SAINT-GOBAIN

CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2016

Direction de la CONSOLIDATION REPORTING GROUPE

COMPAGNIE DE SAINT-GOBAIN

STATUTORY AUDITORS' REPORT
ON THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended December 31, 2016

The Statutory Auditors

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STATUTORY AUDITORS' REPORT
ON THE CONSOLIDATED FINANCIAL STATEMENTS
Year ended December 31, 2016

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking users. The Statutory Auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the Auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions, or disclosures.

This report also includes information relating to the specific verification of information given in the Group's 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
18, avenue d'Alsace
92400 Courbevoie

To the Shareholders,

In compliance with the assignment entrusted to us by your Annual General Meeting, we hereby report to you, for the year ended December 31, 2016, on:

- the audit of the accompanying consolidated financial statements of Compagnie de Saint-Gobain;
- the justification of our assessments;
- the specific verification required by law.

These consolidated financial statements have been approved by the Board of Directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

I - Opinion on the consolidated financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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 at December 31, 2016 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.

II - Justification of our assessments

In accordance with the requirements of article L.823-9 of the French Commercial Code (*code de commerce*) relating to the justification of our assessments, we bring to your attention the following matters:

- Measurement of property, plant and equipment and intangible assets

The Group regularly carries out impairment tests on its property, plant and equipment, goodwill and other intangible assets, and also assesses whether there is any indication of impairment of property, plant and equipment and amortizable intangible assets, based on the methods described in Note 5.5 to the consolidated financial statements ("Impairment review"). We examined the methods applied in implementing these tests and the estimates and assumptions used, and we verified that the information disclosed in Note 5.5 to the consolidated financial statements is appropriate.

- Employee benefits

The methods applied for assessing employee benefits are set out in Note 4.3 to the consolidated financial statements ("Provisions for pensions and other employee benefits"). These benefit obligations were reviewed by independent actuaries. Our work consisted of assessing the data and assumptions used, examining, on a test basis, the calculations performed and verifying that the information disclosed in Note 4.3 to the consolidated financial statements is appropriate.

- Provisions

As specified in Note 7 to the consolidated financial statements ("Other current and non-current liabilities and provisions, contingent liabilities and litigation"), the Group books provisions to cover risks. The nature of these provisions recorded is described in Note 7.1 to the consolidated financial statements. Based on the information available at the time of our audit, we ensured that the methods and data used to determine provisions as well as the disclosures regarding said provisions provided in Note 7 to the consolidated financial statements are appropriate.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

III - Specific verification

As required by law, we have also verified in accordance with professional standards applicable in France the information presented in the Group's management report.

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

Neuilly-sur-Seine and Paris La Défense, February 23, 2017

The Statutory Auditors

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

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2016 CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEET

At December 31

(in € millions)	Notes	2016	2015
ASSETS			
Goodwill	(5)	10,669	10,683
Other intangible assets	(5)	2,662	2,748
Property, plant and equipment	(5)	11,654	11,587
Investments in equity-accounted companies	(6)	376	319
Deferred tax assets	(10)	1,188	1,337
Other non-current assets	(6)	710	635
Non-current assets		**27,259**	**27,309**
Inventories	(3)	5,875	5,715
Trade accounts receivable	(3)	4,935	4,751
Current tax receivable	(10)	445	296
Other receivables	(3)	1,515	1,405
Cash and cash equivalents	(8)	3,738	5,380
Current assets		**16,508**	**17,547**
Total assets		**43,767**	**44,856**
EQUITY AND LIABILITIES			
Capital stock	(9)	2,221	2,244
Additional paid-in capital and legal reserve		6,090	6,341
Retained earnings and consolidated net income		11,077	10,805
Cumulative translation adjustments		(742)	(528)
Fair value reserves		191	181
Treasury stock	(9)	(72)	(87)
Shareholders' equity		**18,765**	**18,956**
Minority interests		375	364
Total equity		**19,140**	**19,320**
Long-term debt	(8)	6,959	7,330
Provisions for pensions and other employee benefits	(4)	3,615	3,849
Deferred tax liabilities	(10)	363	466
Other non-current liabilities and provisions	(7)	1,242	1,276
Non-current liabilities		**12,179**	**12,921**
Current portion of long-term debt	(8)	1,835	2,231
Current portion of other liabilities and provisions	(7)	436	454
Trade accounts payable	(3)	5,805	5,716
Current tax liabilities	(10)	148	150
Other payables	(3)	3,636	3,448
Short-term debt and bank overdrafts	(8)	588	616
Current liabilities		**12,448**	**12,615**
Total equity and liabilities		**43,767**	**44,856**

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

CONSOLIDATED INCOME STATEMENT

(in € millions)	Notes	2016	2015
Net sales	(3)	39,093	39,623
Cost of sales	(3)	(29,106)	(29,694)
General expenses including research	(3)	(7,200)	(7,336)
Share in net income of core business equity-accounted companies	(6)	31	43
Operating income		**2,818**	**2,636**
Other business income	(3)	61	49
Other business expense	(3)	(575)	(1,391)
Business income		**2,304**	**1,294**
Borrowing costs, gross		(376)	(444)
Income from cash and cash equivalents		27	25
Borrowing costs, net		(349)	(419)
Other financial income and expense		(192)	(210)
Net financial expense	**(8)**	**(541)**	**(629)**
Share in net income of non-core business equity-accounted companies	(6)	5	0
Income taxes	(10)	(416)	(248)
Net income from continuing operations		1,352	417
Net income from discontinued operations		0	929
Net income		**1,352**	**1,346**
Group share of net income from continuing operations		1,311	374
Group share of net income from discontinued operations		0	921
Group share of net income		**1,311**	**1,295**
Minority interests in net income from continuing operations		41	43
Minority interests in net income from discontinued operations		0	8
Minority interests		41	51

Earnings per share (in €)	Notes	2016	2015
Weighted average number of shares in issue		554,624,285	562,001,188
Earnings per share, Group share	(9)	2.36	2.30
Earnings per share from continuing operations, Group share	(9)	2.36	0.66
Earnings per share from discontinued operations, Group share	(9)	0.00	1.64
Weighted average number of shares assuming full dilution		557,163,247	564,780,983
Diluted earnings per share, Group share	(9)	2.35	2.29
Diluted earnings per share from continuing operations, Group share	(9)	2.35	0.66
Diluted earnings per share from discontinued operations, Group share	(9)	0.00	1.63

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

CONSOLIDATED STATEMENT OF RECOGNIZED INCOME AND EXPENSE

(in € millions)	**2016**	**2015**
Net income	**1,352**	**1,346**
Items that may be subsequently reclassified to profit or loss		
Translation adjustments	(217)	397
Changes in fair value	10	241
Tax on items that may be subsequently reclassified to profit or loss	(3)	(81)
Items that will not be reclassified to profit or loss		
Changes in actuarial gains and losses	(366)	(30)
Tax on items that will not be reclassified to profit or loss	76	(18)
Liability method on items that will not be reclassified to profit or loss	(49)	(33)
Income and expense recognized directly in equity	**(549)**	**476**
Total recognized income and expense for the year	803	1,822
Group share	766	1,800
Minority interests	37	22

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

CONSOLIDATED STATEMENT OF CASH FLOWS

(in € millions)	Notes	2016	2015
Group share of net income from continuing operations		**1,311**	**374**
Minority interests in net income	(a)	41	43
Share in net income of equity-accounted companies, net of dividends received	(6)	(20)	(29)
Depreciation, amortization and impairment of assets	(3)	1,369	2,085
Gains and losses on disposals of assets	(3)	2	70
Unrealized gains and losses arising from changes in fair value and share-based payments		42	(15)
Changes in inventory	(3)	(173)	26
Changes in trade accounts receivable and payable, and other accounts receivable and payable	(3)	72	192
Changes in tax receivable and payable	(10)	(135)	(134)
Changes in deferred taxes and provisions for other liabilities and charges	(4)(7)(10)	(544)	(143)
Net cash from (used in) operating activities of continuing operations		**1,965**	**2,469**
Net cash from (used in) operating activities of discontinued operations		0	140
Net cash from operating activities		**1,965**	**2,609**
Acquisitions of property, plant and equipment [2016: (1,370), 2015: (1,346)] and intangible assets	(5)	(1,521)	(1,475)
Increase (decrease) in amounts due to suppliers of fixed assets	(3)	24	8
Acquisitions of shares in consolidated companies [2016: (252), 2015: (201)], net of cash acquired		(233)	(189)
Acquisitions of other investments	(6)	(110)	(26)
Increase in investment-related liabilities	(7)	15	14
Decrease in investment-related liabilities	(7)	(9)	(28)
Investments		**(1,834)**	**(1,696)**
Disposals of property, plant and equipment and intangible assets	(5)	85	122
Disposals of shares in consolidated companies, net of cash divested		49	1,667
Disposals of other investments	(6)	1	2
Divestments		**135**	**1,791**
Increase in loans, deposits and short-term loans	(6)	(144)	(136)
Decrease in loans, deposits and short-term loans	(6)	150	72
Changes in loans, deposits and short-term loans		**6**	**(64)**
Net cash from (used in) investment and divestment activities of continuing operations		**(1,693)**	**31**
Net cash from (used in) investment and divestment activities of discontinued operations		0	(175)
Net cash from (used in) investment and divestment activities		**(1,693)**	**(144)**
Issues of capital stock	(a)	149	412
(Increase) decrease in treasury stock	(a)	(418)	(545)
Dividends paid	(a)	(680)	(695)
Transactions with shareholders of parent company		**(949)**	**(828)**
Minority interests' share in capital increases of subsidiaries	(a)	2	23
Acquisitions of minority interests without gain of control	(6)	0	0
Changes in investment-related liabilities following the exercise of put options of minority shareholders	(7)	(13)	(8)
Dividends paid to minority shareholders of consolidated subsidiaries	(a)	(31)	(37)
Transactions with minority interests		**(42)**	**(22)**
Increase (decrease) in bank overdrafts and other short-term debt		(138)	(8)
Increase in long-term debt	(b)	1,322	1,212
Decrease in long-term debt	(b)	(2,104)	(1,164)
Changes in gross debt		**(920)**	**40**
Net cash from (used in) financing activities of continuing operations		**(1,911)**	**(810)**
Net cash from (used in) financing activities of discontinued operations		0	273
Net cash from (used in) in financing activities		**(1,911)**	**(537)**
Increase (decrease) in cash and cash equivalents		**(1,639)**	**1,928**
Net effect of exchange rate changes on cash and cash equivalents		(1)	(25)
Net effect of changes in fair value on cash and cash equivalents		(2)	(10)
Net effect of exchange rate changes on discontinued operations		0	(6)
Cash and cash equivalents at beginning of year		**5,380**	**3,493**
Cash and cash equivalents at end of year		**3,738**	**5,380**

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

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

Income tax paid amounted to €460 million in 2016 (€591 million in 2015) and interest paid net of interest received amounted to €369 million in 2016 (€438 million in 2015).

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 Group share**	Minority interests	**Total equity**
561,895,566	**560,385,966**	**At January 1, 2015**	**2,248**	**6,437**	**10,411**	**(953)**	**(63)**	**(67)**	**18,013**	**405**	**18,418**
		Income and expenses recognized directly in equity	0	0	(161)	425	241	0	**505**	(29)	**476**
		Net income for the year			1,295				**1,295**	51	**1,346**
		Total income and expense for the year	**0**	**0**	**1,134**	**425**	**241**	**0**	**1,800**	**22**	**1,822**
		Issues of capital stock									
4,449,939	4,449,939	Group Savings Plan	18	126					**144**		**144**
1,038,730	1,038,730	Stock option plans	4	24					**28**		**28**
6,559,204	6,559,204	Dividends paid in shares	26	214					**240**		**240**
		Other							**0**	23	**23**
		Dividends paid (€1.24 per share)			(695)				**(695)**	(37)	**(732)**
	(15,050,261)	Shares purchased						(594)	**(594)**		**(594)**
	1,223,943	Shares sold			(13)			62	**49**		**49**
(13,000,000)		Shares canceled	(52)	(460)				512	**0**		**0**
		Share-based payments			9				**9**		**9**
		Changes in Group structure			(41)		3		**(38)**	(49)	**(87)**
560,943,439	**558,607,521**	**At December 31, 2015**	**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**
		Dividends paid in shares							**0**		**0**
		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**

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

NOTES TO THE 2016 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 by the Board of Directors on February 23, 2017 and will be submitted to the Shareholders' Meeting for approval.

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, 2015, 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, 2016. These financial statements have also been prepared in accordance with the IFRS issued by the International Accounting Standards Board (IASB). 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, 2016

The standards, interpretations and amendments to published standards applicable for the first time for reporting periods beginning on or after January 1, 2016 do not have a material impact on the consolidated financial statements.

- Amendment to IAS 1, "Disclosure initiative";
- Amendment to IAS 16 and IAS 38, "Clarification of acceptable methods of depreciation and amortization, and amendment to the revaluation method";
- Amendment to IAS 19, "Employee contributions and discount rate (regional market issue)";
- Amendment to IFRS 11, "Accounting for acquisitions of interests in joint operations";
- Amendment to IAS 27, "Equity method in separate financial statements";
- Amendment to IFRS 2, "Share-based Payment - Definition of vesting conditions" (for share-based payments awarded after July 1, 2014 - prospective application);
- Amendment to IFRS 3, "Business Combinations - Accounting for contingent consideration" (for business combinations carried out after July 1, 2014 - prospective application);
- Amendment to IFRS 5, "Non-current Assets Held for Sale - Changes in methods of disposal";
- Amendment to IFRS 7, "Financial Instruments - Disclosures regarding management mandates and applicability of the amendments to IFRS 7 to condensed interim financial statements";
- Amendment to IFRS 8, "Operating Segments - Aggregation of operating segments and reconciliations of assets";
- Amendment to the Basis for Conclusions of IFRS 13, "Short-term receivables and payables";
- Amendment to IAS 24, "Related Party disclosures - Key management personnel";
- Amendment to IAS 34, "Interim Financial Information - Information provided elsewhere in the interim financial report".

1.1.2. Standards, interpretations and amendments to existing standards available for early adoption in reporting periods beginning on or after January 1, 2016

The new standards, interpretations and amendments to existing standards applicable for reporting periods beginning on or after January 1, 2017 were not early-adopted by the Group in 2016.

- IFRS 9, "Financial Instruments"**:** the initial phase of this project in 2016 involved an analysis of issues relating to financial instruments (excluding trade receivables). The analysis will focus on trade receivables as from early 2017.

- IFRS 15, **"**Revenue from Contracts with Customers**":** although the Group does not expect IFRS 15 to have a material impact on its financial statements, a project was carried out in 2016 with the dual aim of (i) identifying the specific cases in which the standard will change the method of recognizing revenue and (ii) analyzing the overall impacts of the standard.

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 payments (Note 4 "Employees, personnel expenses and employee benefit obligations"), asset impairment tests (Note 5 "Property, plant and equipment and intangible assets"), 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 deferred 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 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 2016 and 2015 are presented below and a list of the main consolidated companies at December 31, 2016 is provided in Note 13 "Principal consolidated companies".

2.2.1. **Transactions carried out in 2016**

In 2016, Saint-Gobain pursued active management of the scope of its business activities, adhering closely to the Group's strategy. Various transactions were carried out with a view to strengthening the Group's profile in high value-added businesses and promising 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, 2016, 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 of the Annual General Meeting of Sika on April 14, 2015 for which SWH voting rights had been restricted, and SWH's appeal to the Zug Supreme Court against this decision. Saint-Gobain had anticipated these decisions by extending the term of the purchase agreement relating to the disposal of SWH shares with the Burkard family, from March 2016 to June 30, 2017. As of this date, Saint-Gobain will have the option to extend the agreement until December 31, 2018.

2.2.2. **Transactions carried out in 2015**

a) Sale of the Packaging Sector

Following the announcement made on June 8, 2015, Saint-Gobain Group sold the Packaging Sector on October 29, 2015 to funds managed by affiliates of Apollo Global Management, LLC and BPI France, which currently hold 90% and 10%, respectively, of the share capital. The sale was made based on an enterprise value of €2,945 million.

As a result, and in accordance with IFRS 5, "Non-current Assets Held for Sale and Discontinued Operations", net income from discontinued operations included the net income of the Packaging Sector until the date of sale and the disposal gains in respect of the Packaging Sector in 2015.

The consolidated income statement for the Packaging Sector was as follows:

(in € millions)	**2015***
Net sales	1,998
Cost of sales	(1,605)
General expenses including research	(116)
Share in net income of core business equity-accounted companies	0
Operating income	**277**
Other business income**	812
Other business expense	(16)
Business income	**1,073**
Borrowing costs, gross	(17)
Income from cash and cash equivalents	2
Borrowing costs, net	(15)
Other financial income and expense	(8)
Net financial expense	**(23)**
Share in net income of non-core business equity-accounted companies	0
Income taxes	(121)
Net income from discontinued operations	**929**
Group share of net income from discontinued operations	**921**
Minority interests in net income from discontinued operations	8

* The 2015 reporting period was closed as of the date of sale of the Packaging Sector, i.e., October 29, 2015.

** Including the €811 million pre-tax gain on disposal of the Packaging Sector in 2015.

b) Other changes in Group structure

In addition to the sale of the Packaging Sector, in 2015 Saint-Gobain Group continued to actively manage its portfolio of businesses, fully in line with the Group's strategy. In particular, the Group signed an agreement to sell its Norandex distribution business in the United States to ABC Supply Co Inc, the country's leading distributor of roofing and siding products.

Various acquisitions 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, 2016, the number of consolidated companies was as follows:

	France	Outside France	Total
Fully consolidated companies			
At January 1, 2016	**149**	**606**	**755**
Newly consolidated companies	8	38	46
Merged companies	(13)	(18)	(31)
Deconsolidated companies	(3)	(25)	(28)
Change in consolidation method		2	2
At December 31, 2016	141	603	744
Equity-accounted companies and joint arrangements			
At January 1, 2016	**3**	**93**	**96**
Newly consolidated companies	1	6	7
Merged companies			0
Deconsolidated companies		(6)	(6)
Change in consolidation method		(2)	(2)
At December 31, 2016	4	91	95
Total at January 1, 2016	**152**	**699**	**851**
Total at December 31, 2016	**145**	**694**	**839**

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

As of December 31, 2016, commitments for irrevocable purchases included the commitment on the equity interests of the Sika Group for the amount of €2,398 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 business are included in operating income. Contractual supplier discounts are common 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, the judgment of the management is immaterial 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, the judgment of the management 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)	**2016**	**2015**
Restructuring costs[(a)]	(144)	(179)
Provisions and expenses relating to claims and litigation[(b)]	(134)	(125)
Other[(c)]	(34)	(40)
Non-operating income and expense	**(312)**	**(344)**
Impairment of assets[(d)]	(200)	(929)
Other business expense[(e)]	(63)	(118)
Impairment of assets and other business expense	**(263)**	**(1,047)**
Gains on disposals of property, plant and equipment and intangible assets	**61**	**49**
Other business income and expense and impairment of assets	**(202)**	**(998)**
Other business income and expense	**(514)**	**(1,342)**

(a) Restructuring costs in 2016 mainly consist of retirement benefits totaling €76 million (€106 million in 2015);

(b) In both 2016 and 2015, 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 concerned asbestos-related litigation;

(c) In 2016, the “Other” line as detailed and explained in Note 7 “Other current and non-current liabilities and provisions, contingent liabilities and litigation” mainly relates to environmental litigation costs;

(d) Impairment losses on assets in 2016 include €13 million on goodwill (€157 million in 2015), €176 million on property, plant and equipment and intangible assets (€720 million in 2015), and €11 million on financial assets, current assets and acquisition fees incurred in connection with business combinations (€52 million in 2015);

(e) Other business expense in both 2016 and 2015 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)	2016	2015
Net sales	**39,093**	**39,623**
Personnel expenses:		
Salaries and payroll taxes	(7,819)	(7,746)
Share-based payments[a]	(30)	(21)
Pensions and employee benefit obligations[a]	(197)	(180)
Depreciation and amortization	(1,180)	(1,208)
Share in net income of core business equity-accounted companies	31	43
Other[b]	(27,080)	(27,875)
Operating income	**2,818**	**2,636**
Other business income	61	49
Other business expense	(575)	(1,391)
Other business income and expense	**(514)**	**(1,342)**
Business income	**2,304**	**1,294**

(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 €440 million in 2016 (€435 million in 2015).

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 2016 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 2016 and 2015 by sector and by business is as follows:

2016

	INNOVATIVE MATERIALS				CONSTRUCTION PRODUCTS				BUILDING DISTRIBUTION	Other*	Total
(in € millions)	Flat Glass	High-Performance Materials	Intra-segment eliminations	Total	Interior Solutions	Exterior Solutions	Intra-segment eliminations	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/(loss)	490	616		1,106	675	431		1,106	616	(10)	**2,818**
Business income/(loss)	426	475		901	555	386		941	552	(90)	**2,304**
Share in net income/(loss) 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.

2015

	INNOVATIVE MATERIALS				CONSTRUCTION PRODUCTS				BUILDING DISTRIBUTION	Other*	Total
(in € millions)	Flat Glass	High-Performance Materials	Intra-segment eliminations	Total	Interior Solutions	Exterior Solutions	Intra-segment eliminations	Total			
External sales	5,185	4,388		9,573	5,905	5,289		11,194	18,845	11	**39,623**
Internal sales	32	114	(16)	130	580	310	(72)	818	4	(952)	**0**
Net sales	5,217	4,502	(16)	9,703	6,485	5,599	(72)	12,012	18,849	(941)	**39,623**
Operating income/(loss)	413	602		1,015	576	446		1,022	603	(4)	**2,636**
Business income/(loss)	217	479		696	448	314		762	(46)	(118)	**1,294**
Share in net income/(loss) of equity-accounted companies	30	2		32	7	4		11	0	0	**43**
Depreciation and amortization	288	154		442	320	151		471	265	30	**1,208**
Impairment of assets	149	51		200	97	88		185	492	0	**877**
EBITDA	701	756		1,457	896	597		1,493	868	26	**3,844**
Capital expenditure	311	218		529	312	216		528	231	58	**1,346**
Cash flow from operations				931				790	629	212	**2,562**
Goodwill, net	209	1,597		1,806	3,741	2,216		5,957	2,920	0	**10,683**
Non-amortizable brands	0	0		0	814	90		904	1,381	0	**2,285**
Total segment assets and liabilities				7,301				12,292	7,595	315	**27,503**

* "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 2016 and 2015 by geographic area is as follows:

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/(loss)	301	1,072	544	901		**2,818**
Business income/(loss)	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**

2015

(in € millions)	France	Other Western European countries	North America	Emerging countries and Asia	Internal sales	TOTAL
Net sales	10,326	17,414	5,366	8,375	(1,858)	**39,623**
Operating income/(loss)	297	984	490	865		**2,636**
Business income/(loss)	(317)	752	159	700		**1,294**
EBITDA	595	1,361	665	1,223		**3,844**
Capital expenditure	269	335	282	460		**1,346**
Cash flow from operations	382	941	412	827		**2,562**

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 €3,998 million in 2016 (€3,844 million in 2015), calculated as follows:

(in € millions)	2016	2015
Operating income	2,818	2,636
Depreciation/amortization of property, plant and equipment and intangible assets	1,180	1,208
EBITDA	**3,998**	**3,844**

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 from continuing operations totaled €1,398 million in 2016 (€1,165 million in 2015). Based on the weighted average number of shares outstanding at December 31 (554,624,285 shares in 2016 and 562,001,188 shares in 2015), recurring earnings per share amounted to €2.52 in 2016 and €2.07 in 2015.

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

(in € millions)	**2016**	**2015**
Group share of net income from continuing operations	**1,311**	**374**
Less:		
Gains and losses on disposals of assets	(2)	(70)
Impairment of assets and acquisition fees incurred in connection with business combinations	(201)	(928)
Changes in provision for anti-trust litigation and other non-recurring provisions	(4)	(34)
Impact of minority interests	(1)	0
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	121	241
Group share of recurring net income from continuing operations	**1,398**	**1,165**

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 continuing operations totaled €2,749 million in 2016 (€2,562 million in 2015) and cash flow from operations excluding income tax on disposal gains and losses and non-recurring provisions from continuing operations amounted to €2,628 million in 2016 (€2,321 million in 2015). These amounts are calculated as follows:

(in € millions)	2016	2015
Group share of net income from continuing operations	**1,311**	**374**
Minority interests in net income	41	43
Share in net income of equity-accounted companies, net of dividends received	(20)	(29)
Amortization and impairment of assets	1,369	2,085
Gains and losses on disposals of assets	2	70
Changes in provision for anti-trust litigation and other non-recurring provisions	4	34
Unrealized gains and losses arising from changes in fair value and share-based payments	42	(15)
Cash flow from operations of continuing operations	**2,749**	**2,562**
Tax on disposal gains and losses, asset impairment and non-recurring charges to provisions	(121)	(241)
Cash flow from operations before tax on disposal gains and losses and non-recurring provisions of continuing operations	**2,628**	**2,321**

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.

At December 31, 2016 and 2015, inventories were as follows:

(in € millions)	Dec. 31, 2016	Dec. 31, 2015
Gross value		
Raw materials	1,327	1,282
Work in progress	318	284
Finished goods	4,678	4,610
Gross inventories	**6,323**	**6,176**
Provision for impairment		
Raw materials	(143)	(149)
Work in progress	(11)	(13)
Finished goods	(294)	(299)
Total provision for impairment	**(448)**	**(461)**
Net value	**5,875**	**5,715**

The net value of inventories was €5,875 million at December 31, 2016 compared with €5,715 million at December 31, 2015.

Impairment losses on inventories recorded in the 2016 income statement totaled €176 million (€208 million in 2015). Reversals of impairment losses on inventories amounted to €152 million in 2016 (€125 million in 2015).

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, 2016**	**Dec. 31, 2015**
Gross value	5,361	5,201
Provision for impairment	(426)	(450)
Trade accounts receivable	**4,935**	**4,751**
Discounts and advances to suppliers	567	504
Prepaid payroll taxes	24	16
Other prepaid and recoverable taxes (other than income tax)	348	323
Miscellaneous operating receivables	248	252
Other non-operating receivables and provisions	339	326
Provision for impairment of other operating receivables	(11)	(16)
Other receivables	**1,515**	**1,405**

Change in impairment provisions for trade accounts receivable in 2016 primarily reflect €84 million in additions (€99 million in 2015) and €98 million in reversals (€103 million in 2015), resulting from recoveries as well as write-offs. Bad debt write-offs are also reported under this caption for €69 million (€69 million in 2015).

Net past-due trade receivables amounted to €904 million at December 31, 2016 and €902 million at December 31, 2015, including €187 million over three months past due (€177 million at December 31, 2015).

b) Trade and other accounts payable

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

(in € millions)	Dec. 31, 2016	Dec. 31, 2015
Trade accounts payable	**5,805**	**5,716**
Customer deposits	1,056	927
Payables to suppliers of non-current assets	277	250
Grants received	88	97
Accrued personnel expenses	1,178	1,107
Accrued taxes other than on income	416	394
Other operating payables	521	566
Other non-operating payables	100	107
Other payables	**3,636**	**3,448**

3.5.3. Changes in working capital requirement

Changes in working capital requirement can be analyzed as follows:

(in € millions)	Dec. 31, 2016	Dec. 31, 2015
Inventories, net	**5,875**	**5,715**
Trade accounts receivable, net	**4,935**	**4,751**
Other operating receivables	1,176	1,079
Other non-operating receivables	339	326
Other receivables	**1,515**	**1,405**
Current tax receivables	**445**	**296**
Trade accounts payable	**5,805**	**5,716**
Other operating payables	3,171	2,994
Other non-operating payables	465	454
Other payables	**3,636**	**3,448**
Current tax liabilities	**148**	**150**
Operating working capital requirements	3,010	2,835
Non-operating working capital requirements (including current tax receivables and liabilities)	171	18
Working capital requirements	**3,181**	**2,853**

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)	Dec. 31, 2016	Dec. 31, 2015
Future minimum lease payments		
Due within 1 year	17	17
Due in 1 to 5 years	40	44
Due beyond 5 years	12	8
Total future minimum lease payments	**69**	**69**
Less finance charge	(10)	(7)
Present value of future minimum lease payments	**59**	**62**

At December 31, 2016, future finance lease payment commitments represented €56 million under equipment and machinery leases and €13 million under land and buildings leases.

3.6.2. **Obligations under operating leases**

The Group leases equipment, vehicles and office, manufacturing and warehouse space under various non-cancelable operating leases. 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 2016, rental expenses amounted to €844 million, including €563 million for land and buildings, and revenue from subleases represented €17 million. Net rental expense was €827 million.

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

(in € millions)	Total 2016	Payments due by period Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2015
Rental expense	**3,185**	714	1,534	937	**3,215**
Subletting revenue	**(76)**	(16)	(30)	(30)	**(77)**
Total	**3,109**	**698**	**1,504**	**907**	**3,138**

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.

(in € millions)	Total 2016	Payments due by period Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2015
Property, plant and equipment and intangible assets	**49**	47	2	0	**46**
Commodities and energy	**1,080**	338	545	197	**1,321**
Services	**184**	82	82	20	**262**
Total	**1,313**	**467**	**629**	**217**	**1,629**

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 €93 million at December 31, 2016 (€99 million at December 31, 2015).

3.6.5. **Commercial commitments**

(in € millions)	Total 2016	Commitment amounts by period Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	Total 2015
Security for borrowings	**41**	17	15	9	**44**
Other commitments given	**214**	83	97	34	**158**
Total	**255**	**100**	**112**	**43**	**202**

Guarantees given to the Group in respect of receivables amounted to €105 million at December 31, 2016 (€106 million at December 31, 2015).

At December 31, 2016, pledged assets amounted to €343 million (€674 million at December 31, 2015). The year-on-year decrease in this item mainly reflects a decrease in pledges of financial assets in the United Kingdom.

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 2016 represented approximately 3.6 million metric tons of CO_2. The new 2017 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

	2016	2015*
Managerial-grade employees	27,677	26,936
Administrative employees	74,202	75,266
Other employees	70,184	71,042
Total average number of employees	**172,063**	**173,244**

* Data adjusted for suspended contracts.

The total number of Group employees for fully consolidated companies was 172,696 at December 31, 2016 and 171,958 at December 31, 2015, adjusted for suspended contracts.

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 2016 and 2015:

(in € millions)	2016	2015
Attendance fees	1.1	1.1
Direct and indirect compensation (gross)		
Fixed portion	8.9	9.7
Variable portion	4.4	4.5
Estimated cost of pensions and other employee benefit obligations (IAS 19)	2.5	2.6
Share-based payment expense (IFRS 2)	8.5	6.4
Termination, retirement and other benefits	0.0	1.5
Total	**25.4**	**25.8**

Total compensation and benefits paid in 2016 to Saint-Gobain management by the French and foreign companies in the Group (excluding any long-term cash-settled compensation) amounted to €13.3 million (€15.7 million in 2015), including €4.4 million in gross variable compensation (€4.5 million in 2015) and nil in termination, retirement or other benefits (€1.5 million in 2015).

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 €47.0 million at December 31, 2016 (€55.8 million at December 31, 2015).

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 rates of return and the discount rates applied. 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.

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. 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. Rate assumptions

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

Discount rates were set by zone or country, based on observed bond yields at December 31, 2016.

The rate assumptions used in 2016 for the Group's main plans were as follows:

(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.

The rate assumptions used in 2015 for the Group's main plans were as follows:

(in %)	France	Eurozone	United Kingdom	United States
Discount rate	2.40%	2.40%	3.80%	4.25%
Salary increases	2.50%	1.50% to 2.60%	2.00%*	3.00%
Inflation rate	1.70%	1.50% to 1.90%	2.05%	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 €250 million for the United States plans, €240 million for the Eurozone plans and €510 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 €670 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 7.36% or 7.85% per year, depending on the age of the beneficiary (a 1-point increase in this rate would lead to an increase of around €55 million in the related projected benefit obligation).

4.3.3. **Change 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, 2016	Dec. 31, 2015
Pension commitments	2,673	2,919
Length-of-service awards	355	333
Post-employment healthcare benefits	435	451
Total provisions for pensions and other post-employment benefit obligations	**3,463**	**3,703**
Healthcare benefits	27	28
Long-term disability benefits	20	19
Other long-term benefits	105	99
Provisions for pensions and other employee benefits	**3,615**	**3,849**

Provisions for all other long-term benefits totaled €152 million at December 31, 2016 (€146 million at December 31, 2015).

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

(in € millions)	Dec. 31, 2016	Dec. 31, 2015
Provisions for pensions and other post-employment benefit obligations - liabilities	3,463	3,703
Pension plan surpluses - assets	(41)	(63)
Net pension and other post-employment benefit obligations	**3,422**	**3,640**

4.3.3.2. Analysis of obligations

At December 31, 2016, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region 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 ceiling					4	4
Net pension and other post-employment benefit obligations	**709**	**1,078**	**464**	**858**	**313**	**3,422**

At December 31, 2015, pension obligations and provisions for other post-employment benefit obligations by major geographic region were as follows:

Dec. 31, 2015 (in € millions)	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
Average duration *(in years)*	16	16	19	14	14	16
Defined benefit obligations - funded plans	540	1,724	4,775	2,829	841	10,709
Defined benefit obligations - unfunded plans	361	113		422	165	1,061
Fair value of plan assets	(270)	(803)	(4,410)	(1,902)	(751)	(8,136)
Deficit/(surplus)	**631**	**1,034**	**365**	**1,349**	**255**	**3,634**
Asset ceiling			1		5	6
Net pension and other post-employment benefit obligations	**631**	**1,034**	**366**	**1,349**	**260**	**3,640**

4.3.3.3. Changes in pension and other post-employment benefit obligations

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, 2015	**11,796**	**(8,299)**	**8**	**3,505**
Movements during the year				
Service cost	211			211
Interest cost/return on plan assets as per calculations	390	(296)		94
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(2)			(2)
Plan curtailments/settlements	(237)	195		(42)
Pension contributions		(116)		(116)
Benefit payments	(498)	411		(87)
Actuarial gains and losses and asset ceiling	(359)	390	(1)	30
Currency translation adjustments	633	(497)	(1)	135
Changes in Packaging Sector	(1)	21		20
Changes in Group structure and reclassifications	(163)	56		(107)
Total movements	**(26)**	**163**	**(2)**	**135**
At December 31, 2015	**11,770**	**(8,136)**	**6**	**3,640**
Movements 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 movements	**894**	**(1,110)**	**(2)**	**(218)**
At December 31, 2016	**12,664**	**(9,246)**	**4**	**3,422**

4.3.3.4. Actuarial gains and losses

The €366 million actuarial gain breaks down as €1,474 million arising on pension obligations owing to changes in actuarial assumptions and experience adjustments, €1,106 million corresponding to the increase in plan assets and €2 million relating to a decrease in the asset ceiling.

4.3.3.5. Plan assets

Plan assets have been progressively built up by contributions, primarily in the United States, the United Kingdom and Germany. Contributions paid by the Group into these plans in 2016 totaled €732 million (€116 million in 2015), including a one-off contribution of USD 640 million (€578 million) paid in the United States in September 2016.

Actual returns on equity and bond markets generated an increase of €1,384 million in plan assets, compared with a decrease of €94 million in 2015. This actual return is €1,106 million higher (including €1,016 million arising in the United Kingdom) than the estimated return of €278 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 are mainly composed of equities (27%) and bonds (55%), with the remaining 18% invested in other asset classes.

Projected contributions to pension plans for 2017 are estimated at around €130 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)	2016	2015
Service cost	189	211
Interest cost	382	390
Return on plan assets	(278)	(296)
Past service cost, plan curtailments and settlements	(14)	(44)
Employee contributions and plan administration costs	(1)	(1)
Pensions, length-of-service awards and other post-employment benefits	**278**	**260**

4.3.4. Defined contribution plans

Contributions to defined contribution plans are expensed as incurred.

Contributions to defined contribution plans for 2016 represented an estimated €628 million (€600 million in 2015), including €418 million for government-sponsored basic pension schemes (€399 million in 2015), €131 million for government-sponsored supplementary pension schemes, mainly in France (€129 million in 2015), and €79 million for corporate-sponsored supplementary pension plans (€72 million in 2015).

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 in 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 2016, 4,653,810 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €29.42 (4,449,939 shares at an average subscription price of €32.44 in 2015), representing a share capital increase of €136 million (€144 million in 2015), net of transaction fees.

The cost recorded in the income statement amounted to nil in 2016 and 2015, net of the lock-up cost of €26 million (€24 million in 2015).

The following table shows the main features of the standard plans, the amounts invested in the plans and the valuation assumptions applied in 2016 and 2015:

	2016	2015
Plan characteristics		
Date of Shareholders' Meeting	June 4, 2015 (17th Resolution)	June 6, 2013 (16th Resolution)
Date of the Chief Executive Officer's decision fixing the subscription price	March 21	March 23
Plan duration (in years)	5 or 10	5 or 10
Reference price (in €)	36.77	40.54
Subscription price (in €)	29.42	32.44
Discount (in %)	20.00%	20.00%
Total discount on the date of the Chief Executive Officer's decision (in %) **(a)**	21.94%	20.02%
Employee investments (in € millions)	136.9	144.4
Total number of shares subscribed	4,653,810	4,449,939
Valuation assumptions		
Interest rate applicable to employees*	5.00%	5.40%
5-year risk-free interest rate	-0.15%	0.05%
Repo rate	0.50%	0.46%
Lock-up discount (in %) **(b)**	22.92%	23.42%
Total cost to the Group (in %) **(a-b)**	-0.98%	-3.40%

* A 0.5-point decline in borrowing costs for the employee would have no impact on the 2016 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 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 vesting period. 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, 2016, plans 2007 to 2012 offer subscription options. For plans launched between 2013 and 2016, 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.

Up to 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 2016 plan, the value used to calculate the 30% *contribution sociale* tax due by grantees employed by French companies in the Group is €4.21 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, 2014	**16,182,839**	**46.04**
Options granted	224,950	39.47
Options exercised	(801,840)	35.21
Options forfeited	(4,004,092)	40.18
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**

* Including 4,306,454 options under the 2006 stock option plan that had not been exercised upon expiry of the plan on November 15, 2016, and 202,994 options under the 2012 stock option plan which lapsed because the related performance condition was only 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 2016 and 2015. The fair value of options granted in 2016 amounted to €1 million.

The table below summarizes information about stock options outstanding at December 31, 2016, after taking into account partial fulfillment of the performance criteria attached to certain plans:

Grant date	Exercisable options			Non-exercisable options		Total options outstanding	Type of options
	Exercise price (in €)	Number of options	Weighted average contractual life (in months)	Exercise price (in €)	Number of options	Number of options	
2007	64.72	3,403,171	11			3,403,171	Subscription
2008	25.88	1,702,822	23			1,702,822	Subscription
2009	36.34	809,868	35			809,868	Subscription
2010	35.19	0	47			0	Subscription
2011	31.22	0	59			0	Subscription
2012	27.71	29,716	71			29,716	Subscription
2013			83	38.80	237,250	237,250	Subscription or purchase*
2014			95	34.13	234,550	234,550	Subscription or purchase*
2015			107	39.47	224,950	224,950	Subscription or purchase*
2016			119	40.43	280,000	280,000	Subscription or purchase*
Total		**5,945,577**			**976,750**	**6,922,327**	

* 2013, 2014, 2015 and 2016 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, 2016, 5,945,577 stock options were exercisable (at an average exercise price of €49.55) and 976,750 options (with an average exercise price of €38.30) 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 plans were outstanding at December 31, 2016. The plans approved by the Board of Directors in 2013, 2014 and 2015 solely concern certain managerial-grade employees and senior managers of the Group outside France. The plan approved by the Board of Directors on November 24, 2016 concerns managerial-grade employees and senior managers of the Group 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, 2014	**2,102,291**
Performance share rights granted in November 2015	500,910
Shares issued/delivered	(237,810)
Lapsed and canceled rights	(13,510)
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**

* Including 217,115 new shares delivered under the 2011 plan, 365,555 existing shares delivered under the 2012 plan and 550 existing shares delivered in advance under the 2013 and 2014 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 4-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 2016 in respect of these plans amounted to €10 million (€8 million in 2015).

The following table shows the expected dates when shares under the four performance share plans outstanding at December 31, 2016 will be issued/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, 2016*	End of vesting and lock-up period	Type of shares
November 21, 2013	541,105	November 21, 2017	existing
November 20, 2014	529,790	November 20, 2018	existing
November 26, 2015	500,910	November 26, 2019	existing
November 24, 2016	1,231,320	November 24, 2020	existing
Total	**2,803,125**		

* 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 2016, since all beneficiaries received rights to performance shares (see above).

En 2016, 345,431 performance units became exercisable under the 2012 plan and 190,969 performance units under that plan lapsed, including 180,038 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, 2016:

Grant date	Number of performance units granted at inception of plan	Exercised early	Number of performance units at December 31, 2016*
November 21, 2013	588,535	17,750	570,785
November 20, 2014	598,400	1,350	597,050
November 26, 2015	556,340		556,340
Total	**1,743,275**	**19,100**	**1,724,175**

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

The expense recorded in the income statement in respect of these plans in 2016 amounted to €20 million (€14 million in 2015).

NOTE 5 – PROPERTY, PLANT AND EQUIPMENT AND INTANGIBLE ASSETS

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 twelve-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 twelve months following the acquisition. Under IFRS 3R, any adjustments to the acquisition price beyond this twelve-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 2016 and 2015 are detailed below:

(in € millions)	**2016**	**2015**
At January 1		
Gross value	12,180	11,899
Accumulated impairment	(1,497)	(1,437)
Net value	**10,683**	**10,462**
Movements during the year		
Impairment	(13)	(157)
Translation adjustments	(189)	320
Changes in Packaging Sector	0	(1)
Changes in Group structure	188	59
Total movements	**(14)**	**221**
At December 31		
Gross value	12,160	12,180
Accumulated impairment	(1,491)	(1,497)
Net value	**10,669**	**10,683**

In 2016, changes in Group structure related mainly to newly consolidated companies for €189 million (€174 million in 2015), partially offset by companies deconsolidated for €1 million (€115 million in 2015). Impairment tests performed in 2016 led to the recognition of goodwill impairment, primarily on the Interior Solutions business. Currency translation differences arising in 2016 primarily reflect the impact of fluctuations in the pound sterling, US dollar, and Brazilian real.

In 2015, changes in goodwill were primarily due to translation adjustments arising on fluctuations in the US dollar, pound sterling and Brazilian real, and by impairment losses booked against the Flat Glass business in the United States and the Insulation business in Russia.

The net value of goodwill by sector and by business at December 31, 2016 and 2015 can be analyzed as follows:

(in € millions)	**2016**	**2015**
Flat Glass	240	209
High-Performance Materials	1,679	1,597
Construction Products	5,924	5,957
Building Distribution	2,826	2,920
Total	**10,669**	**10,683**

Goodwill is essentially allocated to the Construction Products Sector, and chiefly relates to Gypsum (€3,435 million at December 31, 2016) and Industrial Mortars (€1,979 million at December 31, 2016), 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 2016 and 2015 are analyzed below:

(in € millions)	**Patents**	**Non-amortizable brands**	**Software**	**Development costs**	**Other**	**Total**
At January 1, 2015						
Gross value	149	2,821	969	121	365	4,425
Accumulated amortization and impairment	(125)	(146)	(795)	(81)	(193)	(1,340)
Net	**24**	**2,675**	**174**	**40**	**172**	**3,085**
Movements during the year						
Acquisitions	0	0	89	8	32	129
Disposals	0	0	(1)	0	(4)	(5)
Translation adjustments	2	70	0	1	4	77
Amortization and impairment	(4)	(451)	(65)	(12)	(16)	(548)
Changes in Packaging Sector	0	0	1	0	0	1
Changes in Group structure and other	2	(9)	(4)	(3)	23	9
Total movements	**0**	**(390)**	**20**	**(6)**	**39**	**(337)**
At December 31, 2015						
Gross value	162	2,872	1,000	131	425	4,590
Accumulated amortization and impairment	(138)	(587)	(806)	(97)	(214)	(1,842)
Net	**24**	**2,285**	**194**	**34**	**211**	**2,748**
Movements 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 movements	**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	**26**	**2,144**	**220**	**36**	**236**	**2,662**

Impairment of non-amortizable brands in 2015 was charged against the Lapeyre brand due to difficulties in the French housing market.

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 property, plant and equipment in 2016 and 2015 are analyzed below:

(in € millions)	Land and quarries	Buildings	Machinery and equipment	Assets under construction	Total
At January 1, 2015					
Gross value	2,476	8,806	21,413	1,114	33,809
Accumulated depreciation and impairment	(490)	(5,050)	(15,561)	(51)	(21,152)
Net	**1,986**	**3,756**	**5,852**	**1,063**	**12,657**
Movements during the year					
Acquisitions	27	69	273	977	1,346
Disposals	(21)	(26)	(17)	(14)	(78)
Translation adjustments	32	24	(1)	4	59
Depreciation and impairment	(42)	(316)	(1,021)	(1)	(1,380)
Transfers		261	649	(910)	0
Changes in Packaging Sector	(1)	(4)	56	(29)	22
Changes in Group structure and other	(21)	(175)	(762)	(81)	(1,039)
Total movements	**(26)**	**(167)**	**(823)**	**(54)**	**(1,070)**
At December 31, 2015					
Gross value	2,493	8,500	19,549	1,064	31,606
Accumulated depreciation and impairment	(533)	(4,911)	(14,520)	(55)	(20,019)
Net	**1,960**	**3,589**	**5,029**	**1,009**	**11,587**
Movements during the year					
Acquisitions	50	63	329	928	1,370
Disposals	(41)	(18)	(19)	(7)	(85)
Translation adjustments	(7)	(7)	30	(3)	13
Depreciation 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 movements	**(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	**1,950**	**3,539**	**5,148**	**1,017**	**11,654**

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 2016, other movements in property, plant and equipment included assets acquired under finance leases for an amount of €21 million (€17 million at December 31, 2015). These finance leases are not included in the cash flow statement, in accordance with IAS 7. At December 31, 2016, total property, plant and equipment acquired under finance leases amounted to €71 million (€67 million at December 31, 2015).

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 decreased from 31 at December 31, 2015 to 30 at December 31, 2016 following the aggregation of two CGUs in European Flat Glass to reflect the shared cash generation of these two businesses following a management reorganization.

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. 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 2016 and 2015) plus a country risk premium where appropriate depending on the geographic area concerned. The discount rates applied in 2016 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, 2016, a 0.5-point increase in the discount rate for all CGUs would lead to approximately €121 million in additional intangible asset impairment, while the impact of a 0.5-point decrease in the average annual cash flow growth rate, projected to perpetuity across all the CGUs, would result in additional intangible asset impairment of around €83 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 €171 million, while a 0.5-point decrease in the rate for distribution activities would have generated additional impairment of €48 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 profit rate	0.5 point decrease in the operating profit rate
Flat Glass	(2)	0	(6)	
High-Performance Materials				
Construction Products	(85)	(56)	(165)	
Building Distribution	(34)	(27)		(48)
Total	**(121)**	**(83)**	**(171)**	**(48)**

The breakdown of asset impairment by sector for 2016 and 2015 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 2016 and 2015 can be analyzed as follows:

(in € millions)	2016	2015
At January 1		
Equity in associates and joint ventures	308	355
Goodwill	11	31
Investments in equity-accounted companies	**319**	**386**
Movements during the year		
Group share in net income of equity-accounted companies	36	43
Dividends paid	(16)	(14)
Translation adjustments	7	(31)
Transfers, share issues and other movements	3	(1)
Changes in Packaging Sector	0	(2)
Changes in Group structure and acquisitions	27	(62)
Total movements	**57**	**(67)**
At December 31		
Equity in associates and joint ventures	364	308
Goodwill	12	11
Investments in equity-accounted companies	**376**	**319**

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

	2016			2015		
(in € millions)	Associates	Joint ventures	Total	Associates	Joint ventures	Total
Net sales	710	673	1,383	713	729	1,442
Net income	26	54	80	17	87	104
Shareholders' equity	580	401	981	486	368	854
Total assets and liabilities	984	604	1,588	796	531	1,327

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 equity-accounted companies 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, 2016**	**Dec. 31, 2015**
Financial receivables	1	1
Inventories	0	0
Short-term receivables	8	17
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)	**2016**	**2015**
Purchases	2	2
Sales	43	54

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 2016 and 2015 are analyzed below:

(in € millions)	Available-for-sale and other securities	Loans, deposits and surety	Pension plan surpluses	Total
At January 1, 2015				
Gross value	66	462	137	665
Provision for impairment	(14)	(5)		(19)
Net value	**52**	**457**	**137**	**646**
Movements during the year				
Increases/(decreases)	24	64	(79)	9
Provisions for impairment	(2)	0		(2)
Translation adjustments	(3)	(10)	8	(5)
Transfers and other movements	1	2		3
Changes in Packaging Sector	0	46	(3)	43
Changes in Group structure	(10)	(49)		(59)
Total movements	**10**	**53**	**(74)**	**(11)**
At December 31, 2015				
Gross value	76	519	63	658
Provisions for impairment	(14)	(9)		(23)
Net value	**62**	**510**	**63**	**635**
Movements 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)			(22)
Total movements	**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**

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 with sufficient reliability, 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

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, 2015									
Current portion	95	32	76	32	119	50	**404**	5	**409**
Non-current portion	418	131	98	44	140	257	**1,088**	137	**1,225**
Total provisions for other liabilities and investment-related liabilities	**513**	**163**	**174**	**76**	**259**	**307**	**1,492**	**142**	**1,634**
Movements during the year									
Additions	132	20	75	39	74	119	**459**		**459**
Reversals	(6)	(5)	(22)	(12)	(36)	(48)	**(129)**		**(129)**
Utilizations	(99)	(11)	(81)	(12)	(62)	(58)	**(323)**		**(323)**
Changes in Group structure		(8)	(4)	(2)	(5)	(8)	**(27)**		**(27)**
Changes in Packaging Sector	(1)	0	(3)	(1)	0	2	**(3)**		**(3)**
Other (reclassifications and translation adjustments)	56	4	0	(5)	25	(7)	**73**	46	**119**
Total movements	**82**	**0**	**(35)**	**7**	**(4)**	**0**	**50**	**46**	**96**
At December 31, 2015									
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**
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**

7.1.1. Provisions for claims and litigation

At December 31, 2016 and 2015, 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 €99 million at December 31, 2016 (€139 million at December 31, 2015), including net additions of €32 million during the year. The provisions primarily concern Benelux (€33 million), Germany (€21 million), the United Kingdom (€12 million), and France (€10 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, 2016, provisions for other contingencies amounted to €281 million (€307 million at December 31, 2015) and mainly concerned Germany (€98 million), the United States (€60 million), France (€40 million) and Brazil (€41 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 2016, changes in investment-related liabilities primarily concerned minority shareholder puts.

7.2. Contingent liabilities and litigation

7.2.1. Asbestos-related litigation

The situation regarding ongoing asbestos-related litigation is described below.

7.2.1.1. Asbestos-related litigation in France

a) Inexcusable fault lawsuits

In France, further individual lawsuits were filed in 2016 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, 2016, a total of 805 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, 2016, 761 of these 805 lawsuits had been completed in terms of both liability and quantum. 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 €1.7 million.

Concerning the 44 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2016, the merits of three have been decided but the compensation awards have not yet been made, pending Appeal Court rulings. A further four of these 44 lawsuits 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 37 remaining lawsuits, at December 31, 2016 the procedures relating to the merits of 33 cases were at different stages, with four in the process of being investigated by the French Social Security authorities and 29 pending before the Social Security courts. The last four actions have been canceled but the plaintiffs may request their restoration at any time within a two-year period.

In addition, as of December 31, 2016, 221 similar suits had been filed since the outset of the litigation by current or former employees of thirteen 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, 2016, 164 lawsuits had been completed. In 89 of these cases, the employer was held liable for “inexcusable fault”.

The compensation definitively paid by these companies totaled approximately €2.5 million.

With regard to the 57 suits outstanding at December 31, 2016, two cases were still at the investigation stage by the French Social Security authorities, 41 were being investigated - including 25 pending before the Social Security courts and 16 before the Appeal Courts. In addition, seven suits had been completed in terms of liability but are still pending with regard to the quantum or liability for paying the compensation, of which one was pending before the French Social Security court and five before the Appeal Courts. The seven remaining suits have been canceled but the plaintiffs may request their restoration at any time within a two-year period.

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, 2016, a total of 822 suits had been brought by current or former employees claiming compensation for various damages 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, 585 have been terminated. Three plaintiffs had their claims dismissed, while for the 582 others who were recognized as having been exposed to an asbestos risk, the total amount of compensation is €7.6 million at December 31, 2016. Of the remaining 237 suits, 97 are pending before the competent Appeal Courts, eight before the competent labor tribunals ("bureau de jugements des Conseils de prud'hommes"), five are pending before the Court of Cassation and 110 have been canceled but the plaintiffs may request their restoration at any time during a period of two years. Finally, six suits have been dismissed by the competent labor tribunals and 11 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 2016

About 3,200 new claims were filed against CertainTeed in 2016, stable compared to 2015 and 4,000 in 2014. 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 3,700 of the pending claims were resolved in 2016, compared to 4,600 in 2015 and 6,500 in 2014. Taking into account the 35,600 outstanding claims at the end of 2015 and the new claims having arisen during the year, as well as claims settled, around 35,100 claims were outstanding at December 31, 2016. 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 100 million charge in 2016 to cover future developments in relation to claims. This amount is stable compared to the amount recorded in 2015 and 2014. At December 31, 2016, the Group provision for asbestos-related claims against CertainTeed in the United States amount to USD 562 million, (USD 581 million at December 31, 2015 and USD 571 million at December 31, 2014).

c) Cash-flow impact

Compensation paid in respect of these claims against CertainTeed, including claims settled prior to 2016 but only paid out in 2016, and those fully resolved and paid in 2016, and compensation paid (net of insurance) in 2016 by other Group businesses in connection with asbestos-related litigation, amounted to USD 97 million, compared to USD 65 million in 2015 and USD 68 million in 2014.

7.2.1.3. Situation in Brazil

In Brazil, former employees of Group companies suffering from asbestos-related occupational illness linked to asbestos are offered, depending on the case, solely financial compensation, or otherwise lifetime medical assistance combined with financial compensation; only a small number of former employee litigants or their legal successors were outstanding at December 31, 2016, and they do not present a material risk for the subsidiaries concerned.

7.2.2. Anti-trust law and related proceedings

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

In November 2011, the Swiss Antitrust 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 appelead 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, 2016).

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. The hearing was held on May 11, 2016. The Competition Authority's final ruling has been 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 area. 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. 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 31 December 2016, the Company established a provision in the amount of USD 23 million in connection with defense and various costs.

7.2.4. 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 twelve 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. Except in special cases, the subsidiaries 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 is composed of 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 volatility risk, 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, 2016 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	12	1
Interest rate decrease of 50 basis points	(12)	(1)

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 the functional currency of the particular entity. 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, 2016, 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, 2016:

(in millions of euro equivalent)	**Long**	**Short**
EUR	1	6
USD	7	9
Other currencies	0	6
Total	**8**	**21**

The table below shows the sensitivity at December 31, 2016 of the Group's pre-tax income to a 10% increase in the exchange rates of the following currencies to which the subsidiaries are exposed after hedging:

Currency of exposure *(in millions of euro)*	Impact on pre-tax income
EUR	(0.5)
USD	(0.2)
Other currencies	(0.6)
Total	**(1.3)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2016 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 a steering committee 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 units long-term incentive plan. 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 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 pension and other post-employment benefit obligations, net of the return on plan assets, and other financial income and expense such as exchange gains and losses and bank charges.

(in € millions)	2016	2015
Borrowing costs, gross	(376)	(444)
Income from cash and cash equivalents	27	25
Borrowing costs, net	**(349)**	**(419)**
Interest cost – pension and other post-employment benefit obligations	(387)	(393)
Return on plan assets	278	297
Interest cost – pension and other post-employment benefit obligations, net	**(109)**	**(96)**
Other financial expense	(111)	(131)
Other financial income	28	17
Other financial income and expense	**(83)**	**(114)**
Net financial expense	**(541)**	**(629)**

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, 2016	Dec. 31, 2015
Bond issues	6,089	6,663
Perpetual bonds and participating securities	203	203
Long-term securitization	350	200
Other long-term financial liabilities	317	264
Long-term debt (excluding current portion)	**6,959**	**7,330**
Current portion of long-term debt	**1,835**	**2,231**
Short-term financing programs (NEU CP, US CP, Euro CP)	0	0
Short-term securitizations	173	178
Bank overdrafts and other short-term financial liabilities	415	438
Short-term debt and bank overdrafts	**588**	**616**
Total gross debt	**9,382**	**10,177**
Cash at banks	(1,529)	(1,232)
Mutual funds and other marketable securities	(2,209)	(4,148)
Cash and cash equivalents	**(3,738)**	**(5,380)**
Total net debt	**5,644**	**4,797**

The fair value of gross long-term debt (including the current portion) managed by Compagnie de Saint-Gobain amounted to €8.6 billion at December 31, 2016, 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

Debt at December 31, 2016 can be analyzed by maturity as follows:

(in € millions)	Currency	Within 1 year	1 to 5 years	Beyond 5 years	Total
Bond issues	EUR	1,450	3,412	1,956	6,818
	GBP	0	0	639	639
	JPY	40	0	0	40
	NOK	0	82	0	82
Perpetual bonds and participating securities	EUR	0	0	203	203
Long-term securitization	EUR	150	350		500
Other long-term financial liabilities	All currencies	58	124	193	375
Accrued interest on long-term debt	All currencies	137			137
Total long-term debt		**1,835**	**3,968**	**2,991**	**8,794**
Total short-term debt	All currencies	**588**			**588**
Total gross debt		**2,423**	**3,968**	**2,991**	**9,382**

At December 31, 2016, future interest payments on gross long-term debt (including the current portion) managed by Compagnie de Saint-Gobain fall due as follows:

(in € millions)	Within 1 year	1 to 5 years	Beyond 5 years	Total
Future interest payments on gross long-term (	235	630	609	1,474

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

8.3.3. Bonds

On May 31, 2016, Compagnie de Saint-Gobain redeemed a €700 million 4.875% bond at maturity.

On September 14, 2016, Compagnie de Saint-Gobain redeemed a €500 million private placement at maturity. The bond had paid a variable coupon consisting of 3-month Euribor +0.27%.

On September 27, 2016, Compagnie de Saint-Gobain took advantage of good conditions in the debt market to lower its average borrowing costs, issuing €1 billion worth of 0% bonds maturing on March 27, 2020.

On December 15, 2016, Compagnie de Saint-Gobain redeemed a GBP 300 million 5.625% bond at maturity.

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).

Up to December 31, 2016, 18,496 perpetual bonds had been bought back and canceled, and 6,504 perpetual bonds were outstanding, 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 2016 was €11.11.

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 participating securities have been bought back over the years. At December 31, 2016, 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 2016 was €2.05.

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 securities have been bought back over the years. At December 31, 2016, 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 2016 was €63.38, paid in two installments (€30.83 and €32.55).

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, 2016, issuance under these programs was as follows:

(in € millions)	Authorized drawings	Authorized limits at Dec. 31, 2016	Balance outstanding at Dec. 31, 2016	Balance outstanding at Dec. 31, 2015
Medium Term Notes		15,000	7,777	7,719
NEU CP	up to 12 months	3,000	0	0
US Commercial Paper	up to 12 months	949 *	0	0
Euro Commercial Paper	up to 12 months	949 *	0	0

* Equivalent of USD 1,000 million based on the exchange rate at December 31, 2016.

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 various 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):

- an initial €1.5 billion syndicated line of credit expiring in December 2017 that was obtained in December 2012. This facility was renegotiated in December 2013 and rolled over until December 2018;
- a second €2.5 billion syndicated line of credit expiring in December 2018 with two one-year rollover options that was contracted in December 2013. Following exercise of the two extension options in December 2014 and December 2015, this syndicated facility was extended for a further two years, and now falls due in December 2020.

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, 2016.

8.3.8. Receivables securitization programs

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

The French program was renewed on November 10, 2016 for a maximum amount of €500 million (€600 million previously). At December 31, 2016, it amounted to €500 million (€578 million at December 31, 2015). Based on past seasonal fluctuations in receivables included in the program and on the contract’s features, €350 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 USD 350 million. Its euro-equivalent value at December 31, 2016 was €173 million (€178 million at December 31, 2015).

8.3.9. Collateral

At December 31, 2016, €14 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 Derivatives recorded in assets	Derivatives recorded in liabilities	Dec. 31, 2016	Dec. 31, 2015	Nominal amount by maturity Within 1 year	1 to 5 years	Beyond 5 years	Dec. 31, 2016
Fair value hedges			0	0				0
Cash flow hedges								
Currency	238	(7)	231	227	2,934	31	0	2,965
Interest rate	0	(70)	(70)	(13)	0	0	387	387
Energy and commodities	5	0	5	(9)	15	2	0	17
Other risks	13	0	13	6	12	69	0	81
Cash flow hedges – total	256	(77)	179	211	2,961	102	387	3,450
Derivatives not qualifying for hedge accounting mainly contracted by Compagnie de Saint-Gobain								
Currency	5	(10)	(5)	3	1,463	12	0	1,475
Interest rate	0	0	0	22	0	0	0	0
Energy and commodities	0	0	0	0	0	0	0	0
Derivatives not qualifying for hedge accounting – total	5	(10)	(5)	25	1,463	12	0	1,475
Total	261	(87)	174	236	4,424	114	387	4,925

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, 2016, credit value adjustments were not material.

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

At December 31, 2016, the cash flow hedging reserve carried in equity in accordance with IFRS had a credit balance of €191 million, consisting mainly of:

- a credit balance of €232 million corresponding to the change in the fair value of the currency swaps qualified as cash flow hedges for the acquisition of a controlling interest in Sika;
- a debit balance of €36 million in relation to cross-currency swaps designated as cash flow hedges that are used to convert a bond issue into euros.

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

At December 31, 2016, the cash flow hedge relating to the acquisition of a controlling interest in Sika was valued at €232 million based on a spot exchange rate of €1 for CHF 1.074. An increase of 10% in this exchange rate would result in a decrease of €240 million in equity. A 10% fall in the exchange rate would have the opposite impact.

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 €5 million loss at December 31, 2016 (€25 million gain at December 31, 2015).

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, 2016, 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 3.4% at December 31, 2016, compared with 3.9% at December 31, 2015.

The average internal rate of return for the main component of long-term debt before hedging (bonds) was 3.9% at December 31, 2016, compared with 4.4% at December 31, 2015.

The table below presents the breakdown by interest rate (fixed or variable) of the Group's gross debt at December 31, 2016, taking into account interest rate, currency and cross-currency swaps.

	Gross debt after hedging		
(in € millions)	**Variable rate**	**Fixed rate**	**Total**
EUR	1,347	7,220	8,567
Other currencies	80	518	598
Total	**1,427**	**7,738**	**9,165**
(in %)	16%	84%	100%
Accrued interest and other financial liabilities			217
Total gross debt			**9,382**

8.5. Financial assets and liabilities

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

At December 31, 2016

(in € millions)		Financial instruments at fair value			Total	Other financial instruments			Total	Financial instruments at fair value according to the IFRS 7 hierarchy			Total
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)	**financial instruments measured at fair value**	Available-for-sale financial assets	Loans and receivables	Liabilities at amortized cost	**financial instruments**	Level 1 inputs	Level 2 inputs	Level 3 inputs	**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**

At December 31, 2015

(in € millions)		Financial instruments at fair value			Total	Other financial instruments			Total	Financial instruments at fair value according to the IFRS 7 hierarchy			Total
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)	**financial instruments measured at fair value**	Available-for-sale financial assets	Loans and receivables	Liabilities at amortized cost	**financial instruments**	Level 1 inputs	Level 2 inputs	Level 3 inputs	**financial instruments measured at fair value**
Trade and other accounts receivable	(3)				**0**		5,910		**5,910**				**0**
Loans, deposits and surety	(6)				**0**		510		**510**				**0**
Available-for-sale and other securities	(6)				**0**	62			**62**				**0**
Derivatives recorded in assets		35	238		**273**				**273**		273		**273**
Cash and cash equivalents				5,380	**5,380**				**5,380**	4,148	1,232		**5,380**
Total assets		**35**	**238**	**5,380**	**5,653**	**62**	**6,420**	**0**	**12,135**	**4,148**	**1,505**	**0**	**5,653**
Trade and other accounts payable	(3)				**0**			(9,142)	**(9,142)**				**0**
Long- and short-term debt					**0**			(10,189)	**(10,189)**				**0**
Derivatives recorded in liabilities		(10)	(27)		**(37)**				**(37)**		(37)		**(37)**
Total liabilities		**(10)**	**(27)**	**0**	**(37)**	**0**	**0**	**(19,331)**	**(19,368)**	**0**	**(37)**	**0**	**(37)**
Total		**25**	**211**	**5,380**	**5,616**	**62**	**6,420**	**(19,331)**	**(7,233)**	**4,148**	**1,468**	**0**	**5,616**

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

At December 31, 2016, Compagnie de Saint-Gobain's capital stock comprised 555,280,358 shares of common stock with a par value of €4 each (560,943,439 shares at December 31, 2015). At December 31, 2016, 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, 2016, 1,891,955 shares were held in treasury (2,335,918 shares at December 31, 2015). In 2016, the Group acquired 12,246,156 shares (15,050,261 shares in 2015) directly on the market and sold 1,706,031 shares (1,223,943 shares in 2015). Lastly, 10,984,088 shares were canceled in 2016 (13,000,000 shares in 2015).

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 a trust administered by Wachovia Bank, National Association. In the consolidated financial statements, these shares are treated as being controlled by Saint-Gobain Corporation.

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:

	2016		2015	
	Basic	Diluted	Basic	Diluted
Income (in € millions)				
Group share of net income from continuing operations	1,311	1,311	374	374
Group share of net income from discontinued operations	0	0	921	921
Group share of net income	1,311	1,311	1,295	1,295
Number of shares				
Weighted average number of shares in issue	554,624,285		562,001,188	
Weighted average number of shares assuming full dilution		557,163,247		564,780,983
Earnings per share (in €)				
Earnings per share from continuing operations, Group share	2.36	2.35	0.66	0.66
Earnings per share from discontinued operations, Group share	0.00	0.00	1.64	1.63
Earnings per share, Group share	2.36	2.35	2.30	2.29

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 694,913 and 1,844,049 shares, respectively, at December 31, 2016.

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.

The pre-tax income of consolidated companies is as follows:

(in € millions)	2016	2015
Net income	1,352	1,346
Less:		
Share in net income of equity-accounted companies	36	43
Net income from discontinued operations	0	929
Income taxes	(416)	(248)
Pre-tax income of consolidated companies	**1,732**	**622**

Income tax expense breaks down as follows:

(in € millions)	2016	2015
Current taxes	**(325)**	**(457)**
France	(45)	(40)
Outside France	(280)	(417)
Deferred taxes	**(91)**	**209**
France	86	219
Outside France	(177)	(10)
Total income tax expense	**(416)**	**(248)**

Theoretical tax expense was reconciled with current tax expense using a tax rate of 34.43% in 2016 and 2015, and can be analyzed as follows:

(in € millions)	2016	2015
Theoretical tax expense at French tax rate	(596)	(214)
Impact of different tax rates	161	116
Asset impairment, capital gains and losses and anti-trust provision	(8)	(125)
Deferred tax assets not recognized	(75)	(31)
Liability method	67	6
Research tax credit, tax credit for competitiveness and employment (CICE) and value-added contribution for businesses (CVAE)	5	6
Costs related to dividends	(5)	(1)
Other taxes and provision writebacks	35	(5)
Total income tax expense	**(416)**	**(248)**

Changes in deferred tax rates led the Group to recognize an income tax gain of €67 million in 2016 (€6 million gain in 2015). The main contributors to this item were France and the United Kingdom.

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

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.

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, 2015	**714**
Deferred tax (expense)/benefit	202
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(18)
Liability method on actuarial gains and losses	(33)
Translation adjustments	52
Impact of changes in scope of consolidation and other	(46)
At December 31, 2015	**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 scope of consolidation and other	(9)
At December 31, 2016	**825**

The table below shows the main deferred tax components:

(in € millions)	**Dec. 31, 2016**	**Dec. 31, 2015**
Pensions	846	1,011
Brands	(474)	(552)
Depreciation and amortization, accelerated capital allowances and tax-driven provisions	(887)	(916)
Tax loss carry-forwards	765	780
Other	575	548
Net deferred tax	**825**	**871**
Of which:		
Deferred tax assets	1,188	1,337
Deferred tax liabilities	(363)	(466)

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 €1,188 million were recognized at December 31, 2016 (€1,337 million at December 31, 2015), primarily in the United States (€533 million) and in Germany (€219 million). Deferred tax liabilities recognized at December 31, 2016 amounted to €363 million (€466 million at December 31, 2015), including €88 million in the United Kingdom, €54 million in India, €43 million in Switzerland, and €42 million in Brazil. 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 €765 million at December 31, 2016, against €780 million at December 31, 2015. 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 loss carry-forwards may have indefinite expiry dates. However, after analyzing each situation, the Group may decide to not recognize the deferred tax assets.

At December 31, 2016, deferred tax assets whose recovery is not considered probable totaled €393 million (€427 million at December 31, 2015) and a provision had been accrued for the full amount. Unrecognized deferred tax assets chiefly relate to China, Germany, the United States, Belgium and Spain.

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 2016 and 2015 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, 2016 Consolidation method	Dec. 31, 2016 Percentage held directly and indirectly
Saint-Gobain Sekurit Deutschland GmbH & CO Kg, Herzogenrath*	Germany	Full consolidation	99.99%
Saint-Gobain Glass Deutschland GmbH, Stolberg*	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%
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 Glass Industries Inc.	South Korea	Full consolidation	80.47%
Hankuk Sekurit Limited	South Korea	Full consolidation	90.13%
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%
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, 2016 Consolidation method	Dec. 31, 2016 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, Herzogenrath*	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 Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canada, Inc.	Canada	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, 2016 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%
SG Rakennustuotteet	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%
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 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	98.12%

EXTERIOR SOLUTIONS	Country	Dec. 31, 2016 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%
SG Rakennustuotteet	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, 2016 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*	Allemagne	Full consolidation	67.34%
Balzer & Nassauer GmbH & Co KG, Herborn*	Allemagne	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%

* Subsidiary or consolidated subgroups in Germany in the legal form of limited liability companies or partnerships using the exemption requirements according to § 264 Section 3, § 264b and § 291 of the German Commercial Code that refrain the entities and subgroups from disclosing their annual and subgroup financial statements as well as from preparing and disclosing their notes and local management report (entity or subgroup exceeding or not €100 million of annual sales).