SOLVAY

asking more from chemistry®

MORE FUTURE

2016 Annual Integrated Report

ABOUT THIS REPORT

OUR FIRST INTEGRATED REPORT

This 2016 Annual Integrated Report is a major milestone in Solvay's journey towards integrated reporting, which was initiated two years ago, as our introductory section is based on the framework established by the International Integrated Reporting Council (IIRC). It underpins our commitment to sustainable and long-term value creation.

At Solvay, we are convinced that value creation is meaningful only if it is truly enduring. The standards by which we judge our success can only be those in which the sustainability of the planet and the well-being of its people are central concerns.

We take financial and extra-financial criteria into consideration in operational management and strategic decisions. This is why we unveiled the alignment between financial and extra-financial mid-term objectives in 2016 – covering the 13 issues categorized as being "priority" or "high materiality" topics in a comprehensive materiality analysis that we fully reviewed in 2015.

> Another first for Solvay: this Annual Integrated Report is aligned with the Global Initiative Reporting (GRI) standards and the information provided serves as a progress report on the implementation of the ten principles of the United Nations Global Compact.

GRI GOLD Community Solvay 2017

UN GLOBAL COMPACT COMMUNICATION ON PROGRESS

HOW TO APPROACH THIS REPORT

The "Overview" section of this report follows an integrated approach, aligning and simplifying content and putting it into the perspective of our vision and strategy, linking material information, and providing an outlook to the future. The Overview focuses on priority topics for Solvay, presenting the objectives that the Group has pursued over the last few years and its recent key achievements. The Management Report supplements the information provided in this Overview, including a focus on high materiality issues.

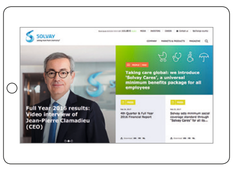
2016 Sections with this icon have been audited.

Sections with the Sustainable Development Goals (SDGs) icon show how the individual goals are implemented.

FURTHER READING & FEATURES

- Solvay's strategic objectives
- Accounting policies
- 2016 highlights
- Further reading in the report
- Further content online

This report is also available online with expanded content, including interactive GRI Content Index: **annualreports.solvay.com/2016/en**



For greater insight into the Group, visit our corporate website: **www.solvay.com**

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WHO WE ARE

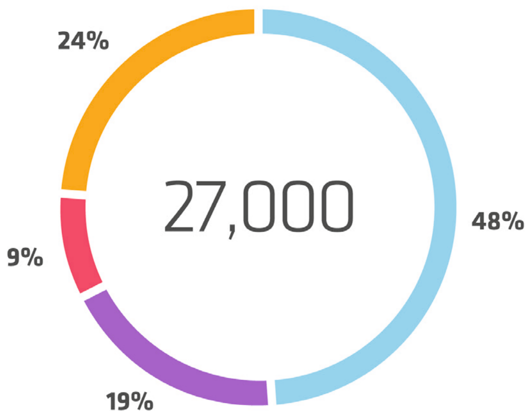
Solvay is a multi-specialty chemical company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers in diverse global end markets. Its products and solutions are used in planes, cars, smart and medical devices, batteries, in mineral and oil extraction, among many other applications promoting sustainability. Its lightweighting materials enhance cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality.

Solvay is headquartered in Brussels with around 27,000 employees in 58 countries. Net sales were € 10.9 billion in 2016, with 90% from activities where Solvay ranks among the world's top three leaders. Solvay SA (**SOLB.BE**) is listed on Euronext Brussels and Paris (Bloomberg: **SOLB.BB** - Reuters: **SOLB.BR**) and in the United States its shares (**SOLVY**) are traded through a level-1 ADR program.

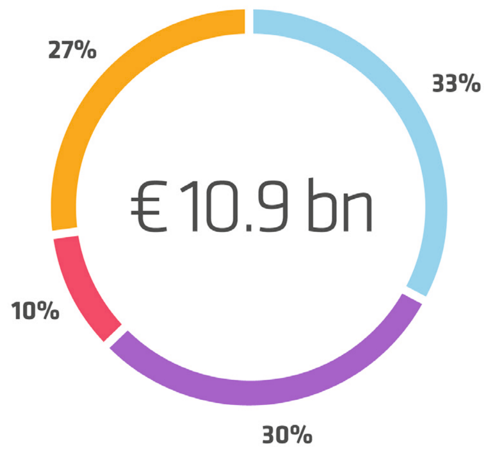
2016 KEY FIGURES

2016 underlying figures; 2015 pro forma and restated information (except for environmental and social figures).

EMPLOYEES
by zone

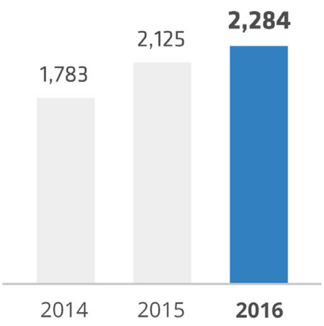


NET SALES
by zone

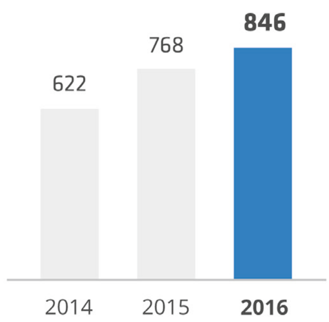


Europe · Asia Pacific · Latin America · North America

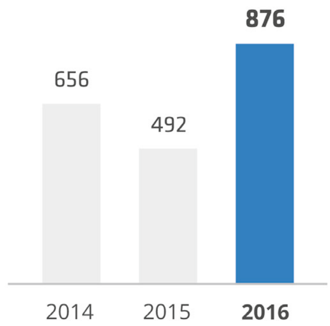
UNDERLYING EBITDA
in € million



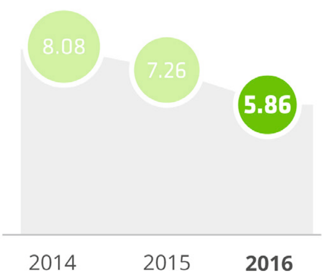
UNDERLYING PROFIT ATTRIBUTABLE TO SOLVAY SHARE
in € million



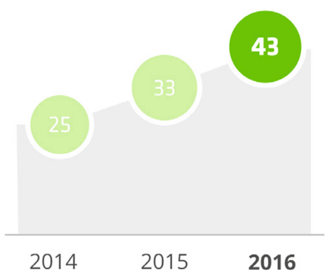
FREE CASH FLOW
in € million



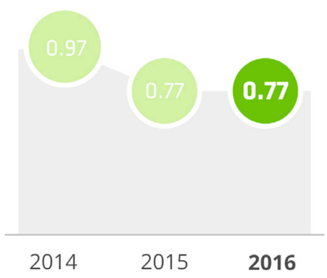
GREENHOUSE GAS INTENSITY
Kg CO_2 eq. per € EBITDA



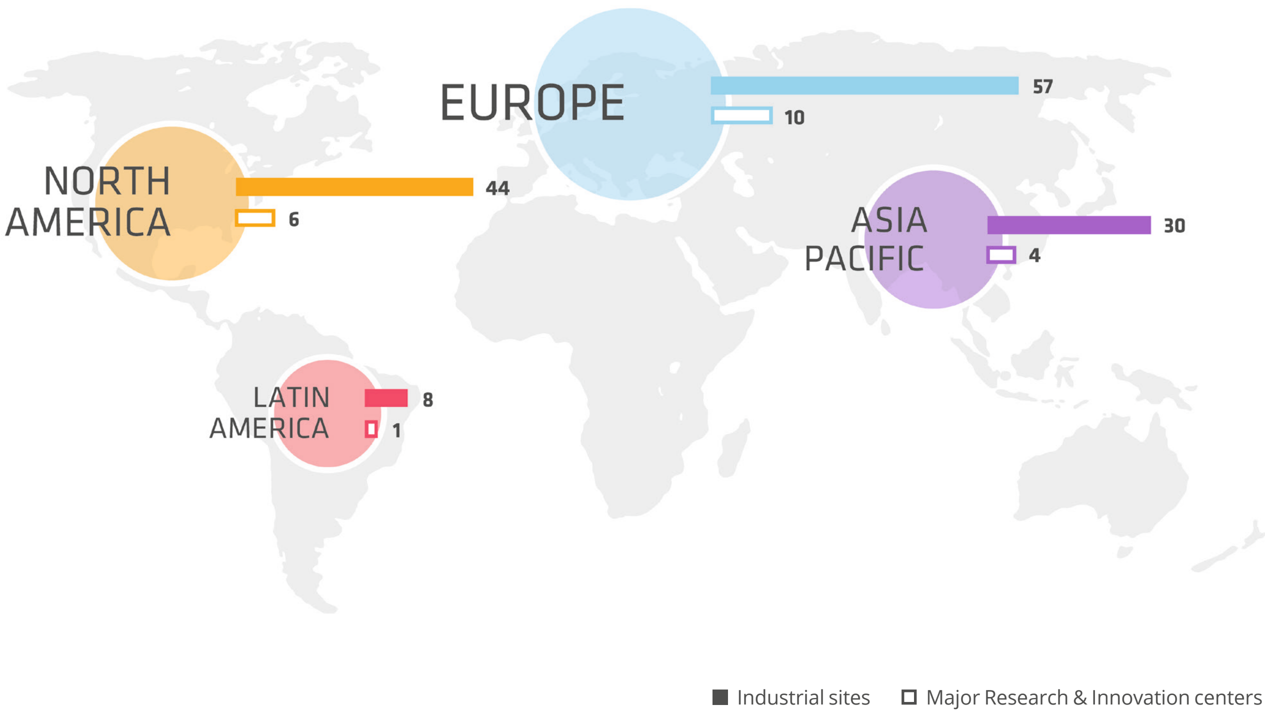
SUSTAINABLE SOLUTIONS (SPM)
as percentage of Group sales



OCCUPATIONAL ACCIDENTS AT GROUP SITES[2]
per million hours worked

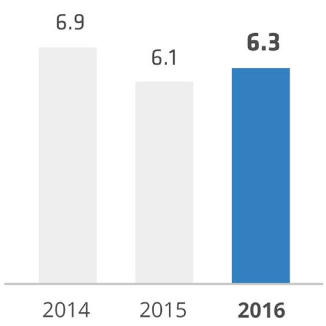


SOLVAY AROUND THE WORLD



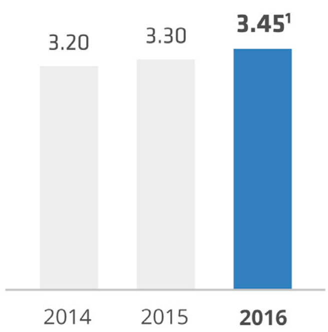
CFROI

as percentage



DIVIDEND

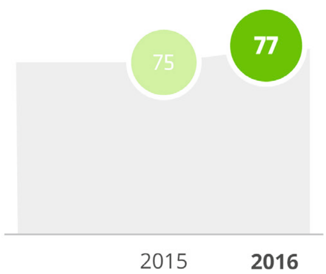
in € per share



[1] Recommended to the Shareholders' meeting on May 9, 2017.

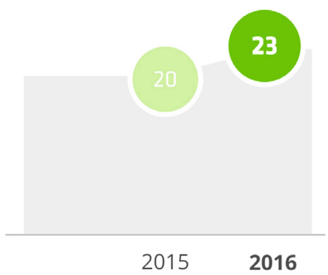
EMPLOYEE ENGAGEMENT INDEX

as percentage



EMPLOYEES INVOLVED IN SOCIETAL ACTIONS

as percentage



[2] Rate of accidents with medical treatment, with or without work stoppage. Non-restated figures.

OUR MODEL FOR CREATING SUSTAINABLE VALUE

Our ambition is to build a new model of sustainable chemistry to help answer some of society's challenges.

We are convinced that "asking more from chemistry" will enable us to use the resources we need in our business as sparingly as possible in order to create sustainable solutions that hold potential for future generations.

We are transforming into a multi-specialty chemical solutions-provider. We are developing new innovative products and solutions in close partnership with our customers, including some of the world's leading players in the aeronautics, automotive, electronics, and consumer goods sectors.

Through our specialized technological expertise and industrial know-how, leveraging our unique ways of doing business based on a framework of core principles and ethics, we create value for our stakeholders at economic, social, and environmental levels. Only by ensuring the sustainability of the value we create can we truly satisfy our ambition of securing more future for our people, our businesses, the planet, and society at large.

THE RESOURCES WE USE

ECONOMIC INPUT[1]

Equity attributable to Solvay share[2]
€ 7.5
billion

Underlying net debt[3]
€ 6.6
billion

Capex from continuing operations
€ 929
million

R&I effort
€ 350
million

ENVIRONMENTAL INPUT

Energy consumption
138
petajoules

Total water intake
580
million m³

Groundwater
165
million m³

SOCIAL INPUT

27,000
employees

23%
of women

9%
of R&I staff

A MULTI-SPECIALTY CHEMICAL SOLUTIONS-PROVIDER

HOW WE DO BUSINESS

Our organization ensures that all our business units operate in close proximity to their customers. They anticipate changes in their markets and environments and react with agility, tailoring their products and solutions in response to changing needs. All of our actions are guided by our fundamental principles, to which all our employees are expected to adhere strictly.

More about the fundamentals guiding our actions
annualreports.solvay.com/2016/en

- People Model & Management Model
- Solvay Way
- Code of conduct

A MULTI-SPECIALTY CHEMICAL SOLUTIONS-PROVIDER

With a balanced portfolio – both in terms of markets and geography – we work in close partnership with our customers to develop innovative solutions that create sustainable value today and tomorrow.

Electrical and Electronics
5% of net sales
- Design & connectivity
- Safety
- Sustainable solutions
- Process efficiency

Consumer goods and Healthcare
18% of net sales
- Consumer goods
- Healthcare

Resources and Environment
11% of net sales
- Oil & Gas
- Mining
- Energy solutions
- Environmental protection

Building and Construction
10% of net sales
- Energy performance
- Protection & Safety
- Resource management

Automotive and Aeronautics
28% of net sales
- Lightweighting
- Powertrain efficiency
- Electrification
- Green technologies

Agro, Feed and Food
10% of net sales
- Agriculture
- Feed
- Food

Industrial applications
18% of net sales
- Industrial & protective coatings
- 3D printing
- Metal & surface treatment
- Industrial equipment protection

THE VALUE WE CREATE

ECONOMIC OUTPUT[1]

Underlying EBITDA
€ 2.3 billion

Underlying profit attributable to Solvay share
€ 846 million

Free cash flow
€ 876 million

CFROI
6.3%

Dividend related to 2016
€ 356 million

Cash conversion
59%

Patent applications
240

Sales of products released in < 5 years
15%

Group Net Promoter Score
27%

ENVIRONMENTAL OUTPUT

Greenhouse gas intensity
5.86
Kg CO_2 eq. per € EBITDA

Sustainable solutions (SPM)
43%
of Group sales

Air emissions

Nitrogen oxides
11.10
1,000 tons

Sulfur oxides
5.40
1,000 tons

Non-methane volatile organic compounds
4.97
1,000 tons

Industrial hazardous waste not disposed of in a sustainable way
50.30
1,000 tons

SOCIAL OUTPUT

Occupational accidents at Group sites[4]
0.77
per million hours worked

Employee engagement index
77%

Employees involved in societal actions
23%

Income taxes paid
€ 212 million

[1] 2016 underlying figures.
[2] Excluding perpetual hybrid bonds.
[3] Including perpetual hybrid bonds.
[4] Rate of accidents with medical treatment, with or without work stoppage. Non-restated figure.

Strategic objective

CHAIRMEN'S MESSAGE

Nicolas Boël,
Chairman of the Board of Directors

The Board of Directors regularly evaluates our progress, which bolsters our approach to sustainable development and ensures its coherence.

In 2016, Solvay passed a new milestone in its transformation into a more resilient, more sustainable, and more innovative multi-specialty Group with high added value.

We finalized the divestment of our chlorovinyls activities, initiated in 2013, with withdrawals from Indupa in Latin America and from Vinythai in South-East Asia. We also entered into an agreement to sell the acetate tow production activities of Acetow. On each occasion, we were committed to divesting under the best possible conditions, and in particular to safeguarding the future of the operations we were selling.

Furthermore, in 2016 we completed the integration of the Cytec activities in record time, generating a far higher level of synergies than we anticipated. Consequently, the Group is now among the world's leading suppliers of advanced materials to the aerospace industry.

TRANSFORMING OUR PORTFOLIO

The metamorphosis of our client portfolio illustrates the magnitude of our transformation. Ten years ago, our major clients were big glass manufacturers. Today, we continue to lead in our traditional fields of activity, something of which we are extremely proud. But our current top clients are the giants of the aerospace industry or of the world of smart devices, for whom we are a strategic partner in the development of the innovative solutions that are essential for the success of their flagship projects.

In 2016, Solvay's results once again showed solid growth. To a considerable extent, our strong performance was due to our operational excellence programs, to the rapid realization of synergies from our acquisitions, and to a sustained price dynamic. This has allowed us to strengthen our financial solidity and to involve our shareholders in our strong performance through a continuing increase in our dividend, in response to the confidence they showed us by subscribing to a historic rights issue.

JOINT STEERING OF ECONOMIC AND SUSTAINABLE DEVELOPMENT OBJECTIVES

In parallel, this Annual Report has become a more integrated report, aimed at showing our commitment to jointly controlling our economic performance and our sustainable development results. We have defined the domains in which we want to progress and have set ten-year objectives for measuring that progress.

Today, these objectives form an integral part of our ambition to create value. For example, in 2016 we reduced the carbon intensity of our operations significantly – by 19% – thanks to the transformation of our portfolio. At the same time, the Group's employee engagement rate is progressing. On the other hand, we have failed to make progress with respect to safety, although our performance is among the best in the chemical sector. As a result, we are boosting our efforts in this field.

To ensure that our sustainable development permeates the entire organization, the short-term compensation policy includes a sustainable component for all of the Group's employees. The long-term compensation of management goes even further, integrating a carbon intensity reduction target taking effect as of 2017. The Board of Directors regularly evaluates our progress, which bolsters our approach to sustainable development and ensures its coherence.

2017 OBJECTIVE: GROWTH

Thanks to the transformation of the portfolio and to the investments in personnel that the Group has made in recent years, 2017 should be a year of growth, especially in terms of volume growth in our Advanced Materials and Advanced Formulations segments.

We are operating in an uncertain geopolitical climate. But the diversity of our fields of activity, our positions of leadership in innovative activities, our well-balanced global presence, and our uninterrupted efforts in the pursuit of excellence are the guarantees of the continuity of the Group and of its growth model.

It is with confidence that we are advancing towards our target of building a solid and innovative Group that is capable of creating value for its shareholders and for every one of its stakeholders.

Nicolas Boël

Jean-Pierre Clamadieu

Jean-Pierre Clamadieu,
Chairman of the Executive Committee and CEO

Watch Jean-Pierre Clamadieu's video
annualreports.solvay.com/2016/en

OUR STRATEGIC POSITIONING

Throughout our 150-year history, we have always been driven by the strong belief that innovative chemistry holds the solutions for future generations. Asking more from chemistry, our ambition is to play a crucial role in bringing more future to our people, our customers, and society.

OUR VISION

We are one of the world's foremost industrial groups in the specialty chemical segment. We are committed to developing the role of chemistry in introducing sustainable solutions that will help resolve challenges faced by the planet and society. Our vision consists in creating "more future" – a future with more potential, for ourselves, our children, our planet, and its people.

It is chemistry that will shape this future by making the impossible possible. Our pioneering spirit is inherited from our founder, Ernest Solvay. We are just as determined today as he was 150 years ago to dedicating our expertise in chemistry to acting responsibly and furthering our desire to make the world a better place.

People are at the heart of our vision. We are a company of people, and we strive to give them a better future by helping them develop, honing their skills, and recognizing their talents. Their mindset – characterized by agility, collaboration, curiosity, and courage – guarantees our success and performance; it is the vital resource that drives us to achieve more innovative sustainable solutions with less depletion of natural reserves and less waste.

Our progress has always been all about continuously reinventing what we do and how we do it. The courage to transform ourselves is a fundamental building block of our success.

150 years of innovation and scientific progress

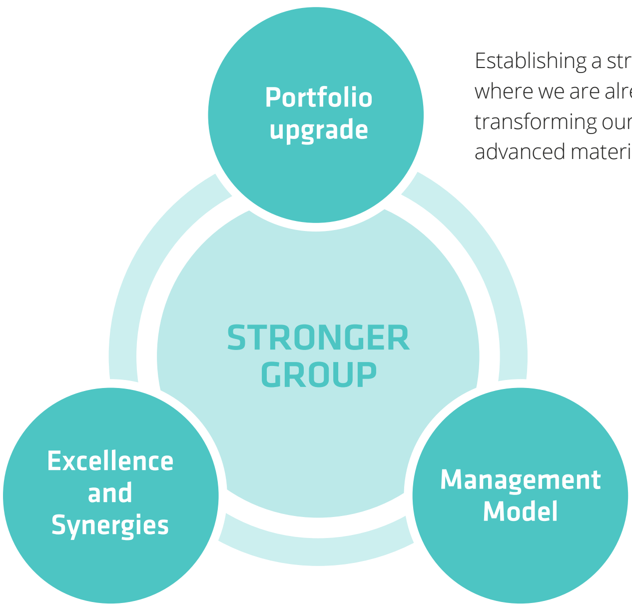
Our Group can look back on a scientific and entrepreneurial heritage. Solvay is the fruit of the resolution and determination of a young self-taught visionary surrounded by a small network of associates. Passionate about science, Ernest Solvay patented a process for producing soda ash in 1863 and set up a company to manufacture it.

OUR STRATEGY

Our strategy is to develop as a multi-specialty chemical solutions-provider that contributes to addressing the world's challenges by focusing on the innovative sustainable solutions we bring to our customers. We see a lot of opportunities in our challenging and fast-changing environment. We are continuing to execute our transformation to generate stronger growth, more resilience, and greater returns for our shareholders.

2016 has been a strong year of delivery for the Group, in which we met our objectives by achieving key milestones on each of our strategic levers – Portfolio upgrade, Excellence and Synergies, Management Model.

EXECUTING OUR TRANSFORMATION



Establishing a strong position in segments where we are already active and transforming our portfolio towards more advanced materials and formulations.

Pursuing functional excellence in order to be at the forefront of our industry, innovating to create new sustainable solutions that focus on return on investment.

"The way we achieve results" with our four key business pillars, including customer-centricity, collaborative innovation, relentless excellence, and superior Group performance.

PORTFOLIO UPGRADE

Establishing a strong position in segments where we are already active and transforming our portfolio towards more advanced materials and formulations.

More global, resilient, sustainable, and innovative

For several years now, we have been reshaping our portfolio to include more advanced technologies, positioning ourselves as a solution provider to help our customers increase their competitiveness. By transforming the Group into a multi-specialty chemical solutions-provider, with specialties which in 2016 comprised two-thirds of our business, we will make it more global, resilient, sustainable, and innovative. Our transformation also takes account of geographical location: as a global player, Solvay is now balanced in terms of the geographical distribution of its activities. 50% of our businesses are in markets expected to grow at GDPplus.

Acquisitions and divestments represent key steps in Solvay's transformation into a group with a higher growth profile, by enhancing customized solution offerings and reducing cyclical and low-growth businesses exposure. In 2016, the very quick and effective integration of the Cytec businesses strongly contributed to this transformation. In addition, the Group finalized the divestment of its European PVC business, completed the sale of its stake in Solvay Indupa to the Brazilian chemical group Unipar, and signed a definitive agreement to sell its stake in Vinythai to AGC Asahi Glass. The Group also reached an agreement to sell its cellulose acetate tow business.

EXCELLENCE AND SYNERGIES

Pursuing functional excellence in order to be at the forefront of our industry, innovating to create new sustainable solutions that focus on return on investment.

"Innovate more and faster"

Our Research & Innovation is at the core of our business. As we transform ourselves into a multi-specialty business, innovation has a capital role to play. It is crucial to our differentiation and our growth strategy as well as to our understanding of key market players, so that we continue to lead the way in developing pioneering technologies. To innovate more and faster, we have articulated our organization and ways of working to optimize synergies and collaborative projects. The success of the 13-year technological partnership with Solar Impulse showed Solvay's ability to tackle issues regarding energy saving and lightweighting, in a highly demanding environment, enabling this electrical plane to fly around the globe without fuel.

Nicolas Cudré-Mauroux,
Group General Manager Research & Innovation

INNOVATION IN FIGURES

2,340 Employees	240 Patent applications	€ 350 million R&I effort	€ 80 million Invested in funds and start-ups

MANAGEMENT MODEL

"The way we achieve results" with our four key business pillars, including customer-centricity, collaborative innovation, relentless excellence, and superior Group performance.

Integration of Cytec businesses

The integration of Cytec has been a textbook example of blending the cultures and strengths of both organizations, to quickly identify and achieve higher-than-expected synergies. The businesses have now been incorporated seamlessly into our portfolio, and multiple collaborations across all businesses are in the process of developing new innovations that address our customers' most important industry challenges.

To implement its strategy, Solvay relies on:

Gaining a thorough understanding of customers, being able to anticipate what they will need in five years' time

Tech Days: getting closer to our customers

Solvay regularly organizes events called "Tech Days" with customers as well as key prescribers in their industries, who are best positioned to understand the needs of the end consumers and are driving market trends. These events allow Solvay to better understand its customers' challenges and to raise the visibility of its portfolio of technologies and solutions.

Solvay has set up around 20 Group Tech Days over the last five years, involving leading players in such industries as automotive, aeronautics, oil & gas, agro and coatings. These events – held in Europe, Asia, and the Americas – have had a significant impact for the Group. They have been attended by more than 2,500 representatives of customers and have given rise to tangible business opportunities for the Group (e.g. through joint development agreements).

Developing the technologies that will deliver sustainable solutions

Sustainable Portfolio Management (SPM): a strategic tool for our businesses

Solvay uses its SPM tool to identify and analyze opportunities that will have a positive impact on its extra-financial objectives. By analyzing the manufacturing steps and all possible product-application combinations, SPM allows us to focus our portfolio, innovation projects, and acquisitions on the most environmentally friendly and socially responsible technologies and businesses. These may be familiar solutions – such as biodegradable products for soaps and shampoos and renewable-based solvents for paints and coatings – or more complex solutions, for example enabling consumers to ultimately reduce their energy consumption or generate less food waste.

Solvay's objective is to achieve at least 50% of its net sales with "sustainable solutions" by 2025.

Developing talents capable of understanding customers' needs and enabling technologies

Talent Days: developing our people

Solvay has set a range of initiatives to give guidance to each employee in the Group's transformation and ensure the development of each individual's potential.

Talent Days are one of these initiatives, a powerful vehicle for managing and developing talents through learning, personal contact, and networking. This two-day event provides participants with an opportunity to boost their career paths by enhancing their visibility and understanding of business challenges. Face-to-face meetings with senior managers and the subsequent feedback help them clarify their aspirations and develop soft skills such as self-awareness, and impact and influence.

Feedback shows that Talent Days deliver outcomes in terms of commitment, engagement, and energy from both participants and managers. In 2016, 26 participants and 22 managers took part in the European Talent Days; there were similar numbers in Latin America, while 30 talents and 30 leaders participated in Asia Pacific.

MANAGEMENT REPORT

Management Report

CORPORATE GOVERNANCE STATEMENT

1. INTRODUCTION

As a company headquartered in Belgium with a commitment to the highest standards of corporate governance, the Board of Directors of Solvay SA ("Solvay" or the "Company") adopted a Charter of Corporate Governance (the "Charter") on December 13, 2016. The Charter is available on the Company's website and describes the main aspects of the corporate governance of the Solvay group (the "Group"), including its governance structure, and the internal rules of the Board of Directors, the Executive Committee, and other committees set up by the Board of Directors.

The Group applies the principles set forth in the 2009 Belgian Corporate Governance Code, which is its reference code in governance matters. The 2009 Belgian Corporate Governance Code is available on the Belgian Corporate Governance Committee website.

This Corporate Governance Statement with respect to 2016 applies the recommendations of the 2009 Belgian Corporate Governance Code, in accordance with the "comply or explain" principle.

In accordance with this principle, none of the rules described in this Corporate Governance Statement depart from the 2009 Belgian Corporate Governance Code.

2. CAPITAL, SHARES AND SHAREHOLDERS

2.1. Capital and shares

The capital of the Company has not been modified in 2016 and amounts to €1,588,146,240 and is represented by 105,876,416 shares.

2.2. Shareholders

2.2.1. Major shareholder

Solvay's main shareholder is Solvac SA, with a holding of more than 30% in the share capital of Solvay.

Solvac SA is a public limited liability company established under Belgian law, the shares of which are admitted to trading on Euronext Brussels.

Solvac has approximately 13,000 shareholders. Among them, more than 2,000 persons are related to the founding families of Solvay and of Solvac. These persons hold approximately 77% of the shares of Solvac.

2.2.2. Shareholders' structure

The following table shows the current shareholders' structure based on the notifications made to the Company and to the Belgian Financial Services and Markets Authority ("FSMA") by the shareholders specified below, according to i) the Belgian law of May 2, 2007 on the notification of significant shareholdings or according to Solvay's by-laws or ii) Article 74 of the Belgian law of April 1, 2007 on public take-over bids or iii) based on more recent information from public disclosures.

	Date	Number of shares	% of total
Solvay	July 29, 2016	32,511,125	30.71%
Solvay Stock Option Management	July 4, 2016	2,632,690 (+ 559,374 purchase options)	3.01%

On July 29, 2016 Solvac gave notice that it holds 30.71% (32,511,125 shares) in the share capital of Solvay.

Solvay Stock Option Management SPRL, an indirect subsidiary of Solvay, notified Solvay on July 4, 2016 that its shareholding amounted to 3.01% of the 105,876,416 shares issued by Solvay, representing 2,632,690 shares and 559,374 purchase options. These purchase options are part of the Group's risk hedging strategy linked to stock options granted by Solvay to senior executives of the Group.

Blackrock Inc. gave notice on November 18, 2016 that it holds a 3.04% interest (3,219,775 shares) in the share capital of the Company and on November 30, 2016 that it had fallen below the statutory threshold of 3% in the Company's share capital.

The latest transparency notifications are available on the website (www.solvay.com).

The shares for which no transparency notifications have been filed with Solvay and the FSMA are held by:

- individual shareholders who hold shares directly in Solvay
- European and international institutional shareholders, whose number and interest can be measured by the intensity of contacts at many roadshows, by the regular publication of analysts' reports and by the level of trading volumes over recent years.

At the Ordinary Shareholders' Meeting held on May 10, 2016, shares were deposited and votes cast in respect of 58.16% of Solvay SA's capital.

3. RELATIONS WITH SHAREHOLDERS AND INVESTORS

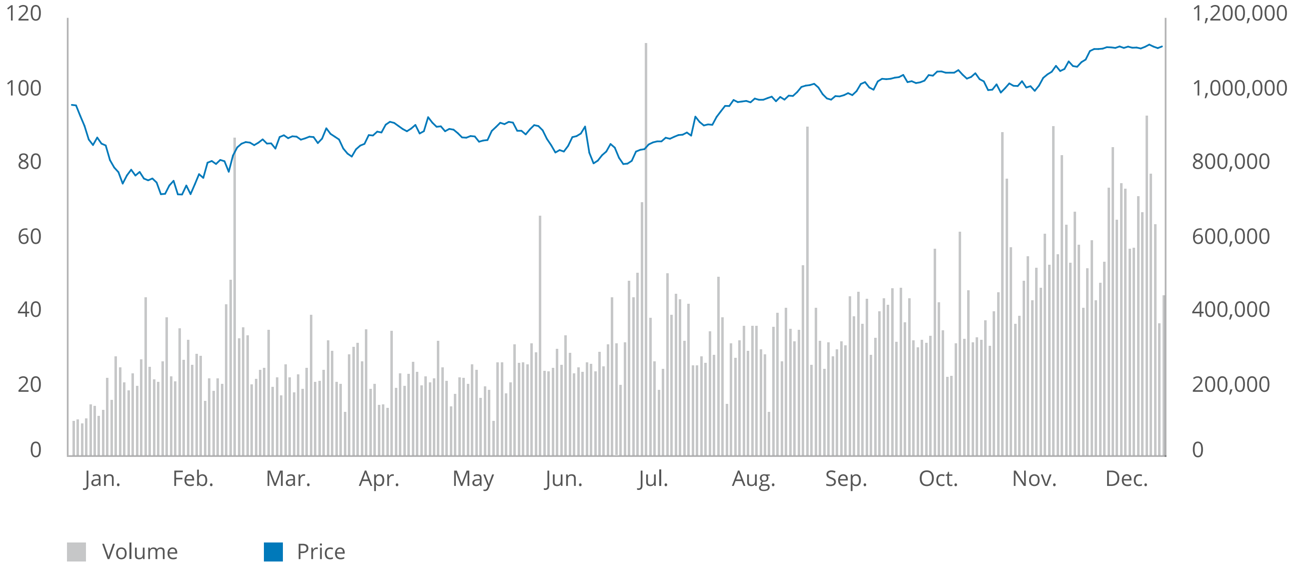
3.1. Performance of the Solvay share

Solvay shares have a dual listing on Euronext Brussels – the primary listing – and, since January 2012, on Euronext Paris under the unique mnemonic code of SOLB. Furthermore, Solvay joined the CAC 40 stock index on September 21, 2012. Both these events reflect the Group's long history in France as well as its economic weight.

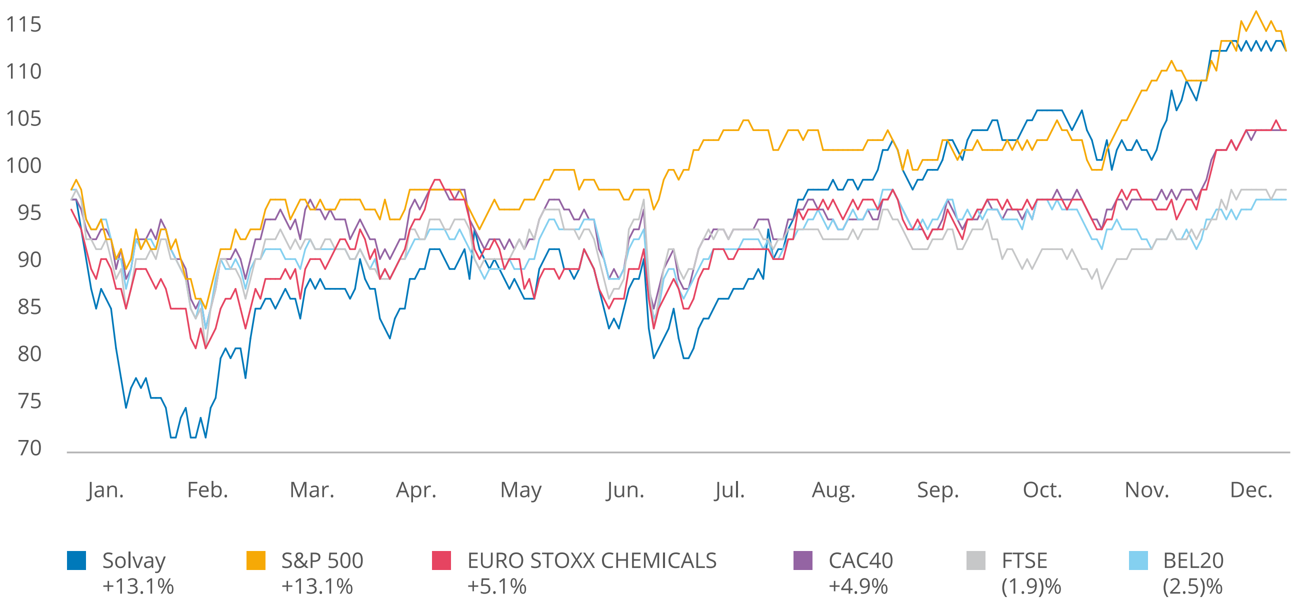
During 2016, the average price was € 92.41, while the highest price was € 112.30.

Average daily trading volume as reported by Euronext was 335,719 shares in 2016, compared with 325,619 shares in 2015.

Solvay share prices and trading volumes from January 1, 2016 to December 31, 2016



The Solvay share compared with indexes from January 1, 2016 to December 31, 2016



3.2. Active financial communication

Throughout the year the Investor Relations team has endeavored to communicate in a timely and effective manner. It presents financial and strategical relevant facts and developments to various investor groups, equity and credit analysts and other stakeholders, on a worldwide basis. During the year the Investor Relations team members have had regular contact with financial analysts, institutional and retail investors. They have provided updates with facts regarding financial and strategic trends, and have organized presentations, visits and roadshows.

The Group pays a great deal of attention to the equal treatment of all shareholders.

The Group's communication policy is to disseminate, as soon as reasonably possible, information that is of material interest to the market in the form of press releases and/or press conferences and public presentations available on the Group website.

Solvay SA

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3.3. Individual investors

For many years Solvay has maintained close relations with individual investors both by taking part in conferences and by providing regular information about the Group, in the form of press releases, the annual report, etc.

In 2016, the Group actively continued its meetings with individual investors. In March 2016 Solvay took part in an Investors' Day organized in Antwerp by the Flemish Federation of Investments Club and Investors, VFB (Vlaamse Federatie van Beleggingsclubs en Beleggers), and which is attended every year by more than 1,500 participants. On this occasion, the Solvay Head of Investor Relations presented the Group to an audience of around 400 individual investors.

Furthermore, the Group implemented a campaign including corporate & financial performance messages on financial websites in Belgium and France.

Since 2014 Solvay has published a quarterly e-newsletter called "Solvay in Action", available in French, Dutch and English, which presents key financial messages as well as articles, videos and images that illustrate the Group evolution through its key strategic levers. It is addressed primarily to Solvay's Investors' Club but its entire content is available in the Investors section of www.solvay.com. Since its launch in September 2014, 1,600 persons have become members of the Investors' Club.

3.4. Roadshows and meetings for institutional stakeholders

Roadshows and meetings with senior Group managers are organized regularly for international financial professionals such as analysts, portfolio managers and the press. Solvay is also developing an active dialog on its sustainability policy, and multiplies the opportunities of interaction with investors concerned with Corporate Social Responsibility (CSR) values.

In 2016, some 510 contacts took place in Europe (Belgium, France, the United Kingdom, Germany, the Netherlands, Switzerland, Ireland, Italy, Sweden, Finland, Denmark, Luxembourg and Poland) and on other continents (the United States, Canada, Japan, Singapore, Hong Kong and the United Arab Emirates).

Conference calls with management are also organized every quarter, to comment on Group results.

Furthermore, in September 2016 Solvay held a Capital Markets Day in London, presenting the Group's strategic direction with a particular focus on Advanced Materials and Advanced Formulations businesses. This event was attended by 90 sell-side and buy-side analysts and by fund managers, and was made available by live video webcast.

3.5. Dedicated web pages

Dedicated pages on the website www.solvay.com/en/investors provide shareholders and investors with financial and strategic information published by the Group. The site provides various and valuable services. It is now available in three languages – English, French and Dutch.

It also offers the opportunity to join the Investors' Club to receive email notifications – in the three languages – on a variety of topics: agendas of upcoming meetings, including the Annual Shareholders' Meeting, amendments to by-laws, special reports of the Board of Directors, publication of the annual report, unconsolidated parent company accounts, payment of dividends, etc. A new section dedicated to the shareholders' information was created in 2014. It comprises Solvay in Action, the information program mentioned in Section 3.3 of the present statement, practical information concerning shares registration and answers to the most frequent questions.

4. BOARD OF DIRECTORS AND BOARD COMMITTEES

The role and mission, functioning, size, composition, training and evaluation of the Board of Directors are described in detail in the Charter. In addition, the internal rules of the Board of Directors are attached to the Charter.

4.1. Board of Directors

4.1.1. Structure and composition

The evolutions and changes during the year 2016 in the composition of the Board of Directors are listed below:

The mandate of Mr. Jean-Marie Solvay was renewed for a four-year term at the Ordinary Shareholders' Meeting of May 10, 2016 so that his mandate will expire at the end of the ordinary Shareholders' Meeting to be held in May 2020.

At the Ordinary Shareholders' Meeting of May 9, 2017 the Board of Directors will propose:

- the renewal of the directorship of Mr. N. Boël, Mr. J-P. Clamadieu, Mr. B. de Laguiche, Mr. Hervé Coppens d'Eeckenbrugge, Mrs. E. du Monceau, Mrs. F. de Viron and Mrs. A. Moraleda for a four-year term
- the appointment of Mrs. A. Lemarchand as a new independent director for a four-year term, and to prepare a replacement for Mr. Y-Th. de Silguy at the Ordinary Shareholders' Meeting of 2019, when he reaches the age limit and his term expires.

This means that the number of members of the Board of Directors will increase from 15 members today to 16 members. That will be a temporary increase until the Ordinary Shareholders' Meeting of 2019, when the term of Yves-Thibault de Silguy expires.

As at December 31, 2016, the Board of Directors was composed of the following 15 members:

	Year of birth	Year of first appoint-ment	Solvay SA mandates, and expiry date of directorship	Diplomas and activities outside Solvay	Presence at Board meetings in 2016
Mr. Nicolas Boël (B)	1962	1998	2017 Chairman of the Board of Directors, Chairman of the Finance Committee and Chairman of the Compensation Committee Member of the Nomination Committee	MA in Economics (Catholic University of Louvain), Master of Business Administration (College of William and Mary – USA). Director of Sofina.	8/8
Mr. Jean-Pierre Clamadieu (F)(1)	1958	2012	2017 Chairman of the Executive Committee and CEO, Director and Member of the Finance Committee	Engineering degree from the École des Mines (Paris). Director of Axa, Faurecia. Chairman of Cytec Industries Inc.	8/8
Mr. Bernard de Laguiche (F/BR)	1959	2006	2017 Member of the Executive Committee until September 30, 2013, Director Member of the Finance Committee and Member of the Audit Committee since May 13, 2014	MA in Economics and Business Administration, HSG (University of St. Gallen, Switzerland). Managing Director of Solvac SA, Chairman of the Board Peroxidos do Brasil Ltda, Curitiba.	8/8
Mr. Jean-Marie Solvay (B)	1956	1991	2020 Director Member of the Innovation Board	Advanced Management Programme – Insead. CEO of Albrecht RE Immobilien GmbH & Co. KG., Berlin (Germany), Chairman of the Board of the International Solvay Institutes.	8/8
Mr. Denis Solvay (B)	1957	1997	2018 Director Member of the Compensation and Nomination Committees	Business engineering – Solvay Business School (Université Libre de Bruxelles). Abelag Holding, SA. Voluntary Director of the healthcare Institute ANBCT and Queen Elisabeth Musical Chapel.	8/8
Prof. Dr. Bernhard Scheuble (D)	1953	2006	2018 Independent Director Chairman of the Audit Committee	MSc, Nuclear Physics & PhD, Display Physics (Freiburg University – Germany). Former Chairman of the Executive Committee of Merck KGaA, (Darmstadt) and former Member of the E. Merck OHG Board of Directors.	7/8

(1) Full-time activity in the Solvay group.

	Year of birth	Year of first appoint-ment	Solvay SA mandates, and expiry date of directorship	Diplomas and activities outside Solvay	Presence at Board meetings in 2016
Mr. Charles Casimir-Lambert (B)	1967	2007	2019 Independent Director Member of the Audit Committee	MBA Columbia Business School (New York)/London Business School (London), Master's degree (lic.oec.HSG) in economics, management and finance (University of St. Gallen – Switzerland). Management of family's global interests.	8/8
Mr. Hervé Coppens d'Eeckenbrugge (B)	1957	2009	2017 Independent Director Member of the Finance and Audit Committees	MA in Law from the University of Louvain-la-Neuve (Belgium), Diploma in Economics and Business, ICHEC (Belgium). Until June 30, 2013, Group Director Petercam sa, Director of Vital Renewable Energy Company LLC (Delaware). Independent Director, VISONARITY AG (Basel, Switzerland).	8/8
Mr. Yves-Thibault de Silguy (F)	1948	2010	2019 Independent director Member of the Compensation Committee and Chairman of the Nomination Committee Member of the Finance Committee	MA in Law from the University of Rennes, DES in public law from the Université de Paris I, graduate of the Institut d'Études Politiques de Paris and the École Nationale d'Administration. Vice-Chairman and Lead Director of the VINCI group, Director of LVMH, Chairman of the Supervisory Board of Sofisport (France), Director of VTB bank (Moscow), and Chairman of YTSeuropaconsultants.	7/8
Mrs. Evelyn du Monceau (B)	1950	2010	2017 Independent director Member of the Compensation and Nomination Committees	MA in Applied Economics from the Catholic University of Louvain. Vice Chair of the Board and Chair of the Remuneration and Nomination Committee of UCB SA, Member of the Board of Directors of La Financière de Tubize SA, , Member of the Commission Corporate Governance.	8/8
Mrs. Françoise de Viron (B)	1955	2013	2017 Independent Director Member of the Compensation and Nomination Committees	Doctorate of Science (UCL, Louvain-la-Neuve). Master in Sociology (UCL, Louvain-la-Neuve). Professor in the Faculty of Psychology and Education Sciences and Louvain School of Management (UCL), Academic Member of the Center of Research Entrepreneurial Change and Innovative Strategies, of Interdisciplinary Group of Research in Socialization, Education and Training, of the Interdisciplinary Research Group in Adult Education at UCL. Chairman and Director AISBL EUCEN – European Universities Continuing Education network.	7/8

(1) Full-time activity in the Solvay group.

	Year of birth	Year of first appoint-ment	Solvay SA mandates, and expiry date of directorship	Diplomas and activities outside Solvay	Presence at Board meetings in 2016
Mrs. Amparo Moraleda Martinez (ES)	1964	2013	2017 Independent Director Member of the Compensation and Nomination Committees	Degree in Industrial Engineering, ICAI (Spain) MBA, IESE Business School (Spain). Former General Manager for IBM Spain, Portugal, Greece, Israel and Turkey. Former Chief Operating Officer, International Division (Spain) and Acting CEO, Scottish Power (UK) of Iberdrola. Member of the Boards of the following listed companies: Airbus Group, Faurecia (France), Caixabank (Spain). Member of the Consejo rector of Consejo Superior of Investigaciones Cientificas. Member of the Academy of the Spanish Royal Academy of Economics and Financial sciences.	7/8
Mrs. Rosemary Thorne (UK)	1952	2014	2018 Independent Director Member of the Audit Committee	Honours Degree in Mathematics and Economics from the University of Warwick. Fellow of Chartered Institute of Management Accountants FCMA and CGMA. Fellow Association of Corporate Treasurers FCT. Former Chief Financial Officer for J. Sainsbury, Bradford & Bingley and Ladbrokes. Member of the Board and Chair of Audit Committee of Santander UK (until end June 2015) and Smurfit Kappa Group (Ireland). First Global Trust Bank (UK), until October 19, 2016.	8/8
Mr. Gilles Michel (F)	1956	2014	2018 Independent Director Member of the Finance Committee	École Polytechnique. École nationale de la statistique et de l'administration économique (ENSAE). Institut d'Études Politiques (IEP). Former CEO "Ceramics & Plastics", Saint-Gobain, France. Former Member of the Management Board, PSA, France. Former CEO, Fonds stratégique d'Investissement (FSI), France. Chairman & CEO, Imerys, France (listed).Independent Director IBL.	8/8
Mrs. Marjan Oudeman (NL)	1958	2015	2019 Independent Director Member of the Audit Committee since May 12, 2015	Law degree, State University of Groningen. Summer Program American Law, Columbia University (NY), USA, University of Amsterdam and University of Leiden. Masters Degree in Business Administration, Simon E. Business School, University of Rochester, New York, USA and Erasmus University, Rotterdam. Member of the Board of Statoil ASA. Member of the Board of SHV Holdings N.V., the Netherlands. President of the Executive Board Utrecht University. Member of the Supervisory Board of Koninklijke Concertgebouw, the Netherlands. Chairman of the Board of Ronald McDonald Children's Fund. Member of the Supervisory Board of the Rijksmuseum, the Netherlands.	7/8

(1) Full-time activity in the Solvay group.

The composition of this Board is as follows:

- 14 of the 15 directors on the Board are non-executive
- Ten of the 15 Directors have been recognized as independent by the Ordinary Shareholders' Meeting, according to the criteria defined by the Belgian law and further refined by the Board of Directors
- International composition: seven different nationalities
- 5 out of 15 Board members are women
- very high attendance at Board meetings: 95.8%

4.1.2. Functioning of the Board of Directors

In 2016, the Board held eight meetings. Attendance by each director is provided in the chart in section 4.1.1. Structure and composition!

During 2016, the Board of Directors' main areas of discussion, review and decisions were: the annual review of the Group strategy, the review of the strategic projects (acquisitions, divestments, capital expenditures, etc.), the approval of the quarterly financial statements and dividend proposal to the AGM, the quarterly financial reporting, the reports of the Board Committees, the Corporate Governance, the corporate social responsibility and the sustainability policy, the risk management, the compensation policy and the long-term incentive plan, the Board and management succession planning, intragroup restructurings, and the reports and resolution proposals to the General Meeting.

There were no transactions or contractual relationships in 2016 between the Group and its Board members giving rise to conflicts of interests.

4.1.3. Evaluation

In 2016, the Board of Directors concluded its evaluation by an independent competent third party in order to advise the Board on opportunities for further improvement in line with best practices. Such evaluation takes place every two to three years and focuses primarily on the composition, the functioning, the information and the interactions of the Board with executive management, as well as the composition and functioning of the Committees created by it. Board members were invited to express their views on these various points during interviews based on a questionnaire and per-formed by an external consultant.

The evaluation underlined an overall progress of the functioning of the Board and its Committees since the previous evaluation in 2013.

The improvements identified at the end of this evaluation are related to the optimization of the content of meeting, visit and trip programs, the level of detail of the reports of the various Committees to the Board of Directors, and the identification of training needs.

4.1.4. Training

In 2016, the CEO involved a number of key executives in presentations to the Board about topics regarding operations and functional domains, allowing the Board to get ongoing information on topics not requiring an immediate decision.

As every year, the Board of Directors also visited industrial and research sites. In 2016, the Board visited industrial units, R&I and customer centers of the GBU Composite Materials (ex-Cytec) in the UK.

Furthermore, a training session on sustainable development was organized, so as to further expand the knowledge and awareness of the Board on that topic and its evolution, the implementation of the relevant Group policy, and the realization of the related objectives.

4.2. Board committees

The Board of Directors has set up on a permanent basis the following specialized Committees: the Audit Committee, the Finance Committee, the Compensation Committee and the Nominations Committee.

All the mandates of the members of these various Committees expired on May 10, 2016 at the date of the Ordinary Shareholders' Meeting. They were renewed for a period of two years, ending on the date of the Ordinary Shareholders' Meeting to be held in 2018.

The composition of the four Board Committees is as follows:

	Audit Committee	Finance Committee	Compensation Committee	Nominations Committee
Mr. Nicolas Boël		Chairman	Chairman	Member
Mr. Jean-Pierre Clamadieu		Member		
Mr. Bernard de Laguiche	Member	Member		
Mr. Denis Solvay			Member	Member
Prof. Dr. Bernhard Scheuble	Chairman			
Mr. Charles Casimir-Lambert	Member			
Mr. Hervé Coppens d'Eeckenbrugge	Member	Member		
Mr. Yves-Thibault de Silguy		Member	Member	Chairman
Mrs. Evelyn du Monceau			Member	Member
Mrs. Françoise de Viron			Member	Member
Mrs. Amparo Moraleda Martinez			Member	Member
Mrs. Rosemary Thorne	Member			
Mr. Gilles Michel		Member		
Mrs. Marjan Oudeman	Member			

4.2.1. The Audit Committee

The Board has set up an Audit Committee whose composition, role and missions and functioning are described among other in its internal rules, which form an Appendix to the Charter.

The Audit Committee is composed of at least three non-executive directors and a majority of them are independent. The directors on this Audit Committee fulfill the criterion of competence by virtue of their training and the experience gained during their previous functions (see section 4.1.1 regarding the composition of the Board of Directors). The secretariat of this Committee is provided by a member of the Group's internal legal staff.

This committee met six times in 2016, including four times before the various Board meetings at which the publication of periodic results (quarterly, semiannual and annual) was scheduled for consideration. Attendance by the Audit Committee members at the meetings was very high (100%).

At each meeting, the Audit Committee hears reports from the Chief Financial Officer, the head of the Group Internal Audit and the auditor in charge of the external audit (Deloitte, represented by Mr. Michel Denayer). It also examines the quarterly report by the Group General Counsel on significant ongoing legal disputes and reports on tax and intellectual property disputes. It meets alone with the auditor in charge of the external audit whenever it deems such a meeting useful. The Chairman of the Executive Committee and CEO (Mr. Jean-Pierre Clamadieu) and all other Board members are invited, once a year, to discuss the major risks to which the Group is exposed.

4.2.2. The Finance Committee

The Board has set up a Finance Committee whose composition, role, mission and functioning are described among other in its internal rules, which form an Appendix to the Charter.

Mr. Karim Hajjar (Executive Committee member and CFO) is invited to attend the Finance Committee meetings.

The Secretary of this Committee is Mr. Michel Defourny.

This Committee met four times in 2016. Attendance by the members of the Finance Committee was very high (100%)

The Committee gives its opinion on financial matters such as the amounts of the interim and final dividends, the levels and currencies of indebtedness in the light of interest rate developments, the hedging of foreign exchange and energy risks, the hedging policy of the long-term incentive plans, the content of financial communication, and the financing of major investments. It finalizes the preparation of the press releases announcing the quarterly results. It may also be called upon to give opinions on Board policies on these matters.

4.2.3. The Compensation Committee

The Board has set up a Compensation Committee whose composition, role, mission and functioning are described among other in its internal rules, which form an Appendix to the Charter.

A majority of the members of this Committee have independent director status within the meaning of the law. The Compensation Committee has the expertise necessary to perform its mission.

The Chairman of the Executive Committee is invited to meetings, except for matters that concern him personally.

The Secretary of this committee is Mr. Michel Defourny.

The meetings are prepared by the Group General Manager Human Resources, who attends the meetings.

This committee met twice in 2016. Attendance by the members of the Compensation Committee was very high (100%).

The Compensation Committee fulfills the mission imposed on it by law. In particular, it advises the Board of Directors on Compensation policy and compensation levels for members of the Board of Directors and the Executive Committee, and is informed every year about the compensation of General Management. It also gives its opinion to the Board of Directors and/or Executive Committee on the Group's principal compensation policies (including long-term incentive plans). It also prepares the report on compensation.

4.2.4. The Nominations Committee

The Board has set up a Nominations Committee whose composition, role, mission and functioning are described in its internal rules, which form an Appendix to the Charter.

A majority of the members of the Nominations Committee are independent non-executive directors.

The Chairman of the Executive Committee is invited to meetings, except for matters that concern him personally.

The Secretary of this Committee is Mr. Michel Defourny.

The committee met three times in 2016. Attendance by the members of the Nomination Committee was very high (100 %)

The Nominations Committee gives its opinion on appointments to the Board of Directors (Chairman, new members, renewals and committees), to Executive Committee positions (Chairmanship and members) and to general management positions.

5. EXECUTIVE COMMITTEE

The role, mission, composition, functioning and evaluation of the Executive Committee are described in detail in the Charter. In addition, the internal rules of the Executive Committee are attached to the Charter.

As at December 31, 2016, the Executive Committee was composed of the following five members.

	Year of birth	Year of first appointment	Term of office ends	Diplomas and main Solvay activities	Presence at meetings in 2016
Mr. Jean-Pierre Clamadieu (F)	1958	2011	2017	Engineering degree from the École des Mines (Paris). Chairman of the Executive Committee and CEO.	17/17
Mr. Vincent De Cuyper (B)	1961	2006	2018	Chemical engineering degree (Catholic University of Louvain), Master in Industrial Management (Catholic University of Leuven), AMP Harvard. Executive Committee member.	17/17
Mr. Roger Kearns (US)	1963	2008	2018	Bachelor of Science – Engineering Arts (Georgetown College – Georgetown), Bachelor of Science – Chemical Engineering (Georgia Institute of Technology – Atlanta), MBA (Stanford University). Executive Committee member.	17/17
Mr. Karim Hajjar (UK)	1963	2013	2017	BSC (Hons) Economics (The City University, London). Chartered Accountancy (ICAEW) Qualification. Executive Committee member and CFO.	17/17
Mr. Pascal Juéry (F)	1965	2014	2018	Graduate of the European Business School of Paris (ESCP – Europe). Executive Committee member.	17/17

On May 1, July 1, and January 1, 2016 the Board of Directors renewed the respective mandates of Vincent De Cuyper, Roger Kearns, and Pascal Juéry as members of the Executive Committee for a two-year term. Their respective mandates therefore expire on May 1, July 1, and January 1, 2018.

6. COMPENSATION REPORT

6.1. Governance

The Compensation Committee, as a consultative body of the Board of Directors, fulfills the tasks assigned to it by Article 526 quater, §5 of the Companies Code. It advises the Board of Directors on:

- the Company's compensation policy and principles;
- the compensation levels for members of the Board of Directors and the Executive Committee;
- the determination of the Chairman of the Executive Committee's compensation, short-term incentives and long-term incentives, and performance assessment;
- the allocation of long-term incentives (performance share units and stock options) to the Company's senior managers.

The Compensation Committee also prepares the annual compensation report for the Corporate Governance Statement and it is informed every year about the compensation of General Management.

The Compensation Committee has the necessary expertise to perform its mission.

6.2. Board of Directors compensation

Directors of Solvay SA are remunerated with fixed emoluments, the common basis of which is set by the Ordinary Shareholders' Meeting, and any complement thereto by the Board of Directors on the basis of Article 26 of the by-laws, which states that:

- *"Directors shall receive emoluments payable from overhead costs; the Shareholders' Meeting shall determine the amount and terms of payment";*
- *"That decision shall stand until another decision is taken";*
- *"The Board of Directors shall be authorized to grant directors with special duties (the Chairman, vice-Chairmen, directors charged with day-to-day management, members of the Executive Committee) fixed emoluments in addition to those provided for in the above paragraph";*
- *"Each of the Directors responsible for day-to-day management is also entitled to variable compensation determined by the Board of Directors on the basis of their individual results and of the consolidated results of the Solvay group";*
- *"The sums referred to in the two preceding sub-sections are also paid out of overhead costs".*

6.2.1. Board of Directors individual compensation

- the Ordinary Shareholders' Meetings of June 2005 and May 2012 (for Board attendance fee) decided to set directors' pay, starting from the 2005 financial year, and to grant:
  - an annual gross fixed compensation of € 35,000 per director and additionally an individual attendance fee of € 4,000 gross per Board meeting attended
  - € 4,000 gross for members of the Audit Committee and € 6,000 gross for its Chairman for each meeting of the committee attended
  - € 2,500 gross per member of the Compensation Committee, Nominations Committee and Financial Committee and € 4,000 gross for the chairmen of these committees for each meeting attended, on the understanding that a director sitting on both the Compensation Committee and the Nominations Committee does not receive double compensation
  - the Chairman of the Board, the Chairman of the Executive Committee and the executive directors do not receive attendance fees for taking part in these committees
- for the Chairman of the Board of Directors, the Board of Directors has made use of the authorization conferred on it by Article 27 of the by-laws to grant an additional yearly fixed compensation of € 250,000 gross in 2016 by reason of the workload and the responsibility attached to this
- non-executive directors do not receive any variable compensation linked to results or other performance criteria. They are not entitled to stock options or performance share units, nor to any supplemental pension scheme
- the Company reimburses directors' travel and subsistence expenses for meetings and while exercising their Board and Board Committee functions.

The Chairman of the Board of Directors is the sole non-executive director having permanent support provided by the Group (office, secretariat, car). The other non-executive directors receive logistics support from the General Secretariat as and when needed. The Company also carries customary insurance policies covering the activities of Board members in carrying out their duties.

6.2.2. Amount of the compensation and other benefits granted directly or indirectly to directors (executive and non-executive) by the Company or by an affiliated company

Gross compensation and other benefits granted to directors

Compensation

In €	2016 Gross amount	2016 Including Board of Directors and Committees attendance fees	2015 Gross amount	2015 Including Board of Directors and Committees attendance fees
N. Boël				
Fixed emoluments + attendance fees	67,000	32,000	75,000	40,000
"Article 27" supplement	250,000		250,000	
D. Solvay	74,500	39,500	82,500	47,500
J-P. Clamadieu	67,000	32,000	75,000	40,000
J-M. Solvay	67,000	32,000	75,000	40,000
G. de Selliers de Moranville(1)			41,701	29,000
B. de Laguiche	101,000	66,000	99,500	64,500
B. Scheuble	99,000	64,000	101,000	66,000
C. Casimir-Lambert	91,000	56,000	95,000	60,000
H. Coppens d'Eeckenbrugge	101,000	66,000	103,500	68,500
E. du Monceau	74,500	39,500	78,500	43,500
Y-T. de Silguy	85,000	50,000	93,000	58,000
A. Moraleda	66,500	31,500	82,500	47,500
F. de Viron	74,500	39,500	82,500	47,500
G. Michel	77,000	42,000	87,500	52,500
R. Thorne	91,000	56,000	95,000	60,000
M. Oudeman(2)	87,000	52,000	50,298	28,000
	1,473,000	**698,000**	**1,567,500**	**792,500**

(1) Until May 12, 2015.
(2) From May 12, 2015.

6.3. Executive Committee compensation

6.3.1. Solvay compensation philosophy

Solvay compensation policy aims to ensure that our Executive Committee is rewarded according to its success in contributing to Solvay's performance.

Overall, Solvay seeks to position itself at or around the relevant market median for base salary and benefits. Variable compensation, both short-term and long-term, is designed to ensure superior performance. Our high performers may achieve around upper quartile on actual total compensation.

The Solvay Compensation System is designed in line with the following principles:

- Total compensation is designed to be competitive in the relevant market, so as to attract, retain and motivate the right talents.
- Short-term and long-term variable compensation is tied directly to the achievement of strategic targets to drive sustainable performance and recognize superior results.
- Compensation decisions are compliant and equitable, and balance cost and value appropriately.

6.3.2. Compensation structure

Solvay's compensation structure for our Executive Committee is designed in accordance with the "pay-for-performance" approach approved by the Board of Directors, focusing on the Company's short and long-term performance.

The level and structure of the compensation are aligned with market practices for similar functions in a comparable organization.

To assess relevant competitive practice, Solvay takes as its frame of reference a selection of European chemical and industrial manufacturing companies with international operations and annual sales revenues and a headcount reasonably close to its own. The composition of this selected group is reviewed on a periodic basis to assure that it continues to reflect the Company's strategic orientation.

It is currently composed of 17 European-based multinational companies headquartered in six different European countries (Belgium, France, Germany, Netherlands, UK and Switzerland) and active in the chemical sector and/or the industrial sector.

- Umicore
- Air Liquide
- Arkema
- Michelin
- Saint Gobain
- Vallourec
- BASF
- Bayer
- Evonik
- Lanxess
- Akzo Nobel
- DSM
- Rolls Royce
- GKN
- BAE Systems
- Johnson Matthey
- Syngenta

For data relating to the international market, the services of the internationally recognized compensation consultant Willis Towers Watson have been retained.

No major changes in the structure of the compensation package of the Chairman and the members of the Executive Committee are expected in 2017 and 2018.

The compensation structure consists of the following components:

	Fixed Compensation and Benefits		Short and Long Term Variable Compensation		
	Annual Base Salary	Pension and Benefits	Short Term Incentive	Performance Share Units (*)	Stock Options (*)
Performance Period			1 year	3 years	3 years
Performance Measures			• Underlying EBITDA • Sustainable Devp. • Individual Obj.	• Underlying EBITDA • CFROI	Share Price

(*) The corresponding number of stock options (SOP) is determined at grant date, based on the fair market value of the SOP. The PSU value is the closing share price on the grant date.

Base salary

The base salary reflects role responsibilities, job characteristics, experience and skill sets. It is paid monthly in cash. Base salary is reviewed annually and may increase if justified by external market (peer group).

Pension and other benefits

The primary purpose of pension and insurance plans is to establish a level of security for our employees and their dependents with respect to age, health, disability and death.

Short-term incentive

The short-term incentive is linked partly to the Group performance and partly to the individual performance.

- Group performance is measured against the annual underlying EBITDA (under a specific Free Cash Flow constraint) and a Sustainable Development indicator.
- Individual performance is measured against a set of pre-determined annual objectives, approved by the Board of Directors.

Long-term incentive

The long-term incentives consist of a 50/50 mix of stock options (SOP) and performance share units (PSU).

Each annual LTI plan is subject to prior Board approval.

In its sole discretion the Executive Committee (or the Board of Directors for the Executive Committee members) may decide/ recommend individual grants of + or -50% of the target to reward special or unique achievements or circumstances or to acknowledge insufficient performance, while respecting the 50/ 50 split between SOP and PSU grants.

Stock options

The plan offers a competitive Long Term Incentive (LTI) vehicle aligned with Belgian practices. It is aimed at incentivizing Solvay's executive leadership team to work towards achieving robust sustainable returns for the shareholders while offering a robust retention tool to the Company.

The SO plan provides each beneficiary with the right to buy Solvay shares at a strike price corresponding to the fair market value of the shares upon grant. They bear no intrinsic value at that point in time and will only generate a potential gain for the beneficiaries if the stock price rises.

In accordance with Belgian legislation, taxes on stock options are paid at grant. Therefore, in accordance with Belgian practices, there is no performance attached to the stock options vesting period.

Every year, the Board of Directors determines the volume of stock options available for distribution, based on an assessment of the economic fair value at grant, using the Black Scholes financial formula. The total volume of options available is then allocated to the top executives of the Company based on the importance of their individual contribution/position to the success of the Solvay group.

Key features:

- Options are granted at the money
- Eight years duration
- Options become exercisable for the first time after three full calendar years following grant
- Options are not transferrable inter vivos
- The plan includes a bad leaver clause.

Performance share units

The performance share unit program (PSU) ensures the alignment with market practices, helping Solvay to remain competitive in the market place in order to attract and retain key executives while offering a more performance-contingent vehicle to incentivize key executives to make a contribution towards Solvay's roadmap ambitions.

The PSU plan, settled in cash, provides for a possible payout in three years' time if a combination of pre-set performance objectives are met (underlying EBITDA and CFROI long-term evolution based on this three-year period), with a +/-20% adjustment depending on the actual performance versus the initial pre-set objective. The minimum payout can vary from zero if the minimum performance required or "threshold" is not met, to 80% if the performance minimum "threshold" is met, and up to 120% for a performance exceeding a pre-defined ceiling performance.

The Board of Directors determines annually the envelope available for distribution based on the closing value of the Solvay share at grant date. The total volume of PSUs available is then allocated to the senior managers of the Company based on their expected ability to contribute substantially to the achievement of Solvay's ambitions.

Key features:

- The plan is purely cash-based and does not encompass any transfer of shares to beneficiaries
- It contains the following two performance targets – 50% based on EBITDA target aligned with Solvay’s roadmap and 50% based on CFROI target
- Condition of employment up to achievement of performance targets
- Payout in cash based on the value of Solvay shares on target date.

In its sole discretion, the Executive Committee (or the Board of Directors for executive members) assesses the achievement of the targets and the Executive Committee (or the Board of Directors for executive members) may also re-evaluate the targets in cases of material change of perimeter or other unexpected circumstances.

2013 LTI performance share units payout

The 2013 PSU program payout was at 45.5% of the target based on CFROI and underlying EBITDA achievements for the period 2013-2015.

The Board of Directors decided that such payout did not reflect the exceptional Group transformation required by the Cytec acquisition and the integration over the period 2013-2015. It therefore decided to increase the payout to 54.25% (dividend and share price variation included).

Future LTI performance share units plan

As of 2017 plan, new metric will be introduced into the PSU plan. Solvay has publicly reinforced its position on value creation that encompasses both financial and extra-financial indicators (sustainable development).

In order to align LTIs with Solvay's broader definition of sustainable value creation, a proportion of the value will henceforth be linked to improving Solvay's sustainability performance in respect of greenhouse gas intensity. The new criteria, applicable with effect from LTIs granted in 2017, will thus become:

- 40% on underlying EBITDA growth
- 40% on CFROI improvement
- 20% on Greenhouse Gas (GHG) Intensity reduction.

6.3.3. Chief Executive Officer

The remuneration package of the Chairman of the Executive Committee is in full compliance with Art. 520 *ter* of the Companies’ Code and is set by the Board of Directors based on recommendations by the Compensation Committee.

Art. 520 ter of the Companies’ Code provides that from 2011 onwards, in the absence of statutory provisions to the contrary or express approval by the General Meeting of Shareholders, at least one quarter of the variable compensation must be based on predetermined criteria of performance that are objectively measurable over a period of at least two years, and at least another quarter should be based on predetermined performance criteria that are objectively measurable over a period of at least three years.

Base salary

The base salary of the Chairman of the Executive Committee remains unchanged at € 1.1 million and matches the market median of Solvay's peer group.

Pension & benefits

In the area of extra-legal pension rights, given his self-employed status in Belgium, the CEO has his own separate contractual regime, with pension, death-in-service and disability rules, which reflect the conditions he had previously at Rhodia.

Short-term incentive

The short-term incentive target is set at 100% of base salary, with a maximum of 150%. Payout of short-term incentive is based on the achievement of pre-defined targets:

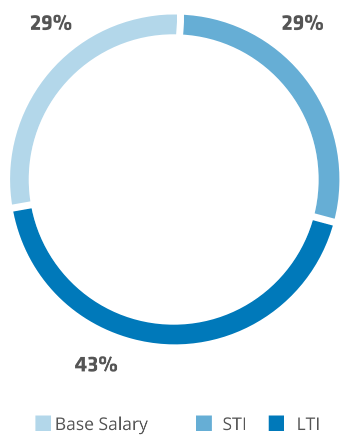
- 50% related to underlying EBITDA under cash constraint
- 10% related to sustainable development (presence of Solvay in extra-financial indexes and progress on internal sustainable development reference system Solvay Way)
- 40% related to individual objectives (such as portfolio management, R&I strategy, and People Engagement)

Long-term incentive

The long-term incentive is composed of a 50/50 mix of stock options and performance share units, with an annual economic value target set at 150% of the base salary and a maximum guidance set at 200% of such base salary.

The design of the generic Solvay long-term incentive plan is subject to the final approval of the Board. Solvay's commitment to offer a competitive though challenging reward package to its CEO is demonstrated by his pay mix, since his global variable pay target substantially outweighs his base salary.

CEO total compensation at target for 2016



Amount of compensation paid and other benefits granted directly or indirectly to the Chairman of the Executive Committee

Based on the assessment of the achievement of his individual pre-set objectives by the Board of Directors and the achievement of the Group collective economic and sustainable development indicators, the 2016 compensation package of the Chairman of the Executive Committee was set as follows.

Compensation paid and other benefits granted to the Chairman of the Executive Committee

In €	2016	2015
Base compensation	1,100,000	1,100,000
Variable compensation (Short Term Incentive)(1)	1,325,500	1,507,000
2013 Performance Share Units (Cash)(2)	406,879	NA
Pension and death-in-service and disability coverage (costs paid or provided for)	698,601	757,546
Other compensation components(3)	15,279	15,279

(1) Paid in April 2017

(2) First plan introduced in 2013 (covers 2013-2015). Payout in June 2016.

(3) Company vehicle

Short-term incentive

The annual incentive target remained set at 100% of the base salary, with a maximum of 150%.

Each performance measure can vary from 0% to 200% achievement but the maximum total payout is capped at 150% of the target.

The CEO's short-term incentive for 2016 of € 1,325,500 equals 120.5% of his STI at target.

Performance Measures		% of the STI	Achievement	Payout factor
Underlying EBITDA (under cash constraint)		50%	96%	48%
Sustainable Development		10%	140%	14%
Individual Objectives	Strategy	30%	150%	45%
	People Model	10%	135%	13.5%
Total		100%		120.5%

Payout calculation

	Base salary	x	Target incentive	x	Performance factor	=	Final award
STI Payout	€ 1,100,000	x	100%	x	120.5%	=	€ 1,325,500

2016 has been a solid year for Solvay as far as financial performance is concerned and it was also marked by another step in the Group's transformation: the successful acquisition of Cytec.

Solvay's CEO delivered on all objectives set by the Board of Directors on Strategy – including notably Cytec integration & Synergies, Divestments, and Corporate R&I strategy – and on deployment of the People Model, which includes Talent Management and the Executive Committee succession plan within the framework of the long-term and short-term financial equilibriums of the Group.

Acquisition award

Tied to the successful acquisition of Cytec with synergies estimated at US$ 100 million, the Board decided, following the pay for performance principle, to grant an acquisition award to the CEO comprising € 200,000 cash and 35,149 stock options units; the latter is blocked for three years and will only pay out if and when the share price increases.

Since then, the synergies have been revised up to US$ 150 million.

Long-term incentive
2016 Award

In 2016, the face value of his overall LTI award totaled € 1.65 million, in line with his LTI target of 150% of base salary. The gain which will eventually be derived on payout date will depend upon achievement of the performance thresholds imposed on his PSUs as well as of the performance of the Solvay shares on the stock market. The resulting numbers of stock options and PSU's are calculated according to the Black Scholes model.

	Annual Base	x	Target award	=	Grant Value
LTI – Perf. Share Units	€ 1,100,000	x	(150% / 2)	=	€ 825,000
LTI – Stock Option	€ 1,100,000	x	(150% / 2)	=	€ 825,000
LTI – Total					€ 1,650,000

2013 PSUs payout

	2013 PSU target award	x	Payout factor	=	Cash Payout
Perf.Share Units (cash)	€ 750,000	x	54.25%	=	€ 406,879

6.3.4. Other members of the Executive Committee

Pension and other benefits

The Executive Committee members are entitled to retirement, death-in-service and disability benefits on the basis of the provisions of the plans applicable in their home country. Other benefits, such as medical care and company cars or car allowances, are also provided according to the rules applicable in the host country. The nature and magnitude of these other benefits are largely in line with the median market practice.

Short-term incentive

Target in % of base salary	Performance Measures	% of the STI
70%	Underlying EBITDA (under cash constraint)	60%
	Sustainable Development	10%
	Individual Objectives	30%
	Total	100%

The target annual incentive for the members of the Executive Committee is 70% of base salary. The target short-term incentive consists of three components weighted as follows:

- 60% linked to the actual performance achieved towards a combination of annual pre-set collective Group economic performance objectives (underlying EBITDA under a specific Free Cash Flow constraint)
- 10% related to a Group sustainable development indicator
- 30% depending on the individual performance of the manager as measured against a set of pre-determined objectives

The actual annual incentive can vary from 0% in cases of poor performance to 200% of target in cases of outstanding collective and individual performance.

Acquisition award

Tied to the successful acquisition of Cytec with synergies estimated at US$ 100 million, the Board decided to grant an acquisition award of 66,197 stock options units to the Executive Committee. This award is made in accordance with the pay for performance principle since it is blocked for three years and will then only pay out to the extent that the share price has increased in the meantime.

Since then, the synergies have been revised up to US$ 150 million.

Long-term incentive

	Performance Shares Units (PSU's)	Stock Options
Executive Committee	Target Grant	Target Grant
	€ 250,000	€ 250,000

Global amount of compensation paid and other benefits granted directly or indirectly to the other members of the Executive Committee by the Company or an affiliated company

Compensation paid and other benefits granted to the other members of the Executive Committee

In €	2016[1]	2015[2]
Base compensation	2,259,531	2,182,396
Variable compensation[3]	1,802,934	1,648,133
2013 Performance Share Units (Cash)[4]	406,880	NA
Pension and death-in-service and disability coverage (costs paid or provided for)	672,567	936,092
Other compensation components[5]	118,151	128,057

(1) V. De Cuyper, R. Kearns, K. Hajjar, P. Juéry

(2) V. De Cuyper, R. Kearns, K. Hajjar, P. Juéry.

(3) 2015 payout based on 60% of base salary at target 2016 payout based on 70% of base salary at target. Payout in April of the following year.

(4) K. Hajjar excluded (joined after the 2013 LTI grant)

(5) Representation allowance, luncheon vouchers, company car.

Variable compensation consisted of an annual incentive based on the performance achieved towards pre-set collective Group economic and sustainable development performance objectives, and towards the performance of the manager as measured against a set of pre-determined individual objectives.

The remuneration package of the members of the Executive Committee is in full compliance with Art. 520 *ter* of the Companies' Code.

Art. 520 *ter* of the Companies' Code provides that from 2011 onwards, in the absence of statutory provisions to the contrary or express approval by the General Meeting of Shareholders, at least one quarter of the variable compensation of Executive Committee members must be based on predetermined criteria of performance that are objectively measurable over a period of at least two years, and at least another quarter should be based on predetermined performance criteria that are objectively measurable over a period of at least three years.

Executive Committee members receive stock options and performance share units as explained above. They do not, however, receive shares as part of their compensation packages.

Executive Committee members' expenses, including those of its Chairman, are governed by the same rules as apply to all Group management staff, i.e. the justification of all business expenses, item by item. Private expenses are not reimbursed.

In the case of mixed business/private expenses (e.g. cars), a proportional rule is applied in the same way as to all management staff in the same position.

In the area of insurance, the Company takes out the same type of cover for Executive Committee members as it does for its senior managers.

Pensions and retirement and death-in-service coverage for Executive Committee members are based in principle on the provisions of the schemes applicable to senior executives in their base countries.

6.4. Stock options and PSU allotted in 2016 to Executive Committee members

In 2016, at the proposal of the Compensation Committee, the Board of Directors allotted stock options to some 70 Group senior executives. The exercise price amounts to € 75.98 per option, with a three-year vesting period. Executive Committee members were granted a total of 208,260 options in March 2016 (acquisition award included) compared with 93,068 options in 2015[(1)].

In combination with the stock option plan, the Board of Directors granted performance share units to around 450 Group executives, for a possible payout in three years' time if pre-set economic performance objectives (underlying EBITDA and CFROI) are met. Executive Committee members were granted a total of 23,425 PSU in March 2016 compared with 17,264 PSU in 2015[(2)].

Country	Name	Function	Number of options[(1)]	Number of PSU
Belgium	Clamadieu, Jean-Pierre	Chairman of the Executive Committee	83,479	10,589
Belgium	De Cuyper, Vincent	Member of the Executive Committee	20,211	3,209
Belgium	Kearns, Roger	Member of the Executive Committee	49,502	3,209
Belgium	Hajjar, Karim	Member of the Executive Committee	34,857	3,209
Belgium	Juéry, Pascal	Member of the Executive Committee	20,211	3,209
TOTAL			**208,260**	**23,425**

(1) Exceptional award included

Stock Options held in 2016 by Executive Committee members

		Stock-options				31.12.2016		
Country	Name	Held at 31.12.2015	Granted in 2016	Exercised in 2016	Expired in 2015	Held	Exercisable	Non exercisable
Belgium	Clamadieu, Jean-Pierre	170,346	83,479	0	0	253,825	65,188	188,637
Belgium	De Cuyper, Vincent	64,816	20,211	0	0	85,027	31,175	53,852
Belgium	Kearns, Roger	94,289	49,502	0	0	143,791	60,648	83,143
Belgium	Hajjar, Karim	21,164	34,857	0	0	56,021	0	56,021
Belgium	Juéry, Pascal	49,601	20,211	0	0	69,812	15,960	53,852
TOTAL		**400,216**	**208,260**			**608,476**	**172,971**	**435,505**

(1) Stock options: Black Scholes fair value for 2015 grant was at € 26.09 vs € 17.07 for 2016 grant
(2) PSU's share price for 2015 grant was at € 124.90 vs € 77.91 for 2016 grant

6.5. Most important provisions of their contractual relationships with the Company and/or an affiliated company, including the provisions relating to compensation in the event of early departure

Executive Committee members, including the Chairman, have directorships in Group subsidiaries as a function of their responsibilities.

Where such directorships are compensated, they are included in the amounts given above, regardless of whether the position is deemed to be salaried or undertaken on a self-employed basis under local legislation.

No Executive Committee member, including the Chairman, will benefit from any departure indemnity linked to the exercise of their office. If their service ends early, only the legal system applies.

Mr. Jean-Pierre Clamadieu's contract includes a 24-month non-competition clause, but with no more than 12 months' pay.

Executive Committee members' contracts do not contain a clause providing a right of claw-back of variable compensation in cases of erroneous financial information.

7. MAIN CHARACTERISTIC OF RISK MANAGEMENT AND INTERNAL CONTROL SYSTEMS

The Group has set up an internal control system designed to provide a reasonable assurance that (i) current laws and regulations are complied with, (ii) policies and objectives set by general management are implemented, (iii) financial and extra-financial information is reliable, and (iv) internal processes are efficient, particularly those contributing to the protection of its assets.

A reasonable assurance level means a high, but not absolute, level; any internal control system has limitations linked to human error, wrong decisions or to the choices made in terms of cost/benefit of control.

This system has five components: the control environment, a risk assessment process, control activities, information and communication, and the internal control monitoring.

7.1. The control environment

The control environment is the foundation of the internal control system, as it promotes the awareness and the compliant behavior of all employees. It is made up of various elements that set up a clear structure of principles, rules, roles and responsibilities, while showing the commitment of general management.

The **Management Book** explains the organization and governance of the Group: its guiding principles, the roles and responsibilities of the Executive Committee (Comex), Global Business Units and functions are defined, as well as their scope. It also set forth a management framework expressed in the Group's Management and People Models, including accountability and transparency. The Management Book also contains an approval matrix, displaying the level of authority required for the approval of major decisions (financial commitments, sales or purchase contracts, capital investments, acquisitions or divestments, and legal settlements). Finally, it contains 25 "red lines" that are tackling key risks of the Group. These rules are mandatory for all employees.

The **Code of Conduct** highlights the principles that are intended to guide employees in their daily activities. It is based on a strong tradition of values that are deeply rooted in the Company's culture. As to the financial reporting, the Code states that employees must ensure that it is accurate and compliant with applicable regulations.

An **Ethics Helpline**, managed by a third party, is being made available to employees to enable them to report potential violations of the Code of Conduct, in case they cannot go through their managers or through the Compliance organization, or wish to report anonymously. The Helpline is available for reporting concerns via the internet in more than 45 specific countries/regions as well as in the general category "other location". Thus, anyone may contact the Ethics Helpline from wherever he or she may be located in the world. In addition, the Ethics Helpline web tool is available in more than 40 languages. The phone line has more than 20 languages available by prompt, depending on the number dialed. Toll-free access is given to Solvay employees and is available 24 hours a day, 365 days a year.

All these documents are accessible widely through the Group intranet, and regular training courses on the Code of Conduct are provided to all employees.

Standardized human resources processes are in place to allow development, training and appraisal of personnel. The job descriptions for key positions are organized consistently by professional family: Finance has its own job description reference system, covering the key positions that ensure the timeliness, compliance and quality of the financial reporting.

7.2. The risk assessment process

It is an inherent aspect of the business and operations of the Group to deal with risks, while remaining in compliance with laws, regulations and the Code of Conduct, and pursuing its ambitious sustainable development targets.

The Enterprise Risk Management (ERM) policy of Solvay is explained in the Management Book: it states that the Group will identify, quantify, assess and manage all potentially significant business risks and opportunities by applying systematic risk management integrated with strategy, business decisions and operations. Enterprise Risk management is seen as an essential management tool and aid in making the decisions needed to achieve the Company's short, medium, and long-term objectives.

The Comex approves the risk management policies and processes used throughout the Group. The Internal Audit & Risk Management Department (IA/RM) is in charge of setting up a global and consistent system of risk management across the Group.

The process of risk management takes into account the organization's strategic objectives and is structured in following phases:

- risk analysis (identification and evaluation)
- decision on how to manage the critical risks
- implementation of risk management actions
- monitoring of those actions.

The enterprise risk management effort is structured around three main pillars:

- an annual top-down exercise initiated at Leadership Council level (Comex, GBU presidents, function general managers, zone presidents, Solvay Business Services general manager and selected senior managers). It is complemented by a bottom-up exercise using the risk assessments at GBU/ functions level, and is finalized by a review and validation of a list of Group risks by the Group Risk Committee (Comex and General Managers of the HR, Industrial, Legal, and Sustainable Development functions). The Comex receives regularly a Group Risks Dashboard following up on those Group risks and the status of mitigating actions undertaken
- an exercise covering all GBUs and functions, with a methodology adapted to their size and embedded in the annual strategic review process. This exercise involves all the senior managers of the GBU or function to identify and assess the major risks for their unit. The management team and the president of the GBU (or the function general manager) are then in a position to assign the ownership of all critical risks to one of the GBU's managers. A regular follow-up of the actions mitigating critical risks is required from all GBUs
- specific risk assessments for major projects (investments, acquisitions or major function projects).

Moreover, the approach to designing internal controls on major processes includes a step of risk assessment, defining which key control objectives are to be tackled.

This is the case in particular for processes at subsidiary, shared service, GBU or corporate level, leading to the production of the financial reporting.

More information on risks can be found in the "Management of risks" section of the annual report, in particular with regard to the Group's main risks and the actions taken to avoid or reduce them.

7.3. Control activities

Solvay uses a systematic approach to designing and implementing control activities in the most relevant processes. The key responsibilities in this approach are defined in Solvay's Management Book. The corporate process owner (CPO) is the top management, function general manager, sponsor of processes (and sub processes). The corporate process manager (CPM) is responsible for the definition of a standard process for the Group. He should:

1. identify risks and assess them;
2. set up procedures and control activities relevant to those risks;
3. roll out those controls across the Group.

The Internal Audit and Risk Management Department assists the corporate process managers in identifying the most significant risks in the processes and in designing control activities in proportion to the stakes inherent in each process. It also helps them to set up their annual internal control plan (indicating which issues and controls are to be a priority for the coming year, as well as the roll-out plan). This plan is validated each year by an Internal Control Steering Committee chaired by the Group CFO, and comprising all function general managers. At each level of the Group (corporate, Shared Services platforms and GBUs), the management operating the various processes is responsible for the execution of the controls.

General controls on the information systems cover both the security aspects, aimed at securing the protection of data, and the quality aspects, aimed at ensuring the best suitability of solutions (management of changes and projects) and services (management of information system operations) to the needs of the users.

With regard to the controls on financial data, these controls are implemented throughout the Record-to-Report process. Furthermore, a **Financial Reporting Guide** explains how the IFRS rules should be applied throughout the Group.

The financial elements are consolidated monthly and analyzed at every level of responsibility of the Company (such as, for example, Solvay Business Services, the finance director of the entity, Group Accounting and Reporting and the Executive Committee) and in various ways, such as variance analysis, plausibility and consistency checks, ratio analysis and comparison with forecasts.

The results are also validated quarterly by the Audit Committee, taking into account the work carried out by the external auditor.

7.4. Information and communication

The Group Communication function defines and ensures the implementation of an external communication policy and press relations policy. This function validates the external communications with potential impact at the Group level (a red line that is not to be crossed).

The Group maintains extensive communication channels that allow all relevant information to move fluidly down from top management level and up from operational level.

The communication from top management to all the employees is supported by a number of tools, such as the Group intranet or electronic newsletters, which are used in presentations by senior management to various teams throughout the world.

Besides the monthly reporting analysis prepared by the Group Controlling, the Comex makes a thorough quarterly review of the GBU performance, through the business forecast reviews.

The information systems for the whole Group are managed by Solvay Business Services. A large majority of the operations of the Group are supported by a small number of integrated ERP systems. The financial consolidation is supported by a dedicated tool.

As to the financial reporting disclosure, Solvay publishes quarterly results. Before each quarterly closing, the Group Accounting and Reporting department circulates written detailed instructions to all concerned actors.

The publication of the results is subject to various checks and validations carried out in advance:

- publication is carried out under the supervision and control of the Executive Committee
- the Audit Committee validates it, ensuring in particular that the IFRS accounting principles are complied with and that it gives a fair and relevant picture of the business of the Group
- the Board of Directors approves it.

7.5. Internal control monitoring

The Audit Committee is in charge of monitoring the effectiveness of internal control systems. It supervises the work of Internal Audit and Risk Management with regard to financial, operational, and compliance monitoring. In particular, it is informed of the scope, programs and results of the internal audit work and receives the assurance that the audit recommendations are properly implemented. The role and missions of the Audit Committee are further detailed in the Charter.

Internal audit is an independent objective assurance and consulting activity designed to add value and improve the Group operations. It helps the Group to accomplish its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control and governance processes.

The internal audit assignments are planned and defined in terms of content on the basis of a risk analysis; the diligences focus on the areas perceived as having the highest risks. All the consolidated entities within the Group are visited by Internal Audit at least every three years.

The recommendations of Internal Audit are implemented by the management.

Other entities carry out activities of the same type in very specific areas. For example:

- the Health Safety & Environment department carries out health, safety, and environmental audits
- the Solvay Business Services Compliance and Risk Management department conducts information system audit assignments, in coordination with Internal Audit;
- the Ethics and Compliance department coordinates investigations in cases of potential infringement of the Code of Conduct.

8. EXTERNAL AUDIT

The audit of the Company's financial situation, its financial statements, and the conformity of the statements – and the entries to be recorded in the financial statements in accordance with the Companies' Code and the by-laws – is entrusted to one or more auditors appointed by the Shareholders' Meeting from among the members, either physical or legal persons, of the Belgian Institute of Company Auditors.

The mission and powers of the auditor(s) are those set by law.

The Shareholders' Meeting sets the number of auditors and fixes their emoluments in accordance with the law. Auditors are also entitled to reimbursement of their travel expenses for auditing the Company's sites and administrative offices.

The Shareholders' Meeting may also appoint one or more alternate auditors. Auditors are appointed for three-year renewable terms, which may not be revoked by the Shareholders' Meeting other than for good reason.

The audit mandate of Deloitte Reviseurs d'Entreprises SC s.f.d. SCRL expired at the Ordinary Shareholders' Meeting of 2016.

Based on the recommendation of the Audit Committee, the Board of Directors proposed to the Ordinary Shareholders' Meeting held on May 10, 2016 to renew the audit mandate of Deloitte Reviseurs d'Entreprises SC s.f.d. SCRL, represented by Mr. Michel Denayer, for three years. The Board has also proposed to appoint Corine Magnin as alternate representative of Deloitte Reviseurs d'Entreprises SC s.f.d. SCRL, for three years.

The Ordinary Shareholders' Meeting of May 10, 2016 approved both resolutions.

The yearly 2016 audit fees for Solvay SA were set at € 1.1 million. They include the audit of the statutory and consolidated accounts of Solvay SA.
Additional audit fees for Solvay affiliates in 2016 amount to € 5.1 million, and include Cytec legacy for the full year 2016.

Supplementary non audit fees of € 1.4 million were paid in 2016 by Solvay Affiliates.

9. ITEMS TO BE DISCLOSED PURSUANT TO ARTICLE 34 OF THE BELGIAN ROYAL DECREE OF NOVEMBER 14, 2007

According to Article 34 of the Belgian Royal Decree of November 14, 2007, the Company hereby discloses the following items:

9.1. Capital structure and authorizations granted to the Board

As at December 21, 2015, the capital of the Company amounted to € 1,588,146,240 represented by 105,876,416 ordinary shares with no par value, fully paid up.

All Solvay shares are entitled to the same rights. There are no different classes of shares.

9.2. Transfer of shares and shareholders' arrangements

Solvay's by-laws do not contain any restriction on the transfer of its shares.

The Company has been informed that certain individual shareholders who hold shares directly in Solvay have decided to consult one another when questions of particular strategic importance are submitted by the Board of Directors to the Shareholders' Meeting. Each of these shareholders, however, remains free to vote as he or she chooses. None of these persons, either individually or in concert with others, reaches the initial 3% transparency notification threshold.

Solvay is not aware of any other voting agreements among its shareholders or of the existence of a concert between its shareholders.

9.3. Holders of securities with special control rights

There are no such securities.

9.4. Control mechanism of any employee share scheme where the control rights are not exercised directly by the employees

There is no employee share scheme with such a mechanism.

9.5. Restrictions on the exercise of voting rights

Each Solvay share entitles holders thereof to exercise one vote at Shareholders' Meetings.

Article 11 of the Company's by-laws provides that the exercise of voting rights and other rights attached to shares that are jointly owned, or of which the usufruct and bare ownership rights have been separated or which are pledged, are suspended pending the appointment of a single representative to exercise the rights attached to the shares.

The voting rights attached to the shares in Solvay held by Solvay Stock Option Management are, as a matter of law, suspended.

9.6. Appointment, renewal, resignation and dismissal of directors

The by-laws of the Company provide that the Company is to be managed by a Board of Directors composed of no less than five members, their number being determined by the Shareholders' Meeting (Article 14).

Directors are appointed by the Shareholders' Meeting for four years (and may be reappointed).

The Board of Directors submits directors' appointments, renewals, resignations or dismissals to the Ordinary Shareholders' Meeting for approval. It also submits to such Shareholders' Meeting the vote on the independence of the directors fulfilling the related criteria, after informing the Works' Council of the same. It first seeks the prior advice of the Nominations Committee, whose mission is to define and assess the profile of any new candidate using the criteria of appointment and of specific competences it sets.

The Ordinary Shareholders' Meeting decides on proposals made by the Board of Directors in this matter by a simple majority.

When a directorship becomes vacant during a term of office, the Board of Directors may appoint a new member, subject to ratification by the next following Ordinary Shareholders' Meeting.

9.7. Amendment of Solvay's by-laws

Amendments to the Company's by-laws require a resolution of the Shareholders' Meeting, provided that at least 50% of the share capital or Solvay is present or represented at the meeting and, in principle, a majority of 75% of the votes cast.

If the attendance quorum is not met at the first Extraordinary Shareholders' Meeting, a second Shareholders' Meeting can be convened and will decide without any attendance quorum having to be reached.

For certain other matters (e.g. amendment of the purpose of the Company), higher voting majorities may be applicable.

9.8. Powers of the Board of Directors, in particular to issue and buy back shares

9.8.1. Powers of the Board of Directors

The Board of Directors is the highest management body of the Company.

It is entrusted with all the powers that are not reserved, by law or by the by-laws, to the Shareholders' Meeting.

The Board of Directors has kept responsibility for certain key areas for itself and has delegated the remainder of its powers to an Executive Committee (further detailed in the Charter).

In all matters for which it has exclusive responsibility, the Board of Directors works in close cooperation with the Executive Committee, which in particular is responsible for preparing most of the proposals for decisions by the Board of Directors.

9.8.2. The Board's authorizations to issue and buy back shares

The Board of Directors was authorized, until December 31, 2016, to increase the registered capital by contributions in cash that amount to a maximum of € 1.5 billion, of which a maximum amount of € 1,270,516,995 will be allocated to the account "capital" and the remainder to the account "issuance premium" in the framework of the acquisition of Cytec industries Inc. Such acquisition was completed on December 9, 2015 and in order to finance part of it, the Board of Directors proceeded with a share capital increase for an amount of € 317,629,245 by issuing 21,175,283 new ordinary Solvay shares, with an issuance premium of € 1,182,216,050. This special authorization is therefore no longer relevant.

The Shareholders' Meeting has currently not authorized the Board of Directors to acquire or dispose of Solvay's own shares.

9.9. Significant agreements or securities that may be impacted by a change of control on the company

The Ordinary Shareholders' Meeting of May 10, 2016 approved the change of control provisions relating to the December 2015 euro-denominated senior and hybrid bonds and the USD-denominated senior notes issued to finance the acquisition of Cytec and the general corporate purposes of the Solvay group.

9.10. Agreements between the Company and its directors or employees providing for compensation if directors resign, are good leavers or in the case of a public takeover bid

N/A

RISK MANAGEMENT

1. INTRODUCTION

Risk is the possibility of an event occurring that will have a negative impact on the people, assets, environment, reputation, or strategic objectives of the Group, including forgoing potential opportunities. Calculated risk-taking within a pre-established risk appetite endorsed by the Board is an inherent aspect of the activities of Solvay. This risk appetite is translated through a number of Group policies approved by the Comex, and especially through the 25 "red lines" set out in the Solvay Management Book as mandatory rules.

The Group's systematic risk management is integrated with strategy, business decisions and operations through the Enterprise Risk Management (ERM) approach, facilitated by the Internal Audit and Risk Management (IA/RM) department. This approach ensures that Solvay leaders identify, assess, and manage all potentially significant business risks and opportunities. Risk management is integrated into strategic and operational decision-making; it is seen as an essential management tool and an important aid in making the decisions needed to achieve the Company's short, medium, and long-term objectives. In a context of global economic and political uncertainty, changing power balances, different growth dynamics, shortening market cycles, raw-material and energy price volatility, and quick technological evolution, Solvay also believes that monitoring and managing risks effectively is key to achieving its sustainability objectives.

The ERM methodology was refined in 2014, and then rolled out across the whole Group in 2015. The revisions introduced improvements that allow a better prioritization of relevant risks and a more focused risk response by individual GBUs and functions, and at Group level.

GBU Risk Coordinators were appointed in 2016, and their role has been clarified. They are part of a network facilitated by IA/RM to share best practices and methodology improvements. Also in 2016, GBUs updated their risk maps to take into account the status of the risk treatment actions launched previously.

The key steps of the ERM process are:

- an initial series of risk management exercises in which each GBU and each function, assisted by the IA/RM team, reviews and updates its own risk matrix, and also defines risk owners responsible for mitigating the most critical risks.
- a second phase in which a risk identification is conducted with the Leadership Council: building on an IA/RM team analysis of individual GBU/function transversal or correlated risks, a list of Group risks is generated and then assessed. This year, the correlation analysis has been extended to ensure a better risk response;
- in a further phase, Group risks (considered as the most critical risks for the Group) are closely reviewed by the Group Risk Committee (composed of the Executive Committee and the general managers of the Industrial, Legal & Compliance, Human Resources, and Sustainable Development functions). For each Group risk, a member of the Comex is appointed to be the risk sponsor and to ensure that the risk is adequately addressed.
- Finally, the Group risks update is presented at an extended Audit Committee session dedicated to this subject, where the Chairman of the Board, the CEO, and other Board members are present. The CEO presents and explains the key changes.

The mitigating actions and their status are monitored and reported by the IA/RM team in a Group risk dashboard. This dashboard is updated, published and formally reviewed by the Group Risk Committee twice during the year. The committee assesses both progress on mitigating actions and new developments in the risk environment. Group risks are also considered annually by the Audit Committee of the Board of Directors.

Internal control is one aspect of risk management. Please refer to section 8 of the Corporate Governance section of this Annual Report for a detailed description of the Solvay Group risk management and internal control system.

Crisis Preparedness, another important aspect of the response to risk, operates a structured network within the Group. Assigned members perform tasks and implement programs to ensure the readiness of their business units and functions. These programs include crisis simulations, media training for potential spokespersons, maintenance of key databases, and analysis of relevant internal and external events. The risks identified through the ERM approach influence the scenarios used in the simulations.

The description of the risks relevant to Solvay and the actions the Group takes to reduce those risks are listed below. The mitigation efforts described do not guarantee that risks will not materialize or impact the Group, but they show how Solvay is proactively managing risk exposures.

2. MAIN RISKS

The Group Risk Committee has assessed the impact and level of control of Group risks and the findings were considered and noted by the extended Audit Committee in December 2016. It uses four main types of impact: economic impact, impact on people, impact on the environment, and impact on reputation.

The level of control of the risks was assessed by considering the following questions:

- Are the mitigating/controlling actions defined?
- Are the actions implemented, fully or partially?
- Is the effectiveness of those actions monitored?

Each of these criteria has been rated on a four-level scale.

The criticality is determined by the combination of the risk's two ratings (impact and level of control) at the time of the assessment.

In the chart below, the trend reflects the direction of each risk's criticality, taking into account the implementation of mitigating actions in 2016, as well as external developments. Each key risk is sponsored and monitored by a Comex member.

Criticality	Risk	Trend
High	Climate change*	→
	Security	↘
	Transport accidents	→
Moderate to High	Chemical product usage	→
	Ethics and Compliance	→
	Information protection and cyber-risk	↘
Moderate	Industrial safety	→
	Environmental strategy*	N/A

* Emerging risk: newly developing or changing risks that may have on the long-term, a significant impact which will need to be assessed in the future.

Climate change – emerging risk

Description

Climate change increases the occurrence of extreme natural events, significantly impacting Solvay's sites and supply chain. These impacts could manifest themselves as one or more of the following consequences:

- Inability to operate plants
- Asset damage
- Difficulty supplying customers
- Disruption in the supply of raw materials, energy or utilities.

Prevention and mitigation

This risk has a long-term horizon; nevertheless, Solvay is creating a consistent mitigation plan, the details of which are as follows.

- Build a methodology (type of impacts to be taken into account – major events, permanent changes, environmental, socio-economic impacts – level of impact, location, etc.)
- Consider the following impacts:
  - Greater frequency and higher amplitude of natural events such as floods and storms
  - Regulatory impact (intake water temperature, return water temperature)
  - Sea level rise
  - Drought/Hydric stress => update previous study
- Deploy the methodology onto the Industrial footprint and supply chain flows.

Security

Description

This heading includes intentional attacks on Solvay sites, information and people, with the intent to cause harm, damage or negative consequences.

Prevention and mitigation

- Solvay has a threat-based security risk-based approach to protecting sites, information and people.
- A Group Security Director, appointed in 2016, coordinates all security activities globally in order to ensure efficient mitigation of security risks.
- The Executive Committee has endorsed the creation of two governance bodies:
  - a Security Board, chaired by the CFO and another Comex member
  - a Security Coordination Working Group, chaired by the Group Security Director, with the objective of driving a continuous security threat monitoring program and an optimized security program for the Group
- In response to the heightened terror threat in Europe, immediate measures were taken to increase protection at a number of sites.
- Solvay Business Services (SBS) has launched a number of initiatives to mitigate cyber security risks.
- A travel security program has been approved and implemented to increase protection for business travelers.

Transport accident

Description

The risk of causing injury to neighbors or the public may be a consequence of an accident during transport activities.

Prevention and mitigation

The risk of an accident in connection with hazardous chemicals transportation is reduced by optimizing transport routes, relying on selected and audited hauliers, and calling upon worldwide emergency assistance from the Carechem service in the event of an accident. In addition, every effort is made to minimize the number of transportation activities by operating with integrated production units for hazardous intermediates. Solvay follows the safety recommendations of associations such as Eurochlor and CTEF *(Comité Technique Européen du Fluor)*, and programs such as Responsible Care®.

Chemical product usage

Description

- Product-liability risk: Solvay's exposure stems from the possibility of injury to third parties or damage to their property arising from the use of a Solvay product, as well as from the resulting litigation.
- The possible consequences of a faulty product include exposure to liability for injury and damage, and product recalls. Product liability risk is generally higher for products used in healthcare and food & feed applications.
- Solvay is also exposed to adverse outcomes while developing new products and technologies or scaling up a process.

Prevention and mitigation

- Solvay Product Stewardship Management System (PSMS) manages product risks ensuring safety across the full-product life cycles.
- In-house product stewardship experts identify and assess the hazards and risks of Solvay products.
- The Group characterizes and manages risks related to the uses and applications of its products, and – in collaboration with the GBUs – prioritizes mitigation actions relating to potential inappropriate use.
- Stewardship programs give adequate information and technical assistance to customers, ensuring a good understanding of safe use and handling.
- Solvay Safety Data Sheets (SDS) ensure harmonized content by implementing a common worldwide SAP system for the Group. Control by SDS shipping allows confirmation that any product marketed by Solvay is accompanied by a compliant SDS. Solvay monitors the discrepancies registered during checks and manages failures due to shipping.
- The Group also develops and deploys recall procedures as prescribed by the product stewardship programs, a product stewardship management system, and a product safety management process that includes healthcare.
- Solvay takes out insurance to reduce the financial impact of a product liability risk, including for first and third-party product recall.

Ethics and compliance

Description

Risk arises from a potential failure to comply with:

- The Solvay Code of Conduct
- Supporting policies and procedures
- Laws and regulations in the jurisdictions in which Solvay operates.

Examples:

- Failure to implement good governance in a joint venture
- Direct or indirect involvement in human rights violations
- Intentional misstatement of financial reporting, corruption and by-passing of internal controls.

Prevention and mitigation

The Code of Conduct, policies and procedures adopted to enhance good governance apply to all employees wherever they are located. In addition:

- Third parties are expected to act within the framework of the Code of Conduct.
- All critical suppliers must confirm that they adhere to the principles set out in the Solvay Supplier code.
- Majority-owned joint ventures are held to the Solvay Code of Conduct or to a separate code adopted based on similar principles.

Compliance organization:

- This organization operates under the leadership of the Group General Counsel to enhance a Group-wide culture based on ethics and compliance. It also monitors compliance with applicable laws, the Code of Conduct, and supporting policies and procedures.
- Regional Compliance Officers serve in all four zones where the Group operates to ensure communication of the Code and the principles on which it is based.
- Every global business unit and function within Solvay appoints Compliance Liaisons to enhance adherence to compliance objectives and to instill a commitment to compliance throughout Solvay.

Training:

- Courses are developed internally and presented by the Legal & Compliance function to ensure understanding and adoption and to address behavioral risks in certain areas such as anti-trust, anti-bribery and corruption, human rights, and other aspects of Corporate Social Responsibility. Multi-lingual online training is also being developed.
- Special campaigns to maintain and/or enhance the level of awareness within the Group are identified and adopted annually.
- New employee training is organized as part of the orientation process.

Reporting violations:

- Is encouraged as a condition of employment through various internal avenues, including management, Human Resources, Legal & Compliance, and Internal Audit.
- An external third-party helpline active 24 hours a day, 365 days a year allows employees to ask questions, raise concerns or file reports. The Solvay Ethics Helpline is available on the web or by phone, operationally via the internet in 46 specific regions in more than 40 languages, and via the phone in more than 20 languages.
- This Group-wide Speak Up program is overseen by the Audit Committee of the Board of Directors.

Information protection and cyber risk

Description

Information and cyber risk includes theft, manipulation or destruction of information, and the inability to ensure continuity of services or to protect confidential, critical or sensitive information.

Prevention and mitigation

Cyber security program

Solvay's cyber security and confidential information loss prevention program was further enhanced in 2016:

- Outside experts conducted independent assessments, including penetration tests.
- Solvay Business Services (SBS) renewed its quality management program (ISO9001:2015) for all its activities and the ISO27001:2013 certification that encompasses cybersecurity for the majority of our information systems activities is ongoing (all SBS will be certified ISO27001 by end of 2017).
- Training on information systems security policies and best practices was completed for all SBS information systems professionals.
- End-user security training remains mandatory for all employees. Cybersecurity tips are published regularly to increase employee awareness.
- New fraud management tools have been implemented to identify and preempt fraud attempts.

In 2017, Solvay will continue to enhance its overarching cyber security strategy and governance, develop the corporate information security program, and explore other functions/capabilities to enrich the company's security posture and ability to respond to a cyber-related threat.

While the Company has a comprehensive, regularly updated cyber security program, a significant cyber attack could nevertheless result in the loss of critical business information and/or could negatively impact the company's operations and results.

Insurance

Solvay is insured against the potential financial impact of a cyber event with respect to assets, business interruptions, and cases of fraud.

Industrial safety

Description

- Accidents on industrial sites may cause injury to employees, contractors, or members of the public adjacent to those sites, especially in the context of major releases of chemical substances.
- Accidents involving employees or third-party individuals on Solvay's sites are generally linked to a failure of safety management relating to risks at the workplace.
- Accidents involving contractors include falls during work at height, in construction and maintenance activities, use of tools, and interaction with equipment during maintenance, as well as accidents due to non-compliance with work permit procedures.
- Risks of causing injury to neighbors or the public are mostly a consequence of major process accidents at manufacturing sites or during transport activities.

Prevention and mitigation

Occupational safety is the highest priority in managing the activities of Solvay. The Group has a long track record of good safety performance, and has made significant progress by sharing good practices.

- Safety results are considered monthly both at Executive Committee and GBUs level.
- The Health, Safety and Environment (HSE) department implements a management system entitled "Solvay Care Management System (SCMS)", integrating all Solvay requirements for HSE and fulfilling the international standards ISO14001 and OHSAS 18001. A new version of the benchmarks will be released in 2017.
- The HSE department supports sites and GBUs by collecting, validating, and distributing return on experience, lessons learned bulletins on typical accident scenarios and consequences. It is also part of external research, and academic and inter-company developments to identify new safety approaches: ICSI (Institut pour une Culture de Sécurité Industrielle), EPSC (European Process Safety Centre) and CEFIC (European Chemical Industry Council) initiatives.
- Some actions in 2016: the first Solvay Safety Excellence Plan 2015-2016 to boost safety performance (being reviewed for the 2017-2018 period). The plan focuses on: defining clear expectations at management level, defining customized action plans through site and GBU roadmaps, and generating a safety excellence mindset. The most familiar initiative of this plan is the eight "Solvay Life Saving Rules", which address the eight most dangerous work-related activities (such as working at height).

Environmental strategy – emerging risk

This risk was added to the main risks in 2016 because it was becoming potentially significant for the Group.

Description

- Solvay's activities impact the environment through:
  - Use of raw materials based on fossil or non-renewable resources
  - Consumption of energy
  - Use of water
  - Production of waste (solid or liquid, hazardous or safe)
  - Greenhouse gases emission
  - NO_X, SO_X, Volatile Organic Compounds (VOC) or dust emission.
- Failure to adapt to changing market dynamics or to technological developments triggered by those environmental concerns may damage the Group's reputation. It may cause the Company to be undervalued by or unappealing to long-term investors, and cause it to lose competitiveness.

Prevention and mitigation

- The Group's strategy focuses on businesses with higher added value and less environmental exposure.
- Every year, the Sustainable Portfolio Management (SPM) tool assesses the environmental exposure of our sales and our innovation projects portfolio.
- The Carbon Intensity action plan has a 40% reduction target for 2025 (reference year 2014).
- Solvay has a new environmental plan and targets for 2020 on air emissions (SO_X, NO_X, VOC), water usage, and hazardous waste.
- Research & Innovation focuses on selected megatrends, including sustainability opportunities and concerns.

3. OTHER RISKS

Market and growth – Strategic risk

Description

- Strategic risk refers to Solvay's exposure to developments in its markets or its competitive environment, and the risk of making erroneous strategic decisions.
- Examples of risks:
  - Economic downturn, drastic changes in energy and raw material prices and availability
  - Reduction of demand in the Group's main markets as a consequence of either new legislation or competitive actions, or events affecting its most important customers
  - New entrants in a market, a price war, or significant imbalances between supply and demand in its markets
  - Technological leaps leading to the development of substitute products or more competitive manufacturing processes
  - Lack of success of a new product.

Prevention and mitigation

The potential impact of adverse events is continuously assessed and managed at both the GBU and corporate levels. This year, there was a particular focus on:

- Systematic and formal analysis of markets and marketing challenges on investments and innovation project ramp-ups.
- Development of GDP+ growth markets: Automotive & Aerospace, Resources & Environment, Electrical & Electronics and Agro, Feed & Food.
- Development of customized, mission-critical solutions with our key accounts.
- Adaptation of operations to new energy and CO_2 markets.
- Stronger focus on cash conversion and generation.

The integration of Cytec has already delivered on its promise in 2016, significantly exceeding targets for synergies and cash generation. The addition has already enabled the Group to expand its presence in the fast-growing advanced aerospace materials market. In 2016 the development of new aircraft platforms with high composite content was offset by lower production rates of older generation aircraft. However, Solvay remains well-positioned for growth as production of new aircraft programs (growth expected on A320neo, B737 MAX, and Joint Strike Fighter) with higher composite content.

The portfolio transformation continued in 2016, with the Group scaling back cyclical and low-growth businesses by selling stakes in Inovyn, Vinythai and Indupa, and by divesting the cellulose acetate business.

Supply chain and manufacturing reliability risk

Description

Supply chain and manufacturing risk in production units and transportation refers to risks related to raw materials, energy, suppliers, production, storage units, and inbound/outbound transportation. Risks include major equipment failure or damage, natural disasters, strikes, and drastic shortages of raw materials, utilities or critical equipment.

The geographic distribution of production units around the world reduces the overall impact of one production unit being damaged or interrupted. Some specialty products are, however, produced only in a single plant.

Prevention and mitigation

Key risk areas are addressed with relevant dedicated policies and risk control programs, such as the property loss prevention program, process safety management procedures, the supplier qualification and assessment process, integrated resource planning and supply chain optimization systems, ERP (Emergency Response Plans), corporate and local crisis management procedures, business continuity planning (including for pandemic risk), and networking groups for manufacturing and supply chain managers.

Solvay takes out insurance to reduce the financial impact of events that could cause **extensive damage and material business interruption.** It deploys a property loss prevention program with the support of a large network of risk engineers assigned by the insurers. The program focuses on the prevention and mitigation of damage to assets and loss of profit due to fire, explosion, accidental chemical release, and other adverse events. The program has been reinforced across the Group and includes: engineering visits to all locations, monitoring and providing updates on the status of agreed risk improvement actions for all locations, meetings with the GBUs on reducing property and business interruption risks, road maps designed to reduce property and business interruption risks, business impact analysis and, loss prevention training for plant employees.

To identify **supply chain risk**, Solvay takes into account environmental, social, security of supply, and innovation criteria and identifies a mitigation action for each specific risk. These strategic management reviews take place on a regular basis.

- Some suppliers are identified as critical based on their strategic importance or because they might represent a business, country, or product risk. Those suppliers have to engage in a CSR assessment and a continuous improvement process. All critical suppliers must also formally confirm that they adhere to principles that are consistent with those set out in the Solvay Supplier Code;
- Solvay owns several mines and quarries for the extraction of trona, limestone, and salt. This reduces the risk of a disruption in its raw material supplies (availability, reliability, and price), as key suppliers are included in the property loss prevention program whenever possible.

In the field of **energy supply**, Solvay has consistently implemented programs to reduce its energy consumption for many years. While Solvay has industrial activities with high energy consumption, mainly in Europe (synthetic soda ash plants, polyamides), it also operates a range of industrial activities whose energy content is relatively low as a percentage of sales price, particularly in the fluorinated polymers business. The Group considers secure and reliable energy supplies to be particularly important and has taken the following strategic initiatives:

- technological leadership in processes and high-performance industrial operations to minimize energy consumption;
- diversification and flexible use of the different types and sources of primary energy;
- upstream integration in steam and electricity generation (gas cogeneration, biomass or secondary fuels cogeneration, etc.);
- periodic review of the condition of industrial sites' energy assets and connections;
- a strategy of supply coverage with long-term partnerships and medium- to long-term contracts, with price-hedging protection mechanisms when needed;
- direct access to energy markets when possible (gas hubs, electrical grids, financial spot and futures exchanges);
- regular forecast reports on energy and raw material price trends sent to business to anticipate sales prices realignments.

Solvay Energy Services optimizes energy purchasing and consumption for the Group and helps GBUs manage energy and CO_2 emissions.

Project selection and management

Description

The allocation of resources to projects (capital expenditure (capex), mergers and acquisitions) could be misaligned with Solvay's growth strategy, leading to an inefficient use of Group financial resources and resulting in poor cash conversion. Also, a major project could experience difficulties and so fail to reach its objectives.

Prevention and mitigation

To increase the likelihood that project objectives are met, the Group has set up processes to manage both capital investments and acquisitions, including risk identification, assessment, and mitigation steps.

- The model of governance for major/medium-sized capex projects is designed to ensure that only the most effective capital projects are authorized and executed in the best possible way.
- The Investment Committee provides the Comex an analytical view of the capex allocation efficiency for the Group and the capex plan, consistent with the Roadmaps and Business Strategy Reviews of the GBUs.
- A performance analysis after implementation is conducted to assess the Capex efficiency. The lessons learned are used to continuously improve how the Group approaches the challenges inherent in the marketing, financial and industrial aspects of investment projects.

The methodology used to tackle major capital projects has been extended to the GBUs: they can apply it for their medium-sized projects.

The Group has progressively deployed a Capex Excellence methodology for project portfolio optimization on smaller projects.

The combination of these actions has led to much better control over EBITDA conversion into cash and a conversion level comparable to similar companies in the Industry.

Regulatory, political and legal risk

Description

Regulatory risk

- Regulatory risk refers to Solvay's exposure to changes in legislation and regulations. Solvay could be exposed to significant cost increases or business interruptions as a consequence of new legislation or regulations, or a more strict interpretation or application of current regulations by courts or authorities.
- Solvay must obtain and maintain regulatory approval to operate its production facilities and sell its products. Withdrawal of any previously granted approval or failure to obtain an authorization may have an adverse effect on its business continuity and operating results.
- For Europe in particular, all chemical substances manufactured, imported, or used by Solvay require registration under the REACH Regulation and must meet the deadlines imposed by this regulation. This is in addition to other, already existing requirements. 451 dossiers were successfully registered with the European Chemical Agency between 2010 and May 31, 2013. Around 332 substances have to be registered before the next REACH registration deadline of May 31, 2018. With respect to these, the registration schedule is on track as of the end of 2016. 123 dossiers had already been registered as of December 1, 2016.

Political risk

Political risk refers to Solvay's exposure to circumstances where the normal exercise of public authority is disrupted. This could be the consequence of a social crisis, political instability, civil war, nationalization, or terrorism in countries where the Group operates or sells products, resulting in delays or failure to deliver products, or an unavailability of raw materials or utilities, or logistical or transport facilities.

Legal risk

- Legal risk refers to the exposure to actual and potential judicial and administrative proceedings.
- The simple fact of doing business exposes Solvay to disputes and litigation, and adverse outcomes are always possible (see the Important Litigation section below).
- The Group may become a party to judicial or administrative proceedings in the conduct of its normal course of business, particularly in the areas of product liability, contractual obligations, antitrust laws, patent infringement, tax assessments, and environmental matters (see the Important Litigation section below).
- The Group's operations depend on the control of its key technologies and on the capacity to innovate. Legal challenges to the right of Solvay to use certain technologies could have an impact on its operations.

Prevention and mitigation

- The Group's geographic spread around the world helps reduce the impact of adverse regulatory and political developments.
- Properly designing and testing products and their production processes helps contain regulatory and legal risks, as does making sure that applications for necessary approvals are timely and thorough.
- Regulatory and political risk both within and outside the European Union is reduced through the continuous work of Solvay's Government and Public Affairs department, which works with public authorities and through the local Belgian Embassy.
- To manage its legal risk, Solvay maintains in-house legal and intellectual property professionals, as well as regulatory resources and tools. It also retains external professional resources when appropriate.
- Financial provisions are made based on Solvay's awareness of legal risks. Awareness is raised by dedicated training, sharing of information, self-assessment procedures, and internal audits.
- Trade secrets and patents protect Solvay's technological know-how on new products and processes, and continuous efforts are made to protect its proprietary information and its position as a leader in technological know-how for its production processes.
- With respect to political risks, Solvay's actions include risk-sharing with local or institutional partners, as well as monitoring of political developments in sensitive areas.

All risks that could trigger an eventual exposure (irrespective of probability of outcomes) are monitored centrally and are shared with Comex and with the Audit committee every quarter, whereby developments in the intervening period are considered and suitability of financial provisions considered.

Financial risk

Description

Below is a list of Solvay's financial risks and how they apply to the Company:

- Liquidity risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements)
  - To repay and refinance financial debt on time
  - To fund its business operations and generate cash from operations
  - To extract cash from divestments and not over-pay acquisitions
  - To preserve the Group "Investment grade" rating.

- Foreign exchange risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements)
  - The Group's largest forex exposure is to the euro and US dollar
  - The Group's overall activities generate an important net positive US dollar flow; thus, a depreciation of the US dollar will generally result in lower revenues and lower profit.
  - Furthermore, and to a significantly lesser extent, the Group is also exposed to the euro/Japanese yen, euro/Chinese yuan and Brazilian real/US dollar rates

- Interest-rate risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements)
  - Exposure to fluctuating interest rates

- Counterparty risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements)
  - Exposure to financial intermediates through its treasury activities and through the Group's commercial relationships

- Pension obligation risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements):
  - Exposure to a number of defined benefit plans subject to fluctuations in discount rates, expected inflation rates and social security coverage and expected longevity, as well as asset/liability matching, all of which may result in a major impact on the Group's net pension liability
  - Exposure of under-funded plans to interest rate and inflation risks

- Tax litigation risk (see note F32 *Financial instruments and financial risk management* to the consolidated financial statements)
  - Exposure to increasing tax audit queries and the introduction of changing tax regulations.

Prevention and mitigation

Financial risks are analyzed, assessed, and managed by the Corporate Finance function broadly, and more specifically, by the Treasury, Group Accounting & Reporting, and Tax departments. Loss prevention and mitigation efforts guide the Group's financial policies and their strict monitoring:

A prudent financial profile, conservative financial discipline and strong liquidity reserves

A prudent financial profile and conservative financial discipline:

- After the acquisition of Cytec in December 2015, the two leading rating agencies confirmed the Group's Investment Grade status, with a Baa2/P2 rating (negative outlook) by Moody's and a BBB-/A3 rating (stable outlook) by Standard & Poor's.

Strong liquidity reserves:

- As of the end of 2016, the Group has € 1.1 billion in cash and equivalents (namely, other current financial instruments), as well as € 2.4 billion in liquidity reserves composed of committed credit facilities (two syndicated credit facilities of € 1.5 billion and € 550 million, respectively), and an additional € 350 million from bilateral facilities with key international banking partners.
- The Group has access to a Belgian Treasury Bill program for € 1 billion, and alternatively, to a US commercial paper program for US$500 million.

Investment grade rating:

- The Group aims at preserving its investment grade rating and in that context maintains a prudent financial profile. Moreover, the Group's portfolio management and investment decisions, as well as cash flow generation objectives, take explicit account of their impact on the Group's credit metrics. Solvay has also developed a comprehensive financial methodology, and is advised by independent experts, making it possible to understand and anticipate impacts on credit worthiness derived from prospective financial and business developments.
- Solvay promotes transparent and regular discussions with leading rating agencies.

Geographic diversification and foreign exchange hedging policy

Geographic diversification of the manufacturing footprint and sales naturally mitigates foreign exchange risk, as income streams are matched with expenses in the same currency.

Currency hedging policy

Solvay monitors the foreign exchange market closely and takes hedging measures, principally for terms shorter than one year and generally not exceeding 18 months, whenever deemed appropriate.

- To hedge forex exchange exposure, Solvay uses forward and option contracts designed to secure the value of future cash flows in foreign currency.
- The Group manages its foreign exchange risk for receivables, payables and borrowings centrally for all affiliates of the Group where it is possible to enter into such transactions, and through local financial affiliates for other regions.

Interest rate hedging policy

The Group locks the majority of its net indebtedness with fixed interest rates. Solvay monitors the interest rate market closely and enters into interest rate swaps whenever they are deemed appropriate.

Monitoring of Group counterparties' ratings

For its treasury activities, Solvay works with banking institutions of the highest creditworthiness (selection based on major rating systems) and minimizes the concentration of risk by limiting its exposure to each of these banks to a certain threshold, set in relation to the institution's credit rating. In addition, Solvay may invest money with highly-rated money market funds, as well as in short-term debt securities from highly-rated sovereign issuers when appropriate.

For its commercial activities, Solvay's external customer risk and cash collection are monitored by a strong network of credit managers and cash collectors located in the Group's various operating regions and countries. Their controls are supported by a set of detailed procedures and managed through Corporate and GBU Credit Committees. These loss mitigation measures have led, over the past few years, to a record low rate of customer defaults.

Pension governance and pension plan optimization

Pension governance: Solvay has set guidelines to maximize its influence over local pension fund decisions within the limits provided by domestic laws, including investment and funding, selection of advisors, appointment of employer-nominated trustees to local pension fund boards, and other cost management actions.

Pension plan optimization: This consists primarily of reducing the Group's exposure to defined benefit plans by either converting existing plans into pension plans with a lower risk profile for future services or closing them to new entrants. Examples of such lower risk plans include hybrid plans that combine cash balance plans and defined contribution plans.

A global ALM (Asset Liability Management) analysis of the Group's pension plans, representing about 90% of the Group's gross or net pension obligations, is performed on a triennial basis, in order to identify and manage corresponding risks on a global basis. Solvay conducted an ALM study in 2016.

Control processes for tax regulation compliance and transfer pricing policies

Control processes for tax regulation compliance include monitoring procedures and systems, thorough internal reviews, and audits performed by reputable external consultants. Efforts to prevent tax litigation risk include thorough analyses of the internal financing of affiliates, mergers, acquisitions, and divestments, or proposed changes in the business organization and operations. The Group seeks the assistance of external experts or law firms when the amounts at stake warrant it.

Transfer pricing policies, procedures and controls are aimed at meeting the requirements of the authorities. Transfer pricing documentation is prepared annually for each relevant Group legal entity that requires such documentation, in line with local national laws and practices. This is done with the assistance of internal or external experts to demonstrate the arm's length nature of cross-company pricing. The Internal Audit department regularly verifies the existence and timeliness of the documentation. Internal transfer pricing specialists assist the business in setting intra-Group prices that comply with the transfer pricing policy.

Moreover, Solvay's Tax department pays close attention to the correct interpretation and application of new tax rules to avoid future litigation. In this regard, among other things it implements the G20/OECD base erosion and profit shifting (BEPS) recommendations at the country level in order to ensure that tax positions remain consistent with changing requirements.

Occupational diseases and pandemic risk

Description

Occupational diseases are work-related diseases recognized as resulting from exposure to occupational hazards, generally repeated exposure. In most cases, health effects appear after a long period of latency, e.g. asbestos-related diseases or cancers.

Pandemic risk can affect employees, their families, and society at large.

Prevention and mitigation

- Conservative approaches to risk identification, assessment and management help avoid a real risk of exposure, including when new hazards are revealed.
- Solvay monitors occupational disease standards worldwide and a strong industrial hygiene program focused on comprehensive assessments of compliance with occupational hygiene standards.
- Conservative exposure limits are defined and shared by Solvay's worldwide toxicology team, supported by the internal "Solvay Acceptable Exposure Limit" Committee, which establishes Solvay Acceptable Exposure Limits (SAELs) for substances with no official occupational exposure limit (OEL) or an OEL considered insufficiently protective. High priority is given to nano-materials and technology, endocrine disruptors, SVHCs (Substances of Very High Concern) and health-related applications of Solvay products.
- All Solvay industrial sites and major administrative sites are required to ensure periodic medical monitoring of workers based on individual risk profiles and on Group recommendations, thereby helping to prevent the onset of occupational diseases and any other adverse health effects due to work.
- Internal industrial hygiene and occupational health IT tools are integrated at site level. With these tools, local teams benefit from easy and efficient management of – and access to – comprehensive hygiene assessments and medical surveillance data on their personnel. These tools help to identify and anticipate the occurrence of potential new occupational disease cases, improve the traceability of individual and collective exposure and medical data, and facilitate the daily work of Solvay physicians and hygienists.
- A global pandemic preparedness plan covering all plants and businesses, supported by a network of coordinators, has been developed. This plan can be reactivated to initiate a regional or local response.

Environmental risk

Description

- Managing or remediating historical soil contamination at a number of sites and complying with future changes in environmental legislation are top priorities.
- There is a global trend of legislation introducing an increasingly broader scope of environmental legal liabilities. However, in Europe, the legislation is reinterpreted in a pragmatic way using site-specific risk-based analyses to define intervention value and remedial objectives.

Prevention and mitigation

- ISO 14001 or integrated HSE management systems equivalent to ISO 14001 (Solvay Care Management System) for the environment are implemented in all manufacturing sites.
- Policies and risk control programs are applied in all production units and other facilities, and are implemented progressively in newly acquired plants. The Group takes the necessary steps to meet and even exceed regulatory standards concerning major risks, which includes detailed accident prevention measures.
- Sites facing historical soil contamination are carefully monitored and managed. A dedicated worldwide team is regularly trained and undertakes regular updates of appropriate provisions for monitoring and remediation according to a defined audit process.
- As a matter of policy, all concerned sites employ a risk characterization approach. It contains a diagnosis of potential problems based on hydrogeological studies and soil characterizations, an evaluation of the risks to aquifers, and the implementation of relevant remediation or confinement actions with authorities.
- Local regulatory monitoring is performed at all Solvay sites. Corrective actions are implemented whenever necessary, in close cooperation with environmental authorities.
- Solvay takes out insurance to reduce the financial impact of an environmental risk materializing. Solvay monitors the effects of climate change, as related risks and opportunities may affect the Group's business objectives. The risk is hedged to an extent through the geographic spread of both production units and markets for its products.

IT risk

Description

For Solvay, information and information service-related risks refer to the inability to ensure continuity of services or provide information services adapted to the business needs.

Prevention and mitigation

- The Group uses a dedicated data network and regional internet gateways that are managed by a trusted service provider. The critical data and applications are hosted in a data center operating in accordance with professional good practices, ensuring recovery capabilities in the event of an incident.
- In 2016, disaster recovery and crisis management tests were carried out for the data center as well as the main service centers and regional offices of Solvay's Business Services (SBS), involving various crisis scenarios.
- IT general controls are applied to critical information systems and are audited for compliance both internally and externally. Solvay has developed an annual IT audit program to ensure compliance with information systems security policies.

IMPORTANT LITIGATION

With its variety of activities and its geographic reach, the Solvay Group is exposed to legal risks, particularly in the areas of product liability, contractual relations, antitrust laws, patent disputes, tax assessments, and HSE matters. In this context, litigation cannot be avoided and is sometimes necessary so as to defend the rights and interests of the Group.

The outcome of proceedings cannot be predicted with certainty. It is therefore possible that adverse final court decisions or arbitration awards could lead to liabilities (and expenses) that are not covered or not fully covered by provisions or insurance, and that could have a material impact on the revenues and earnings of the Group.

Ongoing legal proceedings involving the Solvay Group that are currently considered to involve significant risks are outlined below. The legal proceedings described below do not constitute an exhaustive list.

The fact that litigation proceedings are reported below is unrelated to the merits of the cases. In all the cases cited below, Solvay is defending itself vigorously and believes in the merits of its defenses.

For certain cases, Solvay has created reserves/provisions in accordance with the accounting rules to cover financial risk and defense costs (see note 35D, "Provisions for litigation to the consolidated financial statements" of the present document).

Antitrust proceedings

In 2006, the European Commission imposed fines against Solvay (including Ausimont SpA, acquired by Solvay in 2002) for alleged breaches of competition rules in the peroxygens market, amounting after appeal to € 139.5 million for Solvay SA and € 12.8 million for Solvay Specialty Polymers Italy SpA. Joint civil lawsuits were filed before the Court of Dortmund (Germany) in 2009 against Solvay and other manufacturers based on the alleged antitrust violation, claiming damages from the manufacturers on a joint and several basis. The value of the claims is approximately € 240 million (excluding interest) against all six defendants. Several questions on the jurisdiction of the Court of Dortmund have been submitted to the European Court of Justice, and proceedings before the Court of Dortmund are pending.

In Brazil, Solvay is facing administrative claims related to alleged cartel activities in various markets. CADE (the Brazilian antitrust authority) issued fines against Solvay and others in May 2012 relating to H_20_2 activity and in February 2016 related to perborate activity (Solvay's shares of these fines amount to € 29.6 million and € 3.99 million respectively). Solvay has filed a claim contesting these administrative fines before the Brazilian Federal Court.

HSE-related proceedings

In October 2009, the public prosecutor of the Criminal Court of Alessandria (Italy) charged several individuals (including employees and former employees of Solvay and Ausimont SpA, now Solvay Specialty Polymers Italy) in relation to alleged criminal violations of environmental laws (a failure to remediate) and public health legislation (intentional poisoning of potable waters). Solvay Specialty Polymers Italy - SSPI (formerly Solvay Solexis and Ausimont), a subsidiary of Solvay and legal successor to Ausimont SpA, named in the trial as the civilly liable party together with Edison SpA, may be exposed to claims for civil liability in the event of a negative outcome of the proceedings. The civil parties admitted to the trial have provisionally quantified their civil damages claims at about € 105 million. In December 2015 the Assize Court of Alessandria sentenced three SSPI managers to jail for 2.5 years and awarded civil damages of about € 400k. This judgment, which is not enforceable as it is not final, was appealed by all the parties and is currently pending before the Criminal Assize Court of Appeal of Turin.

In May 2008, the public prosecutors of the Criminal Court of Pescara (Italy) charged several individuals in relation to alleged criminal violation of environmental laws (environmental disaster) and to alleged crimes against public health (intentional poisoning of potable waters) that had taken place before 2002 (i.e. before Ausimont SpA's acquisition by Solvay). These individuals included former employees of Ausimont SpA, acquired by Solvay in 2002; no Solvay employee was charged, and Solvay SA and Solvay Specialty Polymers Italy were admitted to the trial as civil parties. The Assize Court of Chieti dismissed the intentional poisoning charge and found the former Ausimont employees guilty of culpable environmental pollution, but declared that this matter was time-barred. The public prosecutors and the civil parties lodged an appeal against this decision and the case is currently pending before the Criminal Assize Court of Appeal of L'Aquila.

As of the end of 2016, 17 civil proceedings had been brought before the Civil Court of Livorno by past workers and relatives of deceased workers at the Rosignano Site seeking damages (provisionally quantified at € 9 million) in relation to diseases allegedly caused by exposure to asbestos. The defendants in these civil proceedings are Solvay SA and Solvay Chimica Italia SpA, respectively the owner and manager of the Rosignano site.

Pharmaceutical activities (discontinued)

In the context of the sale of the pharmaceutical activities in February 2010, the contractual arrangements have defined terms and conditions for the allocation and sharing of liability arising out of the activities before the sale.

Subject to limited exceptions, Solvay's exposure for indemnifications to Abbott for liabilities arising out of sold activities is limited to an aggregate amount representing € 500 million and is limited in duration.

This includes indemnification against certain potential liabilities for the US hormone replacement therapy (HRT) litigation, re-activated Qui Tam litigation focusing on promotional and marketing practices that allegedly influenced sales of the drugs ACEON®, LUVOX®, and ANDROGEL®, and more recently filed testosterone replacement therapy (TRT) litigation also focusing on the drug ANDROGEL®. These claims are proceeding at varying rates of resolution.

BUSINESS REVIEW

1. OVERVIEW OF THE CONSOLIDATED RESULTS

Key financial figures

		IFRS[1]			Underlying		
In € million	Notes	FY 2016	FY 2015 pro forma	% yoy	FY 2016	FY 2015 pro forma	% yoy
Net sales	**B1**	**10,884**	**11,415**	**(4.7)%**	**10,884**	**11,415**	**(4.7)%**
Net operating costs, excluding depreciation & amortization	B2	(8,753)	(9,559)	8.4%	(8,600)	(9,290)	7.4%
EBITDA	**B3**	**2,131**	**1,857**	**15%**	**2,284**	**2,125**	**7.5%**
EBITDA margin	B3				21%	19%	2.4pp
Depreciation, amortization & impairments	B4	(1,169)	(1,103)	(6.0)%	(750)	(727)	(3.1)%
EBIT		**962**	**754**	**28%**	**1,534**	**1,398**	**9.7%**
Net financial charges	B5	(339)	(320)	(5.7)%	(469)	(441)	(6.4)%
Income taxes	B6	56	(35)	n.m.	(291)	(300)	3.2%
Tax rate	B6				28%	32%	(4.8)pp
Profit for the period from discontinued operations	B7	(6)	50	n.m.	133	175	(24)%
Profit for the period attributable to non-controlling interests (-)		(53)	(48)	11%	(61)	(65)	(6.6)%
Profit attributable to Solvay share		**621**	**400**	**55%**	**846**	**768**	**10%**
Basic earnings per share (in €)	**B25**	**6.01**	**3.86**	**56%**	**8.19**	**7.40**	**11%**
Dividend[2]	**B26**	**3.45**	**3.30**	**(4.3)%**	**3.45**	**3.30**	**(4.3)%**
Capex	**B8**	**(981)**	**(1,160)**	**15%**	**(981)**	**(1,160)**	**15%**
Capex from continuing operations	B8	(929)	(1,057)	12%	(929)	(1,057)	12%
Cash conversion	B8				59%	50%	9.0pp
Free cash flow	**B9**	**876**	**492**	**78%**	**876**	**492**	**78%**
Free cash flow from continuing operations	B9	736	394	87%	736	394	87%
Net working capital	**B10**	**1,396**	**1,557**	**(10)%**	**1,396**	**1,557**	**(10)%**
Net working capital / sales	B10				15.3%	13.4%	1.9pp
Net debt[3]	**B11**	**(4,356)**	**(4,379)**	**–**	**(6,556)**	**(6,579)**	**–**
Underlying leverage ratio[3][4]	B11				2.60	2.82	(0.21)
CFROI[5]	**B12**				**6.3%**	**6.1%**	**0.3pp**
Research & innovation	**B13**				**(350)**	**(361)**	**3.0%**
Research & innovation intensity	B13				3.2%	3.2%	0.1pp

(1) A full reconciliation of IFRS and underlying income statement data can be found in section 5 of the Business Review.
(2) Recommended 2016 dividend, pending General Shareholders meeting on May 9, 2017.
(3) Underlying net debt includes the perpetual hybrid bonds, accounted for as equity under IFRS.
(4) The 2016 underlying leverage ratio is calculated based on the underlying EBITDA including the discontinued operations Acetow and Vinythai.
(5) The 2015 pro forma CFROI has not been restated for the discontinuation of Acetow and Vinythai.

Historical key financial figures

In € million		As published 2012	2013	2014	2015[1]	2016
Income statement data						
Sales	a	12,831	10,367	10,629	11,047	11,403
Net sales	b	12,435	9,938	10,213	10,578	10,884
Underlying EBITDA	c	2,067	1,663	1,783	1,955	2,284
Underlying EBITDA margin	d	*17%*	*17%*	*17%*	*18%*	*21%*
IFRS EBIT	e	1,275	647	652	833	962
Underlying profit for the period	f					907
IFRS profit for the period	g	601	315	13	454	674
Underlying profit attributable to solvay share	h			622	680	846
IFRS profit attributable to Solvay share	i	584	270	80	406	621
Cash flow data						
Capex	k	(785)	(810)	(987)	(1,037)	(981)
Capex from continuing operations	l	(785)	(708)	(861)	(969)	(929)
Cash conversion	m = (c+l)/c	*62%*	*57%*	*52%*	*50%*	*59%*
Free cash flow	n	787	524	656	387	876
Balance sheet data						
Net working capital	p	1,379	1,217	1,101	1,557	1,396
Net working capital / sales	q = μ(p/a)[2]	*12.4%*	*12.9%*	*13.5%*	*13.4%*	*15.3%*
Underlying net debt[3]	r = s+t	(1,125)	(2,302)	(1,978)	(6,579)	(6,556)
Perpetual hybrid bonds	s	–	(1,200)	(1,200)	(2,200)	(2,200)
IFRS net debt	t	(1,125)	(1,102)	(778)	(4,379)	(4,356)
Total equity	u	6,574	7,453	6,778	9,668	9,956
Equity attributable to non-controlling interests	v	443	378	214	245	250
Perpetual hybrid bonds in equity	w	–	1,194	1,194	2,188	2,188
Equity attributable to Solvay share	x = u-v-w	6,131	5,881	5,369	7,234	7,518
Underlying leverage ratio[4]	y = -r/c	*0.5*	*1.4*	*1.1*	*2.8*	*2.6*
Other key data						
CFROI[5]	A	*6.5%*	*6.9%*	*6.9%*	*6.9%*	*6.3%*
Research & innovation	B	(300)	(280)	(287)	(320)	(350)
Research & innovation intensity	C = -B/b	*2.4%*	*2.8%*	*2.8%*	*3.0%*	*3.2%*

(1) 2015 data are not presented on pro forma basis, i.e. excude Cytec.
(2) Average of the quarters.
(3) Underlying net debt includes the perpetual hybrid bonds, accounted for as equity under IFRS.
(4) The 2016 underlying leverage ratio is calculated based on the underlying EBITDA including the discontinued operations Acetow and Vinythai. The 2015 underlying leverage ratio is calculated based on the underlying pro forma EBITDA, including Cytec.
(5) The 2012 CFROI is calculated before discontinuation of Indupa.

The table above presents the historical figures of the Group as published at the reference date. These data have not been affected by possible subsequent restatements due to perimeter changes, IFRS/IAS standards evolution, etc.

Over the reference periods, the following main changes have intervened:

- 2012:
  - Latin American chlorovinyls activities Indupa presented as discontinued and assets held for sale;
- 2013:
  - European chlorovinyls activities presented as discontinued and assets held for sale;
  - Acquisition of Chemlogics, consolidated as from November 1;

- 2014:
  - Application of IFRS 11;
  - Eco Services activities presented as discontinued and assets held for sale, and divested on December, 2;
- 2015:
  - European chlorovinyls activities contributed to the Inovyn joint venture (50% Solvay, 50% Ineos) on July 1;
  - Acquisition of 100% of the shares of Cytec Industries Inc. on December 9. Cytec opening balance sheet has been fully consolidated within the Solvay group as from December 31, 2015. Cytec's results and cash flows for the period between December 9 and December 31 are not material, except for acquisition-related expenses presented as portfolio management and reassessment. Consequently, Cytec has not contributed to the Group's profit or cash flows in 2015.
- 2016:
  - Divestment of Solvay's share in Inovyn joint venture on July, 7;
  - Acetow and Vinythai businesses presented as discontinued operations and as assets held for sale;
  - Divestment of Latin American chlorovinyls activities Indupa on December, 27.

2. PREPARATION BACKGROUND

Comparability of results

Following the announcements at the end of 2016 of the intended divestments of the Acetow and Vinythai businesses, these businesses are reclassified as discontinued operations and as assets held for sale. For comparative purposes, the 2015 income statement has been restated.

The results of former Cytec are consolidated in the Group's income and cash flow statements since January 1, 2016. Comparative information for the fourth quarter and full year 2015 is presented on an unaudited pro forma basis as if the acquisition of Cytec had taken place on January 1, 2015.

Underlying versus IFRS income statement

Besides IFRS accounts, Solvay also presents underlying Income Statement performance indicators to provide a more consistent and comparable indication of the Group's financial performance. The underlying performance indicators adjust IFRS figures for the non-cash Purchase Price Allocation (PPA) accounting impacts related to acquisitions, for the coupons of perpetual hybrid bonds, classified as equity under IFRS but treated as debt in the underlying statements, and for other elements that would distort the analysis of the Group's underlying performance. These adjustments consist of:

- Results from portfolio management and reassessments;
- Results from legacy remediation and major litigations;
- M&A related impacts, mainly including non-cash Purchase Price Acquisition impacts (e.g. inventory step-up and amortization of intangibles) and retention bonuses relative to Chemlogics and other acquisitions;
- Net financial results related to changes in discount rates, hyperinflation, coupons of hybrid bonds considered as dividends under IFRS and debt management impacts (mainly including gains/(losses) related to the early repayment of debt);
- Adjustments of equity earnings for impairment gains or losses and unrealized foreign exchange gains or losses on debt;
- Results from available-for-sale financial assets;
- Tax effects related to the items listed above and tax expense or income of prior years;
- All adjustments listed above apply to both continuing and discontinuing operations, and include the impacts on non-controlling interests.

Solvay believes that these measurements are useful for analyzing and explaining changes and trends in its historical results of operations, as they allow performance to be compared on a consistent basis. The underlying income statement figures are non-audited metrics, but are derived from the audited IFRS accounts.

Alternative performance metrics (APM)

Solvay uses alternative performance metrics to measure its financial performance, which can be found below:

- The term "net sales" refers to the sales of goods and value-added services corresponding to Solvay's know-how and core business. Net sales exclude other revenues primarily comprising commodity and utility trading transactions and other revenues deemed as incidental for the Group;
- EBITDA = Earnings Before Interest and Taxes, Depreciation and Amortization charges;
- EBIT = Earnings Before Interest and Taxes;
- Tax rate = Income taxes / (Result before taxes – Earnings from associates & joint ventures – Interests & realized foreign exchange results on RusVinyl joint venture). The adjustment of the denominator regarding associates and joint ventures is made as these contributions are already net of income taxes;

- Free cash flow measures cash flow from operating activities, net of investments. It excludes any M&A or financing related activities, but includes elements like dividends from associates and joint-ventures, pensions, restructuring costs, etc. It is defined as cash flow from operating activities (excluding cash flows from expenses incurred in connection with acquisitions of subsidiaries) and cash flow from investing activities (excluding cash flows from acquisitions and disposals of subsidiaries and other investments and excluding loans to associates and non-consolidated investments, as well as related tax elements);
- Capital expenditure (capex) is cash paid for the acquisition of tangible and intangible assets;
- Cash conversion is a ratio to measure the conversion of EBITDA into cash. It is defined as (Underlying EBITDA + Capex from continuing operations) / Underlying EBITDA;
- Net debt = Non-current financial debt + current financial debt – cash & cash equivalents – other financial instrument receivables. Underlying net debt represents the Solvay share view of debt, reclassifying as debt 100% of the hybrid perpetual bonds, considered as equity under IFRS;
- Leverage ratio = Net debt / Underlying EBITDA of last 12 months. Underlying leverage ratio = Underlying net debt / Underlying EBITDA of last 12 months);
- CFROI or Cash Flow Return On Investment measures the cash returns of Solvay's business activities. This uses a reasonable estimate of the replacement cost of assets and avoids accounting distortions, e.g. for impairments. It is calculated as the ratio between recurring cash flow and invested capital, where:
  - Recurring cash flow = Underlying EBITDA + (Dividends from associates and joint ventures – Earnings from associates and joint ventures) + Recurring capex + Recurring income taxes;
  - Invested capital = Replacement value of goodwill and fixed assets + Net working capital + Carrying amount of associates and joint ventures;
  - Recurring capex is normalized at 2% of the replacement value of fixed assets net of goodwill values;
  - Recurring income tax is normalized at 30% of (Underlying EBIT – Earnings from associates and joint ventures);
- Research & Innovation measures the total cash effort in research and innovation, regardless as to whether the costs were expensed or capitalized. It consists of research & development costs from the income statement before netting of related subsidies and royalties, and where depreciation and amortization are replaced by related capital expenditure;
- Research & innovation intensity is the ratio of research & innovation to net sales;
- Net working capital: includes inventories, trade receivables and other current receivables, netted with trade payables and other current liabilities.

These alternative performance metrics are used internally for analyzing the Group's results as well as its business units. They are also used in the calculation of management remuneration. The alternative performance metrics are non-IFRS audited metrics, but are derived from the audited IFRS accounts.

Description of the operational segments

Advanced Materials

As a leader in markets with high entry barriers and strong returns on investment, the Advanced Materials is a major contributor to the Group's performance and growth. Innovation edge, unmatched portfolio breadth, customer intimacy and market knowledge combined with global presence provide a compelling competitiveness to industries seeking increased energy efficiency and use of less polluting alternatives.

Specialty Polymers

With over 1,500 products, Specialty Polymers offers the widest range of high performance polymers in the world. The GBU addresses highly diversified and dynamic markets (such as automotive, aerospace, smart devices, energy, healthcare and water treatment) driven by light weighting and worldwide demand for "clean" technologies.

Composite Materials

Composite Materials is a top tier supplier to the aerospace engineered materials market known for its technology leadership and the added value to its customers: scale and technical capability. Its products allow to lightweight aircrafts, thereby reducing their environmental footprint. Besides the aeronautics sector it also serves other applications in wind energy, sports, sailing boats, and notably automotive, where the lightweighting properties create substantial development potential.

Special Chem

Special Chem produces fluor and rare-earth formulations for automotive, semi-conductor and lighting applications. With its industrial know-how, global presence and R&I proximity, Special Chem has positioned itself as a strategic partner for the automotive sector as a producer of materials used in emission control catalysis and aluminum brazing, and as a producer of cleaning and polishing materials for electronics.

Silica

Silica focuses on highly dispersible silica, primarily used in fuel-efficient and performance tires. It develops innovative solutions for global tire manufacturers, as well as Silica ranges for many other market segments like toothpaste, food, industrial products, and rubber articles.

Advanced formulations

As one of Solvay's growth engines, the Advanced Formulations businesses stand out for their applications, customer-driven approach and relatively low capital intensity. Their offerings address major societal trends, meeting ever stricter requirements with respect to the environment and energy savings as well as the challenges of the mass consumer markets.

Novecare

Novecare develops and produces formulations that alter the properties of liquids. It offers solutions to the oil and gas industry using the world's largest chemicals portfolio. Novecare also provides specialty solutions for certain industrial applications, agricultural and coatings markets.

Technology Solutions

Technology Solutions is a global leader in specialty mining reagents, phosphine-based chemistry, and solutions for stabilization of polymers. Its portfolio includes world class, leading-edge technologies and unrivalled technical service and applications expertise that support our customers in developing tailored solutions, in particular for mining, where Solvay's products allow customers to extract metal concentrates from increasingly more complex and depleted ores.

Aroma Perfomance

Aroma Performance is the world's largest integrated producer of vanillin for food, flavors & fragrances industries and synthetic intermediates used in perfumery.

Performance Chemicals

Operating in mature, resilient markets, this operating segment's success is based on economies of scale, competitiveness and quality of service. Solidly cash-generating, the Performance Chemicals businesses are engaged in programs of excellence to create additional sustainable value.

Soda Ash & Derivatives

Soda Ash & Derivatives is the world's largest producer of soda ash and sodium bicarbonate, sold primarily to the flat and container glass industries but also used in detergents, agro and food industries. It provides resilient profitability thanks to good pricing, dynamics growing at mid-single digit rate, underpinned by high-quality assets.

Peroxides

Solvay is the market leader in hydrogen peroxide, both in market share and technology. Hydrogen peroxide (H_2O_2) is mainly used by the paper industry to bleach pulp. Its properties are also of interest to many markets like chemicals, food, textiles and the environment.

Coatis

Coatis is a provider of glycerine-based sustainable solvents solutions and specialty phenols mainly for the Latin American market. It enjoys an undisputed market leadership position in Brazil for Phenol & Derivatives used in the production of synthetic resins employed in foundries, construction and abrasives.

Functional Polymers

Functional Polymers includes the polyamide-related businesses groups, which produce polyamide compounds used in high-performance plastics, and polyamide yarn, as well as housing Solvay's participation in its chlorovinyls joint venture RusVinyl in Russia.

Polyamide

The GBU is one of the rare operators in the market to control the entire polyamide chain from upstream (production of intermediates and polymers) to downstream (development of high value-added engineering plastics) serving mainly the automotive, electrical/electronics and different consumer good markets. It also includes a downstream business activity in Latin America, which manufactures and commercializes textile and industrial yarns and staple fibers, based on polyamide 6.6, for final use in clothing and industrial applications.

Chlorovinyls

The Russian chlorovinyls activity consists of the RusVinyl JV which started operation in 2014 and is consolidated using the equity method.

Corporate & Business Services

Solvay Energy Services

Solvay Energy Services delivers innovative and sustainable tailor-made services designed to improve energy performance and reduce the CO_2 footprint of the Solvay group and energy-intensive third-party industrial clients. These services range from energy sourcing and energy efficiency to price risk management and operation of co-generation plants.

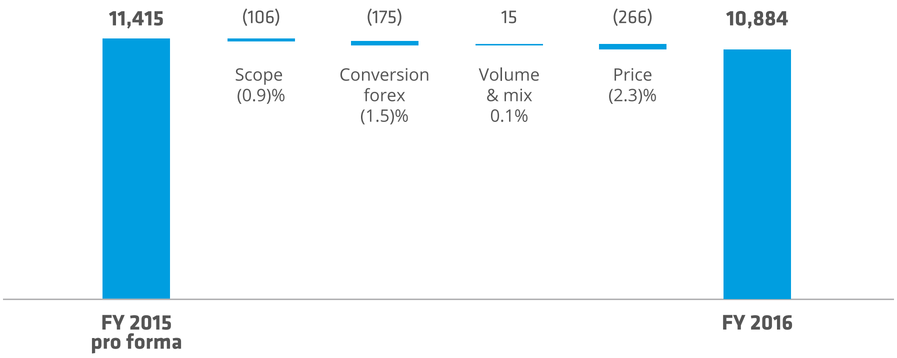
Other Corporate and Business Services

Business Services covers, in a global shared services organization, all the Group's IT services and its main administrative departments (accounting, credit, customer service, customs, payroll and personnel administration and procurement).

3. NOTES TO THE GROUP UNDERLYING FIGURES

NOTE B1
Net sales

Net sales evolution



Net sales totaled € 10,884 m, down (4.7)%. Volumes were stable overall. Sales prices decreased, however, while foreign exchange fluctuations had a negative conversion impact and the scope reduced slightly.

Volumes were largely flat, with growth in Functional Polymers offsetting a decrease in Advanced Formulations. In Advanced Materials, solid growth in consumer goods, healthcare and automotive markets more than compensated for lower civil aviation build rates and smart devices demand, including the impact of inventory adjustments in those markets. Oil and gas markets started recovering in the second half of the year, but the activity remained well below the 2015 level, weighing on Advanced Formulations' performance. This was mitigated, however, by growth in other areas, including agro and food products. In Performance Chemicals, volumes were flat overall across businesses. Functional Polymers' volumes were up thanks to solid market demand for polyamide 6.6 intermediates and engineered materials.

Average price reductions of (2.3)% reflected primarily the pass-through impact of lower raw materials costs, as well as price pressure in the oil and gas sector and on the Latin American market.

Foreign exchange fluctuations had a slightly negative impact on conversion of (1.5)%, linked to the depreciation of the Chinese yuan and Venezuelan bolivar.

The scope effect accounted for (0.9)%, and related to the sale of the refrigerants and PCC businesses in 2015.

NOTE B2
Underlying raw material & energy costs

Underlying cost of goods sold totaled € (8.2) bn, of which some 40% are taken by raw material and energy costs.

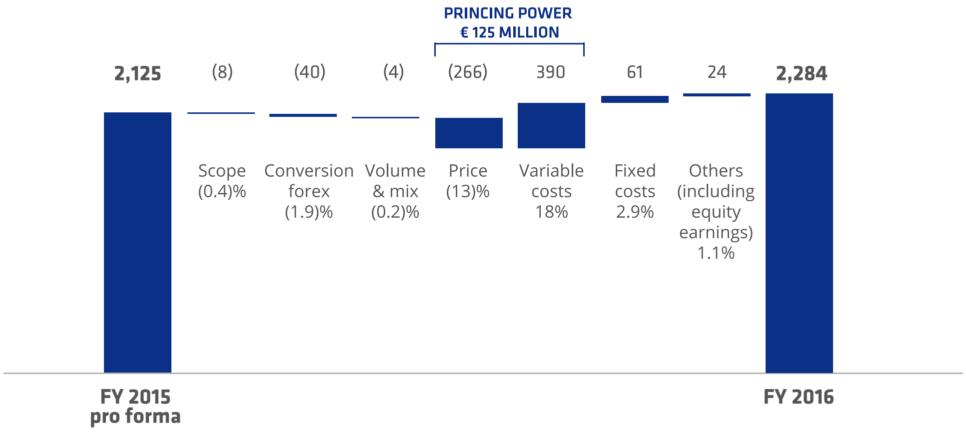
The overall raw materials expense of the Group mounted to circa € 2.5 bn in 2016, some 16% lower compared to 2015. The raw materials expense can be split into several categories: crude oil derivatives circa 46%, minerals derivatives circa 23% (e.g. glass fiber, sodium silica, calcium silicate, phosphorus, sodium hydroxide...), natural gas derivatives (circa 13%), biochemicals circa 12% (e.g. wood pulp, glycerol, guar, fatty alcohol, ethyl alcohol...), others (circa 7%).

Net energy costs represented about € 0.64 bn in 2016, circa 10% lower versus 2015. Energy sources were spread over electricity and gas (circa 71%), coke, coal and anthracite (circa 22%) and steam and others (circa 7%). Fossil fuels represented circa 73%. More than half of the costs were incurred in Europe (circa 56%) followed by the Americas (24%), Asia and rest of the world (circa 20%). The Group has pursued an active energy policy for many years. As a major energy consumer, the Group produces its own electricity through on-site cogeneration plants and steam turbines for a total capacity of circa 800 MWe.

Within the Group, Solvay Energy Services (SES) focuses on optimizing the Solvay's energy costs and carbon emissions. Furthermore, SES has continued deploying its operating energy efficiency excellence initiative called SOLWATT®, which aims at reducing energy consumption and optimizing energy production on industrial sites. By the end of 2016, SOLWATT® has been gradually rolled out and covers almost all the Group's manufacturing sites. As of December 2016[1], 2205 actions for a total of €91 million of savings per annum have been identified after the diagnosis phase. More than half of these actions representing €35.5 million and circa 359 kt of CO_2 of annual savings have been implemented since 2011[1]. The Soda Ash & Derivatives and Specialty Polymers GBUs are among the top beneficiaries.

NOTE B3
Underlying EBITDA

Evolution de l'EBITDA sous-jacent



Underlying EBITDA grew 7.5% to € 2,284 m, driven by pricing power and fixed cost reduction benefits. Operational excellence exceeded € 200 m, while completion of the Cytec integration delivered € 70 m of synergies, well ahead of the initial plan. There were no significant effects from volume/mix changes. Foreign exchange fluctuations and scope had a slightly negative impact.

Volumes were largely flat and had no overall impact on EBITDA.

Continued pricing power pushed net pricing up 5.9% year on year. Lower sales prices were more than compensated by lower raw material costs and delivery of operational excellence initiatives in all segments, except in Advanced Formulations where the price pressure in the oil & gas market proved too heavy. Solvay's rolling hedging policy protected the pricing power against short-term currency fluctuations.

Fixed costs were down, adding 2.9% to EBITDA, supported by operational excellence and synergies delivery, thereby more than compensating for inflation and the additional costs from increased production capacity.

The net foreign exchange impact on conversion was (1.9)%, mainly linked to the significant depreciation of the Venezuelan bolivar and Chinese yuan.

The scope effect on EBITDA accounted for (0.4)%.

The underlying EBITDA margin reached 21%, up 2.4 pp versus 2015, thereby exceeding 20% for the first time.

NOTE B4
Underlying depreciation & amortization

Amortization and depreciation charges were € (750) m, 3% up on € (727) m in 2015, which results from the higher capex level in recent years.

(1) 2016 Solwatt® figures still include actions related to Acetow and Vinythai

NOTE B5
Underlying net financial charges

In € million		Underlying FY 2016	Underlying FY 2015 pro forma
Net cost of borrowings	**a**	**(226)**	**(210)**
Coupons on perpetual hybrid bonds	b	(111)	(112)
Interests and realized foreign exchange gains (losses) on the RusVinyl joint venture	c	(26)	(27)
Cost of discounting provisions	d	(106)	(92)
Result from available-for-sale financial assets	e	–	–
Net financial charges(1)	**f = a+b+c+d+e**	**(469)**	**(441)**

(1) Underlying net financial charges include the coupons on perpetual hybrid bonds, which are accounted as dividends under IFRS, and thereby excluded from the income statement, as well as the financial charges and realized foreign exchange losses in the RusVinyl joint venture, which under IFRS are part of the earnings from associates & joint ventures and thereby included in the IFRS EBITDA.

Underlying net financial charges rose to € (469) m from € (441) m in 2015.

- The underlying net cost of borrowings increased to € (226) m compared to € (210) m a year ago, with currency swapping costs and higher average interest rates offsetting the effects of lower indebtedness and reduced cost of carry.
- The coupons on perpetual hybrid bonds were € (111) m, in line with 2015.
- Financial charges on the RusVinyl joint venture were largely stable at € (26) m versus € (27) m last year.
- Non-cash discounting costs on pension and environmental liabilities were € (106) m, compared to € (92) m in 2015. The increase is due to positive one-off effects in 2015 on post-retirement benefits.

NOTE B6
Underlying income taxes

In € million		Underlying FY 2016	Underlying FY 2015 pro forma
Profit for the period before taxes	a	1,065	957
Earnings from associates & joint ventures	b	69	44
Interests and realized foreign exchange gains (losses) on the RusVinyl joint venture	c	(26)	(27)
Income taxes	d	(291)	(300)
Tax rate	**e = -d/(a-b-c)**	***28%***	***32%***

Underlying income taxes were € (291) m versus € (300) m in 2015, reflecting a lower tax rate of 28% versus 32% in 2015, which is linked to a change in the geographical mix of pre-tax earnings.

NOTE B7
Underlying profit from discontinued operations

Discontinued operations include the Latin American PVC activity Indupa, which was sold at the end of December 2016, and the recently discontinued acetate tow businesses Acetow and Asian PVC activity Vinythai. The latter's contribution was lower year on year, as in 2015 discontinued operations still included the € 57 m contribution of the European PVC activity, which has been incorporated in the Inovyn joint venture mid-2015.

NOTE B8
CAPEX

In € million		FY 2016	FY 2015 pro forma[1]
Acquisition (-) of tangible assets	a	(883)	
Acquisition (-) of intangible assets	b	(98)	
Capex	**c = a+b**	**(981)**	**(1,160)**
Capex flow from discontinued operations	d	(51)	(103)
Capex from continuing operations	**e = c-d**	**(929)**	**(1,057)**

(1) The 2015 detailed cash flow statement was not presented on a pro forma basis and was not restated for the discontinuation of Acetow and Vinythai. The capex for 2015 is however presented both on a pro forma and restated basis and therefore can't be reconciled with the detailed cash flow statement.

In € million		FY 2016	FY 2015 pro forma
Capex from continuing operations	**a**	**(929)**	**(1,057)**
Underlying EBITDA	b	2,284	2,125
Cash conversion	**c = (a+b)/b**	***59%***	***50%***

Capex from continuing operations was € (929) m, € 127 m lower than in 2015, in line with the planned reduction of capex intensity. Cash conversion thereby rose from 50% to 59%.

Besides health, safety & environment and maintenance capital expenditures, the Group selectively invested in a number of strategic projects, with priority given to businesses and geographies with superior and sustainable growth potential.

Production expansions across the globe to serve customers were realized in 2016. The most significant are:

- the announcement of extra composite capabilities with a state-of-the-art resin facility at an upgraded site in Germany. Production should begin in the second quarter of 2017 after customer qualifications, to supply the LEAP engine for Airbus and Boeing programs;
- the launch of Highly Dispersible Silica production at its new South Korean plant to meet strong and growing regional demand for energy saving tires;
- The new hydrogen peroxide plant, in China, began production for high-quality applications, serving growing demand for electronics, water treatment and aquaculture industries, as well as supplying Solvay's own semiconductor and flavor businesses.

A number of growth projects represented significant capital expenditures in 2016, but are still under construction:

- the new mega Hydrogen Peroxide for Propylene Oxide (HPPO) plant (330kt/year) in Saudi Arabia in joint venture with Sadara Aramco and Dow, which was largely finished by end 2015 but due to open in 2016 only;
- the construction of a second PEEK polymers plant for Specialty Polymers, built in the United States (Georgia) ;
- the second phase of the fluoro-polymers plant in China (Changshu) for Specialty Polymers, to start-up in 2017.

NOTE B9
Free Cash Flow

In € million		FY 2016	FY 2015 pro forma(1)
Cash flow from operating activities	a	1,788	
of which cash flow related to acquisition of subsidiaries, excluded from free cash flow	b	7	
Cash flow from investing activities	c	(807)	
Acquisition (-) of subsidiaries	d	(23)	
Acquisition (-) of investments - Other	e	4	
Loans to associates and non-consolidated companies	f	(25)	
Sale (+) of subsidiaries and investments	g	144	
Income taxes paid on sale of investments	h	–	
Free cash flow	**i = a-b+c-d-e-f-g-h**	**876**	**492**
Free cash flow from discontinued operations	j	140	98
Free cash flow from continuing operations	**k = i-j**	**736**	**394**

(1) The 2015 detailed cash flow statement was not presented on a pro forma basis and was not restated for the discontinuation of Acetow and Vinythai. The free cash flow for 2015 is however presented both on a pro forma and restated basis and therefore can't be reconciled with the detailed cash flow statement.

Free cash flow from continuing operations nearly doubled to € 736 m versus € 394 m in 2015. In addition to the € 159 m rise in EBITDA this was the result of lower capex and strict working capital management. Including the free cash flow from discontinued operations, the total free cash flow was € 876 m versus € 492 m in 2015.

NOTE B10
Net working capital

		2016				2015
In € million		December	September(1)	June(1)	March(1)	December(1)(2)
Inventories	a	1,672	1,754	1,753	1,761	1,867
Trade receivables	b	1,621	1,728	1,730	1,664	1,615
Other current receivables	c	736	666	976	1,050	655
Trade payables	d	(1,547)	(1,410)	(1,414)	(1,336)	1,559
Other current liabilities	e	(1,085)	(985)	(926)	(999)	1,021
Net working capital	**f = a+b+c-d-e**	**1,396**	**1,753**	**2,119**	**2,140**	**1,557**
Sales	g	2,933	3,048	3,053	3,052	3,109
Annualized quarterly total sales	h = 4*g	11,731	12,193	12,214	12,206	12,434
Net working capital / sales	i = f / h	***11.9%***	***14.4%***	***17.4%***	***17.5%***	***12.5%***
Year average(2)	**j = μ(Q1,Q2,Q3,Q4)**	***15.3%***				***13.4%***

(1) The data from September 2016 and before have not been restated for the discontinuation of Acetow and Vinythai.
(2) Average of the quarters. The data from September 2015 and before, used for the calculation of the average, are not on pro forma basis, i.e. exclude Cytec.

Outflow from working capital was € (75) m. The average net working capital to sales ratio over the quarters was 15.3% versus 13.4% in 2015 on non-restated basis, inflated by the outstanding receivable on the Inovyn exit price in the first half of 2016.

NOTE B11
Net debt

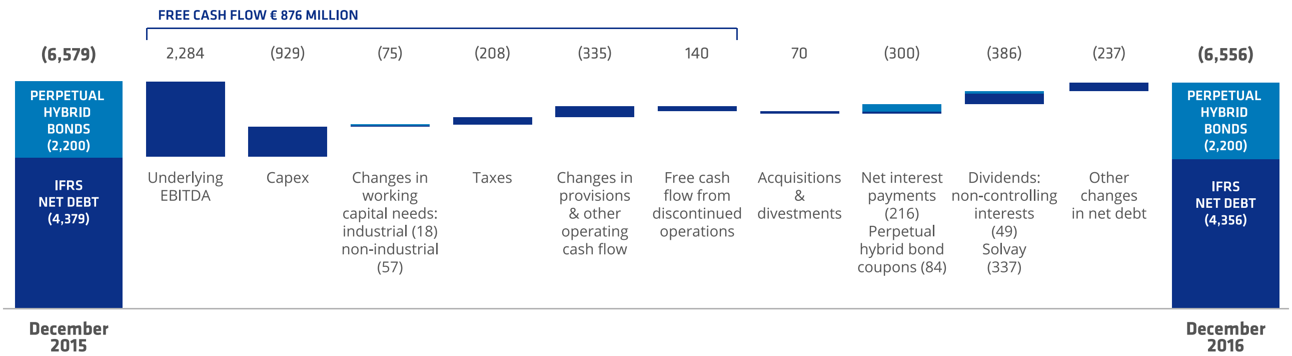
In € million		2016 December	2016 September(1)	2016 June(1)	2016 March(1)	2015 December(1)
Non-current financial debt	a	(4,087)	(4,976)	(5,063)	(5,540)	(5,628)
Current financial debt	b	(1,338)	(505)	(953)	(732)	(892)
Gross debt	c = a+b	(5,426)	(5,481)	(6,016)	(6,272)	(6,520)
Other financial instrument receivables	d	101	119	124	155	111
Cash & cash equivalents	e	969	1,060	1,080	1,555	2,030
Total cash and cash equivalents	f = d+e	1,070	1,179	1,204	1,711	2,141
IFRS net debt	**g = c+f**	**(4,356)**	**(4,302)**	**(4,812)**	**(4,561)**	**(4,379)**
Perpetual hybrid bonds	h	(2,200)	(2,200)	(2,200)	(2,200)	(2,200)
Underlying net debt	**i = g+h**	**(6,556)**	**(6,502)**	**(7,012)**	**(6,761)**	**(6,579)**
Underlying EBITDA (last 12 months)(2)	j	2,284	2,433	2,394	2,345	2,336
Underlying EBITDA of Acetow & Vinythai	k	235	–	–	–	–
Adjusted underlying EBITDA for leverage calculation	l = j+k	2,519	2,433	2,394	2,345	2,336
Underlying leverage ratio(3)	m = -i/l	***2.6***	***2.7***	***2.9***	***2.9***	***2.8***

(1) September 2016 data and before were not restated for the discontinuation of Acetow and Vinythai.

(2) The underlying EBITDA is based on the last 12 months, i.e. the underlying EBITDA of the last four quarters.

(3) As net debt at the end of 2016 does not reflect yet the net proceeds to be received on the divestment of the discontinued Acetow and Vinythai businesses, whereas the underlying EBITDA excludes the contribution of these discontinued businesses already, the underlying EBITDA was adjusted for the purpose of calculating the leverage ratio.

Underlying net debt evolution



Underlying net debt reached € (6,556) m, stable compared to the end of 2015. The strong free cash flow more than covered € (300) m in financial charges, which include € (84) m coupons on perpetual hybrid bonds, and higher dividend pay-out, of which € (337) m to Solvay shareholders. The net cash inflow from acquisitions and divestments primarily reflects the sale of Solvay's stake in Inovyn and the net cash outflow linked to the sale of Indupa. Other changes in net debt of € (237) m comprise the non-cash effect of foreign exchange fluctuations on financial debt and related instruments, primarily the conversion impact of the higher US dollar and Brazilian real on gross debt, and of the lower Venezuelan bolivar on cash. Net debt on an IFRS basis was € (4,356) m and excludes 100% of the € (2,200) m hybrid perpetual bonds considered as equity under IFRS.

NOTE B12
CFROI

In € million		FY 2016 As published	FY 2016 Adjustment	FY 2016 As calculated	FY 2015 pro forma[1] As published	FY 2015 pro forma[1] Adjustment	FY 2015 pro forma[1] As calculated
Underlying EBIT[2]	a	1,534	(69)	1,465	1,550	(43)	1,506
Underlying EBITDA[2]	b	2,284	(69)	2,214	2,336	(43)	2,292
Dividends received from associates & joint ventures[3]	c	22	–	22	13	–	13
Recurring capex[4]	d = -2%*k			(363)			(388)
Recurring income taxes[4][5]	e = -30%*a			(439)			(452)
Recurring "CFROI" cash flow data	**f = b+c+d+e**			**1,434**			**1,465**
Tangible assets	g	6,472			6,946		
Intangible assets	h	3,600			3,919		
Goodwill	i	5,679			5,840		
Replacement value of goodwill & fixed assets[6][7]	j = g+h+i	15,751	4,669	20,420	16,705	5,193	21,898
of which fixed assets	k			18,134			19,422
Investments in associates & joint ventures[6]	l	497	(52)	445	398	12	410
Net working capital[6]	m	1,396	355	1,751	1,557	231	1,787
"CFROI" invested capital	**n = j+l+m**			**22,615**			**24,095**
CFROI	**n = f/m**			***6.3%***			***6.1%***

(1) 2015 data have not been restated but are provided on a pro forma basis.
(2) The adjustment excludes earnings from associates & joint ventures.
(3) The adjustment excludes discontinued operations.
(4) Currently estimated at 2% of replacement value of fixed assets.
(5) Currently estimated at 30% of underlying EBIT.
(6) The adjustment reflects the quarterly average over the year.
(7) The adjustment reflects the difference between the estimated replacement value of goodwill and fixed assets, and the accounting value. The changes over time come from foreign exchange variations, new investments and portfolio moves.

CFROI improved to 6.3%, versus 6.1% pro forma in 2015 on a non-restated basis. This reflects Solvay's growing performance, despite a (0.2) pp impact from the discontinuation of Acetow and Vinythai.

NOTE B13
Research & Innovation

In € million		FY 2016	FY 2015 pro forma
IFRS research & development costs	**a**	**(305)**	**(318)**
Grants & royalties netted in research & development costs	b	33	32
Depreciation, amortization & impairments included in research & development costs	c	(54)	(39)
Capex in research & innovation	d	(66)	(50)
Research & innovation	**e = a-b-c+d**	**(350)**	**(361)**
Net sales	f	10,884	11,415
Research & innovation intensity	**g = -e/f**	***3.2%***	***3.2%***

Research & Innovation efforts in 2016 were € -350 million. The 3% gap is mainly related to the Cytec restatement and the reduction of R&I corporate due to stop of OLED project. 85% of the Group's R&I investments are directly managed by businesses.

Research & innovation efforts are driven by the following four innovation levers:

- A process of excellence to improve its efficiency and shorten time to market;
- An intellectual property policy to drive Solvay's future differentiation;
- An extended network of open innovation (through partnerships with academics, SMEs or other industrials) to maximize its efficiency and tap into the creativity and competencies of the external world;
- Explanatory partnerships with start-ups and venture capital funds which allow Solvay to unleash potential in strategic areas.

4. NOTES TO THE UNDERLYING SEGMENT FIGURES

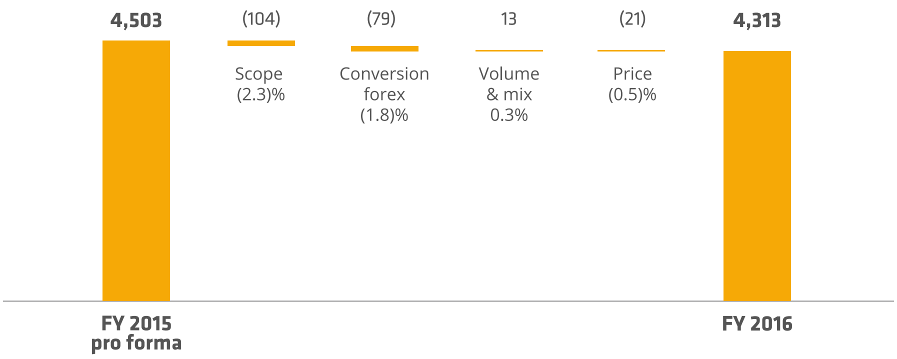
Segment overview

	Underlying		
In € million	**FY 2016**	FY 2015 pro forma	*% yoy*
Net sales	**10,884**	**11,415**	***(4.7)%***
Advanced Materials	4,313	4,503	*(4.2)%*
Advanced Formulations	2,668	2,885	*(7.5)%*
Performance Chemicals	2,460	2,526	*(2.6)%*
Functional Polymers	1,436	1,490	*(3.6)%*
Corporate & Business Services	7	11	*(39)%*
EBITDA	**2,284**	**2,125**	***7.5%***
Advanced Materials	1,110	1,079	*2.9%*
Advanced Formulations	484	522	*(7.2)%*
Performance Chemicals	695	628	*11%*
Functional Polymers	222	141	*57%*
Corporate & Business Services	(227)	(245)	*7.3%*
EBIT	**1,534**	**1,398**	***9.7%***
Advanced Materials	829	798	*3.9%*
Advanced Formulations	327	378	*(14)%*
Performance Chemicals	534	470	*14%*
Functional Polymers	137	58	*n.m.*
Corporate & Business Services	(293)	(306)	*4.4%*
Capex from continuing operations	**(929)**	**(1,057)**	***12%***
Advanced Materials	(435)	(415)	*(4.8)%*
Advanced Formulations	(134)	(225)	*40%*
Performance Chemicals	(186)	(242)	*23%*
Functional Polymers	(95)	(71)	*(34)%*
Corporate & Business Services	(79)	(104)	*24%*
Research & innovation	**(350)**	**(361)**	***(3.0)%***
Advanced Materials	(155)	(160)	*3.4%*
Advanced Formulations	(87)	(89)	*2.6%*
Performance Chemicals	(26)	(26)	*(2.6)%*
Functional Polymers	(30)	(31)	*1.8%*
Corporate & Business Services	(52)	(55)	*5.6%*

NOTE B14
Advanced Materials

In € million	FY 2016	Underlying FY 2015 pro forma	% yoy
Net sales	**4,313**	**4,503**	***(4.2)%***
Specialty Polymers	1,922	1,901	*1.1%*
Composite Materials	1,073	1,169	*(8.2)%*
Special Chem	862	912	*(5.5)%*
Silica	455	521	*(13)%*
EBITDA	**1,110**	**1,079**	***2.9%***
EBITDA margin	*26%*	*24%*	*1.8pp*
EBIT margin	*19%*	*18%*	*1.5pp*
CFROI	***9.4%***	***9.2%***	***0.2pp***
Cash conversion	*61%*	*62%*	*(0.7)pp*
Research & innovation intensity	*3.6%*	*3.6%*	–

Net sales evolution



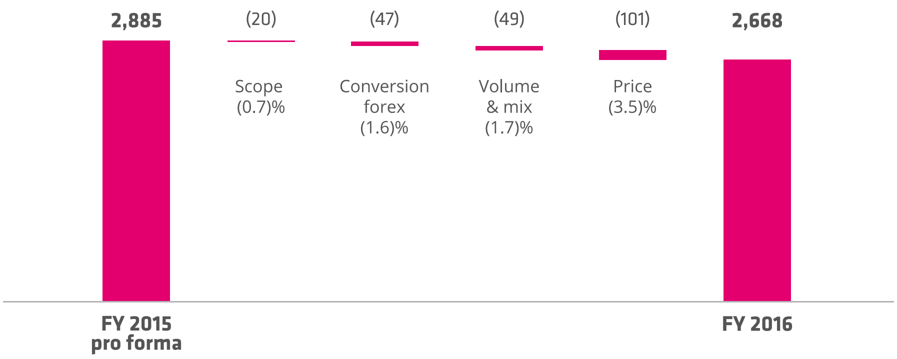
Net sales were € 4,313 m, with the sales shortage mainly attributable to the divestiture of Special Chem's refrigerants and PCC businesses in 2015 combined with unfavorable foreign exchange. Lower prices were balanced by modest volume growth. Sales grew in **Specialty Polymers** as strong volumes in diverse applications such as in consumer goods, automotive and medical sectors more than offset lower demand in smart devices. Sales volumes in **Composite Materials** were affected by the anticipated rate declines of older aircraft programs and reduced sales to industrial markets. **Special Chem** reported good demand for automotive catalysts and growth from the semi-conductor market. **Silica** volume growth across regions in the energy-efficient tire market was largely offset by the devaluation of the bolivar in Venezuela.

Underlying EBITDA rose 2.9% to € 1,110 m driven by operational excellence programs and Cytec synergies, which increased EBITDA margin by 1.8 pp to 26%.

NOTE B15
Advanced Formulations

In € million	FY 2016	Underlying FY 2015 pro forma	% yoy
Net sales	**2,668**	**2,885**	***(7.5)%***
Novecare	1,663	1,895	*(12)%*
Technology Solutions	656	631	*3.9%*
Aroma Performance	350	360	*(2.7)%*
EBITDA	**484**	**522**	***(7.2)%***
EBITDA margin	*18%*	*18%*	*0.1pp*
EBIT margin	*12%*	*13%*	*(0.9)pp*
CFROI	***6.1%***	***6.5%***	***(0.4)pp***
Cash conversion	*72%*	*57%*	*15pp*
Research & innovation intensity	*3.2%*	*3.1%*	*0.2pp*

Net sales evolution



Net Sales decreased (7.5)% to €2,668 m, with prices down (3.5)% and the balance from volumes and foreign exchange fluctuations. **Novecare**'s annual sales were affected by the decline in the oil and gas market, which started to improve toward year end. Novecare demonstrated good growth in its other markets, including home & personal care, agro, coatings and industrial applications. Sales in **Technology Solutions** grew almost 4% thanks to phosphorous and phosphine chemicals, which mitigated the lower demand in mining where some key customers reduced operating rates. **Aroma Performance** sales benefited from volume growth from the new Chinese vanillin plant but were offset by competitive price pressures.

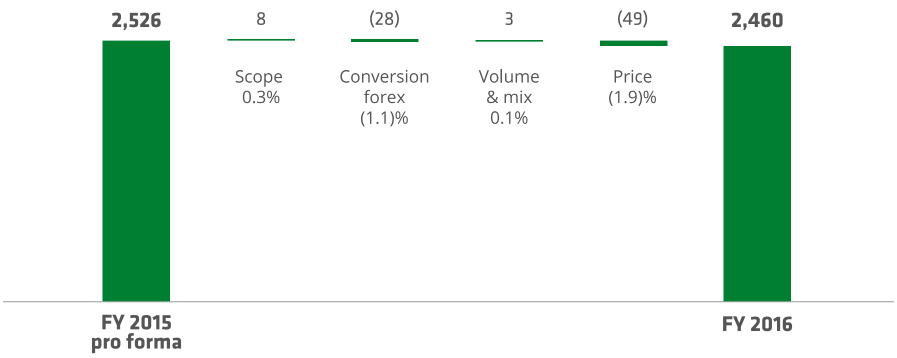
Underlying EBITDA decreased (7.2)% to €484 m as a result of foreign exchange, lower volumes and price. The underlying EBITDA margin remained at 18% following cost restructuring measures implemented in response to a more challenging environment.

NOTE B16
Performance Chemicals

In € million	FY 2016	Underlying FY 2015 pro forma	% yoy
Net sales[(1)]	**2,460**	**2,526**	***(2,6)%***
Soda Ash & Derivatives	1,561	1,554	*0.4%*
Peroxides	542	558	*(2.8)%*
Coatis	346	398	*(13)%*
EBITDA	**695**	**628**	***11%***
EBITDA margin	*28%*	*25%*	*3.4pp*
EBIT margin	*22%*	*19%*	*3.1pp*
CFROI	***8.9%***	***8.5%***	***0.5pp***
Cash conversion	*73%*	*61%*	*12pp*
Research & innovation intensity	*1.1%*	*1.0%*	*0.1pp*

(1) Following the discontinuation of Acetow, some residual business is still contained in Performance Chemicals' net sales. These accounted for € 3 m in Q4 and € 10 m in FY 2016, compared to € 4 m in Q4 and € 16 m in FY 2015. There was no material contribution to EBITDA.

Net sales evolution



Net Sales were down (2.6)% to € 2,460 m, due to the lower average prices, which reflect the pass-through effect of lower raw material costs. Foreign exchange effects were negative over the year, mainly with the depreciation of the Brazilian real. Volumes were stable overall. In **Soda Ash & Derivatives**, volumes were similar to the prior year. Higher bicarbonate sales, supported by the ramp-up of the new plant in Thailand, offset slightly lower volumes of soda ash, linked to slower market demand at the start of the year. In **Peroxides**, the ramp-up of the new plant in China supported volume growth in the traditional wood pulp bleaching market, offsetting weaker sales in specialties. Overall sales were down due to mix effects. **Coatis** suffered low demand in its domestic Latin American market.

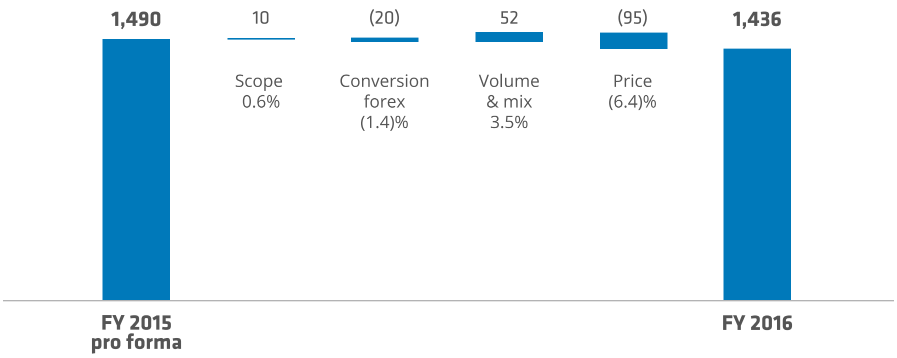
Underlying EBITDA increased by 11% to € 695 m. Operational excellence remained the main driver for the improvement, leading to a record EBITDA margin of 28%.

NOTE B17
Functional Polymers

		Underlying	
In € million	FY 2016	FY 2015 pro forma	% yoy
Net sales	**1,436**	**1,490**	***(3.6)%***
Polyamide	1,414	1,448	*(2.4)%*
Chlorovinyls[1]	22	41	*(47)%*
EBITDA	**222**	**141**	***57%***
EBITDA margin	*15%*	*9.5%*	*5.9pp*
EBIT margin	*9.5%*	*3.9%*	*5.6pp*
CFROI	***5.1%***	***3.5%***	***1.6pp***
Cash conversion	*57%*	*50%*	*7.2pp*
Research & innovation intensity	*2.1%*	*2.1%*	–

(1) Following the discontinuation of Vinythai, the only businesses reporting net sales in Chlorovinyls are residual trading and research activities in PVC, following the discontinuation of the European, Latin American and Asian chlorovinyl activities. These residual activities had no material impact on EBITDA. EBITDA includes, however, the net contribution from the RusVinyl joint venture, the Russian PVC activity, adjusted for financial charges.

Net sales evolution



Net Sales were down (3.6)% to €1,436 m due to (6.4)% lower prices. This resulted from a decrease in raw material costs, which was partially passed on to customers. Volumes rose 3.5% thanks to the favorable market conditions for polyamides, both upstream and downstream. The (1.4)% foreign exchange fluctuations on conversion came from the Euro's appreciation versus local currencies in Brazil and Korea, where Solvay operates major sites.

Underlying EBITDA increased 57% to € 222 m, reflecting the volume increase in polyamide combined with benefits from operational excellence programs, more than offsetting the sales price decrease. RusVinyl, Solvay's Russian PVC joint venture, contributed significantly to results, operating close to full capacity throughout the year. The underlying EBITDA margin grew 5.9 pp to 15% versus 2015.

NOTE B18
Corporate & Business Services

	Underlying		
In € million	FY 2016	FY 2015 pro forma	% yoy
Net sales	**7**	**11**	***(39)%***
Energy Services	4	11	*(68)%*
Other Corporate & Business Services	3	–	*n.m.*
EBITDA	**(227)**	**(245)**	***7.3%***

Net underlying EBITDA costs were € (227) m, € 18 m lower than in 2015, reflecting excellence and delivery on Cytec synergies. Excluding one-off elements in both years, the EBITDA would have been € 41 m better than in 2015.

Energy Services' EBITDA was € 3 m, compared to € (3) m in 2015. The difference is entirely due to the € (7) m write-offs on CERS in 2015. Results in 2016 benefited from the restructuring of certain renewable energy assets and from improved business conditions for energy and carbon management services.

Other **Corporate & Business Services**' EBITDA costs were € (231) m. This represented a significant improvement compared to 2015, which included a € 30 m one-off benefit recognized in 2015 related to US post-retirement benefits. Operational excellence and synergy benefits more than compensated for inflation throughout 2016.

5. RECONCILIATION OF UNDERLYING WITH IFRS FIGURES

Besides IFRS accounts, Solvay also presents underlying Income Statement performance indicators to provide a more consistent and comparable indication of Solvay's economic performance. These figures adjust IFRS figures for the non-cash Purchase Price Allocation (PPA) accounting impacts related to acquisitions, for the coupons of perpetual hybrid bonds, classified as equity under IFRS but treated as debt in the underlying statements, and for other elements to generate a measure that avoids distortion and facilitates the appreciation of performance and comparability of results over time. The 2016 data are compared to unaudited pro forma 2015 data including Cytec, as if the acquisition had taken place on January 1, 2015.

FY consolidated income statement

In € million	Notes	FY 2016 IFRS	FY 2016 Adjust-ments	FY 2016 Under-lying	FY 2015 pro forma IFRS	FY 2015 pro forma Adjust-ments	FY 2015 pro forma Underlying
Sales		**11,403**	–	**11,403**	**11,882**	–	**11,882**
of which revenues from non-core activities		519	–	519	467	–	467
of which net sales		10,884	–	10,884	11,415	–	11,415
Cost of goods sold	*(B19) (B20)*	(8,314)	84	(8,230)	(8,834)	83	(8,751)
Gross margin		**3,090**	**84**	**3,173**	**3,048**	**83**	**3,131**
Commercial & administrative costs	*(B19) (B20)*	(1,465)	50	(1,416)	(1,517)	57	(1,459)
Research & development costs	*(B20)*	(305)	3	(302)	(318)	–	(318)
Other operating gains & losses	*(B20)*	(222)	231	9	(228)	229	1
Earnings from associates & joint ventures	*(B19)*	85	(16)	69	21	22	44
Result from portfolio management & reassessments	*(B19) (B20)*	(164)	164	–	(212)	212	–
Result from legacy remediation & major litigations	*(B19)*	(56)	56	–	(41)	41	–
EBITDA	***(B19)***	**2,131**	**152**	**2,284**	**1,857**	**268**	**2,125**
Depreciation, amortization & impairments	*(B20)*	(1,169)	419	(750)	(1,103)	376	(727)
EBIT	***(B20)***	**962**	**571**	**1,534**	**754**	**644**	**1,398**
Net cost of borrowings	*(B21)*	(226)	–	(226)	(235)	25	(210)
Coupons on perpetual hybrid bonds	*(B21)*	–	(111)	(111)	–	(112)	(112)
Interests and realized foreign exchange gains (losses) on the RusVinyl joint venture	*(B21)*	–	(26)	(26)	–	(27)	(27)
Cost of discounting provisions	*(B21)*	(118)	12	(106)	(77)	(14)	(92)
Result from available-for-sale financial assets	*(B21)*	5	(5)	–	(8)	8	–
Profit for the period before taxes		**624**	**441**	**1,065**	**434**	**524**	**957**
Income taxes	*(B22)*	56	(347)	(291)	(35)	(265)	(300)
Profit for the period from continuing operations		**680**	**94**	**774**	**399**	**259**	**657**
Profit for the period from discontinued operations	*(B23)*	(6)	138	133	50	126	175
Profit for the period	***(B24)***	**674**	**233**	**907**	**448**	**385**	**833**
attributable to Solvay share	*(B24)*	621	225	846	400	368	768
attributable to non-controlling interests	*(B24)*	53	7	61	48	17	65

NOTE B19
IFRS EBITDA

EBITDA on an IFRS basis totaled € 2,131 m versus € 2,284 m on an underlying basis. The difference of € 152 m is explained by the following adjustments to IFRS results, in order to improve comparability of underlying results:

- € 82 m for the non-cash impact of purchase price allocation (PPA), consisting of recycling into profit or loss of Cytec inventory step-ups, which are adjusted in "*Cost of goods sold*";
- € 9 m for legacy acquisition costs, in this case the Chemlogics retention premiums, which are adjusted in "*Commercial & administrative costs*";
- € (16) m in "*Earnings from associates & joint ventures*" for the foreign exchange gains on the euro-denominated debt of the RusVinyl joint venture, following the revaluation of the Russian ruble since the start of the year, netted with the financial charges of the joint venture. These elements are reclassified in "Net financial charges";

- € 21 m for net costs in "*Result from portfolio management and reassessments*", excluding depreciation, amortization and impairment elements. These include restructuring costs of € (116) m, primarily related to restructuring plans in Corporate & Business Services, Special Chem and Soda Ash & Derivatives, as well as € (46) m costs and losses related to acquisition and divestments. These costs were partially offset by the net capital gain of € 72 m made on the exit of Inovyn, the € 49 m gain for the release to Solvay of Chemlogics holdback payments and a net capital gain on sale of land of € 20 m;
- € 56 m for net costs in "*Result from legacy remediation and major litigations*".

NOTE B20 IFRS EBIT

EBIT on an IFRS basis totaled € 962 m versus € 1,534 m on an underlying basis. The difference of € 571 m is explained by the above-mentioned € 152 m adjustments on EBITDA level and € 419 m on "Depreciation, amortization & impairments". The latter consist of:

- € 277 m for the non-cash impact of purchase price allocation (PPA), consisting of amortization charges on intangible assets, which are adjusted in "Cost of goods sold" for € 2 m, "Commercial & administrative costs" for € 41 m, "Research & innovation costs" for € 3 m and "Other operating gains & losses" for € 231 m;
- € 143 m for the net impact of impairments, which are non-cash in nature and are reported in "Portfolio management and reassessments". These primarily related to the mothballing of the soda ash plant in Egypt for € (82) m and renewable energy assets for € (49) m.

NOTE B21 IFRS net financial charges

Net financial charges on an IFRS basis were € (339) m versus € (469) m on an underlying basis. The € (130) m adjustment made to IFRS net financial charges consists of:

- € (26) m reclassification of financial charges and realized foreign exchange result on the euro-denominated debt of RusVinyl as net financial charges. The € 42 m delta with the adjustment made to EBITDA is attributed to unrealized foreign exchange gains;
- € (111) m reclassification of coupons on perpetual hybrid bonds, which are treated as dividends under IFRS, and as financial charges in underlying results;
- € 12 m for the net impact of decreasing discount rates on the valuation of environmental liabilities in the period;
- € (5) m for the "Result from available-for-sales financial assets".

NOTE B22 IFRS income taxes

Income taxes on an IFRS basis represented a gain of € 56 m versus a cost of € (291) m on an underlying basis. The € (347) m adjustment consists of:

- € (145) m for the tax impacts of the adjustments made to the underlying result before taxes (as described above);
- € (202) m for tax elements related to prior years, mainly from recognition of deferred tax assets in Belgium and the UK.

NOTE B23 IFRS profit from discontinued operations

Discontinued operations generated a loss for the period of € (6) m on an IFRS basis, but a profit of € 133 m on an underlying basis. The € 138 m adjustment made to the IFRS profit consists of:

- € 129 m for Indupa, including adjustments to fair value and €54 m for the recycling of negative currency translation adjustments at the closing of the divestment in December;
- € 26 m for costs related to the divestment of Acetow and Vinythai, including PPA depreciation;
- € (17) m related to gains on the divested pharma activities, as underlying results exclude post-closing elements.

NOTE B24 IFRS profit for the period

Profit for the period attributable to Solvay share on an IFRS basis was € 621 m after subtracting the € 53 m profit attributable to non-controlling interests. On an underlying basis the profit attributable to non-controlling interests represented € 61 m, after subtraction of € 7 m for the impact of the above adjustments. This resulted in a profit for the period attributable to Solvay share of € 846 m on an underlying basis.

6. NOTES TO THE FIGURES PER SHARE

Historical key share data

		As published				
		2012	2013	2014	2015	**2016**
Number of shares (in 1000 shares)						
Issued shares at end of year	a	84,701	84,701	84,701	105,876	105,876
Treasury shares at end of year	b	1,735	1,530	1,719	2,106	2,652
Shares held by Solvac	c	25,559	25,559	25,578	32,116	32,511
Outstanding shares at the end of the year	d = a-b	82,966	83,171	82,982	103,770	103,225
Average outstanding shares (basic calculation)	e	82,305	83,151	83,228	83,738	103,294
Average outstanding shares (diluted calculation)	f	82,696	83,843	83,890	84,303	103,609
Data per share (in €)						
Equity attributable to Solvay share	g = .../d[(2)]	73.90	70.71	64.71	69.72	72.83
Underlying profit for the period (basic)	h = .../e[(2)]					8.19
IFRS profit for the period (basic)	i = .../e[(2)]	7.10	3.25	0.96	4.85	6.01
IFRS profit for the period (diluted)	j = .../f[(2)]	7.06	3.22	0.96	4.81	5.99
Gross dividend[(3)]	k	3.20	3.20	3.40	3.30	3.45
Net dividend[(3)]	l = k*(1-...%)[(4)]	2.40	2.40	2.55	2.41	2.42
Share price data (in €)						
Highest[(5)]	m	109.80	121.05	129.15	141.10	112.30
Lowest[(5)]	n	62.11	97.20	100.15	88.01	70.52
Average[(5)]	o = v/u	87.33	109.42	114.35	105.74	89.32
At the end of the year	p	109.35	115.00	112.40	98.43	111.35
Underlying price/earnings	q = p/h					*13.6*
IFRS price/earnings	r = p/i	*15.4*	*35.4*	*116.6*	*20.3*	*18.5*
Gross dividend yield	s = k/p	*2.9%*	*2.8%*	*3.0%*	*3.4%*	*3.1%*
Net dividend yield	t = l/p	*2.2%*	*2.1%*	*2.3%*	*2.4%*	*2.2%*
Stock market data[(6)]						
Annual volume (in 1000 shares)	u	77,144	53,643	48,600	82,718	86,280
Annual volume (in € m)	v	6,737	5,870	5,557	9,218	7,707
Market capitalisation, end of year (in € bn)	w = p*d	9,262	9,741	9,520	10,421	11,789
Velocity	x = u/a	*91%*	*63%*	*57%*	*78%*	*81%*
Velocity adjusted for free float	y = u/(a-b-c)	*134%*	*93%*	*85%*	*115%*	*122%*

(1) 2015 data are not presented on pro forma basis, i.e. excude Cytec.
(2) The numerator can be found under the same label in the historic key financial data table in section 1 of the Business review.
(3) Recommended 2016 dividend, pending General Shareholders meeting on May 9, 2017.
(4) Belgian withholding tax applicable in year of dividend payment, i.e. the following year: 25% in 2013-2015, 27% in 2016, 30% in 2017.
(5) The 2015 share price data use the share price adjusted by a factor 93.98% for the period until December 3, 2015. The adjustment reflects the distribution of rights during the capital increase completed in December 2015.
(6) The stock market data are based on all trades registered by Euronext.

NOTE B25
Earnings per share

		2016	2015 pro forma	% yoy
Profit attributable to Solvay share (in € m)				
Underlying profit for the period	a	846	768	10%
Underlying profit from continuing operations	b	729	618	18%
IFRS profit for the period	c	621	400	55%
IFRS profit from continuing operations	d	640	366	75%
Number of shares (in 1000 shares)				
Issued shares at end of year	e	105,876	105,876	–
Treasury shares at end of year	f	2,652	2,106	26%
Outstanding shares at the end of the year	g = e-f	103,225	103,770	(0.5)%
Average outstanding shares (basic calculation)(1)	h	103,294	103,770	(0.5)%
Average outstanding shares (diluted calculation)(1)	i	103,609	104,470	(0.8)%
Data per share (in €)				
Underlying profit for the period (basic)	j = a/h	8.19	7.40	11%
Underlying profit from continuing operations (basic)	k = b/h	7.06	5.95	19%
IFRS profit for the period (basic)	l = c/h	6.01	3.86	56%
IFRS profit from continuing operations (basic)	m = d/h	6.20	3.52	76%
IFRS profit for the period (diluted)	l = c/i	5.99	3.83	11%
IFRS profit from continuing operations (diluted)	m = d/i	6.18	3.50	19%

(1) The average number of outstanding shares used for 2015 pro forma are those at the end of the year, as the capital increase in December 2015 would otherwise distort the calculation.

NOTE B26
Dividend

The Board of Directors decided to recommend to the General Shareholders' Meeting of May 9, 2017, payment of a total gross dividend of €3.45 per share (€ 2.415 net per share).

The dividend for the fiscal year 2016, up 4.5% compared to the dividend for the fiscal year 2015, is in line with the Group's dividend policy of maintaining a stable to increasing dividend whenever possible and, as far as possible, never reducing it.

Given the interim dividend of €1.32 gross per share (€ 0.924 net per share) paid on January 18, 2017, the balance of the dividend in respect of 2016, equal to €2.13 gross per share (€ 1,491 net per share), which will be paid on May 16, 2017, provided prior agreement by General Shareholders Meeting.

7. OUTLOOK 2017

EBITDA

Solvay expects underlying **EBITDA** to grow by mid-single digit. Overall demand is anticipated to remain healthy and operational excellence momentum is expecting to continue, albeit in an environment of rising raw material prices.

- **Advanced Materials** growth will be driven from its diversified end markets including aerospace, automotive, consumer & healthcare, and electronics.
- **Advanced Formulations** growth is projected in several end markets including agro, coatings and mining, with improving conditions in oil & gas.
- **Performance Chemicals** is expected to show stable to modest growth, with anticipated headwinds in the soda ash market offset by operational excellence and Solvay's capacity increase in peroxides.
- **Functional Polymers** is projected to be flat, retaining the growth achieved in 2016.
- **Corporate & Business Services** are committed to excellence measures to offset inflation.

The EBITDA outlook is based on constant scope and foreign exchange rates(1).

Underlying **depreciation & amortization** charges are expected to be at around € (750) m and exclude PPA amortization charges of approximately € (290) m.

Financial charges & taxes

- Underlying **net financial charges** expected at €(425) m, excluding the impact of foreign exchange fluctuations
  - Underlying **net cost of borrowing**s at around € (230) m;
  - Coupons to be paid on the **perpetual hybrid bonds** of € (112) m;
  - Non cash recurring **discounting costs** are estimated at approximately € (80) m, of which some three quarters relates to pensions and one quarter to health, safety & environmental (HSE) provisions.
- Underlying **income tax** rate is expected to remain at around 30%.

Cash flow

- **Free cash flow** from continuing operations is expected to exceed €800 m in 2017, compared to €736 m in 2016, driven by higher EBITDA and reduced capital expenditures.
- **Capital expenditure** from continued operations is expected to decrease further to around € (800) m.
- The total **pension** cash outflow is projected at € (210) m.

(1) Solvay is exposed to foreign exchange fluctuations. The main currency exposure is to US dollar, Chinese yuan, Thai baht, Brazilian real, Russian ruble, Japanese yen and Korean won. EBITDA sensitivity to US dollar is about €120 m per US$ (0.10) change, of which some 60% on conversion and 40% on transaction. Net debt sensitivity to US dollar is approximately € (200) m per US$ (0.10) change.

EXTRA-FINANCIAL STATEMENTS

1. SUMMARY TABLE

	Units	Notes	2016	2015	2014	2013	2012
Sustainable business solutions							
Product portfolio assessed	%	S1	84	88	79	64	–
Sustainable solutions	%	S1	43	33	25	19	–
Greenhouse gas emissions							
Greenhouse gas intensity	Kg CO_2 eq. per € EBITDA	S2	5.86	7.26	8.08	8.84	7.12
Direct and indirect CO_2 emissions (Scope 1 & 2)	Mt CO_2	S2	10.9	11.6	11.7	12.0	11.8
Other greenhouse gas emissions according to Kyoto Protocol (Scope 1)	Mt CO_2 eq	S2	2.4	2.6	2.7	2.7	2.6
Total greenhouse gas emissions (Kyoto protocol)	Mt CO_2 eq	S2	13.4	14.2	14.4	14.7	14.4
Other greenhouse gas emissions not according to Kyoto Protocol (Scope 1)	Mt CO_2 eq	S2	0.1	0.1	0.1	0.1	0.1
Energy management							
Energy consumption	Petajoules Low Heating Value	S3	138	175	179	181	179
Energy efficiency index	%	S3	94	96	99	99	100
Air quality management							
Nitrogen oxides – NO_x	Metric tons	S4	11,098	12,210	12,679	10,980	11,548
Nitrogen oxides intensity	Kg per € EBITDA	S4	0.0058	0.0063	0.0071	0.0068	0.0057
Sulfur oxides – SO_x	Metric tons	S4	5,395	6,563	6,620	10,336	12,023
Sulfur oxides intensity	Kg per € EBITDA	S4	0.0028	0.0034	0.0037	0.0064	0.0059
Non-methane volatile organic compounds – NMVOC	Metric tons	S4	4,968	6,781	7,158	7,464	7,974
Non-methane volatile organic compounds intensity	Kg per € EBITDA	S4	0.0026	0.0035	0.0040	0.0046	0.0039
Water management							
Freshwater withdrawal	Million m^3	S5	491	537	535	554	–
Freshwater withdrawal intensity	Litres per € EBITDA	S5	0.26	0.28	0.30	0.34	–
Chemical oxygen demand	Tons O_2	S5	7,539	8,834	9,652	9,715	–
Chemical oxygen demand intensity	Kg per € EBITDA	S5	0.0040	0.0045	0.0054	0.0060	–
Environmental incidents and remediation							
Medium severity incidents with environmental consequences	Number	S6	40	46	55	–	–
Medium severity incidents with environmental consequences in which the limits of the operating permit were exceeded	Number	S6	26	26	–	–	–
Environmental provision	€ million	S6	737	730	723	636	800

	Units	Notes	2016	2015	2014	2013	2012
Hazardous materials management							
Non-hazardous industrial waste	1,000 Metric tons	S7	1,463	1,453	1,637	–	–
Hazardous industrial waste	1,000 Metric tons	S7	194.2	202.0	194.6	–	–
Total hazardous industrial waste	1,000 Metric tons	S7	1,657	1,655	1,831	–	–
Industrial hazardous waste not disposed of in a sustainable way	1,000 Metric tons	S7	50.3	47.1	49.7	–	–
Industrial hazardous waste not disposed of in a sustainable manner	Kg per € EBITDA	S7	0.0265	0.0241	0.0279	–	–
Substances of very high concern (SVHC) according to REACH criteria present in products put on the market	Number	S7	20	20	25	23	–
SVHC according to REACH criteria present in products put on the market for which this presence is due to raw materials	Number	S7	10	10	18	39	–
SVHCs reviewed for potential substitution with safer alternatives	%	S7	18	5	0	0	0
Employee health and safety management							
Medical Treatment Accident Rate - Employee, contractors and temporary workers (MTAR)	Accident per million hours worked	S8	0.77	0.77	0.97	1.06	2.59
Lost time accident rate - employees, contractors, and temporary workers (LTAR)	Accident per million hours worked	S8	0.76	0.75	0.98	0.8	0.81
Fatal accidents	Number	S8	1	0	2	2	0
Industrial Hygiene program: sites where hygiene specialists have been trained to new industrial hygiene standards	%	S8	65	73	24	3	–
Advanced Health Monitoring program: sites with advanced risk based medical surveillance	%	S8	18	28	26	26	–
Employee engagement and wellness management							
Solvay engagement index	%	S9	77	75	–	72	–
Coverage by collective agreement	%	S9	87.8	77	82.2	85	85
Community development management							
Solvay Group donations, sponsorship, and own projects	€ million	S10	7.38	5.25	–	–	–
Employees involved in societal actions	%	S10	23	20	–	–	–
Management of the legal, ethics, and regulatory framework							
HSE compliance audits during last five years	%	S11	75	50	–	–	–
HSE regulatory watch process in place	%	S11	82	50	–	–	–
Process safety, emergency preparedness, and response							
Percentage of product lines having a risk analysis updated in the last five years	%	S12	65	69	64	58	–
Number of "Risk Sheets Level 1" at the end of the year	Number	S12	46	94	217	11	111
Percentage of level 1 risk situations resolved within one year	%	S12	100	100	100	100	–
Risk level 1 situation resolved	Number	S12	98	232	23	111	111
Site with a process safety management system corresponding to their risk level	%	S12	90	84	–	–	–
Process safety rate	%	S12	0.7	0.6	0.4	–	–
Customer satisfaction							
Net Promoter Score	%	S13	27	24	14	–	–

2. SUSTAINABILITY MANAGEMENT

Solvay Way outlines the Group's approach to sustainability. It illustrates the integration of social, societal, environmental, and economic factors into the Company's management, strategy, decision-making, and operating practices, with the objective of creating value that stands the test of time.

2.1. Sustainability at the heart of the Group's culture

150 years of transformation

Solvay's culture of responsibility is part of its historical identity. Starting at its inception, the Group pioneered a number of initiatives to benefit its workers, including the provision of internal social security (1878), the adoption of an eight-hour workday (1897), and the provision of paid vacation (1913). It was one of the first companies to engage employees in meaningful social dialog and has built a strong safety culture. These early experiences were formative in shaping the Group's values and commitment to corporate social responsibility. Throughout its 150-year history, Solvay adapted its business model to respond to societal trends and concerns, reflecting its pioneering spirit. As it continues to transform itself today, the Company is guided by its past and is focused on creating responsible sustainable value.

Asking more from chemistry

For Solvay, "Asking more from Chemistry" means being responsible in the way we act, innovate, generate value for our key stakeholders, and contribute broadly to science and society. Responsibility is a fundamental part of our identity. It is a value that manifests itself in our key choices and actions.

Our first scope of responsibility is the way our people manage our sites through Solvay Way. We have three key indicators: greenhouse gas intensity, safety, and people engagement.

We consider that we also have an impact in the way we manage our product portfolio. We create innovative sustainable solutions that should help our customers and society to answer today's challenges. Our role is to turn these challenges into sustainable market opportunities, which in turn will help to propel our revenue and earnings growth over time.

Our conviction is that we are able to create economic value and that this value is indeed enhanced as we make both scientific and social progress. It is our firm belief that, as a responsible chemist, our broader contribution to society will ensure that our leadership positions are enhanced.

2.2. Voluntary external commitments

Solvay has set voluntary external commitments:

For a responsible chemical industry: Solvay is committed to the "Responsible Care®" World Charter. This global chemical industry initiative aims to achieve continuous improvement in the safe handling of chemical substances from their initial development to their final use.

For human rights: Solvay participates in the UN Global Compact and is committed to upholding its principles, contributing to the emergence of a sustainable and inclusive global economy which delivers lasting benefits to people, communities, and markets.

For a global standard in sustainability: Solvay uses the voluntary international standard ISO 26000 on social responsibility as its point of reference. This standard provides guidelines for organizations to operate in a socially responsible manner. Solvay Way incorporates the requirements of this international standard.

For a responsible dialog: on December 17, 2013, Solvay signed a Corporate Social and Environmental Agreement for the whole Group with IndustriALL Global Union. This agreement, one of the first of its kind in the chemical industry, gives tangible expression to Solvay's determination to ensure that basic labor rights and the Group's social standards in the areas of health, safety, and environmental protection are respected on all of its sites. This agreement applies to all Solvay employees. Every year, a Solvay site is assessed to ensure the commitments made by the Group are being applied correctly at grassroots level, based on International Labor Organization (ILO) standards and the principles of the United Nations Global Compact (UNGC).

To ensure compliance with the IndustriALL Global Union Agreement by all employees, it has been integrated as an employee practice in the Solvay Way reference framework, and each year the Solvay Way assessment evaluates how well it is deployed and understood.

European Pact for Youth

Improving young people's chances of employment: at the Enterprise 2020 Summit, the European Commission and business leaders including Mr. Jean-Pierre Clamadieu, CEO of Solvay, launched the "European Pact for Youth" to create 10,000 partnerships between business and education to boost young people's chances of employment. The initiative aims to improve the quality of training and skills that young people can acquire, including transversal, digital, entrepreneurial, green, and soft skills.

Solvay's commitment to reducing the greenhouse gas intensity of its activities

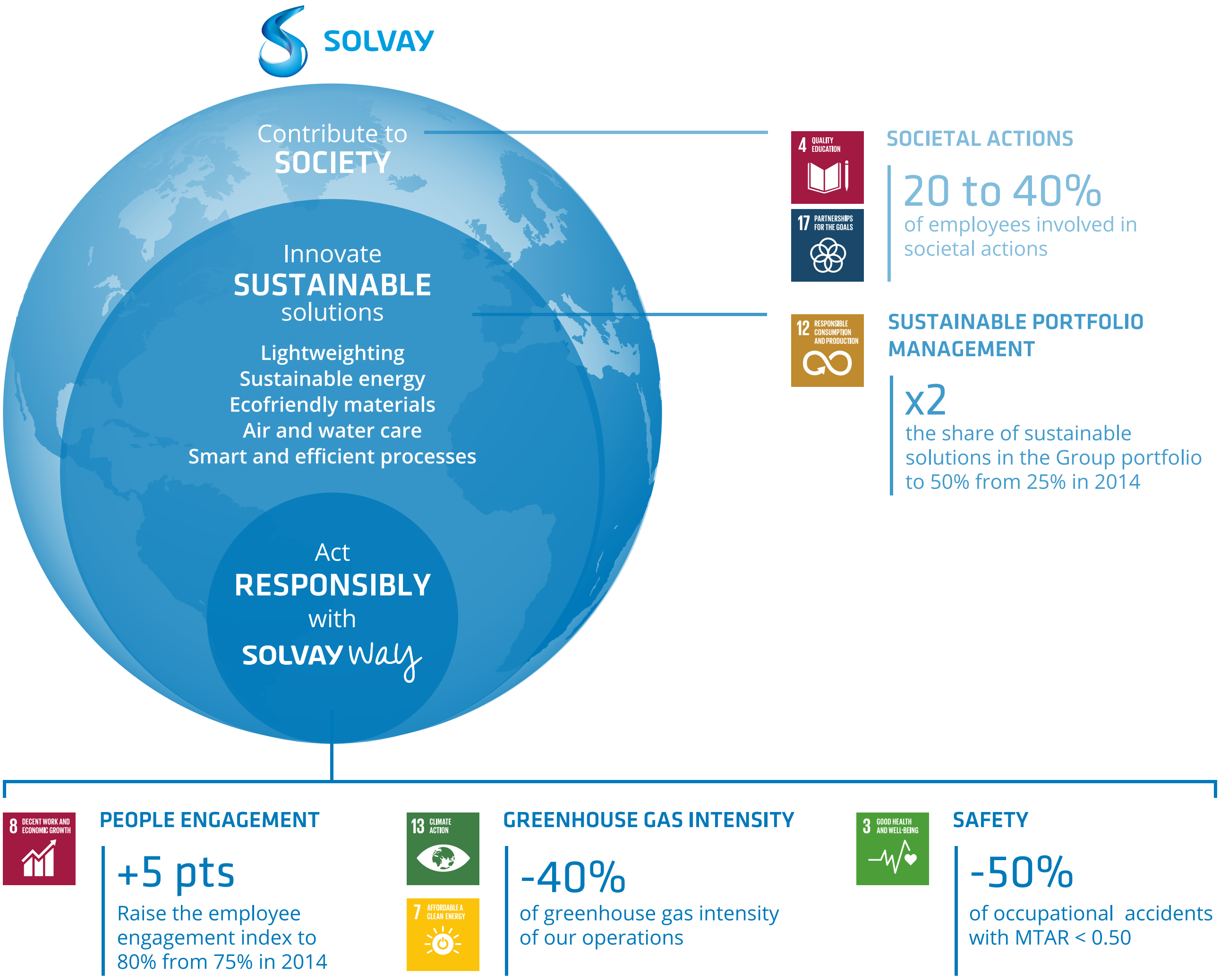
In 2015, along with other steps taken during the COP21 conference in Paris to participate in the fight against global climate change, Solvay committed to reducing by 40% the greenhouse gas intensity of its activities by 2025. The Group has also announced the adoption of an internal carbon price. Since January 2016, Solvay uses an internal price of €25 per metric ton of CO_2 for all greenhouse gas emissions worldwide to account for climate challenges in its investment decisions.

Reinforcing its commitment to operating responsibly and sustainably, Solvay has accelerated its efforts to reduce its greenhouse gas intensity in the run-up to the COP22 climate change conference in Marrakech in November 2016: the Group has set an intermediary target of a one-fifth reduction in greenhouse gas intensity by 2018.

How Solvay supports the UN Sustainable Development Goals

As a member signatory of the UN Global Compact, Solvay has an impact and contributes to all of the UN Sustainable Development Goals (SDGs) through its daily business and its products and solutions. Through its strategy, three circles of responsibility and materiality analysis, Solvay has chosen to focus on seven of the UN's 17 SDGs as particularly important in setting its performance targets. In the following sections, SDG icons indicate links to specific Solvay actions.

How Solvay's strategic objectives for 2025 contribute to the SDGs



Baseline 2014

2.3. Solvay Way approach and management

Solvay Way, constantly improving how we do business

Solvay Way encompasses all aspects of the Group's sustainable approach to doing business. It ensures that social and environmental implications are integrated into the company's strategy, operations and decision-making. It is applied at all life cycle stages of Solvay's products, including design, manufacture, consumption of resources, application, and end-of-life. It also takes into account the consequences for society of their manufacture and use.

The presidents of each global business unit and the function leaders are accountable for the effective implementation of Solvay Way across their businesses and functions. The deployment is supported and overseen by Solvay's Sustainable Development function. Further, the Sustainable Development function runs a global network of more than 200 "Champions" and "correspondents" drawn from across all businesses and functions covering all key geographies. They play a key role in ensuring the deployment of the Solvay Way approach and the sharing of best practices and experiences, and promote collaborative working to ensure that processes and practices are continuously improved.

To drive improvement throughout the company, each business unit, research center, function, and production site conducts annual self-assessments by reference to the Solvay Way framework. The self-assessment findings are supplemented by the results from internal audits and from independent assurance reviews. Findings – encompassing lessons learned, best practices, strengths, and improvement opportunities – are shared across businesses and functions and motivate a culture of continuous improvement. The Sustainable Development function presents the key assessment results to the Executive Committee and the Board of Directors.

Solvay Way, constantly improving how we do business – A continuous improvement process based on four scales

SOLVAY Way

4 – PERFORMANCE	The entity is close to the benchmark of the profession. The improvement process is sustainable, the results are sustainable. The entity is recognized for its exemplary performance. All stakeholders adhere to the approach.
3 – MATURITY	Action plans bring measurable progress. Their implementation is carried out and audited throughout the perimeter with details of lessons learned; employees are mobilized in their deployment.
2 – DEPLOYMENT	The entity implements a structured, internal progress dynamic with stakeholders. Methods are used to set priorities. Resources are deployed and managers are mobilized in action plans.
1 – LAUNCH	The entity is essentially responsive to the expectations of stakeholders. An inventory is conducted.

Mobilizing employees at every level of the Company

BOARD OF DIRECTORS EXECUTIVE COMMITTEE
Strategy definition & monitoring

- Set the strategy
- Monitor execution, inlcuding the Solvay Way annual self-assessments results

→

CORPORATE SUSTAINABLE DEVELOPMENT FUNCTION
Coordination and supervision

- Reports directly to the CEO
- Consolidates the Solvay Way self-assessement
- Presents the results to the Board of Director and the Executive Committee

→

SOLVAY Way CHAMPIONS AND CORRESPONDENTS
Deployment

- Ensure the deployment of the Solvay Way process in 100% of Solvay's sites, GBUs and Corporate Functions
- Motivate their colleagues to fulfill precise objectives
- Set action plans to improve their processes and practices

→

EMPLOYEES
A day to day action

- Assess the progress they have made
- Identify directions for improvement by stakeholder group
- Construct their improvement plans to better include sustainability in their entity

Solvay Way also provides a framework, consistent with ISO 26,000, based on stakeholder inputs on issues of sustainable development. Solvay has made 22 commitments to six major stakeholders (customers, employees, investors, suppliers, communities, and the planet), translated into 49 associated practices. Solvay Way commitments are aligned with the interests identified for each stakeholder group, which are used as a reference to help guide its actions.

Solvay's Sustainable Development function is responsible for implementing the findings and conclusions reached through dialog with stakeholders to achieve progress.

Sustainability integrated in the management processes

To ensure rapid progress, the Group has integrated the goals of sustainable development at every stage of people management and business cycle.

Solvay Way is integrated into its people management processes and its Code of Conduct. The Group's compensation policy links 10% of the variable remuneration for all managers to Solvay Way assessment results. All employees benefit from an incentive linked to financial and extra-financial targets. For senior executives, 20% of Long Term Incentive will, with effect from January 2017, also be driven by improvement in the Group's greenhouse gas intensity.

Solvay Way allows for a deeper integration of the Group's sustainability policy within the operational deployment of its strategy in the short, middle, and long term. For the business cycle, Solvay assesses current products (portfolio and processes) and future spending (innovation, acquisitions) as part of its one-year outlook, using the Sustainable Portfolio Management (SPM) methodology. Afterwards, all these elements are audited.

Within the five-year business strategic plan, both the SPM and Group targets performance will be challenged, priorities agreed, resources allocated, and improvement commitments secured.

2.4. Sustainable business solutions

The Sustainable Portfolio Management (SPM) tool enables Solvay to make strategic decisions that steer its portfolio, support progress toward its sustainability objectives and integrate sustainability into its operating decisions. Operating sustainably also broadens opportunities for business. Solvay provides solutions in a variety of specialty areas. As such, the Group responds to the sustainability needs of the marketplace by conceiving solutions that address changes in its environment, and that meet client and stakeholder expectations both today and tomorrow.

Some examples include:

- familiar solutions, such as biodegradable products for soaps and shampoos and renewable-based solvents for paints and coatings
- complex solutions that ultimately enable consumers to reduce their energy consumption, generate less food waste, or overcome the limitations of aging.

The SPM tool is the fact-based compass that enables Solvay to upgrade its product portfolio to achieve higher social and environmental standards, and to robustly and systematically map sustainability concerns and opportunities in the marketplace, including from its own suppliers and customers.

The methodology aims at informing decision-makers so that they can detect sustainability risks and opportunities along the entire value chain (cradle-to-grave), develop action plans, and deliver through innovation while balancing economic, social, and environmental values.

Within Solvay, Global Business Units (GBUs) are accountable for delivering the ambitious Group target for sustainable business performance: by 2025, realize €1 of revenue out of every €2 in Sustainable Solutions.

3. BASIS OF PREPARATION

3.1. Reporting principles

The information in this Report aligns with the recently published GRI Standards from the Global Reporting Initiatives. This report also offers an update on our implementation of the ten principles of the United Nations Global Compact (UNGC), in accordance with the Global Compact Advanced Level. More sustainability information is available on Solvay's annual report website, including the GRI Content Index.

Reporting scope and boundaries

Unless otherwise stated, all social and environmental indicators are consolidated in the same way that Group sales are reported. The financial consolidation scope is described in the corresponding section of this report. Where relevant, data is also reported using an operational scope, which consolidates all activities under operational control even if not financially consolidated.

Greenhouse gas (GHG) reporting principles

Greenhouse gas (GHG) emissions are reported in accordance with the World Business Council for Sustainable Development's "Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain". By extension, other emissions are reported according to the same guideline.

For accurate reporting, the convention adopted for selecting CO_2 emission factors related to acquired electricity meets the following criteria (in decreasing order of priority):

- emission factors resulting from specific instruments such as green energy certificates
- the emission factor obtained from contract agreements on specific sources for which there is no emission of specific attributes
- the emission factor of the contract with the supply chain or power supplier
- the emission factor which is calculated based on the non-attribute claimed production and reflects the mix after the subtraction of certified products
- if none of the above factors is available, the national emission factor published by national authorities, the International Energy Agency, or for the United States, the state's emission factor as published by the United States Environmental Protection Agency.

Energy reporting principles

Energy consumption components are converted into primary energy, with the following conventions:

- fuels, using the net calorific values
- steam purchased, taking into account the reference value of boiler efficiency related to the fuel used for its generation (e.g. 90% efficiency based on the net calorific value for natural gas)
- electricity purchased, assuming an average efficiency of 39.5% for all types of power production except for nuclear power (33%), based on net calorific value (source IEA).

Environmental reporting principles

Chemlogic's environmental data has been integrated as from 2016.

The recently acquired Cytec operations (Technology Solutions and Composite Materials GBUs) are being progressively integrated in the Group's environmental reporting. These are not yet included in the figures of the following Notes, with the exception of the three sites which were moved from the Novecare GBU to the Technology Solutions GBU (Oldbury, Charleston, and Zhanjiagang Henchang)

- NOTE S4 Air quality management
- NOTE S5 Water management
- Note S7 Hazardous material management.

3.2. Materiality analysis

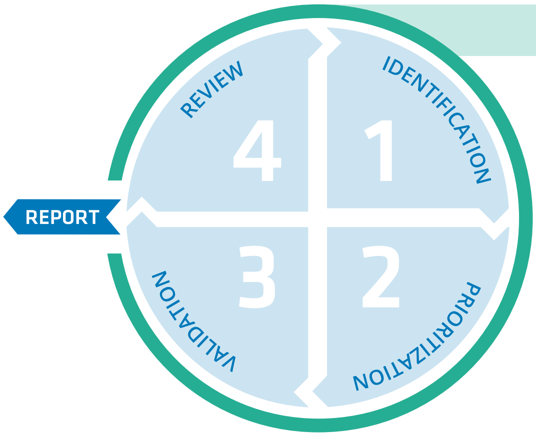
Category	Moderate materiality	High materiality
Environment	Fuel management Waste management and effluents Biodiversity impacts	Greenhouse gas emissions Air quality Energy management Environmental accidents and remediation Water and wastewater management Hazardous materials management (including waste)
Social Capital	Access and affordability Data security and customer privacy Fair disclosure and labelling Fair marketing and advertising	Customer satisfaction Community development (societal actions)
Human Capital	Diversity and inclusion Recruitment, development and retention Compensation and benefits	Employee health and safety Employee engagement and wellness
Business Model and Innovation	Environmental, social impacts on assets and operations Product Packaging Product quality and safety	Sustainable business solutions
Leadership and Governance	Systemic risk management Regulatory capture and political influence Materials sourcing Supply chain management	Management of the legal, ethics & regulatory framework Process safety, emergency preparedness & response
	Priorities	

Process

Solvay bases its priorities for sustainability on a "materiality analysis." This approach identifies critical economic, environmental and social issues with potential to significantly impact Solvay's performance and/or substantially influence stakeholders' decisions. The analysis is performed and updated each year according to the Sustainability Accounting Standards Board (SASB) approach.

The analysis is coordinated by Solvay's Sustainable Development function with an internal network of sustainability champions in the business units and functions. Experts in each Corporate Function have reviewed the analysis of each aspect, and a particular attention has been given to consistency with the Group's risk analysis.

Materiality analysis process



STAKEHOLDER INCLUSIVENESS | SUSTAINABILITY CONTEXT

Indirectly taken into account:
- through the exhaustive list of aspects of the SASB's "Materiality Map™"
- through the "evidence of interest criteria" which includes the analysis of documents published by each stakeholder group

Report
Reporting on the 8 High materiality topics and the 17 Moderate materiality topics.

4 Annual review led by the Sustainable Development Function

A review takes place after the report has been published, and the organization is preparing for the next reporting cycle. The findings inform and contribute to the Identification Step for the next reporting cycle.

1 Use of the SASB's Materiality Map™
SASB's Materiality Map™ identifies likely material sustainability aspects on an industry-by-industry basis.

3 Review our analysis by the Executive Committee and the Global Business Units and corporate functions leaders, give a special importance to ensure consistency with the analysis of the Group's main risks and also compare with the result of the analysis of the SASB for the chemical sector.

2 SASB's Materiality Map™ is based on tests designed to prioritize issues. To determine which sustainability topics were likely to be material to particular industries, SASB ran the following tests: evidence of interest, evidence of financial impact, forward looking adjustment.

The network of Solvay Way champions and internal experts for each highly material aspect were involved in the process.

2016 updates

The list of the Group's main risks has been updated to reinforce consistency with the materiality analysis.

As in 2015, the wording of the material issues has been kept consistent with the SASB Materiality Map™, except in cases where the Group's Executive Committee has made a decision to do otherwise during the validation step in order to broaden the scope of some material issues. For example, the high materiality issue labelled "Employee Engagement and Wellness" includes issues that are labelled "Labor Relations" and "Fair Labor Practices" in the SASB Materiality Map™.

3.3. Stakeholder engagement

Investors

In 2016, particular attention was paid to the work of the Task Force on Climate-related Financial Disclosures (TCFD). Group representatives from the Corporate Finance function and the Sustainable Development function participated in consultations and various working groups. The TCFD published its recommendations on December 14, 2016, too late to be included in this report.

The 2015 Annual Report and the 2015 Complementary Annual Report on Sustainable Development Information have been submitted to the GRI Review Service. The feedback was used to improve the content and presentation of this report.

In 2015 Solvay won the "Best Belgian Sustainability Report" award from the Belgian Institute of Registered Auditors; following this, a representative from Solvay joined the jury for the 2016 award. This participation made it possible to interact with the other members of the jury and learn more about their expectations for sustainability reporting.

The Group received questionnaires from investment funds in 2016 relating to its position on substances of very high concern (SVHC), animal testing, and carbon pricing – issues already covered in our reports.

The materiality analysis was presented in 2015 to a particular group of investors: descendants of the founding families of the Solvay group, who currently represent the largest group of investors. Solvay used a dedicated social media platform to present the analysis, submitting a questionnaire that asked them to rank material issues (high-moderate-low priority) as listed by the SASB in their materiality approach. Their feedback is presented in the 2015 Annual Report.

Employees

Engagement is fostered by regular dialog between the managers of the Group and the employees. More specifically, social dialog covers dialog with employees' representatives at four levels: sites, countries, Europe, and Group.

For more details about the main topics discussed in 2016, please see the "Social dialog" section of this report.

The materiality analysis of the Group has been presented to the Sustainable Development Commission for the Group's European Works Council. No particular comments have been made by employee representatives on the materiality analysis.

Since 2013, Solvay is committed, through a Global Framework Agreement signed with IndustriALL Global Union, to respecting fundamental human rights resulting from ILO conventions and UN Global compact initiatives. Beyond the scope of its employees, Solvay expects that this agreement will ensure that its suppliers and subcontractors respect the same rules. Of special mention are the visits, organized twice a year in the Solvay sites with the participation of IndustriALL officers, to assess the compliance of Solvay with these principles.

Planet

Solvay engages in a constructive dialog with public authorities on issues of legitimate interest to Solvay. This includes participation in many trade associations at global and regional level, such as the World Business Council for Sustainable Development (WBCSD), the International Council of Chemistry Associations (ICCA), BusinessEurope, and European Chemical Industry Council (Cefic). Examples:

- **COP22:** Solvay confirmed its commitment to fighting climate change at COP22 in Marrakesh. Participating in several high-level meetings with business leaders and ministers from across the globe, Jean-Pierre Clamadieu highlighted the important role that innovation from the chemical industry and collaboration between industry sectors can play in implementing the Paris agreement.
- **United Nations Sustainable Development Goals:** at its headquarters in Brussels, Solvay organized an internal workshop on the 17 United Nations Sustainable Development Goals (UNSDGs). The objective of the half-day event was to raise awareness around the UN 2030 Agenda and see how the five Solvay Sustainable Development targets (as well as the whole list of the 13 materiality issues) fit in this global framework. The workshop generated a helpful exchange with some of the Group's external stakeholders (United Nations, European Commission, European Parliament, Carbon Disclosure Project, Belgian Federal Institute for Sustainable Development, Corporate Social Responsibility Europe).

Communities

The "Community Development" chapter of this report includes examples of actions initiated locally, in the areas around our sites, within the framework of local community engagement.

Solvay CEO Jean-Pierre Clamadieu signed the "Alliance for YOUth" pledge in the presence of the European Commissioner Marianne Thyssen. Solvay's participation is one part of several commitments the Group has made, including the European Pact 4 Youth, to stimulate policies on youth employability to enhance business competitiveness.

Customers

Solvay puts its customers at the heart of its strategy and is continuing its shift towards greater customer centricity. To pursue this aim, Solvay organizes regular Group Tech Days with key customers, who are best positioned to understand the needs of the end consumers, and who are driving the market trends.

These Tech Days aim to raise Solvay's visibility as a solution provider and enhance its recognition as a strategic partner, both for its current product offering and for future customer-focused co-innovations. During these events, Solvay focuses on our customers' challenges, which later enables us to match their needs.

In the last five years, Solvay has held about 20 Group Tech Days with leading players in such industries as automotive, aeronautics, oil & gas, agro, and coatings in Europe, Asia and the Americas. These events have had a significant impact for the group, with more than 2,500 representatives of customers giving rise to tangible business opportunities for the group (e.g. through joint-development agreements).

Suppliers

Below are some examples of engagement with suppliers:

- A suppliers' online satisfaction survey was conducted at the end of 2015. The survey sought to promote Solvay Way practices and ensure balanced relationships with suppliers. Of the 790 suppliers invited to participate, 484 responded. Suppliers truly appreciate the strong relationship they have with Solvay. Suppliers also took the opportunity to raise some areas for improvement, such as communication concerning general news, business, forecasts, and new products.
- On September 20, 2016, the Together for Sustainability (TfS) summit took place in Mumbai, India, to build awareness of the importance of creating a sustainable supply chain in the chemical industry. Over 500 participants attended the conference, including representatives from suppliers and members of the TfS organization, as well as local and international associations. For more information about the TfS initiative, please see http://www.tfs-initiative.com.
- Solvay organized an Excellence Award in Latin America event to recognize suppliers that provided exemplary logistics services in 2015. The awards were very well received, and generated positive feedback both internally and externally. This recognition is put to good use by suppliers with respect to their teams and customers.

4. NOTES TO THE EXTRA-FINANCIAL STATEMENTS

NOTE S1
Sustainable Portfolio Management

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

How the methodology works

SPM considers both:

- the environmental manufacturing footprint and its correlated business risks and opportunities,
- the marketplace and how, in its specific applications, a product brings sustainable benefits or faces challenges.

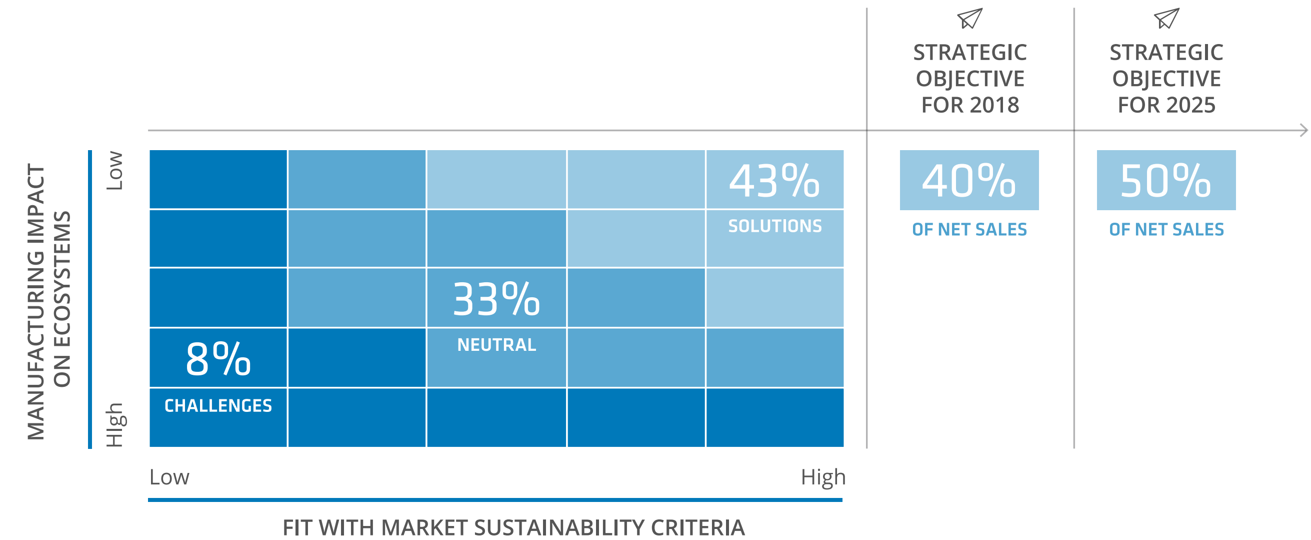
To be considered a part of the "Solutions", products must serve in an application that demonstrates a direct, significant, and measurable benefit (social or environmental) to society at large. They must not exhibit any sustainability concerns and must have a low environmental manufacturing footprint compared to the value they bring to society.

If a sustainability roadblock is identified, or if its environmental manufacturing footprint is too high, the product-application combination (PAC) will be ranked in "Challenges".

The results of the SPM analysis are presented by a heat map showing the revenue breakdown by category: Solutions, Neutral, and Challenges.

The guide on Solvay SPM methodology will be finalized and published before summer 2017 and made available on the Solvay corporate website.

2016 SPM Heat Map



SOLVAY'S STRATEGIC OBJECTIVES:

2018 mid-term	2025
40%	50%
Raise the proportion of sustainable solutions to 40% of Group sales	Generate at least 50% of the group sales in "Sustainable Solutions"

Baseline 2014

Results of the SPM analysis

Revenue breakdown by SPM heat map categories

% of turnover	2016	2015	2014
Solutions	43	33	25
Neutral	33	39	39
Challenges	8	16	15
Not evaluated	16	12	21

By the end of 2016, 43% of product-application combinations in the assessed portfolio qualified as "Solutions", a significant progress compared with the previous year. This improvement comprises:

- six percentage points due to changes in scope (Cytec acquisition, Emerging Biochemicals and Acetow divestments)
- two percentage point from non-recurring quick wins reflecting faster growth in Solutions
- two percentage points from innovation programs aimed at developing more sustainable business.

SPM global and systematic assessment involves an evaluation of the portfolio in 2016 based on 2015 turnover. Changes in scope during the year are taken into account in the scope of 2016 SPM analysis.

External validation

Since 2009, Arthur D. Little (ADL), our partner in developing and improving the SPM methodology, has performed in-depth verification of the Market Alignment results.

In 2016, ADL screened all the PACs in the database and selected 150 PACS for deeper review, 100 with higher value for Solvay based on multiple criteria, and 50 on a random basis. In addition, Solvay submits 50 PACs per year to ADL for review. All the PACs in the database will be reviewed at least every five years. By the end of 2016, ADL had reviewed 48 PACs.

ADL reaches the same conclusion for 89% of PACs, a more positive conclusion for 9%, and a more negative conclusion for 2%. The impact of the corrections is too small to affect published figures.

Correlation between SPM analysis and sales growth

SPM is designed to boost Solvay's business performance and deliver higher growth. Over the last three years, Solvay's products have experienced significantly different annual revenue growth rates depending on whether customers and consumers are seeking out Solvay's products to match their unmet social or environmental needs.

Annual growth rate per SPM category:

- Solutions (unmet needs to achieve higher social or environmental standards): +9%
- Challenges (sustainability concerns or roadblocks): -3%

(based on turnover with same product, same application, and same SPM ranking over the last three years representing 45% of Group revenue).

SPM in key Group processes

The Corporate Sustainable Development function manages the Sustainable Portfolio Management methodology and deploys it in close cooperation with Business Units and Functions in key processes: Strategy, Research and Innovation, Capital Expenditures, Marketing and Sales, and Mergers and Acquisitions. The SPM methodology is part of the Solvay Way framework and helps to measure the maturity of Global Business Units and Corporate Functions with regard to how well sustainability is integrated into their business practices.

- The SPM profile is an integral part of the strategic discussions that each of the Global Business Units holds with the Executive Committee.
- Mergers and Acquisition (M&A) projects are also evaluated through SPM to analyze the feasibility of the investment according to the Sustainable Portfolio targets. As an example, Composite Materials was expected to deliver 86% of its revenue in Solutions according to the SPM analysis done prior to the acquisition of Cytec, and turned out to have reached 84% when assessed in depth on its real performance in the first year after the acquisition.
- Decisions about investments (capital expenditure above €10 million and acquisitions) made by the Executive Committee or the Board of Directors include a sustainability challenge that encompasses an exhaustive SPM analysis of the contemplated investment.
- In 2016, 576 Innovation projects were evaluated with the SPM methodology, accounting for 100% of projects for which resources were allocated. Of those, 60% are expected to deliver additional revenue in Solutions.
- In Marketing and Sales, SPM makes it possible to engage customers on sustainability fact-based topics aimed at differentiating and creating value for Solvay and the customer, such as climate change action, renewable energy, recycling, and air quality.

Towards a reference framework for active portfolio management

Solvay co-chairs two coalitions that are instrumental in setting the industry reference framework for active portfolio management:

- The World Business Council of Sustainable Development's Portfolio Sustainability Assessment initiative aims at creating a high standard and common framework to guide industries on its implementation as a specific methodology for the chemical industry. Benchmarking and sharing best practices among peers make the SPM methodology more robust and enable better decision-making.
- TNO's joint research program on Sustainable Chemical Product Performance aims at setting a reference methodology for measuring product performance, with a strong scientific background.

Business cases

Composite Materials completes its first SPM analysis

The Composite Materials (CM) GBU has the highest percentage of sales through sustainable solutions covering the two business lines, Aerospace and Industrial; this is in line with Solvay's expectations when it acquired Cytec. The CM business provides lightweighting materials in Aerospace to reduce fuel consumption. The industrial segment comprises applications for automotive, tooling, and recreational products, among others. In automotive, CM products help make vehicles safer (thanks to their excellent energy-absorbing capabilities) and improve their fuel efficiency.

The market value of products in the CM portfolio versus their environmental impact is very favorable, making them ideal alternatives to more environmentally impactful products.

For CM, this was an opportunity to analyze its product portfolio with fresh eyes. By asking new questions through SPM, CM gained a better understanding of how its products contribute, for example, to aircraft parts that are more durable and have a longer lifespan. These are additional sustainability features that CM's marketing efforts can leverage.

For CM, the journey is only beginning. SPM is supporting action plans such as a deep dive to determine where CM wants to drive its product portfolio and more interactions with key accounts to use SPM findings as a growth lever to help them achieve their own sustainability goals.

OPTALYS® product range in road transport emissions control

13 CLIMATE ACTION | 11 SUSTAINABLE CITIES AND COMMUNITIES | 3 GOOD HEALTH AND WELL-BEING

According to the latest figures from the International Energy Agency (IEA Statistics 2015), transport accounted for 23% of global CO_2 emissions, of which road transport represents 75%. The majority of automotive exhaust gas is non-toxic, being nitrogen (N_2), water vapor (H_2O), and carbon dioxide (CO_2), but incomplete fuel combustion generates toxic substances such as carbon monoxide (CO), unburnt hydrocarbons (HC), nitrogen oxides (NO_x), and particulate matter. The latter item comprises fine and ultrafine soot particles that cause serious health problems.

Internal combustion engines cannot be optimized for highest fuel efficiency and lowest emissions at the same time. The operating conditions of modern automobile engines are optimized for fuel efficiency, and exhaust after-treatment devices, such as catalytic converters and particles filters, are required to further reduce engine-out emissions to meet the WHO's air quality recommendations. Solvay's OPTALYS® range offers high-performance cerium and zirconium oxide products that support the new technologies for catalytic converters and particle filters that will enable the automotive industry to meet forthcoming emission reduction regulations for both diesel and gasoline engines in the USA, Europe, China, and India.

Specialty Polymers and surgical instruments

The Specialty Polymers GBU, working with Medacta International – a leading manufacturer of orthopedic implants, neurosurgical systems, and instrumentation – and independent sustainability consultant Swiss Climate, completed a unique study comparing the carbon footprint of single-use and reusable surgical instruments. The study challenges the perception that single-use medical instruments have a more negative environmental impact than reusable instruments.

Applying the ISO 14044 standard for life cycle assessment, the group focused its study on the cumulative environmental impact of a surgical instrument kit for knee replacement manufactured by Medacta. The kit is available either with all-metal reusable instruments (GMK®) or with single-use instruments (GMK® Efficiency) injection molded from several high-performance medical grade polymers from Solvay.

The study demonstrated that the annual CO_2 equivalent emissions of the GMK® Efficiency single-use instrumentation are neutral when compared with the re-usable metal instrumentation. The study made metal-to-plastic conversion more viable for these applications. Additional input from Swiss Climate found that the GMK® Efficiency single-use instrumentation eliminates the need for repeated washing and sterilization, which can save up to 435 liters of water for each surgical knee procedure.

Aside from this conclusion on environmental impact, demand for single-use instruments is growing quickly due, in part, to their potential for reducing hospital-acquired infection.

Building on Solvay Specialty Polymers' innovative products, Medacta's latest innovation, GMK® Efficiency, demonstrates a constant commitment to providing safe and highly competitive solutions that deliver sustainable economics while respecting the environment.

NOTE S2
Greenhouse gas emission management

In November 2015, Solvay set a new long-term objective regarding greenhouse gas emissions: to reduce its carbon intensity by 40% by 2025. Furthermore, from January 1, 2016, Solvay applies an internal price for CO_2 emissions of € 25 per metric ton, to take into account climate challenges in its investment decisions.

An externally verified and structured greenhouse gas emission reporting system and responses to rating agencies such as the Carbon Disclosure Project help the Group to align its efforts on the effectiveness of its greenhouse gas challenges.

Definition of indicators for greenhouse gases (GHG)

The greenhouse gas emissions reported by Solvay correspond to the scope of the Kyoto Protocol and comprise the following compounds or compound families: CO_2/ N_2O/ CH_4 / SF6/ HFCs/ PFCs and NF3. To calculate the impact on climate change, the greenhouse gas emissions are converted from metric tons to the CO_2 equivalent using the Global Warming Potential (GWP) of each gas as published by the Intergovernmental Panel on Climate Change (IPCC) in its Fifth Assessment Report.

The indicator takes into account:

- direct emissions for each GHG released from Solvay's industrial activities (Scope 1 of Kyoto Protocol)
- reporting of direct CO_2 emissions, including emissions from the combustion of all fossil fuels as well as process emissions (e.g. thermal decomposition of carbonated products, chemical reduction of metal ores)
- indirect CO_2 emissions related to the steam and electricity purchased from third parties (Scope 2 of Kyoto Protocol). For electricity purchased, indirect emissions are calculated by applying the market-based methods. For 2016, the calculation does not include the use of residual mix, the details of which are not available.

Greenhouse gas emissions (Scope 1 & 2)

Mt CO_2 equ.		**2016**	2015	2014
Direct & indirect CO_2 emissions (scopes 1 & 2)	Mt CO_2	10.9	11.6	11.7
Other greenhouse gases (Kyoto Protocol) emissions (scope 1)	Mt CO_2eq	2.4	2.6	2.7
Total greenhouse gases (Kyoto Protocol) emissions	Mt CO_2eq	13.4	14.2	14.4
Other greenhouse gases (non-Kyoto Protocol) CO_2 emissions (scope 1)	Mt CO_2eq	0.1	0.1	0.1

Scope: The manufacturing activities of the companies that are currently consolidated (fully or proportionately). The greenhouse gas emission of the companies in the financial perimeter represents 83% of the total greenhouse gas emissions of all companies in the operational perimeter.

In 2016 greenhouse gas emissions were 0.8 Mt CO_2 eq. lower than in 2015. This change is explained mainly by changes in the reporting scope, which now includes recently acquired Cytec activities and seven newly added sites, for an increase of 0.4 Mt CO_2 eq. The divestment of precipitated calcium carbonate activities and the classification in discontinued assets of chlorovinyl activities in Thailand and at Acetow led to a decrease of 0.9 Mt CO_2 eq. The rest of the variation (-0.3 Mt CO_2 eq.) is linked to emission reduction projects and production changes.

Greenhouse gas intensity

SOLVAY'S STRATEGIC OBJECTIVES:

2018 mid-term

- 20%

Reduce greenhouse gas intensity by 20% in comparison with 2015

2025

- 40%

Reduce greenhouse gas intensity by 40% in comparison with 2014

Greenhouse gas intensity

In kg CO_2 eq / € EBITDA	**2016**	2015	2014
Greenhouse gas intensity	5.86	7.26	8.08

Legend: The greenhouse gas intensity indicator covers Kyoto Protocol greenhouse gases.

Key achievements:

- in the trona mine at Green River (Wyoming, United States), partial recovery of the methane emitted during the extraction and combustion of trona has avoided emissions equivalent to 100,000 metric tons of CO_2 eq. per year since 2011. Since 2012 a portion of the heat from the combustion of the recovered methane has been used in the manufacturing process, bringing additional energy and CO_2 savings
- in Brazil, Solvay has developed and operates a biomass-fired cogeneration unit using sugarcane bagasse
- thanks to a SOLWATT® energy and carbon efficiency program and other greenhouse gas emission savings from processes, savings are estimated at 100,000 metric tons of CO_2 in 2016.

NOTE S3
Energy management

Solvay's 2020 target is to reduce the energy consumption by 10% (1.3% per year on average). The reference year is 2012 at constant activity scope. To achieve this objective, Solvay will step up its SOLWATT® energy efficiency program, continuously optimize its industrial processes, develop clean technologies, and increase the share of renewables in its energy production and supply.

Solvay has taken concrete steps in the form of large technical investments, such as the recent purchases of two cogeneration units, one in Spinetta (Italy) and one in Massa Carrara (Italy), and the construction of a cogeneration unit in Oldbury (United Kingdom).

Definition of indicators for energy

Energy consumption is made up of four components:

- non-renewable primary fuels (coal, natural gas, fuel oil, etc.), which are used for internal production of steam, electricity and mechanical energy, and in manufacturing processes (coke in lime kiln, gas in dryers, etc.)
- renewable primary fuels (biomass, biogas, etc.)
- purchased steam
- purchased electricity.

Since 2016, steam and electricity generated from fuels and sold on to a third party are deducted from the total. Energy that is purchased and sold to a third party afterwards without any transformation is not accounted for.

In petajoules low heating value (PJ)	2016	2015	2014
Energy consumption	138	175	179

Scope: This indicator shows the primary energy consumption over a given year related to the manufacturing activities of the companies that are currently consolidated (fully or proportionately).

Legend: The primary energy consumption of the companies in the financial sphere represents 77% of the total primary energy consumption of all companies in the operational sphere.

In 2016, energy consumption was 37 PJ less than in 2015. This change is attributable mainly to a single change in the reporting methodology and to changes in the reporting scope. To comply with GRI standards, the amount of energy sold to third parties (23 TJ) is now deducted from the total. The inclusion in the reporting scope of recently acquired Cytec's activities and seven newly-added sites accounted for an increase of 6 PJ. The divestment of precipitated calcium carbonate activities and the classification in discontinued assets of chlorovinyl activities in Thailand and at Acetow led to a decrease of 16 PJ. The rest of the variation (-4 PJ) is linked to energy savings projects and production changes.

Energy intensity

SOLVAY'S OBJECTIVE:

2020

- 10%

Reduce energy consumption by 10% at constant activity scope

Baseline 2012

Energy intensity covers primary energy from fuels (coal, natural gas, fuel oil, etc.) and from purchased steam and electricity.

Energy efficiency index – Baseline 100% in 2012

In %	2016	2015	2014
Energy efficiency index	94	96	99

Legend: Energy index at constant activity scope reflects the change in energy consumption on a comparable basis after adjusting the historical scope to take into account scope changes and making adjustments for changes in production volumes from one year to the next.

Reduction of energy consumption

In 2016, the Group launched its second energy and carbon efficiency program, SOLWATT 2.0®. Energy performance contracts were signed between Solvay Energy Services and the other GBUs to ensure that the findings of the energy audits are implemented. The plan follows three approaches in parallel:

- by developing the use of high-efficiency cogeneration plans, the Group is improving the generation efficiency of secondary energy such as steam and electricity. In 2016, a new cogeneration unit based on a gas-fired engine was put into operation in Livorno, Italy, to replace conventional boilers.
- The SOLWATT® program aims to identify and implement energy savings in existing manufacturing units, through technological improvements and management behavior. By the end of 2015, SOLWATT® had been gradually rolled out and now covers almost all of the Group's manufacturing sites.
- new and remodeled plants are being optimized for energy consumption and generation.

In 2016, the Soda Ash & Derivatives GBU significantly enhanced the energy performances of the soda ash plant in Devnya, Bulgaria, with its World Class Factory plan. New cogeneration units such as those in Ospiate and Porto Marghera (Italy) are also being studied.

NOTE S4
Air quality management

Solvay has committed itself to improving air quality at the local and regional levels, in close cooperation with local stakeholders and according to industry best practices. In the framework of its environmental plan, Solvay focuses on the following pollutants: nitrogen oxides (NO_x), sulfur oxides (SO_x), and non-methane volatile organic compounds (NMVOC).

- Nitrogen oxides: sum of nitrogen oxide emissions (NO and NO_2, expressed as NO_2) excluding N_2O. Nitrogen oxide emissions result mainly from the combustion of fossil fuels such as natural gas. Nitrous oxide (N_2O) contributes to global warming but does not have the acidification impact of NO and NO_2
- Sulfur oxides: emissions of sulfur oxides (SO_2) arise mainly from the combustion of anthracite or coal
- Non-methane volatile organic compounds (NMVOC): Volatile organic compounds (VOCs) have a standard boiling point inferior or equal to 250°C (EU Solvent Directive 1999/13/EC). NMVOCs are VOCs other than methane. Methane emissions from Solvay's mining activity at Green River (Wyoming, United States) are not included. Their impact is integrated in the GHG emission indicator.

Absolute air emissions

In metric tons	2016	2015	2014
Nitrogen oxides – NO_x	11,098	12,210	12,679
Sulfur oxides – SO_x	5,395	6,563	6,620
Non-methane volatile organic compounds – NMVOC	4,968	6,781	7,158

There are several reasons for improvements with respect to nitrogen oxides, including:

- at the Devnya – Deven site in Bulgaria (-291 metric tons): lower operation of the older "grate firing boilers" and higher stream factor of the CFBB (circulating fluidized bed boiler) equipped with a SNCR (selective non-catalytic reduction) system using ammonia injection
- at the Torrelavega site in Spain (-270 metric tons): replacement of the gas turbine of the cogeneration plant
- at the Rheinberg site in Germany (-127 metric tons): selection of a better coal quality and optimization of the SNCR process

The improvements for sulfur oxides result from the following:

- at the Tavaux site in France (-717 metric tons): coal consumption halved because of technical issues in the boilers and the installation of DeSOx (desulfurization) unit in November 2016.
- at the Rheinberg site in Germany (-218 metric tons): operation of the coal boiler with low-sulfur coal and optimization of the DeSOx process.

The improvements for NMVOC result from the following: :

- the majority of the reduction on this indicator (-1181 metric tons) is due to the deconsolidation of the Acetow business
- at the Zhangjiagang Feixiang site in China (-262 metric tons): reduction of methyl chloride emissions due to the implementation of a cryo-condensation unit in August 2016.

SOLVAY'S OBJECTIVES:

2020
- 50%
of nitrogen oxides emissions intensity

2020
- 50%
of sulfur oxide emissions intensity

2020
- 40%
of non-methane volatile organic compound emissions intensity

Baseline 2015

Air emissions intensity

In kg per € EBITDA	**2016**	2015	2014
NO_x	0.0058	0.0063	0.0071
SO_x	0.0028	0.0034	0.0037
NMVOC	0.0026	0.0035	0.0040

Solvay's 2016 achievements for NO_X and NMVOC intensity are better than the expected 2016 target, whereas for SO_2 the Group is slightly behind the target.

NOTE S5
Water management

The Group has a Company-wide water policy that includes a commitment to limiting freshwater withdrawals and consumptions, and to ensuring that the quality status of the water bodies where effluents are discharged remains good, so that the impact on humans and natural biota is minimized.

Solvay's 2015-2020 environmental plan focuses on reducing two impacts: freshwater withdrawal, and chemical oxygen demand (COD) emissions. The number of sites potentially exposed to water scarcity is no longer reported, as it reflected a Solvay internal program with an indicator that cannot be benchmarked against peers.

- Freshwater withdrawal (million m^3/year): this is the amount of incoming water from freshwater sources (surface and groundwater) and from alternative sources such as drinking water.
- Chemical Oxygen Demand: this is the amount of reducing substances (mainly dissolved organic matter) discharged to aqueous receivers. COD is expressed as metric tons of oxygen per year. In addition to nitrogen and phosphorus species, COD contributes to aquatic eutrophication.

Water intake and discharge

	2016	2015	2014
Freshwater withdrawal (million m^3)	491	537	535
Chemical Oxygen Demand (COD) emissions (metric tons O_2)	7,539	8,834	9,652

Due to a change in corporate reporting rules regarding waste water plants treating effluents from third parties, the COD on the site of Spinetta-Marengo (Italy) has been recalculated over the whole period 2014-2016.

The Group's recent improvement in freshwater intake was achieved thanks to:

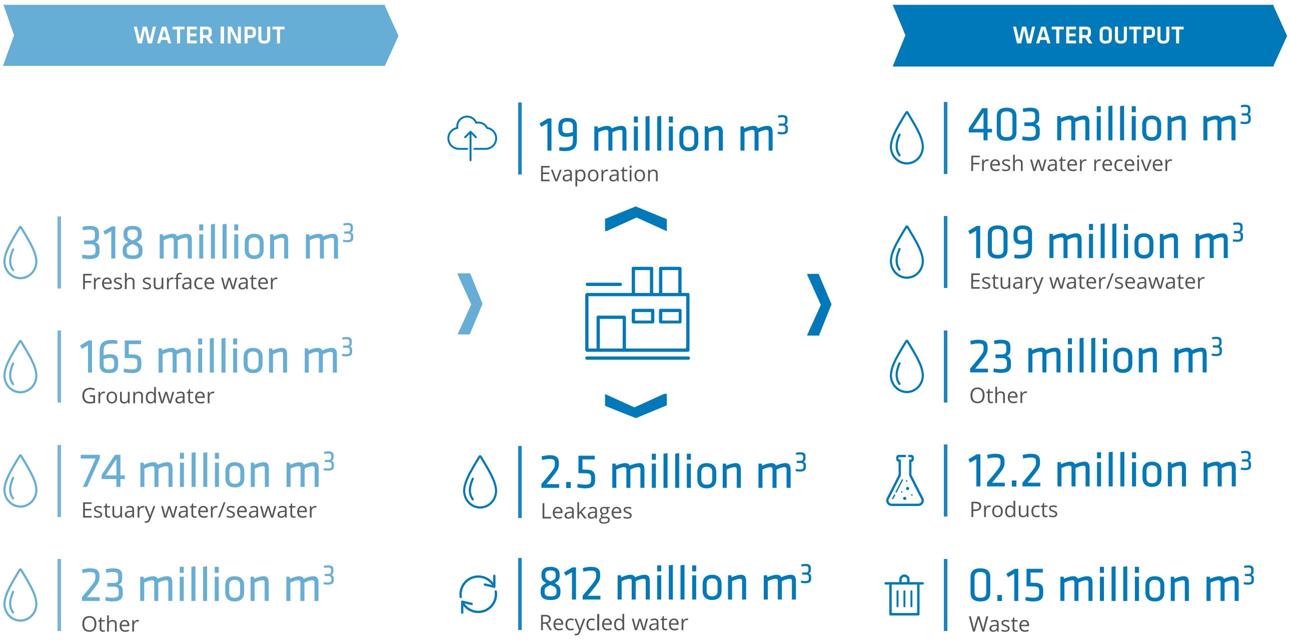
- deconsolidation of the divested Acetow (-29.6 million m^3) and Emerging Biochemicals (-3.4 million m^3) businesses;
- decommissioning or sale of different sites (Bussi sul Tirino, Bad Zurzach, etc.) for a total of -8.8 million $m^{3;}$
- mothballing of the soda ash plant at Alexandria (Egypt) since March 2015 (-1.8 million m^3).

Because of an increased production volume, there was a higher water intake (+ 7.6 million m^3) at the Chalampé site in France.

The Group's improvement for COD emissions is due to the following beneficial effects:

- the Vernon site in the USA (-517 metric tons): reduction in production volume and improvement of the efficiency of the waste water treatment unit;
- mothballing of the soda ash plant at Alexandria (Egypt) since March 2015 (-334 metric tons);
- deconsolidation of the divested Acetow and Emerging Biochemicals businesses (-211 metric tons).

Water management



The left side of the graphic above shows water intakes (million m^3/year) from the main water sources. Other intakes include additional water sources: water recycled from third-party, rainwater, etc. The Group's total water intake in 2016 reached 580 million m^3, 85% of which was freshwater.

The right side of the graphic above shows water discharges (million m^3/year) to the most important receiving environments. Water discharges to other receptors (external waste water treatment plants, underground injection, etc.) are in the category "other". The Group's total water discharge in 2016 amounts to 535 million m^3, 80% of which discharged to the freshwater receptors.

Water loss by evaporation (19 million m^3) takes place in ICTs (Industrial Cooling Towers) or basins.

The circular arrow at the center-bottom of the graphic shows the total volume of water which was recycled with closed-loop cooling systems or re-used. Based on the data in this diagram, we calculate that recycled water accounts for around 58% of the total volume of water used in 2016.

The flask on the right-hand side corresponds to the volume of water exported through manufactured aqueous end-products (commercial hydrogen peroxide, for instance, typically contains 30-70% water), whereas the waste bin symbolizes the estimated amount of water losses through disposal or incineration of our waste materials (sludge, etc.).

SOLVAY'S OBJECTIVES:

2020
- 30%
of freshwater intensity

2020
- 30%
of Chemical Oxygen Demand intensity

Baseline 2015

Water intensity

	2016	2015	2014
Freshwater withdrawal intensity (litres per € EBITDA)	0.26	0.28	0.30
Chemical oxygen demand intensity (Kg per € EBITDA)	0.0040	0.0045	0.0054

Solvay's 2016 achievement for freshwater intake intensity is slightly better than the expected 2016 target. For the COD emission intensity, our progress is even 8 % better than foreseen.

NOTE S6
Environmental accidents and remediation

The Group pursues two courses of action: preventing accidental spills and remediating contaminated subsoils.

Preventing spills

The first course of action relies on two voluntary approaches that, when combined, are good practices in our industry:

1. Identifying and remediating the highest risk situations, relying on a voluntary environmental risk assessment program. This program is monitored at the Group level via the number of identified and resolved "Risk Sheet 1 situations" ("leading indicator"). The Group policy requires such situations to be resolved within one year.
2. Managing risks using records and lessons learned from previous accidents. Accidents and incidents are monitored using a standardized classification ("lagging indicator"). As corrective actions, every exceedance of a permit limit is specifically examined at the GBU level and by the zone HSE management team to ensure adequate actions are taken to avoid recurrence. Such events are part of the dashboard regularly transmitted to the Executive Committee.

- Risk assessment indicator (leading indicator): this indicator monitors the environmental risk assessments that started in 2015, using new Group criteria to determine unacceptable risks and a comprehensive method to complete risk assessments at all sites, taking account of substances and specific parameters. Only one new Level 1 environmental risk sheet situation was identified in 2016. The mitigation measures will be defined and implemented within one year. Solvay will ensure that the effectiveness of the implemented corrective measures is maintained over time. There is a new process for identifying Risk Level 1 for the environment, and the assessment is currently being completed for the sites for which a compliance audit has been performed (75% of the industrial sites - see Note 13). A very limited number of Risk Level 1 incidents are expected.
- Following up incidents with environmental consequences (lagging indicator): since 2014, process incidents with environmental consequences have been monitored and classified according to a scale based on various criteria, such as quantity of material spilled, consequences on site or off site, damage to the immediate vicinity, and dead fish. Incidents are classified by severity (from M - medium severity to C - highest severity). Within the medium severity classification, a specific criterion is used to reflect events that will lead to the exceedance of permit limits.

Number of incidents with environmental consequences

	2016	2015	2014
Number of medium severity incident with environmental consequences	40	46	55
of which with operating permit exceedance	26	26	No data

Scope: Solvay Group Manufacturing and Research and Innovation sites under operational control. The consolidated data for process safety incidents covers 132 sites out of a total of 143 operational sites.

In mid-2014, Solvay set up a new reporting system for process safety incidents, with specific criteria for incidents with environmental consequences. No H or C severity incidents have been reported, meaning there has been no long term damage off site for the environment. We succeeded in reducing M incidents and incidents incurring releases above permit limit.

Protecting and remediating the subsoil

Soil contamination "legacies" is very carefully managed, with a long-term vision, to protect health and the environment. Solvay's management aims to

1. prevent any new soil contamination
2. precisely characterize soil conditions whenever needed at both active and closed sites, and
3. manage soil and/or groundwater contamination so as to prevent any further dispersion in surrounding areas.

Solvay always carries out detailed risk assessments as a key step towards selecting the most appropriate management measures.

Finding innovative remediation approaches is a permanent goal, for example via the EU research project Nanorem, which is now coming to an end. This research project is giving us more insight into the application limits of a remediation technology for treating contamination by chlorinated compounds, based on injecting nanoparticles of iron into the soil subsurface.

Environmental financial provisions

Solvay manages soil contamination, and environmental financial provisions (mainly dedicated to the management of soil contamination), with a long-term vision. Provisions remained stable between 2015 and 2016, with slight changes mainly due to financial factors (exchange rate movements). Increases between 2014 and 2015 were also due to financial factors (discount and exchange rates), and to scope changes.

Environmental provisions

In € million	**2016**	2015	2014
Environmental provisions	737	723	713

Legend: Provisions are reviewed on a quarterly basis in accordance with the IFRS norms.The provisions for recently acquired Cytec are included in the 2016 figures.

NOTE S7
Hazardous materials management

Solvay currently places over 13,000 products on the market. Solvay is committed to a comprehensive understanding and management of the hazards, risks, and applications related to hazardous materials. Solvay's management of hazardous substances addresses the different steps in the value chain. Substances of very high concern (SVHC) in particular are subject to dedicated management approaches as regards: (1) use as raw materials, (2) placing on the market and possible substitution, (3) handling during manufacturing, and (4) managing hazardous waste. In addition, Solvay pursues a strategy of decreasing the use of hazardous substances in value chains, and of maintaining consistent safety information on hazardous substances.

Portfolio strategy

Solvay continues to proactively assess its portfolio of activities (Sustainable Portfolio Management assessment) in order to orient strategic investment and portfolio decisions towards greater sustainability. This means scrutinizing, for every new marketed product, a series of sustainability criteria: SPM is used to assess every product in each application, including for the presence of SVHCs in downstream value chains (either stemming directly from the presence of substances of very high concern in Solvay products or from components other than Solvay products associated in the final solution on the market).

Information on hazardous substances: extended rules

Solvay centrally manages product safety information for all hazardous substances. This is key to ensuring adequate management of these substances, both in Solvay operations and along value chains. The following management elements have been reinforced and are now fully effective (except for the recently acquired Cytec):

- standardized Safety Data Sheets, using shared rules and models across the Group
- automatic Safety Data Sheet authoring and distribution (rules for classification, automatic distribution according to the countries of sale, Global Labeling System, etc.)
- consistent product labels that comply with regulatory guidelines worldwide
- common regulatory data, toxicological and ecotoxicological data, and phrases library.

Substances of very high concern (SVHCs) voluntary approach

Solvay implements a global voluntary approach for the approximately 300 substances of very high concern in products and raw materials, meaning it keeps updated inventories of SVHCs handled by Solvay operations on the basis of an updated reference list, handles SVHCs under strictly controlled conditions, and updates risk studies for all SVHCs and where possible replaces them with safer alternatives.

The group-wide reference list for SVHCs was established in 2015. To date, 133 sites (77%) have cross-checked their inventory. Solvay's proactive approach to anticipating substitution constraints uses three categories (black, red and yellow) to characterize substances' level of risk management and control:

- **Black list SVHCs**: already undergoing a regulatory process of phasing-out or restriction, with a known deadline in at least one given country or zone
- **Red list SVHCs:** currently included in regulatory lists of substances that could enter into a process of special authorization or restriction in the medium term
- **Yellow list:** substances requiring specific attention (SRA), i.e. substances under scrutiny by authorities, NGOs, scientists, and industries due to their current hazard properties or potential effects.

SVHCs in marketed products

Business units continuously run programs aimed at the proactive management of SVHCs put on the market, ensuring business continuity while respecting legal duties, Solvay's Responsible Care® policies, and sustainable development.

Solvay's programs also aim to have risk studies and to assess possible substitution alternatives for every new SVHC put on the market: the 2020 target is to complete 100% of risk assessments and analyze possible safer alternatives when available (target 2016: 15%). Inventories of SVHCs in marketed products are established annually and Analysis of Safer Alternatives (ASA) is performed accordingly.

SOLVAY'S OBJECTIVE:

2020

100%

Complete 100% of risk assessment and analysis of possible safer alternatives when available for marketed products containing SVHC

Baseline 2015

Number of Solvay's substances of very high concern (SVHC) placed on the market in 2016

	SVHCs in products on the market	For which the SVHCs come from raw materials
All SVHCs (list according to REACH registration and EU Authorization process + EU candidate list)(1)	20	10
ASA program for marketed substances(2) (% of completion)	18% (9/49 required assessments)	

Scope: Cytec is not included.

Scope: All Solvay products - except recently acquired Cytec - put on the market, that are either manufactured by Solvay or form part of the composition of the products sold.

Legend: SVHCs manufactured by or forming part of the composition of products sold by Solvay worldwide, currently in Europe's "Candidate List" or "Authorization list" of the REACH process. REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals.

(1) The Candidate List includes substances that are also present in the EU restriction process (annex XVII).

(2) Analysis of Safer Alternatives for potential substitution of SVHC.

Hazardous and non-hazardous waste

In the context of the 2015-2020 environmental plan, the focus is on industrial waste, and particularly on hazardous waste that is not disposed of sustainably.

- Industrial waste: waste stemming from our production activities, including packaging and maintenance waste. Industrial waste is composed of a hazardous and a non-hazardous fraction. Industrial waste excludes waste from our mining activities (541 metric ktons over 2016), which is composed almost exclusively of inert materials backfilled into the mine.
- Hazardous industrial waste not disposed of sustainably: of the total hazardous industrial waste that is landfilled or incinerated without energy recovery.

Absolute volumes

In 1,000 metric tons	2016	2015	2014
Non-hazardous industrial waste	1,463	1,453	1,637
Hazardous industrial waste	194.2	202.0	194.6
Total hazardous industrial waste	1,657	1,655	1,831
Industrial hazardous waste not disposed of in a sustainable way	50.3	47.1	49.7

Important corrections were made to the hazardous waste data from Chalampé-Butachimie as they were previously not expressed as dry matter.

The increase at Group level between 2015 and 2016 (+2,400 metric tons or +10%) for hazardous industrial waste which is landfilled or incinerated without energy recovery is the resultant effect of many increases and decreases at individual sites, too many to be described.

SOLVAY'S STRATEGIC OBJECTIVE:

2020

- 30%

of industrial hazardous waste not disposed of in a sustainable way

Baseline 2015

The 2020 objective is based on known perimeter changes and on estimates of waste reduction projects and recycling initiatives. The target estimate does not include the contribution from the Cytec Legacy, which is not yet known.

Waste intensity

In kg per € EBITDA	2016	2015	2014
Industrial hazardous waste not disposed of in a sustainable way	0.0265	0.0241	0.0279

Solvay's 2016 achievement for this type of waste is around 10% behind the 2016 target schedule. It has to be noted that trends in waste indicators should be interpreted with great care as waste might be stocked temporarily on sites, presenting spikes due to turn-around operations or to changes in waste classification (hazardous / non-hazardous).

Solvay has just initiated a corporate waste initiative, in which experts from the corporate environment and the Purchasing & Supply Chain Excellence departments will make an inventory of waste streams and waste management suppliers. The goal is to identify opportunities to reduce waste volumes, to recycle as, for example, by-product), and also to cut overall waste treatment costs. This program should contribute to the improvement of the waste indicator.

Handling SVHCs in operations

Dedicated rules define how SVHCs must be handled in Solvay's industrial operations in order to protect the health of the personnel.

NOTE S8
Employee health and safety management

3 GOOD HEALTH AND WELL-BEING

The challenge to improve further in occupational safety

Solvay's 2025 priority target is an MTAR (Medical Treatment Accident Rate) lower than 0.5, continuous improvement in Solvay employee safety, and a halving of the accident numbers recorded on our sites. Solvay's main focus is on the MTAR because this indicator takes into account the actual severity of accidents and does not depend on the local legal context (or practices of adapted work), which does, however, influence the Lost Time Accident Rate (LTAR) indicator.

- MTAR: number of work accidents leading to medical treatment other than first aid per million working hours.
- LTAR: number of work accidents with lost time (away from work) of more than one day per million working hours.

SOLVAY'S STRATEGIC OBJECTIVES:

2025

0.5

Halve the number of accidents involving medical treatment and reach an MTAR of 0.5

Occupational Accidents at Group Sites

	2016	2015	2014
Medical Treatment Accident Rate (MTAR)	0.77	0.77	0.97
Lost Time Accident Rate (LTAR)	0.76	0.75	0.98

Scope: All sites (including recently acquired Cytec in 2016) in Solvay's operational control for which the Group manages and monitors safety performance. This represents 235 manufacturing, R&I, administrative and closed sites - Solvay employees and contractors working on sites. The recently acquired Cytec activities have been included as from 2016.

Unfortunately, one fatal accident occurred in 2016 in a lift at a production facility in India.

In order to best ensure the safety of its employees and earn a spot amongst the industry's top players, Solvay has set an ambitious new MTAR target for 2025 and will strengthen its implementation of the Solvay Life-Saving Rules introduced in 2015.

Safety excellence plan

The Group safety excellence plan has been deployed since 2015. It pursues three key courses of action with the goal of further reducing the MTAR and preventing any high severity accident:

- Deployment of Health, Safety, and Environment (HSE) roadmaps in every unit
- Clear communication of management expectations
- Development of a safety mindset.

All global business units (GBUs) and sites have defined their dedicated HSE roadmap and have implemented a range of good safety practices, in particular:

- safety days (163 sites in 2016)
- formalized behavioral safety programs (146 sites in 2016)
- commitment by all managers to promote safety (leadership safety visits program: 1,580 LSV in 2016), together with safety tours, modeling exemplary behavior, and visibly implementing safety measures
- enforcement of Solvay Life-Saving Rules (started in 2015), to prevent fatalities and high-severity accidents

The Group is making the reporting and investigation of near misses a standard process, focusing particularly on those with a potential for serious injuries. In 2016, 423 near misses were reported.

In 2017, it will also launch a series of actions on preventing hand injuries (training, sharing of best practices, and risk awareness), as these represent 50% of total Medical Treatment Accidents (MTA) and their prevalence has increased since the integration of Cytec.

Industrial hygiene and occupational health

Industrial hygiene

To control potential exposure to chemicals, by 2020 Solvay aims to complete all risk assessments at the workplace and manage them using the new Solvay standards for industrial hygiene. Hence, the Industrial Hygiene program relies on the following measures, with a particular focus on substances of very high concern:

- chemical inventories, with a special focus on the substances of very high concern that have a detrimental impact on people's health (Solvay Health-SVHC);
- standardized and effective tools for screening potential risk of overexposure to chemicals: CTES (Critical Tasks Exposure Screening) is used to quickly spot situations where exposure to chemicals requires special attention and additional control measures
- risk assessment for identified potentially critical situations and for all potential exposure to Solvay Health-SVHC substances;
- a new Solvay application (SOCRATES), giving wide and easy access via the Intranet to all methods, tools, and databases.

Advanced health surveillance for employees

Solvay pursues a voluntary objective of ensuring that medical surveillance, most often ensured by external medical services, follows Solvay evolving standards. In particular, Solvay's advanced policy requires that the periodic medical surveillance of every employee is increasingly adapted to individual health risk profiles, with particular attention to SVHC, noise, and safety-sensitive jobs. Such risk profiles are established in the framework of the in-house Group program for industrial hygiene. This Solvay program, and the standardized assessment of workstations, has been leading the way for years amongst industry peers.

As a prerequisite, health teams working for Solvay need access to occupational hygiene data. Interfaces between the information tools used by health teams and the new Solvay hygiene IT tool and data, at every site, are an important element of the program. An increasing proportion of sites and medical teams are equipped to perform such advanced medical surveillance, based on Solvay's standardized industrial hygiene assessments.

SOLVAY'S OBJECTIVE:

2020

100%

of sites with an advanced risk-based medical surveillance

Health and industrial hygiene programs

In %	2016	2015	2014
Industrial Hygiene program: sites where hygiene specialists have been trained to new industrial hygiene standards	65	73	24
Advanced Health Monitoring program: sites with advanced risk based medical surveillance	18	28	26

Scope: All sites under operational control.

The pullback in 2016 of both programs is linked to the integration of Cytec, which will start implementing Solvay's standards in 2017.

Solvay's SVHC list includes all substances that are either:

- Carcinogenic, Mutagenic, or Toxic to Reproduction (CMR), and that meet the criteria for classification in accordance with the new Regulation on the Global Harmonized System, known as the "GHS" Regulation
- Persistent, Bioaccumulative, and Toxic (PBT), or very Persistent and very Bioaccumulative (vPvB)
- identified, on a case-by-case basis and through scientific evidence, as probably causing serious effects to human health or the environment that is of an equivalent level of concern to those above.

NOTE S9
Employee engagement and wellness management

Solvay pursues comprehensive initiatives and processes to cultivate the engagement and well-being of its employees, including:

- personal development
- reward & recognition
- inclusive culture
- work-life balance.

The Group 2025 target is an engagement index of 80%. This index is used as a yardstick to decide which actions are needed in these four areas.

SOLVAY'S STRATEGIC OBJECTIVE:

2025

80%

of Solvay Engagement Index

In 2016, the Engagement of Solvay's workforce was assessed via the "Pulse Survey", a shortened annual version of the global "Solvay employee survey" census, last carried out in 2015 and next scheduled for 2018. More than 23,000 employees answered 23 questions regarding their views on employment, management, and the activities of the Group as a whole.

The rate of engagement, deduced from a limited number of questions and reflecting the satisfaction of Solvay's personnel and their commitment to Solvay's success, stands at 77%, 2 percentage point more than in 2015. Site managers have been briefed on the results and shared them with personnel so that they can define improvement actions.

The survey also assesses perceptions about well-being at work, measured using four questions encompassing workload, mutual respect, immediate supervisor's support of efforts to achieve work-life balance, and satisfaction with working conditions. The average share of favorable answers increased slightly, to 67% from 64% last year. In 2016, work-life balance guidelines were drafted and distributed throughout the Solvay Group.

Social dialog

Engagement is also fostered by regular dialog between the managers of the Group and the employees. It is part of Solvay culture. Solvay considers that maintaining trusting and constructive relations with employees and their representatives forms the basis for such dialog. This relationship is built on the Group's commitment to respecting employees' fundamental human rights and to guaranteeing their social rights. The agreement with IndustriALL formalizes the Group's commitment.

More specifically, social dialog covers dialog with employees' representatives at four levels: sites, countries, Europe, and Group.

Solvay Global Forum

In 2015 Solvay created a global employee representative body, the Solvay Global Forum, composed of eight employee representatives coming from the seven main countries where Solvay operates. This Global Forum meets with the executive committee once a year, in Brussels, during a one-week session. Visio conferences are organized every quarter, between the Solvay Global Forum and the top management of the Group, to comment and discuss the quarterly results of the Group, and to be informed of the main new projects.

One of the main topics is the negotiation of the Global Performance Sharing plan, which entitles each employee of the Group to a share of the Group's EBITDA, and which also includes sustainability criteria (progress in the Solvay Way annual self-assessment).

European Works Council (EWC)

A permanent dialog has been established for more than 20 years between Solvay and its European Works Council (EWC). In 2016, the EWC met three times in a plenary session. The sustainable development EWC commission met twice and the EWC Secretariat met 11 times with senior Group management, allowing these representative bodies to be part of the evolution of the Group. Subject matters receiving particular attention were mergers and acquisitions, restructuring issues, evolution of employment and working conditions in the Group, and strategy and sustainable development issues

The main topics discussed with the Sustainable Development Commission of the European Works Council in 2016 include the new societal actions policy, the five priority targets of the Group, the new health and safety plan, the "well-being at work" project, and the results of the Group's sustainability performance assessment by extra-financial rating agencies.

Health and safety topics in the IndustriALL agreement

Several formal agreements have been concluded with trade unions at different locations of the group, e.g. 12 sites in the United States are covered by healthcare plans based on collective agreements. Two such agreements exist in France. The topic of safety is included in the agreement signed with IndustriALL. The specificity of this global agreement lies in the desire of both partners to make it operative in a concrete and dynamic way.

Every year, IndustriALL representatives meet Solvay employees to check on compliance in the field, with two assessment missions taking place at two different sites. One mission measures the results of the Group's safety policy. The second examines the application of the agreement, which, in particular, formally covers the following health and safety aspects:

- Ensuring good working conditions
- Managing risk as a daily concern
- Defining demanding internal policies and their stringent application
- Improving safety performance and regular monitoring of own and contractors' employees
- Ensuring healthy working conditions for all personnel, regardless of the job they perform and its associated risks.

Solvay strives to improve even further the level of its social dialog, as the relationship with its employee representatives is considered to be crucial for its future development and for its acceptance in society at large. This topic and its level of maturity is part of the Solvay Way annual self-assessment.

Employee Representation Indicator

Trade unions are present at a majority of Solvay sites around the world. Union membership is estimated at 20% in Europe, 30% in South America, 10% in North America, and 70% in Asia. This increase in Asia is due to a reevaluation of the percentage of the affiliate in China (100%).

Coverage of employees by collective agreements

Collective bargaining agreements can be at local (site), national (company), industry (e.g. chemicals industry), or Group level. The content can cover various topics such as shift work payments or pay structures and increases, working time, treatment of part-timers, training, bonuses, financial participation, retirement plans, employment contracts, and gender equality.

In the majority of cases collective agreements are extended to all employees, even if they are not members of a union. Coverage by collective agreements is at the level of 87.8% worldwide. This includes a group collective agreement called Global Performance Sharing Plan, concluded each year with the Solvay Global Forum, under which all non-exempt employees are covered.

These data indicate that freedom of association is ensured within the Group and that its practical application provides mutually agreed working conditions for our employees.

Minimum notice periods regarding operational changes

Some of the collective bargaining agreements specify notice periods for consultation and negotiation. The Global framework agreement concluded between Solvay and IndustriALL Global union includes a provision for employees and unions (where they exist) to be informed in advance of any restructuring plans. In some of the collective bargaining agreements a notice period and provisions for consultation and negotiation may be specified.

NOTE S10
Community development management

17 PARTNERSHIPS FOR THE GOALS

SOLVAY'S STRATEGIC OBJECTIVE:

2025

40%

of employees involved in societal action

The Group aims to strengthen this commitment by facilitating employee involvement in projects that serve society and by offering Solvay's expertise to regions where the Group operates.

Societal actions are how we create shared social value. Today, value creation is a collaborative effort both within the company and between the company and our stakeholders, whether they be customers, investors, suppliers, communities, or the planet as a whole.

Solvay dedicates time and financial resources both locally and globally to help improve people's living environment through:

- scientific solutions;
- education and youth employment;
- environmental actions and solidarity at the local level.

Budget for societal actions

In € million	2016	2015
Solvay Group donations, sponsorships and own projects	7.38	5.25

€ 7.38 million split into € 1.98 million for local societal actions done by sites, € 0.85 million for the Ernest Solvay Fund, and € 4.55 million for Solar Impulse.

From local involvement ...

Employees are involved in diverse projects worldwide that provide direct and indirect added value for the local economy and employment, while also supporting local associations and initiatives.

In % of headcount	2016	2015
Employees involved in local societal actions	23	20

Legend: Number of employees that participated at least in one societal action in 2016 (even if they are no long present at the company on 31/12/2016) divided by the headcount on 31/12/2016.

The increase in engagement at local level is on track with the objective for 2025. Note that 2016 was the first year of launching the Societal Actions guidelines and that Cytec legacy plants have not been included in that measurement.

Preliminary work with our auditors has shown that the measurement of the percentage of people involved in societal actions needs to be more accurate. Further work is required on reporting process and standards.

Examples of local societal actions in France for "Education and youth employment"

- **"C Génial":** this foundation for scientific and technical culture aims to educate teachers about the technical activities of private sector companies, lend a sense of purpose to the teaching of science at middle and high school levels by using industrial applications to bring the subject to life, and give teachers a better idea of the kinds of scientific and technical careers the future holds in the private sector. In 2016, around 15 Solvay employees at four sites hosted several teachers.
- **"Institut Télémaque":** this association promotes equality of opportunity starting in middle school by pairing deserving, motivated young students from underprivileged households with co-mentors from their school and the Group. In 2016, 18 employees from two Solvay sites signed up as mentors.
- **"Nos quartiers ont du talent":** the goal of this association, whose name means "There's talent in the neighborhood", is to accelerate the entry of ambitious, deserving young people into professional life and ensure equal access to promising, skilled jobs. Since it was launched, the association has been working to help graduates under the age of 30 with at least three years of post-secondary education to access the job market. The program focuses on young people from disadvantaged backgrounds, some of whom were raised in low-income housing. In 2016, 15 Solvay employees at two sites signed up to mentor these young people.
- **"Elles Bougent:** aimed at promoting gender diversity in the Group's professions, "Elles Bougent" ("Women on the Move") raises the profile of female engineers and technicians by arranging meetings between Group professionals and middle school, high school, and college students. These events are typically forums organized around topics such as "women in careers", "the science of engineering", or "technological innovation challenges". In 2016, 48 Solvay employees answered young women's questions either in person or through a regional mentor.

... to a global commitment

The most visible Group initiatives are its involvement in Solar Impulse, the Solvay Prize for the Future of Chemistry, and the Solvay International Institutes for Physics and Chemistry.

The Group aims to connect its philanthropic efforts with the Group's areas of expertise and support causes where its products or activities can deliver added value.

In 1923, Solvay created the Ernest Solvay Fund to honor the founder of the Company, who died the year before. Today, the majority of Solvay's corporate philanthropy goes through the Ernest Solvay Fund. This Fund is managed by the independent King Baudouin Foundation.

Solvay concentrates its philanthropic and funding efforts at corporate level on science promotion, education, youth employment, and in some circumstances, support to humanitarian initiatives in reaction to certain disasters and/or where our products or services are of particular value.

Examples of Group science promotion projects
Inspiring the chemists of the future

The Chemistry for the Future Solvay Prize rewards a major scientific discovery that could shape tomorrow's chemistry and aid human progress. The prize perpetuates the strong support for scientific research given by Ernest Solvay. It is intended to endorse basic research and underline the essential role of chemistry, both as a science and an industry, in helping to solve some of the most pressing issues the world is facing. The €300,000 prize is awarded every two years.

In 2015, the Chemistry for the Future Solvay Prize was given to Professor Ben Feringa. Professor Feringa's work on unidirectional molecular motors has opened up a new field of research which, for example, paves the way for the development of new therapeutic and technological applications. Within the next 20 to 30 years, his research is likely to lead to the introduction of nanorobots – microscopic robots that can accurately target specific molecules during therapeutic treatment. It may also enable a new generation of scientists to design artificial muscles or further optimize the storage of information on a molecular scale. For his work and his career, Ben Feringa was awarded the 2016 Nobel Prize in Chemistry.

The next Chemistry for the Future Solvay Prize will be awarded in 2017.

The International Solvay Institutes for Physics and Chemistry

Following the legendary 1911 Conseil Solvay on “Radiation and the Quanta” chaired by Nobel Laureate Hendrik Lorentz, the International Solvay Institute for Physics was founded by Ernest Solvay in 1912. The International Solvay Institute for Chemistry was founded a year later, in 1913. The two Institutes merged in 1970 as the International Solvay Institutes for Physics and Chemistry, founded by Ernest Solvay.

The mission of the Solvay Institutes is to support and develop curiosity-driven research in physics, chemistry, and associated fields with the purpose of “enlarging and deepening the understanding of natural phenomena”.

The central activity of the Institutes is the periodic organization of the celebrated Solvay Conferences on Physics and Chemistry (“Conseils de Physique Solvay” and “Conseils de Chimie Solvay”). This support for fundamental science is complemented by the organization of open workshops on specific selected topics, international chairs, colloquia, and an international doctoral school.

In addition to these activities, the Solvay Institutes promote the popularization of science through the organization of the annual Solvay public lectures devoted to today’s big scientific challenges.

Examples of Group science educational projects

- The creation at the University of Strasbourg of “bourses de doctorat d’excellence en chimie”, which support candidates from Imperial College of London, University of Cambridge, and Saint Andrews University.
- The annual grant to the Queen Elisabeth Medical Foundation (QEMF), which encourages laboratory research and contact between researchers and clinical practitioners, with a particular focus on neurosciences. The QEMF supports 17 university teams throughout Belgium.
- The International IUPAC/Solvay Award for Young Chemists, which will reward five young chemists and researchers from top universities all over the world.
- The “Solvay Awards”, which have been recognizing excellent masters and doctors from two major universities in Belgium for more than 20 years.
- From 2014, Solvay supports VOCATIO scholarships, which are granted to talented young people to enable them to achieve or start pursuing their dream.
- The creation of the research chair "Chimie et Auto assemblage" at the University of Bordeaux.

Solar Impulse: Solvay, a game-changer in clean technologies to make the impossible possible!

In July 2016, Solar Impulse completed its round-the-world tour that started in March 2015, after covering more than 40,000 km powered exclusively by solar energy, flying over two oceans, breaking eight world records.

Since 2003, our dedicated teams of scientists, engineers, visionaries, and innovators have collaborated closely with like-minded individuals from Solar Impulse and leading technological partners, with the aim of sweeping convention aside. Instead we developed clean-sheet solutions to dramatically improve the energy chain and to enhance the structure and reduce the weight of the solar-powered aircraft, crucial elements that have helped to make this historic flight a success. More than 6000 parts in the Solar Impulse 2 are made out of our high-end thermoplastics and thermoset composites that make the aircraft lighter, along with energy-efficient technologies such as lubricants and battery components based on fluorine and lithium chemistry.

The idea conceived by Bertrand Piccard and André Borschberg designing, building, and flying a zero-emission aircraft around the world was totally in line with Solvay's unwavering commitment to developing transformative clean technologies that ease dependency on carbon-emitting fossil fuels. A way of demonstrating chemistry’s ability to "make the impossible possible" – an opportunity that Solvay could not miss!

NOTE S11
Management of the Legal, Ethics and Regulatory framework

Health, safety and environment

Stronger regulatory compliance checks in health, hygiene, occupational safety, process safety, product safety, and environmental matters have recently been implemented locally, at every site. The Group HSE management system also requires every site to ensure a systematic regulatory watch, and to efficiently spot any changes in its regulatory obligations.

The Group aims to conduct a compliance audit at least every five years at every manufacturing site, with full completion (100% of sites) before end 2017. Such compliance audits must be updated at least every five years or in the event of significant regulatory change. Audits are carried out by internal auditors or by external parties under contract.

As regards environmental risk, and in the event that audit findings go beyond administrative failures, priorities are set according to an internal matrix, so as to identify and deal first with the highest risk level situations, and to remediate them within the coming 12 months.

Regulatory compliance in health and hygiene, process safety, and environment

In %	2016	2015
Compliance audits during last 5 years	75	50
Regulatory watch process in place	82	50

Scope: All manufacturing and R&I sites except sites from recently acquired Cytec.

The handling of “Risk Sheet 1” situations is a key element of Solvay’s process safety, as prescribed by Solvay’s “red line” on health, safety, and environment risk management. Red lines are essential Solvay rules that must be respected to the extent that they cover issues which constitute major risks for the Group. All major identified risks are validated and reported at corporate level.

Solvay code of conduct

The Solvay code of conduct and other elements relating to compliance are discussed in the Corporate Governance section of the annual report.

Major litigation

The impact of major litigation is discussed in the Management of Risks section of the annual report.

NOTE S12
Process safety, emergency preparedness and response

Process safety programs continue to ensure the integrity of operations and incorporate good design principles alongside best engineering and operating practices. Programs focus on preventing and controlling incidents, especially scenarios involving potential catastrophic consequences on people or the environment. Solvay's process safety management is risk-based.

Solvay deploys rules and indicators to monitor:

1. risk analysis programs
2. identification and mitigation of Risk Level 1 situations
3. implementation of process safety management systems at sites
4. incident follow-up and reporting.

Process safety monthly bulletins are widely distributed in 14 languages. They describe incidents that have occurred at Solvay sites and provide recommendations for improvement.

Risk analysis program

SOLVAY’S OBJECTIVES:

2020

100%

of the sites with a risk analysis updated in the last five years, for every production line

The main pillar of Solvay's preventive, risk-based approach is the process risk analysis of existing, new, or modified installations. Quantified risk analysis is a best practice among industrial companies: standardized risk analysis makes it possible to quantify the risk level of every possible accident scenario, combining severity and probability factors. Risk analysis forms the backbone of risk control.

This makes it possible to identify major accident scenarios and take the necessary measures to make the level of risk acceptable. Solvay uses tiered risk analysis methods and adapts them to the level of potential hazard of every process at every GBU. Many of Solvay's GBUs use a simplified method - called PRAMAPOR - for the section of chemicals with low potential hazards.

Completion of the risk analysis program is part of the Solvay HSE dashboard regularly reviewed by the Executive Committee.

In %	2016	2015	2014
Percentage of concerned product lines having a risk analysis updated in the last five years	65	69	64

Scope: Manufacturing and Research and Innovation sites under operational control including recently acquired Cytec with reportings as from 2016. The consolidated data for process safety risk analysis cover 134 sites out of a total of 150 operational sites.

Mitigation of process safety "Level 1 Risk Sheets"

A systematic approach is used across the whole Group to efficiently identify and remediate the highest risks. Handling 100% of "Level 1 Risk Sheet" situations (situations with the highest risks) is a key element of Solvay's process safety policy, as prescribed by Solvay's "Red Line" on health, safety, and environment risk management. The Group has repeatedly succeeded in resolving all level 1 risk sheet situations within one year.

Red Lines are essential Solvay rules that must be respected to the extent that they cover issues which constitute major risks for the Group. All identified "level 1 process safety risk sheets" are validated and reported at the corporate level. Then, as defined by the Red Line, they must be mitigated within a maximum of one year.

All Level 1 Risk Sheet situations are remediated within the year.

Most level 1 risk sheets identified referred to a single site that Solvay acquired in China acquired in 2010. This site has gone through a comprehensive risk analysis program to complete the process risk analysis required by the Solvay Red Line. Many level 1 risk sheets have already been identified and mitigated in accordance with the Group's second Red Line.

Mitigation of Process Safety (Risk Level 1)

	2016	2015	2014
Number of "risk sheets level 1" at the end of the year	46	94	217

Process safety management systems (PSM)

SOLVAY'S OBJECTIVE:

2020

100%

of sites with a process safety management system corresponding to their risk level

All Solvay industrial and R&I sites are required to develop and implement an ad hoc process safety management system (PSM). They must implement the PSM practices required by the Group and adapted to their risk level, according to a classification system defined in 2015.

In %	2016	2015
Sites with required PSM practices, according to their PSM level	90	84

Scope: All manufacturing sites (except recently acquired Cytec sites which will be included in 2017).

The systematic but tiered requirement, with three distinct PSM levels, is a good practice amongst industry peers. PSM system implementation is assessed through Solvay internal audits or observations of PSM practices by third parties.

Breakdown of sites according to their Process Safety Management (PSM) level

In %	2016
Sites with a PSM level 1 (Low)	54
Sites with a PSM level 2 (Medium)	34
Sites with a PSM level 3 (High)	11

Process safety incidents

Solvay's target is to avoid any high severity incident (H and above) and to reduce the incident rate for medium severity incidents. Solvay's incident rate (PSI rate) is consistent with the method proposed by the International Council of Chemical Associations (ICCA) and is benchmarkable.

The Group's reporting on process safety incidents is improving progressively. Solvay's incident rate is average relative to its peers. The increasing trend in the number of reported PSIs reflects the increasing number of reporting sites, along the newly introduced reporting process. Based on the data and experiences shared amongst the companies taking part in the initiative by the International Chamber of Chemical Industries (ICCA), in the framework of its pilot program on PSI reporting, Solvay's reporting process appeared to be one of the best, in particular for its coverage of the different geographical regions.

In %	2016	2015	2014
Process safety rate	0.7	0.6	0.4

Legend: Total number of process incidents per 100 full time employee (employees and contractors, assuming 2000 hours of work / worker / year).

Solvay has a worldwide rule for reporting process safety incidents based on a severity matrix that takes into account :

- the consequences for people
- for the environment
- damages to assets and volumes of chemicals released.

Reportable incidents are classified according to severity (medium, high, and catastrophic). No catastrophic incidents have been reported since 2012.

Number of incidents classified according to severity

	2016	2015	2014
Medium	259	215	156
High	1	1	2

Scope: Solvay group manufacturing and R&I sites under operational control. The consolidated data for process safety incident covers 132 sites out of a total of 143 operational sites, including R&I sites.

NOTE S13
Customer satisfaction

17 PARTNERSHIPS FOR THE GOALS

SOLVAY'S OBJECTIVE:

2020

35%

Increase the "Net Promoter Score" to 35%

Since 2014, Solvay has been monitoring and publishing the Group's Customer Satisfaction results by consolidating the Group Net Promoter Score (NPS), compiled through GBU-driven "Voice of the Customer" (VOC) inquiries.

In 2015/16 all GBUs, with the exception of Technology Solutions and Composite Materials, performed for the first time a comprehensive satisfaction survey covering all major aspects of the customer experience.

For the two new GBUs, a light VOC inquiry measuring only the NPS was performed in the last quarter of 2016, owing to time constraints related to their integration. The same procedure had been applied in 2014 when the Group's NPS was first measured.

In %	2016	2015	2014
Solvay's Net Promotor Score (NPS)	27	24	14

Legend: Net Promoter Score is a customer loyalty metric developed by (and registered trademark of) Fred Reichheld, Bain & Company, and Satmetrix.

In 2016, the Group made further progress in terms of customer satisfaction with an NPS of 27%, on the right track towards achieving our 2020 objective.

FINANCIAL STATEMENTS

1. CONSOLIDATED FINANCIAL STATEMENTS

Solvay (the "Company") is a public limited liability company governed by Belgian law and quoted on Euronext Brussels and Euronext Paris. The principal activities of the Company, its subsidiaries, joint operations, joint ventures, and associates (jointly the "Group") are described in note F1 *Segment information*.

The consolidated financial statements were authorized for issue by the Board of Directors on February 23, 2017. They have been prepared in accordance with IFRS accounting policies, details of which are given below.

Main changes in consolidation scope during the year

On March 16, 2016, Solvay and INEOS announced their intention to end their 50/50 Inovyn chlorovinyls joint venture earlier than originally foreseen, with INEOS becoming the sole shareholder. Solvay and INEOS formed Inovyn in July 2015, with Solvay's exit originally planned in July 2018. On March 31, 2016, Solvay and INEOS announced they had signed the binding agreement to end their Inovyn chlorovinyls joint venture, following their intentions announced on March 16, 2016. On July 7, 2016, upon completion of the transaction, Solvay received a payment of € 335 million and INEOS became Inovyn's sole shareholder. The exit of the joint venture followed regulatory clearances from the relevant authorities. In 2017, Solvay will pay a total price adjustment approximating € 80 million.

On April 25, 2016 Solvay issued a formal notification for the exercise of the first call option on the € 500 million hybrid bond (maturing in 2104), after having notified the Luxembourg Stock Exchange, where the bond was listed, as well as the bondholders. This bond, which carried an annual interest rate of 6.375% in the first ten years, had previously been classified as a long-term financial debt in the consolidated statement of financial position, and was repaid on June 2, 2016. The financing of this repayment was secured in December 2015, together with the bonds issued to finance the Cytec acquisition.

On May 2, 2016, Solvay entered into a Share Purchase Agreement with Unipar Carbocloro for the sale of its equity interests held in Solvay Indupa. During the third quarter of 2016, the fair value less cost to sell has been updated, so as to reflect the impact of the worsening of the business environment on the deal. An impairment loss in the amount of € 63 million was recognized in 2016. On December 7, 2016, Solvay obtained clearance from the Brazilian antitrust authority, CADE, for the agreed sale of its 70.59% stake in Solvay Indupa to chemical group Unipar Carbocloro. Completion of the transaction, at a total enterprise value of US$ 202.2 million, took place on December 27, 2016.

On May 19, 2016, Solvay and Eastman Chemical Company signed a definitive agreement to end their cellulose acetate production joint venture Primester with Solvay acquiring Eastman's 50% stake in the U.S.-based plant and becoming its sole owner. Following the transaction, Eastman will provide the long-term supply of basic utilities and raw materials to the plant, based in Kingsport, Tennessee. The closing occurred on June 2, 2016.

On December 7, 2016, Solvay reached an agreement to sell its cellulose acetate tow business, Acetow, to private equity funds managed by Blackstone. The transaction is based on an enterprise value of about € 1 billion, representing around 7 x EBITDA multiple. The net proceeds will contribute to the continued deleveraging of Solvay. Completion of the transaction is expected in the first half of 2017 and is subject to the customary social procedures and approval by the relevant antitrust authorities. In view of the materiality of the transaction, Solvay has considered the business to be a discontinued operation and has restated its results in accordance with IFRS.

On December 14, 2016, Solvay signed a definitive agreement to sell its 58.77% stake in its Thai subsidiary Vinythai PCL to Japanese company AGC Asahi Glass, thereby exiting its Asian polyvinyl chloride (PVC) activities. The transaction is based on a total enterprise value of 16.5 billion Thai Baht (€ 435 million), representing a multiple of 8x mid-cycle EBITDA. Completion of the transaction was subject to customary closing conditions, including antitrust approvals, and was closed on February 22, 2017. In view of the materiality of the transaction, Solvay has considered the business to be a discontinued operation and has restated its results in accordance with IFRS.

Consolidated income statement

In € million	Notes	2016	2015
Sales	(F1)	**11,403**	**10,083**
of which revenue from non-core activities		520	467
of which net sales		10,884	9,615
Cost of goods sold		(8,314)	(7,517)
Gross margin		**3,090**	**2,566**
Commercial and administrative costs		(1,465)	(1,296)
Research and development costs		(305)	(271)
Other operating gains and losses	(F3)	(222)	(84)
Earnings from associates and joint ventures	(F4)	85	21
Results from portfolio management and reassessments	(F5)	(164)	(205)
Results from legacy remediation and major litigations	(F5)	(56)	(36)
EBIT	(F2)	**962**	**695**
Cost of borrowings	(F6)	(188)	(108)
Interest on lendings and short term deposits	(F6)	13	9
Other gains and losses on net indebtedness	(F6)	(50)	(47)
Cost of discounting provisions	(F6)	(118)	(69)
Income/loss from available-for-sale financial assets	(F6)	5	(8)
Profit for the year before taxes		**624**	**472**
Income taxes	(F7)	56	(69)
Profit for the year from continuing operations		**680**	**403**
Profit (loss) for the year from discontinued operations	(F8)	(6)	51
Profit for the year	(F9)	**674**	**454**
attributable to:			
Solvay share		621	406
non-controlling interests		53	48
Basic earnings per share from continuing operations (€)		6.20	4.42
Basic earnings per share from discontinued operations (€)		(0.18)	0.42
Basic earnings per share (€)	(F10)	6.01	4.85
Diluted earnings per share from continuing operations (€)		6.18	4.39
Diluted earnings per share from discontinued operations (€)		(0.18)	0.42
Diluted earnings per share (€)	(F10)	5.99	4.81

Consolidated statement of comprehensive income

In € million	Notes	2016	2015
Profit for the year		**674**	**454**
Other comprehensive income			
Recyclable components			
Hyperinflation	*(F11)*	0	42
Gains and losses on available-for-sale financial assets	*(F11)*	9	3
Gains and losses on hedging instruments in a cash flow hedge	*(F11)*	36	15
Currency translation differences - Subsidiaries and joint operations	*(F11)*	278	208
Currency translation differences - Associates and joint ventures	*(F11)*	51	(22)
Non recyclable components			
Remeasurements of the net defined benefit liability	*(F11)*	(275)	279
Income tax relating to recyclable and non recyclable components	*(F11)*	56	(20)
Other comprehensive income, net of related tax effects	*(F11)*	**155**	**505**
Comprehensive income for the year		**830**	**959**
attributable to:			
Solvay share		762	892
non-controlling interests		67	67

Consolidated statement of cash flows

The amounts below include both continued and discontinued operations.

In € million	Notes	2016	2015
Profit for the year		674	454
Adjustments to profit for the year			
Depreciation, amortization and impairments	(F12)	1,302	978
Earnings from associates and joint ventures		(86)	(21)
Other non operating and non cash items	(F13)	(16)	128
Net financial charges and income/loss from available-for-sale financial assets		374	257
Income tax expense	(F14)	(21)	134
Changes in working capital	(F15)	(99)	(103)
Changes in provisions	(F16)	(151)	(302)
Dividends received from associates and joint ventures		22	14
Income taxes paid (excl. income taxes paid on sale of investments)	(F14)	(212)	(250)
Cash flow from operating activities		**1,788**	**1,289**
of which cash flow linked to acquisition of subsidiaries and excluded from Free Cash Flow(2)		*7*	*(98)*
Acquisition (-) of subsidiaries	(F17)	(23)	(4,835)
Acquisition (-) of investments - Other	(F17)	4	(28)
Loans to associates and non consolidated companies		(25)	11
Sale (+) of subsidiaries and investments	(F17)	144	70
Income taxes paid on sale of investments	(F17)	0	(232)
Acquisition (-) of tangible assets	(F17)	(883)	(952)
Acquisition (-) of intangible assets	(F17)	(98)	(85)
Sale (+) of tangible and intangible assets	(F17)	76	31
of which cash flow related to the sale of real estate in the context of restructuring/dismantling/remediation		*35*	*5*
Dividends from available-for-sale financial assets		0	1
Changes in non-current financial assets		(2)	4
Cash flow from investing activities		**(807)**	**(6,014)**
Capital increase (+) / redemption (-)	(F18)	0	1,477
Proceeds from perpetual hybrid bond issuance	(F18)	0	991
Acquisition (-) / sale (+) of treasury shares	(F35)	(55)	(59)
Increase in borrowings	(F33)	1,133	4,628
Repayment of borrowings	(F33)	(2,300)	(1,219)
Changes in other current financial assets	(F33)	(50)	225
Interests paid		(216)	(156)
Coupons paid on perpetual hybrid bonds	(F18)	(84)	(57)
Dividends paid		(386)	(323)
Other	(F19)	7	(31)
Cash flow from financing activities		**(1,951)**	**5,475**
Net change in cash and cash equivalents		**(970)**	**750**
Currency translation differences		(12)	13
Opening cash balance		2,037	1,275
Closing cash balance(1)	(F33)	1,054	2,037

(1) Including cash in assets held for sale (€ 85 million in 2016 and € 7 million in 2015).

(2) Costs linked to the acquisition of subsidiaries are presented as part of cash flow from operating activities. Such resulted in a transfer from cash flow from investing activities to cash flow from operating activities in the comparative 2015 numbers (€ 94 million in other non operating and non cash items and € 4 million in changes in working capital). Such does not impact the Group's Free Cash Flow, which excludes costs related to the acquisition of subsidiaries and which is presented in the Business Review section.

Consolidated cash flows from discontinued operations

In € million	Notes	2016	2015
Cash flow from operating activities		191	205
Cash flow from investing activities		(84)	(103)
Cash flow from financing activities		(65)	(63)
Net change in cash and cash equivalents	*(F20)*	**41**	**40**

Consolidated statement of financial position

In € million	Notes	2016	2015
ASSETS			
Non-current assets		**17,548**	**18,716**
Intangible assets	*(F21)*	3,600	3,919
Goodwill	*(F22)*	5,679	5,840
Tangible assets	*(F23)*	6,472	6,946
Available-for-sale financial assets	*(F32)*	44	34
Investments in associates and joint ventures	*(F26)*	497	398
Other investments	*(F27)*	55	92
Deferred tax assets	*(F7)*	890	1,059
Loans and other assets	*(F32)*	312	427
Current assets		**6,597**	**6,613**
Inventories	*(F29)*	1,672	1,867
Trade receivables	*(F32)*	1,621	1,615
Income tax receivables		166	158
Dividends receivables		2	0
Other financial instrument receivables	*(F32)*	101	111
Other receivables	*(F30)*	736	655
Cash and cash equivalents	*(F33)*	969	2,030
Assets held for sale	*(F25)*	1,331	177
Total assets		**24,145**	**25,329**
EQUITY & LIABILITIES			
Total equity		**9,956**	**9,668**
Share capital	*(F18)*	1,588	1,588
Reserves		8,118	7,835
Non-controlling interests		250	245
Non-current liabilities		**9,188**	**11,330**
Provisions for employee benefits	*(F31)*	3,118	3,133
Other provisions	*(F31)*	860	831
Deferred tax liabilities	*(F7)*	909	1,456
Financial debt	*(F33)*	4,087	5,628
Other liabilities		214	282
Current liabilities		**5,001**	**4,331**
Other provisions	*(F31)*	291	310
Financial debt	*(F33)*	1,338	891
Trade payables	*(F32)*	1,547	1,559
Income tax payables		197	130
Dividends payables		139	144
Other liabilities	*(F34)*	1,086	1,022
Liabilities associated with assets held for sale	*(F25)*	403	275
Total equity & liabilities		**24,145**	**25,329**

Consolidated statement of changes in equity

		Equity attributable to equity holders of the parent											
								Revaluation reserve (Fair value)					
In € million	*Notes*	Share capital	Share premiums	Treasury shares	Perpetual hybrid bonds	Retained earnings	Currency translation differences	Available-for-sale financial assets	Cash flow hedges	Defined benefit pension plan	Total reserves	Non-controlling interests	Total equity
Balance at 31 December 2014		**1,271**	**18**	**(171)**	**1,194**	**5,753**	**(527)**	**(4)**	**(43)**	**(927)**	**5,293**	**214**	**6,778**
Profit (loss) for the year						406					406	48	454
Items of other comprehensive income	*(F11)*					35	169	3	15	264	486	19	505
Comprehensive income						***441***	***169***	***3***	***15***	***264***	***892***	***67***	***959***
Capital increase	*(F18)*	318	1,151								1,151		1,469
Perpertual hybrid bonds issuance	*(F18)*				994						994		994
Cost of stock options						11					11		11
Dividends						(313)					(313)	(40)	(354)
Coupons of perpetual hybrid bonds						(57)					(57)		(57)
Acquisition (-) / sale of treasury shares				(59)		3					(56)		(56)
Increase / decrease (-) through changes in ownership interests in subsidiaries that do not result in loss of control						(118)	5		(1)	32	(82)	5	(77)
Balance at 31 December 2015		**1,588**	**1,170**	**(230)**	**2,188**	**5,720**	**(353)**	**(2)**	**(28)**	**(630)**	**7,834**	**245**	**9,668**
Profit (loss) for the year						621					621	53	674
Items of other comprehensive income	*(F11)*					0	313	10	23	(205)	141	14	155
Comprehensive income						***621***	***313***	***10***	***23***	***(205)***	***762***	***67***	***830***
Cost of stock options						9					9		9
Dividends						(336)					(336)	(45)	(381)
Coupons of perpetual hybrid bonds						(84)					(84)		(84)
Acquisition (-) / sale of treasury shares				(44)		(13)					(57)		(57)
Increase / decrease (-) through changes in ownership interests in subsidiaries that result in loss of control						(19)				7	(12)	(17)	(29)
Balance at 31 December 2016		**1,588**	**1,170**	**(274)**	**2,188**	**5,899**	**(39)**	**8**	**(5)**	**(828)**	**8,117**	**250**	**9,956**

2. NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

IFRS general accounting policies

1. Basis of preparation

This information was prepared in accordance with European Regulation (EC) 1606/2002 on the application of international accounting standards dated July 19, 2002. The Group's consolidated financial statements for the year ended December 31, 2016 were prepared in accordance with IFRS (International Financial Reporting Standards) as published by the International Accounting Standards Board (IASB), and endorsed by the European Union.

The accounting standards applied in the consolidated financial statements for the year ended December 31, 2016 are consistent with those used to prepare the consolidated financial statements for the year ended December 31, 2015.

Standards, interpretations, and amendments applicable for the first time in 2016

No new standards, interpretations, or amendments that have a material impact on the Group's consolidated financial statements have become applicable for the first time in 2016.

Standards, interpretations, and amendments applicable for the first time in 2017

No new standards, interpretations, or amendments that are expected to have a material impact on the Group's consolidated financial statements are applicable for the first time in 2017.

For annual periods beginning on or after January 1, 2017, in accordance with the amendments to IAS 7 *Statement of Cash Flows* that are part of the IASB's Disclosure Initiative, the Group will provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes.

Standards, interpretations, and amendments applicable for the first time after 2017

IFRS 15 *Revenue from Contracts with Customers* (applicable for annual periods beginning on or after January 1, 2018). IFRS 15 was issued in May 2014 and establishes a five-step model to account for revenue arising from contracts with customers. Under IFRS 15, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The new revenue standard will supersede all current revenue recognition requirements under IFRS. The Group plans to adopt the new standard on the required effective date. During 2016, the Group performed a preliminary assessment of IFRS 15, which is subject to changes arising from a more detailed ongoing analysis. Furthermore, the Group is considering the clarifications issued by the IASB in April 2016 and will monitor any further developments.

a. **Sale of goods:** As the Group is in the business of selling chemicals, contracts with customers generally concern the sale of goods. The Group expects the revenue recognition to occur at a point in time when control of the chemicals is transferred to the customer, generally on delivery of the goods. In preparing for IFRS 15, the Group is considering the following:
    i. **Distinct elements:** The revenue of the Group consists mainly of sales of chemicals, which qualify as separate performance obligations. Value-added services – mainly customer assistance services – corresponding to Solvay's know-how are rendered predominantly over the period that the corresponding goods are sold to the customer. Ancillary services, such as training, are not material. Based on preliminary results, the Group does not expect a more than insignificant adjustment to its current practice.
    ii. **Variable consideration:** Some contracts with customers provide trade discounts or volume rebates. Currently, the Group recognizes revenue from the sale of goods measured at the fair value of the consideration received or receivable, net of returns and allowances, trade discounts, and volume rebates. If revenue cannot be measured reliably, the Group defers revenue recognition until the uncertainty is resolved. Such provisions give rise to variable consideration under IFRS 15, and will be required to be estimated at contract inception. IFRS 15 requires the estimated variable consideration to be constrained, to prevent over-recognition of revenue. The Group is assessing individual contracts to determine the estimated variable consideration and related constraints. Based on preliminary results, the Group does not expect a more than insignificant adjustment to its current practice.
    iii. **Moment of recognition of revenue:** The Group sells its chemicals to its customers, (a) directly, (b) through distributors, and (c) with the assistance of agents. The Group is analyzing whether the moment control of the goods passes, as described in IFRS 15, would result in a different moment to recognize the revenue. Based on preliminary results, the Group does not expect a more than insignificant adjustment to its current practice.

b. **Presentation and disclosure requirements:** IFRS 15 provides presentation and disclosure requirements, which are more detailed than under current IFRSs. The presentation requirements represent a change from current practice and increase the volume of disclosures required in the Group's financial statements. Many of the disclosure requirements in IFRS 15 are new. The Group is analyzing those disclosure requirements, including the need for policies, procedures, and internal controls to collect and disclose the required information.

During 2017, the Group will decide which of the transitional methods and practical expedients it will retain.

IFRS 9 *Financial Instruments* (applicable for annual periods beginning on or after January 1, 2018). IFRS 9 brings together all three aspects of the accounting for the financial instruments project: classification and measurement, impairment, and hedge accounting. Except for hedge accounting, retrospective application is required, but providing comparative information is not compulsory. For hedge accounting, the requirements are generally applied prospectively, with some limited exceptions. The Group plans to adopt the new standard as from January 1, 2018. During 2016, the Group performed a high-level impact assessment of all three aspects of IFRS 9. The assessment is subject to changes arising from a more detailed analysis during 2017.

a. **Classification and measurement:** The Group does not expect a significant impact on its consolidated statement of financial position or equity on applying the classification and measurement requirements of IFRS 9. It expects to continue measuring at fair value all financial assets currently held at fair value. The available for sale financial assets reserve currently presented as accumulated OCI will be opening balance of retained earnings. The equity shares in non-listed companies, currently presented as available for sale, are intended to be held for the foreseeable future. The Group expects to apply the option to present fair value changes in OCI, and therefore believes the application of IFRS 9 would not have a significant impact. In this case, the fair value gains or losses accumulated in the other comprehensive income will no longer be subsequently reclassified to profit or loss, which is different from the current treatment. This would affect the consolidated statement of comprehensive income, yet it would not have an impact on the Group's comprehensive income for the year. If the Group were not to apply that option, the shares would be held at fair value through profit or loss, which would increase the volatility of recognized profit or loss. Loans and trade receivables are held to collect contractual cash flows and are expected to give rise to cash flows representing solely payments of principal and interest. Thus, the Group expects that these will continue to be measured at amortized cost under IFRS 9. However, the Group will analyze the contractual cash flow characteristics of those instruments in more detail before concluding whether all those instruments meet the criteria for amortized cost measurement under IFRS 9.

b. **Impairment:** IFRS 9 requires the Group to recognize expected credit losses on all of its debt securities, loans, and trade receivables, either on a 12-month basis or a lifetime basis. The Group expects to apply the simplified approach and recognize lifetime expected losses on all trade receivables. The Group does not expect a significant impact on its equity following the unsecured nature of its loans and receivables, but it will perform a more detailed analysis during 2017 that considers all reasonable and supportable information, including forward-looking elements to determine the extent of the impact.

c. **Hedge accounting:** The Group believes that all existing hedge relationships that are currently designated in effective hedging relationships will still qualify for hedge accounting under IFRS 9. As IFRS 9 does not change the general principles of how an entity accounts for effective hedges, the Group does not expect a significant impact as a result of applying IFRS 9. The Group will assess in greater detail in the future any possible changes related to the accounting for the time value of options, forward points, or the currency basis spread.

IFRS 16 *Leases* (applicable for annual periods beginning on or after January 1, 2019, not yet endorsed by the EU). The impact of the application of this standard is currently being assessed. We expect an impact mainly for leases currently classified as operating leases and for which Solvay is the lessee. In this respect, we refer to note F24 *Leases* for more information on existing operating leases.

Other standards, interpretation, and amendments applicable for the first time after 2017 are not expected to have a material impact on the Group's consolidated financial statements.

2. Basis of measurement and presentation

The consolidated financial statements are presented in millions of euros, which is also the functional currency of the parent company.

The preparation of the financial statements requires the use of estimates and assumptions that have an impact on the application of accounting policies and the measurement of amounts recognized in the financial statements. The areas for which the estimates and assumptions are material with respect to the consolidated financial statements are presented in the section *Critical accounting judgments and key sources of estimation uncertainty*.

3. Principles of consolidation

3.1. Consolidation scope

3.1.1. General

The consolidated financial statements incorporate the financial statements of the Company, and:

- entities controlled by the Company (including through its subsidiaries) and that hence qualify as subsidiaries (see 3.1.2. below);
- arrangements over which the Company (including through its subsidiaries) exercises joint control, and that qualify as joint operations (see 3.1.3. below);
- arrangements over which the Company (including through its subsidiaries) exercises joint control, and that qualify as joint ventures (see 3.1.4. below);
- entities over which the Company (including through its subsidiaries) has significant influence and that hence qualify as associates (see 3.1.4. below).

Where necessary, adjustments are made to the financial statements of the investees so as to align their accounting policies with those of the Group.

In accordance with the principle of materiality, certain companies which are not of significant size have not been included in the consolidation scope. Companies are deemed not to be significant when, during two consecutive years, they do not exceed any of the three following thresholds in terms of their contribution to the Group's accounts:

- sales of € 30 million;
- total assets of € 15 million;
- headcount of 150 persons.

Companies that do not meet these criteria are, nevertheless, consolidated where the Group believes that they have a potential for rapid development, or where they hold shares in other companies that are consolidated based on the above criteria.

In the aggregate, the non-consolidated companies have an immaterial impact on the consolidated financial statements of the Group.

The full list of companies is filed with the National Bank of Belgium as an attachment to the Annual Report, and can be obtained from the Company head office.

3.1.2. Investments in subsidiaries

A subsidiary is an entity over which the Group has control. Control is achieved when the Group has (a) power over an investee, (b) exposure, or rights, to variable returns from its involvement with the investee, and (c) the ability to use its power over the investee to affect the amount of the investor's returns. To assess whether the Group has control, potential voting rights are taken into account. Subsidiaries are fully consolidated. The results of subsidiaries are included in the consolidated income statement from the effective date of acquisition and up to the effective date of disposal.

Intra-group transactions, balances, income, and expenses are eliminated on consolidation.

Non-controlling interests in subsidiaries are presented separately from the Group's equity. Non-controlling interests are initially measured, either at fair value (full goodwill method), or at the non-controlling interests' proportionate share in the recognized amounts of the acquiree's identifiable net assets (proportionate goodwill method). The choice of measurement is made on an acquisition-by-acquisition basis. Subsequent to the acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's equity interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions. The carrying amounts of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiary. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity.

When the Group loses control of a subsidiary, the profit or loss on disposal is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest, and (ii) the previous carrying amount of the assets (including goodwill) and liabilities of the subsidiary and any non-controlling interests. Amounts previously recognized in other comprehensive income in relation to the subsidiary are accounted for (*i.e.* reclassified to profit or loss or transferred directly to retained earnings) in the same manner as would be required if the relevant assets or liabilities were disposed of. The fair value of any investment retained in the former subsidiary at the date when control is lost is considered to be the fair value on initial recognition for subsequent accounting in accordance with IAS 39 *Financial Instruments: Recognition and Measurement* or, when applicable, the cost on initial recognition of an investment in an associate or joint venture in accordance with IAS 28 *Investments in Associates and Joint Ventures*.

3.1.3. Investments in joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about relevant activities require the unanimous consent of the parties sharing control. In its consolidated financial statements, the Group recognizes its share of the joint operations' assets, liabilities, revenue, and expenses, based on its ownership interest in the joint operations.

3.1.4. Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint arrangement. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about relevant activities require the unanimous consent of the parties sharing control.

The results, assets, and liabilities of associates and joint ventures are incorporated in the consolidated financial statements using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*. Under the equity method, on initial recognition, investments in associates and joint ventures are recognized in the consolidated statement of financial position at cost, and the carrying amount is adjusted for post-acquisition changes in the Group's share of the net assets of the associate or joint venture, less any impairment of the value of individual investments. Losses of an associate or joint venture in excess of the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture) are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

Any excess of the cost of acquisition over the Group's share of the net fair value of the identifiable assets and (contingent) liabilities of the associate or joint venture recognized at the date of acquisition is goodwill. The goodwill is included within the carrying amount of the investment and is assessed for impairment as part of that investment.

Where a Group entity transacts with an associate or joint venture of the Group, profits and losses are eliminated to the extent of the Group's interest in the relevant associate or joint venture.

3.1.5. Main changes in consolidation scope in prior year

On July 1, 2015, Solvay sold its chlorovinyls activities to the INOVYN joint venture (50% Solvay, 50% INEOS) (see note F8 *Discontinued operations*).

On December 9, 2015, Solvay acquired 100% of the shares of Cytec Industries Inc. (see note F22 *Goodwill and business combinations*).

The main impacts of this acquisition have been finalized within the measurement period (i.e. the 12 months following December 9, 2015) and have been taken into account in the consolidated statement of financial position as of December 31, 2016:

- The Cytec opening balance sheet has been fully consolidated within the Solvay Group as from December 31, 2015 and is based on the following:
  - the consideration for Cytec (€ 5,047 million);
  - the identifiable assets acquired and liabilities assumed after remeasurement to fair value at acquisition date (€ 2,472 million); and
  - the final goodwill (€ 2,575 million versus provisional goodwill of € 2,598 million disclosed at year end 2015) corresponding to the difference between consideration and net assets acquired, measured at fair value.
- Cytec's results and cash flows for the period between December 9 and December 31, 2015 were not material, except for acquisition-related expenses presented as results from portfolio management and reassessments. Consequently, Cytec did not contribute to the Group's IFRS net income or cash flows in 2015.
- The acquisition was funded through a capital increase and perpetual hybrid bonds issuance (see note F18 *Proceeds from bond issuance classified as equity and capital increase*) and debt issuance (see note F33 *Net indebtedness*).
- In order to provide a reference frame for the results going forward, on March 17, 2016 Solvay published unaudited *pro forma* consolidated income statement and main cash flow metrics for the year 2015. The figures represent a situation as if the acquisition had taken place on January 1, 2015 – see 2015 Financial Management Report.

4. Foreign currencies

The individual financial statements of each Group entity are prepared in the currency of the primary economic environment in which the entity operates (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group entity are expressed in euros (EUR), which is the functional currency of the Company and the presentation currency of the Group's consolidated financial statements.

In preparing the financial statements of the individual entities, transactions in currencies other than the entities' functional currency are recognized at the exchange rates prevailing at the dates of the transactions. At the end of each reporting period, monetary items denominated in foreign currencies are translated at the closing rate.

Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rate when the fair value was measured. Non-monetary items that are measured in terms of historical cost in a foreign currency are not translated at the closing rate.

Exchange differences are recognized in profit or loss in the period in which they arise except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences on transactions entered into in order to hedge certain foreign currency risks (see note F32 *Financial instruments and financial risk management* for hedge accounting policies); and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the foreseeable future (therefore forming part of the net investment in the foreign operation), which are recognized initially in other comprehensive income under "currency translation differences".

The main exchange rates used are:

		Year-end rate		Average rate	
		2016	2015	**2016**	2015
1 Euro =					
Argentine Peso	ARS	16.7006	14.1601	16.3226	10.2349
Brazilian Real	BRL	3.4297	4.3117	3.8558	3.7014
Yuan Renminbi	CNY	7.3231	7.0608	7.3516	6.9729
Pound Sterling	GBP	0.8551	0.7340	0.8195	0.7259
Japanese Yen	JPY	123.3626	131.0700	120.1886	134.3069
Russian Ruble	RUB	64.2959	80.6736	74.1393	68.1152
Thai Baht	THB	37.7353	39.2480	39.0409	38.0270
US Dollar	USD	1.0538	1.0887	1.1068	1.1094

5. CO_2 emission rights

With respect to the mechanism set up by the European Union to encourage manufacturers to reduce their greenhouse gas emissions, the Group was granted carbon dioxide (CO_2) emission rights for some of its installations. The Group is also involved in the Clean Development Mechanism (CDM) under the Kyoto protocol. Under these projects, the Group has deployed facilities in order to reduce greenhouse gas emissions at the relevant sites in return for Certified Emission Reductions (CER).

In the absence of any IFRS regulating the accounting treatment of CO_2 emission rights, the Group applies the Trade/Production model, according to which CO_2 emission rights are presented as inventories if they will be consumed in the production process or as derivatives if they are held for trading. Energy Services is involved in CO_2 instrument trading, arbitrage, and hedging activities. The net income or expenses from these activities are recognized in other operating income for the industrial component, where Energy Services sells the CO_2 emission rights generated by Solvay, as well as for the trading component, where Energy Services acts as a trader/broker with respect to those CO_2 emission rights.

6. Government grants

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants relating to the purchase of property, plant, and equipment are deducted from the cost of those assets. They are recognized in the consolidated statement of financial position at their expected value at the moment of initial recognition. The grant is recognized in profit or loss over the depreciation period of the underlying assets as a reduction of depreciation expense.

Other government grants are recognized as income on a systematic basis over the periods in which the related costs, which they are intended to compensate, are recognized. Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future-related costs are recognized in profit or loss in the period in which they become receivable.

Critical accounting judgments and key sources of estimation uncertainty

Impairment

The Group performs annual impairment tests on (groups of) CGUs to which goodwill has been allocated, and each time there are indicators that their carrying amount might be higher than their recoverable amount. This analysis requires management to estimate the future cash flows expected to be generated by the CGUs and a suitable discount rate in order to calculate present value.

Further details are provided in note F28 *Impairment of tangible assets, intangible assets, and equity method investees*.

Deferred tax assets

The carrying amount of the deferred tax assets is reviewed at each reporting date. The carrying amount of a deferred tax asset is reduced to the extent that it is no longer probable that the Group will earn sufficient taxable profits against which the deductions can be utilized. Any such reduction is reversed to the extent that it becomes probable that sufficient taxable profits will be available.

Deferred tax assets other than tax loss carryforwards are analyzed on a case-by-case basis, taking into account all relevant facts and circumstances. For example, a zero taxable profit, after deducting the amounts paid to retirees under a defined benefit plan and for which a deductible temporary difference existed, can justify the recognition of the underlying deferred tax assets. Recognition of deferred tax assets for tax loss carryforwards require a positive taxable profit during the year that enables the utilization of tax losses that originated in the past. Because of uncertainties inherent to predicting such positive taxable profit, recognition of deferred tax assets from tax loss carryforwards is based on a case-by-case analysis, which is usually based on five-year profit forecasts, except with respect to financial companies for which ten-year financial profit forecasts are considered highly predictable and are consequently used.

The corporate tax reporting team, which has the overview of the Group deferred tax positions, is involved in assessing deferred tax assets.

Further details are provided in note F7.B. *Deferred taxes in the consolidation statement of financial position*.

Employee benefits obligations

The actuarial assumptions used in determining the defined benefit obligations at December 31, as well as the annual cost, can be found in note F31 *Provisions*. All main employee benefits plans are assessed annually by independent actuaries. Discount rates and inflation rates are defined centrally by management. The other assumptions (such as future salary increases and expected rates of medical care cost increases) are defined at a local level. All plans are supervised by the Group's central Human Resources department with the help of a central actuary to check the acceptability of the results and ensure consistency in reporting.

Further details are provided in note F31.A. *Provisions for employee benefits*.

Environmental provisions

Environmental provisions are managed and coordinated jointly by the Environmental Rehabilitation department and the Finance department.

The forecasts of expenses are discounted to their present value.

The discount rates fixed by geographical area correspond to the average risk-free rate on 10-year government bonds. These rates are set annually by the Finance department and can be revised based on the evolution of economic parameters of the country involved.

To reflect the passage of time, the provisions are increased each year at the discount rates described above.

Further details are provided in note F31.B. *Provisions other than for employee benefits*.

Provisions for litigations

Any significant litigation (tax and other, including threat of litigation) is reviewed by Solvay's in-house lawyers with the support, when appropriate, of external counsels at least every quarter. This review includes an assessment of the need to recognize provisions and/or remeasure existing provisions together with the Finance department and the Insurance department.

Further details are provided in note F31.B. *Provisions other than for employee benefits*.

Fair value adjustments for business combinations

In accordance with IFRS 3 *Business Combinations*, the Group measures the identifiable assets acquired and (contingent) liabilities assumed in a business combination at fair value. Fair value adjustments are based on external appraisals or valuation models, *e.g.* for contingent liabilities and intangible assets which were not recognized by the acquiree. Internal benchmarks are often used for valuing specific production equipment. All of these valuation methods rely on various assumptions such as estimated future cash flows, remaining useful economic life, etc.

Further details are provided in note F22 *Goodwill and business combinations*.

Classification as held for sale

Assets are classified as held for sale if their carrying amount will be recovered through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the asset is available for immediate sale in its present condition. Amongst other conditions, management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification. However, in some cases, an asset may remain classified as held for sale for a period exceeding one year if it remains unsold due to events or circumstances beyond the Group's control.

Solvay Indupa

As a disposal within 12 months was considered highly probable on December 31, 2015, Solvay Indupa remained classified as non-current assets held for sale and discontinued operations at that date. On December 7, 2016, Solvay obtained clearance from the Brazilian antitrust authority, CADE, for the agreed sale of its 70.59% stake in Solvay Indupa to chemical group Unipar Carbocloro. Completion of the transaction, at a total enterprise value of US$ 202.2 million, took place on December 27, 2016. The related impairment has been derived from the expected net cash flows.

Acetow

On December 7, 2016, Solvay reached an agreement to sell its cellulose acetate tow business, Acetow, to private equity funds managed by Blackstone. Completion of the transaction is expected in the first half of 2017 and is subject to the customary social procedures and approval by the relevant antitrust authorities.

Emerging Biochemicals

On December 14, 2016, Solvay signed a definitive agreement to sell its 58.77% stake in its Thai subsidiary Vinythai PCL to Japanese company AGC Asahi Glass, thereby exiting its Asian polyvinyl chloride (PVC) activities. Completion of the transaction was subject to customary closing conditions, including antitrust approvals, and was closed on February 22, 2017.

Further details are provided in note F25 *Assets held for sale*.

Fair value level 3 assessment

Inovyn

Solvay contributed its chlorovinyls business in the joint venture Inovyn on July 1, 2015.

The fair value of the derivative financial instrument representing the additional performance-based payment that Solvay would receive for its exit from Inovyn amounted to € 244 million at December 31, 2015. Its fair value was based largely on level 3 inputs, namely contractually defined REBITDA multiples, comparing the expected exit price against the fair value of Solvay's 50% equity share held in Inovyn. It increased to € 335 million following the binding agreement signed with INEOS on March 31, 2016 for an early exit. It was settled on July 7, 2016.

Further details are provided in note F32 *Financial instruments and financial risk management*.

Control assessment

Solvay considers that it continues to control the key relevant activities of its Venezuelan operations. In case of a loss of control over the Venezuelan legal entity, currency translation adjustments of € (60) million would be recycled to the consolidated income statement.

Notes to the consolidated income statement

Preliminary comment: consistent with the presentation in the consolidated income statement, the notes to the consolidated income statement as presented hereinafter do not include the consolidated income statement impacts from discontinued operations that are presented on a separate line. Those are disclosed in note F8 *Discontinued operations*. As a consequence, the comparative numbers presented in the notes hereinafter are different from the ones published in the 2015 Annual Report due to the impacts from Acetow and Emerging Biochemicals that were presented as discontinued operations as from 2016.

NOTE F1
Segment information

Accounting policy

An Operating Segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's chief operating decision maker, and for which discrete financial information is available. The Solvay Group's chief operating decision maker is the Chief Executive Officer.

Net sales comprise the sales of goods and value-added services corresponding to Solvay's know-how. Net sales and other revenue are measured at the fair value of the consideration received or receivable, net of returns, rebates and trade benefits granted, and sales tax.

Revenue from non-core activities primarily includes commodity and utility trading transactions and other revenue deemed incidental by the Group.

Net sales and other revenue are recognized when all the following conditions have been satisfied:

- the Group has transferred to the buyer the significant risks and rewards of ownership of the goods or, with respect to the rendering of services, the stage of completion can be measured reliably;
- the Group retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the future economic benefits associated with the transaction will flow to the Group; and
- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

General

Solvay is organized into five Operating Segments. As of January 1, 2016, following the acquisition of Cytec, Solvay has re-organized its business segments to enhance strategic coherence and improve business alignment. Cytec's former "Aerospace Materials" and "Industrial Materials" activities are included in Advanced Materials as the GBU "Composite Materials", while its "In Process Separation" and "Additive Technologies" activities are included in Advanced Formulations, largely as the GBU "Technology Solutions". Solvay's GBU "Coatis" is transferred to Performance Chemicals.

- Advanced Materials offers high-performance materials for multiple applications primarily in the automotive, aerospace, electronics, and health markets. In particular, it provides sustainable mobility solutions, reducing weight and improving CO_2 and energy efficiency.
- Advanced Formulations serves primarily the consumer goods, agro and food, as well as energy markets. It offers customized specialty formulations that impact surface chemistry and alter liquid behavior, to optimize efficiency and yield, while minimizing the environmental impact.
- Performance Chemicals operates in mature and resilient markets with leading positions in chemical intermediates. Success is based on economies of scale and state-of-the-art production technology. It serves mainly the consumer goods and food markets.
- Functional Polymers produces and sells polyamide and PVC polymers and compounds and has leading positions in different regions, with a focus on excellence initiatives. It mainly serves the automotive, construction, consumer goods, and building markets.
- Corporate & Business Services includes corporate and other business services, such as the Research & Innovation Center. It also incorporates the GBU Energy Services, whose mission is to optimize energy consumption and reduce CO_2 emissions.

Information per segment

2016 In € million Income statement items	Advanced Formulations	Advanced Materials	Performance Chemicals	Functional Polymers	Corporate & Energy	Group Total
Net sales (including the inter-segment sales)	2,671	4,313	2,481	1,442	7	10,914
Inter-segment sales	(3)	0	(21)	(6)	0	(30)
Net sales	2,668	4,313	2,460	1,436	7	10,884
Gross margin	695	1,398	724	254	18	3,090
Depreciation and amortization	292	413	250	104	111	1,169
Earnings from associates and joint ventures	8	8	20	50	(1)	85
Underlying EBITDA(1)	*484*	*1,110*	*695*	*222*	*(227)*	*2,284*
EBIT						**962**
Net financial charges						(339)
Income taxes						56
Profit (loss) for the year from discontinued operations						(6)
Profit (loss) for the year						**674**

(1) Underlying EBITDA is a key performance indicator followed by management (see Business Review section).

2016 In € million Statement of financial position and other items	Advanced Formulations	Advanced Materials	Performance Chemicals	Functional Polymers	Corporate & Energy	Group Total
Capital expenditures (continuing operations)	134	435	186	95	79	929
Capital expenditures (discontinued operations)			37	14		51
Investments (continuing operations)	16	4	0	0	44	64
Investments (discontinuing operations)			33			33
Working capital						
Inventories	388	794	279	199	11	1,672
Trade receivables	365	571	417	186	82	1,621
Trade payables	293	429	357	213	255	1,547

Capital expenditures are related to tangible and intangible assets.

In 2016, the investment of € 44 million within Corporate & Energy relates to the Cytec acquisition.

Information per segment for 2015 as presented below takes into account the new organization of the Operating Segments applicable as from 2016.

2015 In € million Income statement items	Advanced Formulations	Advanced Materials	Performance Chemicals	Functional Polymers	Corporate & Energy	Group Total
Net sales (including the inter-segment sales)	2,258	3,341	2,561	1,543	11	9,715
Inter-segment sales	(3)	(7)	(35)	(53)	0	(99)
Net sales	2,254	3,334	2,526	1,490	11	9,615
Gross margin	548	1,107	686	219	5	2,566
Depreciation and amortization	181	267	165	106	72	791
Earnings from associates and joint ventures	9	8	20	(14)	(1)	21
Underlying EBITDA[1]	*348*	*836*	*628*	*141*	*(209)*	*1,744*
EBIT						**695**
Net financial charges						(222)
Income taxes						(69)
Profit (loss) for the year from discontinued operations						51
Profit (loss) for the year						**454**

(1) Underlying EBITDA is a key performance indicator followed by management. In the Business Review section, 2015 Underlying EBITDA (€ 2,125 million) is reported on a pro forma basis as if Cytec had been consolidated as from January 1, 2015, which leads to add Cytec 2015 Underlying EBITDA (€ 381 million) to the Underlying EBITDA without Cytec (€ 1,744 million).

2015 In € million Statement of financial position and other items	Advanced Formulations	Advanced Materials	Performance Chemicals	Functional Polymers	Corporate & Energy	Group Total
Capital expenditures (continuing operations)	204	340	267	81	77	969
Capital expenditures (discontinued operations)			0	68		68
Investments (continuing operations)	23	22	0	13	4,901	4,960
Working capital						
Inventories	409	892	324	221	21	1,867
Trade receivables	342	540	458	221	54	1,615
Trade payables	277	439	356	229	259	1,559

Capital expenditures are related to tangible and intangible assets.

In 2015, the investment of € 4,901 million within Corporate & Energy relating to Cytec. It represented the difference between the total consideration plus acquisition-related expenses (€ 5,099 million) and the cash acquired from Cytec (€ 198 million).

External net sales by cluster

In € million	2016	2015
Advanced Formulations	**2,668**	**2,254**
Novecare	1,663	1,895
Technology Solutions	656	0
Aroma Performance	350	360
Advanced Materials	**4,313**	**3,334**
Specialty Polymers	1,922	1,901
Composite Materials	1,073	0
Silica	455	521
Special Chem	862	912
Performance Chemicals[1]	**2,460**	**2,526**
Soda Ash & Derivatives	1,561	1,554
Peroxides	542	558
Coatis	346	398
Functional Polymers	**1,436**	**1,490**
Polyamides	1,414	1,448
Chlorovinyls	22	41
Corporate & Business Services	**7**	**11**
Energy Services	4	11
CBS and NBD	3	0
Total	**10,884**	**9,615**

(1) The total amount of the cluster includes residual Acetow sales (2016: € 10 million and 2015: € 16 million)

Sales by country and region

The sales disclosed below are allocated based on the customers' location.

In € million	2016	%	2015	%
Belgium	154	1%	156	2%
Germany	982	9%	841	9%
Italy	555	5%	452	5%
France	466	4%	437	5%
United Kingdom	302	3%	223	2%
Spain	269	2%	246	3%
European Union – other	749	7%	606	6%
European Union	**3,476**	**32%**	**2,961**	**31%**
Europe – other	**108**	**1%**	**239**	**2%**
United States	2,866	26%	2,308	24%
Canada	141	1%	102	1%
North America	**3,007**	**28%**	**2,409**	**25%**
Brazil	677	6%	705	7%
Mexico	175	2%	126	1%
Latin America – other	208	2%	170	2%
Latin America	**1,061**	**10%**	**1,001**	**10%**
Russia	62	1%	56	1%
Turkey	90	1%	66	1%
China	945	9%	955	10%
India	185	2%	171	2%
Japan	398	4%	346	4%
South Korea	393	4%	352	4%
Thailand	197	2%	219	2%
Egypt	55	1%	51	1%
Other	907	8%	787	8%
Asia and rest of the world	**3,231**	**30%**	**3,004**	**31%**
Total	**10,884**	**100%**	**9,615**	**100%**

Invested capital, capital expenditures, and investments by country and region

	Invested capital				Capital expenditures and investments			
In € million	**2016**	**%**	2015	%	**2016**	**%**	2015	%
Belgium	2,155	12%	2,838	14%	(28)	3%	(17)	0%
Germany	765	4%	746	4%	(46)	5%	(59)	1%
Italy	743	4%	762	4%	(83)	8%	(86)	1%
France	1,922	10%	1,952	10%	(188)	19%	(160)	3%
United Kingdom	235	1%	205	1%	(40)	4%	(8)	0%
Spain	142	1%	147	1%	(18)	2%	(17)	0%
European Union – other	408	2%	678	3%	(55)	6%	(63)	1%
European Union	**6,370**	**35%**	**7,328**	**37%**	**(458)**	**46%**	**(410)**	**7%**
Europe – other	**81**	**0%**	**4**	**0%**	**0**	**0%**	**(15)**	**0%**
United States[(1)]	9,008	49%	9,075	46%	(309)	31%	(5,126)	86%
Canada	212	1%	212	1%	(8)	1%	0	0%
North America	**9,220**	**50%**	**9,287**	**47%**	**(317)**	**32%**	**(5,126)**	**86%**
Brazil	570	3%	447	2%	(37)	4%	(49)	1%
Argentina	0	0%	20	0%	(2)	0%	0	0%
Latin America – other	63	0%	91	0%	(3)	0%	(1)	0%
Latin America	**633**	**3%**	**559**	**3%**	**(41)**	**4%**	**(50)**	**1%**
Russia	228	1%	141	1%	0	0%	(14)	0%
Thailand	127	1%	424	2%	(4)	0%	(21)	0%
China	798	4%	869	4%	(66)	7%	(165)	3%
South Korea	269	1%	230	1%	(69)	7%	(31)	1%
India	237	1%	230	1%	(8)	1%	(16)	0%
Singapore	81	0%	80	0%	(3)	0%	(24)	0%
Japan	84	0%	87	0%	(1)	0%	(2)	0%
Egypt	10	0%	111	1%	0	0%	(1)	0%
Other	266	1%	229	1%	(29)	3%	(54)	1%
Asia and rest of the world	**2,099**	**11%**	**2,402**	**12%**	**(181)**	**18%**	**(327)**	**6%**
Total	**18,404**	**100%**	**19,579**	**100%**	**(997)**	**100%**	**(5,927)**	**100%**

(1) In 2015, the amounts reported included the acquisition of Cytec (see note F22 Goodwill and business combinations)

Invested capital includes the non-current assets (excluding the deferred taxes), inventories, and trade receivables and payables. Capital expenditures and investments include acquisitions of tangible and intangible assets, investments in subsidiaries, and other investments. Both exclude discontinued operations.

NOTE F2
Consolidated income statement by nature

In € million	Notes	2016	2015
Net sales	*(F1)*	10,884	9,615
Revenue from non-core activities		520	467
Raw materials, utilities and consumables used		(4,547)	(4,212)
Use of the PPA step-up for inventories		(82)	
Changes in inventories		(20)	(24)
Personnel expenses		(2,432)	(2,041)
Wages / salaries and direct social benefits		*(1,674)*	*(1,407)*
Employer's contribution for social insurance		*(340)*	*(315)*
Pensions and insurance benefits		*(210)*	*(170)*
Other personnel expenses		*(208)*	*(149)*
Amortization, depreciation and impairment	*(F12)*	(1,169)	(819)
Other variable logistics expenses		(658)	(746)
Other fixed expenses		(1,388)	(1,302)
Addition and reversal of provisions (excluding employee benefit provisions)	*(F31)*	(198)	(89)
Operating lease expenses	*(F24)*	(107)	(81)
M&A costs and gains and losses on disposals	*(F5)*	75	(94)
Earnings from associates and joint ventures	*(F4)*	85	21
EBIT		**962**	**695**
Cost of borrowings	*(F6)*	(188)	(108)
Interest on lendings and short term deposits	*(F6)*	13	9
Other gains and losses on net indebtedness	*(F6)*	(50)	(47)
Cost of discounting provisions	*(F6)*	(118)	(69)
Income/loss from available-for-sale financial assets	*(F6)*	5	(8)
Profit for the year before taxes		**624**	**472**
Income taxes	*(F7)*	56	(69)
Profit for the year from continuing operations		**680**	**403**
Profit (loss) for the year from discontinued operations	*(F8)*	(6)	51
Profit for the year	*(F9)*	**674**	**454**
attributable to:			
Solvay share		621	406
non-controlling interests		53	48

The consolidated income statement 2016 takes into account Cytec's results, consolidated as from January 1, 2016.

NOTE F3
Other operating gains and losses

In € million	2016	2015
Start-up, formation and preliminary study costs	(20)	(26)
Capital gains / losses on sales of fixed assets	29	20
Net foreign exchange gains and losses	2	(5)
Amortization of intangible assets resulting from PPA	(231)	(98)
Other	(1)	26
Other operating gains and losses	**(222)**	**(84)**

The increase of the amortization of intangible assets resulting from PPA is related to the Cytec intangible assets, which are being amortized as from 2016.

NOTE F4
Earnings from associates and joint ventures

The net income of the associates and joint ventures amounts to € 85 million in 2016 against € 21 million in 2015. The increase is due mainly to RusVinyl's improved operating and financial performance.

NOTE F5
Results from portfolio management and reassessments, legacy remediation and major litigations

Accounting policy

Following the ESMA Guidelines on Alternative Performance Measures issued on June 30, 2015 and effective as from July 3, 2016, Solvay has split the non-recurring items into two items: (a) Results from portfolio management and reassessments, and (b) Results from legacy remediation and major litigations. The sum of these two items is equal to what was previously labeled "non-recurring items", before reclassification to discontinued operations.

Results from portfolio management and reassessments include:

- gains and losses on the sale of subsidiaries, joint operations, joint ventures, and associates that do not qualify as discontinued operations;
- acquisition costs of new businesses;
- gains and losses on the sale of real estate not directly linked to an operating activity;
- restructuring charges driven by portfolio management and reassessment, including impairment losses resulting from the shutdown of an activity or a plant; and
- impairment losses resulting from testing of CGUs.

Results from legacy remediation and major litigations include:

- the remediation costs not generated by on-going production facilities (shut-down of sites, discontinued productions, previous years' pollution); and
- the impact of significant litigations.

Results from portfolio management and reassessments

In € million	2016	2015
Restructuring costs and impairment	(239)	(111)
M&A costs and gains and losses on disposals	75	(94)
Results from portfolio management and reassessments	**(164)**	**(205)**

Results from legacy remediation and major litigations

In € million	2016	2015
Major litigations	(14)	8
Remediation costs and other costs related to non-ongoing activities	(42)	(45)
Results from legacy remediation and major litigations	**(56)**	**(36)**

In 2016, these items relate primarily to:

- restructuring costs and impairment relating to:
  - the mothballing of the Soda Ash plant in Egypt (€ (112) million);
  - the divestment decision of the US torrefied biomass electricity generation project (€ (39) million);
  - the resizing of Solvay's shared services due to the changes in the Group's portfolio (€ (40) million);
  - the impact of adverse market conditions on the Brazilian electricity cogeneration assets (€ (28) million);
- M&A costs and gains and losses on disposals:
  - gain on Inovyn divestment (€ 71 million);
  - loss on the disposal of a peroxide business in Bussi (Italy) (€ (13) million);
  - gain following additional reversal of the holdback included in the Chemlogics purchase price and subject to performance conditions not reached in 2016 (€ 49 million); and
  - M&A acquisition costs for € (25) million.

In 2015, these items related primarily to:

- restructuring costs and impairment relating to:
  - restructuring costs (€ (57) million), due mainly to the resizing of Solvay Functions following the changes in the Group's portfolio (€ (35) million);
  - the fluorite mine in Bulgaria (€ (25) million);
  - the divestment of Plextronics (€ (8) million);
- M&A costs and gains and losses on disposals:
  - Cytec acquisition-related expenses (€ (130) million) mainly composed of advisory services (see note F22 *Goodwill and business combinations*); and
  - M&A costs impacted mainly by a partial reversal of the holdback (€ 25 million) included in the Chemlogics purchase price and subject to performance conditions not reached in 2015.

In addition, an amount of € 3 million was transferred to discontinued operations, so that the sum of the above mentioned items relating to 2015 is equal to what was previously presented as non-recurring in the 2015 IFRS consolidated financial statements.

NOTE F6
Net financial charges

Accounting policy

Interest on borrowings is recognized in costs of borrowings as incurred, with the exception of borrowing costs directly attributable to the acquisition, construction, and production of qualifying assets (see note F23 *Tangible assets*).

Net foreign exchange gains or losses on financial items and changes in fair value of derivative financial instruments are presented in "Other gains and losses on net indebtedness", with the exception of changes in fair value of derivative financial instruments that are hedging instruments in a cash flow hedge relationship, and which are recognized on the same line as the hedged item, when the latter affects profit or loss.

In € million	**2016**	2015
Cost of borrowing	(188)	(108)
Interest on lendings and short term deposits	13	9
Other gains and losses on net indebtedness	(50)	(47)
Net cost of borrowing	**(226)**	**(146)**
Cost of discounting provisions	(118)	(69)
Income/loss from available-for-sale financial assets	5	(8)
Net financial charges	**(339)**	**(222)**

Details are included in note F33 *Net indebtedness*.

The increase of the cost of borrowing is explained mainly by:

- the costs relating to the bonds issued in December 2015 for financing the acquisition of Cytec (€ 2,250 million senior € notes and US$ 1,600 million senior US$ notes), and to the US$ 732 million senior notes of Cytec Industries which amount to € 123 million in 2016 (€ 8 million in December 2015); and
- the lower costs (€ (30) million) relating to the repayment of the € 300 million European Investment Bank (EIB) loan in January 2016 and of the € 500 million hybrid bond in June 2016.

The other gains and losses on net indebtedness increased slightly from € (47) million in 2015 to € (50) million in 2016. This increase is explained mainly by:

- € (48) million of currency swaps (mainly €/US$ swaps on intercompany financing of the Cytec acquisition and BRL/US$ swaps on intercompany financing) as against € (19) million in 2015; and
- a loss of € (25) million in 2015 due to Venezuelan hyperinflation accounting – see note F11 *Consolidated statement of comprehensive income*).

The increase of cost of discounting provisions relates to post-employment benefits (€ (23) million) and to environmental provisions (€ (26) million) and is mainly explained by the evolution of the applicable discount rates.

NOTE F7
Income taxes

Accounting policy

Current taxes

The current tax payable is based on taxable profit of the year. Taxable profit differs from profit as reported in the consolidated income statement because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred taxes

Deferred tax is recognized for temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their corresponding tax bases used in the computation of taxable profit.

Deferred tax assets are generally recognized for all deductible temporary differences, to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized.

Deferred tax liabilities are generally recognized for all taxable temporary differences.

No deferred tax liabilities are recognized following the initial recognition of goodwill. In addition, no deferred tax assets or liabilities are recognized with respect to the initial recognition of an asset or liability in a transaction which is not a business combination and affects neither accounting profit nor taxable profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, joint operations, joint ventures, and associates, except where the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The carrying amount of the deferred tax assets is reviewed at each reporting date. The carrying amount of a deferred tax asset is reduced to the extent that it is no longer probable that the Group will earn sufficient taxable profits against which the deductions can be utilized. Any such reduction is reversed to the extent that it becomes probable that sufficient taxable profits will be available.

Deferred tax assets other than tax loss carryforwards are analyzed on a case-by-case basis, taking into account all relevant facts and circumstances. For example, a zero taxable profit, after deducting the amounts paid to retirees under a defined benefit plan and for which a deductible temporary difference existed, can justify the recognition of the underlying deferred tax assets. Recognition of deferred tax assets for tax loss carryforwards require a positive taxable profit during the year that enables the utilization of tax losses that originated in the past. Because of uncertainties inherent to predicting such positive taxable profit, recognition of deferred tax assets from tax loss carryforwards is based on a case-by-case analysis, which is usually based on five-year profit forecasts, except with respect to financial companies for which ten-year financial profit forecasts are considered highly predictable and are consequently used.

The corporate tax reporting team, which has the overview of the Group deferred tax positions, is involved in assessing deferred tax assets.

Further details are provided in note F7.B.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities, and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Current and deferred taxes for the period

Current and deferred taxes for the period are recognized as an expense or income in profit or loss, except when they relate to items that are recognized outside profit or loss (whether in other comprehensive income or directly in equity), in which case the tax is also recognized outside profit or loss, or when they arise from the initial accounting for a business combination. In the case of a business combination, the tax effect is taken into account in the accounting for the business combination.

F7.A. Income taxes

In € million	*Notes*	**2016**	2015
Current taxes related to current year		(213)	(178)
Current taxes related to prior years		4	112
Deferred income taxes		270	(6)
Deferred tax impact of changes in the nominal tax rates		(5)	2
Total income taxes recognized in the consolidated income statement		**56**	**(69)**

In € million	*Notes*	**2016**	2015
Income tax on items recognized in other comprehensive income	*(F11)*	56	(20)

The current taxes relating to prior years (€ 4 million) include the net tax adjustments for transfer pricing audits in Belgium and in Spain.

The specific items of the year that significantly contribute to the deferred tax income include mainly:

- the deferred tax income resulting from the amortization of the Purchase Price Allocation step-up (€ 100 million);
- the recognition of previously unrecognized deferred tax assets on (a) employee benefits obligations and other temporary differences in Solvay SA (€ 65 million) and (b) tax loss carryforwards (€ 39 million) due to improved profitability expectations at the level of Solvay SA for future years; and
- the recognition of previously unrecognized deferred tax assets on employee benefits obligations and other temporary differences in the United Kingdom (€ 93 million) due to the Group Relief regime which allows the deduction of the losses of Solvay Solutions UK from the post-acquisition profits of Cytec companies.

In 2015, the current taxes relating to prior years (€ 112 million) include the reversal of provisions for tax risks (€ 66 million) and true-ups in the United States after significant changes in portfolio.

Reconciliation of the income tax expense

The effective income tax expense has been reconciled with the theoretical tax expense obtained by applying to the pre-tax profit of each Group entity the nominal tax rate prevailing in the country in which it operates.

In € million	2016	2015
Profit for the year before taxes	624	472
Earnings from associates and joint ventures	85	21
Profit for the year before taxes excluding earnings from associates and joint ventures	**539**	**451**
Reconciliation of the tax charge		
Total tax charge of the Group entitites computed on the basis of the respective local nominal rates	(141)	(173)
Weighted average nominal rate	26%	38%
Tax effect of permanent differences	36	136
Tax effect on distribution of dividends	(17)	(4)
Tax effect of changes in tax rates	(4)	1
Tax effect of current and deferred tax adjustments related to prior years	12	5
Changes in unrecognized deferred tax assets	170	(35)
Effective tax charge	**56**	**(69)**
Effective tax rate	**(9)%**	**15%**

The weighted average nominal rate in 2016 was 12% lower than in 2015, due to the lower weight of earnings before tax in countries with a higher tax rate (mainly United States) and to the higher weight of earnings before tax (including results from portfolio management and reassessment) in countries with a lower tax rate.

Significant changes in effective tax rate from 15% in 2015 to (9)% in 2016 result from:

- recognition of higher deferred tax assets in 2016 (€ 205 million versus 2015) mainly for previously unrecognized deferred tax assets in Belgium (€ 104 million) and in the United Kingdom (€ 93 million)
- partially offset by the negative tax impact of lower permanent differences in 2016 (€ (100) million versus 2015), due to the reversal of provisions for tax litigation for € 66 million in 2015 and non-deductible capital losses in 2016.

The gain arising from the early exit in 2016 from the joint venture with INEOS (€ 76 million in Solvay Chlorovinyls Holding) and the € 19 million reversal of a provision in Solvay Pharmaceuticals had no tax impact in the consolidated income statement as they were offset against unrecognized prior year tax losses.

F7.B. Deferred taxes in the consolidated statement of financial position

2016 In € million	Opening balance	Recognized in income statement	Recognized in other comprehensive income	Exchange rate effect	Cytec acquisition	Other acquisition/ disposal	Transfer to asset held for sale	Other	Closing balance
Temporary differences									
Employee benefits obligations	328	92	71	3	(29)	0	(29)	1	435
Provisions other than employee benefits	199	36	(3)	9	7	0	(3)	(1)	244
Tangible and intangible assets	(1,361)	64		(36)	16	(3)	76	(1)	(1,246)
Goodwill	23	(7)		0	(1)				15
Tax losses	373	44		7	6	(1)	(5)	19	444
Tax credits	86	(8)		(1)	(43)			0	35
Assets held for sale		(2)					(3)	6	
Other	(44)	48	(11)	(1)	61	0	2	1	55
Total (net amount)	**(396)**	**266**	**56**	**(19)**	**16**	**(4)**	**37**	**25**	**(19)**
Deferred tax assets in the consolidated statement of financial position	1,059								890
Deferred tax liabilities in the consolidated statement of financial position	(1,456)								(909)

In 2016, the total of deferred tax assets amounts to € 3,667 million of which € 2,777 million are not recognized.

The unrecognized deferred tax assets result from (i) losses carried forward (€ 7,190 million mainly in holding companies including Solvay SA and Rhodia SA since 2011) for which deferred tax assets (€ 2,235 million) have not been recognized and (ii) deferred tax assets on other temporary differences (€ 542 million across the Group), mainly on employee benefits obligations in France (€ 351 million).

The line Other includes deferred tax liabilities relating to unremitted earnings from Solvay affiliates, and amounting to € 23 million in 2016 (€ 23 million in 2015). In that respect, an amount of € 62 million (excluding Cytec) is not recognized, as the Group controls the timing of the reversal of the temporary differences and as it is probable that they will not reverse in the foreseeable future. The Cytec unremitted earnings will be permanently reinvested, including for pre-acquisition and post-acquisition profits, and accordingly no deferred tax liabilities have been recognized.

Recognized deferred tax assets, for which utilization depends on future taxable profits in excess of the profit arising from the reversal of existing taxable temporary differences within entities that have suffered a tax loss in either current or preceding year in the related tax jurisdiction, amount to € 475 million. This recognition is justified by favorable expectations as to future taxable profits.

2015 In € million	Opening balance	Recognized in income statement	Recognized in other comprehensive income	Exchange rate effect	Cytec acquisition	Other acquisition/ disposal	Transfer to asset held for sale	Other	Closing balance
Temporary differences									
Employee benefits obligations	234	(13)	(13)	7	97	(2)	6	11	328
Provisions other than employee benefits	136	(19)	1	3	59	7	13	(1)	199
Tangible and intangible assets	(521)	29	(7)	(6)	(862)	1	4	1	(1,361)
Goodwill	31	(8)							23
Tax losses	386	1		(6)	2	0	(12)		373
Tax credits	11	29		1	44		2		86
Assets held for sale		8				3	(14)	3	
Other	57	(28)	(1)	3	(76)	(2)		3	(44)
Total (net amount)	**333**	**0**	**(20)**	**2**	**(735)**	**7**	**0**	**17**	**(396)**
Deferred tax assets in the consolidated statement of financial position	710								1,059
Deferred tax liabilities in the consolidated statement of financial position	(378)								(1,456)

In 2015, the total of deferred tax assets amounts to € 4,129 million of which € 3,070 million are not recognized.

The unrecognized deferred tax assets result from (i) losses carried forward (€ 7,070 million mainly in holding companies including Solvay SA and Rhodia SA since 2011) for which relative deferred tax assets (€ 2,283 million) were not recognized and (ii) deferred tax assets on other temporary differences (€ 787 million across the Group), mainly on employee benefits obligations (€ 502 million, most of them in Belgium (€ 70 million), France (€ 333 million), and the United Kingdom (€ 82 million)).

The deferred taxes on tangible and intangible assets relating to the Cytec acquisition relate mainly to the step-up to fair value on intangible assets.

Other information

For the majority of the Group's tax loss carryforwards, no deferred tax assets have been recognized. The unrecognized tax losses are located mainly in countries where they can be carried forward indefinitely.

The tax loss carryforwards generating deferred tax assets are given below by expiration date.

In € million	**2016**	2015
Within 1 year	5	8
Within 2 years	17	16
Within 3 years	21	28
Within 4 years	42	32
Within 5 or more years	278	174
No time limit	1,035	937
Total of tax losses carried forward which have generated recognized deferred tax assets	**1,397**	**1,194**
Tax losses carried forward for which no deferred tax assets were recognized	7,190	7,070
Total of tax losses carried forward	**8,587**	**8,263**

In 2016, the tax losses carryforwards (€ 1,397 million) have generated deferred tax assets of € 444 million.

In 2015, the tax losses carryforwards (€ 1,194 million) have generated deferred tax assets of € 373 million.

NOTE F8
Discontinued operations

Accounting policy

A discontinued operation is a component of the Group which the Group has disposed of or which is classified as held for sale (see note F25 *Assets held for sale*), and which:

- represents a separate major line of business or geographical area of operations
- is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations or
- is a subsidiary acquired exclusively with a view to resale.

A component of the Group consists of operations and cash flows, which can be clearly distinguished, operationally and for financial reporting purposes, from the rest of the Group.

In the consolidated statement of comprehensive income, the consolidated statement of cash flows, and disclosures, discontinued operations are re-presented for prior periods.

2016 In € million	Indupa	Acetow	Emerging Biochemicals	Other	Total
Sales	478	531	404	0	1,414
Breakdown discontinued operations					
Loss recognised as result of remeasurement to fair value less costs to sell	(63)				(63)
EBIT[1]	(95)	116	30	16	68
Financial result	(31)	(4)	(2)	0	(37)
Tax	(3)	(33)	0	0	(36)
Profit (loss) from discontinued operations	**(129)**	**79**	**28**	**16**	**(6)**
attributable to:					
Solvay share	(126)	79	12	16	(19)
non-controlling interests	(3)	0	16	0	13

(1) Including recycling of currency translation adjustments for Indupa (€ (55) million).

2015 In € million	Indupa	Chlorovinyls	Acetow	Emerging Biochemicals	Other	Total
Sales	529	965	526	437	0	2,456
Breakdown discontinued operations						
Loss recognised as result of remeasurement to fair value less costs to sell	(88)					(88)
EBIT	(68)	102	116	22	(16)	156
Financial result	(33)	(2)	(3)	(1)	0	(39)
Tax	5	(41)	(28)	0	(2)	(66)
Profit (loss) from discontinued operations	**(96)**	**59**	**85**	**21**	**(18)**	**51**
attributable to:						
Solvay share	(86)	44	85	11	(18)	36
non-controlling interests	(10)	15	0	10	0	15

NOTE F9
Profit for the year

Profit for the year amounts to € 674 million as against € 454 million in the previous year.

Due to the changes in consolidation scope, the Business Review section provides an analysis of profit for the year on a pro forma basis as if Cytec had been acquired on January 1, 2015.

NOTE F10
Earnings per share

Accounting policy

The basic earnings per share are obtained by dividing profit for the year by the number of shares.

The diluted earnings per share are obtained by dividing profit for the year by the number of shares plus the number of potentially diluting shares attached to the issuance of share options. For the purpose of calculating diluted earnings per share, there were no adjusting elements to profit for the year (Solvay share).

Basic and diluted amounts per share for discontinued operations are presented in the consolidated income statement.

Number of shares (in thousands)	2016	2015
Weighted average number of ordinary shares (basic)	103,294	83,738
Dilution effect of subscription rights	315	565
Weighted average number of ordinary shares (diluted)	103,609	84,303

	2016		2015	
In € million	Basic	Diluted	Basic	Diluted
Profit for the year (Solvay share) including discontinued operations (in € thousands)	620,964	620,964	405,835	405,835
Profit for the year (Solvay share) excluding discontinued operations (in € thousands)	640,017	640,017	370,259	370,259
Earnings per share (including discontinued operations) (in €)	6.01	5.99	4.85	4.81
Earnings per share (excluding discontinued operations) (in €)	6.20	6.18	4.42	4.39

The weighted average number of shares for 2015 takes into account the shares issued on December 21, 2015, which were outstanding for a period of 10 days.

Full data per share, including dividend per share, can be found in the Business Review section.

The average closing price during 2016 was € 92.41 per share (2015: € 115.08 per share). Based on this average closing price all share options were in the money, and therefore dilutive, for the presented period (see note F35 *Share-based payments*).

Notes to the consolidated statement of comprehensive income

NOTE F11
Consolidated statement of comprehensive income

Accounting policy

In accordance with IAS 1 *Presentation of Financial Statements*, the Group elected to present two statements – a consolidated income statement immediately followed by a consolidated statement of comprehensive income.

The components of other comprehensive income (OCI) are presented before related tax effects with one amount shown for the aggregate amount of income tax relating to those components. Tax impacts are further disclosed in this note.

Presentation of the tax effect relating to each item of other comprehensive income

Note: the below table presents the total other comprehensive income items for the aggregate of the shares of Solvay and the non-controlling interests.

	2016			2015		
In € million	Before-tax amount	Tax expense(-)/ benefit (+)	Net-of-tax amount	Before- tax amount	Tax expense(-)/benefit (+)	Net-of-tax amount
Gains and losses related to hyperinflation	0	0	0	42	(7)	35
Hyperinflation	**0**	**0**	**0**	**42**	**(7)**	**35**
Gains and losses on remeasuring available-for-sale financial assets	9	0	10	3	0	3
Available-for-sale financial assets (see note F32)	**9**	**0**	**10**	**3**	**0**	**3**
Effective portion of gains and losses on hedging instruments in a cash flow hedge	3	(13)	(10)	(42)	0	(42)
Recycling to the income statement	33		33	134		134
Basis adjustments	0		0	(77)		(77)
Cash flow hedges (see note F32)	**36**	**(13)**	**23**	**15**	**0**	**15**
Currency translation differences - Subsidiaries and joint operations	***272***		***272***	***208***	***0***	***208***
Currency translation differences arising during the year	199		199	207		207
Recycling of currency translations differences relating to foreign operations disposed of in the year	63		63	1		1
Other movement of currency translation differences (NCI) relating to foreign operations disposed of in the year	10		10			
Currency translation differences - Associates and joint ventures	***57***		***57***	***(22)***	***0***	***(22)***
Currency translation differences arising during the year	51		51	(22)		(22)
Recycling of currency translations differences relating to foreign operations disposed of in the year	6		6			
Currency translation differences	**329**	**0**	**329**	**186**	**0**	**186**
Actuarial gains and losses on defined benefit pension plans (see note F31.A)	**(275)**	**68**	**(207)**	**279**	**(13)**	**266**
Other comprehensive income	**100**	**56**	**155**	**525**	**(20)**	**505**

Hyperinflation

Accounting policy

The Venezuelan economy being considered as a hyperinflationary economy, since 2013 the Group applies the hyperinflationary accounting requirements of IAS 29 *Financial Reporting in Hyperinflationary Economies* to its Venezuelan operations. The financial statements are based on the historical cost basis and have been restated to take into account the effects of inflation.

During the first quarter of 2016, following evolutions in the local legislation and the business environment, the Group decided to no longer use the Dipro rate (previously known as Cencoex rate) to translate the entity into Euros, and switched to the DICOM exchange rate, resulting in a devaluation above 10,000%. Consequently, contributions of the Venezuelan legal entity to the Group's financial statements are no longer material even after applying the accounting policy for hyperinflation. The conditions of hyperinflation do not, in themselves, constitute an event of loss of control over the operations in Venezuela.

Currency translation differences

Accounting policy

For the purpose of presenting consolidated financial statements at the end of each reporting period, the assets and liabilities of the Group's foreign operations are expressed in Euros using closing rates. Income and expense items are translated at the average exchange rates for the period, except when the impact of applying the average rate is materially different from applying the spot rate at the date of the respective transactions, in which case the latter is applied. Exchange differences arising, if any, are recognized in other comprehensive income as "currency translation differences".

Currency translation differences are reclassified from equity to profit or loss, on:

- a disposal of the Group's entire interest in a foreign operation, or a partial disposal involving loss of control over a subsidiary that includes a foreign operation. In this case, all of the accumulated exchange differences in respect of that operation attributable to the Group are reclassified to profit or loss. Any exchange differences that have previously been attributed to non-controlling interests are derecognized, but they are not reclassified to profit or loss;
- a partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation, when the retained interest is a financial asset.

In the case of a partial disposal of a subsidiary (*i.e.* no loss of control) that includes a foreign operation, a proportionate share of accumulated exchange differences is reattributed to non-controlling interests and is not recognized in profit or loss. In the event of a capital decrease of a subsidiary without loss of control, no accumulated exchange differences are reclassified from equity to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated into the Group's presentation currency at the closing rate.

The total currency translation gains amount to € 329 million in 2016, and include:

- € 251 million currency translation gains in 2016, of which € 245 million for the Group's share;
- the recycling of € 69 million currency translation loss related mainly to the sale of Solvay Indupa (€ 55 million); and
- the derecognition of € 10 million currency translation loss for non-controlling interests for Solvay Indupa.

The € 251 million currency translation gains are linked to:

- the devaluation of the British pound (€ 68 million) and the Chinese renminbi (€ (40) million) against the Euro;
- the appreciation of the US dollar (€ 189 million), the Russian ruble (€ 48 million), the Brazilian real (€ 38 million) against the Euro; and
- the impact of the switch to the DICOM exchange rate for the Venezuelan legal entity (€ (60) million).

Notes to the consolidated statement of cash flows (continuing and discontinued operations)

In order to further enhance the understanding of cash flow performance, additional lines in the IFRS consolidated cash flow statement have been included in respect of the sale of real estate in the context of restructuring/dismantling/remediation and of cash flow linked to acquisitions of subsidiaries and excluded from Free Cash Flow.

NOTE F12
Depreciation, amortization and impairments

In 2016 total depreciation, amortization, and impairment losses amount to € 1,302 million, made up of:

- straight-line depreciation and amortization of € 1,026 million for continuing operations including:
  - cost of goods sold (€ 614 million);
  - administrative and commercial costs (€ 103 million);
  - research and development costs (€ 54 million);
  - other (€ 256 million), including € 231 million for Rhodia and Cytec PPA amortization (see note F3 *Other operating gains and losses*);
- net impairment loss of € 143 million for continuing operations;
- impairment loss of Solvay Indupa of € 63 million; and
- € 70 million for discontinued operations, including € 11 million for Rhodia PPA amortization.

In 2015 total depreciation, amortization, and impairment losses amount to € 978 million, made up of:

- straight-line depreciation and amortization of € 772 million for continuing operations including:
  - cost of goods sold (€ 515 million);
  - administrative and commercial costs (€ 97 million);
  - research and development costs (€ 39 million);
  - other (€ 120 million), including € 98 million for Rhodia PPA amortization (see note F3 *Other operating gains and losses*);
- net impairment loss of € 48 million for continuing operations;
- impairment loss of Solvay Indupa of € 88 million at year end; and
- € 71 million for discontinued operations, including € 11 million for Rhodia PPA amortization.

NOTE F13
Other non-operating and non-cash items

The other non-operating and non-cash items for 2016 (€ (16) million) comprise mainly the gain relating to the reversal of the Chemlogics holdback (€ (49) million), the impact from reversals of tax litigations provisions (€ 24 million), and other non-cash losses (impairment and gains on disposals).

The other non-operating and non-cash items for 2015 (€ 128 million) comprise mainly the costs relating to the Cytec acquisition (€ 36 million) and the impact from reversals of tax litigations provisions (€ 84 million).

NOTE F14
Income taxes

In 2016

Income tax income amounts to € 21 million, of which € 56 million for continuing operations.

Income tax paid amounts to € 212 million, of which € 180 million for continuing operations.

In 2015

Income tax expense amounts to € 135 million, of which € 69 million for continuing operations.

Income tax paid amounts to € 250 million, of which € 208 million for continuing operations.

NOTE F15
Changes in working capital

In € million	**2016**	2015
Inventories	17	(25)
Trade receivables	(157)	22
Trade payables	88	(79)
Other receivables/payables	(47)	(21)
Changes in working capital	**(99)**	**(103)**
Of which discontinued operations	(12)	(76)

NOTE F16
Changes in provisions

In 2016, the amount (€ (151) million) includes:

- the cash-out for € (414) million, of which € (16) million for discontinued operations, mainly Acetow; and
- the additions (€ 405 million) and reversals (€ (141) million) presented in note F31 *Provisions*.

In 2015, the amount (€ (302) million) includes:

- the cash-out for € (372) million of which € (43) million for discontinued operations, mainly Chlorovinyls; and
- the additions (€ 282 million) and reversals (€ (212) million).

NOTE F17
Cash flows from investing activities – acquisition/disposal of assets and investments

2016 In € million	Acquisitions	Disposals	Total
Subsidiaries	(23)	144	120
Other	(2)	6	4
Total investments	(26)	150	124
Tangible/intangible assets	(981)	76	(904)
Total	**(1,006)**	**226**	**(780)**

2015 In € million	Acquisitions	Disposals	Total
Subsidiaries	(4,835)	70	(4,765)
Associates and joint ventures	(13)		(13)
Other	(15)	(232)	(247)
Total investments	(4,862)	(162)	(5,024)
Tangible/intangible assets	(1,037)	31	(1,006)
Total	**(5,899)**	**(131)**	**(6,030)**

In 2016

The acquisition of subsidiaries (€ (23) million) relates mainly to the acquisition of Primester (€ (33) million) in 2016. The balance is related to prior year acquisitions: Cytec (€ (44) million), release of the Chemlogics holdback (€ 74 million), and Erca Emery Surfactant (€ (16) million).

The disposal of subsidiaries (€ 144 million) relates mainly to the disposal of Inovyn (€ 335 million) and Indupa (€ (157) million).

The acquisition of tangible and intangible assets (€ (981) million) relates to various projects:

- Composite Materials: expansion of adhesive capacity in Wrexham (United Kingdom);
- Composite Materials: new resin infusion facility in Ostringen (Germany);
- Peroxides: build-up of a megaplant H_2O_2 joint operation in the Kingdom of Saudi Arabia with Sadara (JV Dow-Aramco);
- Peroxides: construction of a 60Kt H_2O_2 plant at Zhengiang (China);
- Peroxides: H_2O_2 capacity expansion in Longview (United States);
- Silica: build-up of new highly dispersible silica (HDS) plant in Gunsan (South Korea);
- Special Chem: new eH_2O_2 plant in Rosignano (Italy);
- Specialty Polymers: investment in Fluorelastomers and PVDF in Changshu (China); and
- Specialty Polymers: investment in PEEK capacity (United States).

In 2015

The acquisition of subsidiaries (€ (4,835) million) related mainly to the acquisition of Cytec (€ (4,807) million).

The acquisition of associates and joint ventures (€ (13) million) related to the capital increase in RusVinyl.

The disposal cash-out (€ (232) million) related to the tax cash-out on Eco Services capital gain.

The other disposal (€ 70 million) related mainly to Inovyn net cash in (€ 58 million): up front net proceeds from Inovyn of € 150 million adjusted for cash transfers and other financial flows with the joint venture, as well as divestment costs, totaling € (92) million.

The acquisition of tangible and intangible assets (€ (1,037) million) related to various projects:

- Aroma Performance: new vanillin production plant in Zhenjiang (China), boosting its production capacities by 40%;
- Novecare: expansion of ethoxylation capacity in Asia and the United States;
- Novecare: expansion and rationalization of its production capacity in Brazil;
- Peroxides: construction of a megaplant H_2O_2 joint operation in the Kingdom of Saudi Arabia with Sadara (joint venture Dow-Aramco);
- Peroxides: construction of a 60Kt H_2O_2 plant at Zhengiang (China);
- Soda Ash and Derivatives: construction of a large sodium bicarbonate plant (Thailand);
- Specialty Polymers: investment in Changshu (China); and
- Specialty Polymers: investment in PEEK capacity (United States).

NOTE F18
Proceeds from bond issuance classified as equity and capital increase

Accounting policy

Share capital

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issuance of new share capital are directly recognized in equity as a deduction, net of tax, from the equity issuance proceeds.

Reserves

The reserves include:

- treasury shares;
- perpetual hybrid bonds that qualify as equity absent any unavoidable contractual obligation to repay the principal and interest of the perpetual hybrid bonds (no maturity, interest is payable annually but can be deferred indefinitely at the issuer's discretion);
- retained earnings;
- impact of hyperinflation accounting;
- currency translation differences from the consolidation process relating to the translation of the financial statements of foreign operations prepared in a functional currency other than the euro;
- the impacts of the fair value remeasurement of available-for-sale financial assets;
- the impacts of the fair value remeasurement of financial instruments documented as hedging instruments in cash flow hedges; and
- actuarial gains and losses related to defined benefit plans.

Non-controlling interests

These represent the share of non-controlling interests in the net assets and comprehensive income of subsidiaries of the Group. This share represents the interests in subsidiaries that are not held by the Company or its subsidiaries.

General

To strengthen its capital structure, Solvay issued undated deeply subordinated perpetual bonds ("perpetual hybrid bonds") of respectively € 1.2 billion in 2013 following the acquisition of Chemlogics and € 1.0 billion (net of issuance costs € 991 million) in December 2015 to finance the acquisition of Cytec.

Both perpetual hybrid bonds are classified as equity in the absence of any unavoidable contractual obligation to repay the principal and interest of the perpetual hybrid bonds, specifically:

- no maturity, yet the issuer has a call option at every reset date to redeem the instrument;
- at the option of the issuer, interest payments can be deferred indefinitely.

The coupons related to the perpetual hybrid bonds are recognized as equity transactions and are presented as dividends upon declaration (see consolidated statement of changes in equity):

- amounting to € 57 million in 2016 (€ 57 million in 2015) for the 2013 € 1.2 billion issuance (€ 700 million NC5.5 at 4.199% and € 500 million NC10 at 5.425%); and
- amounting to € 27 million in 2016 for the December 2015 € 1.0 billion issuance. It corresponds to the first payment of coupon made in June 2016. Every payment in June thereafter will amount to € 55 million until first call options (€ 500 million NC5.5 at 5.118% and € 500 million NC8.5 at 5.869%).

If Solvay has deferred any interest under the terms of the perpetual hybrid bonds, such deferred interest shall become due upon the declaration or payment of any dividend to the holders of ordinary shares.

In December 2015, Solvay increased its capital by € 1.5 billion (net of equity issuance costs paid at December 31, 2015 € 1,477 million), issuing 21,175,283 new shares at € 70.83 per share with preference rights. This rights issue was launched to complete the financing of the Cytec acquisition.

Number of shares (in thousands)

	2016	2015
Shares issued and fully paid at January 1	105,876	84,701
Capital increase		21,175
Shares issued and fully paid at December 31	105,876	105,876
Treasury shares held at December 31	2,651	2,106

NOTE F19
Other cash flows from financing activities

In 2016 the other cash flows from financing activities (€ 7 million) relate to the repayment of margin calls related to Solvay Energy Services activities.

In 2015 the other cash flows from financing activities (€ (31) million) included the payments for the liquidity clause relating to share-based payments signed as part of the Rhodia acquisition (€ (39) million).

NOTE F20
Cash flow from discontinued operations

The 2016 cash flow from discontinued operations (€ 41 million) results from the total cash flow of Acetow (€ 72 million), Emerging Biochemicals (€ 22 million), and Solvay Indupa (€ (52) million).

The 2015 cash flow from discontinued operations (€ 40 million) results from the total cash flow of Solvay Indupa (€ (53) million), Chlorovinyls (€ 41 million), Pharma (€ (24) million), Acetow (€ 59 million), and Emerging Biochemicals (€ 18 million).

Notes to the consolidated statement of financial position

NOTE F21
Intangible assets

Accounting policy

General

An intangible asset is an identifiable non-monetary asset without physical substance. It is identifiable when it is separable, *i.e.* is capable of being separated or divided from the Group, or when it arises from contractual or other legal rights. An intangible asset shall be recognized if, and only if:

a. it is probable that the expected future economic benefits that are attributable to the asset will flow to the Group; and

b. the cost of the asset can be measured reliably.

Intangible assets acquired or developed internally are initially measured at cost. The cost of an acquired intangible asset comprises its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates, and any directly attributable cost of preparing the asset for its intended use. Subsequent expenditure on intangible assets is capitalized only if it is probable that it will increase the future economic benefits associated with the specific asset. Other expenditure is recognized in profit or loss as incurred.

After initial recognition, intangible assets are measured at cost less accumulated amortization and impairment losses, if any.

Intangible assets are amortized on a straight-line basis over their estimated useful lives, which do not exceed the contractual period, if any. The estimated useful lives, residual values, and amortization methods are reviewed at each year end, and any changes in estimates are accounted for prospectively.

Patents and trademarks	2-20 years
Software	3-5 years
Development expenditures	2-5 years
Other intangible assets – Customer relationships	5-29 years
Other intangible assets – Technology	5-20 years

Amortization expense is included in the consolidated income statement within cost of goods sold, commercial and administrative costs, and research and development costs.

The asset is tested for impairment if there is a trigger for impairment, and annually for projects under development (see note F28 *Impairment*).

Intangible assets are derecognized from the consolidated statement of financial position on disposal or when no future economic benefits are expected from their use or disposal. The gain or loss arising from the derecognition of an intangible asset is recognized in profit or loss at the moment of derecognition.

Research and Development costs

Research costs are recognized in profit or loss in the period in which they are incurred.

Development costs are capitalized if, and only if, all the following conditions are fulfilled:

- the cost of the asset can be reliably measured;
- the technical feasibility of the product has been demonstrated;
- the product or process will be placed on the market or used internally;
- the assets will generate future economic benefits (a potential market exists for the product or, where it is to be used internally, its future utility has been demonstrated); and
- the technical, financial, and other resources required to complete the project are available.

Development costs comprise employee expenses, the cost of materials and services directly attributable to the projects, and an appropriate share of directly attributable fixed costs including, and where applicable, borrowing costs. The intangible assets are amortized as from the moment they are available for use, *i.e.* when they are in the location and condition necessary for them to be capable of operating in the manner intended by management. Development costs which do not satisfy the above conditions are recognized in profit or loss as incurred.

Other intangible assets

Other intangible assets consist mainly of customer lists and other intangible commercial assets acquired separately or in a business combination.

In € million	Development costs	Patents and trademarks	Customer relationships and other intangible assets	Total
Gross carrying amount				
At December 31, 2014	**249**	**956**	**1,226**	**2,431**
Additions	51	15	20	85
Disposals and closures	(5)	(5)	(1)	(11)
Increase through business combinations	0	731	1,728	2,460
Currency translation differences	3	5	51	60
Other	0	16	(12)	4
Transfer to assets held for sale	0	0	0	0
At December 31, 2015	**298**	**1,719**	**3,012**	**5,029**
Additions	68	8	22	98
Disposals and closures	(26)	(14)	(5)	(45)
Increase through business combinations	0	0	0	0
Currency translation differences	4	33	64	101
Other	(35)	60	(21)	4
Transfer to assets held for sale	(17)	(64)	(111)	(192)
At December 31, 2016	**292**	**1,742**	**2,961**	**4,995**
Accumulated amortization				
At December 31, 2014	**(83)**	**(442)**	**(362)**	**(887)**
Amortization	(25)	(72)	(126)	(223)
Disposals and closures	5	5	1	11
Currency translation differences	0	(3)	(11)	(14)
Other	(1)	(7)	12	4
Transfer to assets held for sale	0	0	0	0
At December 31, 2015	**(105)**	**(518)**	**(487)**	**(1,110)**
Amortization	(28)	(123)	(221)	(372)
Impairment	0	2	(4)	(2)
Disposals and closures	26	12	2	39
Currency translation differences	(1)	(11)	(7)	(19)
Other	16	(17)	2	1
Transfer to assets held for sale	8	26	34	67
At December 31, 2016	**(84)**	**(629)**	**(683)**	**(1,395)**
Net carrying amount				
At December 31, 2014	165	514	864	1,543
At December 31, 2015	193	1,201	2,525	3,919
At December 31, 2016	**208**	**1,113**	**2,278**	**3,600**

Intangibles relate mainly to the intangibles acquired from Rhodia (€ 471 million) and Cytec (€ 2,341 million, including € 694 million for patent and trademarks and € 1,647 million for acquired customer relationships). The average remaining useful life of Rhodia's assets is six years, and that of Cytec's assets is 16 years.

In 2015, the increase through business combinations relates mainly to Cytec for € 2,451 million.

NOTE F22
Goodwill and business combinations

Accounting policy

General

Acquisitions of subsidiaries are accounted for using the acquisition method. The consideration for each acquisition is measured at the aggregate of the fair values (at the date of acquisition) of assets transferred and liabilities incurred or assumed, and equity instruments issued by the Group in exchange for control of the acquiree. Acquisition-related costs are recognized in profit or loss as incurred.

Where applicable, the consideration for the acquisition includes any asset or liability resulting from a contingent consideration arrangement, measured at its acquisition-date fair value. Subsequent changes in such fair values are adjusted against the cost of acquisition where they qualify as measurement period adjustments (see below). All other subsequent changes in the fair value of contingent consideration classified as an asset or liability are accounted for in accordance with relevant IFRSs, generally through profit or loss.

Where a business combination is achieved in stages, the Group's previously held interests in the acquired entity are remeasured to fair value at the acquisition date (*i.e.* the date the Group obtains control) and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are reclassified to profit or loss, where such treatment would be appropriate if that interest were disposed of.

The acquiree's identifiable assets, liabilities, and contingent liabilities that meet the conditions for recognition under IFRS 3 *Business Combinations* are recognized and measured at their fair value at the acquisition date, except that:

- deferred tax assets or liabilities, and liabilities or assets related to employee benefit arrangements, are recognized and measured in accordance with IAS 12 *Income Taxes,* and IAS 19 *Employee Benefits*, respectively;
- liabilities or equity instruments relating to the replacement by the Group of an acquiree's share-based payment awards are measured in accordance with IFRS 2 *Share-based Payment*; and
- assets (or disposal groups) that are classified as held for sale in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations* are measured in accordance with that standard.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see paragraph below), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the amounts recognized as of that date.

The measurement period is the period from the date of acquisition to the date the Group obtains complete information about facts and circumstances that existed as of the acquisition date, and does not exceed twelve months.

Goodwill

Goodwill arising in a business combination is recognized as an asset at the date that control is obtained (the acquisition date). Goodwill is measured as the excess of the sum of:

a. the consideration transferred;
b. the amount of any non-controlling interests in the acquiree; and
c. in a business combination achieved in stages, the acquisition date fair value of the previously held equity interest in the acquiree,

over the share acquired by the Group in the fair value of the entity's identifiable net assets at the acquisition date.

Goodwill is not amortized but is tested for impairment on an annual basis, and more frequently if any impairment triggers are identified.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units (or groups of cash-generating units) in accordance with IAS 36 *Impairment of Assets*.

A cash-generating unit (CGU) is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other group(s) of assets.

These tests consist of comparing the carrying amount of the assets or (groups of) CGUs with their recoverable amount. The recoverable amount of an asset, a CGU, or a group of CGUs is the higher of its fair value less costs to sell and its value in use. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then the other assets of the unit pro rata on the basis of the carrying amount of each asset in the unit. An impairment loss recognized on goodwill shall not be reversed in a subsequent period.

Assets held for sale include their related goodwill.

On disposal of an operation within a CGU to which goodwill has been allocated, the goodwill associated with the operation disposed of is included in the determination of the profit or loss on disposal. It is measured on the basis of the relative values of the operation disposed of and the portion of the CGU retained, unless another method better reflects the goodwill associated with the operation disposed of.

Goodwill – overview

In € million	Total
Net carrying amount	
At December 31, 2014	**3,150**
Additions	2,610
Disposals and closures	(4)
Currency translation differences	62
Other	23
At December 31, 2015	**5,840**
Additions	31
Disposals and closures	
Currency translation differences	116
Other	(23)
Transfer to assets held for sale	(286)
At December 31, 2016	**5,679**

In 2016, the change in goodwill is further explained by:

- additions (€ 31 million) related to the Primester acquisition;
- adjustments of Cytec provisional goodwill within the measurement period (€ (23) million); and
- the transfer to assets held for sale of goodwill relating mainly to Acetow (€ (224) million), Emerging Biochemicals (€ (22) million), Formulated Resins (€ (29) million), and Cross Linkable Compound (€ (11) million).

In 2015, the goodwill increased by € 2,690 million due mainly to the Cytec acquisition (€ 2,598 million).

Goodwill by CGU

Goodwill acquired in a business combination is allocated to the CGU or groups of CGUs (Operating Segments) that are expected to benefit from that business combination.

In € million	2015 At the end of the period	2015 Transfer	2015 Adjust-ments	2015 Acqui-sitions and divest-ments	2015 Currency trans-lation differ-ences	2015 At the end of the period	2016 Transfer	2016 Adjust-ments	2016 Transfer to assets held for sale	2016 Acqui-sitions and divest-ments	2016 Currency trans-lation differ-ences	2016 At the end of the period
Groups of CGUs (Operating Segments)												
Advanced Formulations	221		8	(2)		227	(35)					192
Advanced Materials	485		8			493						493
Performance Chemicals	157		7			164	35		(75)			124
Cytec				2,598		2,598	(2,575)	(23)				0
Cash generating units												
Composites materials						0	1,399				48	1,447
Novecare	1,085			11	61	1,157	145				33	1,335
Technology solutions						0	1,032		(29)		35	1,037
Special Chem		231			(3)	228					(1)	227
Polyamides	170					170						170
Rare Earth Systems	161	(161)				0						0
Specialty Polymers	188			2	4	194			(11)		1	184
Acetow	120					120			(151)	31		0
Soda Ash and Derivatives	162					162						162
Coatis	82					82						82
Silica	72					72						72
Aroma Performance	49					49						49
Energy Services	50					50						50
Fluorochemicals	70	(70)				0						0
Hydrogen Peroxides Europe	20					20						20
Emerging Biochemicals	20					20			(20)			0
Hydrogen Peroxides Mercosul	14					14						14
Hydrogen Peroxides Nafta	8					8						8
Hydrogen Peroxides Asia	10					10						10
Precipitated Calcium Carbonate	4			(4)		0						0
PVC Mercosur	2				0	1						1
Total goodwill	**3,150**	**0**	**23**	**2,606**	**61**	**5,840**	**0**	**(23)**	**(286)**	**31**	**116**	**5,679**

In 2015, the CGUs Fluorochemicals and Rare Earth Systems were merged into the new CGU Special Chem. The goodwill resulting from the acquisition of Cytec on December 9, 2015 was allocated to a separate group of CGUs (Cytec) – shown in the table above – as of December 31, 2015.

In 2016, following the acquisition of Cytec, Solvay re-organized its segment set-up to enhance strategic coherence and improve alignment. Cytec's former Aerospace Materials and Industrial Materials activities are included in Advanced Materials and its In Process Separation and Additive Technologies activities are included in Advanced Formulations. Solvay's GBU Coatis has been transferred to Performance Chemicals.

Business combinations
Cytec Industries Inc.

1. Purchase consideration and other impacts on cash flows

On July 29, 2015, Solvay SA entered into a definitive merger agreement with U.S.-based Cytec Industries Inc. to acquire 100% of its share capital and of the voting rights, for US$ 75.25 per share in cash, subject to customary closing conditions, including regulatory approvals and Cytec's shareholders' approval. Following those approvals, the closing of the acquisition took place on December 9, 2015.

The total consideration for the acquisition amounted to € 5,047 million, and was based on the following:

i. the outstanding number of Cytec shares (other than those shares held by Cytec as treasury stock) as of December 9, 2015, namely 71,568,528, multiplied by the share price of US$ 75.25 that Solvay agreed to pay in cash pursuant to the Merger Agreement entered into between Solvay SA and Cytec Industries Inc. on July 28, 2015, equaling US$ 5,385 million (€ 4,947 million);

ii. the fair value of Cytec's outstanding share-based payment transactions, which were cancelled and converted into a right to receive cash on the acquisition date. This was included in the consideration in accordance with IFRS 3 *Business Combinations* for an amount of US$ 193 million (€ 177 million); and

iii. in addition, on July 29, 2015, Solvay entered into a foreign exchange forward contract to hedge US$ 1,880 million of the expected purchase price, contingent upon the realization of the acquisition. The effect of this hedging contract was a € 77 million decrease of the consideration, which has been deducted from goodwill as a basis adjustment.

The acquisition-related expenses amounting to € 130 million were presented as an M&A cost in 2015.

2. Purchase price allocation

Cytec's opening balance sheet has been fully consolidated within the Solvay Group as from December 31, 2015.

Accordingly, a provisional valuation of identifiable assets acquired and liabilities assumed was made as at December 31, 2015.

The following table summarizes:

- the consideration for Cytec of € 5,047 million;
- identifiable assets acquired less liabilities assumed after remeasurement to fair value at acquisition date of € 2,449 million; and
- the goodwill of € 2,598 million corresponding to the difference between the consideration and the net assets acquired, measured at fair value.

In € million	Total consideration	Provisional fair values 31.12.2015	Adjustments 2016	Final fair values 31.12.2015
Total consideration (A)	**5,047**			
Net assets acquired at fair value		**2,449**	**23**	**2,472**
Non-current assets		**4,076**	**(209)**	**3,867**
Intangible assets		2,451	0	2,451
Tangible assets		1,136	5	1,141
Investments in associates and joint ventures		11		11
Other investments		7	(6)	1
Deferred tax assets(1)		447	(213)	234
Loans and other assets		24	5	29
Current assets		**926**	**17**	**943**
Inventories		380	(3)	377
Trade receivables		233	0	233
Income tax receivables		57	0	57
Other receivables(2)		58	20	78
Cash and cash equivalents		198		198
Total assets (B)		**5,002**	**(192)**	**4,810**
Non-current liabilities		**2,189**	**(222)**	**1,967**
Provisions for employee benefits(3)		215	9	224
Other provisions		81		81
Deferred tax liabilities(1)		1,182	(230)	952
Financial debt		664		664
Other liabilities		47	(2)	45
Current liabilities		**364**	**7**	**371**
Other provisions(3)		37	3	40
Financial debt		65		65
Trade payables		156	(2)	154
Income tax payables		8	(2)	6
Other liabilities		98	8	106
Total liabilities (C)		**2,553**	**(215)**	**2,338**
Goodwill (A-B+C)		**2,598**	**(23)**	**2,575**

Provisional goodwill at the end of 2015

The net assets provisional fair value disclosed at the end of 2015 amounted to € 2,449 million and took into account:

- intangible assets of € 2,451 million, of which € 1,721 million for acquired customer relationships and € 730 million for acquired technologies;
- tangible assets of € 1,136 million;
- net deferred tax liabilities of € (735) million;
- inventories of € 380 million;
- trade receivables and trade liabilities of € 77 million;
- provisions of € (333) million;
- financial net debt of € (531) million; and
- other of € 4 million.

Consequently, the resulting provisional goodwill amounted to € 2,598 million (difference between total consideration of € 5,047 million and net assets provisional fair value of € 2,449 million).

During the 12-month measurement period, the fair values of identifiable assets acquired and liabilities assumed were further refined (see column "Adjustments 2016" in the table above and the related notes below).

These adjustments reduced the goodwill by € 23 million and are explained below.

1. The reduction in net deferred tax liabilities amounting to € 16 million results from (a) the reversal of net deferred tax liabilities related to non-US unremitted earnings that will no longer be repatriated to Cytec US (€ 25 million), and (b) deferred tax liabilities related to temporary differences resulting from other adjustments (€ (9) million). The other movements of deferred taxes correspond to reclassifications between deferred tax assets and deferred tax liabilities.
2. The revaluation of a receivable based on conditions existing at acquisition date (€ 20 million).
3. The revision of IAS 19 benefits mainly in United Kingdom and United States (€ 9 million).

The goodwill is not expected to be deductible for income tax purposes.

Had Cytec's business been consolidated from January 1, 2015, the consolidated income statement of comprehensive income would have included revenue of € 1,800 million and net income of € 23 million. Detailed *pro forma* information for the full year 2015 can be found in the Business Review section.

The final goodwill of € 2,575 million arises mainly from business opportunities in advanced lightweighting materials for the aerospace and automotive industries and in specialty chemicals for mining, synergies (estimated at a minimum of € 100 million in annual synergies within three years after the acquisition), and skilled work force. These benefits have not been recognized separately from goodwill because they do not meet the definition of identifiable intangible assets. See above for the allocation of this goodwill.

Other business combinations

On April 15, 2015 Solvay completed the acquisition of Erca Emery Surfactant B.V. alkoxylation asset, a facility jointly owned by Emery Oleochemicals and ERCA Group in the Moerdijk integrated industrial park in the Netherlands, strengthening its strategy of securing sustainable, large-scale surfactant assets worldwide, for a cash amount of € 23 million in 2015. The transaction generated a total amount of goodwill of € 1 million. The identifiable net assets acquired amount to € 42 million and consist mainly of tangible assets.

On November 5, 2015 Solvay acquired EPIC Polymers' long-fiber thermoplastics (LFT) technology, to complement its offering of high performance lightweighting materials and gain access to metal replacement of larger automotive semi-structural parts, for a total cash amount of € 7 million. The transaction generated a total amount of goodwill of € 2 million. The identifiable net assets acquired amount to € 5 million and consist mainly of intangible assets.

NOTE F23
Tangible assets

Accounting policy

General

Property, plant, and equipment are tangible items that:

- are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- are expected to be used during more than one period.

The items of property, plant, and equipment owned by the Group are recognized as tangible assets when the following conditions are satisfied:

- it is probable that the future economic benefits associated with the asset will accrue to the Group; and
- the cost of the asset can be measured reliably.

Items of property, plant, and equipment are initially measured at cost. The cost of an item of property, plant, and equipment comprises its purchase price and any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. If applicable, the cost comprises borrowing costs during the construction period.

After initial recognition, items of property, plant, and equipment are measured at cost less accumulated depreciation and impairment losses, if any.

Items of property, plant, and equipment are depreciated on a straight-line basis over their estimated useful lives. The components of an item of property, plant, and equipment with different useful lives are depreciated separately. Land is not depreciated. The estimated useful lives, residual values, and depreciation methods are reviewed at each year end, and any changes in estimates are accounted for prospectively.

Buildings	30-40 years
IT equipment	3-5 years
Machinery and equipment	10-20 years
Transportation equipment	5-20 years

Depreciation expense is included in the consolidated income statement within cost of goods sold, commercial and administrative costs, and R&D costs.

The asset is tested for impairment if there is trigger for impairment (see note F 28 *Impairment of tangible assets, intangible assets, and equity method investees*).

Items of property, plant, and equipment are derecognized from the consolidated statement of financial position on disposal or when no future economic benefits are expected from their use or disposal. The gain or loss arising from the derecognition of an item of property, plant, and equipment is recognized in profit or loss at the moment of derecognition.

Subsequent expenditure

Subsequent expenditure related to items of property, plant, and equipment is capitalized only if it is probable that it will increase the future economic benefits associated with the specific asset. Other expenditure is recognized in profit or loss as incurred. Subsequent expenditure incurred for the replacement of a component of an item of property, plant, and equipment is recognized as an asset only if it satisfies the recognition criteria mentioned above. The carrying amount of replaced items is derecognized.

Repair and maintenance costs are recognized in the consolidated income statement as incurred.

Regarding its industrial activity, Solvay incurs expenditure for major repairs over several years for most of its sites. The purpose of this expenditure is to maintain certain installations in proper working order without altering their useful life. This expenditure is considered a specific component of the item of property, plant, and equipment and is depreciated over the period during which the economic benefits are expected to be obtained, *i.e.* the interval between major repairs.

Dismantling costs

Dismantling and restoration costs are included in the cost of an item of property, plant, and equipment if the Group has a legal or constructive obligation to dismantle or restore. They are depreciated over the useful life of the items to which they pertain.

Generally, Solvay's obligation to dismantle and/or restore its operating sites is likely to arise only upon the discontinuation of a site's activities. A provision for dismantling discontinued sites or installations is recognized if there is a legal obligation (due to a request or injunction from the relevant authorities), or if there is no technical alternative to dismantling, so to ensure the safety compliance of the discontinued sites or installations.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction, or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization.

All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

In € million	Land and Buildings	Fixtures and Equipment	Other tangible assets	Tangible assets under construction	Total
Gross carrying amount					
At December 31, 2014	**2,863**	**10,521**	**424**	**916**	**14,725**
Additions	63	309	20	619	1,011
Disposals and closures	(44)	(253)	(16)	(3)	(315)
Increase through business combinations	277	566	21	320	1,183
Currency translation differences	21	14	2	27	64
Other	151	560	29	(632)	110
At December 31, 2015	**3,332**	**11,718**	**480**	**1,248**	**16,778**
Additions	22	170	11	621	823
Disposals and closures	(72)	(302)	(24)	0	(397)
Increase through business combinations	0	0	0	0	0
Currency translation differences	(48)	35	2	2	(9)
Other	260	687	41	(922)	66
Transfer to assets held for sale	(256)	(1,378)	(102)	(33)	(1,769)
At December 31, 2016	**3,237**	**10,929**	**409**	**916**	**15,492**
Accumulated depreciation					
At December 31, 2014	**(1,452)**	**(7,540)**	**(347)**	**0**	**(9,339)**
Depreciation	(85)	(526)	(32)		(644)
Impairment	(1)	(17)	(2)		(19)
Disposals and closures	31	237	15		283
Currency translation differences	(16)	14	(2)		(4)
Other	(6)	(104)	2		(109)
At December 31, 2015	**(1,530)**	**(7,935)**	**(367)**	**0**	**(9,832)**
Depreciation	(111)	(572)	(42)		(725)
Impairment	(57)	(75)			(132)
Reversal of impairment loss			3		3
Disposals and closures	41	301	23		364
Currency translation differences	39	51	0		89
Other	(7)	(34)	(8)		(50)
Transfer to assets held for sale	84	1,083	96		1,263
At December 31, 2016	**(1,543)**	**(7,181)**	**(297)**	**0**	**(9,020)**
Net carrying amount					
At December 31, 2014	1,411	2,981	77	916	5,386
At December 31, 2015	1,802	3,783	113	1,248	6,946
At December 31, 2016	1,695	3,748	112	916	6,472

Cash flows relating to major investments have been disclosed in note F17 *Cash flows from investing activities – Acquisition/disposal of assets and investments*.

NOTE F24
Leases

Accounting policy

General

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership. All other leases are classified as operating leases.

Agreements not in the legal form of a lease contract are analyzed in accordance with IFRIC 4 *Determining whether an Arrangement contains a Lease* to determine whether or not they contain a leasing contract to be accounted for in accordance with IAS 17 *Leases*.

Finance leases – lessee

On commencement of the lease, assets held under finance leases are initially recognized as assets of the Group at their fair value, or, if lower, at the present value of the minimum lease payments. The corresponding liability to the lessor is included in the consolidated statement of financial position as a finance lease obligation.

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, where shorter, the term of the lease.

Lease payments are apportioned between finance expenses and reduction of the lease obligation so as to produce a constant periodic rate of interest on the remaining balance of the liability. Finance expenses are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets, in which case they are capitalized in accordance with the Group's general policy on borrowing costs (see above). Contingent rentals arising under finance leases are recognized as expenses in the periods in which they are incurred.

Operating leases – lessee

Operating lease payments are recognized as an expense on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Contingent rentals arising under operating leases are recognized as an expense in the period in which they are incurred.

In the event that lease incentives are received to enter into operating leases, such incentives are recognized as a liability. The aggregate benefit of incentives is recognized as a reduction of rental expense on a straight-line basis, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

Finance leases

In € million	2016	2015
Net carrying amount of finance leases included in the table above		
Land and buildings	5	2
Fixtures and equipment	47	51
Total	**53**	**53**

Finance lease obligations

	Minimum lease payments	
In € million	2016	2015
Amounts payable under finance leases:		
Within one year	11	10
In years two to five inclusive	34	33
Beyond five years	88	84
Less: future finance charges	(81)	(74)
Present value of minimum lease payments of finance leases	**52**	**53**
Amount due for settlement within 12 months	**11**	**10**
Amount due for settlement after 12 months	**122**	**117**

Operating lease obligations

In € million	2016	2015
Total minimum lease payments under operating leases recognized in the income statement of the year	107	81

In € million	2016	2015
Within one year	96	82
In years two to five inclusive	281	250
Beyond five years	113	113
Total of future minimum lease payments under non-cancellable operating leases	**490**	**444**

Operating leases relate mainly to offices, warehouses, transportation and IT equipment.

NOTE F25
Assets held for sale

Accounting policy

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the sale is highly probable and the asset (or disposal group) is available for immediate sale in its present condition. For a sale to be highly probable, management should be committed to a plan to sell the asset (or disposal group), an active program to locate a buyer and complete the plan should be initiated, the asset (or disposal group) should be actively marketed at a price which is reasonable in relation to its current fair value, the sale should be expected to be completed within one year from the date of classification, and actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

When the Group is committed to a sale plan involving loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the Group will retain a non-controlling interest in its former subsidiary after the sale.

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and their fair value less costs to sell. Any excess of the carrying amount over the fair value less costs to sell is recognized as an impairment loss. Depreciation of such assets is discontinued as from their classification as held for sale. Prior period consolidated statements of financial position are not restated to reflect the new classification of a non-current asset (or disposal groups) as held for sale.

In € million	Acetow	Emerging Biochemicals	Formulated Resin	Cross Linkable Compound	Total	Solvay Indupa
	2016					2015
Operating segment	Performance Chemicals	Performance Chemicals	Advanced Formulations	Advanced Materials		Functional Polymers
Tangible assets	282	205	5	14	506	55
Goodwill	224	22	29	11	286	0
Intangible assets	95	1	29	0	125	0
Investments	2	11	0	0	13	8
Inventories	73	30	3	8	115	44
Trade and other receivables (including deferred tax assets)	119	76	2	0	196	62
Cash and cash equivalent	0	85	0	0	85	7
Assets held for sale	***800***	***429***	***68***	***33***	***1,331***	***177***
Non-current liabilities	265	4	10	1	280	3
Trade payables and other liabilities	60	62	1	0	123	271
Liabilities associated with assets held for sale	***325***	***66***	***10***	***1***	***403***	***275***
Net carrying amount of the disposal group	**474**	**364**	**58**	**32**	**928**	**(98)**
Included in other comprehensive income						
Currency translation differences	(25)	(1)			(25)	(56)
Defined benefit plans	(36)	(1)			(36)	(3)
Cash flow hedges	(1)				(1)	(3)
Other comprehensive income	**(61)**	**(1)**	**0**	**0**	**(63)**	**(59)**

NOTE F26
Investments in associates and joint ventures

Investments in associates[1]

In € million	2016	2015
Carrying amount at January 1	**41**	**30**
Acquisition/Disposal	(1)	
Increase through business combination		11
Profit (loss) for the year from associates	2	2
Dividends received from associates	(2)	(3)
Impairment (loss)/reversal	(11)	
Currency translation differences	(1)	1
Transfer to assets held for sale	(5)	
Other	2	0
Carrying amount at December 31	**24**	**41**

(1) See note F39.

The impairment loss of € (11) million relates to the US torrefied biomass electricity generation project following the decision to exit the project.

Investments in joint ventures[1]

In € million	2016	2015
Carrying amount at January 1	**357**	**350**
Acquisition/Disposal	(2)	
Capital increase/decrease	3	13
Profit (loss) for the year from joint ventures	83	1
Dividends received from joint ventures	(20)	(11)
Impairment (loss)/reversal of RusVinyl		19
Transfer from other investments	1	9
Currency translation differences	53	(20)
Other	(2)	(3)
Carrying amount at December 31	**473**	**357**

(1) See note F39.

In 2016, the profit (loss) for the year from joint ventures relates mainly to RusVinyl (€ 49 million) and Peroxidos do Brazil (€ 19 million). The currency translation difference relates mainly to the appreciation of the Russian ruble and the Brazilian real against the euro.

In 2015, the capital increase in joint ventures related mainly to the investment in RusVinyl. The currency translation difference in joint ventures related mainly to the depreciation of the Russian ruble and the Brazilian real against the euro.

NOTE F27
Other investments

In € million	2016	2015
Carrying amount at January 1	**92**	**121**
Additions	0	1
Disposals	(8)	(13)
Increase through business combination	(5)	7
Capital increase / decrease	4	33
Changes of consolidation method	(4)	(9)
Changes in consolidation scope	(4)	(14)
Impairments	(7)	(32)
Reversal of impairments		4
Transfer to assets held for sale	(11)	
Other	(3)	(6)
Carrying amount at December 31	**55**	**92**

In accordance with the concept of materiality, certain companies which are not of significant size have not been included in the consolidation scope. For more information, refer to *Principles of consolidation*.

NOTE F28
Impairment of tangible assets, intangible assets, and equity method investees

Accounting policy

General

At the end of each reporting period, the Group reviews whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are allocated to individual CGUs, or otherwise they are allocated to the smallest group of CGUs for which a reasonable and consistent allocation basis can be identified.

The recoverable amount is the higher of the fair value less costs to sell and the value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or CGU) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized for the asset (or CGU) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

Assets other than non-current assets held for sale

In accordance with IAS 36 *Impairment of Assets*, the recoverable amount of property, plant, and equipment, intangible assets, CGUs or groups of CGUs, including goodwill, and equity method investees corresponds to the higher of their fair value less costs of disposal and their value in use. The latter equals the present value of the future cash flows expected to be derived from each asset, CGU or group of CGUs, and equity method investees and is determined using the following inputs:

- business plan approved by management based on growth and profitability assumptions, taking into account past performances, forecast changes in the economic environment, and expected market developments. Such business plan generally covers five years, unless management is confident that projections over a longer period are reliable;
- consideration of a terminal value determined from the cash flows obtained by extrapolating the cash flows of the last year of the business plan referred to above, affected by a long-term growth rate deemed appropriate for the activity and the location of the assets;
- discounting of expected cash flows at a rate determined using the weighted average cost of capital formula.

Discount rate

The discount rate is estimated based on an extensive benchmarking with peers, so as to reflect the return investors would require if they were to choose an investment in the underlying assets. The weighted average cost of capital used to discount future cash flows was set at 7.2% in 2016 (7.7% in 2015). The decrease is driven by the lower interest rate environment.

Long-term growth rates

In 2016, the long-term growth rate was set at 2%, except for Aroma, for which a 1% rate was set. In 2015, the long-term growth rate was set between 1% and 3% depending on the CGU. The growth rates are consistent with the long-term average market growth rates for the respective CGUs and the countries in which they operate.

Other key assumptions are specific to each CGU (energy price, volumes, margin, etc.).

General

The impairment tests performed at CGU level at December 31, 2016 and December 31, 2015 did not lead to any impairment of assets, as the recoverable amounts of the (groups of) CGUs were significantly higher than their carrying amounts. More specifically, the difference between the carrying amount of the CGUs or groups of CGUs and their value in use (excess value) represents in all cases more than 10% of their carrying amount. As such, for those CGUs or groups of CGUs, a reasonable change in a key assumption on which the recoverable amount of the CGUs or groups of CGUs is based would not result in an impairment loss for the related CGUs or groups of CGUs. In this respect, for the Cytec CGUs (Composite Materials and Technology Solutions), the sensitivities below led to the remaining excess value being below 10% of their carrying amount:

Assumptions: Discount rate = 7.2% Long term growth rate = 2%	Recoverable amount (in € billion)		Remaining excess value (in € billion)	
	Composite Materials	Technology Solutions	Composite Materials	Technology Solutions
Sensitivity to long term growth rate (1)%	(0.5)	(0.3)	0.2	0.1
Sensitivity to long term growth rate +1%	0.8	0.5	1.5	0.8
Sensitivity to discount rate (0.5)%	0.4	0.3	1.1	0.6
Sensitivity to discount rate + 0.5%	(0.4)	(0.2)	0.3	0.1

For the Cytec CGUs, either an unfavorable change in growth or discount rate as disclosed above is not expected to result in an impairment.

RusVinyl

RusVinyl is a Russian joint venture in chlorovinyls (Operating Segment: Functional Polymers) in which Solvay holds a 50% equity interest, together with Sibur who holds the remaining 50% equity interest.

In 2015 a new business plan provided by RusVinyl to its lenders led to a positive adjustment of RusVinyl equity earnings amounting to € 19 million. The recoverable amount of the investment has been estimated based on a dividend discount model taking into account this new business plan. In 2016 no additional impairment losses or reversals of those were recognized.

The recoverable amount is highly sensitive to the RUB/€ exchange rate. This rate impacts the carrying amount of the investment, the foreign currency losses on the euro denominated debt, and consequently the distributable earnings potential. Sensitivities on the exchange rate RUB/€ and inflation in Russia lead to a range of outcomes varying between € 90 million above and below the recoverable amount.

Other

Impairment charges were recognized in 2016 with respect mainly to the following assets:

- the Egyptian Soda Ash plant following the mothballing decision (€ 82 million - Operating Segment: Performance Chemicals);
- Brazilian electricity cogeneration assets following adverse market conditions (€ 28 million – Operating Segment: Corporate and Business Services);
- the Coleopterre assets (€ 16 million – Operating Segment: Advanced Materials); and
- the US torrefied biomass electricity generation project following the decision to exit the project (€ 10 million – Operating Segment: Corporate and Business Services).

An impairment charge of € 26 million relating to non-performing Special Chem's assets (Operating Segment: Advanced Materials) was recognized in 2015.

Non-current assets held for sale
Solvay Indupa

At the end of 2015, Solvay confirmed that its strategic direction to sell its participation in Solvay Indupa remained unaffected and that it was examining all options to achieve this objective. The remeasurement to fair value less costs to sell of Solvay Indupa led to an additional impairment loss of € 88 million in 2015. On May 2, 2016, Solvay entered into a Share Purchase Agreement with Unipar Carbocloro for the sale of its equity interests held in Solvay Indupa. During the third quarter of 2016, the fair value less cost to sell has been updated, so as to reflect the impact of the worsening of the business environment on the deal. An impairment loss in the amount of € 63 million was recognized in 2016. Completion of the disposal transaction, at a total enterprise value of US$ 202.2 million, took place on December 27, 2016.

NOTE F29
Inventories

Accounting policy

Cost of inventories includes the purchase, conversion, and other costs incurred in bringing the inventories to their present location and condition. The cost of inventories is determined by using the weighted average cost or first-in, first-out (FIFO) method. Inventories having a similar nature and use are measured using the same cost formula.

Inventories are measured at the lower of the purchasing cost (raw materials and merchandise) or production cost (work in progress and finished goods), and net realizable value. Net realizable value represents the estimated selling price, less all estimated costs of completion and the estimated costs necessary to make the sale.

In € million	2016	2015
Finished goods	1,051	1,172
Raw materials and supplies	649	702
Work in progress	45	63
Total	**1,745**	**1,937**
Write-downs	(73)	(71)
Net total	**1,672**	**1,867**

NOTE F30
Other receivables (current)

In € million	2016	2015
VAT and other taxes	289	290
Advances to suppliers	79	52
Financial instruments - operational	188	90
Insurance premiums	24	22
Loan receivables	9	25
Receivables on assets disposal	39	35
Other	107	143
Other current receivables	**736**	**655**

Financial instruments – operational include held for trading and cash flow hedge derivatives (see note F32.A. *Overview of financial instruments*).

NOTE F31
Provisions

In € million	Employee benefits	Restructuring	Environment	Litigation	Other	Total
At December 31, 2015	**3,133**	**97**	**723**	**214**	**106**	**4,273**
Additions	97	102	53	36	101	389
Reversals of unused amounts	(24)	(16)	(13)	(67)	(6)	(125)
Uses	(200)	(71)	(90)	(23)	(30)	(414)
Increase through discounting	87	0	36	3	0	126
Remeasurements	275	0	0	0	0	275
Currency translation differences	(52)	(1)	17	10	(2)	(27)
Acquisitions and changes in consolidation scope	10	3	5	(3)	(2)	12
Disposals	(9)	0	2	(1)	(2)	(10)
Transfer from/to liabilities associated with assets held for sale	(201)	0	0	0	(1)	(202)
Other	1	(16)	5	(1)	(17)	(28)
At December 31, 2016	**3,118**	**99**	**737**	**167**	**148**	**4,269**
Of which current provisions	0	92	99	26	73	291

In total provisions are stable.

The main events of 2016 are:

- a net change in provisions of € 151 million (net amount of additions, reversals, and uses);
- a decrease of the discount rates, mainly in the Eurozone and in the United Kingdom, and changes of other financial and demographic assumptions used for the computation of the employee benefits obligations, which led to a negative impact in equity of € 275 million; and
- the transfer of liabilities from continuing to liabilities associated with assets held for sale amounting to € 202 million, relating mainly to employee benefits obligations at Acetow.

Management expects provisions (other than employee benefits) to be used (cash outlays) as follows:

In € million	Up to 5 years	Between 5 and 10 years	Beyond 10 years	Total
Total provisions for environment	342	141	254	737
Total provisions for litigation(1)	144	6		149
Total provisions for restructuring and other	201	19	30	249
At December 31, 2016	**686**	**165**	**284**	**1,136**

(1) Excluding provisions with cash deposit to guarantee the liabilities (€ 18 million)

F31.A. Provisions for employee benefits

Accounting policy

General

The Group's employees are offered various post-employment and other long-term employee benefits as a result of legislation applicable in certain countries, and contractual agreements entered into by the Group with its employees or constructive obligations.

The post-employment benefits are classified as defined contribution or defined benefit plans.

Defined contribution plans

Defined contribution plans involve the payment of fixed contributions to a separate entity and release the employer from any subsequent obligation, as this separate entity is solely responsible for paying the amounts due to the employee. The expense is recognized when an employee has rendered service to the Group during the period.

Defined benefit plans

Defined benefit plans concern all plans other than defined contribution plans and include:

- post-employment benefits: pension plans, termination benefits, other retirement obligations, and supplemental benefits;
- other long-term employee benefits: long-service benefits granted to employees according to their seniority in the Group; and
- other post-employment benefits: medical care.

Taking projected final salaries into account on an individual basis, post-employment benefits are measured by applying a method (projected unit credit method) using assumptions involving discount rate, life expectancy, turnover, wages, annuity revaluation, and medical cost inflation. The assumptions specific to each plan take into account the local economic and demographic contexts.

The discount rates are interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation.

The amount recognized under post-employment obligations corresponds to the difference between the present value of future obligations and the fair value of the plan assets funding the plan. If this calculation gives rise to a deficit, an obligation is recognized in liabilities. Otherwise, a net asset limited to the lower of the surplus in the defined benefit plan and the present value of any future plan refunds or any reduction in future contributions to the plan is recognized.

The defined benefit cost consists of service cost and net interest (based on discount rate) on the net liability or asset, both recognized in profit or loss, and remeasurements of the net liability or asset, recognized in other comprehensive income.

Service cost consists of current service cost, past service cost resulting from plan amendments or curtailments, and settlement gains or losses.

The interest expenses arising from the reverse discounting of the benefit obligations, the financial income on plan assets (determined by multiplying the fair value of the plan assets by the discount rate), and interest on the effect of the asset ceiling are recognized on a net basis in the net financial charges.

Remeasurements of the net liability or asset consist of:

- actuarial gains and losses on the benefit obligations arising from experience adjustments and/or changes in actuarial assumptions (including the effect of changes in the discount rate)
- the return on plan assets (excluding amounts in net interest) and changes in the limitation of the net asset recognized.

Other long-term benefits such as long service awards are accounted for in the same way as post-employment benefits but remeasurements are fully recognized in the net financial charges during the period in which they occur.

The actuarial calculations of post-employment obligations and other long-term benefits are performed by independent actuaries.

Overview

In € million	2016	2015
Post-employment benefits	2,949	2,964
Other long-term benefits	120	115
Termination benefits	48	53
Total employee benefits	**3,118**	**3,133**

A. Defined contribution plans

For defined contribution plans, Solvay pays contributions to publicly or privately administered pension funds or insurance companies. For 2016, the expense amounted to € 56 million as against € 31 million in 2015; this increase is due mainly to the acquisition of Cytec at the end of 2015, for which expenses have been consolidated as from January 1, 2016.

B. Defined benefit plans

Defined benefit plans can either be funded via outside pension funds or insurance companies ("funded plans") or financed within the Group ("unfunded plans").

The net liability results from the net of the provisions and the capitalized pensions assets.

In € million	2016	2015
Provisions	2,949	2,964
Asset plan surplus	(13)	(9)
Net liability	**2,936**	**2,955**
Operational expense	55	30
Finance expense	80	66

B.1. Management of risks

Over recent years, the Group has reduced its exposure to defined benefit plan obligations stemming from future services by converting existing plans into pension plans with a lower risk profile (hybrid plans, cash balance plans, and defined contribution plans) or by closing them to new entrants.

Solvay continuously monitors its risk exposure, focusing on the following risks:

Asset volatility

Equity instruments, though expected to outperform corporate bonds in the long-term, create volatility and risk in the short term. To mitigate this risk, the allocation to equity instruments is monitored using Assets and Liabilities Management techniques, to ensure it remains appropriate given the long-term objectives of the Group and of the respective schemes.

Changes in bond yields

A decrease in corporate bond yields will increase the carrying amount of the plan's liabilities. For funded schemes this impact will be offset partially by an increase in the fair value of the plan assets.

Inflation risk

The defined benefit obligations are linked to inflation, and higher inflation will lead to higher liabilities (although, in most cases, caps on the level of inflationary increases are in place to protect against extreme inflation). A limited part of the assets is either unaffected by or only loosely correlated with inflation, meaning that an increase in inflation will also increase the deficit.

Life expectancy

The majority of the schemes' obligations are to provide benefits for the life of the member. Increases in life expectancy will therefore increase the plans' liabilities.

Currency risk

This risk is limited, as major plans in foreign currency are funded and most of their assets are denominated in the currency in which benefit payments will take place.

Regulatory risk

For partly or fully unfunded plans, the Group is exposed to the risk of external funding following regulatory constraints. This should not impact the defined benefit obligation but could expose the Group to a potential significant cash outlay.

For more information about Solvay Group risk management, please refer to the Management of risks section of the present document.

B.2 Description of obligations

The provisions have been set up primarily to cover post-employment benefits granted by most Group companies, in line either with local rules and customs or with established practices which generate constructive obligations.

The largest post-employment plans in 2016 are in the United Kingdom, France, the United States, Germany, and Belgium. These five countries represent 94% of the total defined benefit obligation.

	2016	2015
United Kingdom	30%	30%
France	20%	19%
United States	27%	27%
Germany	10%	12%
Belgium	7%	6%
Other countries	6%	6%

United Kingdom

Solvay sponsors a few defined benefit plans in the United Kingdom; the largest one is the Rhodia Pension Fund. This is a final salary funded pension plan, with entitlement to accrue a percentage of salary per year of service. It was closed to new entrants in 2003 and replaced by a defined contribution plan.

Broadly, about 8% of the liabilities are attributable to current employees, 26% to former employees, and 66% to current pensioners.

The Fund functions and complies with UK legislation under a large regulatory framework. The Pensions Regulator has a risk-based approach to regulation and a code of practice which provides practical guidance to trustees and employers of defined benefit schemes on how to comply with the scheme funding requirements. In accordance with UK legislation, the Fund is subject to Scheme Specific Funding which requires that pension plans are funded prudently.

The UK Rhodia Pension Fund is governed by a Board of Trustees. They manage the Fund with prudent and fair judgment. The Trustees determine the liabilities used for Statutory Funding Objectives based on prudent actuarial and economic assumptions. Any shortfall or deficit once these liabilities have been deducted from the Fund's assets must be reduced by additional contributions and in a time frame that fits with the employer's ability to pay and the strength of covenant or contingent security being offered.

The Rhodia Pension Fund is subject to a triennial valuation cycle for funding purposes. This valuation is performed by the scheme actuary in line with UK regulations and is discussed between the Trustees and the sponsoring employer to agree the valuation assumptions and a funding plan. The last completed valuation was as at January 1, 2015 which established a fixed contribution rate of pensionable pay for active members plus a deficit recovery plan which aims to fund the scheme through technical provisions over a period of time. Future contributions were kept at the same level as those agreed at the previous valuation, which required the recovery plan to be extended for another year.

France

Solvay sponsors various defined benefit plans in France: the French compulsory retirement indemnity plan as well as two closed and one open top hat plans.

The main plan is for all former Rhodia current and retired employees who contributed to the plan prior to its closure in the 1970s. It offers a full benefit guarantee based on the end-of-career salary. This plan is unfunded and approximately 95% of the liabilities are attributable to current pensioners.

Solvay does not expect to have any cash out impact in France due to the changes in legislation regarding minimum funding requirements.

United States

As of year end 2016 Solvay sponsored six different defined benefit pension plans in the United States (three qualified plans and three non-qualified plans). A qualified plan is an employer-sponsored retirement plan that qualifies for special tax treatment under Section 401(a) of the Internal Revenue Code. At this moment all defined benefit plans are closed to new entrants; newly hired employees are eligible to participate in a defined contribution plan. Note that all three of the qualified defined benefit pension plans are funded while the three non-qualified defined benefit pension plans are unfunded. The qualified plans make up the vast majority of the pension liabilities as of December 31, 2016.

Solvay's plans are in compliance with local laws regarding audited financial statements, governmental filings, and Pension Benefit Guaranty Corporation insurance premiums where applicable. The plans are reviewed and monitored locally by fiduciary committees for purposes of plan investments and administrative matters.

For the US qualified plans, Solvay's contributions take into account minimum (tax-deductible) funding requirements and maximum tax deductible contributions, both regulated by the tax authorities.

Certain eligible participants may elect to receive their pension in a single lump sum payment instead of a monthly payment.

During 2016, Solvay took action to reduce the liabilities of its qualified pension plans. In December 2016, Solvay offered a voluntary lump-sum pension settlement to participants in these plans, and it also entered into an agreement with an insurance carrier to purchase a group annuity contract to settle a substantial portion of the plans' liabilities for current pensioners.

Broadly, about 31% of the liabilities are attributable to current employees, 10% to former employees for whom benefit payments have not yet commenced, and 59% to current pensioners.

In connection with the lump-sum offering, approximately 900 plan participants who had deferred vested benefits elected to receive their pension benefits in the form of a one-time lump-sum payment with no future payments due. As a result, US$ 42 million in pension lump sums were distributed from the plans in December 2016.

In addition, as noted above, Solvay purchased a group annuity contract under which an insurance carrier will pay and administer future benefit payments for approximately 3,100 pensioners. This transaction closed in December 2016 with the transfer of US$ 112 million in assets to the selected insurance carrier.

In 2016, in the United States Solvay contributed to three multiemployer pension plans under collective bargaining agreements that cover certain of its union-represented employees. Solvay withdrew from the National Integrated General Pension Plan on June 1, 2016, pursuant to collective bargaining agreements. Following the Cytec acquisition Solvay is now contributing to the Western Conference of Teamsters pension fund on behalf of Orange, California, union employees. Each of the multiemployer plans is a defined benefit pension plan. None of the multiemployer plans provides an allocation of its assets, liabilities, or costs among contributing employers. None of the multiemployer plans provides sufficient information to permit Solvay, or other contributing employers, to account for the multiemployer plan as a defined benefit plan. Accordingly, the company accounts for its participation in each of the multiemployer plans as if they were a defined contribution plan. The annual contributions paid to multiemployer plans during 2016 and 2015 were less than € 1 million.

Germany

Solvay sponsors five different defined benefit plans in Germany, of which two are closed to new entrants and three are open. As is common in Germany, all these plans are unfunded. Under these plans, employees are entitled to annual pensions on retirement based on their service and final salary.

Broadly, about 64% of the liabilities are attributable to current pensioners.

Belgium

Solvay sponsors two defined benefit plans in Belgium. These are funded pension plans. The plan for executives has been closed since the end of 2006, and the plan for the white and blue collars has been closed since 2004. The past service benefits provided under these plans continues to be adapted each year considering annual salary increase and inflation ("Dynamic management"). In accordance with market practice in Belgium, because of favorable retirement lump-sum taxation most benefits are paid as lump sum.

Furthermore, Solvay sponsors two open defined contribution plans. These are funded pension plans: the plan for executives opened at the beginning of 2007 and the plan for white and blue collars opened at the beginning of 2005. There are four different investment funds – ranging from "Prudent" to "Dynamic" – in which participants may choose to invest their contributions However, regardless of their choices, Belgian law stipulates that the employer must guarantee a return on employer contribution and on personal contribution, thereby creating a potential liability for the Company. Since January 1, 2016 the return is set on an annual basis with a minimum of 1.75% and a maximum of 3.75%. For 2016 and 2017 the return is fixed at 1.75% for both types of contributions. For these plans Solvay has € 110 million of plan assets at December 31, 2016, and paid € 9 million of contributions during 2016. At the end of 2016 the net liability recognized in the consolidated statement of financial position concerning these plans is not material.

Solvay's plans are administered through two Solvay Pension Funds that operate in compliance with local laws regarding minimum funding, investments principles, audited financial statements, governmental filings, and governance principles. Pension Funds are managed through a General Assembly and a Board of Directors delegating day-to-day activities to an operational committee.

Other plans

The majority of the obligations relate to pension plans. In some countries (mainly the United States), there are also post-retirement medical plans, which represent 6% of the total defined benefit obligation.

B.3 Financial impacts

Changes in net liability

In € million	2016	2015
Net amount recognized at beginning of period	**2,955**	**3,014**
Net expense recognized in P&L - Defined benefit plans	135	96
Actual employer contributions/direct actual benefits paid	(181)	(168)
Acquisitions/disposals	0	189
Remeasurements before impact of asset ceiling	290	(291)
Change in the effect of the asset ceiling limit on remeasurements	(16)	12
Reclassifications	1	30
Currency translation differences	(54)	61
Transfer from/to (liabilities associated with) assets held for sale	(195)	12
Net amount recognized at end of period	**2,936**	**2,955**

The decrease of the net liability of € 19 million between 2015 and 2016 is explained mainly by the net effect of:

- remeasurements (€ 275 million) due primarily to the decrease of discount rates for Eurozone, United Kingdom and United States, partially offset by favorable investment returns. Total remeasurement amounts to € 290 million of which € 16 million were not recognized due to asset ceiling. Note that remeasurements in 2015 amounted to € (279) million in the context of increase in discount rates;
- the classification as held for sale of Acetow activities (€ (195) million);
- the positive effect on foreign currency, mainly in United Kingdom (€ (54) million);
- the net expense in the consolidated income statement (€ 135 million); and
- the cash out (€ (181) million).

Net expense

In € million	2016	2015
Service costs	**39**	**18**
Current service costs	49	51
Past service costs (including curtailments)	(10)	(32)
Net interest	**80**	**66**
Interest cost	194	149
Interest income	(114)	(83)
Administrative expenses paid	**16**	**11**
Net expense recognized in P&L - Defined benefit plans	**135**	**96**
Remeasurements recognized in other comprehensive income	**275**	**(279)**

The service costs and administrative expenses of these defined benefit plans are recognized within cost of sales, commercial and administrative costs, research & development costs, operating gains and losses and results from legacy remediation. The net interest is reported as a finance expense.

In 2016 the Group's current service costs amounted to € 49 million, of which € 32 million related to funded plans and € 17 million related to unfunded plans. Cytec integration has not generated an increase of service cost because the majority of its US pensions plans are closed. Conversely, the administrative and interest costs increased in 2016 further to the Cytec integration. Past service costs include favorable impacts reflecting the amendment of the medical plan in Brazil (€ 9 million).

In 2015 the Group current service costs amounted to € 51 million, of which € 33 million related to funded plans and € 18 million related to unfunded plans. Past service costs include favorable impacts reflecting the evolution of the post retirement Medicare insurance policy in the United States (€ 30 million).

Net liability

In € million	2016	2015
Defined benefit obligations - funded plans	3,650	3,648
Fair value of plan assets at end of period	(2,811)	(2,940)
Deficit for funded plans	**839**	**708**
Defined benefit obligations - unfunded plans	2,089	2,223
Deficit/Surplus (-)	**2,928**	**2,931**
Amounts not recognized as asset due to asset ceiling (recognized in other comprehensive income)	8	24
Net liability (asset)	**2,936**	**2,955**
Provision recognized	2,949	2,964
Asset recognized	(13)	(9)

Changes in defined benefit obligations

In € million	2016	2015
Defined benefit obligation at beginning of period	**5,871**	**5,103**
Current service costs	49	51
Interest cost	194	149
Employee contributions	4	4
Past service costs (including curtailments)	(9)	(32)
Settlements	(139)	1
Acquisitions/disposals (-)	0	986
Remeasurements in other comprehensive income	456	(324)
Actuarial gains and losses due to changes in demographic assumptions	*(22)*	*(77)*
Actuarial gains and losses due to changes in financial assumptions	*460*	*(242)*
Actuarial gains and losses due to experience	*18*	*(5)*
Actual benefits paid	(318)	(270)
Currency translation differences	(175)	158
Reclassification and other movements	0	38
Transfer from/to (liabilities associated with) assets held for sale	(195)	9
Defined benefit obligation at end of period	**5,739**	**5,871**
Defined benefit obligations - funded plans	3,650	3,648
Defined benefit obligations - unfunded plans	2,089	2,223

In 2016 the classification as held for sale of Acetow activities led to a decrease of defined benefit obligations of € 190 million.

In 2015 the major variation on Solvay defined benefit obligation was the acquisition of Cytec activities which led to an increase of € 992 million.

Changes in the fair value of plan assets

In € million	2016	2015
Fair value of plan assets at beginning of period	**2,940**	**2,102**
Interest income	114	83
Remeasurements in other comprehensive income	166	(33)
Return on plan assets (excluding amounts in net interests)	*166*	*(33)*
Employer contributions	181	168
Employee contributions	4	4
Acquisitions/disposals (-)	0	797
Administrative expenses paid	(16)	(11)
Settlements	(138)	1
Actual benefits paid	(318)	(270)
Currency translation differences	(121)	97
Reclassification and other movements	(1)	7
Transfer from/to (liabilities associated with) assets held for sale	0	(4)
Fair value of plan assets at end of period	**2,811**	**2,940**
Actual return on plan assets	280	50

In 2016 the total return on plan assets amounted to € 280 million.

In 2015 the major variation on Solvay plan assets was the acquisition of Cytec activities which led to an increase of € 785 million.

The Group's cash contributions (including direct benefit payments) for 2016 amounted to € 181 million, of which € 79 million were contributions to funds and € 102 million were direct benefits payments.

The Group's cash contributions (including direct benefit payments) for 2015 amounted to € 168 million, of which € 63 million were contributions to funds and € 105 million were direct benefits payments.

Excluding significant changes in the regulatory environment (see "Regulatory risk" above), the Group's cash contributions in 2017 are expected to approximate € 209 million. This increase is due to additional contributions in the United States.

Categories of plan assets

	2016		2015	
	Quoted	Non quoted	Quoted	Non quoted
Equity	38%	0%	51%	0%
Bonds				
Investment Grade	57%	0%	44%	0%
Non Investment Grade	1%	0%	1%	0%
Properties	1%	0%	1%	0%
Cash and cash equivalents	3%	0%	3%	0%
Derivatives				
Structured debt (LDI)	0%	0%	0%	0%
Other derivatives	0%	0%	0%	0%
Others	0%	0%	0%	0%
Total	**100%**	**0%**	**100%**	**0%**

With respect to the invested assets, it should be noted that these assets do not contain any direct investment in Solvay Group shares or in property or other assets occupied or used by Solvay. This does not prevent Solvay shares from being included in mutual investment fund type investments.

Changes in assets ceiling

In € million	2016	2015
Effect of the asset ceiling limit at beginning of year	**24**	**12**
Change in the effect of the asset ceiling limit on remeasurements	(16)	12
Effect of the asset ceiling limit at end of year	**8**	**24**

The changes in asset ceiling recognized through OCI amount to € (16) million as against € 12 million in 2015. These impacts relate to the plans of Brazil, Portugal, and Switzerland.

Actuarial assumptions

These assumptions are not related to a specific segment.

	Eurozone		United Kingdom		United States	
In %	2016	2015	2016	2015	2016	2015
Discount rates	1.50	2.25	2.75	3.75	4.00	4.25
Expected rates of future salary increases	1.75 – 4.00	1.75 – 4.00	2.40 – 3.50	2.15 – 3.25	3.00 – 3.75	3.00 – 3.75
Inflation	1.50 – 2.00	1.75	3.50	3.25	2.25	2.25
Expected rates of pension growth	0.00 – 1.75	0.00 – 1.75	3.50	3.25	NA	NA
Expected rates of medical care cost increases	1.75	1.75	5.40	5.50	4.50 – 7.00	4.50 – 7.50

Actuarial assumptions used in determining the annual cost

These assumptions are not related to a specific segment.

	Eurozone		United Kingdom		United States	
In %	2016	2015	2016	2015	2016	2015
Discount rates	2.25	1.75	3.75	3.50	4.25	4.00
Expected rates of future salary increases	1.75 – 4.00	1.75 – 4.00	2.15 – 3.25	1.90 – 3.00	3.00 – 3.75	3.00 – 3.75
Inflation	1.75	1.75	3.25	3.00	2.25	2.25
Expected rates of pension growth	0.00 – 1.75	0.00 – 1.75	3.25	3.00	NA	NA
Expected rates of medical care cost increases	1.75	1.75	5.40	5.50	4.50 – 7.00	4.50 – 7.50

Actuarial assumptions regarding future mortality are based on recent country-specific mortality tables. These assumptions translate at December 31, 2016 into an average remaining life expectancy in years for a pensioner retiring at age 65:

In years	United Kingdom	United States	Belgium	France	Germany
Retiring at the end of the reporting period					
Male	21	20	18	24	20
Female	24	22	21	28	24
Retiring 20 years after the end of the reporting period					
Male	23	21	18	27	22
Female	25	23	21	31	26

In some countries such as United Kingdom and United States, the mortality assumptions reflect actual scheme experience and/or Solvay's expectations in terms of future mortality improvements.

The actuarial assumptions used in determining the benefit obligation at December 31 are based on the following employee benefit liability durations:

	Eurozone	United Kingdom	United States
Duration in years	12.3	16.1	10.6

Sensitivities

Sensitivity to a change of percentage in the discount rates on the defined benefits obligation is as follows:

In € million	0.25% increase	0.25% decrease
Eurozone	(72)	75
United Kingdom	(67)	70
United States	(38)	39
Others	(6)	6
Total	**(183)**	**190**

Sensitivity to a change of percentage in the inflation rates on the defined benefits obligation is as follows:

In € million	0.25% increase	0.25% decrease
Eurozone	66	(64)
United Kingdom	53	(51)
United States	0	0
Others	4	(4)
Total	**123**	**(119)**

Sensitivity to a change of percentage in salary growth rate on the defined benefits obligation is as follows:

In € million	0.25% increase	0.25% decrease
Eurozone	18	(17)
United Kingdom	3	(3)
United States	1	(1)
Others	1	(1)
Total	**23**	**(22)**

Sensitivity to a change of one year on mortality tables on the defined benefits obligation is as follows:

In € million	Age correction +1 year	Age correction (1) year
Eurozone	(74)	76
United Kingdom	(54)	54
United States	(30)	31
Others	(7)	7
Total	**(165)**	**168**

F31.B. Provisions other than for employee benefits

Accounting policy

General

Provisions are recognized when (a) the Group has a present obligation (legal or constructive) as a result of a past event, (b) it is probable that the Group will be required to settle the obligation, and (c) a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where the effect of the time value of money is material, the amount is the present value of expenditures required to settle the obligation. Impacts of changes in discount rates are generally recognized in the financial result.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received if the Group settles the obligation.

Onerous contracts

An onerous contract is a contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. Present obligations arising from onerous contracts are recognized and measured as provisions.

Restructurings

A restructuring provision is recognized when the Group has developed a detailed formal plan for the restructuring and has, by starting to implement the plan or announcing its main features to those affected by it, raised a valid expectation in those affected that it will carry out the restructuring. The measurement of a restructuring provision includes only the direct expenditures arising from the restructuring, which are those amounts that are both necessarily entailed by the restructuring and not associated with the ongoing activities of the entity.

Environmental liabilities

Solvay analyzes twice a year all its environmental risks and the corresponding provisions. Solvay measures these provisions to the best of its knowledge of applicable regulations, the nature and extent of the pollution, clean-up techniques, and other available information.

Restructuring provisions

These provisions amount to € 99 million, as against € 97 million at the end of 2015.

The main provisions at the end of 2016 relate to:

- the reorganization of Corporate Functions following Group portfolio review (€ 48 million); and
- Cytec (€ 18 million).

Environmental provisions

These provisions amount to € 737 million at the end of 2016, as against € 723 million at the end of 2015, and pertain to:

- mines and drilling operations to the extent that legislation and/or operating permits in relation to quarries, mines, and drilling operations contain requirements to pay compensation to third parties. These provisions, based on local expert advice, can be expected to be used over a 1-20 year horizon and amount to € 148 million;
- the discontinuation of mercury electrolysis activities: forecast expenditure is staggered over time as a result of the expected reutilization of the sites, national regulations on the management of contaminated soils, and the state of contamination of soils and groundwater. Most of these provisions can be expected to be used over a 10-20 year time horizon;
- dikes, dump sites and land: the provisions relate mainly to soda plant dikes, old lime dikes and land and dump sites linked to activities at certain industrial sites. These provisions have a horizon of 1 to 20 years; and
- various types of pollution (organic, inorganic) coming from miscellaneous specialty chemical productions; these provisions mainly cover discontinued activities or closed plants. Most of these provisions have a horizon of 1 to 20 years.

The estimated amounts are discounted based on the probable date of settlement, and are adjusted periodically to reflect the passage of time.

Provisions for litigation

Provisions for litigation refer to tax and legal exposures. They amount to € 167 million at the end of 2016 as against € 214 million at the end of 2015. The decrease is explained mainly by the reversal of (a) a tax provision of € 25 million and (b) a legal provision for Pharma of € 20 million.

The balance at the end of 2016 relates to tax risks (€ 81 million) and legal claims (€ 76 million).

Other provisions

Other provisions relate to the shutdown or disposal of activities and amount to € 148 million, as against € 106 million at the end of 2015.

NOTE F32
Financial instruments and financial risk management

Accounting policy

General

Financial assets include available-for-sale securities, loans and receivables, and derivative financial instruments. All financial assets are recognized and derecognized on trade date where the purchase or sale of a financial asset is under a contract whose terms require delivery of the financial asset within the time frame established by the market concerned, and are initially measured at fair value plus transaction costs, except for financial assets classified as at fair value through profit or loss, which are initially measured at fair value.

A financial asset is classified as current when the cash flows expected to flow from the instrument mature within one year.

At initial recognition, Solvay classifies financial assets into one of the four categories provided in IAS 39 *Financial Instruments: Recognition and Measurement*. This classification determines the method for measuring financial assets at subsequent reporting dates: amortized cost or fair value.

Amortized cost is the amount at which the financial asset is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, minus any reduction for impairment or uncollectibility. The effective interest method is a method of calculating the amortized cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees on points paid or received that form an integral part of the effective interest rate, transaction costs, and other premiums or discounts) through the expected life of the debt instrument or, when appropriate, a shorter period, to the net carrying amount on initial recognition.

Income is recognized on an effective interest basis for debt instruments other than those financial assets classified as at fair value through profit or loss.

For instruments quoted in an active market, the fair value corresponds to a market price (level 1). For instruments that are not quoted in an active market, the fair value is determined using valuation techniques including reference to recent arm's length market transactions or transactions involving instruments which are substantially the same (level 2), or discounted cash flow analysis including, to the greatest possible extent, assumptions consistent with observable market data (level 3). However, if the fair value of an equity instrument that does not have a quoted price in an active market cannot be reliably estimated, it is measured at cost.

Financial assets at fair value through profit or loss

Financial assets are measured at fair value with any resulting gains or losses recognized in profit or loss if they are held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also classified as held for trading. In this case, resulting gains and losses are recognized in profit or loss unless they are designated and effective as hedging instruments in a cash flow hedge.

Available-for-sale financial assets

Available-for-sale financial assets include equity investments in entities, which were not acquired principally for the purpose of selling in the short term, and which are not subsidiaries, joint operations, joint ventures, or associates. Assets classified in this category are measured at fair value, with any resulting gains or losses recognized in other comprehensive income. If there is objective evidence that the asset is impaired, any cumulative loss that had been recognized in other comprehensive income is reclassified from equity to profit or loss.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments which are not quoted in an active market. The Group's loans and receivables category comprises cash and cash equivalents, trade receivables, and other non-current receivables except for pension fund surpluses. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash, have maturities of three months or less from the date of acquisition, and are subject to insignificant risk of change in value. Loans and receivables are measured at amortized cost using the effective interest method, less any impairment.

Impairment of financial assets

The impairment loss of a financial asset measured at amortized cost equals the difference between the carrying amount and the estimated future cash flows, discounted at the initial effective interest rate. The impairment of an available-for-sale financial asset is calculated with reference to its current fair value.

An impairment test is performed, on an individual basis, for each material financial asset. Other assets are tested as groups of financial assets with similar credit risk characteristics.

Impairment losses are recognized in the consolidated income statement.

The impairment loss is reversed if the reversal can be objectively related to an event occurring after the impairment was recognized. For financial assets measured at amortized cost, the reversal is recognized in profit or loss. After reversal, the carrying amount of the financial asset measured at amortized cost shall not exceed what the amortized cost would have been, had the impairment not been recognized. Impairment losses with respect to an equity instrument classified as available for sale are not reversed through profit or loss. Impairment losses with respect to debt instruments classified as available for sale are reversed through profit or loss to the extent of the impairment loss previously recognized in profit or loss. Impairment losses relating to assets measured at cost cannot be reversed.

Financial liabilities are classified as either "financial liabilities at fair value through profit or loss" or "financial liabilities measured at amortized cost".

Financial liabilities at fair value through profit or loss

Financial liabilities are measured at fair value with any resulting gains or losses recognized in profit or loss if they are held for trading. A financial liability is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also classified as held for trading. In this case, resulting gains and losses are recognized in profit or loss unless they are designated and effective as hedging instruments in a cash flow hedge.

Financial liabilities measured at amortized cost using the effective interest method

Financial liabilities measured at amortized cost, including borrowings, are initially measured at fair value, net of transaction costs. They are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments through the expected life of the financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

The Group's financial liabilities measured at amortized cost comprise long-term financial debt, other current and non-current liabilities, short-term financial debt, trade liabilities and dividends payable.

Derivative financial instruments

Derivative financial instruments are financial instruments with all three of the following characteristics:

- their value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, etc.;
- they require no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and
- they are settled at a future date.

The Group enters into a variety of derivative financial instruments (forward, future, option, and swap contracts) to manage its exposure to interest rate risk, foreign exchange rate risk, and commodity risk (mainly energy and CO_2 emission rights price risks).

Derivatives are initially recognized at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in income or expense, unless the derivative is designated and effective as a hedging instrument. The Group designates certain derivatives as hedging instruments of the exposure to variability in cash flows with respect to a recognized asset or liability or a highly probable forecast transaction (cash flow hedges).

A derivative with a positive fair value is recognized as a financial asset whereas a derivative with a negative fair value is recognized as a financial liability. Derivative instruments (or portions of them) are presented as non-current assets or non-current liabilities if the remaining maturity of the underlying settlements is more than twelve months after the reporting period. Other derivative instruments (or portions of them) are presented as current assets or current liabilities.

Hedge accounting

The Group designates certain derivatives and embedded derivatives, in respect of foreign currency risk, interest rate risk, energy price risk, and CO_2 emission rights price risk, as hedging instruments in a cash flow hedge relationship.

At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking the hedge transaction. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in cash flows of the hedged item.

Cash flow hedges

The effective portion of changes in the fair value of hedging instruments that are designated in a cash flow hedge is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in profit or loss.

Amounts previously recognized in other comprehensive income are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss, in the same line of the consolidated income statement as the recognized hedged item. When the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognized in other comprehensive income are transferred from other comprehensive income and included in the initial measurement of the cost of the non-financial asset or non-financial liability.

Hedge accounting is discontinued when the Group revokes the hedging relationship, the hedging instrument expires or is sold, terminated, or exercised, or no longer qualifies for hedge accounting. Any gain or loss accumulated in other comprehensive income at that time remains in other comprehensive income and will affect profit or loss as described in the paragraph above. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in other comprehensive income is recognized immediately in profit or loss as a reclassification adjustment. If all or a portion of a loss recognized in other comprehensive income will not be recovered in one or more future periods, the amount that is not expected to be recovered is immediately reclassified into profit or loss.

The following table presents the financial instruments by category, split into current and non-current assets and liabilities.

In € million	Classification	**2016** **Carrying amount**	2015 Carrying amount
Non-current assets - Financial instruments		**343**	**452**
Available for sale financial assets	Available-for-sale	44	34
Loans and other non-current assets (except pension fund surpluses)		299	418
INOVYN derivative financial instrument	Held for trading	0	244
Others	Loans and Receivables	299	174
Current assets - Financial instruments		**2,878**	**3,846**
Trade receivables	Loans and Receivables	1,621	1,615
Other financial instrument receivables		101	111
Other marketable securities > 3 months	Loans and Receivables	32	21
Currency swaps	Held for trading	12	49
Other current financial asset	Loans and Receivables	57	40
Financial instruments - Operational		188	90
Held for trading	Held for trading	160	76
Derivative financial instruments designated in a cash flow hedge relationship	Cash flow hedges	28	14
Cash and cash equivalents	Loans and Receivables	969	2,030
Total assets - Financial Instruments		**3,221**	**4,298**
Non-current liabilities - Financial instruments		**4,301**	**5,911**
Financial debts		4,087	5,628
Subordinated loans and bonds	Financial liabilities measured at amortized cost	3,837	5,337
Other non current debts	Financial liabilities measured at amortized cost	200	240
Long-term finance lease obligations	Financial lease liabilities measured at amortized cost	50	51
Other liabilities	Financial liabilities measured at amortized cost	214	282
Current liabilities - Financial instruments		**3,221**	**2,729**
Financial debts		1,338	891
Short-term financial debt (excluding finance lease obligations)	Financial liabilities measured at amortized cost	1,277	885
Currency swaps	Held for trading	59	4
Short-term finance lease obligations	Financial liabilities measured at amortized cost	2	2
Trade payables		1,547	1,559
Financial instruments - Operational		195	135
Held for trading	Held for trading	160	90
Derivative financial instruments designated in a cash flow hedge relationship	Cash flow hedges	35	45
Dividends payable		139	144
Total liabilities - Financial Instruments		**7,522**	**8,640**

F32.A. Overview of financial instruments

The following table gives an overview of the carrying amount of all financial instruments by class and by category as defined by IAS 39 *Financial Instruments: Recognition and Measurement*.

	2016	2015
In € million	Carrying amount	Carrying amount
Fair value through profit or loss		
Held for trading	172	369
Derivative financial instruments designated in a cash flow hedge relationship	28	14
Loans and receivables (including cash and cash equivalents, trade receivables, loans and other current/non-current assets except pension fund surpluses)	2,977	3,881
Available for sale financial assets	44	34
Total financial assets	**3,221**	**4,298**
Fair value through profit or loss		
Held for trading	(220)	(90)
Derivative financial instruments designated in a cash flow hedge relationship	(35)	(45)
Financial liabilities measured at amortized cost (including long-term financial debt, other non-current liabilities, short-term financial debt and trade liabilities)	(7,075)	(8,308)
Dividends payable	(139)	(144)
Finance lease obligations measured at amortized cost	(52)	(53)
Total financial liabilities	**(7,521)**	**(8,640)**

The category "Held for trading" contains only derivative financial instruments that are used for management of foreign currency risk, interest rate risk, energy and CO_2 emission rights price risks, and Solvay share price risk, but which are not documented as hedging instruments. In 2015, they also include the Inovyn derivative financial instrument (see detail in section F32.B). Available-for-sale financial assets pertain to Solvay's New Business Development (NBD) activity: the Group has built a Corporate Venturing portfolio which is made up of direct investments in start-up companies and of investments in venture capital funds. The available-for-sale financial assets are measured at fair value according to the valuation guidelines published by the European Private Equity and Venture Capital Association.

F32.B. Fair value of financial instruments Valuation techniques and assumptions used for measuring fair value

Accounting policy

Quoted market prices are available for financial assets and financial liabilities with standard terms and conditions that are traded on active markets. The fair values of derivative financial instruments are equal to their quoted prices, if available. If such quoted prices are not available, the fair value of the financial instruments is determined based on a discounted cash flow analysis using the applicable yield curve derived from quoted interest rates matching maturities of the contracts for non-optional derivatives. Optional derivatives are measured at fair value based on option pricing models, taking into account the present value of probability-weighted expected future payoffs, using market reference formulas.

Solvay's right to an additional, performance-based payment following its exit from Inovyn qualified as a derivative financial instrument. Its fair value amounted to € 244 million at December 31, 2015 and was largely based on level 3 inputs, namely REBITDA multiples, comparing the expected exit price with the fair value of Solvay's 50% equity share held in Inovyn.

The fair values of other financial assets and financial liabilities (other than those described above) are determined in accordance with generally accepted pricing models based on discounted cash flow analysis.

Fair value of financial instruments measured at amortized cost

	2016		2015		
In € million	Carrying amount	Fair value	Carrying amount	Fair value	Fair value level
Non-current assets - Financial instruments	**299**	**299**	**174**	**174**	
Loans and other non-current assets (except pension fund surpluses)	299	299	174	174	2
Non-current liabilities - Financial instruments	**(4,301)**	**(4,504)**	**(5,911)**	**(6,005)**	
Subordinated loans and bonds	(3,837)	(4,040)	(5,337)	(5,431)	1
Other non current debts	(200)	(200)	(240)	(240)	2
Other liabilities	(214)	(214)	(282)	(282)	2
Long-term finance lease obligations	(50)	(50)	(51)	(51)	2

The carrying amounts of current financial assets and liabilities are estimated to reasonably approximate their fair values, such in light of short terms to maturity.

Financial instruments measured at fair value in the consolidated statement of financial position

The table "Financial instruments measured at fair value in the consolidated statement of financial position" provides an analysis of financial instruments that, subsequent to their initial recognition, are measured at fair value, grouped in Levels 1 to 3 based on the degree to which the fair value is observable. Financial instruments classified as held for trading and as hedging instruments in cash flow hedges are generally grouped in Levels 1 and 2. They are measured at fair value based on forward pricing and swap models using present value calculations. The models incorporate various inputs including foreign exchange spot and interests rates of the respective currencies, currency basis spreads between the respective currencies, interest rate curves, and forward rate curves of the underlying commodity. The available-for-sale financial assets fall within Level 3 and are measured based on a discounted cash flow approach.

In accordance with the Group internal rules, the responsibility for measuring the fair value level resides with (a) the Treasury department for the non-energy derivative financial instruments, and the financial liabilities, (b) Energy Services business unit for the energy derivative financial instruments and (c) the Finance department for non-derivative financial assets.

Financial instruments measured at fair value in the consolidated statement of financial position

	2016			
In € million	Level 1	Level 2	Level 3	Total
Held for trading	**59**	**112**	**2**	**172**
Foreign currency risk		14		14
Energy risk	51	94	2	147
CO_2 risk	8	1		9
Solvay share price		2		2
Cash flow hedges	**1**	**26**		**28**
Foreign currency risk		11		11
Energy risk		9		9
CO_2 risk	1			1
Solvay share price		6		6
Available for sale financial assets			**44**	**44**
New Business Development			44	44
Total (assets)	**61**	**138**	**46**	**244**
Held for trading	**(49)**	**(169)**	**(1)**	**(220)**
Foreign currency risk		(61)		(61)
Energy risk	(47)	(100)	(1)	(148)
CO_2 risk	(3)	(7)	0	(10)
Cash flow hedges	**(4)**	**(31)**		**(35)**
Foreign currency risk		(26)		(26)
Interest rate risk		(1)		(1)
Energy risk		(3)		(3)
CO_2 risk	(4)			(4)
Solvay share price		(1)		(1)
Total (liabilities)	**(54)**	**(200)**	**(1)**	**(255)**

	2015			
In € million	Level 1	Level 2	Level 3	Total
Held for trading	**2**	**123**	**244**	**369**
Foreign currency risk		49		49
Energy risk		55		55
CO_2 risk	2	19	0	22
INOVYN derivative financial instrument			244	244
Cash flow hedges	**6**	**8**		**14**
Foreign currency risk		8		8
Energy risk		1		1
CO_2 risk	6			6
Available for sale financial assets			**34**	**34**
New Business Development			34	34
Total (assets)	**8**	**131**	**278**	**417**
Held for trading		**(90)**	**0**	**(90)**
Foreign currency risk		(12)		(12)
Energy risk		(46)		(46)
CO_2 risk		(28)	0	(28)
Solvay share price		(4)		(4)
Cash flow hedges	**0**	**(45)**		**(45)**
Foreign currency risk		(23)		(23)
Interest rate risk		(1)		(1)
Energy risk		(16)		(16)
Solvay share price		(5)		(5)
Total (liabilities)	**0**	**(135)**	**0**	**(135)**

Movements during the period

Reconciliation of level 3 fair value measurements of financial assets and liabilities

	2016		
	At fair value through profit or loss	Available-for-sale	
In € million	Derivatives	Shares	Total
Opening balance at 1 January	**244**	**34**	**277**
Total gains or losses			
Recognized in the income statement	1		1
Recognized in other comprehensive income		10	10
Acquisitions		6	6
Disposals	(244)	(6)	(250)
Closing balance at 31 December	**1**	**44**	**45**

	2015		
	At fair value through profit or loss	Available-for-sale	
In € million	Derivatives	Shares	Total
Opening balance at 1 January	**(1)**	**43**	**43**
Total gains or losses			
Recognized in the income statement	0	(9)	(9)
Recognized in other comprehensive income		3	3
Acquisitions	244	4	248
Disposals		(8)	(8)
Closing balance at 31 December	**244**	**34**	**277**

Income and expenses of financial instruments recognized in the consolidated income statement and in other comprehensive income

In € million	2016	2015
Recognized in the income statement		
Recycling from OCI of derivative financial instruments designated in cash flow hedge relationship		
Foreign currency risk	(27)	(112)
Energy risk	(3)	(19)
CO_2 risk	(3)	(3)
Changes in the fair value of financial instruments held for trading		
Energy risk	(6)	(2)
CO_2 risk	(6)	4
Recognized in the gross margin	**(45)**	**(132)**
Changes in the fair value of financial instruments held for trading		
Solvay share price	5	(4)
Ineffective portion of gains and losses on derivative financial instruments designated in cash flow hedge relationship		
Foreign currency risk	4	7
Foreign operating exchange gains and losses	2	(5)
Recognized in other operating gains and losses	**12**	**(2)**
Changes in the fair value of financial instruments held for trading		
Solvay share price	0	5
Ineffective portion of gains and losses on derivative financial instruments designated in cash flow hedge relationship		
Foreign currency risk	0	(33)
Recognized in results from portfolio management and reassessments	**0**	**(27)**
Net interest expense	(175)	(99)
Other gains and losses on net indebtedness (excluding gains and losses on hyperinflation and other items not related to financial instruments)		
Foreign currency risk	(2)	(1)
Interest element of swaps	(48)	(19)
Others	5	2
Recognized in charges on net indebtedness	**(220)**	**(117)**
Income/loss from available-for-sale financial assets	5	(8)
Total recognized in the income statement	**(249)**	**(286)**

The foreign currency expense recognized in gross margin of € 27 million is the result of the recycling of gains and losses of derivative financial instruments designated in cash flow hedge relationships. Their purpose was to offset a portion of the foreign exchange differences on sales. The main currencies hedged by the Group are US dollar, Japanese yen, Brazilian real, and Chinese renminbi.

Income and expenses on financial instruments recognized in other comprehensive income include the following:

In € million	2016	2015
Net change in the fair value of available-for-sale financial assets	9	2
Total available-for-sale financial assets	**9**	**2**
Recycling from OCI of derivative financial instruments designated in cash flow hedge relationship		
Foreign currency risk	26	112
Energy risk	3	19
CO_2 risk	3	3
Interest rate risk	0	0
Basis adjustments		
Foreign currency risk		(77)
Effective portion of changes in fair value of cash flow hedge		
Foreign currency risk	(15)	(15)
Energy risk	0	(19)
CO_2 risk	8	(3)
Solvay share price	10	(5)
Total cash flow hedges	**36**	**15**
Total	**45**	**17**

Conventionally, (+) indicates an increase and (-) a reduction in equity.

The recycling from OCI (foreign currency risk) of € 26 million is explained above. In 2015, the amount of € (77) million represented the designated portion of the derivative financial instrument (intrinsic value) related to the acquisition of Cytec that had been reclassified to goodwill at acquisition date as a basis adjustment.

F32.C. Capital management

See the policy in respect of capital in the Corporate governance statement section of this report.

F32.D. Financial risk management

The Group is exposed to market risks from movements in foreign exchange rates, interest rates, and other market prices (energy prices, CO_2 emission rights prices, and equity prices). Solvay uses derivative financial instruments to hedge clearly identified foreign exchange, interest rate, energy price, and CO_2 emission rights price risks (hedging instruments). However, the required criteria to apply hedge accounting are not met in all cases.

Furthermore, the Group is exposed to liquidity risks and credit risks.

The Group does not enter into or trade financial instruments (including derivative financial instruments) for speculative purposes.

Foreign currency risks

The Group's foreign exchange risk hedging policy is based essentially on the principles of financing its activities in local currency, systematically hedging transactional exchange risk (risk that is certain) at the time of invoicing, as well as on monitoring and hedging where appropriate exchange rate exposures generated by the Group's activities, based on expected cash flows. See Financial risk in the Management of risks section of this report for additional information on the foreign currency risks management.

The Group undertakes transactions denominated in foreign currencies. Consequently, exposures to exchange rate fluctuations arise. Exchange rate exposures are managed within approved policy parameters utilizing forward foreign exchange contracts or other derivatives like currency options.

In 2015, the currency risk of the Cytec acquisition was partially hedged.

The Group's currency risk can be split into two categories: translation and transactional risk.

Translation risk

The translation exchange risk is the risk affecting the Group's consolidated financial statements relating to investees operating in a currency other than the EUR (the Group's presentation currency). The main other currencies are the US dollar, Chinese renminbi, Brazilian real and Japanese yen.

Exchange rate fluctuations, particularly of the US dollar, can affect earnings. In the course of 2016 the EUR/USD exchange rate moved from 1.0887 at the start of January to 1.0538 at the end of December. In the course of 2015 the EUR/USD exchange rate moved from 1.2141 at the start of January to 1.0887 at the end of December. During 2016 and 2015, the Solvay Group did not hedge the currency risk of foreign operations.

Transactional risk

The transactional risk is the exchange risk linked to a specific transaction, such as a Group company buying or selling in a currency other than its functional currency.

To the largest extent possible, the Group manages the transactional risk on receivables and borrowings centrally; it is managed locally when centralization is not possible.

The choice of borrowing currency depends mainly on the opportunities offered by the various markets. This means that the selected currency is not necessarily that of the country in which the funds will be invested. Nonetheless, operating entities are financed essentially in their functional currencies, with this currency being obtained, where appropriate, by currency swaps against the currency held by the financing company. The cost of these currency swaps is included in the cost of borrowings. They enable the Group to limit the exchange risk both in the financial company and in the company finally using the funds.

In emerging countries it is not always possible to borrow in local currency, either because funds are not available in local financial markets, or because the financial conditions are too onerous. In such a situation the Group has to borrow in a different currency. Nevertheless, the Group considers opportunities to refinance its borrowings in emerging countries with local currency debt.

Cash flow hedge

The Group uses derivatives to hedge identified foreign exchange rate risks. It documents those as hedging instruments unless it hedges a recognized financial asset or liability when generally no cash flow hedge relationship is documented.

At the end of 2016 for future exposure, the Group had mainly hedged forecast sales (short position) in a nominal amount of US$ 680 million (€ 624 million) and JP¥ 15,545 million (€ 132 million), as well as the sale of its 58.77% stake in its Thai subsidiary Vinythai PCL of CHF 297 million (€ 276 million). Most of cash flow hedges that exist at the end of December 2016 will be settled within the next 12 months, and will mainly impact profit or loss during that period.

Held for trading

The transactional risk is managed on a day-to-day basis by either spot or forward contracts. Unless documented as hedging instruments (see above), those forward contracts are classified as held for trading.

In comparison with 2015, the trading position (mainly due to financing constraints) remains stable.

The following table details the forward exchange contracts outstanding at the end of the period:

Notional amounts net(1)

	Notional amount(1)		Fair value assets		Fair value liabilites	
In € million	**2016**	2015	**2016**	2015	**2016**	2015
Held for trading	(1,179)	(1,174)	14	49	(61)	(12)
Cash flow hedges	(472)	(683)	11	8	(26)	(23)
Total	**(1,651)**	**(1,857)**	**25**	**57**	**(88)**	**(34)**

(1) Long/(short) positions.

The Group is not subject to material sensitivity to variations in exchange rates in profit or loss and equity.

Hedging aims to limit the fluctuation of the Group's forecast gross margin. Exchange rates variations could lead to changes in the value of financial instruments and adverse changes in future cash flows from planned transactions.

Group Treasury acts to mitigate the transactional risk at Group level in order to avoid impact of foreign exchange rates fluctuations on profit or loss.

Interest rate risks

See Financial risk in the Management of risks section of this report for additional information on the interest rate risk management.

Interest rate risk is managed at Group level.

The Group is exposed to interest rate risk because entities in the Group borrow funds at both fixed and floating interest rates. Interest rate risk is managed at Group level by maintaining an appropriate mix between fixed and floating rate borrowings.

Interest rate exposure by currency is summarized below:

In € million	At December 31, 2016			At December 31, 2015		
Currency	Fixed rate	Floating rate	Total	Fixed rate	Floating rate	Total
Financial debt						
EUR	(1,857)	(1,006)	(2,863)	(2,539)	(1,461)	(4,000)
USD	(2,227)	(30)	(2,257)	(2,170)	(74)	(2,244)
THB	(34)	(25)	(59)	(43)	(61)	(104)
BRL	(70)	(4)	(75)	(20)	(4)	(24)
CNY	(104)	(4)	(109)	(103)	0	(103)
Other	(14)	(49)	(63)	(22)	(23)	(45)
Total	**(4,307)**	**(1,119)**	**(5,426)**	**(4,897)**	**(1,623)**	**(6,520)**
Cash and cash equivalents						
EUR		180	180		1,083	1,083
USD		476	476		455	455
THB		14	14		99	99
BRL		89	89		74	74
CNY		39	39		40	40
KRW		61	61		22	22
JPY		35	35		21	21
Other		75	75		236	236
Total		**969**	**969**		**2,030**	**2,030**
Other financial instrument receivables						
EUR		55	55		29	29
Other		45	45		83	83
Total		**101**	**101**		**111**	**111**
Total	**(4,307)**	**(49)**	**(4,356)**	**(4,897)**	**518**	**(4,379)**

At the end of 2016, around € 4.3 billion of the Group's gross debt was at a fixed rate, including mainly:

- the EMTN bond issuance of € 500 million maturing in 2018 (carrying amount € 496 million);
- senior € notes for a total of € 1,250 million (carrying amount of € 1,237 million);
- senior US$ notes for a total of US$ 1,600 million (nominal amount of € 1,518 million, carrying amount of € 1,511 million); and
- senior US$ notes assumed through the acquisition of Cytec of US$ 732 million (nominal amount of € 695 million, carrying amount € 675 million) with mainly three bonds maturing in 2017, 2023 and 2025.

The floating rate debt (€ 1.1 billion) includes the € 1 billion senior notes (carrying amount of € 998 million) maturing in 2017 (Euribor plus 82 bps of margin).

The impact of interest rate volatility at the end of 2016 in comparison with 2015 is as follows:

	Sensitivity to a +100 bp movement in EUR market interest rates		Sensitivity to a (100) bp movement in EUR market interest rates	
In € million	**2016**	2015	**2016**	2015
Profit or loss	(10)	(15)	10	15

The fair value of the interest rate swap of the MTP HP joint operation 50/50 between Dow and Solvay in Thailand, structured in 2012 for hedging purpose (notional amount € 42 million at the end of 2016 at 100%), is € (1) million (the same as in 2015), included in the net financial charges (only 50%, Solvay share).

	Notional amount		Fair value assets		Fair value liabilites	
In € million	**2016**	2015	**2016**	2015	**2016**	2015
Cash flow hedge	21	32	0	0	(1)	(1)
Total	**21**	**32**	**0**	**0**	**(1)**	**(1)**

Other market risks

Energy price risks

The Group purchases a large portion of its coal, gas, and electricity needs in Europe and the United States, based on fluctuating liquid market indices. In order to reduce the cost volatility, the Group has developed a policy for exchanging variable price for fixed price through derivative financial instruments. Most of these hedging instruments can be documented as hedging instruments of the underlying purchase contracts. Purchases of physical energy at fixed price contracts that qualify as “own use” contracts (not derivatives) constitute a natural hedge, and are not included in this note. Similarly, the Group’s exposure to CO_2 price is hedged partly by forward purchases of European Union Allowance (EUA), which either can be documented as hedging instruments, or qualify as own use contracts.

Finally some exposure to gas-electricity or coal-electricity spreads may arise from the production of electricity on Solvay sites (mostly from cogeneration units in Europe), which can be hedged by forward purchases and forward sales or optional schemes. In this case, cash flow hedge accounting is applied.

Energy Services

Financial hedging of energy and CO_2 emission rights price risks is managed centrally by Energy Services on behalf of the Group entities.

Energy Services also carries out trading transactions with respect to energy and CO_2, for which the residual price exposure is maintained close to zero.

The following table details the notional principal amounts and fair values of energy and CO_2 derivative financial instruments outstanding at the end of the reporting period:

	Notional amount		Fair value assets		Fair value liabilites	
In € million	**2016**	2015	**2016**	2015	**2016**	2015
Held for trading	672	624	156	76	(158)	(75)
Cash flow hedge	110	73	11	6	(8)	(16)
Total	**782**	**697**	**167**	**82**	**(166)**	**(91)**

Credit risk

See Financial risk in the Management of risks section of this report for additional information on the credit risk management.

There is no significant concentration of credit risk at Group level to the extent that the receivables risk is spread over a large number of customers and markets.

The ageing of trade receivables, financial instruments - operational, loans, and other non-current assets is as follows:

			of which receivables without write-down				
2016 In € million	Total	with write-down	Not past due	less than 30 days past due	between 30 & 60 days past due	Between 60 & 90 days past due	more than 90 days past due
Trade receivables	1,621	61	1,454	82	11	4	9
Financial instruments – operational	188		188				
Loans and other non-current assets	312	88	222	2			
Total	**2,120**	**149**	**1,864**	**84**	**11**	**4**	**9**

			of which receivables without write-down				
2015 In € million	Total	with write-down	Not past due	less than 30 days past due	between 30 & 60 days past due	Between 60 & 90 days past due	more than 90 days past due
Trade receivables	1,615	102	1,389	95	13	2	14
Financial instruments – operational	90		90				
Loans and other non-current assets	427	35	392	1			
Total	**2,133**	**137**	**1,871**	**95**	**13**	**2**	**14**

The table below presents the write-downs on trade receivables:

In € million	**2016**	2015
Carrying amount at January 1	**(75)**	**(76)**
Additions	(14)	(14)
Used	13	4
Reversal of impairments	11	10
Currency translation differences	(4)	4
Transfer to assets held for sale	12	
Other	5	(3)
Carrying amount at December 31	**(53)**	**(75)**

Liquidity risk

See Financial risk in the Management of risks section of this report for additional information on the liquidity risk management.

Liquidity risk relates to Solvay's ability to service and refinance its debt (including notes issued) and to fund its operations. This depends on its ability to generate cash from operations and not to over-pay for acquisitions.

The Finance Committee gives its opinion on the appropriate liquidity risk management for the Group's short, medium and long-term funding and liquidity management requirements.

The Group manages liquidity risk by maintaining adequate reserves, banking facilities, and reserve borrowing facilities, by continuously monitoring forecast and actual cash flows, and by matching the maturity profiles of financial assets and liabilities.

The Group staggers the maturities of its financing sources over time in order to limit the amounts to be refinanced each year.

The following tables detail the Group's remaining contractual maturity for its financial liabilities with contractual repayment periods.

The tables have been prepared using the discounted cash flows of financial liabilities, based on the earliest date on which the Group can be required to pay.

2016 In € million	Total	within one year	in year two	in years three to five	beyond five years
Outflows of cash related to financial liabilities:	**7,521**				
Other non-current liabilities	214	214			
Current financial debt	1,338	1,338			
Trade liabilities	1,547	1,547			
Dividends payables	139	139			
Financial instruments – operational	195	195			
Non current financial debt	4,087		521	976	2,590
Total financial debt (current and non current)	**5,426**	**1,338**	**521**	**976**	**2,590**

2015 In € million	Total	within one year	in year two	in years three to five	beyond five years
Outflows of cash related to financial liabilities:	**8,640**				
Other non-current liabilities	282	282			
Current financial debt	891	891			
Trade liabilities	1,559	1,559			
Dividends payables	144	144			
Financial instruments – operational	135	135			
Non current financial debt	5,628		1,101	1,334	3,193
Total financial debt (current and non current)	**6,520**	**891**	**1,101**	**1,334**	**3,193**

In addition to the above-mentioned financing sources, the Group has access to the following instruments:

- a Belgian Treasury Bill program in an amount of € 1 billion, with no outstanding issues at the end of 2016 as against € 324 million at the end of 2015, and alternatively a US commercial paper program in an amount of US$ 500 million, unused at the end of 2016 and 2015. The two programs are covered by back-up credit lines:
- a € 1.5 billion and a € 550 million multilateral credit line, maturing respectively in 2021 and in 2018, as well as bilateral credit lines (€ 350 million). They were all unused at the end of 2016 and 2015.

NOTE F33
Net indebtedness

The Group's net indebtedness is the balance between its financial debts and other financial instruments receivables, and cash and cash equivalents.

In € million	2016	2015
Financial debts	5,426	6,520
Other financial instrument receivables	(101)	(111)
Cash and cash equivalents	(969)	(2,030)
Net indebtedness	**4,356**	**4,379**

Solvay's ratings by two rating agencies are: BBB-/A3 (stable outlook) at Standard and Poors, and Baa2/P2 (negative outlook) at Moody's following the acquisition of Cytec.

Financial debt

In € million	2016			2015		
	Non Current	**Current**	**Total**	Non Current	Current	Total
Subordinated loans	0	0	0	500	0	500
Loans payables (incl Bonds)	3,837	1,087	4,924	4,837	308	5,145
Finance lease obligations	50	2	52	51	2	53
Currency swaps	0	59	59	0	4	4
Other depts (including overdrafts)	200	190	390	240	578	818
Total	**4,088**	**1,338**	**5,426**	**5,629**	**891**	**6,520**

Gross debt decreased from € 6,520 million at the end of 2015 to € 5,426 million at the end of 2016 following the repayment of the € 300 million loan to EIB, the € 500 million hybrid bond (first call repayment made on June 2, 2016) and no treasury notes outstanding at the end of 2016 (as against € 324 million at the end of 2015).

The current portion of the loan payables includes mainly the € 1 billion floating rate notes issued by Solvay SA in December 2015 and the US$ 82 million senior notes issued by Cytec Industries, which will be repaid respectively in December and July 2017.

Main borrowings and credit lines

					2016		2015	
In € million (except where indicated)	Nominal amount	Coupon	Maturity	Secured	**Amount at amortized cost**	**Fair value**	Amount at amortized cost	Fair value
European Investment Bank	300	3.90%	2016	No	0	0	300	312
Deeply subordinated € debt	500(1)	6.375%	2016 (first call)	No	0	0	500	507
Floating rate € notes	1,000	Euribor 3m+82 bps	2017	No	998	1,005	995	1,004
Senior US$ note Cytec Industries Inc (US$ 82.2 m)	78	8.95%	2017	No	81	80	82	82
EMTN € bond	500	4.625%	2018	No	496	535	493	551
Senior US$ notes (144A;US$ 800 m)	759	3.40%	2020	No	756	774	731	730
Senior € notes	750	1.625%	2022	No	742	786	741	751
Senior US$ note Cytec Industries Inc (US$ 400 m)	380	3.5%	2023	No	362	369	347	347
Senior US$ note Cytec Industries Inc (US$ 250 m)	237	3.95%	2025	No	233	232	224	224
Senior US$ notes (144A;US$ 800 m)	759	4.45%	2025	No	755	785	730	730
Senior € notes	500	2.75%	2027	No	495	559	494	505
Total					**4,916**	**5,126**	**5,637**	**5,743**

(1) Solvay has exercised its option to redeem this bond, which was repaid at par on June 2, 2016.

There are no instances of default on the above-mentioned financial debts. There are no financial covenants, either on Solvay SA, or on any of the Group's holding companies.

Other financial instrument receivables and cash and cash equivalents

The total cash available, cumulating the "Other financial instrument receivables" and "Cash and cash equivalents", amounts to € 1,070 million at the end of 2016 as against € 2,141 million at the end of 2015.

In 2015, the cash also includes the extra financing issued in December 2015 for the early refinancing of existing short-term and long-term financial debts maturing in 2016 (resulting in an increase in cash and cash equivalents approximating to € 900 million) as well as the cash of Cytec (€ 198 million).

As mentioned, Solvay used part of these available funds to repay the € 300 million loan to EIB in January 2016 and the € 500 million hybrid bond in June 2016, as well as the € 324 million treasury notes outstanding at the end of 2015.

Other financial instrument receivables

In € million	2016	2015
Currency swaps	12	49
Other marketable securities > 3 months	32	21
Other current financial assets	57	41
Other financial instrument receivables	**101**	**111**

The "Other financial instruments receivables" amount to € 101 million at the end of 2016 as against € 111 million at the end of 2015. They include currency swaps, other marketable securities > 3 months (Chinese bank drafts), and other current financial assets (mainly margin calls of Solvay Energy Services).

Cash and cash equivalents

In € million	2016	2015
Cash	773	1,214
Term deposits	195	815
Others	2	0
Cash and cash equivalents	**969**	**2,030**

By their nature, the carrying amount of cash and cash equivalents is equal or very close to their fair values.

NOTE F34
Other liabilities (current)

In € million	2016	2015
Wages and benefits debts	378	322
VAT and other taxes	151	136
Social security	67	87
Financial instruments - operational	195	135
M&A related liabilities	124	129
Insurance premiums	12	11
Advances from customers	29	23
Other	130	179
Other current liabilities	**1,086**	**1,022**

NOTE F35
Share-based payments

Accounting policy

Solvay has set up compensation plans, including equity-settled and cash-settled share-based compensation plans.

In its equity-settled plans, the Group receives services as consideration for its own equity instruments (namely through the issuance of share options). The fair value of services rendered by employees in consideration of the granting of equity instruments represents an expense. This expense is recognized on a straight-line basis in the consolidated income statement over the vesting periods relating to these equity instruments with the recognition of a corresponding adjustment in equity. The fair value of services rendered is measured based on the fair value of the equity instruments on the grant date. It is not subsequently remeasured. At each reporting date, the Group re-estimates the number of share options likely to vest. The impact of the revised estimates is recognized in profit or loss against a corresponding adjustment in equity.

In its cash-settled plans, the Group acquires services by incurring a liability to transfer to its employees rendering those services amounts that are based on the price (or value) of equity instruments (including shares or share options) of the Group. The fair value of services rendered by employees in consideration of the granting of share-based payments represents an expense. This expense is recognized on a straight-line basis in the consolidated income statement over the vesting periods relating to these share-based payments with the recognition of a corresponding adjustment in liabilities. At each reporting date, the Group re-estimates the number of options likely to vest, with the impact of the revised estimates recognized in profit or loss. The Group measures the services acquired and the liability incurred at the fair value of the liability. Until the liability is settled, the Group remeasures the fair value of the liability at the end of each reporting period and at the date of settlement, with any changes in fair value recognized in profit or loss for the period.

Stock Option Plan

In 2016, as in every year since 1999, the Board of Directors renewed the share option plan offered to executive staff (about 70 persons) with a view to involving them more closely in the long-term development of the Group. The plan is an equity-settled share-based plan. The majority of the managers involved subscribed the options offered them in 2016 at an adjusted exercise price of € 75.98, representing the average stock market price of the share in the 30 days prior to the offer. The three-year vesting period is followed by a five-year exercise period, at the end of which any unexercised options expire. The settlement method is in equity.

In 2015, to compensate the dilution impact of the capital increase, an adjustment (based on the Euronext ratio of 0.93984) was made for each plan on the spot reference, on the exercise price, and on the number of options. Such is reflected in the tables below and did not impact the Group's profit or loss.

At the end of December 2016, the Group held 2,650,810 treasury shares, which have been deducted from consolidated shareholders' equity. At the end of 2015, the Group held 2,105,905 treasury shares. Treasury shares are intended to cover the share options offered to Group executives.

Share options	**2016**	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Number of share options granted and still outstanding at December 31, 2015		349,108	380,151	427,943	823,488	152,739	141,939	151,686	69,757	88,771	95,761	71,927
Granted share options	759,023											
Forfeitures of rights and expiries		(2,491)			(11,192)	(1,000)	(1,500)	(1,064)		(2,660)		
Share options exercised					(70,971)	(12,254)	(6,925)	(16,290)	(69,757)			(3,405)
Number of share options at December 31, 2016	759,023	346,617	380,151	427,943	741,325	139,485	133,514	134,332	0	86,111	95,761	68,522
Share options exercisable at December 31, 2016	0	0	0	0	741,325	139,485	133,514	134,332	0	86,111	95,761	68,522
Exercise price (in €)	75.98	114.51	101.14	104.33	83.37	61.76	71.89	67.99	55.27	90.97	102.53	91.45
Fair value of options at measurement date (in €)	17.07	24.52	22.79	20.04	21.17	12.73	14.64	18.66	14.05	17.56	19.92	10.77

	2016		2015	
	Number of share options	**Weighted average exercise price**	Number of share options	Weighted average exercise price
At January 1	2,753,270	96.45	2,889,689	89.65
Granted during the year	759,023	75.98	493,894	106.54
Forfeitures of rights and expiries during the year	(19,907)	85.51	(66,273)	94.52
Exercised during the year	(179,602)	69.30	(564,040)	70.65
At December 31	3,312,784	93.30	2,753,270	96.45
Exercisable at December 31	1,399,050		772,580	

The share options resulted in a charge in 2016 of € 10 million calculated by third parties according to the Black-Scholes model and recognized in the consolidated income statement under commercial and administrative costs.

The value of the option is based on:

- the price of the underlying asset (Solvay share): € 80.75 at February 24, 2016;
- the time outstanding until the option maturity: exercisable from January 1, 2020 until February 24, 2024, taking into account the fact that some of them will be exercised before the option maturity;
- the option exercise price: € 75.98;
- the risk-free return: 0.27% (on average);
- the volatility of the underlying yield, inferred from the option price: 30.90%; and
- a dividend yield of 2.5%.

Weighted average remaining contractual life:

In years	2016	2015
Share option plan 2005	2.0	3.0
Share option plan 2006	3.0	4.0
Share option plan 2007	4.0	5.0
Share option plan 2008	0.0	1.0
Share option plan 2009	0.9	1.9
Share option plan 2010	2.0	3.0
Share option plan 2011	3.0	4.0
Share option plan 2012	3.1	4.1
Share option plan 2013	4.2	5.2
Share option plan 2014	5.2	6.2
Share option plan 2015	6.2	7.2
Share option plan 2016	7.2	

Performance Share Units Plan (PSU)

Since 2013, the Board of Directors renewed a yearly Performance Share Unit Plan, offered to executive staff with the objective of involving them more closely in the development of the Group, making this part of the long-term incentive policy. All the managers involved subscribed the PSU offered them in 2016 at an adjusted grant price of € 77.91. The Performance Share Units Plan is a cash-settled share-based plan through which beneficiaries will obtain cash benefit based upon the Solvay share price, as well performance conditions.

Each plan has a three-year vesting period, after which a cash settlement will take place, if vesting conditions are met.

Performance share units	Plan 2016	Plan 2015
Number of PSU	348,990	184,352
Grant date	02/24/2016	03/25/2015
Acquisition date	01/01/2019	01/01/2018
Vesting period	03/31/2016 to 12/31/2018	03/31/2015 to 12/31/2017
Performance conditions	50% of the initial granted PSU are subject to the Underlying EBITDA YoY growth % over 3 years (2016, 2017, 2018) 50% of the initial granted PSU are subject to the YoY CFROI % variation over 3 years (2016, 2017, 2018)	50% of the initial granted PSU are subject to the Underlying EBITDA YoY growth % over 3 years (2015, 2016, 2017) 50% of the initial granted PSU are subject to the YoY CFROI % variation over 3 years (2015, 2016, 2017)
Validation of performance conditions	By the board of Directors	By the board of Directors

In 2016 the impact of PSU on the consolidated income statement amounted to € 32 million, as against € 18 million in 2015.

Miscellaneous Notes

NOTE F36
Commitments to acquire tangible and intangible assets

In € million	2016	2015
Commitments for the acquisition of tangible and intangible assets	70	104

NOTE F37
Contingent liabilities

Accounting policy

Contingent liabilities are not recognized in the consolidated financial statements, except if they arise from a business combination. They are disclosed unless the possibility of an outflow of economic benefits is remote.

In € million	2016	2015
Liabilities and commitments of third parties guaranteed by the Company	792	881
Environmental contingent liabilities	307	313
Litigation and other major commitments	16	27

The liabilities and commitments of third parties guaranteed by the Company relate mainly to guarantees given in the framework of:

- RusVinyl, the joint venture with SIBUR for the construction and operation of a PVC plant in Russia. A guarantee of € 152 million at December 31, 2016 (€ 292 million at the end of 2015) has been provided on a several basis by each sponsor, SolVin/Solvay and Sibur, for the benefit of the lenders and which corresponds for each to 50% of the amount in principal of RusVinyl project finance plus interests and costs;
- VAT payment (€ 295 million at December 31, 2016, € 318 million at December 31, 2015).

Within the framework of the annual review of contingent liabilities, environmental contingent liabilities totaling € 307 million have been identified at December 31, 2016 (€ 313 million at December 31, 2015).

NOTE F38
Dividends proposed for distribution

The Board of Directors will propose to the General Shareholders' Meeting a gross dividend of € 3.45 per share.

Taking into account the dividend advance payment distributed in January 2017 of € 1.32 per share, the dividends proposed for distribution, but not yet recognized as a distribution to equity holders, amount to € 226 million.

NOTE F39
Associates and joint ventures

The associates and joint ventures not classified as held for sale/discontinued operations are consolidated by applying the equity method of accounting.

	2016			2015		
In € million	Associates	Joint ventures	Total	Associates	Joint ventures	Total
Investments in associates and joint ventures	24	473	497	41	357	398
Earnings from associates and joint ventures	2	83	85	2	19	21

The tables below present the summary of the statement of financial position and income statement of the material associates and joint ventures as if they were proportionately consolidated.

Associates

In € million	2016	2015
Statement of financial position		
Non-current assets	**25**	**67**
Current assets	**37**	**35**
Cash and cash equivalents	6	8
Non-current liabilities	**8**	**22**
Non current financial debt	5	18
Current liabilities	**31**	**39**
Current financial debt	6	16
Investments in associates	**24**	**41**
Income statement		
Sales	93	90
Depreciation and amortization	(2)	(4)
Cost of borrowings	0	(1)
Interest on lendings and short term deposits	0	0
Income taxes	(1)	(1)
Profit (loss) for the year from continuing operations	**3**	**2**
Profit (loss) for the year from discontinued operations	0	0
Profit (loss) for the year	**3**	**2**
Other comprehensive income	0	(2)
Total comprehensive income	**3**	**0**
Dividend received	**2**	**2**

Joint ventures

	2016					
In € million	RusVinyl OOO	Peroxidos do Brasil Ltda	Solvay & CPC Barium Strontium	Shandong Huatai Interox Chemical Co. Ltd	Hindustan Gum & Chemicals Ltd	Other
Ownership interest	50%	69.40%	75%	50%	50%	
Operating Segment	Functional Polymers	Performance Chemicals	Advanced Materials	Performance Chemicals	Advanced Formulations	
Statement of financial position						
Non-current assets	**476**	**38**	**12**	**10**	**8**	**17**
Current assets	**42**	**61**	**39**	**2**	**157**	**44**
Cash and cash equivalents	11	36	5	0	147	8
Non-current liabilities	**252**	**7**	**12**	**–**	**1**	**11**
Long-term financial debt	224	4	0	0	0	10
Current liabilities	**71**	**27**	**13**	**3**	**11**	**27**
Short-term financial debt	47	8	0	0	0	15
Investments in joint ventures	**197**	**66**	**26**	**9**	**153**	**23**
Income statement						
Sales	153	70	68	11	20	51
Depreciation and amortization	(22)	(3)	(1)	(1)	(1)	(1)
Reversal of impairment	19					
Cost of borrowings	(23)	0	0	0	0	(1)
Interest on lendings and short term deposits	0	3	0	0	9	1
Income taxes	(12)	(9)	(2)	0	(3)	(1)
Profit (loss) for the year from continuing operations	**49**	**19**	**8**	**0**	**7**	**1**
Profit (loss) for the year from discontinued operations	0	0	0	0	0	0
Profit (loss) for the year	**49**	**19**	**8**	**0**	**7**	**1**
Other comprehensive income	36	13	(2)	0	1	4
Total comprehensive income	**85**	**32**	**6**	**0**	**8**	**5**
Dividends received	**0**	**11**	**6**	**1**	**1**	**1**

Other comprehensive income comprises mainly the currency translation differences.

	2015					
In € million	RusVinyl OOO	Peroxidos do Brasil Ltda	Solvay & CPC Barium Strontium	Shandong Huatai Interox Chemical Co. Ltd	Hindustan Gum & Chemicals Ltd	Other
Ownership interest	50%	69.40%	75%	50%	50%	
Operating Segment	Functional Polymers	Performance Chemicals	Advanced Materials	Performance Chemicals	Advanced Formulations	
Statement of financial position						
Non-current assets	**406**	**32**	**12**	**11**	**9**	**6**
Current assets	**31**	**40**	**37**	**3**	**146**	**20**
Cash and cash equivalents	7	21	6	1	135	3
Non-current liabilities	**275**	**6**	**10**	**1**	**1**	**1**
Long-term financial debt	256	3	0	1	0	0
Current liabilities	**51**	**19**	**13**	**3**	**9**	**8**
Short-term financial debt	35	5	1	0	0	1
Investments in joint ventures	**112**	**47**	**26**	**10**	**145**	**17**
Income statement						
Sales	114	69	68	11	48	56
Depreciation and amortization	(24)	(3)	(1)	(1)	(1)	(1)
Reversal of impairment	19					
Cost of borrowings	(28)	(1)	0	0	0	0
Interest on lendings and short term deposits	0	2	0	0	7	0
Income taxes	10	(7)	(1)	0	(3)	0
Profit (loss) for the year from continuing operations	**(16)**	**16**	**7**	**3**	**8**	**1**
Profit (loss) for the year from discontinued operations	0	0	0	0	0	0
Profit (loss) for the year	**(16)**	**16**	**7**	**3**	**8**	**1**
Other comprehensive income	(9)	(9)	(1)	0	7	(8)
Total comprehensive income	**(25)**	**6**	**6**	**4**	**15**	**(7)**
Dividends received	**0**	**7**	**3**	**0**	**2**	**0**

Other comprehensive income comprises mainly the currency translation differences.

NOTE F40
Joint operations

The list of joint operations is available in the note F44 *List of companies included in the consolidation scope*.

- Soda Ash & Derivatives operations/interests in Devnya (Bulgaria), 75% held by Solvay and comprising the following legal entities:
  - Deven AD;
  - Solvay Sodi AD; and
  - Solvay Sisecam Holding AG.
- Hydrogen Peroxide Propylene Oxide (HPPO) operations/interests in Zandvliet (Belgium), Map Ta Put (Thailand), and the HPPO plant that is being constructed in the Kingdom of Saudi Arabia, all 50% held by Solvay and comprising the following legal entities:
  - BASF Interox H_2O_2 Production NV;
  - MTP HPJV C.V.;
  - MTP HPJV Management B.V.;
  - MTP HPJV (Thailand) Ltd.; and
  - Saudi Hydrogen Peroxide Co.
- Polyamides operations/interests in Butachimie (France), 50% held by Solvay.
- Acetow operations/interests of 49.9% held by Solvay in Warmeverbundkraftwerk Freiburg (Germany), included in Acetow discontinued operations.

NOTE F41
Non-controlling interests (continuing operations)

The following subsidiaries, other than those classified as held for sale have material non-controlling interests.

The amounts disclosed below are fully consolidated amounts and do not reflect the impacts from elimination of intragroup transactions.

	2016		
In € million	**Zhejiang Lansol**	**Solvay Special Chem Japan**	**Solvay Soda Ash**
Non controlling ownership interest	45%	33%	20%
Statement of financial position			
Non-current assets	22	20	349
Current assets	15	29	83
Non-current liabilities	0	1	13
Current liabilities	9	11	25
Income statement			
Sales	35	74	357
Profit (loss) for the year	4	9	174
Other comprehensive income	(1)	1	(5)
Total comprehensive income	**3**	**10**	**169**
Dividends paid to non controlling interests	0	2	36
Share of non controlling interest in the profit (loss) for the year	2	3	35
Accumulated non controlling interest	12	12	68

	2015				
In € million	Zhejiang Lansol	Vinythai	Solvay Special Chem Japan	Solvay Biomas Energy LLC	Solvay Soda Ash
Non controlling ownership interest	45%	41%	33%	35%	20%
Statement of financial position					
Non-current assets	24	244	19	10	337
Current assets	15	145	30	7	34
Non-current liabilities	0	47	1	0	14
Current liabilities	15	43	15	4	16
Income statement					
Sales	32	404	83	11	350
Profit (loss) for the year	0	24	8	(12)	176
Other comprehensive income	1	(18)	3	0	(15)
Total comprehensive income	**1**	**6**	**11**	**(12)**	**162**
Dividends paid to non controlling interests	0	1	3	0	34
Share of non controlling interest in the profit (loss) for the year	0	10	3	(4)	35
Accumulated non controlling interest	11	123	11	5	67

NOTE F42
Related parties

Balances and transactions between Solvay SA and its subsidiaries, related parties of Solvay SA, have been eliminated on consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties are disclosed below.

Sale and purchase transactions

	Sale of goods		Purchase of goods	
In € million	2016	2015	2016	2015
Associates	7	16	4	8
Joint ventures	71	164	46	78
Other related parties	21	27	67	77
Total	**99**	**207**	**117**	**163**

	Amounts owed by related parties		Amounts owed to related parties	
In € million	2016	2015	2016	2016
Associates	2	0	3	0
Joint ventures	3	36	2	21
Other related parties	19	8	17	7
Total	**25**	**44**	**21**	**28**

Loans to related parties

In € million	2016	2015
Loans to associates	0	2
Loans to joint ventures	0	2
Loans to other related parties	5	1
Total	**5**	**4**

Compensation of key management personnel

Key management personnel comprise all members of the Board of Directors and members of the Executive Committee.

Amounts due in respect of the year (compensation) and obligations existing at the end of the year:

In € million	2016	2015
Wages, charges and short-term benefits	3	2
Long-term benefits	11	10
Cash-settled share-based payments liability	5	4
Total	**18**	**16**

Expenses of the year:

In € million	2016	2015
Wages, charges and short-term benefits	8	9
Long-term benefits	1	1
Share-based payments expenses	5	3
Total	**14**	**12**

Excluding employer social charges and taxes

NOTE F43
Events after the reporting period

Accounting policy

Events after the reporting period which provide evidence of conditions that existed at the end of the reporting period (adjusting events) are recognized in the consolidated financial statements. Events indicative of conditions that arose after the reporting period are non-adjusting events and are disclosed in the notes if material.

On February 22, 2017, Solvay completed the divestment of its 58.77% stake in the Thai subsidiary Vinythai PCL to Japanese company AGC Asahi Glass, based on a total enterprise value of 16.5 billion Thai Baht (€ 435 million).

NOTE F44
List of companies included in the consolidation scope

The Group consists of Solvay SA and a total of 404 investees.

Of these 404 investees, 218 are fully consolidated, 10 are proportionately consolidated, and 20 are accounted for under the equity method, whilst the other 201 do not meet the criteria of significance.

List of companies entering or leaving the Group

Companies entering the Group

Country	Company	Comments
BELGIUM	Advanced Biochemical Europe, Bruxelles	new company
	EECO Holding SA, Bruxelles	new company
EGYPT	Solvay Alexandria Trading LLC., Alexandria	meets the consolidation criteria
FRANCE	Cogénération Belle Etoile SAS, Paris	new company
	Cogénération Tavaux SAS, Paris	meets the consolidation criteria
ITALY	Cogeneration Spinetta S.p.a., Bollate	new company
UNITED STATES	CEM Defense Materials LLC, Tempe AZ	new company

Companies leaving the Group

Country	Company	Comments
ARGENTINA	Solvay Indupa S.A.I.C., Bahia Blanca	Sold to Unipar Carbocloro S.A.
	Solalban Energia S.A., Bahia Blanca	Sold to Unipar Carbocloro S.A.
AUSTRALIA	Solvay Chemicals Pty Ltd , Sydney	Merged into Solvay Interox Pty
BELGIUM	Financière Solvay S.A., Bruxelles	Merged into Solvay Participations Belgique S.A.
BRAZIL	Solvay Indupa do Brasil S.A., Sao Paulo	Sold to Unipar Carbocloro S.A.
	Rhodia Energy Brasil Ltda, Paulinia Sao Francisco	Merged into Rhodia Poliamida e Especialidades Ltda
CHINA	Solvay High Performance Materials R&D (Shanghai) Co., Ltd. , Shanghai	Liquidated
FRANCE	Rhodia Finance S.A.S. , Courbevoie	Merged into Rhodia SA
GERMANY	Solvay Organics GmbH, Hannover	Merged into Solvay GmbH
	Girindus AG, Hannover	Liquidated
	EPIC Technologies GmbH, Schotten	Merged into Solvay Specialty Polymers Germany GmbH
ITALY	Solvay Chimica Bussi S.p.A., Rosignano	Sold to Caffaro Industries SpA
	Solvay Bario e Derivati S.p.A., Massa	Merged into Solvay Chimica Italia S.p.A.
IRELAND	C.I.I. Luxembourg Sarl - Irish Branch, Dublin	Merged into C.I.I. Luxembourg Sarl
RUSSIA	Soligran ZAO, Moscow Aptekars	Sold to Nickoplast
	Poligran OAO, Tver	Sold to Nickoplast
NAMIBIA	Okorusu Holdings (Pty) Ltd, Windhoek	Liquidated
	Okorusu Fluorspar (Pty) Ltd, Otjiwarongo	Liquidated
SINGAPORE	Solvay Singapore Pte Ltd, Singapore	Liquidated
SPAIN	Solvay Ibérica S.L., Barcelona	Merged into Solvay Quimica S.L.
UNITED STATES	Girindus America Inc., Cincinnati, OH	Liquidated
	D'Aircraft Products Inc., California	Merged into Cytec Engineered Materials Inc
	Cytec Plastics LLC, New Jersey	Merged into Cytec Industries Inc
	Cytec Acrylic Fibers Inc., New Jersey	Merged into Cytec Industries Inc
	BTH Quitman Hickory LLC, Quitman, Mississippi	Sold to New Biomass Holding LLC
	Alcolac Inc., Cranbury	Liquidated

List of subsidiaries

Indicating the percentage holding

The percentage of voting rights is very close to the percentage holding.

ARGENTINA	
Solvay Argentina SA, Buenos Aires	100
Solvay Quimica SA, Buenos Aires	100
AUSTRALIA	
Cytec Asia Pacific Holdings Pty Ltd, Baulkham Hills	100
Cytec Australia Holdings Pty Ltd, Baulkham Hills	100
Solvay Interox Pty Ltd, Banksmeadow	100
AUSTRIA	
Solvay Österreich GmbH, Wien	100
BELGIUM	
Advanced Biochemical Europe, Bruxelles	58.8
Carrières les Petons S.P.R.L., Walcourt	100
Cytec Belgium bvba, Diegem	100
Solvay Chemicals International S.A., Brussels	100
Solvay Chimie S.A., Brussels	100
Solvay Coordination Internationale des Crédits Commerciaux S.A., Brussels	100
Solvay Energy S.A., Brussels	100
Solvay Participations Belgique S.A., Brussels	100
Solvay Pharmaceuticals S.A. - Management Services, Brussels	100
Solvay Specialty Polymers Belgium SA / NV	100
Solvay Stock Option Management S.P.R.L., Brussels	100
BRAZIL	
Cogeracao de Energia Electricica Paraiso SA, Brotas	100
Cytec Comercio de Materiais Compostos E Produtos Quimicos do Brasil Ltda, Sao Paulo	100
Rhodia Brazil Ltda, Sao Paolo	100
Rhodia Poliamida Brasil Ltda , Sao Paolo	100
Rhodia Poliamida e Especialidades Ltda, Sao Paolo	100
Rhopart-Participacoes Servidos e Comercio Ltda, Sao Paolo	100
BULGARIA	
Solvay Bulgaria EAD, Devnya	100
CANADA	
Cytec Canada Inc, Niagara Falls Welland	100
Solvay Canada Inc, Toronto	100
CAYMAN ISLANDS	
Blair International Insurance (Cayman) Ltd, Georgetown	100
CHINA	
Baotou Solvay Rare Earths Company Ltd, Baotou	55
Beijing Rhodia Eastern Chemical Co., Ltd , Beijing	60
Cytec Industries Co. Ltd, Shanghai	100
Cytec Engineered Materials Co. Ltd, Shanghai	100
Liyang Solvay Rare Earth New Material Co., Ltd, Liyang City	96.3
Rhodia Hong Kong Ltd , Hong Kong	100
Solvay (Beijing) Energy Technology Co., Ltd , Beijing	100
Solvay (Shanghai) Engineering Plastics Co., Ltd	100
Solvay (Shanghai) International Trading Co., Ltd, Shanghai	100
Solvay (Shanghai) Ltd, Shanghai	100
Solvay (Zhangjiagang) Specialty Chemicals Co. Ltd, Suzhou	100
Solvay (Zhenjiang) Chemicals Co., Ltd, Zhenjiang New area	100
Solvay Biochemical (Taixing) Co. Ltd, Shanghai	58.7
Solvay Chemicals (Shanghai) Co. Ltd, Shanghai	100
Solvay China Co., Ltd , Shanghai	100
Solvay Fine Chemical Additives (Qingdao) Co., Ltd, Qingdao	100
Solvay Hengchang (Zhangjiagang) Specialty Chemical Co., Ltd, Zhangjiagang City	70
Solvay Silica Qingdao Co., Ltd , Qingdao	100

Solvay Speciality Polymers (Changshu) Co. Ltd, Changshu	100
Suzhou Interox Sem Co. Ltd, Suzhou	100
Zhejiang Lansol Fluorchem Co., Ltd, Zhejiang	55
Zhuhai Solvay Specialty Chemicals Co Ltd, Zhuhai City	100
CHILE	
Cytec Chile Ltda, Santiago	100
EGYPT	
Solvay Alexandria Sodium Carbonate Co, Alexandria	100
Solvay Alexandria Trading LLC., Alexandria	100
FINLAND	
Solvay Chemicals Finland Oy, Voikkaa	100
FRANCE	
Cogénération Chalampe S.A.S., Puteaux	100
Cogénération Tavaux SAS, Paris	33.3
Cytec Process Materials Sarl, Toulouse	100
RHOD V S.N.C. , Courbevoie	100
RHOD W S.N.C. , Courbevoie	100
Rhodia Chimie S.A.S. , Aubervilliers	100
Rhodia Energy GHG S.A.S. , Puteaux	100
Rhodia Laboratoire du Futur S.A.S. , Pessac	100
Rhodia Operations S.A.S. , Aubervilliers	100
Rhodia Participations S.N.C. , Courbevoie	100
Rhodia S.A. , Courbevoie	100
Rhodianyl S.A.S. , Saint-Fons	100
Solvay - Opérations - France S.A.S., Paris	100
Solvay - Fluorés - France S.A.S., Paris	100
Solvay Energie France S.A.S., Paris	100
Solvay Energy Services S.A.S. , Puteaux	100
Solvay Finance France S.A., Paris	100
Solvay Finance S.A., Paris	100
Solvay Participations France S.A., Paris	100
Solvay Speciality Polymers France S.A.S., Paris	100
Solvay Tavaux S.A.S.	100
Solvin France S.A., Paris	100
GERMANY	
Cavity GmbH, Hannover	100
Cytec Engineered Materials GmbH, Oestringen	100
Horizon Immobilien AG, Hannover	100
Salzgewinnungsgesellschaft Westfalen GmbH & Co KG, Hannover	65
German limited partnership, which makes use of the exemptions offered by Section 264(b) of the German Commercial Code, not to publish their annual financial statements.	
Solvay Acetow GmbH , Freiburg	100
Solvay Chemicals GmbH, Hannover	100
Solvay Fluor GmbH, Hannover	100
Solvay Flux GmbH, Hannover	100
Solvay GmbH, Hannover	100
Solvay Infra Bad Hoenningen GmbH, Hannover	100
Solvay P&S GmbH, Freiburg	100
Solvay Specialty Polymers Germany GmbH, Hannover	100
Solvin GmbH & Co. KG - PVDC, Rheinberg	100
Solvin Holding GmbH, Hannover	100
INDIA	
Cytec India Specialty Chemicals & Materials Private Ltd, Nagpur	100
Rhodia Polymers & Specialties India Private Limited, Mumbai	100
Rhodia Specialty Chemicals India Limited, Mumbai	99
Solvay Specialities India Private Limited, Mumbai	100
Sunshield Chemicals Limited, Mumbai	62.4
IRELAND	
Solvay Finance Ireland Unlimited , Dublin	100
INDONESIA	

PT. Cytec Indonesia, Jakarta	100
ITALY	
Cytec Process Materials S.r.l., Mondovi	100
Solvay Chimica Italia S.p.A., Milano	100
Solvay Energy Services Italia S.r.l., Bollate	100
Solvay Solutions Italia S.p.A. , Milano	100
Solvay Specialty Polymers Italy S.p.A., Milano	100
JAPAN	
Cytec Industries Japan LLC, Tokyo	100
Nippon Solvay KK, Tokyo	100
Solvay Japan K.K., Tokyo	100
Solvay Nicca Ltd, Tokyo	60
Solvay Special Chem Japan Ltd, Anan City	67
Solvay Specialty Polymers Japan KK, Minato Ku-Tokyo	100
LATVIA	
Solvay Business Services Latvia SIA, Riga	100
LUXEMBOURG	
C.I.I. Luxembourg Sarl, Strassen	100
Cytec Luxembourg International Holdings Sarl, Strassen	100
Solvay Chlorovinyls Holding S.a.r.l., Luxembourg	100
Solvay Finance (Luxembourg) SA, Luxembourg	100
Solvay Hortensia S.A., Luxembourg	100
Solvay Luxembourg S.a.r.l., Luxembourg	100
MEXICO	
Cytec de Mexico S.A. de C.V., Jalisco	100
Solvay Fluor Mexico S.A. de C.V., Ciudad Juarez	100
Solvay Mexicana S. de R.L. de C.V., Monterrey	100
NETHERLANDS	
Cytec Industries B.V., Vlaardingen	100
Cytec Industries Europe C.V., Vlaardingen	100
Cytec Netherlands Holdings B.V., Vlaardingen	100
Onecarbon International B.V., Utrecht	100
Rhodia International Holdings B.V., Den Haag	100
Solvay Chemicals and Plastics Holding B.V., Linne-Herten	100
Solvay Chemie B.V., Linne-Herten	100
Solvay Solutions Nederland B.V., Klundert	100
Solvin Holding Nederland B.V., Linne-Herten	100
NEW ZEALAND	
Solvay New Zealand Ltd, Auckland	100
PERU	
Cytec Peru S.A.C., Lima	100
POLAND	
Solvay Engineering Plastics Poland Sp z.o.o. , Gorzow Wielkopolski	100
Solvay Advanced Silicas Poland Sp. z o.o.	100
PORTUGAL	
Solvay Business Services Portugal Unipessoal Lda, Carnaxide	100
Solvay Portugal - Produtos Quimicos S.A., Povoa	100
RUSSIA	
Solvay Vostok OOO, Moscow	100
Sertow OOO, Serpukhov Khimi	100
SINGAPORE	
Cytec Industries PTE Ltd, Singapore	100
Rhodia Amines Chemicals Pte Ltd , Singapore	100
Solvay Fluor Holding (Asia-Pacific) Pte. Ltd., Singapore	100
Solvay Specialty Chemicals Asia Pacific Pte. Ltd., Singapore	100
Vinythai Holding Pte Ltd., Singapore	58.8
SOUTH KOREA	
Cytec Korea Inc, Seoul	100
Daehan Solvay Special Chemicals Co., Ltd, Seoul	100
Solvay Chemicals Korea Co. Ltd , Seoul	100

Solvay Energy Services Korea Co. Ltd , Seoul	100
Solvay Korea Co. Ltd, Seoul	100
Solvay Silica Korea Co. Ltd , Incheon	100
Solvay Specialty Polymers Korea Company Ltd, Seoul	100
SPAIN	
Solvay Energy Services Iberica, S.L., Madrid	100
Solvay Quimica S.L., Barcelona	100
Solvay Solutions Espana S.L. , Madrid	100
SWITZERLAND	
Solvay (Schweiz) AG, Bad Zurzach	100
Solvay Vinyls Holding AG, Bad Zurzach	100
THAILAND	
Advanced Biochemical (Thailand) Company Ltd, Bangkok	58.8
Cytec Specialty Chem (Thailand) Ltd, Bangkok	100
Solvay (Bangpoo) Specialty Chemicals Ltd, Bangkok	100
Solvay Asia Pacific Company Ltd, Bangkok	100
Solvay Peroxythai Ltd, Bangkok	100
Vinythai Public Company Ltd, Bangkok	58.8
UNITED KINGDOM	
Advanced Composites Group Holdings Ltd, Heanor	100
Advanced Composites Group Investments Ltd, Heanor	100
Cytec Engineered Materials Ltd, Wrexham	100
Cytec Industrial Materials (Derby) Ltd, Heanor	100
Cytec Industrial Materials (Manchester) Ltd, Heanor	100
Cytec Industries UK Holdings Ltd, Wrexham	100
Cytec Industries UK Ltd, Wrexham	100
Cytec Med-Lab Ltd, Heanor	100
Cytec Process Materials (Keighley) Ltd, Keighley	100
Holmes Chapel Trading Ltd , Watford	100
McIntyre Group Ltd , Watford	100
Med-Lab International Ltd, Heanor	100
Rhodia Holdings Ltd , Watford	100
Rhodia International Holdings Ltd , Oldbury	100
Rhodia Limited , Watford	100
Rhodia Organique Fine Ltd , Watford	100
Rhodia Overseas Ltd , Watford	100
Rhodia Pharma Solutions Holdings Ltd, Cramlington	100
Rhodia Pharma Solutions Ltd, Cramlington	100
Rhodia Reorganisation, Watford	100
Solvay Chemicals Ltd, Warrington	100
Solvay Interox Ltd, Warrington	100
Solvay Solutions UK Ltd, Watford	100
Solvay UK Holding Company Ltd, Warrington	100
Umeco Composites Ltd, Heanor	100
Umeco Ltd, Heanor	100
UNITED STATES	
Ausimont Industries, Inc., Wilmington, DE	100
CEM Defense Materials LLC, Tempe AZ	100
Cytec Aerospace Materials (ca) Inc., New Jersey	100
Cytec Carbon Fibers LLC, New Jersey	100
Cytec Engineered Materials Inc., Arizona	100
Cytec Global Holdings Inc., New Jersey	100
Cytec Industrial Materials (ok) Inc., New Jersey	100
Cytec Industries Inc, New Jersey	100
Cytec Korea Inc., New Jersey	100
Cytec Olean Inc., New Jersey	100
Cytec Overseas Corp., New Jersey	100
Cytec Process Materials (ca) Inc., New Jersey	100
Cytec Technology Corp., New Jersey	100
Garret Mountain Insurance Co., New Jersey	100

IMC Mining Chemicals LLC, New Jersey	100
Netherlands Cytec GP Inc., New Jersey	100
Primester, Kingsport TN	100
Rhodia India Holding Inc., Cranbury NJ	100
Rocky Mountain Coal Company, LLC, Houston, TX	100
Solvay America Holdings, Inc., Houston, TX	100
Solvay America Inc., Houston, TX	100
Solvay Biomass Energy LLC,Quitman MI	65
Solvay Chemicals, Inc., Houston, TX	100
Solvay Energy Holding LLC, Wilmington DE	100
Solvay Finance (America) LLC, Houston, TX	100
Solvay Financial Services INC., Wilmington DE	100
Solvay Fluorides, LLC., Greenwich, CT	100
Solvay Holding INC., Cranbury NJ	100
Solvay Soda Ash Expansion JV, Houston, TX	80
Solvay Soda Ash Joint Venture, Houston, TX	80
Solvay Specialty Polymers USA, LLC, Alpharetta, GA	100
Solvay USA INC., Cranbury NJ	100
URUGUAY	
Alaver SA, Montevideo	100
Zamin Company S/A, Montevideo	100
VENEZUELA	
Rhodia Silices de Venezuela C.A., Barquisimeto	100

List of joint operations

AUSTRIA	
Solvay Sisecam Holding AG, Wien	75
BELGIUM	
BASF Interox H2O2 Production N.V., Brussels	50
BULGARIA	
Deven AD, Devnya	73.4
Solvay Sodi AD, Devnya	73.5
FRANCE	
Butachimie S.N.C. , Courbevoie	50
GERMANY	
Warmeverbundkraftwerk Freiburg GmbH, Freiburg	49.9
NETHERLANDS	
MTP HP JV C.V., Weesp	50
MTP HP JV Management bv, Weesp	50
SAUDI ARABIA	
Saudi Hydrogen Peroxide Co, Jubail	50
THAILAND	
MTP HP JV (Thailand) Ltd, Bangkok	50

List of companies consolidated by applying the equity method of accounting
Joint ventures

BELGIUM	
EECO Holding SA, Bruxelles	33.3
BRAZIL	
Dacarto Benvic SA, Santo André	50
Peroxidos do Brasil Ltda, Sao Paulo	69.4
CHINA	
Shandong Huatai Interox Chemical Co. Ltd, Dongying	50
FRANCE	
Cogénération Belle Etoile SAS, Paris	33.3
GERMANY	
Solvay & CPC Barium Strontium GmbH & Co KG, Hannover	75
Solvay & CPC Barium Strontium International GmbH, Hannover	75
INDIA	
Hindustan Gum & Chemicals Ltd, New Delhi	50
ITALY	
Cogeneration Spinetta S.p.a. , Bollate	33.3
MEXICO	
Solvay & CPC Barium Strontium Monterrey S. de R.L. de C.V., Monterrey	75
Solvay & CPC Barium Strontium Reynosa S. de R.L. de C.V., Reynosa	75
RUSSIA	
Rusvinyl OOO, Moscow	50
VIETNAM	
Rhodia Nuoc Trong Biogas LLC, Ho Chi Minh City	75

Associates

CHINA	
Qingdao Hiwin Solvay Chemicals Co. Ltd , Qingdao	30
FRANCE	
GIE Chime Salindres , Salindres	50
Gie Osiris, Roussillon	34.8
INDONESIA	
Solvay Manyar P.T. , Gresik	50
MEXICO	
Silicatos y Derivados S.A. DE C.V.	20
POLAND	
Zaklad Energoeloctryczny Energo-Stil Sp. z o.o., Gorzow Wielkopolski	25
UNITED KINGDOM	
Penso Holdings Ltd, , Coventry	20

3. SUMMARY OF FINANCIAL STATEMENTS OF SOLVAY SA

The annual financial statements of Solvay SA are presented in summary format below. In accordance with the Belgian Companies Code, the annual financial statements of Solvay SA, the management report, and the statutory auditor's report will be filed with the National Bank of Belgium.

These documents are also available free of charge on the internet or upon request from:

Solvay SA
rue de Ransbeek 310
B – 1120 Brussels

The balance sheet of Solvay SA for the year 2016 presented below is based on a dividend of € 3.45 per share.

Solvay SA is a société anonyme created under Belgian law, with its registered office at rue de Ransbeek 310 at 1120 Brussels. Solvay SA has two subsidiaries: Solvay SA France (25, rue de Clichy, 75009 Paris, France) and Solvay SA Italie (Via Piave 6, 57013 Rosignano, Italy).

The accounts of Solvay SA are prepared in accordance with Belgian generally accepted accounting principles, and include its French and Italian subsidiaries.

The main activities of Solvay SA consist of holding and managing a number of participations in Group companies and of financing the Group from the bank and bond markets. It also manages the research center at Neder-Over-Heembeek (Belgium) and a very limited number of industrial and commercial activities not undertaken through subsidiaries.

The profit for the year before taxes amounted to € 400 million in 2016, compared with € 1,775 million in the previous year. It includes the operating result amounting to € (119) million, compared with € 75 million in 2015, dividends received from its various participations amounting to € 467 million, compared with € 96 million in 2015, and the differential between interest paid and received on its financing activities amounting to € (153) million, compared with an amount of € (189) million in 2015. The balance of non-recurring results for 2016 is € 190 million, compared with € 1,754 million in 2015. The higher amount in 2015 was due to an exceptional gain on sale of a participation.

The profit for the year of Solvay SA amounted in 2016 to € 404 million, compared with € 1,774 million in 2015.

In the absence of transfers to untaxed reserves, carried forward net income of € 6,321 million is available for distribution.

Balance sheet of Solvay SA (summary)

In € million	2016	2015
ASSETS		
Fixed assets	**18,255**	**15,974**
Start-up expenses and intangible assets	94	128
Tangible assets	51	57
Financial assets	18,110	15,789
Current assets	**1,234**	**3,742**
Inventories	4	3
Trade receivables	181	219
Other receivables	103	110
Short-term investments and cash equivalents	924	3,396
Accruals	22	15
Total assets	**19,489**	**19,716**
SHAREHOLDERS' EQUITY AND LIABILITIES		
Shareholders' equity	**10,726**	**10,688**
Capital	1,588	1,588
Issue premiums	1,200	1,200
Reserves	1,982	1,982
Net income carried forward	5,955	5,917
Provisions and deferred taxes	**369**	**331**
Financial debt	**7,662**	**8,040**
due in more than one year	4,252	5,251
due within one year	3,410	2,789
Trade liabilities	**179**	**143**
Other liabilities	**477**	**429**
Accruals and deferred income	**76**	**86**
Total shareholders' equity and liabilities	**19,489**	**19,716**

Income statement of Solvay SA (summary)

In € million	2016	2015
Operating income	**794**	**1,045**
Sales	11	126
Other operating income	784	919
Operating expenses	**(913)**	**(970)**
Operating profit/loss	**(119)**	**75**
Financial gains/losses	519	1,680
Profit for the year before taxes	**400**	**1,755**
Income taxes	4	19
Profit for the year	**404**	**1,774**
Transfer to (-) / from (+) untaxed reserves	0	0
Profit available for distribution	**404**	**1,774**

Profit available for distribution

In € million	FY 2016	FY 2015
Profit for the year available for distribution	**404**	**1,774**
Carried forward	5,917	4,524
Total available to the General Shareholders' Meeting	**6,321**	**6,298**
Appropriation		
Legal reserve	–	32
Gross dividend	366	349
Carried forward	5,955	5,917
Total	**6,321**	**6,298**

DECLARATIONS: AUDITOR'S REPORTS & DECLARATION BY THE PERSONS RESPONSIBLE

ASSURANCE REPORT OF THE STATUTORY AUDITOR ON A SELECTION OF SOCIAL, ENVIRONMENTAL AND OTHER SUSTAINABLE DEVELOPMENT INFORMATION FOR THE YEAR ENDED 31 DECEMBER 2016

Pursuant to your request and in our capacity of Statutory Auditor of Solvay SA / NV, we hereby present you our assurance report on a selection of social, environmental and other sustainable development information disclosed in section "Extra-financial statements" of Solvay Group Annual Integrated Report for the year ended 31 December 2016 (the "2016 Annual Integrated Report"), identified by the symbol ✓2016 and ✓✓2016 .

Responsibility of the Company

This selection of information (the "Information") extracted from the 2016 Annual Integrated Report has been prepared under the responsibility of Solvay Group management, in accordance with internal measurement and reporting principles used by Solvay Group (the "Reporting Framework"). The Reporting Framework consists of specific definitions and assumptions that are summarized in section "Extra-financial statements" of the 2016 Annual Integrated Report.

Responsibility of the Statutory Auditor

It is our responsibility, based on the procedures performed by us, to express:

- *"Limited assurance" for the Information identified by the symbol* ✓2016 as included in the 2016 Annual Integrated Report
- *"Reasonable assurance" for the Information identified by the symbol* ✓✓2016 as included in the 2016 Annual Integrated Report

The complete list of Information in scope of our assurance engagement together with the type of assurance has been included in appendix A of this report.

We conducted our procedures in accordance with the international standard as defined in ISAE (International Standard on Assurance Engagements) 3000 (Revised)[(1)]. With respect to independence rules, these are defined by the respective legal and regulatory texts as well as by the professional Code of Ethics, issued by the International Federation of Accountants ("IFAC").

Nature and scope of procedures

We have carried out the following procedures

- *General procedures*:
  - We assessed the appropriateness of the Reporting Framework with respect to its relevance, completeness, neutrality, clarity and reliability, by taking into consideration, when relevant, the sector reporting practices.
  - We have verified the set-up within Solvay Group of the process to obtain, consolidate and check the selected Information with regard to its completeness and consistency. We have familiarized ourselves with the internal control and risk management procedures relating to the compilation of the information. We have conducted interviews with individuals responsible for social, environmental and other sustainable development reporting.
  - At the sites that we have selected[(2)] based on their activity, their contribution to consolidated indicators, their location and a risk analysis, we have:
    - Conducted interviews to verify the proper application of procedures and obtained information to perform our verifications;
    - Conducted substantive tests, using sampling techniques, to verify the calculations performed and reconcile data with supporting evidence.

(1) ISAE 3000 (Revised) – Assurance engagements other than audits or reviews of historical information

(2) Sites audited for indicators under limited assurance: Map Ta Phut (VNT), Dombasle, Bad Wimpfen, Chalampé Rhodia, Spinetta-Marengo, Marietta – Ohio, Santo-Andre – Rhodia, Greenriver, Panoli (Solvay), Torrelavega.
Additional sites audited for indicators under reasonable assurance only: Devnya (SODI & DEVEN), Santo-Andre – Indupa, Freiburg, Rheinberg, Neder-over-Heembeek, Shanghai, Bahia Blanca

- *"Limited assurance" for the Information identified by the symbol* ✓2016 as included in the 2016 Annual Integrated Report
  - For the entity in charge of their consolidation, as well as for the controlled entities, we have designed analytical procedures and verified, using sampling techniques, the calculations as well as the consolidation of this information in order to obtain limited assurance that the selected information does not contain any material errors that would question its preparation, in all material respects, in accordance with the Reporting Framework. A higher level of assurance would have required more extensive procedures.
- *"Reasonable assurance" for the Information identified by the symbol* ✓✓2016 as included in the 2016 Annual Integrated Report
  - We conducted work of the same nature as the work described in section above (limited assurance) but in further detail, in particular performing an increased number of tests. When relevant, we have tested a representative sample of entities based on their activities, their contribution to the consolidated data, their location and a risk analysis. In these cases, the selected sample represents between 41% and 61% of the published data, which is significantly more than what would be requested for a limited assurance review.

Conclusion

- *For the indicators in scope of "limited assurance" (identified by the symbol* ✓2016 *)*

On the basis of the procedures performed by us, nothing came to our attention that causes us to believe that the Information identified by the symbol ✓2016 as included in the 2016 Annual Integrated Report, is not prepared, in all material respects, in accordance with the Reporting Framework.

- *For the indicators in scope of "reasonable assurance" (identified by the symbol* ✓✓2016 *)*

In our opinion, based on the procedures performed, the Information identified by the symbol ✓✓2016 as included in the 2016 Annual Integrated Report, has been prepared in all material respects in accordance with the Reporting Framework.

Zaventem, 30 March 2017

The statutory auditor
DELOITTE Bedrijfsrevisoren / Reviseurs d'Entreprises
BV o.v.v.e. CVBA / SC s.f.d. SCRL
Represented by Michel Denayer

Appendix A

Indicators in **bold** are selected for reasonable insurance.

Reporting scope	Information	Audit Procedure
Sustainable business solutions	**Product portfolio assessed (%)**	**Reasonable Assurance**
	Sustainable business solutions (% of net sales)	**Reasonable Assurance**
Greenhouse gas emissions	**Greenhouse gas emissions intensity**	**Reasonable Assurance**
	Direct and indirect CO_2 emissions (Scope 1 & 2)	Limited Assurance
	Other greenhouse gas emissions according to Kyoto Protocol (Scope 1)	Limited Assurance
	Total greenhouse gas emissions (Kyoto protocol)	Limited Assurance
	Other greenhouse gas emissions not according to Kyoto Protocol (Scope 1)	Limited Assurance
Energy management	Energy consumption	Limited Assurance
	Energy efficiency index	Limited Assurance
Air quality	Nitrogen oxides – NO_x	Limited Assurance
	Nitrogen oxides intensity	Limited Assurance
	Sulfur oxides – SO_x	Limited Assurance
	Sulfur oxides intensity	Limited Assurance
	Non-methane volatile organic compounds – NMVOC	Limited Assurance
	Non-methane volatile organic compounds intensity	Limited Assurance
Water management	Freshwater withdrawal	Limited Assurance
	Freshwater withdrawal intensity	Limited Assurance
	Chemical oxygen demand	Limited Assurance
	Chemical oxygen demand intensity	Limited Assurance
Environmental incidents and remediation	Medium severity incidents with environmental consequences	Limited Assurance
	Environmental provision	Limited Assurance
Hazardous materials management	Industrial hazardous waste not disposed of in a sustainable way	Limited Assurance
	Industrial hazardous waste not disposed of in a sustainable way intensity	Limited Assurance
	Substance of very high concern (SVHC) according to REACH criteria present in products put on the market	Limited Assurance
	All SVHC according to REACH criteria present in products put on the market for which this presence is due to raw materials	Limited Assurance
	SVHCs reviewed for potential substitution or safer alternatives	Limited Assurance
Employee health and safety	**Medical Treatment Accident Rate - Employee, contractors and temporary workers (MTAR)**	**Reasonable Assurance**
	Lost Time accident Rate - Employee, contractors and temporary workers (LTAR)	**Reasonable Assurance**
	Fatal accidents	**Reasonable Assurance**
	Industrial Hygiene program: sites where hygiene specialists have been trained to new Industrial Hygiene standards	Limited Assurance
	Advanced Health Monitoring program: sites with advanced risk based medical surveillance	Limited Assurance
Employee engagement and wellness	**Solvay engagement index**	**Reasonable Assurance**
	Coverage by collective agreement	Limited Assurance
Process safety, emergency preparedness and response	Number of "risk sheets level 1" at the end of the year	Limited Assurance
	Percentage of level 1 risk situations resolved within one year	Limited Assurance
	Risk level 1 situation resolved	Limited Assurance
	Process safety rate	Limited Assurance

STATUTORY AUDITOR'S REPORT TO THE SHAREHOLDERS' MEETING ON THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2016

As required by law, we report to you in the context of our appointment as the company's statutory auditor. This report includes our report on the consolidated financial statements together with our report on other legal and regulatory requirements. These consolidated financial statements comprise the consolidated statement of financial position as at 31 December 2016, the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, as well as the summary of significant accounting policies and other explanatory notes.

Report on the consolidated financial statements – Unqualified opinion

We have audited the consolidated financial statements of Solvay SA/NV ("the company") and its subsidiaries (jointly "the group"), prepared in accordance with International Financial Reporting Standards as adopted by the European Union and with the legal and regulatory requirements applicable in Belgium. The consolidated statement of financial position shows total assets of 24,145 million EUR and the consolidated income statement shows a consolidated profit (group share) for the year then ended of 621 million EUR.

Board of directors' responsibility for the preparation of the consolidated financial statements

The board of directors is responsible for the preparation and fair presentation of consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and with the legal and regulatory requirements applicable in Belgium, and for such internal control as the board of directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Statutory auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (ISA) as adopted in Belgium. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the statutory auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the statutory auditor considers internal control relevant to the group's preparation and fair presentation of consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the board of directors, as well as evaluating the overall presentation of the consolidated financial statements. We have obtained from the group's officials and the board of directors the explanations and information necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Unqualified opinion

In our opinion, the consolidated financial statements of Solvay SA/NV give a true and fair view of the group's net equity and financial position as of 31 December 2016, and of its results and its cash flows for the year then ended, in accordance with International Financial Reporting Standards as adopted by the European Union and with the legal and regulatory requirements applicable in Belgium.

Report on other legal and regulatory requirements

The board of directors is responsible for the preparation and the content of the directors' report on the consolidated financial statements.

As part of our mandate and in accordance with the Belgian standard complementary to the International Standards on Auditing applicable in Belgium, our responsibility is to verify, in all material respects, compliance with certain legal and regulatory requirements. On this basis, we make the following additional statement, which does not modify the scope of our opinion on the consolidated financial statements:

- The directors' report on the consolidated financial statements includes the information required by law, is consistent with the consolidated financial statements and is free from material inconsistencies with the information that we became aware of during the performance of our mandate.

Zaventem, 30 March 2017

The statutory auditor
DELOITTE Bedrijfsrevisoren / Reviseurs d'Entreprises
BV o.v.v.e. CVBA / SC s.f.d. SCRL
Represented by Michel Denayer

DECLARATION BY THE PERSONS RESPONSIBLE

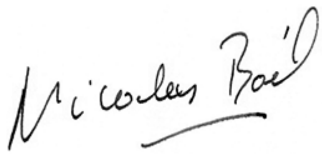
The Board of Directors hereby declares that, to the best of its knowledge:

a. the financial statements, prepared in accordance with International Financial Reporting Standards ("IFRS"), give a true and fair view of the assets, liabilities, financial position, and earnings of the issuer and og the entities included in the consolidation

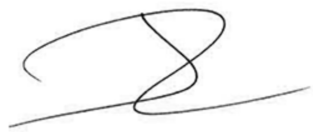
b. the management report includes an accurate review of the business developments, earnings, and financial position of the issuer and of the entities included in the consolidation, as well as a description of the main risks and uncertainties that these entities face.

For the Board of Directors,

Nicolas Boël
Chairman of the Board of Directors



Jean-Pierre Clamadieu
Chairman of the Executive Committee and CEO
Director



GLOSSARY

Adjustment

Adjustments made to IFRS results for elements distorting comparability over time of the Group underlying performance. These adjustments consist of:

- Results from portfolio management and reassessments,
- Results from legacy remediation and major litigations,
- M&A related impacts, mainly including non-cash Purchase Price Acquisition impacts (e.g. inventory step-up and amortization of intangibles) and retention bonuses relative to Chemlogics and other acquisitions,
- Net financial results related to changes in discount rates, hyperinflation, coupons of hybrid bonds considered as dividends under IFRS and debt management impacts (mainly including gains/(losses) related to the early repayment of debt),
- Adjustments of equity earnings for impairment gains or losses and unrealized foreign exchange gains or losses on debt,
- Results from available-for-sale financial assets,
- Tax effects related to the items listed above and tax expense or income of prior years.
- All adjustments listed above apply to both continuing and discontinuing operations, and include the impacts on non-controlling interests.

Basic earnings per share

Net income (Solvay's share) divided by the weighted average number of shares, after deducting own shares purchased to cover stock option programs.

Capital expenditures (capex)

Cash paid for the acquisition of tangible and intangible assets

Carechem

Carechem 24 is a multilingual telephone advice service providing access to a team of trained responders 24 hours a day, 365 days a year. Carechem 24 provides companies all over the world with emergency product support during a hazardous materials incident.

Cash conversion

(Underlying EBITDA + Capex from continuing operations) / Underlying EBITDA

CEFIC

European Chemical Industry Council.

CEO

Chief Executive Officer.

CFO

Chief Financial Officer.

CFROI

Cash Flow Return On Investment, calculated as the ratio between recurring cash flow and invested capital, where

- Recurring cash flow = Underlying EBITDA + (Dividends from associates and joint ventures – Earnings from associates and joint ventures) + Recurring capex + Recurring income taxes;
- Invested capital = Replacement value of goodwill & fixed assets + Net working capital + Carrying amount of associates and joint ventures;
- Recurring capex is normalized at 2% of the Replacement value of fixed assets net of Goodwill values;
- Recurring income taxes are normalized at 30% of (Underlying EBIT – Earnings from associates and joint ventures);

CGU

Cash-generating unit.

Code of Conduct

Solvay is committed to responsible behavior and integrity, taking into account the sustainable growth of its business and its good reputation in the communities in which it operates.

Comex

Executive Committee.

CSR

Corporate Social Responsibility.

Diluted earnings per share

Net income (Solvay's share) divided by the weighted average number of shares adjusted for the effects of dilution.

Discontinued operations

Component of the Group which the Group has disposed of or which is classified as held for sale, and:

- Represents a separate major line of business or geographical area of operations;
- Is part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or
- Is a subsidiary acquired exclusively with a view to resale.

Dividend yield (gross)

Gross dividend divided by the closing share price on December 31.

Dividend yield (net)

Net dividend divided by the closing share price on December 31.

DJ Euro Stoxx

Dow Jones Euro Stoxx is a pan-European stock index which includes the 326 most important shares of the general Dow Jones index, belonging to eleven countries of the Eurozone.

DJ Stoxx

Dow Jones Stoxx is a European stock index composed of the 665 most important European shares.

EBIT

Earnings before interest and taxes.

EBITDA
Earnings before interest and taxes, depreciation and amortization.

Environmental Protection Agency
The U.S. Environmental Protection Agency (EPA or USEPA) is an agency of the United States federal government which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Equity per share
Equity (Solvay share) divided by the number of outstanding shares at year end (issued shares - treasury shares).

Euronext
Global operator of financial markets and provider of trading technologies.

Free Cash Flow
Cash flow from operating activities (excluding cash flow related to acquisitions of subsidiaries) and Cash flow from investing activities (excluding acquisitions and disposals of subsidiaries and other investments and excluding loans to associates and non-consolidated investments, as well as related tax elements).

FTSEurofirst 300
The FTSEurofirst 300 Index tracks the equity performance across the region of the 300 largest companies ranked by market capitalization in the FTSE Developed Europe Index.

GBU
Global Business Unit.

GHG
Greenhouse gas.

GRI
The Global Reporting Initiative (GRI) is a leading organization in the sustainability field. GRI promotes the use of sustainability reporting as a way for organizations to become more sustainable and contribute to sustainable development.

HBP
High-barrier polymer.

HDS
Highly Dispersible Silica.

HPPA
Polyamide High Performance.

IFRS
International Financial Reporting Standards.

Integrated reporting
This is a process founded on integrated thinking, which results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation.

ISO 9001
The ISO 9001 standard defines a set of requirements for the establishment of a system of quality management in an organization, whatever its size and activity.

ISO 14001
The ISO 14001 family addresses various aspects of environmental management. It provides practical tools for companies and organizations looking to identify and control their environmental impact and constantly improve their environmental performance.

ISO 14040
The ISO 14040 standard covers life cycle assessment (LCA) studies and life cycle inventory (LCI) studies.

ISO 26000
The ISO 26000 is a global standard which provides guidelines for organizations that wish to operate in a socially responsible manner. The standard was published in 2010 after five years of negotiations among a large number of stakeholders worldwide. Representatives of governments, NGOs, industry, consumer groups, and the world of work were involved in its development. It therefore represents an international consensus.

Leverage ratio
Net debt / underlying EBITDA of last 12 months. Underlying leverage ratio = underlying net debt / underlying EBITDA of last 12 months.

Loss prevention process
Loss prevention aims at maintaining production flow and profitability of the plants by providing risk mitigation. It also contributes to increasing the protection of people and the environment.

LTAR
Lost Time Accident Rate.

LTI
Long Term Incentive.

M&A
Mergers and Acquisitions.

M&A related impacts
This mainly includes non-cash Purchase Price Allocation impacts (e.g. inventory step-up and amortization of intangibles other than for PPA Rhodia) and retention bonuses relative to Chemlogics and other acquisitions.

Materiality
Organizations are faced with a wide range of topics on which they could report. The relevant topics are those that may reasonably be considered important for reflecting the organization's economic, environmental, and social impacts, or influencing the decisions of stakeholders, and therefore potentially merit inclusion in an annual report. Materiality is the threshold at which aspects become sufficiently important that they should be reported.

MTAR
Medical Treatment Accident Rate.

Net cost of borrowings
Cost of borrowings netted with interest on lendings and short-term deposits, as well as other gains (losses) on net indebtedness

Net debt
Non-current financial debt + current financial debt – cash & cash equivalents – other financial instrument receivables. Underlying net debt reclassifies as debt 100% of the hybrid perpetual bonds, considered as equity under IFRS.

Net pricing
The difference between the change in sales prices versus the change in variable costs.

Natural Currency Hedge
A natural currency hedge is an investment that reduces the undesired risk by matching cash in and outflows.

Net Financial Charges
Net cost of borrowings, costs of discounting provisions (namely, related to post-employment benefits and HSE liabilities) and income / loss from available-for-sale financial assets.

Net Sales
Sales of goods and value added services corresponding to Solvay's know-how and core business. Net sales exclude other revenues primarily comprising commodity and utility trading transactions and other revenue deemed as incidental by the Group.

Net working capital
Includes inventories, trade receivables and other current receivables, netted with trade payables and other current liabilities.

OCI
Other Comprehensive Income.

OECD
Organisation for Economic Co-operation and Development.

OHSAS 18001
OHSAS 18001 is an international occupational health and safety management system specification.

OLED
Organic Light-Emitting Diode.

Open Innovation
Innovation that is enriched with outside expertise, through partnerships with the academic world and by shareholdings in start-ups, either directly or via investment funds.

PEEK
Polyetheretherketone.

PO
Propylene oxide.

pp
Unit of percentage points, used to express the evolution of ratios.

PPA
Purchase Price Allocation (PPA) accounting impacts related to acquisitions, primarily for Rhodia and Cytec.

Pricing power
The ability to create positive net pricing.

PPS
Polyphenylene sulfide.

PSU
Performance Share Unit.

PPSU
Polyphenylsulfone.

Product Stewardship
A responsible approach in managing risks throughout the entire life cycle of a product, from the design stage to the end of life.

PVC
Polyvinyl chloride.

PVDF
Polyvinylidene fluoride.

R&I
Research & Innovation.

R&I intensity
Research & innovation / net sales.

REACH
REACH is the European Community Regulation on chemicals and their safe use (EC 1907/2006). It deals with the registration, evaluation, authorization, and restriction of chemical substances. The law entered into force on June 1, 2007.

Results on disposals
It includes gains/(losses) from activities presented as discontinued operations.

Revenue from non-core activities
Revenues primarily comprising commodity and utility trading transactions and other revenue deemed as incidental by the Group, considered to not correspond to Solvay's know-how and core business.

Responsible Care®
Responsible Care® is the global chemical industry's unique initiative to improve health, environmental performance, enhance security, and to communicate with stakeholders about products and processes.

ROE
Return on equity.

Safety Data Sheets
Safety Data Sheets are the main tool for ensuring that manufacturers and importers communicate enough information along the supply chain to allow safe use of their substances and mixtures.

SASB
Sustainability Accounting Standards Board. SASB's mission is to develop and disseminate sustainability accounting standards that help public corporations disclose material, decision-useful information to investors. That mission is accomplished through a rigorous process that includes evidence-based research and broad, balanced stakeholder participation.

Seveso Regulations
The Control of Major Accident Hazards Involving Dangerous Substances Regulations. These regulations (often referred to as "COMAH Regulations" or "Seveso Regulations") give effect to European Directive 96/82/EC. They apply only to locations where significant quantities of dangerous substances are stored.

Solvay Way
Launched in 2013 and aligned with ISO 26000, Solvay Way is the sustainability approach of the Group. It integrates social, societal, environmental, and economic aspects into the Company's management and strategy, with the objective of creating value shared by all of its stakeholders. Solvay Way is based on an ambitious and pragmatic framework serving as a tool of both measurement and progress. Solvay Way lists 49 practices – practices that reflect the Solvay Way's 22 commitments and are structured on a four-level scale (launch, deployment, maturity, performance).

SOP
Stock Option Plan.

SPM
The Sustainable Portfolio Management tool is integrated into the Solvay Way framework (linked to five practices). It serves as a strategic tool for developing information on our portfolio and analyzing the impacts of sustainability megatrends on our businesses.

STI
Short Term Incentive.

SVHC
Substance of Very High Concern (SVHC) is a chemical substance, the utilization of which within the European Union has been proposed to become subject to legal authorization under the REACH regulation.

Tax rate
Income taxes / (Result before taxes – Earnings from associates & joint ventures – interests & realized foreign exchange results on RusVinyl joint venture). The adjustment of the denominator regarding associates and joint ventures is made as these contributions are already net of income taxes.

Underlying
Underlying results are deemed to provide a more comparable indication of Solvay's fundamental performance over the reference periods. They are defined as the IFRS figures adjusted for the "Adjustments" as defined above.

VCM
Vinyl chloride.

Velocity
Total number of shares traded during the year divided by the total number of listed shares, using the Euronext definition.

Velocity adjusted by free float
Velocity adjusted as a function of the percentage of the listed shares held by the public, using the Euronext definition.

WBCSD
World Business Council for Sustainable Development.

WCF
World Class Factory.

SHAREHOLDER'S DIARY

MAY 3, 2017

Publication of the 1st quarter 2017 results

MAY 9, 2017

Annual Shareholders' Meeting

MAY 12, 2017

Final dividend ex-coupon date

MAY 15, 2017

Final dividend record date

MAY 16, 2017

Final dividend payment

AUGUST 1, 2017

Publication of the 2nd quarter and 1st half year 2017 results

NOVEMBER 8, 2017

Publication of the 3rd quarter 2017 results

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