2017 CONSOLIDATED FINANCIAL STATEMENTS AND NOTES

CONSOLIDATION REPORTING GROUP DEPARTMENT

COMPAGNIE DE SAINT-GOBAIN

STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2017

The Statutory Auditors

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STATUTORY AUDITORS' REPORT
ON THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2017

This is a free translation into English of the Statutory Auditors' report on the consolidated financial statements issued in French and is provided solely for the convenience of English-speaking users. This report includes information specifically required by European regulations and French law, such as information about the appointment of Statutory Auditors or verification of the management report. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

Compagnie de Saint-Gobain S.A.
Les Miroirs
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92400 Courbevoie
France

To the Shareholders,

1. Opinion

In compliance with the engagement entrusted to us by your Annual General Meetings, we have audited the accompanying consolidated financial statements of Compagnie de Saint-Gobain for the year ended December 31, 2017.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the Group as of December 31, 2017 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit and Risk Committee.

2. Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the "Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements" section of our report.

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2017 to the date of our report and in particular we did not provide any prohibited non-audit services prohibited by article 5(1) of Regulation (EU) No 537/2014 or the French Code of Ethics (*Code de déontologie*) for Statutory Auditors.

3. Justification of our assessments – Key audit matters

In accordance with the requirements of articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce*) relating to the justification of our assessments, we inform you of the key audit matters relating to the risks of material misstatement that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon. We do not provide a separate opinion on specific items of the consolidated financial statements.

Measurement of provisions for liabilities and litigation

Description of risk

The Group is exposed to various legal risks, including asbestos-related litigation in the United States and Brazil.

As indicated in Note 7 to the consolidated financial statements, provisions amounting to €1,327 million were recognized at December 31, 2017 for contingent liabilities and litigation. Significant contingent liabilities, whose amount or timing cannot be estimated with sufficient reliability, are disclosed in the notes to the consolidated financial statements.

Determining and measuring the provisions recognized for contingent liabilities and litigation and assessing the appropriateness of information provided thereon in the notes to the consolidated financial statements are a key audit matter given the amounts involved, the importance of estimates and the level of judgment required by Management in determining those provisions.

How our audit addressed this risk

To obtain an understanding of contingent liabilities and litigation and the related matters of judgment, we held discussions with Management at Group, Sector and Delegation level as well as at the main subsidiaries. We also contacted the main law firms involved. We reviewed the minutes of the Board of Directors' meetings and the Group's risk mapping prepared by Management and presented to the Audit and Risk Committee.

For each of the main contingent liabilities and items of litigation identified, we:

- familiarized ourselves with the procedures implemented by Management when measuring the corresponding provisions and determining the disclosures thereon in the notes to the consolidated financial statements;
- carried out a critical review of internal analyses relating to the probability and possible impact of each liability and item of litigation, examining the available information relating to the proceedings (correspondence, claims, judgments, notifications, etc.). We also reviewed the legal or technical opinions of the law firms or external specialists chosen by Management. We used our professional judgment, with the help of our own specialists where necessary, to assess the positions adopted by Management, to see where they fell within risk assessment ranges, and the consistency of those positions over time.

To measure the provisions relating to asbestos-related litigation, based on a statistical model, we verified that the consistency principle was complied with and checked the relevance and reliability of the source data and calculation formulas used. Where applicable, we compared the amounts paid with previously recognized provisions in order to form an opinion on the quality of Management's estimates.

We assessed the appropriateness of information provided in the notes to the consolidated financial statements regarding the main items of litigation and contingent liabilities identified.

Measurement of goodwill, intangible assets and property, plant & equipment

Description of risk

The carrying amounts of goodwill, intangible assets and property, plant & equipment were significant at December 31, 2017, amounting to €10,575 million, €2,603 million and €11,590 million, respectively. The assets may be impaired due to internal or external factors, including a decline in Group performance, changes in competition, unfavorable market conditions and changes in legislation or regulations. These changes are likely to have an impact on the Group's forecast cash flow and, consequently, the assets' recoverable amount.

The impairment tests performed by Management using the method described in Note 5.5 to the consolidated financial statements led to the recognition of impairment losses of €237 million in the fiscal year ended December 31, 2017, as indicated in Note 3 to the consolidated financial statements.

Determining the assets' recoverable amount is a key audit matter given the potentially significant nature of impairment, the importance of estimates and the level of judgment required by Management in measuring impairment loss. Management exercises judgment when making assumptions regarding future changes in sales (in both volume and value terms), profitability, investments and the other cash flows required to operate the assets, and when determining an appropriate discount rate to apply to future cash flows.

How our audit addressed this risk

We familiarized ourselves with the procedures implemented by Group Management for impairment testing, verified that the consistency principle had been complied with and tested the effectiveness of the controls performed by Management to ensure the quality and reliability of the impairment testing process and its consistency with budget data and the strategic plan prepared by General Management and presented to the Board of Directors.

We also assessed the consistency and relevance of Management's approach to determine the cash generating units for asset impairment testing. We adapted our audit approach to the risk of impairment loss which varies depending on the cash generating unit.

Our valuation specialists performed an independent analysis of certain key assumptions used by Management for impairment testing, in particular the discount rate and average annual growth rate to infinity of future cash flows, by referring to both external market data and comparable company analyses.

For a selection of cash generating units, we analyzed the consistency of future cash flow projections with regard to past performance, our knowledge of the business, confirmed by interviews with the Heads of the relevant Sectors and Activities and, where available, external market or competition data. We carefully reviewed the calculation of the normalized amount of the terminal cash flows projected until perpetuity. We performed our own sensitivity analyses of certain key variables of the measurement model to assess the materiality of their potential impact on the recoverable amount of the most high-risk assets.

We verified that the information provided in the notes to the consolidated financial statements on the measurement of goodwill, intangible assets and property, plant & equipment, the underlying assumptions and sensitivity analyses was appropriate.

Planned acquisition of a controlling interest in Sika

Description of risk

As indicated in Notes 2.2, 2.4 and 8.4 to the consolidated financial statements, the Saint-Gobain Group announced, on December 8, 2014, its plan to acquire a controlling interest in Sika. The project consists in acquiring, for CHF 2.83 billion, Schenker Winkler Holding AG (SWH), which controls Sika and is currently held by the Burkard family.

The transaction is subject to a favorable outcome for SWH in the case it brought before the Swiss courts against Sika's Board of Directors' decision of April 2015 to restrict SWH's voting rights for certain resolutions at Sika's General Shareholders' Meetings. Saint-Gobain had foreseen the situation by allowing itself the option of extending the term of the purchase agreement with the Burkard family relating to the disposal of SWH shares. Saint-Gobain exercised its rights, extending the agreement several times, with the most recent extension in October 2017 taking its term to June 30, 2018. At this date, Saint-Gobain will once again have the option of extending the term of the agreement until December 31, 2018.

The Group's commitment to acquire SWH shares exposes it to currency risk, which was hedged using financial instruments measured in accordance with IAS 39. Assessing the transaction's likelihood of occurrence, which affects the accounting treatment of the hedging transaction, is a key audit matter, as the Group's Senior Management considers that the acquisition is "highly probable".

How our audit addressed this risk

To obtain a clear understanding of this transaction, including its terms, conditions and likelihood of occurrence, we analyzed the various contracts between the Group and the Burkard family, and contacted the main Group departments involved. We also reviewed the Board of Directors' minutes relating to the planned transaction, court rulings, and the attorneys' opinions on the procedure underway before the Swiss courts.

We also analyzed the currency hedges taken out by the Group in connection with its commitment to acquire the SWH shares and checked the appropriateness of their accounting treatment in accordance with IFRS.

We assessed the appropriateness of information provided in the notes to the consolidated financial statements regarding the planned acquisition and its accounting impact.

Measurement of supplier discounts in the Building Distribution Sector

Description of risk

The Building Distribution Sector accounted for 46% of the Group's sales for fiscal year 2017. The profitability of the Sector's business activities varies depending on supplier discounts received, which lower the cost price of negotiated goods. As indicated in Notes 3.1.2, 3.5.1 and 3.5.2 to the consolidated financial statements, the recognition of supplier discounts specifically affects "Cost of sales" in the consolidated income statement as well as "Inventories" and "Other receivables" in the consolidated balance sheet.

Given the diversity of products and suppliers in the Building Distribution Sector, supplier contracts are numerous, complex and varied. They give rise to several supplier discounts, some of which are subject to volume conditions or targets, granted at various Sector levels (local, regional, national and international). Measuring accrued supplier discounts is a key audit matter as it is complex and requires significant estimates made by Management. Determining the amounts of supplier discounts to be taken into account when measuring inventories for brands in the Building Distribution Sector is also a significant audit matter.

How our audit addressed this risk

We gained an understanding of the process used by the Sales and Finance Departments of the Building Distribution Sector to estimate accrued supplier discounts at the reporting date and performed tests on the effectiveness of the controls performed by Management.

We also assessed, on a multi-year basis, the consistency of the supplier discount rates obtained per brand and country, confirmed by interviews with the Sales and Finance Departments at various levels within the Sector. Using a sample, we remeasured the supplier discounts obtained based on the terms and conditions of the relevant agreements and volumes purchased. We also retrospectively cross-checked cash and credit notes received after the reporting date against the receivables recognized and asked a sample of suppliers to directly confirm the discount amounts due for the fiscal year.

With regard to the accuracy of the supplier discounts taken into account when measuring inventories for brands in the Building Distribution Sector, we verified that the accounting methods were applied consistently across all the brands. Using sampling techniques, we cross-checked the measurement of certain inventory items against supplier invoices, estimating supplier discounts granted subsequently.

We verified that the information provided in the notes to the consolidated financial statements regarding supplier discounts was appropriate.

4. Verification of the information pertaining to the Group presented in the management report

As required by law we have also verified in accordance with professional standards applicable in France the information pertaining to the Group presented in the management report of the Board of Directors.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

5. Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Compagnie de Saint-Gobain by the Annual General Meetings of June 26, 1986 for Petiteau Scacchi and subsequently PricewaterhouseCoopers Audit and June 10, 2004 for KPMG Audit.

As of December 31, 2017, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-second year and the fourteenth year of total uninterrupted engagement, respectively.

6. Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparing consolidated financial statements presenting a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union, and for implementing the internal control procedures it deems necessary for the preparation of consolidated financial statements free of material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless it expects to liquidate the Company or to cease operations.

The Audit and Risk Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems, as well as, where applicable, any internal audit systems, relating to accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

7. Responsibilities of the Statutory Auditors relating to the audit of the consolidated financial statements

Objective and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free of material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As specified in article L.823-10-1 of the French Commercial Code (*Code de commerce*), our audit does not include assurance on the viability or quality of management of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditor exercises professional judgment throughout the audit. He also:

- identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

- obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;

- evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management and the related disclosures in the notes to the consolidated financial statements;

- assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of the audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the Statutory Auditor concludes that a material uncertainty exists, he is required to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or are inadequate, to issue a qualified opinion or a disclaimer of opinion;

- evaluates the overall presentation of the consolidated financial statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;

- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The Statutory Auditor is responsible for the direction, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed on these consolidated financial statements.

Report to the Audit and Risk Committee

We submit a report to the Audit and Risk Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report any significant deficiencies in internal control that we have identified regarding the accounting and financial reporting procedures.

Our report to the Audit and Risk Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements and which constitute the key audit matters that we are required to describe in this report.

We also provide the Audit and Risk Committee with the declaration provided for in article 6 of Regulation (EU) No 537/2014, confirming our independence within the meaning of the rules applicable in France, as defined in particular in articles L.822-10 to L.822-14 of the French Commercial Code (*Code de commerce*) and in the French Code of Ethics for Statutory Auditors (*Code de déontologie*). Where appropriate, we discuss any risks to our independence and the related safeguard measures with the Audit and Risk Committee.

Neuilly-sur-Seine and Paris La Défense, February 22, 2018

The Statutory Auditors

PricewaterhouseCoopers Audit	KPMG Audit *Department of KPMG S.A.*
Edouard Sattler Cécile Saint-Martin	Jean-Paul Thill Bertrand Pruvost

CONTENTS

2017 CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEET

At December 31

(in € millions)	Notes	2017	2016
Assets			
Goodwill	(5)	10,575	10,669
Other intangible assets	(5)	2,603	2,662
Property, plant and equipment	(5)	11,590	11,654
Investments in equity-accounted companies	(6)	379	376
Deferred tax assets	(10)	938	1,188
Other non-current assets	(6)	774	710
Non-current assets		**26,859**	**27,259**
Inventories	(3)	6,041	5,875
Trade accounts receivable	(3)	5,134	4,935
Current tax receivable	(10)	204	445
Other receivables	(3)	1,395	1,515
Cash and cash equivalents	(8)	3,284	3,738
Current assets		**16,058**	**16,508**
Total assets		**42,917**	**43,767**
Equity and liabilities			
Capital stock	(9)	2,214	2,221
Additional paid-in capital and legal reserve	(9)	5,944	6,090
Retained earnings and consolidated net income	(9)	12,167	11,077
Cumulative translation adjustments		(1,756)	(742)
Fair value reserves		22	191
Treasury stock	(9)	(123)	(72)
Shareholders' equity		**18,468**	**18,765**
Minority interests		384	375
Total equity		**18,852**	**19,140**
Non current portion of long-term debt	(8)	7,655	6,959
Provisions for pensions and other employee benefits	(4)	2,927	3,615
Deferred tax liabilities	(10)	427	363
Other non-current liabilities and provisions	(7)	1,053	1,242
Non-current liabilities		**12,062**	**12,179**
Current portion of long-term debt	(8)	1,064	1,835
Current portion of other liabilities and provisions	(7)	412	436
Trade accounts payable	(3)	6,027	5,805
Current tax liabilities	(10)	157	148
Other payables	(3)	3,823	3,636
Short-term debt and bank overdrafts	(8)	520	588
Current liabilities		**12,003**	**12,448**
Total equity and liabilities		**42,917**	**43,767**

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED INCOME STATEMENT

(in € millions)	Notes	2017	2016
Net sales	(3)	40,810	39,093
Cost of sales	(3)	(30,420)	(29,106)
General expenses including research	(3)	(7,395)	(7,200)
Share in net income of core business equity-accounted companies	(6)	33	31
Operating income		**3,028**	**2,818**
Other business income	(3)	121	61
Other business expense	(3)	(638)	(575)
Business income		**2,511**	**2,304**
Borrowing costs, gross		(298)	(376)
Income from cash and cash equivalents		23	27
Borrowing costs, net		(275)	(349)
Other financial income and expense		(173)	(192)
Net financial expense	**(8)**	**(448)**	**(541)**
Share in net income of non-core business equity-accounted companies	(6)	0	5
Income taxes	(10)	(438)	(416)
Net income		**1,625**	**1,352**
Group share of net income		**1,566**	**1,311**
Minority interests		59	41

Earnings per share *(in €)*	Notes	2017	2016
Weighted average number of shares in issue		553,383,836	554,624,285
Earnings per share, Group share	(9)	2.83	2.36
Weighted average number of shares assuming full dilution		556,655,598	557,163,247
Diluted earnings per share, Group share	(9)	2.81	2.35

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF RECOGNIZED INCOME AND EXPENSE

(in € millions)	Notes	2017	2016
Net income		**1,625**	**1,352**
Items that may be subsequently reclassified to profit or loss			
Translation adjustments		(1,048)	(217)
Changes in fair value of financial instruments	(8)	(169)	10
Tax on items that may be subsequently reclassified to profit or loss		59	(3)
Items that will not be reclassified to profit or loss			
Changes in actuarial gains and losses	(4)	465	(366)
Tax on items that will not be reclassified to profit or loss	(10)	(89)	76
Liability method on items that will not be reclassified to profit or loss and other	(10)	(254)	(49)
Income and expense recognized directly in equity		**(1,036)**	**(549)**
Total recognized income and expense for the year		**589**	**803**
Group share		563	766
Minority interests		26	37

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

(in € millions)	Notes	2017	2016
Group share of net income		**1,566**	**1,311**
Minority interests in net income	(a)	59	41
Share in net income of equity-accounted companies, net of dividends received	(6)	(13)	(20)
Depreciation, amortization and impairment of assets	(3)	1,442	1,369
Gains and losses on disposals of assets	(3)	(46)	2
Unrealized gains and losses arising from changes in fair value and share-based payments		16	42
Changes in inventory	(3)	(348)	(173)
Changes in trade accounts receivable and payable, and other accounts receivable and payable	(3)	139	72
Changes in tax receivable and payable	(3)	236	(135)
Changes in deferred taxes and provisions for other liabilities and charges	(4)(7)(10)	(286)	(544)
Net cash from operating activities		**2,765**	**1,965**
Acquisitions of property, plant and equipment [2017: (1,538), 2016: (1,370)] and intangible assets	(5)	(1,722)	(1,521)
Increase (decrease) in amounts due to suppliers of fixed assets	(3)	99	24
Acquisitions of shares in consolidated companies [2017: (553), 2016: (252)], net of cash acquired		(492)	(233)
Acquisitions of other investments	(6)	(84)	(110)
Increase in investment-related liabilities	(7)	17	15
Decrease in investment-related liabilities	(7)	(42)	(9)
Investments		**(2,224)**	**(1,834)**
Disposals of property, plant and equipment and intangible assets	(5)	183	85
Disposals of shares in consolidated companies, net of cash divested		4	49
Disposals of other investments	(6)	1	1
Divestments		**188**	**135**
Increase in loans, deposits and short-term loans	(6)	(183)	(144)
Decrease in loans, deposits and short-term loans	(6)	186	150
Changes in loans, deposits and short-term loans		**3**	**6**
Net cash FROM (used in) investment and divestment activities		**(2,033)**	**(1,693)**
Issues of capital stock	(a)	187	149
(Increase) decrease in treasury stock	(a)	(406)	(418)
Dividends paid	(a)	(693)	(680)
Transactions with shareholders of the parent company		**(912)**	**(949)**
Minority interests' share in capital increases of subsidiaries	(a)	7	2
Acquisitions of minority interests without gain of control	(6)	(4)	0
Disposals of minority interests without loss of control	(6)	25	0
Changes in investment-related liabilities following the exercise of put options of minority shareholders	(7)	(36)	(13)
Dividends paid to minority shareholders of consolidated subsidiaries	(a)	(27)	(31)
Change in dividends payable		(11)	0
Transactions with minority interests		**(46)**	**(42)**
Increase (decrease) in bank overdrafts and other short-term debt		(107)	(138)
Increase in long-term debt	(b)(8)	1,603	1,322
Decrease in long-term debt	(b)(8)	(1,655)	(2,104)
Changes in gross debt		**(159)**	**(920)**
Net cash from (used in) financing activities		**(1,117)**	**(1,911)**
Increase (decrease) in cash and cash equivalents		**(385)**	**(1,639)**
Net effect of exchange rate changes on cash and cash equivalents		(70)	(1)
Net effect of changes in fair value on cash and cash equivalents		1	(2)
Cash and cash equivalents at beginning of year		**3,738**	**5,380**
Cash and cash equivalents at end of year		**3,284**	**3,738**

(a) Please refer to the consolidated statement of changes in equity.

(b) Including bond premiums, prepaid interest and issue costs.

In 2017, income tax paid amounted to €209 million (2016: €460 million) and interest paid net of interest received totaled €308 million (2016: €369 million).

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(number of shares) *(in € millions)*

Issued	Outstanding		Capital stock	Additional paid-in capital and legal reserve	Retained earnings and consolidated net income	Cumulative translation adjustments	Fair value reserves	Treasury stock	Shareholders' equity	Minority interests	Total equity
560,943,439	**558,607,521**	**At January 1, 2016**	**2,244**	**6,341**	**10,805**	**(528)**	**181**	**(87)**	**18,956**	**364**	**19,320**
		Income and expenses recognized directly in equity	0	0	(341)	(214)	10	0	**(545)**	(4)	**(549)**
		Net income for the year			1,311				**1,311**	41	**1,352**
		Total income and expense for the year	**0**	**0**	**970**	**(214)**	**10**	**0**	**766**	**37**	**803**
		Issues of capital stock									
4,653,810	4,653,810	Group Savings Plan	18	118					**136**		**136**
667,197	667,197	Stock option plans	3	10					**13**		**13**
		Other							**0**	2	**2**
		Dividends paid (€1.24 per share)			(680)				**(680)**	(31)	**(711)**
	(12,246,156)	Shares purchased						(468)	**(468)**		**(468)**
	1,706,031	Shares sold			(10)			60	**50**		**50**
(10,984,088)		Shares canceled	(44)	(379)				423	**0**		**0**
		Share-based payments			11				**11**		**11**
		Changes in Group structure			(19)				**(19)**	3	**(16)**
555,280,358	**553,388,403**	**At December 31, 2016**	**2,221**	**6,090**	**11,077**	**(742)**	**191**	**(72)**	**18,765**	**375**	**19,140**
		Income and expenses recognized directly in equity	0	0	180	(1,014)	(169)	0	**(1,003)**	(33)	**(1,036)**
		Net income for the year			1,566				**1,566**	59	**1,625**
		Total income and expense for the year	**0**	**0**	**1,746**	**(1,014)**	**(169)**	**0**	**563**	**26**	**589**
		Issues of capital stock									
4,593,807	4,593,807	Group Savings Plan	18	150					**168**	7	**175**
682,926	682,926	Stock option plans	3	16					**19**		**19**
		Dividends paid in shares							**0**		**0**
		Dividends paid (€1.26 per share)			(693)				**(693)**	(27)	**(720)**
	(9,595,036)	Shares purchased			(15)			(462)	**(477)**		**(477)**
	1,715,619	Shares sold						71	**71**		**71**
(7,000,000)		Shares canceled	(28)	(312)				340	**0**		**0**
		Share-based payments			17				**17**		**17**
		Changes in Group structure and other			35				**35**	3	**38**
553,557,091	**550,785,719**	**At December 31, 2017**	**2,214**	**5,944**	**12,167**	**(1,756)**	**22**	**(123)**	**18,468**	**384**	**18,852**

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

The consolidated financial statements reflect the accounting position of Compagnie de Saint-Gobain and its subsidiaries ("the Group"), as well as the Group's interests in associate companies and joint ventures. They are expressed in euros rounded to the nearest million.

These consolidated financial statements were adopted on February 22, 2018 by the Board of Directors and will be submitted to the Shareholders' Meeting of June 7, 2018 for approval.

Accounting principles and policies are highlighted in red.

NOTE 1 ACCOUNTING PRINCIPLES AND POLICIES

The accounting policies applied are consistent with those used to prepare the financial statements for the year ended December 31, 2016, except for the application of the new standards and interpretations described below. The consolidated financial statements have been prepared using the historical cost convention, except for certain assets and liabilities that have been measured using the fair value model as explained in these notes.

1.1. Standards applied

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) and interpretations adopted for use in the European Union at December 31, 2017. These financial statements have also been prepared in accordance with the IFRS issued by the International Accounting Standards Board (IASB), with the exception of those standards not yet adopted by the European Union, namely IAS 40, "Transfers of Investment Property" amendments, IFRIC 22, "Foreign Currency Transactions and Advance Consideration", IFRIC 23, "Uncertainty over Income Tax Treatments" and the Annual Improvements to IFRS (2014-2016 Cycle). Standards adopted by the European Union may be consulted on the European Commission website, at http://ec.europa.eu/finance/accounting/ias/index_en.htm.

1.1.1. Standards, interpretations and amendments to existing standards applicable for reporting periods beginning on or after January 1, 2017

The standards, interpretations and amendments to published standards applicable for the first time for reporting periods beginning on or after January 1, 2017 do not have a material impact on the consolidated financial statements:

- amendment to IAS 7, "Disclosure Initiative";
- amendment to IAS 12, "Recognition of Deferred Tax Assets for Unrealized Losses".

1.1.2. Standards, interpretations and amendments to existing standards available for early adoption in reporting periods beginning on or after January 1, 2017

The new standards, interpretations and amendments to existing standards applicable to accounting periods starting on or after January 1, 2018 were not early adopted by the Group at December 31, 2017.

- IFRS 9, "Financial Instruments" is applicable as of January 1, 2018 and supersedes IAS 39, "Financial Instruments: Recognition and Measurement". It sets out new principles for recognizing financial instruments and in particular requires entities to apply an impairment model for trade accounts receivable based on expected losses.

  The Group carried out a project to determine the impacts of IFRS 9 on the financial statements of its different entities and to bring its trade accounts receivable impairment policy into line with the impairment rules under the new standard as from January 1, 2018.

  At December 31, 2017, the additional impairment recognized against trade accounts receivable in accordance with IFRS 9 is not material with regard to the trade receivables line.

- IFRS 15," Revenue from Contracts with Customers" supersedes IAS 18 "Revenue" and IAS 11, "Construction Contracts", along with the related interpretations. IFRS 15 is applicable as of January 1, 2018 and sets out new principles for recognizing revenue and for identifying performance obligations contained in contracts.

  Saint-Gobain develops innovative products and solutions for the construction and renovation industries, promoting buildings that are energy efficient, comfortable, healthy and esthetically superior, while at the same time protecting natural resources.

  Owing to the nature of its business activities, Saint-Gobain did not expect IFRS 15 to have a material impact on its financial statements.

  However, it launched an in-depth review which was rolled down to all Group entities with the aim of identifying and quantifying the potential impacts of the standard. This review confirmed that IFRS 15 would not have a material impact on the Group's consolidated financial statements.

- IFRS 16, "Leases" was identified by the Group from the outset as potentially having a material impact on its financial statements, particularly due to the scale of the Building Distribution Sector.

  The Group launched a series of IFRS 16 projects very early on (as soon as the standard was first published at the beginning of 2016), including awareness-raising, training initiatives and technical documentation. Following an impact assessment carried out in 2016, data was compiled on all leases and Group employees were confronted with the issues raised by the standard. This process also helped the Group in its decision to adopt the 'full retrospective' transition method.

  In 2017, a central project team was set up consisting of experienced employees along with external consultants. The project team relies on a network of IFRS 16 officers in the Group's General Delegations and regularly reports on progress to the steering committee, comprising key finance personnel from the Group's Business Sectors.

  In 2017 Saint-Gobain also selected the software it would use in this respect. Training sessions and data preparation workshops were organized, helping to guarantee a smooth transition to IFRS 16 at January 1, 2019.

- Amendments to IFRS 4, "Applying IFRS 9 with IFRS 4".

1.2. Estimates and assumptions

The preparation of consolidated financial statements in compliance with IFRS requires management to make estimates and assumptions that affect the amounts of assets and liabilities reported in the balance sheet and the disclosure of contingent assets and liabilities in the notes to the financial statements, as well as the reported amounts of income and expenses during the period. These estimates and assumptions are based on past experience and on various other factors seen in the prevailing economic and financial environment, which makes it difficult to predict future business performance. Actual amounts may differ from those obtained through the use of these estimates and assumptions.

The main estimates and assumptions described in these notes concern the measurement of employee benefit obligations and share-based payment (Note 4 "Employees, personnel expenses and employee benefit obligations"), asset impairment tests (Note 5 "Intangible assets and property, plant and equipment"), provisions for other liabilities and charges (Note 7 "Other current and non-current liabilities and provisions, contingent liabilities and litigation"), the measurement of financial instruments (Note 8 "Financing and financial instruments"), and taxes (Note 10 "Taxes").

NOTE 2 SCOPE OF CONSOLIDATION

2.1. Accounting principles related to consolidation

The Group's consolidated financial statements include the accounts of Compagnie de Saint-Gobain and of all companies controlled by the Group, as well as those of jointly controlled companies and companies over which the Group exercises significant influence.

2.1.1. Consolidation methods

a) Full consolidation

Companies over which the Group exercises exclusive control, either directly or indirectly, are fully consolidated.

b) Joint arrangements

Joint arrangements that meet the definition of joint ventures are accounted for by the equity method. Balance sheet and income statement items relating to joint arrangements that meet the definition of joint operations are consolidated line-by-line based on the amount actually contributed by the Group.

c) Equity accounting

Companies over which the Group directly or indirectly exercises significant influence are accounted for by the equity method.

The Group's share of the income of equity-accounted companies is shown on two separate lines of the income statement. The income of equity-accounted companies whose main business activity is in keeping with the Group's core operational business is presented in business income under "Share in net income of core business equity-accounted companies" while the income of other equity-accounted companies is shown under "Share in net income of non-core business equity-accounted companies" in pre-tax income.

2.1.2. Business combinations

a) Step acquisitions and partial disposals

When the Group acquires control of an entity in which it already holds an equity interest, the transaction is treated as a step acquisition (an acquisition in stages), as follows: (i) as a disposal of the previously-held interest, with recognition of any resulting gain or loss in the consolidated financial statements, and (ii) as an acquisition of all of the shares, with recognition of the corresponding goodwill on the entire interest (previous and new acquisitions).

When the Group disposes of a portion of an equity interest leading to the loss of control (but retains a minority interest), the transaction is also treated as both a disposal and an acquisition, as follows: (i) as a disposal of the entire interest, with recognition of any resulting gain or loss in the consolidated financial statements, and (ii) as an acquisition of a minority interest, measured at fair value.

b) Potential voting rights and share purchase commitments

Potential voting rights conferred by call options on minority interests are taken into account in determining whether the Group exclusively controls an entity only when the Group has control.

When calculating its percentage interest in controlled companies, the Group considers the impact of cross put and call options on minority interests in the companies concerned. This approach gives rise to the recognition in the financial statements of an investment-related liability, included within other provisions and non-current liabilities, corresponding to the present value of the estimated exercise price of the put option, with a corresponding reduction in minority interests and equity attributable to equity holders of the parent. Any subsequent changes in the fair value of the liability are recognized by adjusting equity.

c) Minority interests

Under IFRS 10, minority interests (referred to as "non-controlling interests" in IFRS 3R) are considered as a shareholder category (single economic entity approach). As a result, changes in minority interests with no loss of control continue to be recorded in the statement of changes in equity and have no impact on the income statement or balance sheet, except for changes in cash and cash equivalents.

2.1.3. Non-current assets and liabilities held for sale – Discontinued operations

Assets and liabilities that are immediately available for sale and for which a sale is highly probable are classified as non-current assets and liabilities held for sale. When several assets are held for sale in a single transaction, they are accounted for as a disposal group, which also includes any liabilities directly associated with those assets. The assets or disposal groups held for sale are measured at the lower of carrying amount and fair value less costs to sell. Depreciation/amortization ceases when non-current assets are classified as held for sale. Non-current assets and liabilities held for sale are presented separately on two lines of the consolidated balance sheet, and income and expenses continue to be recognized in the consolidated income statement on a line-by-line basis. At the end of each reporting period, the value of the assets and liabilities held for sale is reviewed to determine whether any provision adjustments should be recorded due to a change in their fair value less costs to sell.

An operation is classified as discontinued when it represents a separate major line of business for the Group, and when the criteria for classification as an asset held for sale have been met, or when the Group has sold the asset. Discontinued operations are reported on a single line in the Group's income statement. This line shows the after-tax net income from discontinued operations until the date of disposal and the gains or losses net of taxes realized on the disposals of these operations. In addition, cash flows generated by the discontinued operations are reported, by type of operation, on a separate line in the consolidated statement of cash flows for the relevant periods.

2.1.4. Intragroup transactions

All intragroup balances and transactions are eliminated in consolidation.

2.1.5. Translation of the financial statements of foreign companies

The consolidated financial statements are presented in euros, which is Compagnie de Saint-Gobain's functional and presentation currency.

Assets and liabilities of subsidiaries outside the Eurozone are translated into euros at the closing exchange rate, while income and expense items are translated using the average exchange rate for the period, except in the case of significant exchange rate volatility.

The Group's share of any translation gains or losses is included in equity under "Cumulative translation adjustments" until the assets or liabilities and all foreign operations to which they relate are sold or liquidated. In this case, these translation differences are either taken to the income statement, if the transaction results in a loss of control, or recognized directly in the statement of changes in equity, if the change in minority interests does not result in a loss of control.

2.1.6. Foreign currency transactions

Expenses and income from operations in currencies other than the Company's functional currency are translated at the exchange rates prevailing at the transaction date. Assets and liabilities denominated in foreign currencies are translated at the closing rate and any exchange differences are recorded in the income statement. However, exchange differences relating to loans and borrowings between consolidated Group companies are recorded in equity net of tax under "Cumulative translation adjustments", as they are in substance an integral part of the net investment in a foreign subsidiary.

2.2. Changes in Group structure

Significant changes in the Group's structure during 2017 and 2016 are presented below and a list of the main consolidated companies at December 31, 2017 is provided in Note 13 "Principal consolidated companies".

2.2.1. Transactions carried out in 2017

In 2017, Saint-Gobain continued to actively manage its portfolio of businesses, fully in line with its strategy. Various operations were completed in order to strengthen the Group's profile in high added-value businesses and growing markets.

Further, Saint-Gobain is continuing its plan to acquire a controlling interest in Sika, a leading construction chemicals company. The plan consists of the acquisition by Saint-Gobain, for 2.83 billion Swiss francs (an amount fully hedged in euros), of Schenker Winkler Holding AG (SWH) which, at December 31, 2017, held 16.97% of Sika's share capital and 52.92% of its voting rights. After the acquisition, the Saint-Gobain Group will be able to incorporate Sika into its financial statements by global consolidation, with a positive impact on net income from year one.

Completion of this deal is subject to clearance from the competent anti-trust authorities, which were all obtained on December 2, 2015. Further, on August 27, 2015, the Swiss Federal Administrative Court confirmed in last resort the validity of the opt-out clause provided in Sika's bylaws exempting Saint-Gobain from launching a mandatory takeover bid following the acquisition of the SWH shares.

Saint-Gobain and its Board of Directors took note of the ruling handed down by the Cantonal Court of Zug on October 28, 2016, which rejected SWH's demand for cancellation of the resolutions passed by the Annual General Meeting of Sika on April 14, 2015 for which SWH's voting rights had been restricted, and SWH's appeal to the Zug Supreme Court against this decision. Saint-Gobain had anticipated these decisions by being granted the option to extend the term of the purchase agreement with the Burkard family relating to the disposal of SWH shares. Saint-Gobain exercised its rights, extending the agreement several times, with the most recent extension, in October 2017, taking its term to June 30, 2018. As of this date, Saint-Gobain will once again have the option to extend the term of the agreement until December 31, 2018. These successive extensions of the purchase agreement demonstrate the alignment between the Burkard family and Saint-Gobain and their unwavering determination.

With the support of its Board of Directors, Saint-Gobain is determined to successfully complete its plan to acquire a controlling stake in Sika, an industrial project that will create value for all stakeholders. Pending the decision of the Zug Supreme Court, which is expected early 2018, Saint-Gobain is confident that the Swiss justice system will restore SWH's ownership rights.

2.2.2. Transactions carried out in 2016

In 2016, Saint-Gobain continued to actively manage its portfolio of businesses, fully in line with its strategy. Various operations were completed in order to strengthen the Group's profile in high added-value businesses and growing markets.

2.3. Changes in the number of consolidated companies

At December 31, 2017, the number of consolidated companies was as follows:

	France	Outside France	Total
Fully consolidated companies			
At January 1, 2017	**141**	**603**	**744**
Newly consolidated companies	7	59	66
Merged companies	(5)	(18)	(23)
Deconsolidated companies	0	(16)	(16)
Change in consolidation method	0	0	0
At December 31, 2017	**143**	**628**	**771**
Equity-accounted companies and joint arrangements			
At January 1, 2017	**4**	**91**	**95**
Newly consolidated companies	0	7	7
Merged companies	0	(1)	(1)
Deconsolidated companies	0	(2)	(2)
Change in consolidation method	0	0	0
At December 31, 2017	**4**	**95**	**99**
Total at January 1, 2017	**145**	**694**	**839**
Total at December 31, 2017	**147**	**723**	**870**

2.4. Off-balance sheet commitments related to companies within the scope of consolidation

At December 31, 2017, non-cancelable purchase commitments include the commitment on equity holdings in the Sika group totaling €2,369 million.

NOTE 3 INFORMATION CONCERNING THE GROUP'S OPERATING ACTIVITIES

3.1. Income statement items

3.1.1. Revenue recognition

Revenue generated by the sale of goods or services is recognized net of rebates, discounts and sales taxes (i) when the risks and rewards of ownership have been transferred to the customer, or (ii) when the service has been rendered, or (iii) by reference to the stage of completion of the services to be provided.

Construction contracts are accounted for by the Group's companies using the percentage-of-completion method, as explained below. When the outcome of a construction contract can be estimated reliably, contract revenue and costs are recognized as revenue and expenses, respectively, by reference to the stage of completion of the contract activity at the end of the reporting period. When the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized only to the extent of contract costs incurred that it is probable will be recovered. When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognized as an expense immediately.

Construction contract revenues are not material in relation to total consolidated net sales.

3.1.2. Operating income

Operating income is a measure of the performance of the different sectors and has been used by the Group as its key external and internal management indicator for many years. Foreign exchange gains and losses are included in operating income, as are changes in the fair value of financial instruments that do not qualify for hedge accounting when they relate to operating items. The share of income of core business equity-accounted companies is also posted under operating income.

Discounts granted by suppliers to the Building Distribution Sector are included in operating income. Contractual supplier discounts are customary practice in the industrial goods distribution sector. These discounts are mostly calculated by applying a contractually guaranteed rate by product type to volumes purchased. The calculation is made automatically, based on the supplier invoices. Consequently, little judgment is needed when determining the amounts to be recognized in the income statement for these discounts. Other discounts are calculated based on a step mechanism linked to specified targets, whereby the percentage discount increases as the entity achieves the various targets over a given period. In this case, judgment is required based on historical data, past performance and future trends in order to determine the discount to be recognized in the income statement. Such judgment is exercised in a prudent manner and consistently from one period to the next.

3.1.3. Other business income and expense

Other business income and expense mainly include movements in provisions for claims and litigation and environmental matters, disposal gains and losses, asset impairment, restructuring costs incurred upon the disposal or discontinuation of operations and the costs of workforce reduction measures.

Other business income and expense can be analyzed as follows:

(in € millions)	**2017**	**2016**
Restructuring costs[a]	(120)	(144)
Provisions and expenses relating to claims and litigation[b]	(150)	(134)
Other[c]	(67)	(34)
Non-operating income and expense	**(337)**	**(312)**
Impairment of assets and other[d]	(226)	(200)
Other business expense[e]	(75)	(63)
Impairment of assets and other business expenses	**(301)**	**(263)**
Gains on disposals of property, plant and equipment and intangible assets	**121**	**61**
Capital gains and losses on disposals, asset impairment, acquisition fees and contingent consideration	**(180)**	**(202)**
Other business income and expense	**(517)**	**(514)**

(a) Restructuring costs in 2017 mainly consist of retirement benefits totaling €65 million (2016: €76 million).

(b) In both 2017 and 2016, movements in provisions and expenses relating to litigation as detailed and explained in Note 7 “Other current and non-current liabilities and provisions, contingent liabilities and litigation" chiefly concern asbestos-related litigation.

(c) In 2017, the "Other" line mainly relates to the cost of environmental litigation and the June 27, 2017 cyber-attack.

(d) The “Impairment of assets and other business expense” line essentially includes impairment of goodwill and other intangible assets and property, plant and equipment for €237 million in 2017 (2016: €189 million) and acquisition fees and contingent consideration incurred in connection with business combinations, representing net income of €11 million in 2017 (net expense of €11 million in 2016).

(e) Other business expense in both 2017 and 2016 relates primarily to capital losses on assets divested or scrapped.

3.1.4. Business income

Business income includes all income and expenses other than financial income and expense, the Group's share in net income of non-core business equity-accounted companies, and income taxes.

Business income is detailed by type below:

(in € millions)	**2017**	**2016**
Net sales	**40,810**	**39,093**
Personnel expenses:		
Salaries and payroll taxes	(8,150)	(7,819)
Share-based payments[(a)]	(38)	(30)
Pensions and employee benefit obligations[(a)]	(125)	(197)
Depreciation and amortization	(1,206)	(1,180)
Share in net income of core business equity-accounted companies	33	31
Other[(b)]	(28,296)	(27,080)
Operating income	**3,028**	**2,818**
Other business income	121	61
Other business expense	(638)	(575)
Other business income and expense	**(517)**	**(514)**
Business income	**2,511**	**2,304**

(a) Share-based payments (IFRS 2 expense) and details of changes in employee benefit expense are detailed in Note 4 "Employees, personnel expenses and employee benefit obligations".

(b) The "Other" operating income line relates to cost of sales, supplier discounts and selling expenses for the Building Distribution Sector, and to transport costs, raw materials costs, and other production costs for the other sectors. This item also includes research and development costs recorded under operating expenses, amounting to €450 million in 2017 (2016: €440 million).

3.2. Segment information

In accordance with IFRS 8, segment information reflects the Group's internal organization as presented to management. The Group has chosen to present segment information by sector and by business in line with its internal reporting. There were no changes in the presentation of segment information in 2017 compared with prior years.

Segment assets and liabilities include net property, plant and equipment, working capital, goodwill and net other intangible assets, after deducting deferred taxes on brands and land.

Capital expenditure corresponds to acquisitions of property, plant and equipment and does not include the cost of acquiring non-current assets under finance leases.

Segment information is presented by sector and by business as follows:

- Innovative Materials (IM) Sector
  - Flat Glass
  - High-Performance Materials (HPM)
- Construction Products (CP) Sector
  - Interior Solutions: Insulation and Gypsum
  - Exterior Solutions: Industrial Mortars, Pipe and Exterior Products
- Building Distribution Sector

Management uses several different internal indicators to measure operational performance and to make resource allocation decisions. These indicators are based on the data used to prepare the consolidated financial statements and meet financial reporting requirements. Intragroup ("internal") sales are generally carried out on the same terms as sales to external customers and are eliminated in consolidation. The "Other" column includes holding companies and certain corporate support functions (tax, cash management, purchasing, etc.).

Segment information for 2017 and 2016 by sector and by business is as follows:

2017

(in € millions)	Innovative Materials				Construction Products				Building Distribution	Other*	Total
	Flat Glass	High-Performance Materials	Intra-segment elimi-nations	Total	Interior Solutions	Exterior Solutions	Intra-segment elimi-nations	Total			
External sales	5,633	4,588		10,221	6,246	5,527		11,773	18,797	19	**40,810**
Internal sales	39	150	(27)	162	638	307	(94)	851	3	(1,016)	**0**
Net sales	5,672	4,738	(27)	10,383	6,884	5,834	(94)	12,624	18,800	(997)	**40,810**
Operating income	571	715		1,286	652	491		1,143	631	(32)	**3,028**
Business income	580	608		1,188	556	394		950	493	(120)	**2,511**
Share in net income of equity-accounted companies	22	2		24	3	5		8	0	1	**33**
Depreciation and amortization	280	167		447	301	165		466	261	32	**1,206**
Impairment of assets	48	1		49	47	37		84	103	0	**236**
EBITDA	851	882		1,733	953	656		1,609	892	0	**4,234**
Capital expenditure	468	192		660	374	208		582	251	45	**1,538**
Cash flow from operations				1,188				1,015	653	164	**3,020**
Goodwill, net	189	1,602		1,791	3,615	2,399		6,014	2,770	0	**10,575**
Non-amortizable brands	0	0		0	735	89		824	1,191	0	**2,015**
Total segment assets and liabilities				7,389				12,209	7,645	120	**27,363**

* "Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.

2016

(in € millions)	Innovative Materials				Construction Products				Building Distribution	Other*	Total
	Flat Glass	High-Performance Materials	Intra-segment elimi-nations	Total	Interior Solutions	Exterior Solutions	Intra-segment elimi-nations	Total			
External sales	5,338	4,385		9,723	5,978	5,126		11,104	18,245	21	**39,093**
Internal sales	26	122	(14)	134	605	297	(85)	817	3	(954)	**0**
Net sales	5,364	4,507	(14)	9,857	6,583	5,423	(85)	11,921	18,248	(933)	**39,093**
Operating income	490	616		1,106	675	431		1,106	616	(10)	**2,818**
Business income	426	475		901	555	386		941	552	(90)	**2,304**
Share in net income of equity-accounted companies	17	2		19	12	3		15	1	1	**36**
Depreciation and amortization	272	161		433	307	154		461	254	32	**1,180**
Impairment of assets	19	75		94	88	3		91	4		**189**
EBITDA	762	777		1,539	982	585		1,567	870	22	**3,998**
Capital expenditure	375	198		573	337	178		515	245	37	**1,370**
Cash flow from operations				1,031				899	519	300	**2,749**
Goodwill, net	240	1,679		1,919	3,631	2,293		5,924	2,826	0	**10,669**
Non-amortizable brands	0	0		0	749	90		839	1,305	0	**2,144**
Total segment assets and liabilities				7,553				12,225	7,501	659	**27,938**

* "Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.

3.3. Information by geographic area

Segment information for 2017 and 2016 by geographic area is as follows:

2017

(in € millions)	France	Other Western European countries	North America	Emerging countries and Asia	Internal sales	Total
Net sales	10,600	17,611	5,418	9,166	(1,985)	**40,810**
Operating income	331	1,034	611	1,052		**3,028**
Business income	187	865	388	1,071		**2,511**
EBITDA	624	1,398	777	1,435		**4,234**
Capital expenditure	293	431	201	613		**1,538**
Cash flow from operations	397	1,026	554	1,043		**3,020**

2016

(in € millions)	France	Other Western European countries	North America	Emerging countries and Asia	Internal sales	Total
Net sales	10,225	17,292	5,198	8,281	(1,903)	**39,093**
Operating income	301	1,072	544	901		**2,818**
Business income	252	980	249	823		**2,304**
EBITDA	587	1,438	717	1,256		**3,998**
Capital expenditure	262	387	203	518		**1,370**
Cash flow from operations	316	1,060	412	961		**2,749**

3.4. Performance indicators

3.4.1. EBITDA

EBITDA corresponds to operating income plus depreciation and amortization of property, plant and equipment and intangible assets.

EBITDA amounted to €4,234 million in 2017 (2016: €3,998 million), calculated as follows:

(in € millions)	2017	2016
Operating income	3,028	2,818
Depreciation/amortization of property, plant and equipment and intangible assets	1,206	1,180
EBITDA	**4,234**	**3,998**

3.4.2. Return on capital employed

Return on capital employed (ROCE) corresponds to annualized operating income adjusted for changes in the scope of consolidation, expressed as a percentage of total assets at year-end. Total assets include net property, plant and equipment, working capital, net goodwill and other intangible assets, but exclude deferred tax assets arising on non-amortizable brands and land.

3.4.3. Recurring net income

Recurring net income corresponds to income after tax and minority interests but before disposal gains or losses, asset impairment, material non-recurring provisions and the related tax and minority interests.

Recurring net income totaled €1,631 million in 2017 (2016: €1,398 million). Based on the weighted average number of shares outstanding at December 31 (553,383,836 shares in 2017 and 554,624,285 shares in 2016), recurring earnings per share amounted to €2.95 in 2017 and €2.52 in 2016.

The difference between net income and recurring net income corresponds to the following items:

(in € millions)	**2017**	**2016**
Group share of net income	**1,566**	**1,311**
Less:		
Gains and losses on disposals of assets	46	(2)
Impairment of assets and other	(226)	(201)
Changes in provision for anti-trust litigation and other non-recurring provisions	4	(4)
Impact of minority interests	(18)	(1)
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	129	121
Group share of recurring net income	**1,631**	**1,398**

3.4.4. Cash flow from operations

Cash flow from operations corresponds to net cash generated from operating activities before the impact of changes in working capital requirements, changes in current taxes and changes in provisions for pensions and other employee benefit obligations as well as for other liabilities and charges and deferred taxes. Cash flow from operations is adjusted for the effect of material non-recurring provision charges.

Cash flow from operations before tax on disposal gains and losses and non-recurring provisions corresponds to cash flow from operations less the tax effect of asset disposals, asset impairment and non-recurring provisions.

Cash flow from operations totaled €3,020 million in 2017 (€2,749 million in 2016) and cash flow from operations excluding income tax on disposal gains and losses and non-recurring provisions amounted to €2,891 million in the year (€2,628 million in 2016). These amounts are calculated as follows:

(in € millions)	**2017**	**2016**
Group share of net income	**1,566**	**1,311**
Minority interests in net income	59	41
Share in net income of equity-accounted companies, net of dividends received	(13)	(20)
Depreciation, amortization and impairment of assets	1,442	1,369
Gains and losses on disposals of assets	(46)	2
Changes in provision for anti-trust litigation and other non-recurring provisions	(4)	4
Unrealized gains and losses arising from changes in fair value and share-based payments	16	42
Cash flow from operations	**3,020**	**2,749**
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	(129)	(121)
Cash flow from operations before tax on capital gains and losses and non-recurring provisions	**2,891**	**2,628**

3.5. Working capital

3.5.1. Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of inventories includes purchase costs (net of supplier discounts), processing costs and other costs incurred in bringing the inventories to their present location and condition. Cost is generally determined using the weighted-average cost method, and in some cases the First-In-First-Out (FIFO) method. Inventory costs may also include the transfer from equity of any gains/losses on qualifying cash flow hedges of foreign currency purchases of raw materials. Net realizable value is the selling price in the ordinary course of business, less estimated completion and selling costs. No account is taken in the inventory valuation process of the impact of below-normal capacity utilization rates.

As of December 31, 2017 and 2016, inventories were as follows:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Gross value		
Raw materials	1,391	1,327
Work in progress	330	318
Finished goods	4,770	4,678
Gross inventories	**6,491**	**6,323**
Provision for impairment		
Raw materials	(139)	(143)
Work in progress	(12)	(11)
Finished goods	(299)	(294)
Total provision for impairment	**(450)**	**(448)**
Net value	**6,041**	**5,875**

The net value of inventories was €6,041 million at December 31, 2017 compared with €5,875 million at December 31, 2016.

Impairment losses on inventories recorded in the 2017 income statement totaled €207 million (2016: €176 million). Reversals of impairment losses on inventories amounted to €183 million in 2017 (2016: €176 million).

3.5.2. Operating and non-operating receivables and payables

Trade accounts receivable and payable and other receivables and payables are stated at their carrying amount which approximates their fair value as they generally have maturities of less than three months. Provisions for impairment are booked to cover the risk of total or partial non-recovery.

The Group deems that its exposure to concentrations of credit risk is limited due to its diversified business line-up, broad customer base and global presence. Past-due trade receivables are regularly monitored and analyzed, and provisions are set aside when appropriate.

For trade receivables transferred under securitization programs, the contracts concerned are analyzed and if substantially all the risks associated with the receivables are not transferred in substance to the financing institutions, they remain on the balance sheet and a corresponding liability is recognized in short-term debt (further information is provided in Note 8.3.8).

a) Trade and other accounts receivable

Trade and other accounts receivable can be analyzed as follows:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Gross value	5,527	5,361
Provision for impairment	(393)	(426)
Trade accounts receivable	**5,134**	**4,935**
Discounts and advances to suppliers	637	567
Prepaid payroll taxes	25	24
Other prepaid and recoverable taxes (other than income tax)	372	348
Miscellaneous operating receivables	250	248
Other non-operating receivables and provisions	117	339
Provision for impairment of other operating receivables	(6)	(11)
Other receivables	**1,395**	**1,515**

Movements in impairment provisions for trade accounts receivable in 2017 primarily reflect €98 million in additions (2016: €84 million) and €111 million in reversals (2016: €98 million), resulting from recoveries as well as write-offs. Bad debt write-offs are also reported under this caption for €78 million (2016: €69 million).

Trade accounts receivable at December 31, 2017 are analyzed below by maturity:

(in € millions)	Gross value	Impairment	Net value
Trade accounts receivable not yet due	**4,318**	**(30)**	**4,288**
Trade account receivables past due			
Less than 1 month	478	(12)	466
1-3 months	201	(21)	180
More than 3 months	530	(330)	200
Trade accounts receivable past due	**1,209**	**(363)**	**846**
Trade accounts receivable	**5,527**	**(393)**	**5,134**

b) Trade and other accounts payable

Trade and other accounts payable and accrued expenses can be analyzed as follows:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Trade accounts payable	**6,027**	**5,805**
Customer deposits	1,133	1,056
Payables to suppliers of non-current assets	367	277
Grants received	78	88
Accrued personnel expenses	1,231	1,178
Accrued taxes (other than on income)	423	416
Other operating payables	499	521
Other non-operating payables	92	100
Other payables	**3,823**	**3,636**

3.5.3. Changes in working capital requirement

Changes in working capital requirement can be analyzed as follows:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Inventories, net	**6,041**	**5,875**
Trade accounts receivable, net	**5,134**	**4,935**
Other operating receivables	1,278	1,176
Other non-operating receivables	117	339
Other receivables	**1,395**	**1,515**
Current tax receivable	**204**	**445**
Trade accounts payable	**6,027**	**5,805**
Other operating payables	3,286	3,171
Other non-operating payables	537	465
Other payables	**3,823**	**3,636**
Current tax liabilities	**157**	**148**
Operating working capital requirements	3,140	3,010
Non-operating working capital requirements (including current tax receivables and liabilities)	(373)	171
Working capital requirements	**2,767**	**3,181**

3.6. Off-balance sheet commitments related to operating activities

3.6.1. Obligations under finance leases

Non-current assets acquired under finance leases are recognized as an asset and a liability in the balance sheet (see Note 5.4 for further information).

Future payment commitments under finance leases are as follows:

(in € millions)	2017	2016
Future minimum lease payments		
Due within 1 year	19	17
Due in 1 to 5 years	43	40
Due beyond 5 years	17	12
Total future minimum lease payments	**79**	**69**
Less finance charge	(13)	(10)
Present value of future minimum lease payments	**66**	**59**

At December 31, 2017, future finance lease payment commitments represented €56 million under equipment and machinery leases and €23 million under leases of land and buildings.

3.6.2. Obligations under operating leases

The Group leases equipment, vehicles, offices, warehouses and production or sales premises. Lease terms generally range from one to nine years. The liability for total future minimum payments over the lease terms is discounted. The leases contain rollover options for varying periods of time and some include clauses covering the payment of real estate taxes and insurance. In most cases, management expects that these leases will be rolled over or replaced by other leases in the normal course of business.

In 2017, rental expenses amounted to €870 million, including €569 million for land and buildings, and revenue from subleases represented €19 million. Net rental expense was €851 million.

Payments due under non-cancelable operating leases are as follows:

	Total 2017	Payments due by period			Total 2016
(in € millions)		Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	
Rental expense	3,209	727	1,572	910	3,185
Subletting revenue	(81)	(17)	(29)	(35)	(76)
Total	**3,128**	**710**	**1,543**	**875**	**3,109**

3.6.3. Non-cancelable purchase commitments

Non-cancelable purchase commitments include contractual commitments to purchase raw materials and services along with firm orders for property, plant and equipment and intangible assets.

	Total 2017	Payments due by period			Total 2016
(in € millions)		Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	
Property, plant and equipment and intangible assets	48	45	3	0	49
Commodities and energy	1,308	354	669	285	1,080
Services	157	63	81	13	184
Total	**1,513**	**462**	**753**	**298**	**1,313**

3.6.4. Guarantee commitments

In some cases, the Group grants seller's warranties to the buyers of divested businesses. A provision is set aside whenever a risk is identified and the related cost can be estimated reliably.

The Group also receives guarantees, amounting to €78 million at December 31, 2017 (December 31, 2016: €93 million).

3.6.5. Commercial commitments

	Total 2017	Commitment amounts by period			Total 2016
(in € millions)		Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	
Security for borrowings	39	17	12	10	41
Other commitments given	237	88	120	29	214
Total	**276**	**105**	**132**	**39**	**255**

Guarantees given to the Group in respect of receivables totaled €104 million at December 31, 2017 (December 31, 2016: €105 million).

At December 31, 2017, pledged assets represented €330 million (December 31, 2016: €343 million). This change is primarily due to a decrease in pledges of property, plant and equipment in Brazil.

3.6.6. Other commitments

A provision for greenhouse gas emissions allowances is recorded in the consolidated financial statements to cover any shortage between the Group's emissions and the allowances granted.

Greenhouse gas emissions allowances allocated to the Group's companies in 2017 represented approximately 3.2 million metric tons of CO_2. The new 2018 allowances will be added to the residual inventory of prior allocations and will cover the level of greenhouse gas emissions for the year. As a result, no provision has been recorded in this respect in the Group's financial statements.

NOTE 4 EMPLOYEES, PERSONNEL EXPENSES AND EMPLOYEE BENEFIT OBLIGATIONS

4.1. Employees of fully consolidated companies

	2017	2016
Managerial-grade employees	28,991	27,677
Administrative employees	75,664	74,202
Other employees	71,795	70,184
Total average number of employees	**176,450**	**172,063**

The total number of Group employees for fully consolidated companies was 179,149 at December 31, 2017 and 172,696 at December 31, 2016.

4.2. Management compensation

Direct and indirect compensation and benefits paid to members of the Board of Directors and the Group's senior management were as follows in 2017 and 2016:

(in € millions)	2017	2016
Attendance fees	1.1	1.1
Direct and indirect compensation (gross)		
Fixed portion	8.6	8.9
Variable portion	5.8	4.4
Estimated cost of pensions and other employee benefit obligations (IAS 19)	3.2	3.4
Share-based payment expense (IFRS 2)	11.1	8.5
Termination, retirement and other benefits	0.1	0.0
Total	**29.9**	**26.3**

Total gross compensation and benefits paid in 2017 to Saint-Gobain management by the French and foreign companies in the Group (excluding any long-term cash settled compensation) amounted to €14.5 million (2016: €13.3 million), including €5.8 million in gross variable compensation (2016: €4.4 million) and €0.1 million in termination benefits (2016: nil).

Provisions for pensions and other post-employment benefits (defined benefit obligations [DBO] in respect of length-of-service awards and pensions) accruing to Group management totaled €46.6 million at December 31, 2017 (December 31, 2016: €47.0 million).

4.3. Provisions for pensions and other employee benefits

4.3.1. Description of defined benefit plans

After retirement, the Group's former employees are eligible for pension benefits in accordance with the applicable laws and regulations in the respective countries in which the Group operates. There are also additional pension obligations in certain Group companies, both in France and in other countries.

The Group's obligation for the payment of pensions and length-of-service awards is determined at the end of the reporting period by independent actuaries using the projected unit credit method, taking into account changes in salaries until retirement and the economic conditions in each country. These obligations may be financed by pension funds, with a provision recognized in the balance sheet for the unfunded portion.

When plan assets exceed the defined benefit obligation, the excess is recognized in other non-current assets under "net pension assets". These assets are capped at the level of future economic benefits they provide. Changes in the asset ceiling are recognized in equity.

Actuarial gains and losses result from changes in actuarial assumptions, experience adjustments and the difference between the funds' actual and estimated (calculated) rates of return. They are recognized against equity as and when they arise.

The interest cost of these obligations and the return on the related plan assets are measured by the Group using the discount rate applied to estimate the obligation at the beginning of the period, and are recognized as financial income or expense.

The Group's main defined benefit plans are as follows:

In France, employees receive length-of-service awards on retirement based on years of service and the calculation methods prescribed in the applicable collective bargaining agreements.

In addition to length-of-service awards, there are three defined benefit plans, all of which are final salary plans. These plans were closed to new entrants by the companies concerned between 1969 and 1997. Effective March 1, 2012, a defined benefit plan complying with Article L.137-11 of France's Social Security Code (*Code de la sécurité sociale*) was set up by Compagnie de Saint-Gobain.

In Germany, retirement plans provide pensions and death and disability benefits for employees. These plans have been closed to new entrants since 1996. Since January 1997, new employees have been offered pension plans based on contributions financed jointly by employer and employee.

In the Netherlands, ceilings have been introduced for defined benefit supplementary pension plans, above which they are converted into defined contribution plans.

In the United Kingdom, retirement plans provide pensions as well as death and permanent disability benefits. These defined benefit plans – which are based on employees' average salaries over their final years of employment – have been closed to new entrants since 2001.

In the United States and Canada, the Group's defined benefit plans are final salary plans. Since January 1, 2001, new employees have been offered a defined contribution plan.

In the United States and Spain, retired employees receive benefits other than pensions, mainly concerning healthcare benefits. The Group's obligation under these plans is determined using the actuarial method and is covered by a provision recorded in the balance sheet.

Provisions for other long-term employee benefits cover all other employee benefits. These benefits primarily include long-service awards in France, jubilee awards in Germany, deferred compensation, provisions for social security benefits in the United States, and termination benefits in different countries. The related defined benefit obligation is generally calculated on an actuarial basis using the same rules as for pension obligations. Actuarial gains and losses relating to these benefits are recognized immediately in income statement.

4.3.2. Actuarial assumptions used to measure defined benefit obligations and plan assets

4.3.2.1. Interest rate assumptions

Assumptions related to mortality, employee turnover and future salary increases take into account the economic conditions specific to each country and Group company.

The discount rates are established by region or country based on observed bond rates at December 31, 2017.

The rates used in 2017 for the Group's main plans are the following:

(in %)	France	Eurozone	United Kingdom	United States
Discount rate	1.70%	1.70%	2.45%	3.60%
Salary increases	2.50%	1.50% to 2.40%	2.00%*	3.00%
Inflation rate	1.50%	1.40% to 1.80%	2.30%	2.50%

* A cap applies to the reference salaries used to calculate benefit entitlements.

The rates used in 2016 for the Group's main plans are the following:

(in %)	France	Eurozone	United Kingdom	United States
Discount rate	1.80%	1.80%	2.60%	4.10%
Salary increases	2.50%	1.40% to 2.40%	2.00%*	3.00%
Inflation rate	1.50%	1.40% to 1.55%	2.35%	2.50%

* A cap applies to the reference salaries used to calculate benefit entitlements.

4.3.2.2. Sensitivity of assumptions

A 0.5-point decrease (increase) in the discount rate would lead to an increase (decrease) in defined benefit obligations of around €190 million for the US plans, €215 million for the Eurozone plans and €475 million for the UK plans. A 0.5-point increase in the inflation rate would lead to an overall increase in defined benefit obligations of around €610 million.

The same assumptions concerning mortality, employee turnover and interest rates are used to determine the Group’s defined benefit obligations for other long-term employee benefits. In the United States, retirees’ healthcare costs are projected to rise by 7.02% or 7.44% per year, depending on the age of the beneficiary (a 1-point increase in this rate would lead to an increase of around €35 million in the related projected benefit obligation).

4.3.3. Breakdown of and changes in pension and other post-employment benefit obligations

4.3.3.1. Net book value of provisions

Provisions for pensions and other employee benefit obligations consist of the following:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Pension commitments	2,076	2,673
Length-of-service awards	361	355
Post-employment healthcare benefits	350	435
Total provisions for pensions and other post-employment benefit obligations	**2,787**	**3,463**
Healthcare benefits	25	27
Long-term disability benefits	15	20
Other long-term benefits	100	105
Provisions for pensions and other employee benefits	**2,927**	**3,615**

Provisions for all other long-term benefits totaled €140 million at December 31, 2017 (€152 million at December 31, 2016).

The following table shows net obligations under pension and other post-employment benefit plans and the related plan assets:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Provisions for pensions and other post-employment benefit obligations - liabilities	2,787	3,463
Pension plan surpluses - assets	(161)	(41)
Net pension and other post-employment benefit obligations	**2,626**	**3,422**

4.3.3.2. Analysis of obligations

At December 31, 2017, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region as follows:

Dec. 31, 2017 *(in € millions)*	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
Average duration *(in years)*	16	17	18	13	15	16
Defined benefit obligations - funded plans	685	1,750	5,018	2,662	866	10,981
Defined benefit obligations - unfunded plans	297	116	0	315	188	916
Fair value of plan assets	(261)	(741)	(4,899)	(2,535)	(838)	(9,274)
Deficit/(surplus)	**721**	**1,125**	**119**	**442**	**216**	**2,623**
Asset ceiling					3	3
Net pension and other post-employment benefit obligations	**721**	**1,125**	**119**	**442**	**219**	**2,626**

At December 31, 2016, pension obligations and provisions for other post-employment benefit obligations by major geographic region were as follows:

Dec. 31, 2016 *(in € millions)*	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
Average duration *(in years)*	16	16	19	13	15	16
Defined benefit obligations - funded plans	563	1,781	5,278	2,975	937	11,534
Defined benefit obligations - unfunded plans	402	126		402	200	1,130
Fair value of plan assets	(256)	(829)	(4,814)	(2,519)	(828)	(9,246)
Deficit/(surplus)	**709**	**1,078**	**464**	**858**	**309**	**3,418**
Asset					4	4
Net pension and other post-employment benefit obligations	**709**	**1,078**	**464**	**858**	**313**	**3,422**

4.3.3.3. Changes in provisions

Changes in pension and other post-employment benefit obligations are as follows:

(in € millions)	Pension obligations	Fair value of plan assets	Asset ceiling	Net pension and other post-employment benefit obligations
At January 1, 2016	**11,770**	**(8,136)**	**6**	**3,640**
Changes during the year				
Service cost	189			189
Interest cost/return on plan assets as per calculations	382	(278)		104
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(12)			(12)
Plan curtailments/settlements	(53)	51		(2)
Pension contributions		(732)		(732)
Benefit payments	(491)	399		(92)
Actuarial gains and losses and asset ceiling	1,474	(1,106)	(2)	366
Currency translation adjustments	(599)	558		(41)
Changes in Group structure and reclassifications	4	(1)		3
Total changes	**894**	**(1,110)**	**(2)**	**(218)**
At December 31, 2016	**12,664**	**(9,246)**	**4**	**3,422**
Changes during the year				
Service cost	210			210
Interest cost/return on plan assets as per calculations	324	(247)		77
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(89)			(89)
Plan curtailments/settlements	(67)	48		(19)
Pension contributions		(306)		(306)
Benefit payments	(626)	530		(96)
Actuarial gains and losses and asset ceiling	109	(573)	(1)	(465)
Currency translation adjustments	(674)	564		(110)
Changes in Group structure and reclassifications	46	(43)		3
Total changes	**(767)**	**(28)**	**(1)**	**(796)**
At December 31, 2017	**11,897**	**(9,274)**	**3**	**2,626**

In the United States, plan amendments led to a reduction of around USD 100 million (€88 million) in pension obligations, recognized within “Past service cost”.

4.3.3.4. Actuarial gains and losses

Actuarial gains and losses on provisions result from the following items:

(in € millions)	**2017**	**2016**
Pension obligations	109	1,474
Fair value of plan assets	(573)	(1,106)
Asset ceiling	(1)	(2)
Total movements	**(465)**	**366**

4.3.3.5. Plan assets

Plan assets have been progressively built up by contributions, primarily in the United Kingdom and the United States. Contributions paid by the Group into these plans in 2017 totaled €306 million (2016: €732 million), including €182 million (2016: €578 million) paid in the United States in September 2017.

Actual market returns generated an increase of €820 million in plan assets, compared with an increase of €1,384 million in 2016. This actual return is €573 million higher than the estimated return of €247 million calculated using the discount rate.

A 0.5-point increase or decrease in the actual return on plan assets would have an impact of approximately €46 million on equity.

Plan assets mainly comprise:

(in %)	Dec. 31, 2017	Dec. 31, 2016
Equities	29%	27%
Bonds	48%	55%
Other	23%	18%
Total	**100%**	**100%**

Contributions to pension plans for 2018 are estimated at around €110 million.

4.3.3.6. Employee benefit expense

The cost of the Group's pension and other post-employment benefit plans (excluding other employee benefits) is as follows:

(in € millions)	2017	2016
Service cost	210	189
Interest cost	324	382
Return on plan assets	(247)	(278)
Past service cost, plan curtailments and settlements	(108)	(14)
Employee contributions and plan administration costs	(1)	(1)
Pensions, length-of-service awards and other post-employment benefits	**178**	**278**

4.3.4. Defined contribution plans

Contributions to defined contribution plans are expensed as incurred.

Contributions to defined contribution plans for 2017 represented an estimated €644 million (2016: €628 million), including €434 million for government-sponsored basic pension schemes (2016: €418 million), €131 million for government-sponsored supplementary pension schemes, mainly in France (2016: €131 million), and €79 million for corporate-sponsored supplementary pension plans (2016: €79 million).

4.4. Share-based payments

4.4.1. Group Savings Plan

The Group Savings Plan (*Plan Epargne Groupe*) is an employee stock purchase plan open to all Group employees in France and most other countries where the Group is present. Eligible employees must have completed a minimum of three months' service within the Group. Eligible employees are able to invest in Saint-Gobain shares at a preferential subscription price. These shares are held either directly or through the employee saving plan's mutual funds, depending on local legislation, and are subject to a mandatory five- or ten-year lock-up, except following the occurrence of certain events. The Board of Directors delegates authorization for setting the subscription price to the Chief Executive Officer of Compagnie de Saint-Gobain. It corresponds to the average of the opening prices for the Saint-Gobain share on Euronext Paris over the 20 trading days preceding the date of the decision, subject to a 20% discount, in accordance with applicable laws, the Shareholders' Meeting resolutions and the deliberations of the Board of Directors.

The compensation cost recorded in accordance with IFRS 2 is measured by reference to the fair value of a discount offered on restricted stock (i.e., stock subject to a lock-up). The cost of the lock-up for the employee is defined as the cost of a two-step strategy that involves first selling the restricted stock forward five or ten years and then purchasing the same number of shares on the spot market and financing the purchase with debt. The borrowing cost is estimated at the rate that would be charged by a bank to an individual with an average risk profile for a general-purpose, five- or ten-year consumer loan repayable at maturity. The cost of the plans is recognized in full at the end of the subscription period.

In 2017, 4,593,807 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €36.72 (2016: 4,653,810 shares at an average price of €29.42), representing a share capital increase of €168 million (€136 million in 2016), net of transaction fees.

No amount was expensed in respect of the plans in 2017 or 2016 owing to the lock-in cost.

The following table shows the main features of the standard plans, the amounts invested in the plans and the valuation assumptions applied in 2017 and 2016:

	2017	2016
Plan characteristics		
Date of Shareholders' Meeting	June 4, 2015 (17th Resolution)	June 4, 2015 (17th Resolution)
Date of the Chief Executive Officer's decision fixing the subscription price	March 20	March 21
Plan duration (in years)	5 or 10	5 or 10
Reference price (in €)	45.89	36.77
Subscription price (in €)	36.72	29.42
Discount (in %)	20.00%	20.00%
Total discount on the date of the Chief Executive Officer's decision (in %) **(a)**	21.25%	21.94%
Employee investments (in € millions)	168.7	136.9
Total number of shares subscribed	4,593,807	4,653,810
Valuation assumptions (5-year maturity)		
Interest rate applicable to employees*	4.80%	5.00%
Risk-free interest rate	0.19%	-0.15%
Repo rate	0.47%	0.50%
Lock-up discount (in %) **(b)**	21.17%	22.92%
Total cost to the Group (in %) **(a-b)**	0.08%	-0.98%

*A 0.5-point decline in borrowing costs for the employee would have no material impact on the 2017 share-based payment expense as calculated in accordance with IFRS 2.

4.4.2. Stock option plans

Compagnie de Saint-Gobain has stock option plans available to certain employees.

The Board of Directors grants options allowing beneficiaries to obtain Saint-Gobain shares at a price set, at no discount, by reference to the average of the opening prices for the Saint-Gobain share over the 20 stock market trading days preceding the date of the decision by the Board of Directors.

For all of the plans, options may only be exercised after four years of the grant date. During this period, none of the options received may be exercised. Options must be exercised within 10 years of the grant date. Except in specified circumstances, grantees forfeit these options if they leave the Group.

Among the plans outstanding at December 31, 2017, plans launched between 2008 and 2012 offer subscription options, while the 2013 plan offers purchase options. For plans launched between 2014 and 2017, the Board of Directors has decided that it would determine the type of option (subscription or purchase) at the latest on the day before the start of the exercise period, with any options exercised prior to such decision considered as subscription options.

Until 2008, options were subject to a performance condition for certain grantees only. A performance condition applies for all grantees in plans awarded since 2009.

For options granted under the 2017 plan, the value used to calculate the 30% *contribution sociale* tax due by grantees employed by French companies in the Group is €5.06 per option granted.

The following table presents changes in the number of outstanding options:

	€4 par value shares	Average exercise price (in €)
Options outstanding at December 31, 2015	**11,601,857**	**48.69**
Options granted	280,000	40.43
Options exercised	(450,082)	27.50
Options forfeited	(4,509,448)	51.40
Options outstanding at December 31, 2016	**6,922,327**	**47.97**
Options granted	284,500	49.38
Options exercised	(689,997)	28.39
Options forfeited*	(3,501,207)	63.99
Options outstanding at December 31, 2017	**3,015,623**	**33.97**

* Including 3,403,160 subscription options granted under the 2007 plan that had not been exercised when the plan expired, and 98,047 purchase options granted under the 2013 plan that had lapsed because the performance condition had only been partly met.

The cost of stock option plans is calculated using the Black & Scholes option pricing model.

The following inputs were used:

- volatility assumptions that take into account the historical volatility of the share price over a rolling 10-year period, as well as implied volatility from traded share options. Periods of extreme share price volatility are disregarded;
- assumptions relating to the average holding period of options, based on observed behavior of option holders;
- expected dividends, as estimated on the basis of historical dividend information dating back to 1988;
- a risk-free interest rate corresponding to the yield on long-term government bonds;
- the effect of any stock market performance conditions, which is taken into account in the initial measurement of IFRS 2 share-based payment expense.

The cost calculated using this method is recognized in the income statement over the vesting period of the options, which is four years.

Stock option expense recorded in the income statement amounted to €1 million in both 2017 and 2016. The fair value of options granted in 2017 amounted to €1 million.

The table below summarizes information about stock options outstanding at December 31, 2017, after taking into account partial fulfillment of the performance criteria attached to certain plans:

	Exercisable options			Non-exercisable options		Total options outstanding	
Grant date	**Exercise price** (in €)	**Number of options**	**Weighted average contractual life** (in months)	**Exercise price** (in €)	**Number of options**	**Number of options**	**Type of options**
2008	25.88	1,185,015	11			1,185,015	Subscription
2009	36.34	654,514	23			654,514	Subscription
2010	35.19	0	35			0	Subscription
2011	31.22	0	47			0	Subscription
2012	27.71	19,962	59			19,962	Subscription
2013	38.80	132,132	71			132,132	Purchase
2014			83	34.13	234,550	234,550	Subscription or purchase*
2015			95	39.47	224,950	224,950	Subscription or purchase*
2016			107	40.43	280,000	280,000	Subscription or purchase*
2017			119	49.38	284,500	284,500	Subscription or purchase*
Total		**1,991,623**			**1,024,000**	**3,015,623**	

* 2014, 2015, 2016 and 2017 plans: see above.

For subscription options, the sum received by the Company when options are exercised is recorded in “Capital stock” for the portion representing the par value of the shares, with the balance – net of directly attributable transaction costs – recorded under “Additional paid-in capital”.

At December 31, 2017, 1,991,623 stock options were exercisable (at an average exercise price of €30.19) and 1,024,000 options (with an average exercise price of €41.26) had not yet vested.

4.4.3. Performance shares and performance unit grants

The Group set up a worldwide share grant plan in 2009 whereby each Group employee was awarded seven shares. This plan ended in the first half of 2014. Since 2009, performance share plans have also been set up for certain categories of employees. These plans are subject to eligibility criteria based on the grantee’s period of service (service conditions) with the Group as well as performance criteria (performance conditions), which are described below. The IFRS 2 share-based payment expense takes into account these criteria as well as the lock-up feature. It is determined after deducting the present value of forfeited dividends on the performance shares and are recognized over the vesting period, which ranges from two to four years depending on the country.

Since 2012, performance unit plans have been set up for certain employees in France. These plans are also subject to service and performance conditions. The IFRS 2 share-based payment expense therefore takes into account these factors, as well as the fact that the units are cash-settled. IFRS 2 stipulates that for cash-settled share-based payment transactions, the granted instruments are initially measured at fair value at the grant date, then remeasured at the end of each reporting period, with the expense adjusted accordingly pro rata to the rights that have vested at the reporting date. The expense is recognized over the vesting period of the rights.

a) Performance share plans

Various performance share plans have been set up by Saint-Gobain since 2009.

Four performance share plans were outstanding at December 31, 2017. The plans approved by the Board of Directors in 2014 and 2015 solely concern certain managerial-grade employees and senior managers of the Group outside France. The plans approved by the Board of Directors in 2016 and on November 23, 2017 concern managerial-grade employees and senior managers of the Group both within and outside France.

All plans are subject to service and performance conditions. The vesting period for the plans is four years and the shares will be delivered the day after the end of the vesting period.

The table below shows changes in the number of performance share rights:

	Number of rights
Number of performance share rights at December 31, 2015	**2,351,881**
Performance share rights granted in November 2016	1,231,320
Shares issued/delivered	(583,220)
Lapsed and canceled rights	(196,856)
Number of performance share rights at December 31, 2016	**2,803,125**
Performance share rights granted in November 2017	1,226,680
Shares issued/delivered*	(458,795)
Lapsed and canceled rights	(83,570)
Number of performance share rights at December 31, 2017	**3,487,440**

* Including 457,535 existing shares delivered under the 2013 plan, and 1,260 existing shares delivered in advance under the 2014, 2015 and 2016 plans.

The fair value of the performance shares corresponds to the Saint-Gobain share price on the grant date less the value of dividends not payable on the shares during the vesting period and, as for the Group Savings Plan, minus the discount on restricted stock (i.e., stock subject to a four-year lock-up), which has been estimated at around 30% of the share price. The share-based payment expense is recognized over the two- or four-year vesting period of the performance shares.

The expense recorded in the income statement in 2017 for these plans amounted to €16 million (2016: €10 million).

The following table shows the expected dates when shares under the four performance share plans outstanding at December 31, 2017 will be delivered (except in the case of early release following the grantee's death or disability), along with the service and performance conditions remaining to be fulfilled:

Grant date	Number of rights at December 31, 2017*	End of vesting and lock-up period	Type of shares
November 20, 2014	529,340	November 20, 2018	existing
November 26, 2015	500,510	November 26, 2019	existing
November 24, 2016	1,230,910	November 24, 2020	existing
November 23, 2017	1,226,680	November 23, 2021	existing
Total	**3,487,440**		

* Subject to fulfillment of the service and performance conditions applicable to each plan.

b) Performance unit plans

Performance unit plans subject to service and performance conditions were set up every year between 2012 and 2015 for certain management-grade employees and senior managers of the Group in France. These plans do not give rise to the delivery of shares but entitle grantees to receive cash compensation deferred over the long term (exercise period between four and ten years after the grant date), the amount of which will be determined by reference to the Company's share price.

No long-term payment plan in the form of performance units was set up in 2017 or 2016, since all beneficiaries received rights to performance shares.

In 2017, 490,914 performance units under the 2013 plan vested, while 79,871 performance units under the same plan lapsed, including 61,645 because the related performance condition was only partly met.

The table below shows historical data for the performance unit plans in the process of vesting at December 31, 2017:

Grant date	Number of performance units granted at inception of plan	Exercised early	Number of performance units at December 31, 2017*
November 20, 2014	598,400	1,550	596,850
November 26, 2015	556,340		556,340
Total	**1,154,740**	**1,550**	**1,153,190**

* Subject to fulfillment of the service and performance conditions applicable to each plan.

The expense recorded in the income statement in 2017 for these plans amounted to €21 million (2016: €20 million).

NOTE 5 INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT

5.1. Goodwill

When an entity is acquired by the Group, its identifiable assets and assumed liabilities are recognized at their fair value within a 12-month measurement period and retroactively at the acquisition date.

The final acquisition price ("consideration transferred" in IFRS 3R), including, as appropriate, the estimated fair value of any earn-out payments or other deferred consideration ("contingent consideration" in IFRS 3R), is determined in the 12 months following the acquisition. Under IFRS 3R, any adjustments to the acquisition price beyond this 12-month period are recorded in the income statement. All costs directly attributable to the acquisition, i.e., costs that the acquirer incurs to effect a business combination, such as professional fees paid to investment banks, attorneys, auditors, independent appraisers and other consultants, are no longer capitalized as part of the cost of the business combination. They are therefore expensed as incurred and are no longer included in the cost of acquisition.

In addition, goodwill is recognized only at the date that control is achieved. Any subsequent increase in ownership interest (without change of control) is recorded as a change in equity without adjusting goodwill.

Goodwill is recorded in the consolidated balance sheet as the difference between (i) the acquisition-date fair value plus the amount of any minority interests in the acquisition – measured either at fair value (full goodwill method) or at the proportionate interest in the fair value of the net identifiable assets acquired (partial goodwill method) – and (ii) the net amount of assets and liabilities acquired at their fair value at the acquisition date. The Group generally applies the partial goodwill method and the amount of goodwill calculated under the full goodwill method is not therefore material.

Any excess of the cost of an acquisition over the fair value of the Group's share of the assets and liabilities of the acquired entity is recorded as goodwill. Any negative difference between the cost of the acquisition and the fair value of the net assets and liabilities acquired is recognized in the income statement during the year of acquisition.

Changes in goodwill in 2017 and 2016 are detailed below:

(in € millions)	**2017**	**2016**
At January 1		
Gross value	12,160	12,180
Accumulated impairment	(1,491)	(1,497)
Net value	**10,669**	**10,683**
Changes during the year		
Impairment	(70)	(13)
Translation adjustments	(497)	(189)
Changes in Group structure	473	188
Total changes	**(94)**	**(14)**
At December 31		
Gross value	12,023	12,160
Accumulated impairment	(1,448)	(1,491)
Net value	**10,575**	**10,669**

In 2017, changes in Group structure related mainly to newly consolidated companies in the Construction Products Sector representing €474 million. Impairment tests performed in 2017 led to the recognition of goodwill impairment, primarily in the Flat Glass business in the United States and the United Kingdom. The 2017 currency translation adjustments primarily reflect the impact of fluctuations in the US dollar, pound sterling, Norwegian krone and Brazilian real.

In 2016, changes in Group structure related mainly to newly consolidated companies representing €189 million. Impairment tests performed in 2016 led to the recognition of goodwill impairment, primarily on the Interior Solutions business. Currency translation adjustments primarily reflected the impact of fluctuations in the pound sterling, US dollar, and Brazilian real.

The net value of goodwill by sector and by business at December 31, 2017 and 2016 can be analyzed as follows:

(in € millions)	**2017**	**2016**
Flat Glass	189	240
High-Performance Materials	1,602	1,679
Construction Products	6,014	5,924
Building Distribution	2,770	2,826
Total	**10,575**	**10,669**

Goodwill is essentially allocated to the Construction Products Sector, mainly Gypsum (€3,264 million at December 31, 2017) and Industrial Mortars (€2,075 million at December 31, 2017), and to the Building Distribution Sector, primarily in the United Kingdom, France and Scandinavia.

5.2. Other intangible assets

Other intangible assets primarily include patents, brands, software and development costs. They are measured at historical cost less accumulated amortization and impairment.

Acquired retail brands and certain manufacturing brands are treated as intangible assets with indefinite useful lives as they have a strong national and/or international reputation. These brands are not amortized but are tested systematically for impairment on an annual basis. Other brands are amortized over their useful lives, not exceeding 40 years.

Costs incurred to develop software in-house – primarily configuration, programming and testing costs – are recognized as intangible assets. Patents and purchased computer software are amortized over their estimated useful lives, not exceeding 20 years for patents and three to five years for software.

Research costs are expensed as incurred. Development costs meeting the recognition criteria under IAS 38 are included in intangible assets and amortized over their estimated useful lives (not exceeding five years) from the date when the products to which they relate are first marketed.

Changes in other intangible assets during 2017 and 2016 are analyzed below:

(in € millions)	Patents	Non-amortizable brands	Software	Development costs	Other	Total
At January 1, 2016						
Gross value	162	2,872	1,000	131	425	4,590
Accumulated amortization and impairment	(138)	(587)	(806)	(97)	(214)	(1,842)
Net value	**24**	**2,285**	**194**	**34**	**211**	**2,748**
Changes during the year						
Acquisitions	5	0	91	17	38	151
Disposals	0	0	(12)	0	(1)	(13)
Translation adjustments	1	(140)	3	1	0	(135)
Amortization and impairment	(4)	0	(68)	(13)	(12)	(97)
Changes in Group structure and other	0	(1)	12	(3)	0	8
Total changes	**2**	**(141)**	**26**	**2**	**25**	**(86)**
At December 31, 2016						
Gross value	165	2,731	1,066	147	451	4,560
Accumulated amortization and impairment	(139)	(587)	(846)	(111)	(215)	(1,898)
Net value	**26**	**2,144**	**220**	**36**	**236**	**2,662**
Changes during the year						
Acquisitions	0	0	97	8	79	184
Disposals	0	0	(3)	0	(1)	(4)
Translation adjustments	(2)	(55)	(9)	(2)	(11)	(79)
Amortization and impairment	(4)	(80)	(74)	(13)	(11)	(182)
Changes in Group structure and other	0	6	8	2	6	22
Total changes	**(6)**	**(129)**	**19**	**(5)**	**62**	**(59)**
At December 31, 2017						
Gross value	149	2,682	1,093	119	505	4,548
Accumulated amortization and impairment	(129)	(667)	(854)	(88)	(207)	(1,945)
Net value	**20**	**2,015**	**239**	**31**	**298**	**2,603**

Impairment of non-amortizable brands in 2017 concerned Lapeyre.

The breakdown of non-amortizable brands by sector is provided in the segment information tables in Note 3 "Information concerning the Group's operating activities".

5.3. Property, plant and equipment

Land, buildings and equipment are carried at historical cost less accumulated depreciation and impairment.

Cost may also include incidental expenses directly attributable to the acquisition, as well as the impact of transfers from equity of any gains/losses on qualifying cash flow hedges of property, plant and equipment purchases.

Expenses incurred in exploring and evaluating mineral resources are included in property, plant and equipment when it is probable that associated future economic benefits will flow to the Group. They include mainly the costs of topographical or geological studies, drilling costs, sampling costs and all costs incurred in assessing the technical feasibility and commercial viability of extracting the mineral resource.

Material borrowing costs incurred for the construction and acquisition of property, plant and equipment are included in the cost of the related asset if they are significant.

Property, plant and equipment are considered as having no residual value, as they chiefly consist of industrial assets that are intended to be used until the end of their useful lives.

Property, plant and equipment other than land are depreciated using the components approach on a straight-line basis over the following estimated useful lives, which are regularly reviewed:

- Major factories and offices 30 - 40 years
- Other buildings 15 - 25 years
- Production machinery and equipment 5 - 16 years
- Vehicles 3 - 5 years
- Furniture, fixtures, office and computer equipment 4 - 16 years

Gypsum quarries are depreciated over their estimated useful lives, based on the quantity of gypsum extracted during the year compared with extraction capacity.

Provisions for site restoration are recognized as components of assets whenever the Group has a legal or constructive obligation to restore a site in accordance with contractually determined conditions or in the event of a sudden deterioration in site conditions. These provisions are reviewed periodically and may be discounted over the expected useful lives of the assets concerned. The component is depreciated over the same useful life as that used for mines and quarries.

Government grants for purchases of property, plant and equipment are recorded under "Other payables" and taken to the income statement over the estimated useful lives of the relevant assets.

Changes in Group structure and other changes in the period were not material.

Changes in property, plant and equipment in 2017 and 2016 are analyzed below:

(in € millions)	**Land and quarries**	**Buildings**	**Machinery and equipment**	**Assets under construction**	**Total**
At January 1, 2016					
Gross value	2,493	8,500	19,549	1,064	31,606
Accumulated amortization and impairment	(533)	(4,911)	(14,520)	(55)	(20,019)
Net value	**1,960**	**3,589**	**5,029**	**1,009**	**11,587**
Changes during the year					
Acquisitions	50	63	329	928	1,370
Disposals	(41)	(18)	(19)	(7)	(85)
Translation adjustments	(7)	(7)	30	(3)	13
Amortization and impairment	(35)	(264)	(958)	(2)	(1,259)
Transfers		199	709	(908)	0
Changes in Group structure and other	23	(23)	28	0	28
Total changes	**(10)**	**(50)**	**119**	**8**	**67**
At December 31, 2016					
Gross value	2,510	8,607	19,744	1,067	31,928
Accumulated depreciation and impairment	(560)	(5,068)	(14,596)	(50)	(20,274)
Net value	**1,950**	**3,539**	**5,148**	**1,017**	**11,654**
Changes during the year					
Acquisitions	15	68	269	1,186	1,538
Disposals	(31)	(18)	(31)	(17)	(97)
Translation adjustments	(67)	(158)	(251)	(64)	(540)
Amortization and impairment	(33)	(263)	(883)	(11)	(1,190)
Transfers		213	687	(900)	0
Changes in Group structure and other	43	61	53	68	225
Total changes	**(73)**	**(97)**	**(156)**	**262**	**(64)**
At December 31, 2017					
Gross value	2,454	8,558	19,575	1,335	31,922
Accumulated amortization and impairment	(577)	(5,116)	(14,583)	(56)	(20,332)
Net value	**1,877**	**3,442**	**4,992**	**1,279**	**11,590**

In 2017, "Changes in Group structure and other" related mainly to newly consolidated companies in the Construction Products Sector.

5.4. Finance leases and operating leases

Assets held under finance leases that transfer to the Group substantially all of the risks and rewards of ownership are recognized as property, plant and equipment (land, buildings and equipment). They are recorded at the inception of the lease term at the lower of the fair value of the leased assets and the present value of the minimum lease payments.

Property, plant and equipment acquired under finance leases are depreciated on a straight-line basis over the shorter of the estimated useful life of the asset – determined using the same criteria as for assets owned by the Group – or the lease term. The corresponding liability is shown in the balance sheet net of related interest.

Rental payments under operating leases are expensed as incurred.

In 2017, other movements in property, plant and equipment include an amount of €15 million (2016: €21 million) relating to assets acquired under new finance leases not included in the cash flow statement in accordance with IAS 7. At December 31, 2017, total property, plant and equipment acquired under finance leases amounted to €83 million (December 31, 2016: €71 million).

5.5. Impairment review

5.5.1. Impairment of property, plant and equipment, intangible assets and goodwill

Property, plant and equipment, goodwill and other intangible assets are tested for impairment on a regular basis. These tests consist of comparing the asset's carrying amount to its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and its value in use, calculated by reference to the net present value of the future cash flows expected to be derived from the asset.

For property, plant and equipment and amortizable intangible assets, an impairment test is performed whenever revenues from the asset decline or the asset generates operating losses due to either internal or external factors, and no material improvement is forecast in the annual budget or the relevant business plan.

For goodwill and other intangible assets (including brands with indefinite useful lives), an impairment test is performed at least annually based on the business plan. Goodwill is reviewed systematically and exhaustively at the level of each cash-generating unit (CGU). The Group's reporting segments are its business sectors, which may each include several CGUs. A CGU is a reporting sub-segment, generally defined as a core business of the segment in a given geographic area. It typically reflects the level at which the Group organizes its businesses and analyzes its results for internal reporting purposes. The number of CGUs in both 2017 and 2016 was 30.

The method used for these impairment tests is consistent with that employed by the Group for the valuation of companies acquired in business combinations or acquisitions of equity interests. The carrying amount of the CGUs is compared to their value in use, corresponding to the net present value of future cash flows excluding interest but including tax. It is determined using assumptions made by senior management based on estimates and judgments including future changes in net sales, profitability, investments and other cash flows arising from the use of the corresponding assets, as well as the discount rate applied to future cash flows. Cash flows for the last year of the business plan are rolled forward over the following two years. For impairment tests of goodwill, normative cash flows (corresponding to cash flows at the mid-point in the business cycle) are then projected to perpetuity using a low annual growth rate (generally 1.5%, except for emerging markets or businesses with a high organic growth potential where a 2% rate is used). Growth data are supported by external data issued by prominent organizations. The discount rate applied to these cash flows corresponds to the Group's average cost of capital (7.25% in 2017 and 2016) plus a country risk premium where appropriate depending on the geographic area concerned. The discount rates applied in 2017 for the main operating regions were 7.25% for the Eurozone and North America, 8.25% for Eastern Europe and emerging Asia-Pacific and 8.75% for South America, Russia and the Middle East.

The recoverable amount calculated using a post-tax discount rate gives the same result as a pre-tax rate applied to pre-tax cash flows.

5.5.2. CGU impairment tests

When the annual impairment test reveals that the recoverable amount of an asset is less than its carrying amount, an impairment loss is recorded.

Impairment losses on goodwill can never be reversed through income. For property, plant and equipment and other intangible assets, an impairment loss recognized in prior periods may be reversed, taking into account depreciation/amortization adjustments, if there is an indication that the impairment no longer exists and that the recoverable amount of the asset concerned exceeds its carrying amount.

During the impairment tests, different assumptions measuring the method’s sensitivity are systematically tested using the following inputs:

- 0.5-point increase or decrease in the discount rate applied to cash flows;
- 0.5-point increase or decrease in the annual average rate of growth in cash flows projected to perpetuity;
- 1-point decrease in the operating income rate for industrial activities and 0.5-point decrease for distribution activities.

At December 31, 2017, a 0.5-point increase in the discount rate for all CGUs would have led to approximately €81 million in additional intangible asset impairment, while a 0.5-point decrease in the average annual cash flow growth rate, projected to perpetuity for all CGUs would have resulted in additional intangible asset impairment of around €58 million. The impact of a 1-point decrease in the operating income rate for all industrial CGUs would have generated additional intangible asset impairment of roughly €154 million, while a 0.5-point decrease in the rate for distribution activities would have generated additional impairment of €64 million.

	Impact of			
(in € millions)	**0.5% increase in the discount rate**	**0.5% decrease in the growth rate**	**1-point decrease in the operating income rate**	**0.5 point decrease in the operating income rate**
Flat Glass				
High-Performance Materials				
Construction Products	(43)	(26)	(154)	
Building Distribution	(38)	(32)		(64)
Total	**(81)**	**(58)**	**(154)**	**(64)**

The breakdown of asset impairment by sector for 2017 and 2016 is provided in the segment information tables in Note 3 “Information concerning the Group’s operating activities”.

NOTE 6 INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES AND OTHER NON-CURRENT ASSETS

6.1. Changes in investments in equity-accounted companies

Changes in investments in equity-accounted companies in 2017 and 2016 can be analyzed as follows:

(in € millions)	2017	2016
At January 1		
Group share in:		
Associates	181	140
Joint ventures	183	168
Total	364	308
Goodwill	12	11
Investments in equity-accounted companies	**376**	**319**
Changes during the year		
Group share in net income of:		
Associates	3	11
Joint ventures	30	25
Total	33	36
Dividends paid	(20)	(16)
Translation adjustments	(18)	7
Transfers, share issues and other movements	6	3
Changes in Group structure and acquisitions	2	27
Total changes	**3**	**57**
At December 31		
Group share in:		
Associates	173	181
Joint ventures	187	183
Total	360	364
Goodwill	19	12
Investments in equity-accounted companies	**379**	**376**

The principal financial aggregates of equity-accounted companies are as follows:

	2017			2016		
(in € millions)	Associates	Joint ventures	Total	Associates	Joint ventures	Total
Net sales	789	709	1,498	710	673	1,383
Net income	28	67	95	26	54	80
Current assets	495	310	805	458	283	741
Non-current assets	533	337	870	526	321	847
Current liabilities	227	145	372	235	126	361
Non-current liabilities	801	502	1,303	749	478	1,227
Shareholders' equity	592	409	1,001	580	401	981

6.2. Transactions with equity-accounted companies – related-parties

The consolidated financial statements include transactions conducted by the Group in the normal course of its businesses with associates and joint ventures. These transactions are carried out on an arm's length basis.

The assets and liabilities of equity-accounted companies at December 31 are as follows:

(in € millions)	Dec. 31, 2017	Dec. 31, 2016
Financial receivables	1	1
Inventories	0	0
Short-term receivables	7	8
Cash and cash equivalents	0	0
Provisions for asset impairment	0	0
Short-term debt	2	2
Cash advances	0	0

Purchases and sales with equity-accounted companies are as follows:

(in € millions)	2017	2016
Purchases	2	2
Sales	40	43

6.3. Transactions with key shareholders

Some subsidiaries of the Saint-Gobain Group, particularly in the Building Distribution Sector, carry out commercial transactions with subsidiaries of the Wendel group. These transactions are carried out on an arm's-length basis.

6.4. Other non-current assets

Investments classified as "available-for-sale" are carried at fair value. Unrealized gains and losses on these investments are recognized in equity, unless the investments have suffered a material or other-than-temporary decline in value, in which case an impairment loss is recorded in the income statement.

Changes in other non-current assets in 2017 and 2016 are analyzed below:

(in € millions)	Available-for-sale and other securities	Loans, deposits and surety	Pension plan surpluses	Total
At January 1, 2016				
Gross value	76	519	63	658
Provision for impairment	(14)	(9)		(23)
Net value	**62**	**510**	**63**	**635**
Changes during the year				
Increases/(decreases)	109	(6)	(15)	88
Provisions for impairment	(1)	1		0
Translation adjustments	1	10	(7)	4
Transfers and other movements	(1)	6		5
Changes in Group structure	(22)	0		(22)
Total changes	**86**	**11**	**(22)**	**75**
At December 31, 2016				
Gross value	163	526	41	730
Provision for impairment	(15)	(5)		(20)
Net value	**148**	**521**	**41**	**710**
Changes during the year				
Increases/(decreases)	82	(3)	123	202
Provisions for impairment	0	2		2
Translation adjustments	(10)	(11)	(3)	(24)
Transfers and other movements	3	0		3
Changes in Group structure	(122)	3		(119)
Total changes	**(47)**	**(9)**	**120**	**64**
At December 31, 2017				
Gross value	111	516	161	788
Provision for impairment	(10)	(4)		(14)
Net value	**101**	**512**	**161**	**774**

Increases/(decreases) in available-for-sale securities and other securities primarily relate to acquisitions/(disposals) of securities in the period that will be consolidated/(deconsolidated) in the following period.

NOTE 7 OTHER CURRENT AND NON-CURRENT LIABILITIES AND PROVISIONS, CONTINGENT LIABILITIES AND LITIGATION

A provision is booked when (i) the Group has a present legal or constructive obligation towards a third party as a result of a past event, (ii) it is probable that an outflow of resources will be required to settle the obligation, and (iii) the amount of the obligation can be estimated reliably.

If the amount or due date of the obligation cannot be estimated reliably, it is classified as a contingent liability and reported as an off-balance sheet commitment.

Provisions for other material liabilities and charges whose timing can be estimated reliably are discounted to present value.

7.1. Provisions for other liabilities and charges

The table below provides a breakdown by type along with details of changes in other provisions and current and non-current liabilities:

(in € millions)	Provisions for claims and litigation	Provisions for environmental risks	Provisions for restructuring costs	Provisions for personnel expenses	Provisions for customer warranties	Provisions for other contingencies	Total provisions for other liabilities	Investment-related liabilities	Total
At January 1, 2016									
Current portion	127	39	67	27	130	60	450	4	454
Non-current portion	468	124	72	56	125	247	1,092	184	1,276
Total provisions for other liabilities and investment-related liabilities	**595**	**163**	**139**	**83**	**255**	**307**	**1,542**	**188**	**1,730**
Movements during the year									
Additions	144	15	49	43	70	60	381		381
Reversals	(8)	(4)	(17)	(14)	(26)	(65)	(134)		(134)
Utilizations	(150)	(12)	(70)	(11)	(65)	(33)	(341)		(341)
Changes in Group structure						0	0		0
Other (reclassifications and translation adjustments)	19	(4)	(2)	4	(1)	12	28	14	42
Total movements	**5**	**(5)**	**(40)**	**22**	**(22)**	**(26)**	(66)	**14**	(52)
At December 31, 2016									
Current portion	125	36	52	29	122	60	424	12	436
Non-current portion	475	122	47	76	111	221	1,052	190	1,242
Total provisions for other liabilities and investment-related liabilities	**600**	**158**	**99**	**105**	**233**	**281**	**1,476**	**202**	**1,678**
Movements during the year									
Additions	155	12	49	62	64	73	415		415
Reversals	(3)	(3)	(9)	(13)	(23)	(25)	(76)		(76)
Utilizations	(135)	(12)	(58)	(34)	(54)	(99)	(392)		(392)
Changes in Group structure			2	1	3	6	12		12
Other (reclassifications and translation adjustments)	(71)	(1)	(4)	(6)	(25)	(1)	(108)	(64)	(172)
Total movements	**(54)**	**(4)**	**(20)**	**10**	**(35)**	**(46)**	(149)	**(64)**	(213)
At December 31, 2017									
Current portion	137	30	38	21	102	71	399	13	412
Non-current portion	409	124	41	94	96	164	928	125	1,053
Total provisions for other liabilities and investment-related liabilities	**546**	**154**	**79**	**115**	**198**	**235**	**1,327**	**138**	**1,465**

7.1.1. Provisions for claims and litigation

At December 31, 2017 and 2016, provisions for claims and litigation mainly covered asbestos-related lawsuits filed against the Group. These provisions are described in further detail in Note 7.2 "Contingent liabilities and litigation".

7.1.2. Provisions for environmental risks

These provisions cover costs relating to environmental protection measures, as well as site rehabilitation and clean-up costs.

7.1.3. Provisions for restructuring costs

Provisions for restructuring costs amounted to €79 million at December 31, 2017 (December 31, 2016: €99 million), including net additions of €40 million during the year. The provisions primarily concern Benelux (€26 million), Germany (€18 million), and the United Kingdom (€12 million).

7.1.4. Provisions for personnel expenses

These provisions primarily cover indemnities due to employees that are unrelated to the Group's reorganization plans.

7.1.5. Provisions for customer warranties

These provisions cover the Group's commitments under warranties granted to customers mainly in the United States. They are determined on a statistical basis using a range of criteria and take into account contractual warranty payments made in prior years in the business and region concerned. In addition, specific provisions may be set aside for identified risks.

7.1.6. Provisions for other contingencies

At December 31, 2017, provisions for other contingencies amounted to €235 million (December 31, 2016: €281 million) and mainly concerned the United States (€59 million), France (€46 million), Germany (€43 million) and Brazil (€39 million).

7.1.7. Investment-related liabilities

Investment-related liabilities correspond to commitments to purchase minority interests, liabilities relating to the acquisition of shares in Group companies, and minority shareholder puts.

In 2017, changes in investment-related liabilities primarily concerned minority shareholder puts.

7.2. Contingent liabilities and litigation

7.2.1. Asbestos-related litigation

Current legal actions related to asbestos are described below.

7.2.1.1. Asbestos-related litigation in France

a) Inexcusable fault lawsuits

In France, 10 further individual lawsuits were filed in 2017 by former employees (or persons claiming through them) of Everite and Saint-Gobain PAM which in the past had carried out fiber-cement operations for asbestos-related occupational diseases they have or had. As at December 31, 2017, a total of 815 such lawsuits had been issued against the two companies since 1996 with the aim of obtaining supplementary compensation over and above the amounts paid by the French Social Security authorities in this respect.

As of December 31, 2017, 775 of these 815 lawsuits had been completed in terms of liability and quantum as well as in terms of liability for the payment of compensation. In all these cases, the employers were held liable on the grounds of "inexcusable fault".

Compensation paid by Everite and Saint-Gobain PAM in settlement of these lawsuits totaled approximately €3 million.

Concerning the 40 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2017, seven have been completed in terms of both liability and quantum, but liability for the payment of compensation has not yet been assigned.

Out of the 33 remaining lawsuits, at December 31, 2017 the procedures relating to the merits of 28 cases were at different stages, with two in the process of being investigated by the French Social Security authorities and 26 pending before the Social Security Courts or the Appeal Courts. The last five actions have been canceled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2017, 228 similar suits had been filed since the outset of the litigation by current or former employees, or persons claiming through them, of 13 other French companies of the Group (excluding suits against companies that are no longer part of the Group), in particular by current or former employees who used equipment containing asbestos to protect themselves against heat from furnaces.

As of December 31, 2017, 191 lawsuits had been completed. In 110 of these cases, the employer was held liable for "inexcusable fault".

The compensation definitively paid by these companies totaled approximately €6.1 million. With regard to the 37 suits outstanding at December 31, 2017, two cases were still at the investigation stage by the French Social Security authorities, 34 were being investigated – including 24 pending before the Social Security Courts, eight before the Appeal Courts and two before the Civil Supreme Court (Court of Cassation). Lastly, one suit has been canceled but the plaintiff may request its restoration at any time within a two-year period following its cancellation.

b) Anxiety claims

Eight of the Group's French companies, including six that operate or have operated facilities classified as containing asbestos, are subject of damages claims that are different from those described above.

"Facilities classified as containing asbestos" are defined as industrials facilities, that have been closed or are still operating, which previously manufactured materials containing asbestos or used protection and insulation equipment containing asbestos and are included by ministerial decree on the official list of facilities whose current or former employees are entitled to the early-retirement benefits paid to asbestos workers (ACAATA).

At December 31, 2017, a total of 822 suits had been brought by current or former employees claiming compensation for prejudice of anxiety suffered as a result of their alleged exposure to asbestos. None of these plaintiffs were suffering from an asbestos-related disease and some of them were not receiving the ACAATA benefit. Of these 822 suits, 693 have been terminated. Three plaintiffs had their claims dismissed, while for the 690 others who were recognized as having been exposed to an asbestos risk, the total amount of compensation is €7.6 million at December 31, 2017. Of the remaining 129 suits, two are pending before the competent Appeal Courts and 116 have been canceled but the plaintiffs may request their restoration at any time during a period of two years following their cancellation. Finally, six suits have been dismissed by the competent labor tribunals and five plaintiffs have withdrawn the action they initiated.

It should be clarified that the figures above do not take into account suits filed against companies that are no longer part of the Group.

7.2.1.2. Asbestos-related litigation in the United States

In the United States, several companies that once manufactured products containing asbestos such as asbestos-cement pipes, roofing products, specialized insulation or gaskets, are facing legal action from persons other than their employees or former employees. These claims for compensatory – and in some cases punitive – damages are based on alleged exposure to these products, although in many instances the claimants cannot demonstrate any specific exposure to one or more products, or any specific illness or physical disability. The vast majority of these claims are made simultaneously against many other non-Group entities which have been manufacturers, distributors, installers or users of products containing asbestos.

a) Developments in 2017

About 3,100 new claims were filed against CertainTeed in 2017, a slight decrease compared to the 3,200 filed in 2016. Over the last few years, the number of new claims has remained relatively stable.

Almost all of the claims against CertainTeed are settled out of court or dismissed. Approximately 3,900 of the pending claims were resolved in 2017, compared to 3,700 in 2016 and 4,600 in 2015. Taking into account the 35,100 outstanding claims at the end of 2016 and the new claims having arisen during the year, as well as claims settled, around 34,300 claims were outstanding at December 31, 2017. A large number of these pending claims were filed more than five years ago by individuals without any significant asbestos-related impairment, and it is likely that many of these claims will ultimately be dismissed.

b) Impact on the Group's financial statements

The Group recorded a USD 102 million charge in 2017 to cover future developments in relation to claims. This amount is stable compared to the amount recorded in 2016 and 2015. At December 31, 2017, the Group provision for asbestos-related claims against CertainTeed in the United States amounts to USD 555 million (compared to USD 562 million at December 31, 2016 and USD 581 million at December 31, 2015).

c) Cash flow impact

Compensation paid in respect of these claims against CertainTeed, including claims settled prior to 2017 but only paid out in 2017, and those fully resolved and paid in 2017, and compensation paid in 2017 by other Group businesses in the United States in connection with asbestos-related litigation, amounted to USD 76 million (compared to USD 97 million in 2016 and USD 65 million in 2015).

7.2.1.3. Situation in Brazil

In Brazil, former employees of Brasilit suffering from asbestos-related occupational illnesses are offered, depending on the case, solely financial compensation, or otherwise lifetime medical assistance combined with financial compensation. Around 1,200 contractual instruments were signed accordingly so far.

Two collective actions were initiated against Brasilit in 2017 by two associations defending the former exposed workers of plants of São Caetano (SP) and Recife (PE), asking for reconsideration of medical assistance and compensation. These cases are at very early stage for the moment.

Brasilit is subject to controls by the Ministry of Labor and continues to comply with all its legal obligations with regard to medical assistance of employees and former employees.

In November 2017, the Supreme Court of Brazil has decided to ban asbestos definitively across the country. Brasilit stopped using this material voluntarily as soon as 2002.

7.2.2. Anti-trust law and related proceedings

7.2.2.1. Investigation by the Swiss Competition Commission in the sanitary products wholesale

In November 2011, the Swiss Competition Commission (*Commission Suisse de la Concurrence*) opened an investigation for anti-competitive practices in the sanitary products wholesale sector. In May 2014, the Commission Secretariat issued a notification of complaints against Sanitas Troesch and against other wholesalers in the sector alleging that Sanitas Troesch and some of its competitors had, among other things, agreed in 2005 and 2012 to lower gross prices.

The total fine decided against all the companies involved is CHF 80 million. For Sanitas Troesch, the fine is CHF 28.5 million. Sanitas Troesch appealed this decision on May 2, 2016. Sanitas Troesch continues to firmly refute the claims made; however, a provision for litigation was recognized at December 31, 2015 for an amount equivalent to the fine (unchanged at December 31, 2017).

7.2.2.2. Investigation by the French Competition Authority in the building insulation products sector

On August 6, 2014, Saint-Gobain Isover and Compagnie de Saint-Gobain (as the parent company of Saint-Gobain Group) received a notice of complaints from the French Competition Authority (*Autorité de la Concurrence Française*). The only complaint made was of having exchanged allegedly strategic and confidential information, between 2002 and 2007, relating to a certification request lodged by Actis before the Versailles Commercial Court for one of its products, and in relation to a dispute between Actis and the mineral wool manufacturers' association (FILMM), of which Saint-Gobain Isover was a member.

Saint-Gobain Isover and Compagnie de Saint-Gobain are challenging this complaint. A hearing was held on May 11, 2016. The Competition Authority's final ruling was postponed to a date not yet known.

In the civil law area, in March 2013 Actis served a civil liability writ on Saint-Gobain Isover, the *Centre Scientifique et Technique du Bâtiment*, and the FILMM before the Paris Civil Court (*Tribunal de Grande Instance*) for the adverse consequences of facts forming the subject of the investigation by the Competition Authority. In an order dated December 16, 2014, the pre-trial judge declared a stay of proceedings while waiting for the decision from the Competition Authority.

7.2.2.3. Investigation by the Anti-trust Division of the United States Department of Justice in the United States drywall industry

In July 2015, the Anti-trust division of the United States Department of Justice opened a criminal investigation into potential anti-competitive practices, specifically a price agreement, in the United States drywall industry. This investigation followed complaints filed in late 2012 in the form of class actions in the civil courts against eight drywall manufacturers in the sector, including CertainTeed, by some of their customers.

On the basis of testimony and documents submitted in the civil proceedings, CertainTeed and its attorneys have not identified any element that might create liability for CertainTeed, and as a result filed a motion for summary judgment in May 2015 in order to end the civil proceedings. This application was accepted on February 18, 2016 by the competent court. An appeal against this decision is still possible.

7.2.3. Environmental-related litigation

7.2.3.1. PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) or state health advisories have been found in municipal water systems and private wells near current Saint-Gobain Performance Plastics (SG PPL) facilities in Hoosick Falls (New York) and Merrimack (New Hampshire), and two former facilities in North Bennington (Vermont) in the United States. PFOA and PTFE (polytetrafluorethylene) have never been manufactured by these plants. SG PPL is a processor of PTFE which it purchases from third party suppliers and which in the past contained traces of PFOA.

SG PPL has voluntarily provided bottled water in all three communities, installed point-of-entry treatment systems to residents and businesses in the Hoosick Falls and North Bennington areas, and installed carbon filtration systems on the municipal water supply in Hoosick Falls. In addition, it has voluntarily committed to fund water line extensions in certain communities in the Merrimack and Bennington areas. The investigations are on-going and the scope of responsibility for SG PPL arising from environmental remediation and clean-up obligations at these sites has not yet been established. Without admitting liability, SGPPL has signed consent orders with the environmental regulators in New York and Vermont pursuant to which SGPPL has agreed to complete investigations and implement interim remediation measures. Responsibility, if any, is expected to be shared with other parties as regards in particular the Hoosick Falls' site.

PFOA-related lawsuits alleging both health-related and economic damages claims have been filed in civil courts in New York, New Hampshire and Vermont, some of which are in the form of proposed class actions. It is difficult to predict the timing or outcome of any such litigation, or whether any additional litigation will be brought against SG PPL.

On December 31, 2017, the provision recorded by the Company in respect of this matter amounts to € 44 million.

7.2.4. Other potential liabilities

7.2.4.1. Grenfell Tower fire in the United Kingdom

At the time of the refurbishing of the Grenfell Tower in 2015, Celotex sold through distributors an insulation product for use as part of multicomponent ventilated rainscreen cladding system.

Following the Grenfell Tower fire on June 14, 2017, investigations are ongoing, and, in this context, Celotex as well as more than 60 other companies or organizations, is heard by the British authorities.

7.2.5. Other proceedings and disputes

Some of the Group's companies may also be the subject of other claims made by their employees or by the tax authorities. Apart from the proceedings and litigation described above, to the best of the Company's knowledge no other government, court or arbitration proceedings exist (including pending proceedings or proceedings where the Company and/or the Group might be threatened) which could have or which has had, in the last 12 months, a significant impact on the financial or profit position of the Company and/or Group.

NOTE 8 FINANCING AND FINANCIAL INSTRUMENTS

8.1. Risk factors: financial risks

8.1.1. Liquidity risk

a) Liquidity risk on financing

In a crisis environment, the Group might be unable to raise the financing or refinancing needed to cover its investment plans on the credit or capital markets, or to obtain such financing or refinancing on acceptable terms.

The Group's overall exposure to liquidity risk on its net debt is managed by the Treasury and Financing Department of Compagnie de Saint-Gobain, the Group's parent company. The subsidiaries generally enter into short- or long-term financing arrangements with Compagnie de Saint-Gobain or with the National Delegations' cash pools.

The Group's policy is to ensure that the Group's financing will be rolled over at maturity and to optimize borrowing costs. Long-term debt therefore systematically represents a high percentage of overall debt. At the same time, the maturity schedules of long-term debt are set in such a way that replacement capital market issues are spread over time.

The Group's main source of long-term financing is bonds, which are generally issued under the Medium Term Notes program. Saint-Gobain also uses perpetual bonds, participating securities, a long-term securitization program, bank borrowings and lease financing.

Short-term debt comprises borrowings under Negotiable European Commercial Paper (NEU CP), and occasionally Euro Commercial Paper and US Commercial Paper, but also includes receivables securitization programs and bank financing. Financial assets comprise marketable securities and cash and cash equivalents.

Compagnie de Saint-Gobain's liquidity position is secured by confirmed syndicated lines of credit.

A breakdown of long- and short-term debt by type and maturity is provided in Note 8.3, which also details the main characteristics of the Group's financing programs and confirmed credit lines.

Saint-Gobain's long-term debt issues have been rated BBB with a stable outlook by Standard & Poor's since December 9, 2014.

Saint-Gobain's long-term debt issues have been rated Baa2 with a stable outlook by Moody's since December 9, 2014.

There is no guarantee that the Company will be in a position to maintain its credit risk ratings at current levels. Any deterioration in the Group's credit risk rating could limit its capacity to raise funds and could lead to higher rates of interest on future borrowings.

b) Liquidity risk on investments

Short-term investments consist of bank deposits and mutual fund units. To reduce liquidity and high volatility risks, whenever possible, the Group invests in money market and/or bond funds.

8.1.2. Market risks

a) Interest rate risks

The Group's overall exposure to interest rate risk on consolidated debt is managed by the Treasury and Financing Department of Compagnie de Saint-Gobain. Where subsidiaries use derivatives to hedge interest rate risks, their counterparty is generally Compagnie de Saint-Gobain, the Group's parent company.

The Group's policy is aimed at fixing the cost of its medium-term debt against interest rate risk and optimizing borrowing costs. According to Group policy, the derivative financial instruments used to hedge these risks can include interest rate swaps, cross-currency swaps, options – including caps, floors and swaptions – and forward rate agreements.

The table below shows the sensitivity at December 31, 2017 of pre-tax income and pre-tax equity to fluctuations in the interest rate on the Group's net debt after hedging:

(in € millions)	**Impact on pre-tax income**	**Impact on pre-tax equity**
Interest rate increase of 50 basis points	10	7
Interest rate decrease of 50 basis points	(10)	(7)

Note 8.4 to the consolidated financial statements provides a breakdown of interest rate risk hedging instruments and of gross debt by rate type (fixed or variable) after hedging.

b) Foreign exchange risk

The currency hedging policies described below could be insufficient to protect the Group against unexpected or sharper than expected fluctuations in exchange rates resulting from economic and financial market conditions.

Foreign exchange risks are managed by hedging virtually all transactions entered into by Group entities in currencies other than their functional currencies. Compagnie de Saint-Gobain and its subsidiaries may use forward contracts and options to hedge exposures arising from current and forecast transactions.

The subsidiaries set up contracts generally through the Group's parent company, Compagnie de Saint-Gobain, which then carries out the corresponding forex hedging transaction, or through the National Delegations' cash pools. Failing this, contracts are taken out with one of the subsidiary's banks.

Most forward contracts have short maturities of around three months. However, forward contracts taken out to hedge firm orders may have longer terms.

The Group monitors its exposure to foreign exchange risk using a monthly reporting system that captures the foreign exchange positions taken by its subsidiaries. At December 31, 2017, 98% of the Group's foreign exchange exposure eligible for hedging was hedged.

The residual net foreign exchange exposure of subsidiaries for the currencies presented below was as follows at December 31, 2017:

(in millions of euro equivalent)	**Long**	**Short**
EUR	1	5
USD	13	7
Other currencies	0	4
Total	**14**	**16**

The table below gives an analysis, as of December 31, 2017, of the sensitivity of the Group's pre-tax income to a 10% increase in the exchange rates of the following currencies given the subsidiaries' residual net foreign exchange exposure:

Currency of exposure *(in millions of euro equivalent)*	**Impact on pre-tax income**
EUR	(0.4)
USD	0.7
Other currencies	(0.4)
Total	**(0.1)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2017 would have the opposite impact.

Note 8.4 provides a breakdown of foreign exchange risk hedging instruments.

c) Energy and commodity risk

The Group is exposed to changes in the price of the energy it consumes and the raw materials used in its activities. Its energy and commodity hedging programs may be insufficient to protect the Group against significant or unforeseen price swings that could result from the prevailing financial and economic environment.

The Group may limit its exposure to energy price fluctuations by using swaps and options to hedge part of its fuel oil, natural gas and electricity purchases. The swaps and options are mainly contracted in the functional currency of the entities concerned. Hedges of fuel oil, gas and electricity purchases are managed by steering committees comprising members of the Group Finance Department, the Group Purchasing Department and the relevant Delegations.

Hedges of energy purchases (excluding fixed-price purchases negotiated directly with suppliers by the Purchasing Department) are generally arranged by the Group Treasury and Financing Department (or with the Delegations' treasury departments) in accordance with instructions received from the Purchasing Department.

From time to time, the Group may enter into contracts to hedge purchases of certain commodities, in accordance with the same principles as those outlined above for energy purchases.

Note 8.4 provides a breakdown of instruments used to hedge energy and commodity risks.

8.1.3. Saint-Gobain share price risk

The Group is exposed to changes in the Saint-Gobain share price as a result of its performance unit incentive plans. To reduce its exposure to fluctuations in the share price, the Group uses hedging instruments such as equity swaps.

As a result, if the price of the Saint-Gobain share changes, any changes in the expense recorded in the income statement will be fully offset by the hedges in place.

Note 8.4 provides a breakdown of these share price risk hedging instruments.

8.1.4. Financial counterparty credit risk

The Group is exposed to the risk of default by the financial institutions that manage its cash or other financial instruments, since such default could lead to losses for the Group.

The Group limits its exposure to risk of default by its counterparties by dealing solely with reputable financial institutions and by regularly monitoring their credit ratings. However, the credit quality of a financial counterparty can change rapidly, and a high credit rating cannot eliminate the risk of a rapid deterioration of its financial position. As a result, the Group's policy in relation to the selection and monitoring of its counterparties is unable to entirely eliminate exposure to a risk of default.

To limit the Group's exposure to credit risk, the Treasury and Financing Department deals primarily with counterparties with a long-term rating of A- or above from Standard & Poor's or A3 or above from Moody's. Concentrations of credit risk are also closely monitored to ensure that they remain at reasonable levels, taking into account the relative CDS ("Credit Default Swap") level of each counterparty.

8.2. Net financial expense

Net financial expense includes borrowing and other financing costs, income from cash and cash equivalents, interest cost for pensions and other employee benefits, net of the return on plan assets, and other financial income and expense such as exchange gains and losses and bank charges.

(in € millions)	2017	2016
Borrowing costs, gross	(298)	(376)
Income from cash and cash equivalents	23	27
Net borrowing costs	**(275)**	**(349)**
Interest cost – pensions and other employee benefits	(327)	(387)
Return on plan assets	247	278
Net interest cost – pensions	**(80)**	**(109)**
Other financial expense	(118)	(111)
Other financial income	25	28
Other financial income and expense	**(93)**	**(83)**
Net financial expense	**(448)**	**(541)**

8.3. Net debt

8.3.1. Long- and short-term debt

a) Long-term debt

Long-term debt includes bonds, perpetual bonds, participating securities, long-term securitizations and all other types of long-term financial liabilities, including finance lease liabilities and the fair value of interest rate hedging derivatives.

Under IAS 32, the distinction between financial liabilities and equity is based on the substance of the contracts concerned rather than their legal form. As a result, participating securities are classified as debt.

At the end of the reporting period, long-term debt (excluding interest rate derivatives) is measured at amortized cost. Premiums and issuance costs are amortized using the effective interest method.

b) Short-term debt

Short-term debt includes the current portion of long-term debt described above, short-term financing programs such as commercial paper, short-term securitizations, bank overdrafts and other short-term bank borrowings, the fair value of derivatives related to debt, and accrued interest on borrowings.

Short-term debt, excluding derivatives related to debt, is measured at amortized cost at the end of the reporting period. Premiums and issuance costs are amortized using the effective interest rate method.

c) Cash and cash equivalents

Cash and cash equivalents mainly consist of bank accounts and marketable securities that are short-term (i.e., generally with maturities of less than three months), highly liquid investments readily convertible into known amounts of cash and subject to an insignificant risk of changes in value.

Marketable securities are measured at fair value through profit or loss.

Long- and short-term debt consists of the following:

(in € millions)	**Dec. 31, 2017**	**Dec. 31, 2016**
Bond issues	6,757	6,089
Perpetual bonds and participating securities	203	203
Long-term securitization	400	350
Other long-term financial liabilities	295	317
Non current portion of long-term debt	**7,655**	**6,959**
Current portion of long-term term	**1,064**	**1,835**
Short-term financing programs (NEU CP, US CP, Euro CP)	0	0
Short-term securitizations	174	173
Bank overdrafts and other short-term financial liabilities	346	415
Short-term debt and bank overdrafts	**520**	**588**
Total gross debt	**9,239**	**9,382**
Cash at banks	(1,658)	(1,529)
Mutual funds and other marketable securities	(1,626)	(2,209)
Cash and cash equivalents	**(3,284)**	**(3,738)**
Total net debt	**5,955**	**5,644**

Changes in the Group's long-term debt can be analyzed as follows:

		Cash impact		**No cash impact**			
(in € millions)	**Dec. 31, 2016**						**Dec. 31, 2017**
		Increases	**Decreases**	**Changes in Group structure**	**Translation adjustments**	**Other**	
Long-term debt	6,959	1,597	(73)	76	(122)	(782)	7,655
Current portion of long-term term	1,835	6	(1,582)	13	(5)	797	1,064
Total long-term debt	**8,794**	**1,603**	**(1,655)**	**89**	**(127)**	**15**	**8,719**

The main changes with an impact on cash are described in Note 8.3.3. The main changes with no cash impact in the "Other" column relate to the reclassification of debt maturing within 12 months in short-term debt.

The fair value of gross long-term debt (including the current portion) managed by Compagnie de Saint-Gobain amounted to €8.4 billion at December 31, 2017, for a carrying amount of €7.8 billion. The fair value of bonds corresponds to the market price on the last day of the year. For other borrowings, fair value is considered as equal to the amount repayable.

8.3.2. Debt repayment schedule

The schedule of the Group's gross debt as of December 31, 2017 is as follows:

(in € millions)	Currency	Within 1 year	1 to 5 years	Beyond 5 years	Total
Bond issues	EUR	737	3,689	2,451	6,877
	GBP	0		617	617
	NOK	76			76
Perpetual bonds and participating securities	EUR			203	203
Long-term securitization	EUR	100	400		500
Other long-term financial liabilities	All currencies	56	131	164	351
Accrued interest on long-term debt	All currencies	95			95
Total long-term debt		**1,064**	**4,220**	**3,435**	**8,719**
Total short-term debt	All currencies	**520**			**520**
Total gross debt		**1,584**	**4,220**	**3,435**	**9,239**

At December 31, 2017, future interest payments on gross long-term debt (including the current portion) managed by Compagnie de Saint-Gobain can be broken down as follows:

(in € millions)	Within 1 year	1 to 5 years	Beyond 5 years	Total
Future interest payments on gross long-term debt	230	632	590	1,452

Interest on perpetual bonds and on participating securities is calculated up to 2049.

8.3.3. Bonds

Compagnie de Saint-Gobain issued

- a €750 million 1% bond on March 17, 2017, maturing on March 17, 2025;
- a €750 million 1.375% bond on June 14, 2017, maturing on June 14, 2027.

These issues, which were used to refinance existing debt, extend the average maturity of the Group's debt while also optimizing average borrowing costs.

Compagnie de Saint-Gobain also redeemed the following instruments at maturity:

- a JPY 5 billion 1.903% private placement on January 13, 2017;
- a €1,250 million 4.75% bond on April 11, 2017;
- a €200 million 6% private placement on June 29, 2017.

8.3.4. Perpetual bonds

In 1985, Compagnie de Saint-Gobain issued 25,000 perpetual bonds with a face value of ECU 5,000 (€5,000 today).

A total of 18,496 perpetual bonds have since been bought back and canceled, and 6,504 perpetual bonds were outstanding at end-2017, representing a total face value of €33 million.

The bonds bear interest at a variable rate (average of interbank rates offered by the five reference banks for six-month euro deposits). The amount paid out per bond in 2017 was €3.16.

The bonds are not redeemable and interest on the bonds is classified as a component of finance costs.

8.3.5. Participating securities

In June 1983, Compagnie de Saint-Gobain issued 1,288,299 non-voting participating securities with a face value of FRF 1,000. Their face value is now €152.45, following their translation into euros in 1999.

A certain number of these participating securities have been bought back over the years. At December 31, 2017, 606,883 securities were still outstanding with an aggregate face value of €92.5 million.

Interest on the securities ranges from 75% to 125% of the average corporate bond yield (*TMO*), based on the Group's consolidated income. The amount paid out per security in 2017 was €1.36.

In April 1984, 194,633 non-voting participating securities were issued with a face value of ECU 1,000 (€1,000 today).

A certain number of these securities have been bought back over the years. At December 31, 2017, 77,516 securities were still outstanding with an aggregate face value of €77.5 million.

Interest comprises (i) a fixed portion of 7.5% paid per year applicable to 60% of the nominal amount of the security, and (ii) a variable portion applicable to the remaining 40% of the nominal amount of the participating security, which is linked to consolidated net income of the previous year and to the reference six-month Libor EUR rate +7/8%. The amount paid per security in 2017 was €65.35, paid in two installments (€32.55 and €32.80).

These participating securities are not redeemable and the interest paid on them is reported under borrowing costs.

8.3.6. Financing programs

The Group has a number of medium- and long-term financing programs (Medium-Term Notes) and short-term financing programs (Commercial Paper).

At December 31, 2017, issuance under these programs was as follows:

(in € millions)	Authorized drawings	Authorized limits at Dec. 31, 2017	Balance outstanding at Dec. 31, 2017	Balance outstanding at Dec. 31, 2016
Medium Term Notes		15,000	7,776	7,777
NEU CP	up to 12 months	3,000		0
US Commercial Paper	up to 12 months	834 *		0
Euro Commercial Paper	up to 12 months	834 *		0

* Equivalent of USD 1,000 million based on the exchange rate at December 31, 2017.

In accordance with market practices, Negotiable European Commercial Paper (NEU CP), US Commercial Paper and Euro Commercial Paper are generally issued with maturities of one to six months. They are treated as variable-rate debt since they are rolled over at frequent intervals.

8.3.7. Syndicated lines of credit

Compagnie de Saint-Gobain has two syndicated lines of credit that are intended to provide a secure source of financing for the Group (including as additional backing for its NEU CP, US Commercial Paper and Euro Commercial Paper programs):

- a €2.5 billion syndicated line of credit which was contracted in December 2013. This facility was renegotiated in December 2017 and rolled over until December 2022, with two further one-year rollover options;
- a second €1.5 billion syndicated line of credit which was contracted in December 2017. This facility expires in December 2022 and has two one-year rollover options. It replaces a syndicated line of credit for an equivalent amount initially maturing in 2018.

Based on the Group's current credit rating for long-term debt issues, the two facilities are not subject to any hard covenants.

Neither of these two lines of credit had been drawn down at December 31, 2017.

8.3.8. Receivables securitization programs

The Group has set up two receivables securitization programs, one through its French subsidiary Point.P Finances GIE, and the other through its US subsidiary, Saint-Gobain Receivables Corporation.

The French program was rolled over on November 10, 2016 for a maximum amount of €500 million. It amounted to €500 million at both December 31, 2017 and December 31, 2016. Based on observed seasonal fluctuations in receivables included in the program and on the contract’s features, €400 million of this amount was classified as non-current and the balance as current.

The US program was renewed on October 21, 2015 for a maximum amount of $350 million. Its euro-equivalent value at December 31, 2017 was €174 million (December 31, 2016: €173 million).

8.3.9. Collateral

At December 31, 2017, €11 million of Group debt was secured by various non-current assets (real estate and securities).

8.4. Financial instruments

The Group uses interest rate, foreign exchange and commodity derivatives to hedge its exposure to changes in interest rates, exchange rates and commodity prices that may arise in the normal course of business.

In accordance with IAS 32 and IAS 39, all such instruments are recognized in the balance sheet and measured at fair value, irrespective of whether or not they are part of a hedging relationship that qualifies for hedge accounting under IAS 39.

Changes in the fair value of both derivatives that are designated and qualified as fair value hedges and derivatives that do not qualify for hedge accounting during the period are taken to the income statement (in business income and expense for operational foreign exchange derivatives and commodity derivatives not qualifying for hedge accounting, and in net financial income and expense for all other derivatives). However, in the case of derivatives that qualify as cash flow hedges, the effective portion of the gain or loss arising from changes in fair value is recognized directly in equity, and only the ineffective portion is recognized in the income statement.

a) Fair value hedges

Fair value hedge accounting is applied by the Group mainly for derivative instruments which swap fixed rates against variable rates (fixed-for-floating interest rate swaps). These derivatives hedge fixed-rate debts exposed to a fair value risk. In accordance with hedge accounting principles, debt included in a designated fair value hedging relationship is remeasured at fair value and to the extent of the risk hedged. As the loss or gain on the underlying hedged item offsets the effective portion of the gain or loss on the fair value hedge, the income statement is only impacted by the ineffective portion of the hedge.

b) Cash flow hedges

Cash flow hedge accounting is applied by the Group mainly for derivative instruments which fix the cost of future investments (financial assets or property, plant and equipment) and the price of future purchases, mostly gas and fuel oil (commodity swaps) or foreign currencies (foreign exchange forwards). Transactions hedged by these instruments are qualified as highly probable. The application of cash flow hedge accounting allows the Group to defer the impact on the income statement of the effective portion of changes in the fair value of these derivatives by recording them in a hedging reserve in equity. This reserve is reclassified to the income statement when the hedged transaction occurs and the hedged item itself affects income. In the same way as for fair value hedges, cash flow hedging limits the Group’s exposure to changes in the fair value of these derivatives to the ineffective portion of the hedge.

c) Derivatives that do not qualify for hedge accounting

Changes in the fair value of derivatives that do not qualify for hedge accounting are recognized in the income statement. Instruments concerned are primarily foreign exchange swaps and foreign exchange forwards.

d) Fair value of financial instruments

The fair value of financial assets and financial liabilities corresponds to their quoted price on an active market (if any): this represents level 1 in the fair value hierarchy defined in IFRS 7 and IFRS 13. The fair value of instruments not quoted in an active market, such as derivatives or financial assets and liabilities, is determined by reference to commonly used valuation techniques such as the fair value of another recent and similar transaction, or discounted cash flow analysis based on observable market inputs. This represents level 2 in the fair value hierarchy defined in IFRS 7 and IFRS 13.

The fair value of short-term financial assets and liabilities is considered as being the same as their carrying amount due to their short maturities.

The following table presents a breakdown of the principal derivatives used by the Group:

(in € millions)	Fair value				Nominal amount by maturity			
	Derivatives recorded in assets	Derivatives recorded in liabilities	Dec. 31, 2017	Dec. 31, 2016	Within 1 year	1 to 5 years	Beyond 5 years	Dec. 31, 2017
Fair value hedges			0	**0**				0
Cash flow hedges								
Currency	6	(23)	(17)	231	2,782	0	0	2,782
Interest rate	0	(71)	(71)	(70)	0	0	377	377
Energy and commodities	4	0	4	5	18	0	0	18
Other risks: equities	14	0	14	13	0	30	47	77
Cash flow hedges – total	**24**	**(94)**	(70)	**179**	**2,800**	**30**	**424**	3,254
Derivatives not qualifying for hedge accounting mainly contracted by Compagnie de Saint-Gobain								
Currency	83	(11)	72	(5)	6,185	12	0	6,197
Interest rate	0	0	0	0	0	0	0	0
Energy and commodities	0	0	0	0	0	0	0	0
Derivatives not qualifying for hedge accounting – total	**83**	**(11)**	72	**(5)**	**6,185**	**12**	**0**	6,197
Total	**107**	**(105)**	2	**174**	**8,985**	**42**	**424**	9,451

8.4.1. Currency instruments

- Currency swaps

The Group uses currency swaps mainly to convert euro-denominated funds into foreign currencies for cash management purposes.

- Forward foreign exchange contracts and currency options

Forward foreign exchange contracts and currency options are used to hedge foreign currency transactions, particularly commercial transactions (purchases and sales) and investments.

8.4.2. Interest rate instruments

- Interest rate swaps

The Group uses interest rate swaps to convert part of its fixed (variable) rate bank debt and bond debt to variable (fixed) rates.

- Cross-currency swaps

The Group uses cross-currency swaps to convert foreign currency debt (euro debt) into euro debt (foreign currency debt).

8.4.3. Energy and commodity instruments

- Energy and commodity swaps

Energy and commodity swaps are used to hedge the risk of changes in the price of certain purchases used in the Group subsidiaries' operating activities, particularly energy (fuel oil, natural gas and electricity) purchases.

8.4.4. Other risks

- Equity derivatives

Equity derivatives are used to hedge the risk of changes in the Saint-Gobain share price in connection with the performance units long-term incentive plan.

8.4.5. Credit value adjustments to derivative instruments

Credit value adjustments to derivative instruments are calculated in accordance with IFRS 13 based on historical probabilities of default derived from calculations performed by a leading rating agency and on the estimated loss given default. At December 31, 2017, credit value adjustments were not material.

8.4.6. Impact on equity of financial instruments qualifying for cash flow hedge accounting

At December 31, 2017, the cash flow hedging reserve carried in equity in accordance with IFRS had a credit balance of €21 million, consisting mainly of:

- a debit balance of €29 million in relation to cross-currency swaps designated as cash flow hedges that are used to convert a GBP bond issue into euros;
- a credit balance of €49 million corresponding to changes in the fair value of currency hedges taken out in relation to the acquisition of a controlling interest in Sika, breaking down as:
  - a credit balance of €70 million taken to equity when the initial hedge was unwound,
  - a debit balance of €21 million corresponding to changes in the fair value of the new hedge, measured at a spot exchange rate of CHF 1.17 for €1. An increase of 10% in this exchange rate would result in a decrease of around €245 million in equity. A decrease of 10% in this exchange rate would have the opposite impact.

The ineffective portion of cash flow hedging derivatives is not material.

8.4.7. Impact on income of financial instruments not qualifying for hedge accounting

The fair value of derivatives classified as financial assets and liabilities at fair value through profit or loss represented a gain of €2 million in 2017 compared to a loss of €5 million in 2016. Changes in the fair value of the initial hedge are offset in the income statement against the unwinding of the hedge taken out in connection with the acquisition of a controlling interest in Sika.

8.4.8. Embedded derivatives

The Saint-Gobain Group regularly analyzes its contracts in order to separately identify financial instruments classified as embedded derivatives under IFRS.

At December 31, 2017, no embedded derivatives deemed to be material at Group level were identified.

8.4.9. Group debt structure

The weighted average interest rate on total gross debt under IFRS and after hedging (interest rate swaps, currency swaps and cross-currency swaps) was 2.8% at December 31, 2017, compared with 3.4% at December 31, 2016.

The average internal rate of return for the main component of long-term debt before hedging (bonds) was 3.2% in 2017, compared with 3.9% in 2016.

The table below presents the breakdown by interest rate (fixed or variable) of the Group's gross debt at December 31, 2017, taking into account interest rate, currency and cross-currency swaps:

(in € millions)	Gross debt after hedging		
	Variable rate	**Fixed rate**	**Total**
EUR	1,219	7,264	8,483
Other currencies	153	438	591
Total	**1,372**	**7,702**	**9,074**
(in %)	15%	85%	100%
Accrued interest and other financial liabilities			165
Total gross debt			**9,239**

8.5. Financial assets and liabilities

Financial assets and liabilities are classified as follows in accordance with IFRS 7:

At December 31, 2017:

(in € millions)		Financial instruments at fair value				Other financial instruments				Financial instruments at fair value			
Balance sheet headings and classes of instrument	**Notes**	**Financial instruments through profit or loss**	**Qualifying derivatives**	**Assets and liabilities measured at fair value (fair value option)**	**Total financial instruments measured at fair value**	**Available-for-sale financial assets**	**Loans and receivables**	**Liabilities at amortized cost**	**Total financial instruments**	**Level 1 inputs**	**Level 2 inputs**	**Level 3 inputs**	**Total financial instruments measured at fair value**
Trade and other accounts receivable	(3)				**0**		6,425		**6,425**				**0**
Loans, deposits and surety	(6)				**0**		512		**512**				**0**
Available-for-sale and other securities	(6)				**0**	101			**101**				**0**
Derivatives recorded in assets		83	24		**107**				**107**		107		**107**
Cash and cash equivalents				3,284	**3,284**				**3,284**	1,626	1,658		**3,284**
Total assets		**83**	**24**	**3,284**	**3,391**	**101**	**6,937**	**0**	**10,429**	**1,626**	**1,765**	**0**	**3,391**
Trade and other accounts payable	(3)				**0**			(9,818)	**(9,818)**				**0**
Long- and short-term debt					**0**			(9,169)	**(9,169)**				**0**
Derivatives recorded in liabilities		(11)	(94)		**(105)**		0		**(105)**		(105)		**(105)**
Total liabilities		**(11)**	**(94)**	**0**	**(105)**	**0**	**0**	**(18,987)**	**(19,092)**	**0**	**(105)**	**0**	**(105)**
Total		**72**	**(70)**	**3,284**	**3,286**	**101**	**6,937**	**(18,987)**	**(8,663)**	**1,626**	**1,660**	**0**	**3,286**

At December 31, 2016:

(in € millions)		Financial instruments at fair value				Other financial instruments				Financial instruments at fair value			
Balance sheet headings and classes of instrument	**Notes**	**Financial instruments through profit or loss**	**Qualifying derivatives**	**Assets and liabilities measured at fair value (fair value option)**	**Total financial instruments measured at fair value**	**Available-for-sale financial assets**	**Loans and receivables**	**Liabilities at amortized cost**	**Total financial instruments**	**Level 1 inputs**	**Level 2 inputs**	**Level 3 inputs**	**Total financial instruments measured at fair value**
Trade and other accounts receivable	(3)				**0**		6,193		**6,193**				**0**
Loans, deposits and surety	(6)				**0**		521		**521**				**0**
Available-for-sale and other securities	(6)				**0**	148			**148**				**0**
Derivatives recorded in assets		5	256		**261**				**261**		261		**261**
Cash and cash equivalents				3,738	**3,738**				**3,738**	2,209	1,529		**3,738**
Total assets		**5**	**256**	**3,738**	**3,999**	**148**	**6,714**	**0**	**10,861**	**2,209**	**1,790**	**0**	**3,999**
Trade and other accounts payable	(3)				**0**			(9,433)	**(9,433)**				**0**
Long- and short-term debt					**0**			(9,307)	**(9,307)**				**0**
Derivatives recorded in liabilities		(10)	(77)		**(87)**				**(87)**		(87)		**(87)**
Total liabilities		**(10)**	**(77)**	**0**	**(87)**	**0**	**0**	**(18,740)**	**(18,827)**	**0**	**(87)**	**0**	**(87)**
Total		**(5)**	**179**	**3,738**	**3,912**	**148**	**6,714**	**(18,740)**	**(7,966)**	**2,209**	**1,703**	**0**	**3,912**

IFRS 13 ranks the inputs used to determine fair value:

Level 1: inputs resulting from quoted prices on an active market for identical instruments;
Level 2: inputs other than Level 1 inputs that can be observed directly or indirectly;
Level 3: all other non-observable inputs.

NOTE 9 SHAREHOLDERS' EQUITY AND EARNINGS PER SHARE

9.1. Equity

9.1.1. Capital stock

As of December 31, 2017, the number of shares composing the capital stock of Compagnie de Saint-Gobain was 553,557,091 shares with a par value of €4 (555,280,358 shares at December 31, 2016). At December 31, 2017, capital stock comprised a single share class.

9.1.2. Additional paid-in capital and legal reserve

This item includes capital contributions in excess of the par value of capital stock as well as the legal reserve, which corresponds to a cumulative portion of the yearly net income of Compagnie de Saint-Gobain.

9.1.3. Retained earnings and consolidated net income for the year

Retained earnings and consolidated net income for the year correspond to the Group's share in the undistributed earnings of all consolidated companies.

9.1.4. Treasury stock

Treasury stock is measured at cost and recorded as a deduction from equity. Gains and losses on disposals of treasury stock are recognized directly in equity and have no impact on net income for the period.

Forward purchases of treasury stock are treated in the same way. When a fixed number of shares is purchased forward at a fixed price, this amount is recorded in "Other liabilities" against a deduction from equity under "Retained earnings and net income for the year".

Saint-Gobain shares held or controlled by Compagnie de Saint-Gobain and Saint-Gobain Corporation are shown as a deduction from equity under "Treasury stock" at acquisition cost.

The liquidity agreement signed with Exane BNP Paribas on November 16, 2007 and implemented on December 3, 2007 for a period up to December 31, 2007 has been automatically renewed since that date.

At December 31, 2017, 2,771 372 shares were held in treasury stock (December 31, 2016: 1,891,955 shares). In 2017, the Group acquired 9,595,036 shares (12,246,156 shares in 2016) directly on the market and sold 1,715,619 shares (2016: 1,706,031 shares). Lastly, 7,000,000 shares were canceled in 2017 and 10,984,088 shares in 2016.

For the purposes of a compensation plan set up in January 2008 for certain employees in the United States, Compagnie de Saint-Gobain shares are held by the trustee, Wachovia Bank, National Association. In the consolidated financial statements, these shares are treated as being controlled by Saint-Gobain Corporation.

9.1.5. Dividends

The Annual Shareholders' Meeting of June 8, 2017 approved the recommended dividend payout for 2016, representing €1.26 per share.

9.2. Earnings per share

Basic earnings per share are calculated by dividing net income by the weighted average number of shares of the Group outstanding during the period.

Diluted earnings per share are calculated by adjusting earnings per share and the average number of shares outstanding for the effects of all potential dilutive common shares, such as stock options and performance shares.

Basic and diluted earnings per share are as follows:

	2017		2016	
	Basic	Diluted	Basic	Diluted
Income (in € millions)				
Group share of net income	1,566	1,566	1,311	1,311
Number of shares				
Weighted average number of shares in issue	553,383,836		554,624,285	
Weighted average number of shares assuming full dilution		556,655,598		557,163,247
Earnings per share (in €)				
Earnings per share, Group share	2.83	2.81	2.36	2.35

The weighted average number of shares assuming full dilution is calculated based on the weighted average number of shares outstanding, assuming conversion of all dilutive instruments. The Group's dilutive instruments include stock options and performance share grants corresponding to a weighted average of 975,772 and 2,295,990 shares, respectively, at December 31, 2017.

NOTE 10 TAXES

10.1. Income taxes

Current income tax is the estimated amount of tax payable in respect of income for a given period, calculated by reference to the tax rates that have been enacted or substantively enacted at the end of the reporting period, plus any adjustments to current taxes recorded in previous financial periods.

Income tax expense breaks down as follows:

(in € millions)	2017	2016
Current taxes	**(445)**	**(325)**
France	(18)	(45)
Outside France	(427)	(280)
Deferred taxes	**7**	**(91)**
France	64	86
Outside France	(57)	(177)
Total income tax expense	**(438)**	**(416)**

Theoretical tax expense was reconciled with current tax expense using a tax rate of 34.43% in 2017 and 2016, and can be analyzed as follows:

(in € millions)	2017	2016
Net income	1,625	1,352
Less:		
Share in net income of equity-accounted companies	33	36
Income taxes	(438)	(416)
Pre-tax income of consolidated companies	**2,030**	**1,732**
French tax rate	34.43%	34.43%
Theoretical tax expense at French tax rate	(699)	(596)
Impact of different tax rates	161	161
Asset impairment, capital gains and losses and anti-trust provision	(37)	(8)
Deferred tax assets not recognized	(10)	(75)
Liability method	98	67
Research tax credit, tax credit for competitiveness and employment (CICE) and value-added contribution for businesses (CVAE)	9	5
Costs related to dividends*	31	(5)
Other taxes and provision writebacks	9	35
Total income tax expense	**(438)**	**(416)**

* Including the cancelation of the 3% tax on dividends in 2017.

Changes in deferred tax rates in certain countries led the Group to recognize an income tax gain of €98 million in 2017 (€67 million gain in 2016). The main contributors to this item are the United States and France.

In view of the late adoption of US tax reform, some impact assessments remain to be completed during the first half of 2018. The residual impact is however expected to be limited. The impact of the tax on repatriated profits of foreign subsidiaries is not material in view of the limited number of foreign operations owned by Saint-Gobain's US entities.

The contribution of countries with low tax rates explains the impact of the different tax rates applicable outside France. The main contributors are Poland, the United Kingdom, the Czech Republic, Sweden and Norway.

10.2. Deferred tax

Deferred taxes are recorded using the balance sheet method for temporary differences between the carrying amount of assets and liabilities and their tax basis. Deferred tax assets and liabilities are measured at the tax rates expected to apply to the period when the asset is realized or the liability settled, based on the tax laws that have been enacted or substantively enacted at the end of the reporting period.

No deferred tax liability is recognized in respect of undistributed earnings of subsidiaries that are not intended to be distributed.

For investments in subsidiaries, deferred tax is recognized on the difference between the consolidated carrying amount of the investments and their tax basis when it is probable that the temporary difference will reverse in the foreseeable future.

Deferred taxes are recognized as income or expense in the income statement, unless they relate to items that are recognized directly in equity, in which case the deferred tax is also recognized in equity. Income tax resulting from changes in tax rates is recognized in income, except when it relates to items initially recognized in equity.

In the balance sheet, changes in the net deferred tax liability break down as follows:

(in € millions)	**Net deferred tax asset/(liability)**
At January 1, 2016	**871**
Deferred tax (expense)/benefit	(91)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	76
Liability method on actuarial gains and losses	(51)
Translation adjustments	29
Impact of changes in Group structure and other	(9)
At December 31, 2016	**825**
Deferred tax (expense)/benefit	7
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(89)
Liability method on actuarial gains and losses*	(252)
Translation adjustments	(40)
Impact of changes in Group structure and other	60
At December 31, 2017	**511**

* The liability method on actuarial gains and losses mainly concerns the United States.

The table below shows the main deferred tax components:

(in € millions)	**Dec. 31, 2017**	**Dec. 31, 2016**
Pensions	562	846
Brands	(425)	(474)
Depreciation and amortization, accelerated capital allowances and tax-driven provisions	(711)	(887)
Tax loss carry-forwards	633	765
Other	452	575
Net deferred tax	**511**	**825**
Of which:		
Deferred tax assets	938	1,188
Deferred tax liabilities	(427)	(363)

Deferred taxes are offset at the level of each tax entity, i.e., by tax group where applicable (mainly in France, the United Kingdom, Spain, Germany, the United States and the Netherlands).

Deferred tax assets of €938 million were recognized at December 31, 2017 (€1,188 million at December 31, 2016), primarily in the United States (€245 million), Germany (€203 million) and France (€161 million). Deferred tax liabilities of €427 million were recognized at December 31, 2017 (€363 million at December 31, 2016), including €144 million in the United Kingdom, €52 million in India, €50 million in Switzerland, and €41 million in Denmark. Deferred tax liabilities recognized in other countries represented considerably smaller amounts.

10.3. Tax loss carry-forwards

Deferred tax assets are recognized only if it is considered probable that there will be sufficient future taxable income against which the temporary difference can be utilized. They are reviewed at the end of each reporting period and written down to the extent that it is no longer probable that there will be sufficient taxable income against which the temporary difference can be utilized. In determining whether to recognize deferred tax assets for tax loss carry-forwards, the Group applies a range of criteria that take into account the probable recovery period based on business plan projections and the strategy for the long-term recovery of tax losses applied in each country.

The Group recognized deferred income tax assets on loss carry-forwards for a net amount of €633 million at December 31, 2017 and €765 million at December 31, 2016. This principally relates to the United States, for which the recovery period is shorter than the maximum utilization period of 20 years, and to France, Germany and Spain, where tax consolidation ensures that deferred tax can be recovered. In these countries, tax losses may be carried forwards indefinitely. Nevertheless, after analyzing each situation, the Group may decide not to recognize them.

At December 31, 2017, deferred tax assets whose recovery is not considered probable totaled €330 million (December 31, 2016: €393 million) and a provision had been accrued for the full amount. Unrecognized deferred tax assets chiefly relate to China, Spain, Germany and the United States.

NOTE 11 SUBSEQUENT EVENTS

None.

NOTE 12 FEES PAID TO THE STATUTORY AUDITORS

Total fees paid to the Statutory Auditors and recognized in the income statement in 2017 and 2016 are detailed in the "Additional information and cross-reference tables" section of the Registration Document.

NOTE 13 PRINCIPAL CONSOLIDATED COMPANIES

The table below shows the Group's principal consolidated companies, typically those with annual sales of over €100 million.

INNOVATIVE MATERIALS SECTOR

FLAT GLASS	Country	Dec. 31, 2017 Consolidation method	Percentage held directly and indirectly
Saint-Gobain Glass Deutschland GmbH, Stolberg*	Germany	Full consolidation	99.99%
Saint-Gobain Sekurit Deutschland GmbH & CO Kg, Herzogenrath*	Germany	Full consolidation	99.99%
Saint-Gobain Deutsche Glas GmbH, Stolberg*	Germany	Full consolidation	99.99%
Flachglas Torgau GmbH, Torgau*	Germany	Full consolidation	99.99%
Saint-Gobain Weisswasser GmbH, Aachen*	Germany	Full consolidation	99.99%
Glasverarbeitungs-Gesellschaft Bremen mbH, Bremen*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Nord GmbH, Lübeck*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Süd GmbH, Tuttlingen*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Objekt-Center GmbH, Radeburg*	Germany	Full consolidation	99.99%
Glas-Funke GmbH, Kall*	Germany	Full consolidation	99.99%
Glasverarbeitungs-Gesellschaft Deggendorf mbH, Deggendorf*	Germany	Full consolidation	99.99%
Vetrotech Saint-Gobain Kinon GmbH, Aachen*	Germany	Full consolidation	99.99%
Saint-Gobain Autoglas GmbH, Herzogenrath*	Germany	Full consolidation	99.99%
Saint-Gobain Sekurit Deutschland Beteiligungen GmbH, Herzogenrath*	Germany	Full consolidation	99.99%
FABA Autoglas Technik GmbH & Co. Betriebs-KG, Berlin*	Germany	Full consolidation	99.99%
Freeglass GmbH & Co. KG, Schwaikheim*	Germany	Full consolidation	99.99%
Saint-Gobain Autover Deutschland GmbH, Kerpen*	Germany	Full consolidation	99.99%
Freudenberger Autoglas GmbH, München*	Germany	Full consolidation	99.99%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
Cebrace Cristal Plano Ltda	Brazil	Full consolidation	50.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
SG Hanglas Sekurit (Shanghaï) Co., Ltd	China	Full consolidation	90.24%
Hankuk Sekurit Limited	South Korea	Full consolidation	90.13%
Hankuk Glass Industries Inc.	South Korea	Full consolidation	80.47%
Saint-Gobain Cristaleria S.L	Spain	Full consolidation	99.83%
Saint-Gobain Glass France	France	Full consolidation	100.00%
Saint-Gobain Sekurit France	France	Full consolidation	100.00%
Eurofloat	France	Full consolidation	100.00%
Saint-Gobain Glass Solutions Menuisiers Industriels	France	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.14%
Saint-Gobain Glass Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain Mexico	Mexico	Full consolidation	99.83%
Saint-Gobain Polska Sp Zoo	Poland	Full consolidation	99.11%
Saint-Gobain Innovative Materials Polska Sp Zoo	Poland	Full consolidation	98.61%
Saint-Gobain Sekurit CZ, Spol S.R.O	Czech Republic	Full consolidation	100.00%
Saint-Gobain Glass (United Kingdom) Limited	United Kingdom	Full consolidation	100.00%
Vetrotech Saint-Gobain International	Switzerland	Full consolidation	100.00%

HIGH PERFORMANCE MATERIALS	Country	Dec. 31, 2017	
		Consolidation method	Percentage held directly and indirectly
Saint-Gobain Abrasives GmbH, Wesseling*	Germany	Full consolidation	100.00%
Saint-Gobain Diamantwerkzeuge GmbH, Norderstedt*	Germany	Full consolidation	100.00%
Supercut Europe GmbH, Baesweiler*	Germany	Full consolidation	100.00%
Ernst Winter & Sohn Norderstedt GmbH & Co. KG, Norderstedt*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Isofluor GmbH, Neuss*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics MG Silikon GmbH, Lindau*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Pampus GmbH, Willich*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics L+S GmbH, Wertheim*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Biolink GmbH, Waakirchen*	Germany	Full consolidation	100.00%
Kirson Industrial Reinforcement GmbH, Neustadt an der Donau*	Germany	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canada, Inc.	Canada	Full consolidation	100.00%
Saint-Gobain Performance Plastics (Shanghaï) Co., LTD	China	Full consolidation	100.00%
Saint-Gobain Abrasives (Shanghaï) Co., LTD	China	Full consolidation	100.00%
Saint-Gobain Abrasives, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Ceramics & Plastics, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Performance Plastics Corporation	United States	Full consolidation	100.00%
Saint-Gobain Adfors America, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Abrasifs	France	Full consolidation	99.98%
Société Européenne des Produits Réfractaires - SEPR	France	Full consolidation	100.00%
Grindwell Norton Ltd	India	Full consolidation	51.59%
Saint-Gobain K.K.	Japan	Full consolidation	100.00%
Saint-Gobain America S.A De C.V	Mexico	Full consolidation	99.83%
Saint-Gobain Abrasives BV	Netherlands	Full consolidation	100.00%
Saint-Gobain HPM Polska Sp Zoo	Poland	Full consolidation	100.00%
Saint-Gobain Adfors CZ S.R.O.	Czech Republic	Full consolidation	100.00%

CONSTRUCTION PRODUCTS SECTOR

INTERIOR SOLUTIONS	Country	Dec. 31, 2017 Consolidation method	Percentage held directly and indirectly
Saint-Gobain Construction Products South Africa Ltd	South Africa	Full consolidation	100.00%
Saint-Gobain Rigips GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Isover G+H Aktiengesellschaft	Germany	Full consolidation	99.91%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
CertainTeed Gypsum Canada, Inc.	Canada	Full consolidation	100.00%
Saint-Gobain Placo Iberica	Spain	Full consolidation	99.83%
CertainTeed Corporation	United States	Full consolidation	100.00%
CertainTeed Gypsum & Ceillings USA, Inc.	United States	Full consolidation	100.00%
CertainTeed Ceilings Corporation	United States	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Placoplatre SA	France	Full consolidation	99.75%
Saint-Gobain Isover	France	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.14%
Saint-Gobain PPC Italia S.p.a	Italy	Full consolidation	100.00%
Mag-Isover K.K.	Japan	Full consolidation	99.98%
Glava As	Norway	Full consolidation	100.00%
Saint-Gobain Construction Products Nederland BV	Netherlands	Full consolidation	100.00%
Saint-Gobain Construction Products Polska Sp Zoo	Poland	Full consolidation	100.00%
Saint-Gobain Construction Products CZ AS	Czech Republic	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products Russia ooo	Russia	Full consolidation	100.00%
Saint-Gobain Ecophon AB	Sweden	Full consolidation	100.00%
Saint-Gobain Sweden AB	Sweden	Full consolidation	100.00%
Izocam Ticaret VE Sanayi A.S.	Turkey	Full consolidation	47.53%
Vinh Tuong Industrial Corporation	Vietnam	Full consolidation	98.65%

EXTERIOR SOLUTIONS	Country	Dec. 31, 2017 Consolidation method	Percentage held directly and indirectly
Saint-Gobain Weber GmbH	Germany	Full consolidation	100.00%
Saint-Gobain PAM Deutschland GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Argentina S.A	Argentina	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canalizaçao Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain (Xuzhou) Pipe Co., Ltd	China	Full consolidation	100.00%
Saint-Gobain (Xuzhou) Pipelines Co., Ltd	China	Full consolidation	100.00%
Saint-Gobain Pipelines Co., Ltd	China	Full consolidation	100.00%
CertainTeed Corporation	United States	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Saint-Gobain Weber	France	Full consolidation	100.00%
Saint-Gobain PAM	France	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Sweden AB	Sweden	Full consolidation	100.00%
Saint-Gobain Weber AG	Switzerland	Full consolidation	100.00%

BUILDING DISTRIBUTION SECTOR

	Country	Dec. 31, 2017	
		Consolidation method	Percentage held directly and indirectly
Saint-Gobain Building Distribution Deutschland GmbH, Offenbach/Main*	Germany	Full consolidation	100.00%
Fliesen Discount GmbH, Berlin*	Germany	Full consolidation	100.00%
Chr.Balzer GmbH & Co. KG, Marburg*	Germany	Full consolidation	67.34%
Balzer & Nassauer GmbH & Co. KG, Herborn*	Germany	Full consolidation	67.34%
Christian Balzer Beteiligungs GmbH & Co. KG, Allendorf (Eder)*	Germany	Full consolidation	67.34%
Balzer GmbH & Co. KG, Allendorf (Eder)*	Germany	Full consolidation	67.34%
Saint-Gobain Distribuiçao Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Distribution Denmark	Denmark	Full consolidation	100.00%
Saint-Gobain Distribucion Construccion, S.L	Spain	Full consolidation	99.83%
Distribution Sanitaire Chauffage	France	Full consolidation	100.00%
Lapeyre	France	Full consolidation	100.00%
Saint-Gobain Distribution Bâtiment France	France	Full consolidation	100.00%
Optimera As	Norway	Full consolidation	100.00%
Saint-Gobain Distribution The Netherlands B.V	Netherlands	Full consolidation	100.00%
Saint-Gobain Building Distribution Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Distribution Nordic Ab	Sweden	Full consolidation	100.00%
Sanitas Troesch Ag	Switzerland	Full consolidation	100.00%

* German consolidated subsidiary or sub-group with corporate or limited liability status and meeting the criteria under Articles 264 paragraph 3, 264b and 291 of the German Commercial Code (HGB) exempting the relevant entities and sub-groups from publishing their statutory and consolidated financial statements or notes to the financial statements and management reports (entities or sub-groups above or below the €100 million threshold).