a consolidated basis, compared with €370 million for the year ended December 31, 2022. Including the undrawn portion of our bank facilities of €627 million, our total liquidity as of December 31, 2023, was €1,144 million, compared with €737 million at the end of 2022.

THE FOLLOWING TABLE PRESENTS OUR DETAILED CASH FLOW STATEMENT FOR THE PAST THREE YEARS:

<b>CASH FLOW STATEMENT (MEUR)</b>	<b>2021 12M</b>	<b>2022 12M</b>	<b>2023 12M</b>
<b>NET INCOME</b>	<b>188</b>	<b>254</b>	<b>365</b>
Allowances for depreciation and amortization, provisions	229	302	311
Reversals of depreciation, amortization and provisions	(15)	(14)	(6)
Grants transferred to net income	(0)	(0)	(0)
Undistributed earnings accounted for under the equity method	(4)	(1)	(0)
Gains/ (losses) from asset disposals	12	30	6
Fair value variation of non-consolidated entities	(9)	(2)	(2)
Income attributable to non-controlling interests	3	10	8
Income tax charge (current and deferred)	47	84	119
Other financial expense and income	38	114	64
<b>CASH FLOW GENERATED FROM OPERATIONS</b>	<b>490</b>	<b>777</b>	<b>865</b>
Change in inventories and work in progress	(283)	(168)	103
Change in receivables	(247)	(109)	53
Change in payables	204	16	(110)
Change in other payables and receivables	5	0	(11)
Tax payments	(33)	(68)	(96)
Interest expense payments	(47)	(55)	(67)
<b>NET CASH FROM OPERATING ACTIVITIES</b>	<b>89</b>	<b>392</b>	<b>738</b>
Inflows from fixed asset disposals	4	2	3
Investments in property, plant and equipment	(292)	(397)	(452)
Investments in intangible assets	(37)	(22)	(23)
Acquisitions	(9)	(18)	(65)
<b>NET CASH FROM INVESTING ACTIVITIES</b>	<b>(333)</b>	<b>(434)</b>	<b>(538)</b>
Net variation loans and borrowings	100	127	(26)
Share capital increases (reductions)	-	-	0
Dividends paid (including non-controlling interests)	(1)	(5)	(6)
<b>NET CASH FROM FINANCING ACTIVITIES</b>	<b>99</b>	<b>122</b>	<b>(32)</b>
Effect of changes in exchange rates	13	(17)	(21)
<b>NET CHANGE IN CASH AND CASH EQUIVALENTS</b>	<b>(132)</b>	<b>63</b>	<b>146</b>
Net opening cash and cash equivalents	439	307	370
Net closing cash and cash equivalents	307	370	517



## SENIOR CREDIT FACILITIES AND OTHER INDEBTEDNESS

On June 27, 2023, we signed a new revolving credit facility of €750 million available to SNF Group in US dollars or euros. Its maturity is June 27, 2028, with two annual options to extend the maturity by an additional one year each. This revolving credit facility is unsecured and ranks equally with our Senior Notes. Concomitantly with the issuance of this facility, we have reimbursed in full the former revolving credit facility and 3 bilateral bank lines amounting to €160 million.

On October 3, 2018, we entered into a facility with the European Investment Bank (EIB) for a total amount of €180 million at a fixed rate of 1.75%, available to SNF Group, with a maturity of eight years and a bullet amortization. This loan is unsecured and ranks equally with our Senior Notes and revolving credit facility.

AS OF DECEMBER 31, 2023, OUR TOTAL BORROWING OF €1,867 MILLION WAS BROKEN DOWN AS FOLLOWS:

DEBT (MEUR)	4Q22	1Q23	2Q23	3Q23	4Q23
Senior Notes	1,356	1,344	1,344	1,361	1,333
Senior Facility	48	48	193	186	158
Other SNF Group	410	408	248	248	247
Subsidiaries	37	35	31	18	63
IFRS 16	56	59	60	59	66
Others	0	0	(0)	1	(1)
<b>Total Debt</b>	<b>1,907</b>	<b>1,893</b>	<b>1,875</b>	<b>1,873</b>	<b>1,867</b>
Adjustments as per bank facility	9	9	3	(13)	13
Gross cash and cash equivalents	(370)	(407)	(408)	(501)	(517)
<b>Adjusted Net Debt</b>	<b>1,545</b>	<b>1,495</b>	<b>1,471</b>	<b>1,359</b>	<b>1,363</b>

For the purpose of calculating the leverage ratio associated with our bank covenant, the average exchange rate between EUR and USD for the year is used instead of the closing rate.

**As of December 31, 2023, our adjusted net debt to EBITDA ratio was 1.51x.**

# BUSINESS

## OVERVIEW

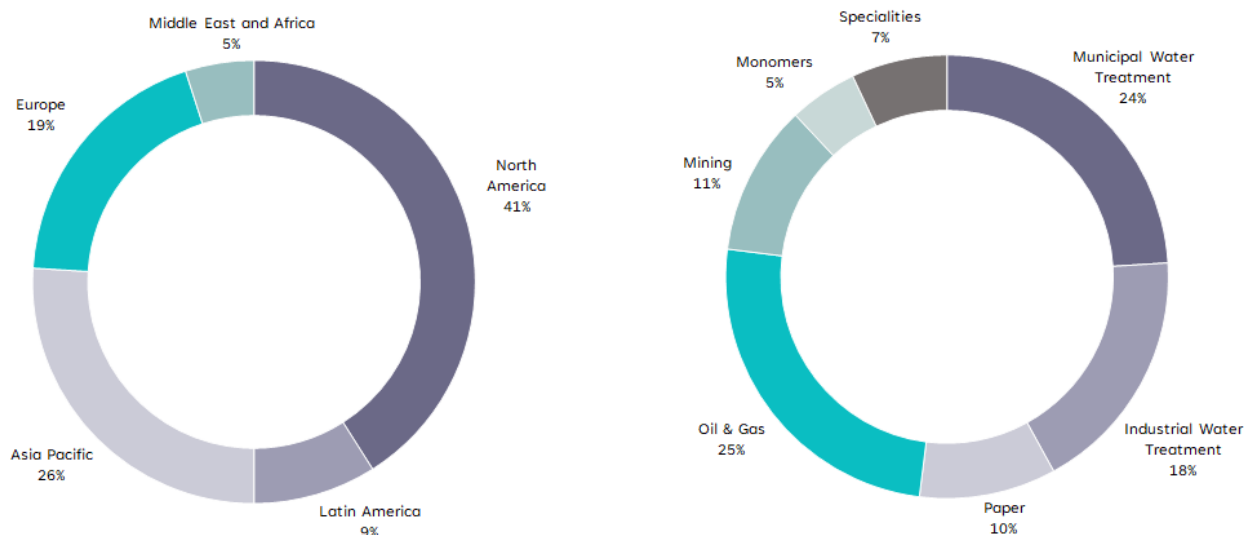
We believe that we are the world’s largest producer of polyacrylamide, or PAM, a water-soluble specialty chemical used in water treatment, oil and gas applications (including enhanced oil recovery, or EOR), mineral extraction, pulp and paper manufacturing and other industries. PAM has a broad variety of industrial and commercial uses as a flocculant, which facilitates the separation of suspended solids from water, as a viscosity modifier, which alters the thickness of liquids, and as a drag reducer, which decreases the pressure drop along a segment of pipe. In addition to PAM, of which we estimate we produced 56% of global output in 2023 and from which we generated approximately 83% of our 2023 net revenue, we also produce and sell related specialty chemicals such as coagulants, which are used primarily in water treatment, and monomers. We also sell dispersants, which are used in the paper, household products and mining industries; and equipment that facilitates the utilization of PAM. For the year ended December 31, 2023, we had net revenue of €4.5 billion and EBITDA of €0.9 billion.

Since we were founded in 1978, we have implemented a strategy of organic growth and selective acquisitions of manufacturing operations to create an international manufacturing and sales platform that has enabled us to achieve a leading global share of our chosen markets. We benefit from large modern manufacturing facilities in France, the United States, China, India and South Korea and several smaller manufacturing facilities around the world, and from a direct sales force that reaches more than 45,000 customers. We also benefit from a distribution network that consists of approximately 800 independent resellers around the world. We believe that our products are sold in more than 140 countries and that we reach more than 450,000 end users worldwide.

We offer a large product portfolio of more than 1,090 product formulations tailored to address end-user requirements, which we sell to a diversified customer base across multiple industries. Of our 2023 net revenue, we estimate that municipal water applications accounted for approximately 24%, industrial water treatment applications accounted for approximately 18%, oil and gas applications accounted for approximately 25%, mining applications accounted for approximately 11%, pulp and paper applications accounted for approximately 10%, other specialty applications, such as agricultural aids, construction chemicals, textile, home and personal care products, accounted for approximately 7%, and monomer sales accounted for approximately 5%.

In 2023, our sales were also geographically diverse and, of our 2023 net revenue, 41% came from North America, 9% from Latin America, 26% from Asia Pacific, 19% from Europe, 5% from the Middle East and Africa.

## 2023 NET REVENUE BY GEOGRAPHY AND INDUSTRY



## HISTORICAL BACKGROUND

We began producing flocculants for water treatment under the name Streichenberger in 1968 with a license from a small English chemical company. In 1970, Streichenberger was purchased by a French subsidiary of British Petroleum, which resold the company eight months later to a subsidiary of W.R. Grace.

In 1978, our then-technical director, René Pich, led a management buyout from W.R. Grace. Following the buyout, we began to develop our research and development, production, and sales capacities. Approximately 38 years ago, we began our U.S. operations with the acquisition of our current Riceboro, Georgia site, and following that, made several key acquisitions to increase U.S. capacity. Key events in our history since 1999 are as follows:

**1999:** At our Riceboro, Georgia site, we brought additional DMAEA production lines online, which increased the capacity of this plant to approximately 48,000 metric tons per year. We also increased PAM production in France by approximately 20,000 metric tons, and emulsion PAM by approximately 10,000 metric tons. We also increased emulsion PAM and powder PAM capacity at our Eyang joint venture in South Korea, and founded our Taixing, China operations, to produce water treatment and EOR chemicals.

**2000:** In the United States, we added an additional 10,000 metric tons per year capacity in powder PAM and emulsion PAM, as well as increased Mannich PAM capacity. In France, we added an additional 10,000 metric tons per year capacity in powder and emulsion PAM, and brought additional polyamine lines online. We also opened new PAM manufacturing plants in Indonesia and Australia, and built additional production lines at our Taixing manufacturing facility.

**2001-2002:** We built two additional PAM production lines at our Taixing site, and completed the acquisition of our business in India, which currently has powder PAM capacity of 10,000 metric tons annually.

**2003:** Construction of our new Andrézieux site for PAM production and the expansion of powder PAM production lines in France, with additional expansions to PAM and monomer production lines in the United States.

**2007:** Award of the first large EOR construction contract for PDO in Oman.

**2008:** We built two additional 20,000 metric tons per year PAM production lines at our Riceboro, Georgia site.

**2009:** We purchased 1,000 acres of land in Plaquemine, Louisiana for the construction of a new PAM facility.

**2011:** We started operations in our new plant in Plaquemine, Louisiana.

**2014:** We acquired the remaining 50% shares of our joint venture with OCI / Eyang in South Korea.

**2016:** We started operating a new acrylamide line in our plant in Ulsan, South Korea.

**2017:** We started operations in our new PAM plant in Rudong, China.

**2020:** We started operating a fourth PAM line in our plant in Rudong, China.

**2021:** We started operating our second PAM plant in India located in Gandhidham, Gujarat.

**2023:** By the end of 2023, our existing PAM production capacity was in excess of 1,465,000 metric tons.

Throughout our history, we have continued to innovate, back integrating several of our key raw materials and, in particular, beginning to produce bioacrylamide using the enzymatic process.

## COMPETITIVE STRENGTHS

We believe that we have the following key strengths:

### World Leader with 56% of Production Capacity.

We believe we are the world's largest producer of PAM, accounting for approximately 56% of global production capacity in 2023. At our 21 facilities, we currently have the capacity to produce approximately 1,465,000 metric tons of PAM per year in active equivalent ("active equivalent" is determined based on the concentration of PAM in its different forms to reconcile its dilution in liquid, emulsion or powder in determining production and capacity). Our leading market position has allowed us to develop expertise in the research and development, production, marketing and sales of PAM that ultimately benefits a broad end user base. We are also a market leader in each of the principal regions we address, including North America, Europe/Africa and Asia-Pacific, with approximately 71%, 49% and 50% of the production capacity in such regions, respectively.

### Large Product Range.

We have a range of more than 1,090 product formulations. These formulations take a number of different physical forms such as powders, beads, emulsions, liquids and dispersions, depending on their end use. Our products also have a number of different chemical properties (anionic, cationic, non-ionic) and a number of different molecular forms (linear, branched, cross-linked, comb, star). Our knowledge in combining these different characteristics gives us the ability to tailor our products to specific applications and the specific requirements of end users. We industrialized more than 150 new products in 2023.

We have broadened our product range by diversifying into additional products in industries where end users require bundled products. We can provide our primary product, PAM, in connection with other products, such as coagulants, which are also used in water treatment. We have successfully employed this strategy for many end users, especially municipal and mining end users. Furthermore, for water treatment applications, we sell certain products to our resellers who have their own specialized product lines that complement ours to better serve markets such as the boiler or cooling water treatment markets.

### Diversified Business Model.

Our business model is diversified across industries, applications, customers and geographies. We market and sell our products in four primary markets: water treatment, oil and gas, mining, and paper industries, complemented by several other niche markets including agricultural, construction, textile and home and personal care industries. Our primary product, PAM, has a variety of industrial and commercial applications in these industries as a flocculant, viscosity modifier and drag reducer. We also produce a range of other products, including coagulants, monomers, dispersants, activated car-

bon, inorganic coagulants and defoamers, which also support different applications across the industries we service.

We sell to approximately 45,000 customers, including approximately 800 distributors and resellers, and we believe that in total we reach more than 450,000 end users. In 2023, no single customer accounted for more than 3% of our net revenue, and our ten largest customers represented approximately 14% of our net revenue. Our business is also globally diversified as described under "— Global Sales Effort Across Market Segments" below.

### Stable and Loyal Customer Base.

Our customers represent a variety of stable consumer, municipal and industrial end markets. Our customers include municipalities, pulp and paper companies, oil and gas companies, mining companies and companies in several other industries that use our products for water treatment and, in the case of oil and gas and mining companies, to improve the extraction of oil and minerals. In particular, we sell PAM and other products to numerous municipalities and major cities in Europe and North America for treatment of their water. Most of our customers have had relationships with us for a number of years, and we believe that our customer retention rate is high.

### Modern and Geographically Diverse Production Capacity.

We have designed and built large, cost-effective and high-quality manufacturing facilities in France, the United States, South Korea, India and China that we believe are among the most modern in the industry. We have eight major plants in France, the United States, India, China, and South Korea, as well as thirteen additional production sites. By having major manufacturing sites in our key markets, we are able to provide our products more quickly to our customers and end users, and have chosen sites where we will be able to expand. Additionally, our costs in any particular currency in these markets generally match the currency in which sales are realized, thereby reducing our exchange risks for these markets. We have also established a standard design for our main production lines, which has enabled us to shorten construction time, to simplify maintenance across our different sites and to provide the flexibility to shift production from region to region as needed.

### Global Sales Effort Across Market Segments and Efficient Pass-through Pricing Policies.

We directly sell our products in more than 55 countries through our local subsidiaries and through our own sales team of approximately 600 salespeople. We also benefit from a global network of resellers who distribute our products in more than 140 countries. We have implemented a strategy that has enabled us to cover our market segments globally. We have established operations in three key markets: Europe, North America and Asia-Pacific, with the ability to service

clients directly from manufacturing sites located in each of these areas.

While we are exposed to raw material price fluctuations, including fluctuations in the price of propylene, we are able to pass such cost increases on to our customers through formula-based contracts and price lists that are regularly updated to reflect market costs of raw materials, each of which represented 35% and 42% of our sales in 2023, respectively. Fixed price contracts are mainly used in the municipal water treatment end-market, while contracts used in our oil & gas and industrial water treatment end-markets are well balanced between price lists and formula-based contracts. Our pass-through pricing policies allow us to maintain control of our margins.

Our marketing efforts are generally tailored to customer type:

- high volume and low service end users are approached directly by our global sales team. These end users are typically required to deal directly with product manufacturers, not resellers, and include many large municipalities, as well as mining and oil companies; and
- lower volume and more specialized end users are often covered by our network of resellers, giving us access to a substantial extended global sales force. In addition, we have established strategic relationships with a number of the large service-driven resellers who provide high-end services to their customers.

In recent years we have increased the share of net revenue generated by our direct sales force from an estimated 25% in 2005 to an estimated 68% in 2023, which has contributed to our enhanced profitability.

### **World Class Technical Expertise and Research.**

We continuously monitor technical feedback from end users to enhance and expand our product range, and we develop new production formulations by working closely with targeted end users. We have three main research and development centers and ten application laboratories at which we develop and test new product formulations. Our technical experts from research and development and on-field technical support represent a group of about 275 field specialists and, 445 scientists and technicians, of which approximately 40% are located in France, with the remainder being split between the United States, China and our other field operations. We introduce more than 150 new product formulations every year and have approximately 1,717 active patents in multiple jurisdictions. Our technical know-how relates to the production of PAM and our other products and involves

expertise in monomer development, the polymerization process, and polymer production as well as performance applications for our customers. We have leveraged our technical expertise and research efforts to develop our sixth generation of bacteria used for the production of monomers and our fourth generation of polymer production units, enabling significant improvements in our production capacity and efficiency across our global operations. We also work with our customers in order to develop and provide tailored applications for our products and to optimize their ability to end users.

### **Leading sustainability platform.**

We have been dedicated to sustainability and have placed significant focus on minimizing the environmental impact of our activities and reducing the footprint of all our industrial sites.

Our products address the issue of water scarcity, which is exacerbated by population growth, increasing urbanization and standards of living and more complex regulation. We aim to preserve natural resources in all our markets through water treatment, extraction of key minerals and optimization of hydrocarbon resources. More specifically, we are instrumental in water treatment for about 1 billion people and in cleaning and recycling water for over 12,000 industrial sites. We constantly strive to optimize our mining processes which can be potentially pivotal to the energy transition, achieving lower levels of water consumption and hydrocarbon emissions for the production of oil.

Our focus on clean water and sanitation, climate action, responsible consumption and production and life on land, and the overall alignment of our activities with the United Nations Sustainable Development Goals (“SDGs”), has been recognized with awards, high sustainability ratings and metrics, consistently superior to our peers across the environmental Key Performance Indicators (“KPIs”).

### **Experienced Management.**

We believe our experience helps us identify growth and investment opportunities in new areas, products lines and target industries in order to strengthen our leading position in the industry. We have a professional and committed management team, consisting of executives with significant experience in the chemical industry, marketing, product development and acquisitions, who are focused on successfully implementing our business strategy and have a successful track record of growing our business and enhancing our profitability. Our chief executive officer has over 25 years of experience in the specialty chemical industry.

## BUSINESS STRATEGY

### Help Battle Water Scarcity and Preserve Natural Resources.

We are focused on geographic and industry specific markets with high volume growth potential for our products driven by the increased scarcity of natural resources, especially water. Indeed, by providing products to treat water for use in both industrial and municipal application, optimize mining processes, enhance oil recovery for existing reserves and reduce water needs for mining and oil and gas extraction processes, we prove instrumental in battling water scarcity and preserving natural resources.

In the water treatment market, which represented 42% of our sales for the twelve months ended December 31, 2023, we treat water for over 1 billion people, and clean and recycle water at over 12,000 industrial sites.

In the mining market, which represented 11% of our sales for the twelve months ended December 31, 2023, our products are used for the optimization of mining processes and reduction of water needs as well as the extraction of key materials essential to the energy transition.

In the oil and gas market, which represented 25% of our sales for the twelve months ended December 31, 2023, oilfield operators using our polymers in their polymer flooding operations for EOR are able to reduce the water and CO<sub>2</sub> needed to produce a barrel of oil. Polymer floods lead to three to six times less water and two to six times less CO<sub>2</sub> per barrel of oil, as compared to water flooding. These reductions are primarily achieved through a more efficient sweep of oil within the reservoir, resulting in water cut reduction and, ultimately, a decrease in required pumping energy at the producers and less taxing on fluid separation equipment and processes.

In addition to our role in battling water scarcity and preserving natural resources in our end-markets, we also strive to minimize the environmental impact of our own activities and reducing our footprint on all our industrial sites. Our efforts to reduce our water consumption have allowed us to use 20% less water than we needed ten years ago to produce one ton of finished product. We constantly monitor our water consumption by installing flow meters, detecting leaks and upgrading fire circuits and are focused on finding ways to optimize our use of water by, for example, recovering rainwater and recycling water from boiler washings or condensates.

We are also committed to preserving natural resources by continuous improvement of our manufacturing sites to reduce energy needs, including through the design and purchase of

energy-efficient equipment. We have developed a range of more than one thousand products that help to preserve our natural resources, promote recycling and improve the efficiency of industrial processes. Our key focus areas are aligned to the United Nations 2030 Agenda for Sustainable Development.

In July 2023, Moody's Analytics assigned an ESG overall score of 62 to SNF Group. According to the Moody's Analytics report, we display a strong willingness and capacity to integrate environment, social and governance factors into our strategy (receiving a score of 67 in "Environmental," compared to the sector average of 49 and 67 in "Social," compared to the sector average of 51), operations and risk management, with robust results on managing risks related to human capital and legal security.

### Maintain our Chemical and Engineering Technical Leadership.

We believe that our technical capabilities in the applications for PAM result from our knowledge of the needs of end users and from our ability to continually adapt our product range to provide innovative solutions to our customers. We have also continued to develop specific products for value-added resellers. Some of our most innovative resellers are also focusing on niche markets for our products that could represent potential new markets. We are supporting these needs, so long as we stay within our core chemical and manufacturing competencies and address the needs of our customers and we constantly seek to improve the quality of our products.

### Reinvest Cash Flow in Operations.

We have historically invested a very significant majority of our cash flow from operations back into our business in order to increase our production capacity, improve the quality of our operations, and make investments in existing projects and new strategies, such as our EOR business. We have a history of very low dividend distribution, and we plan to follow this pattern in the future.

### Focus on Low Cost Production Advantage.

We continue to seek to reduce our costs of production. We also continue to focus on internal volume growth in order to increase our revenue and achieve economies of scale. We strive to enhance manufacturing productivity and will continue to make investments to achieve this aim. We will seek to increase plant capacity at existing plants to spread our fixed costs and to build new plant capacity in new markets where we believe there is strong market demand, such as the United Kingdom, Brazil, India, France and China.

## OUR PRODUCTS

We have over 1,090 separate and distinct product formulations, which encompass a number of product categories and product types. We produce PAM (used as a flocculant, viscosity modifier, and drag reducer), monomers, coagulants (organics: polyDADMAC, polyamine, and inorganics: aluminum, ferric salts), superabsorbants and dispersants.

These products are used in a variety of forms:

- physical (powders, beads, emulsions, liquids and dispersions);
- chemical (anionic, cationic and non-ionics); and
- molecular (linear, branched, cross-linked, comb and star).

In our chosen markets and as a percentage of 2023 net revenue, the breakdown of our product lines is as follows:

**PAM 83%** | **Monomers 6%** | **Coagulants 8%** | **Dispersants 2%** | **Equipment 1%** |

### PAM

By physical form, 42% of our 2023 net revenue came from the sale of powder PAM and 41% of our 2023 net revenue came from the sale of emulsion and liquid PAM. Of our 2023 net revenue from the sale of PAM, anionic powder represented 27%, cationic powder represented 15%, anionic emulsion represented 17% and cationic emulsion represented 24%.

PAM is used in three main families of applications:

- flocculation (used for water treatment, and in pulp/paper and mining applications);
- viscosity modification (used in the oil industry, as a thickener textile printing paste and for other uses, such as home and personal care); and
- drag reduction (used in hydraulic fracturing).

#### PAM FOR FLOCCULATION

Flocculation is currently the main application of PAM. Flocculation is the mechanism by which suspended solids are separated from water. This application is widely used in potable water production, in municipal and industrial waste water treatment, in dredging, and in sludge dewatering. Flocculation also facilitates technical processes such as the production of paper (as a retention aid and drainage aid, and for pitch control) or in mining, for mineral extraction (hydro metallurgy and ore-matrix separation).

#### PAM FOR VISCOSITY MODIFICATION

The main market for this application is EOR. Other applications for PAM used as viscosity modifiers include textile, construction, home and personal care products. In textile applications, PAM is used as a thickener for printing paste.

#### PAM FOR DRAG REDUCTION

Hydraulic fracturing currently is the main technology used for shale oil and gas exploitation and is the main drag reduction application for PAM. PAM is used to significantly reduce the pressure drop and the energy necessary to pump the fracturing fluid downhole.

## MONOMERS

To improve and strengthen our competitive position, we also produce acrylamide and cationic monomers, the main building blocks of PAM and cationic PAM.

We have built plants to produce acrylamide using a new process based on enzyme technology developed in coordination with Mitsubishi Rayon Co., Ltd., (formerly Dia-Nitrix). This new bio-acrylamide process is based on a low-temperature and pressure-free bio-reaction, as opposed to a high-pressure, high-temperature chemical reaction, and has the advantage of being safer for the environment than its alternatives. This new process reduces the capital investment required for a given capacity, and we believe that our new plants have more efficient processes than those of our competitors. It is also a cheaper form of production. We have built production lines in France, China, South Korea, India, the United Kingdom, Australia and the United States with this process.

From acrylamide, we also produce and sell acrylamide derivatives, such as N-methylol acrylamide. In the United States, in France and in China, we have also built large plants for cationic monomer production, used in conjunction with acrylamide monomers to produce cationic PAM. Both acrylamide and cationic monomers are used internally and also sold on the open market.

In the United States, we have also a large plant for cationic monomer used for the production of coagulants mostly (Dadmac).

## COAGULANTS

The organic and inorganic coagulants we produce are used in water treatment alongside flocculants, and our sales of coagulants are facilitated by our leading market position in flocculant production. In the United States, China and Europe, we have a significant amount of capacity to produce the organic coagulants Poly Dimethyldiallylammonium chloride (PolyDADMAC) and polyamines, which are used mainly in potable water applications.

## MISCELLANEOUS PRODUCTS

We carry products that complement our other product offerings, such as dispersants (used in paper, household products, and for mining), activated carbon, xanthan gum, ethylene peroxide, anti-odor agents and defoamers.

## EQUIPMENT AND ENGINEERING

We also construct and sell equipment to facilitate the utilization of PAM by our customers. In 2023, 1% of our net revenue was generated by equipment sales.



## MARKETING AND SALES

We market and sell our products in four primary markets, namely (i) water treatment, (ii) oil and gas, (iii) mining, and (iv) paper industries, complemented by other niche applications. Municipal water treatment comprised 24% of 2023 net revenue and industrial water treatment applications accounted for 18%. Other markets include oil and gas applications, comprising 25% of 2023 net revenue and which includes EOR, shale oil and gas exploitation and drilling applications; mining applications, which comprised 11% of 2023 net revenue and includes polymer and reagent applications; and pulp and paper applications, which comprised 10% of 2023 net revenue. Other specialty applications, which comprised 7% of 2023 net revenue, include products used as agricultural aids, construction chemicals, various textile additives, personal and home care ingredients. 5% of 2023 net revenue came from sales of monomers.

We believe we have a flexible market channel, which enables us to have wide market coverage and to tailor the service support associated with the products we sell to the needs of customers. Approximately 68% of our sales are made directly to end users in more than 55 countries through our local subsidiaries and through our sales team of about 600 salespeople. These direct sales are generally made following a bid process, typically for a year term, to large municipalities that require direct access to manufacturers. We also sell directly to some oil and mining companies. In some circumstances we will alter the services that we offer in order to meet our customers' needs. For example, in our contracts with PDO, we agreed to provide primary contractor service for the construction of a polymer solution and injection facility and a water treatment facility in addition to offering our product supply services. For our applications that require a high level of service, we also make sales through service-driven resellers, which include Ecolab (Nalco), BASF and Solenis (Hercules, Drew and BASF). Approximately 8% of our sales are made through service-driven resellers.

Approximately 24% of our sales are made through approximately 800 distributors, who can provide broad coverage of the end-user market through an extended sales force and distribute our products in more than 140 countries. Generally, we have non-exclusive agreements with these distributors, who typically supply technical assistance and on-site service to end users. Such distributors also often service niche markets, such as boiler and cooling water applications. These distributors are typically not exclusively PAM distributors, but rather general chemical distributors, who package our products with other chemical products to on-sell them to end users.

In the water treatment market, the majority of our business is conducted without a contract, under pricing agreements that may be renegotiated periodically, typically on a quarterly basis. Generally, our customers give us two to three weeks' notice of their product requirements, and send orders by fax or internet to individual production facilities. For example, if an order comes in from the United States, that order is filled from our production facilities in the United States. While shipping costs generally make it expensive to shift production from a facility in one region to a facility in a different region, (e.g., to fill a European order from our U.S. production facilities), to the extent orders come in from regions where we do not have significant manufacturing capabilities or cannot produce certain products on their own, as our smaller production facilities target a narrower range of products, we can fill those orders from one of several of our production facilities.

Generally, prices are computed based on a formula that includes, among other things, raw material costs, and may include transportation costs. Pursuant to these arrangements, we are often required (given applicable notice periods) to match lower prices for the same materials offered by our competitors. If we cannot match these lower prices, our customers may purchase products from our competitors.

Where we conduct our business through contracts, a smaller percentage of our business is done through short-term, fixed-price contracts resulting from competitive bids. The remainder of our business is done through longer-term formula-based contracts or contracts with prices linked to a constantly updated price list that corresponds to raw material prices (particularly propylene). In 2023, our sales under formula-based contracts, fixed-price contracts and price list-correlated contracts accounted for 35%, 23% and 42% of our total net revenue, respectively.

## RAW MATERIALS

The main raw materials we use are derived from petroleum or gas (in the form of propylene and acrylonitrile), for which we have multiple sources in different parts of the world. Acrylamide is the basic building block of PAM and the primary raw material we exploit ourselves. We produce our own acrylamide and do not rely on outside sources (and also produce acrylamide for sale to customers and competitors).

We use the following raw materials, most of which are derived from propylene — a petroleum derivative — and which are acquired from one to two key suppliers in each region, when we do not produce them ourselves:

- acrylonitrile;
- acrylate of dimethylamino ethyl, or ADAME;
- methacrylate of dimethylamino ethyl, or MADAME;
- glacial acrylic acid;
- acrylamido-tertiary butyl sulphonic acid, or ATBS;
- methyl chloride;
- epichlorhydrin;
- dimethylamine, or DMA;
- methyl acrylate;
- dimethylamino ethyl alcohol, or DMOH; and
- allyl chloride.

We also purchase large volume of caustic soda, aliphatic hydrocarbons and surfactants as processing additives for our PAM. We have a long-standing relationship with each of our raw material suppliers. Because of our size, we are able to take advantage of volume discounts offered by these suppliers.

Most of our raw materials are derived from propylene, a derivative of petroleum, and thus the market for our raw materials is highly variable, varying based on propylene prices, which fluctuate based on supply and demand, and, to a lesser extent, petroleum prices.

Most of our contracts for our most significant raw materials are multi-year contracts, which are generally allowed to be extended on a period-to-period basis after the end of the contract (usually a tacit renewal), which allows us to guarantee a minimum volume of raw material supply. However, generally the price we pay for our raw materials is adjusted on a quarterly or monthly basis, based on a formula made up of variables including propylene or other base material prices, and/or transport costs. Generally, we are also allowed pursuant to these contracts (based on applicable notice periods) to require our supplier to match lower prices for the same materials offered by other suppliers in the market. If our suppliers cannot match lower prices, we are allowed to be released from some or all of our obligations under the supply contract. A small portion of our purchases of raw materials are spot transactions.

We carry an inventory of all raw materials of approximately two weeks, and, in some cases, longer, in order to avoid raw material shortages. Generally, we purchase raw materials in the same currency in which we sell the finished products, so there is limited foreign exchange risk exposure.

## RESEARCH AND DEVELOPMENT

We benefit from our research and development effort, comprising about 275 field specialists and, 445 scientists and technicians, who are located primarily in France, the United States and China and are dedicated to the research and development of all applications we use, including powders, beads, emulsions, dispersions, liquids, and water in water emulsions. We introduce a number of new products or formulations every year.

Our technical expertise is centered on four key areas of competence:

- monomer development;
- polymerization processes;
- polymer products; and
- performance application.

We have an agreement with Mitsubishi Rayon Co. for the license of the biological process for the manufacture of acrylamide. Through this license, we have access to the latest generation of enzymes, allowing us to continuously improve the efficiency of our manufacturing processes; we are currently using the sixth-generation enzyme, which has allowed us to significantly increase capacity without additional capital expenditure. See “— Joint Ventures and Partnerships.”

We believe that continued research and development activities are critical to maintaining our leadership position in the industry and will provide us with a competitive advantage as we seek additional business with new and existing end users, distributors and resellers.

## INTELLECTUAL PROPERTY

We do not rely substantially on patents or trademarks to do our business. Generally, much of our production comes from products that are already in the public domain, although we do selectively pursue patent applications to preserve our intellectual property rights relative to our competitors.

Our material trademarks include FLOQUAT (coagulants) and FLOPAM (drinking water and waste water), FLOFOAM, ODORFLO, FLOSPERSE (dispersants), and METALSORB (waste water), FLOPRINT, FLOFIX, FLOLINE, FLOLUX (all last four for textile), FLOSOFT (home care), FLODRILL, FLOPERM, FLOJET, SUPERPUSHER, FLOCOMB and FLOPAAM (all last six for oil and mining), FLOBOND and AQUASORB (agriculture) and FLOCARE (personal care).

We own or have licenses to use a portfolio of patents relating to a large number of products and processes, and have accumulated know-how that we believe produces better quality, low-cost products. We currently have a number of active patents in the United States, European Union and worldwide. We also have registered U.S. and E.U. trademarks covering our products.

We have an existing license with Mitsubishi Rayon Co. for the production of biologic acrylamide that expires in 2027. See “— Joint Ventures and Partnerships.”

## EMPLOYEES

As of December 31, 2023, we had 8,151 employees, of which 1,628 were located in France. We believe that our relationship with our employees is generally good, and we generally have low employee turnover.

As of December 31, 2023, some of our employees were members of labor unions and subject to collective bargaining agreements with us. We believe that our relationship with these labor unions is generally good. We have not had any major strikes or work stoppages in our manufacturing facilities due to labor disputes in the past ten years.

## PROPERTIES

### EXISTING PLANTS AND PROPERTIES

Our principal administrative offices and research facilities are located in Andrézieux, France. We own all of our manufacturing facilities, except for some of our buildings in France, which are subject to sale and leaseback arrangements, and have a network of small leased sales offices throughout the world.

A LIST OF OUR CURRENT PRODUCTION FACILITIES IS AS FOLLOWS:

Continent	Country	City	Size in hectares	Major Products Manufactured
Americas	USA	Riceboro, GA	210	PAM copolymers in different physical forms, such as gels, powders, emulsions, dewatered emulsions and solutions, Mannichs, wet strength resins, superabsorbants, dispersants, acrylamide monomer and derivatives, ADAME and MADAME, ADAME Quat
Americas	USA	Plaquemine, LA	405	PAM powder and emulsion copolymers, acrylamide monomer
Americas	USA	Dolton, IL		PolyDADMAC, Mannichs
Americas	USA	Longview, WA		Liquid transfer
Americas	USA	Los Angeles, CA		Mannichs, anionic solution polyacrylamides, co-polymers, alum blends
Americas	USA	Pearlington, MS (Port Bienville)	15	DADMAC monomer, polyDADMAC, polyamines
Americas	USA	Taylor, PA		Mannichs, co-polymers, wet strength resins
Americas	USA	Wayne, MI	37/47	Mannichs, polyDADMAC, melamine formaldehyde resins, ADAME Quat
Americas	Canada	Edmonton, AB		Powder transfer
Americas	Mexico	Toluca		PAM liquid copolymer, liquids, dispersants
Americas	Brazil	Camaçari	75	PAM copolymers in emulsions and solutions, dispersants
Asia	China	Taixing	30	PAM copolymers in different physical forms, such as gels, powders, dewatered emulsions, emulsions and solutions, acrylamide monomer, dicyandiamide resins, dispersants, ADAME monomer, ADAME Quat, polyamines, DADMAC monomer, polyDADMAC
Asia	China	Rudong	60	PAM powder copolymers, acrylamide monomer, heavy metal chelating agents
Asia	South Korea	Ulsan	10	PAM copolymers in different physical forms such as gels, powders, emulsions and solutions, dispersants, acrylamide monomer
Asia	Indonesia	Cikande	30	Liquids, dispersants
Asia	India	Vizakhaptnam	30	Emulsions, liquids, acrylamide monomer
Asia	India	Gandhidham	40	PAM powder copolymers, liquids, dispersants, acrylamide monomer
Asia	Australia	Lara, VIC	20	Emulsions, liquids
Europe	France	Andrézieux	90	PAM copolymers in different physical forms, such as beads, powders, spray dried powders, emulsions, dewatered emulsions and solutions, Mannichs, wet strength resins, superplasticizers, polyDADMAC, dispersants, acrylamide monomer and derivatives
Europe	France	Saint Avold	20	ADAME Quat, polyamines, polyDADMAC, inorganic coagulants
Europe	UK	Teesside	25	PAM emulsion copolymers

In France, we are using only one half of the land capacity of our existing site. Likewise, at our manufacturing facilities in the United States and China, we have the ability to expand production.

The PAM production capacity in metric tons (active equivalent) of our different facilities as of December 31, 2023, in terms of PAM powder and PAM emulsion is as follows:

	PAM Powder Capacity	PAM Emulsion Capacity
Andrézieux and Saint Avold, France	145,000	120,000
Teesside, United Kingdom	—	29,000
Plaquemine, Louisiana, USA	80,000	120,000
Riceboro, Georgia and other USA	130,000	215,000
Ulsan, South Korea	85,000	27,000
Taixing, China	205,000	72,000
Rudong, China	100,000	—
Gandhidham, India	50,000	18,500
Vizag, India	—	28,000
Camaçari, Brazil	—	22,000
Lara, Australia	—	16,000
Other	—	2,500

## PLANTS UNDER CONSTRUCTION OR PLANNING

We have started construction of our second major plant in France. This plant is located in Dunkirk and covers approximately 35 hectares. It will produce monomers in a first phase, and PAM powders in a second phase, to service the EMEA market. The plant is expected to be commissioned in the first half of 2024.

We have acquired 21 additional hectares in our Cikande site, in Indonesia. We intend to build a new acrylamide and PAM powders plant for the Asian market.

Additionally, we are constantly assessing opportunities and regularly invest in our current plants to increase our production capacity, add product lines, enhance manufacturing productivity and reduce our costs of production.

## JOINT VENTURES AND PARTNERSHIPS

We have a policy of seeking out joint ventures with knowledgeable partners with particular expertise in strategic areas related to our products.

### MITSUBISHI RAYON CO. (FORMERLY DIA-NITRIX)

We have an agreement with Mitsubishi Rayon Co., Ltd., for a 30-year license, expiring in 2027, for the biological process to manufacture acrylamide, known as the “immobilized process.” Through this partnership, we have access to the latest generation of enzymes, allowing us to continuously improve the efficiency of our manufacturing processes. We are currently using the sixth-generation enzyme, which has allowed us to significantly increase capacity without additional capital expenditure.

## COMPETITION

We operate in a highly competitive pricing environment, and face significant competition in all of the markets in which we operate. Among other areas, we compete with market competitors on PAM, coagulant and monomer pricing, product line and type, the availability of supply, scheduling and order timing, and quality.

## REGULATION

We are subject to requirements of environmental and occupational safety and health laws and regulations in the United States and other countries. These include laws and regulations pertaining to the discharge of materials into the environment, pertaining to the manufacture, transportation, storage, handling and disposal of hazardous substances and hazardous wastes, or otherwise relating to the protection of the environment.

Under some of these laws and regulations, a current or previous owner or operator of a facility may be liable for the removal or remediation of hazardous materials at the facility and nearby areas. Such laws typically impose liability without regard to whether the owner or operator knew of, or was responsible for, the presence of such hazardous materials. In addition, under various laws governing the generation, transportation, treatment, storage or disposal of solid and hazardous wastes, owners and operators of facilities may be liable for removal or remediation, or other corrective action at areas where hazardous materials have been released. The costs of removal, remediation or corrective action may be substantial. The presence of hazardous materials in the environment at any of our facilities, or the failure to abate such materials promptly or properly, may adversely affect our ability to operate such facilities. Certain of these laws also impose liability for investigative, removal and remedial costs on persons who dispose of or arrange for the disposal of hazardous substances at facilities owned or operated by third parties. In certain instances, liability for such costs is retroactive, strict, and joint and several; it may also include obligations to investigate and clean up environmental contamination on or from our current or former properties or at off-site locations to which we sent wastes. Under these laws and regulations, we may have these obligations without regard to fault or the legality of the conduct that contributed to the contamination and liability for the entire cost of a cleanup can be imposed on any responsible party.

The activities and plants at our production facilities are subject to a variety of laws and regulations, including requirements relating to the emission of pollutants into the ground, waters and the atmosphere and the generation, transportation, treatment, storage and disposal of solid and hazardous wastes. We are also subject to laws that regulate the manufacture, processing, and distribution of chemical substances and mixtures, as well as the disposition of certain hazardous substances. Further, non-compliance or alleged non-compliance with environmental and product safety regulations may result in the local government forcing us to modify plant operations, or even result in the seizure or the permanent or temporary discontinuation of the operations of our non-conforming plants.

National and international laws regulate the production, marketing and use of chemicals, and all major developed countries have their own chemical control legislation. The most significant rules and regulations impacting our business are those in force in the European Union (covering all the member states), the United States, Canada, Japan, China, South Korea and Australia. Some facets of the regulations in these regions are continuously being revised, with input from us.

These regulations are subject to expansion or enhancement. Any new or tightened regulations could lead to increases in the direct and indirect costs we incur in manufacturing and delivering products to the end users and resellers we supply. For example, the European Parliament and Council adopted extensive new chemical legislation which went into force in 2007 and which impacts the manufacturers, importers and distributors and users of all chemicals, not just those chemicals which are considered to be hazardous to human health and the environment. The ongoing implementation of this regulation, referred to as REACH (Registration, Evaluation and Authorisation of Chemicals), means that all chemical companies and user companies are faced with additional costs to conduct their businesses in the European Union and the European Economic Area. Similarly, extensive new chemical regulation programs in China and South Korea are creating additional costs for chemical producers and users in those countries.

In the European Union, within the framework of the former Existing Substances Regulation (793/93/EEC) (replaced by REACH), risk assessments were completed and risk reduction strategies were implemented for most of the major raw materials the Company uses. The conclusions and recommendations of the European Union in this respect have not resulted in any further regulatory burden on us, as they have confirmed the safety of both our manufacturing facilities and the products we place on the market. These risk assessments, along with those carried out by the Organisation for Economic Development, or OECD, as part of the High Production Volume Chemicals Program, are datasets that have been and will be used for the evaluation of our major raw materials under the REACH regulations. Acrylamide has been registered under REACH in the highest tonnage band. A full registration dossier was submitted with all studies required under REACH. The increase in the costs of compliance and potential regulatory burdens for us in Europe overall should be less significant than for other producers of chemical products because polymers, the greatest share of our production, are exempted from the registration and evaluation requirements of REACH.

In the United States, we contributed to the recent review of acrylamide by the Environmental Protection Agency (EPA) within the Integrated Risk Information System (IRIS) program by providing industry input. The information contained in IRIS database is used to determine regulatory decisions on allowable emissions to air and water and workplace exposure levels. We submitted an extensive set of new data obtained through our scientific research program, which was used to update IRIS with respect to acrylamide. The risk level for exposures to acrylamide was increased 10-fold, indicating acrylamide is much less toxic than previously assessed. The new (and less stringent) risk factor allows for increased air emissions and so allows the projected expansion of our Riceboro, Georgia site.

We are equally active in all the other regulatory issues that impact our business in the United States, and we have subscribed to EPA's High Production Volume Challenge Program as a participant in producer consortiums.

A further regulatory initiative which we support and in which we are involved is the United Nations' Globally Harmonized System

of Classification and Labeling, or GHS. This system is intended to globally harmonize classification and labeling of chemicals not only in the supply chain but also for their transport by land, water and air. GHS has been introduced in the EU, the U.S., the People's Republic of China and elsewhere and will continue to be adopted by various countries over the next few years, resulting in regulatory coherence and minimization of resources and costs required for compliance.

The introduction of new product lines requires us to seek inventory listings in all the major regions stated above, for example the Toxic Substances Control Act (TSCA) Chemical Inventory in the United States. For certain specially controlled applications, such as the treatment of drinking water and the production of food-contact paper, we have made many successful submissions to agencies such as the U.S. Food and Drug Administration (FDA), the German Federal Institute for Risk Assessment (BfR), and the French Agency for Food, Environmental and Occupational Health & Safety (ANSES).

## LEGAL PROCEEDINGS

### CURRENT STATUS

We are involved in various other disputes and litigation arising in the ordinary course of our business. None of these matters is expected to have a material adverse effect on our financial position, results of operations or cash flow.

## INSURANCE

We insure our buildings and plant equipment, for property damage with insurance policies which we believe are generally in accordance with market practice and provide for adequate coverage amounts. We also have insurance covering our operations, including business interruption insurance, liability, worker compensation, marine and product liability insurance, which we believe to be appropriate in amounts and level of coverage in accordance with customary industry practices.

# MANAGEMENT

## DIRECTORS AND EXECUTIVE OFFICERS

THE FOLLOWING TABLE PRESENTS ALL OUR DIRECTORS AS OF THE DATE OF THIS ANNUAL REPORT:

Name	Age	Title
Pascal Remy	63	Chairman of the Board of Directors and Chief Executive Officer (Président Directeur Général)
René Pich	83	Senior Executive Vice President (Directeur Général Délégué)
Cédric Favero	48	Senior Executive Vice President (Directeur Général Délégué)
John Pittman	56	President of SNF USA
Virginie Malnoy	42	Chief Compliance Officer
Philippe Lecointre	58	Chief Quality Officer
Caroline Dumond	52	Director (Administrateur)
Richard Saint-Sauveur	73	Director (Administrateur)
Thierry Lemonnier	70	Director (Administrateur)

THE FOLLOWING IS A BRIEF DESCRIPTION OF THE PRESENT AND PAST BUSINESS EXPERIENCE OF EACH OF OUR DIRECTORS.

### PASCAL REMY

Pascal Remy has been Chairman of the Board of Directors and Chief Executive Officer since November 2010. Prior to his appointment as Chairman and CEO, Mr. Remy was our President and a member of our Board of Directors, beginning in December 2005. Mr. Remy has over 25 years of experience in the chemical and water treatment industry, and was previously Senior Vice President of Nalco (now part of Ecolab) and President of Degremont. Before joining us, Mr. Remy was operating partner of a Chicago-based private equity fund. Mr. Remy holds graduate degrees from the Massachusetts Institute of Technology, *Ecole Polytechnique* and the *Ecole Nationale des Ponts et Chaussées*.

### RENÉ PICH

René Pich graduated with a degree in chemistry from the *Institut de Chimie et Physique Industrielle* (Lyon). Mr. Pich started his career as a researcher on polymerization in Rhodiaceta and then Streichenberger before being appointed as Polyacrylamide Technical Director of British Petroleum. In 1978, Mr. Pich founded SNF and became the first Chairman of our Board of Directors and Chief Executive Officer of SNF. Mr. Pich resigned from this position in November 2010 and became Senior Executive Vice President. Mr. Pich has been a member of the Board of Directors since 1978.

### CÉDRICK FAVERO

Cédric Favero graduated from the *Institut Textile et Chimique — ITECH and Université Claude Bernard — UCBL* (both in Lyon — 1998). Mr. Favero joined SNF in 1999 as a researcher on monomers and coagulants for water treatment. After the start-up of the Saint-Avoid (France) and Pearlington (U.S.) plants, Mr. Favero focused his research topics on new polymers and polymerization technologies for oil and gas, specialty applications and organic chemistries for monomers and mining chemicals. Mr. Favero became R&D manager in 2005, joined the Board of Directors in 2012 and was appointed Senior Executive Vice President in November 2015.



**JOHN PITTMAN**

John Pittman holds a BA in Mechanical Engineering from the Georgia Institute of Technology and a MBA from the Warrington College of Business at the University of Florida. Mr. Pittman has worked in the chemical industry for about 30 years, initially with Vinings/Kemira, where he had various roles in Sales and Sales Management primarily focused on the global Mining, Oil & Gas markets. More recently, Mr. Pittman was the Regional Market Director of Oil & Gas for Solvay USA. Mr. Pittman joined SNF in 2017 and is currently President of SNF USA. Mr. Pittman was appointed as a board member of SNF Group in 2019.

**VIRGINIE MALNOY**

Virginie Malnoy holds a Master's Degree from EDHEC Business School and a Master's Degree from the Faculty of Law and Political science of Nice Sophia Antipolis. She has worked for 14 years for international law firms in Monaco, her area of expertise being business law. She joined SNF in 2019 as Corporate Law Manager for the SNF Group, and has been a member of the Board of Directors since 2021.

**PHILIPPE LECOINTRE**

Philippe Lecointre graduated from the *Institut de Chimie et Physique Industrielle* (Lyon). Mr. Lecointre joined SNF in 1991 and led the implementation effort of our ISO 9001 quality system. In 2006, Mr. Lecointre was appointed Chief Quality Officer. Mr. Lecointre joined the Board of Directors in the following year.

**CAROLINE DUMOND**

Caroline Dumond has an engineering degree from École Polytechnique Féminine (EPF). She has held several positions as engineer, Chief Production Officer, Chief Industrial Officer and joint venture manager including at Air Liquide. In 2016, she was certified as a corporate director by Sciences Po Paris and the IFA (Institut Français des Administrateurs). Since 2018, she is CEO and founding partner of Les Premières Sud, a business incubator promoting inclusion and women's entrepreneurship to help start-ups innovate and grow with high social impact. She has been a member of the Board of Directors since 2003.

**RICHARD SAINT-SAUVEUR**

Richard Saint-Sauveur graduated from ESC Lille and received an MBA degree from HEC. Mr. Saint-Sauveur has 40 years of experience in the chemical industry and has held various technical, commercial and management positions within Roquette, Lafarge, Orkem and Elfatochem. Mr. Saint-Sauveur was Director of the acrylic business unit of Elfatochem before joining SNF in 1999 as Group Purchasing Director. Mr. Saint-Sauveur was appointed as a board member of SNF Group in 2011.

**THIERRY LEMONNIER**

Thierry Lemonnier graduated from the *Ecole Nationale Supérieure de Géologie* (Nancy) and from Stanford University. He joined Total in 1979, where he held various management positions, among which were Chief Financial Officer (CFO) of the Refining and Marketing branch from 1993 to 1999 and CFO of the Chemical branch from 2001 to 2006. He was CFO and member of the Executive Committee of Arkema from 2006 until his retirement at the end of 2018. Mr. Lemonnier was appointed as a board member of SNF Group in 2019.

**Compensation of Directors and Management**

An aggregate of approximately €3.7 million was paid to our senior managers and board members in 2023.

## RETIREMENT PLAN INFORMATION

Non-union employees in the United States hired prior to January 1, 2009, are eligible to participate in the Defined Benefit Pension Plan (the “DBP”). The DBP provides for normal retirement benefits in the form of a monthly annuity when the employee reaches age 65, or at a reduced amount starting at age 55 if the employee retires early, subject to the plan’s vesting and service requirements. The maximum benefits payable are equal to 40% of the average annual compensation, subject to certain maximums, for the five full calendar years prior to the employee’s retirement from service. As of December 31, 2023, 309 people were participants in the DBP, split as follows: 183 active employees, 124 former employees no longer in the company and 2 retired people. At this date, the DBP was overfunded by approximately €2 million and a provision of this amount has been accounted for.

In late 2023 the company took advantage of financial market conditions to engage in a Special Event to de-risk its balance sheet. A group annuity contract was purchased to fully fund benefits for 217 retirees receiving benefits and a lump sum offer was extended to buy out the earned benefit of 72 former employees no longer in the company. These Special Event actions resulted in a reduction in Plan liabilities and Plan assets.

Non-Union employees in the United States hired on or after January 1, 2009, are eligible to participate in a Defined Contribution Plan called the Retirement Savings Plan (the “RSP”). The company contributes 2% of eligible wages on a quarterly basis and may make an additional discretionary contribution up to 2% on an annual basis. There is no defined future benefit obligation associated with this RSP and thus, no provision has been recorded as of December 31, 2023.

Additionally, all union and non-union employees may participate in a traditional 401(k) Defined Contribution Plan. The company contributes a matching 50% of employee’s deferral up to a maximum of 5% of the employee’s annual earnings. There is also a maximum limit on the total yearly employee pre-tax salary deferral into the plan. This limit is \$22,500 for the year 2023 plus \$7,500 for employees who are 50 years old or over.

For our French employees, we pay a duty to the French government for each employee. We also pay a premium to our employees when they retire, which amount is determined pursuant to the collective bargaining agreement applicable to them. This premium is accounted as a provision for a contingent liability. The amount of the provision is reassessed every year, based on the profile of our employees, and is audited by our statutory auditors.

## **PRINCIPAL SHAREHOLDERS**

The company is privately held and owned by an irrevocable US-based trust whose potential beneficiaries are charities.

## **CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

We are not a party to any material related party transactions with our executive officers or directors.

# GLOSSARY OF SELECTED TERMS IN THE ANNUAL REPORT

*Below is a glossary of selected terms in the annual report, which has been provided only to aid the reader and that does not purport to be complete in all material respects. For further descriptions of the terms used in this glossary, we refer you to “Business” and “Industry Overview.”*

**Active equivalent** PAM is produced in various physical forms to meet customer handling constraints. The active content (i.e., the amount of polymer active equivalent in the commercial product of PAM) varies from 95% (with the remainder being moisture) down to 2% for very diluted polymer solutions (with the remainder being water, oil, surfactant, etc.).

**Acrylonitrile** is a liquid used primarily in organic synthesis such as acrylamide production, and for polymerization for the production of fibers.

**Activated carbon** or **activated charcoal** is a general term which includes carbon material mostly derived from charcoal. It denotes a material which has an exceptionally high surface area, typically determined by nitrogen absorption, and includes a large amount of microporosity.

**ADAME** or **Acrylate of DimethylAMinoEthyl** is the reaction product of methyl acrylate with DMAE and an intermediate product for the production of ADAME MeCl, the monomer used for the production of cationic PAM.

**ADAME Quat** or **ADAME MeCl** or **ChloroMethyl ADAME** is the quaternization reaction product of ADAME and methyl chloride. It is a cationic monomer.

**Allyl chloride** is a chemical intermediate used in many applications such as DADMAC production. It is a highly versatile product due to its dual reactive sites at the double bond and the chlorine atom.

**Amines** are organic compounds and a type of functional group that contain nitrogen as the key atom. The amine group is found in DMA and DMAE.

**Anionic flocculants** are flocculants with a negative charge thanks to the incorporation of acrylic acid, or ATBS, along with acrylamide in the polymerization process.

**Anti-foaming agents** are additives that reduce the surface tension of a solution or emulsion. The additive is used to prevent formation of foam or is added to break a foam already formed.

**Anti-odor agents** are additives that reduce the odor of a solution or emulsion.

**ATBS** or **Acrylamido-Tertiary Butyl Sulphonic acid** is an anionic monomer used to bring salt and heat tolerance to polymers. Its main uses are for EOR, drilling, dispersants and textile applications.

**Cationic flocculants** are flocculants with a positive charge due to the incorporation of ADAME MeCl or MADAME MeCl along with acrylamide in the polymerization process.

**Cationic Polyacrylamide**, or **Cationic PAM**, is a positively charged polymer formed from acrylamide subunits which has been copolymerized with cationic monomers such as ADAME MeCl or MADAME MeCl.

**Coagulants** are inorganic or organic cationic chemicals. Inorganics are aluminum and ferric or ferrous salts. Organics are polyDADMACs, polyamines, dicyandiamide resins, melamine formaldehyde polycondensate, etc. They cause the agglomeration by destabilization of finely divided particles into larger particles in water treatment, dye fixation, clay inhibition, etc.

**DADMAC** or **DiAllylDiMethylAmmonium Chloride** is a cationic monomer made from DMA and allyl chloride for the production of polyDADMAC, an organic coagulant.

**Dispersion** is a physical form of PAM where the polymer is dispersed in hydrocarbon or a brine and stabilized as such by surfactants.

**DMA** or **DiMethylAmine** is an organic compound and an amine. It is a colorless, liquefied and flammable gas with an ammonia and fish-like odor. It is used for Mannichs, DADMAC monomer and polyamines production.

**DMAE** or **DiMethylAminoEthanol** is the amine used for the transesterification reaction involved in the production of ADAME.

**Emulsion** is a physical form of PAM similar to dispersion.

**Enhanced Oil Recovery** or **EOR** involves injecting viscous water that contains polymer into a reservoir, which causes the remaining oil to more easily move through the reservoir's porous rock and towards a well bore.

**Enzymatic process** is the biological process for the manufacture of acrylamide where an enzyme allows the bioconversion of the nitrile in acrylonitrile to be converted to amide in mild and clean conditions.

**Epichlorhydrin** is a cyclic ether used to react with DMA for the production of polyamines.

**Flocculants** are substances that facilitate the separation of suspended solids from water. They can be either anionic, non-ionic or cationic to interact with finely divided particles which may have been coagulated before. Thanks to their high molecular weight, they bridge the particle together, increasing their speed of settling.

**Glacial acrylic acid** is a colorless liquid with an acrid odor. It is an anionic monomer used for the production anionic PAM.

**Heap leaching** is an industrial mining process to extract precious metals and copper compounds from ore.

**Leaching** is a process in which a metallic compound is extracted from an ore by dissolving it in a suitable solvent.

**MADAME**, or **MethAcrylate of DimethylAMinoEthyl**, is the same as ADAME, but with a “meth” group to improve resistance to hydrolysis and some specific performances in specialty applications.

**MADAME MeCl** or **ChloroMethyl MADAME** is the quaternization reaction product of MADAME and methyl chloride. It is a cationic monomer.

**Mannich reaction** is the chemical reaction of DMA and formaldehyde on PAM to create a cationic flocculant for water treatment.

**Methyl acrylate** is a clear, colorless liquid chemical with a sweet, fruity odor. It is the shortest ester of acrylic acid. Methyl Acrylate is used in the manufacturing of ADAME, leather finishing, resins, textile, paper coatings, and plastic films.

**Methyl chloride** is a chemical used to quaternize ADAME to ADAME MeCl and MADAME to MADAME MeCl. It is a highly reactive pressurized gas.

**Monomers** are chemicals involved in polymerization as the main building block. A monomer may be repeated several times in a polymer and can be blended with other monomers to form copolymers, terpolymers, etc. The typical number of repeating units in a polymer varies from 10 for dispersants, to 1,000 for coagulants and up to 500,000 for flocculants.

**Municipal and industrial effluent** is discharged waste water that is treated to concentrate the solids portion of water. Municipal effluent carries principally human waste, together with some amounts of contaminants from businesses, light industry and ground runoff via storm sewers, and is largely organic in matter. Industrial effluent is generated from specific manufacturing point sources and its matter varies with the particular industry.

**Non-ionic flocculants** are flocculants with a neutral charge since only constituted of acrylamide repeating units.

**Polyacrylamide**, or **PAM**, is a polymer formed from acrylamide subunits which may be copolymerized with other monomers to be anionic or cationic. They are mostly water soluble polymers and may be applied in any applications using water. The chain length can vary from short (1,000 g.mol<sup>-1</sup>) to very long (30 million g.mol<sup>-1</sup>).

**Polyamine** is an organic coagulant made from epichlorhydrin and DMA, used in rubber coagulation, water treatment, paper, construction, etc.

**PolyDADMAC**, or **Poly-DiAllylDiMethylAmmonium Chloride**, is an organic coagulant made from DADMAC, used in water treatment, dye fixation, home and personal care, etc.

**Polymer** is a long molecule consisting of monomeric structural units and repeating units connected by covalent chemical bonds.

**Polymerization process**, or **polymer production**, is a process involving assembling monomers together to form a polymer.

**Powders** are a form of PAM where the PAM is a solid particle from 40 nanometers up to several millimeters.

**Quat ammonium polymers** are a kind of cationic water-soluble polymer used, notably, in water treatment.

**Reagents** are any substance used in a chemical reaction. They usually imply a chemical that is added in order to react with another chemical to lead to a chemical reaction.

**Sludge dewatering** is a process that separates the liquid and solid portions of sludge.

**Structural units** are the building block of a polymer chain. The structural unit or repeating unit is provided by the monomer.

**Viscosity modifiers** alter the viscous properties of a fluid, in general to increase the viscosity.

**Xanthan gum** is a high-molecular-weight polysaccharide which is now produced from corn starch. It is used as a rheology control agent in aqueous systems and as a stabilizer for emulsions and suspensions. In oil field applications it is used as a viscosifier for drilling fluids and also for completion and fracturing. It is also used in processed foods and pharmaceutical and personal care products.

