CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2019

CONSOLIDATION REPORTING GROUP DEPARTMENT

Compagnie de Saint-Gobain

STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2019

The Statutory Auditors

PricewaterhouseCoopers Audit
Crystal Park
63, rue de Villiers
92208 Neuilly-sur-Seine Cedex, France

KPMG Audit
Tour Eqho
2, avenue Gambetta
CS 60055
92066 Paris La Défense Cedex, France

PricewaterhouseCoopers Audit
Crystal Park
63, rue de Villiers
92208 Neuilly-sur-Seine Cedex, France

KPMG Audit
Tour Eqho
2, avenue Gambetta
CS 60055
92066 Paris La Défense Cedex, France

STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2019

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 readers. This report includes information specifically required by European regulations or French law, such as information about the appointment of Statutory Auditors. 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 SA
Les Miroirs
18, avenue d'Alsace
92400 Courbevoie, France

To the Shareholders,

1. Opinion

In compliance with the engagement entrusted to us by your Shareholders' Meeting, we have audited the accompanying consolidated financial statements of Compagnie de Saint-Gobain for the year ended December 31, 2019.

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, 2019 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

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

2. Basis for opinion

Audit framework

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

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

Independence

We conducted our audit engagement in compliance with the independence rules applicable to us, for the period from January 1, 2019 to the date of our report, and, in particular, we did not provide any non-audit services prohibited by Article 5(1) of Regulation (EU) No 537/2014 or the French Code of Ethics (*Code de déontologie*) for Statutory Auditors.

3. Emphasis of matter

Without qualifying our opinion, we draw your attention to Note 3 "Impact of new standards" to the consolidated financial statements, which describes the consequences of the adoption as from January 1, 2019 of IFRS 16, "Leases".

4. Justification of assessments – Key audit matters

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

These matters were addressed as part of our audit of the consolidated financial statements as a whole, and therefore contributed to the opinion we formed as expressed above. We do not provide a separate opinion on specific items of the consolidated financial statements.

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

Description of risk

The carrying amounts of goodwill, intangible assets and property, plant & equipment were significant at December 31, 2019, representing €10,029 million, €2,709 million and €11,707 million, respectively. These assets may be impaired due to internal or external factors, including decisions to change the Group's strategy in certain markets, a decline in Group performance, changes in competition, unfavorable market conditions and changes in legislation or regulations. These changes are likely to have an impact on the Group's forecast cash flow and, consequently, the assets' recoverable amounts.

The impairment tests performed by Management using the method described in Note 6.5 to the consolidated financial statements led to the recognition of impairment losses of €342 million in the year ended December 31, 2019, as indicated in Note 4 to the consolidated financial statements.

Determining the assets' recoverable amounts is a key audit matter given the potentially significant nature of any impairment and the high degree of estimation and judgment required by Management in assessing impairment losses. Management exercises judgment when making assumptions regarding future changes in sales (in both volume and value terms), profitability, investments and the other cash flows required to operate the assets, and when determining an appropriate discount rate to apply to future cash flows.

How our audit addressed this risk

We familiarized ourselves with the procedures implemented within the Group for impairment testing purposes as well as Management's analysis of the impact of IFRS 16 on these tests, at the transition date and the reporting date, and we exercised our professional judgment in order to assess the position taken by Management.

We verified the consistency of the method used, particularly in the context of the first-time adoption of IFRS 16, "Leases", and tested the effectiveness of the controls implemented by the Group to ensure the quality and reliability of the aforementioned procedures and their consistency with data from the budget and the medium-term business plan prepared by Management.

We also assessed the consistency and relevance of Management's approach to determine the cash-generating units for asset impairment testing, particularly with regard to the new organization implemented at January 1, 2019. We adapted our audit approach to the risk of impairment, which varies depending on the cash-generating unit.

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

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

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

Measurement of provisions for liabilities and litigation related to asbestos

Description of risk

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

As indicated in Note 8 to the consolidated financial statements, provisions amounting to €1,293 million were recognized at December 31, 2019 for contingent liabilities and litigation. Significant contingent liabilities, whose amount or timing cannot be estimated with sufficient reliability, are disclosed in the notes to the consolidated financial statements.

With regard to asbestos-related risks in the United States and Brazil, determining and measuring the provisions recognized for contingent liabilities and litigation and assessing the appropriateness of the related disclosures in the notes to the consolidated financial statements are a key audit matter given the amounts involved and the high degree of estimation and judgment required by Management in determining those provisions. Judgment is required, in particular, to assess the status and resolution of the ongoing legal proceedings (in particular the voluntary petition for relief under Chapter 11 in the United States and class actions in Brazil): duration, cost, estimation of the number of current and future cases covered, definition of the damages by the judicial authority, etc.

How our audit addressed this risk

To obtain an understanding of contingent liabilities and litigation regarding asbestos in the United States and Brazil and the related judgments made, we held discussions with Management at the Group and country level as well as at the main subsidiaries concerned. We also contacted certain law firms and external experts chosen by Management to assist them with measuring these provisions.

We:

- examined the minutes of the Board of Directors' meetings and the Group's risk mapping prepared by Management and presented to the Audit and Risk Committee;
- familiarized ourselves with the procedures implemented by Management when measuring the provisions for asbestos-related risks in the United States and Brazil and determining the disclosures thereon in the notes to the consolidated financial statements while taking due account of events after the reporting date;
- assessed the proficiency of the law firms or external experts chosen by Management to assist them with measuring these provisions and, where appropriate, brought in our own experts to assess the position of the latter parties;
- carried out a critical review of internal analyses relating to the probability and possible impact of these contingent liabilities and items of litigation by examining the available information relating to the proceedings (correspondence, judgments, notifications, etc.). We also reviewed the external legal or technical opinions and the responses to the confirmation letters of the law firms or external experts chosen by Management, particularly in terms of their experience at resolving comparable situations in the past. We also used our professional judgment to assess the positions adopted by Management, to see where they fell within risk assessment ranges and the consistency of those positions over time;
- assessed the adequacy of the method used to measure the asbestos-related provisions, based on a statistical model, and the relevance and reliability of the source data.

We verified the appropriateness of the disclosures provided in the notes to the consolidated financial statements regarding these items of litigation and contingent liabilities identified.

Measurement of supplier discounts in Distribution

Description of risk

The Distribution entities in Europe accounted for 45% of the Group's sales for the fiscal year 2019. The profitability of these entities varies depending on supplier discounts received, which lower the cost price of negotiated goods. As indicated in Notes 4.1.2, 4.4.1 and 4.4.2 to the consolidated financial statements, the recognition of supplier discounts specifically affects "Cost of sales" in the consolidated income statement as well as "Inventories" and "Other receivables" in the consolidated balance sheet.

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

How our audit addressed this risk

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

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

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

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

First-time adoption of IFRS 16, "Leases"

Description of risk

As indicated in Note 3 to the consolidated financial statements for the year ended December 31, 2019, the Group adopted IFRS 16, "Leases" with effect from January 1, 2019 using the full retrospective method. The new standard provides a single lessee accounting model, under which a "right-of-use asset" and a corresponding "lease liability" are recognized in the balance sheet for all leases. The cumulative impact of the first-time adoption was therefore recognized at January 1, 2018 by identifying and analyzing all existing leases since their inception and notably by taking into account, for each lease, the term, the type of payments and the incremental borrowing rate.

The first-time adoption of IFRS 16 resulted in the recognition, at January 1, 2018, of right-of-use assets for a net carrying amount of €3,000 million and lease liabilities of €3,268 million. In addition, EBITDA and operating income for the year ended December 31, 2018 increased by €789 million and €85 million, respectively, as a result of the first-time adoption of IFRS 16.

Given the high volume of data to collect, analyze and restate, the significant amount of right-of-use assets and lease liabilities in the consolidated financial statements and the degree of judgment required by Management to determine the lease term and the incremental borrowing rate, we deemed the first-time adoption of the new standard to be a key audit matter.

How our audit addressed this risk

We assessed the compliance with the accounting principles of the approach taken by Management (particularly the transition method, simplification measures, determination of the discount rate, useful life of leasehold improvements and treatment of deferred taxes and charges).

We gained an understanding of the organization, information systems and key controls implemented by Management for the adoption of the new standard as well as the instructions and procedures provided to the subsidiaries.

In order to test the completeness and accuracy of the measurement of right-of-use assets and lease liabilities, we:

- tested the design, implementation and operational effectiveness of the automatic or manual controls for ensuring the accuracy of the inputs used and the completeness of the accounting restatements, in particular with regard to the identification of leases;
- tested the settings, particularly the calculation module of the centralized information system set up by Management to collect the data on the leases and calculate the accounting impacts of IFRS 16;
- for a sample of leases, corroborated the information collected to measure the right-of-use assets and the lease liabilities with the data in the leases and assessed the relevance of the lease terms used;
- assessed the consistency with the market data provided by our experts of the discount rates provided in the IFRS 16 centralized information system;
- tested the accuracy of the reconciliations performed between the published consolidated financial statements at December 31, 2017 and December 31, 2018 in accordance with IAS 17 and the restated consolidated financial statements at January 1, 2018 and December 31, 2018 following the adoption of IFRS 16.

We also assessed the appropriateness of the disclosures provided in Note 3 to the consolidated financial statements.

5. Specific verifications

As required by legal and regulatory provisions and in accordance with professional standards applicable in France, we have also verified the information pertaining to the Group presented in the Board of Directors' management report.

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

We attest that the information pertaining to the Group presented in the management report includes the consolidated non-financial information statement required under Article L.225-102-1 of the French Commercial Code. However, in accordance with Article L.823-10 of the French Commercial Code, we have not verified the fair presentation and consistency with the consolidated financial statements of the information given in that statement, which will be the subject of a report by an independent third party.

6. Report on other legal and regulatory requirements

Appointment of the Statutory Auditors

We were appointed Statutory Auditors of Compagnie de Saint-Gobain by the Shareholders' Meeting held on June 26, 1986 for Petiteau Scacchi and subsequently PricewaterhouseCoopers Audit and on June 10, 2004 for KPMG Audit.

At December 31, 2019, PricewaterhouseCoopers Audit and KPMG Audit were in the thirty-fourth and sixteenth consecutive year of their engagement, respectively.

7. Responsibilities of Management and those charged with governance for the consolidated financial statements

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

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

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

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

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

Objective and audit approach

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

As specified in Article L.823-10-1 of the French Commercial Code, our audit does not include assurance on the viability or quality of the Company's management.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditors exercise professional judgment throughout the audit. They also:

- identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error, design and perform audit procedures in response to those risks, and obtain audit evidence considered to be sufficient and appropriate to provide a basis for their opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

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

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

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

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

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. The Statutory Auditors are responsible for the management, supervision and performance of the audit of the consolidated financial statements and for the opinion expressed thereon.

Report to the Audit and Risk Committee

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

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

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

Neuilly-sur-Seine and Paris La Défense, February 27, 2020

The Statutory Auditors

PricewaterhouseCoopers Audit	KPMG Audit *Department of KPMG SA*
Edouard Sattler Cécile Saint-Martin	Pierre-Antoine Duffaud Bertrand Pruvost

CONSOLIDATION REPORTING GROUP DEPARTMENT

CONTENTS

2019 CONSOLIDATED FINANCIAL STATEMENTS....2
CONSOLIDATED BALANCE SHEET....2
CONSOLIDATED INCOME STATEMENT....3
CONSOLIDATED STATEMENT OF RECOGNIZED INCOME AND EXPENSE....4
CONSOLIDATED STATEMENT OF CASH FLOWS....5
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY....6
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS....7
NOTE 1 Accounting principles and policies....7
1.1. Standards applied....7
1.2. Estimates and assumptions....8
NOTE 2 Scope of consolidation....9
2.1. Accounting principles related to consolidation....9
2.2. Changes in Group structure....11
2.3. Assets and liabilities held for sale....13
2.4. Changes in the number of consolidated companies....14
2.5. Off-balance sheet commitments related to companies within the scope of consolidation....15
NOTE 3 Impact of new standards....15
3.1. Accounting policies applied since January 1, 2019....15
3.2. Impact on the consolidated financial statements....17
NOTE 4 Information concerning the Group's operating activities....19
4.1. Income statement items....19
4.2. Segment information....21
4.3. Performance indicators....23
4.4. Working capital....25
4.5. Off-balance sheet commitments related to operating activities....28
NOTE 5 Employees, personnel expenses and employee benefit obligations....29
5.1. Employees of fully consolidated companies....29
5.2. Management compensation....29
5.3. Provisions for pensions and other employee benefits....30
5.4. Share-based payments....35
NOTE 6 Intangible assets, property, plant and equipment, and right-of-use assets....40
6.1. Goodwill....40
6.2. Other intangible assets....41
6.3. Property, plant and equipment....42
6.4. Right-of-use assets linked to leases....45
6.5. Impairment review....45
NOTE 7 Investments in equity-accounted companies and other non-current assets....47
7.1. Changes in investments in equity-accounted companies....47
7.2. Transactions with equity-accounted companies – related parties....48
7.3. Other non-current assets....49
NOTE 8 Other current and non-current liabilities and provisions, contingent liabilities and litigation....50
8.1. Provisions for other liabilities and charges....50
8.2. Contingent liabilities and litigation....51

NOTE 9 Financing and financial instruments ... 57
9.1. Financial risks ... 57
9.2. Net financial income (expense) ... 60
9.3. Net debt ... 60
9.4. Financial instruments ... 65
9.5. Financial assets and liabilities ... 69
NOTE 10 Shareholders' equity and earnings per share ... 70
10.1. Equity ... 70
10.2. Earnings per share ... 71
NOTE 11 Tax ... 72
11.1. Income taxes ... 72
11.2. Deferred tax ... 72
11.3. Tax loss carry-forwards ... 74
NOTE 12 Subsequent events ... 74
NOTE 13 Fees paid to the Statutory Auditors ... 75
NOTE 14 Principal consolidated companies ... 76

2019 CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEET

(in € millions)	Notes	Dec. 31, 2019	Dec. 31, 2018 restated*	January 1, 2018, restated*
ASSETS				
Goodwill	(6.1)	10,029	9,990	10,575
Other intangible assets	(6.2)	2,709	2,526	2,603
Property, plant and equipment	(6.3)	11,707	11,253	11,516
Right-of-use assets	(6.4)	2,954	2,803	3,000
Investments in equity-accounted companies	(7.1) (7.2)	437	412	379
Deferred tax assets	(11.2)	833	860	976
Other non-current assets	(7.3)	3,511	2,527	774
NON-CURRENT ASSETS		**32,180**	**30,371**	**29,823**
Inventories	(4.4)	6,200	6,252	6,050
Trade accounts receivable	(4.4)	4,813	4,967	5,107
Current tax receivable	(4.4) (11.1)	194	286	204
Other receivables	(4.4)	1,609	1,608	1,401
Assets held for sale	(2.3)	0	788	0
Cash and cash equivalents	(9.3)	4,987	2,688	3,284
CURRENT ASSETS		**17,803**	**16,589**	**16,046**
TOTAL ASSETS		**49,983**	**46,960**	**45,869**

EQUITY AND LIABILITIES				
Capital stock	(10.1)	2,179	2,186	2,214
Additional paid-in capital and legal reserve	(10.1)	5,551	5,646	5,944
Retained earnings and consolidated net income	(10.1)	12,518	11,864	11,925
Cumulative translation adjustments		(1,467)	(1,775)	(1,756)
Fair value reserves		743	(124)	22
Treasury stock	(10.1)	(108)	(106)	(123)
SHAREHOLDERS' EQUITY		**19,416**	**17,691**	**18,226**
Minority interests		364	330	383
TOTAL EQUITY		**19,780**	**18,021**	**18,609**
Non-current portion of long-term debt	(9.3)	10,286	9,156	7,599
Non-current portion of long-term lease liabilities	(9.3)	2,552	2,392	2,570
Provisions for pensions and other employee benefits	(5.3)	2,648	2,525	2,927
Deferred tax liabilities	(11.2)	448	449	406
Other non-current liabilities and provisions	(8.1)	1,126	1,034	1,047
NON-CURRENT LIABILITIES		**17,060**	**15,556**	**14,549**
Current portion of long-term debt	(9.3)	1,751	1,167	1,049
Current portion of long-term lease liabilities	(9.3)	665	683	698
Current portion of other liabilities and provisions	(8.1)	343	455	401
Trade accounts payable	(4.4)	6,000	6,150	6,062
Current tax liabilities	(4.4) (11.1)	156	104	157
Other payables	(4.4)	4,004	3,842	3,824
Liabilities held for sale	(2.3)	0	503	0
Short-term debt and bank overdrafts	(9.3)	224	479	520
CURRENT LIABILITIES		**13,143**	**13,383**	**12,711**
TOTAL EQUITY AND LIABILITIES		**49,983**	**46,960**	**45,869**

* The restatements are explained in note 3 "Impact of new standards".

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

CONSOLIDATED INCOME STATEMENT

(in € millions)	Notes	2019	2018 restated*
Net sales	(4.1)	42,573	41,774
Cost of sales	(4.1)	(31,717)	(31,157)
General expenses including research	(4.1)	(7,490)	(7,440)
Share in net income of core business equity-accounted companies	(7.1)	24	30
OPERATING INCOME		**3,390**	**3,207**
Other business income	(4.1)	196	437
Other business expense	(4.1)	(1,033)	(2,793)
BUSINESS INCOME		**2,553**	**851**
Borrowing costs, gross		(300)	(297)
Income from cash and cash equivalents		27	22
Borrowing costs, net, excluding lease liabilities		(273)	(275)
Interest on lease liabilities		(71)	(77)
Borrowing costs, net, including lease liabilities		(344)	(352)
Other financial income and expense		(124)	467
NET FINANCIAL INCOME (EXPENSE)	**(9.2)**	**(468)**	**115**
Share in net income of non-core business equity-accounted companies	(7.1)	0	0
Income taxes	(11.1) (11.2) (11.3)	(631)	(492)
NET INCOME		**1,454**	**474**
GROUP SHARE OF NET INCOME		**1,406**	**397**
Minority interests		48	77

	Notes	2019	2018 restated*
EARNINGS PER SHARE, GROUP SHARE *(in €)*	**(10.2)**	**2.59**	**0.73**
Weighted average number of shares in issue		542,079,771	547,105,985
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in €)*	**(10.2)**	**2.58**	**0.72**
Weighted average number of shares assuming full dilution		545,159,839	550,016,438

* The restatements are explained in note 3 “Impact of new standards”.

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

CONSOLIDATED STATEMENT OF RECOGNIZED INCOME AND EXPENSE

(in € millions)	Notes	2019	2018 restated*
NET INCOME		**1,454**	**474**
Items that may be subsequently reclassified to profit or loss			
Translation adjustments		309	(98)
Changes in fair value of financial instruments	(9.4)	(4)	(77)
Tax on items that may be subsequently reclassified to profit or loss		0	24
Items that will not be reclassified to profit or loss			
Changes in actuarial gains and losses	(5.3)	(80)	307
Tax on items that will not be reclassified to profit or loss	(11.1) (11.2)	27	(69)
Changes in assets at fair value through equity	(7.3)	871	(69)
Liability method on items that will not be reclassified to profit or loss	(11.1) (11.2)	0	(1)
Other		0	(2)
INCOME AND EXPENSE RECOGNIZED DIRECTLY IN EQUITY		**1,123**	**15**
TOTAL RECOGNIZED INCOME AND EXPENSE FOR THE YEAR		**2,577**	**489**
Group share		2,528	430
Minority interests		49	59

* The restatements are explained in note 3 “Impact of new standards“.

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

CONSOLIDATED STATEMENT OF CASH FLOWS

(in € millions)	Notes	2019	2018 restated*
GROUP SHARE OF NET INCOME		**1,406**	**397**
Minority interests in net income	(a)	48	77
Share in net income of equity-accounted companies, net of dividends received	(7.1)	(8)	(19)
Depreciation, amortization and impairment of assets	(4.1)	1,525	3,187
Depreciation and impairment of right-of-use assets	(6.4)	718	756
Gains (losses) on disposals of assets	(4.1)	2	(21)
Non-recurring SWH/Sika net income			(781)
Unrealized gains and losses arising from changes in fair value and share-based payments		31	23
Restatement for hyperinflation		20	(4)
Changes in inventory	(4.4)	(55)	(418)
Changes in trade accounts receivable and payable, and other accounts receivable and payable	(4.4)	25	99
Changes in tax receivable and payable	(4.4)	108	(133)
Changes in deferred taxes and provisions for other liabilities and charges	(5.3) (8.1) (11.2) (11.3)	(16)	48
NET CASH FROM OPERATING ACTIVITIES		**3,804**	**3,211**
Acquisitions of property, plant and equipment [2019: (1,656), 2018: (1,666)] and intangible assets	(6.2) (6.3)	(1,818)	(1,855)
Increase (decrease) in amounts due to suppliers of fixed assets	(4.4)	(30)	(19)
Acquisitions of shares in consolidated companies [2019: (200), 2018: (669)], net of cash acquired		(187)	(626)
Acquisitions of other investments	(7.3)	(88)	(937)
Increase in investment-related liabilities	(8.1)	11	39
Decrease in investment-related liabilities	(8.1)	(18)	(25)
Investments		**(2,130)**	**(3,423)**
Disposals of property, plant and equipment and intangible assets	(6.2) (6.3)	157	66
Disposals of shares in consolidated companies, net of cash divested		267	192
Disposals of other investments	(7.3)	1	3
(Increase) decrease in amounts receivable on sales of fixed assets	(4.4)	74	(108)
Divestments		**499**	**153**
Increase in loans, deposits and short-term loans	(7.3)	(99)	(268)
Decrease in loans, deposits and short-term loans	(7.3)	157	155
Changes in loans, deposits and short-term loans		**58**	**(113)**
NET CASH FROM (USED IN) INVESTMENT AND DIVESTMENT ACTIVITIES		**(1,573)**	**(3,383)**
Issues of capital stock	(a)	165	193
(Increase) decrease in treasury stock	(a)	(273)	(532)
Dividends paid	(a)	(716)	(707)
Transactions with shareholders of the parent company		**(824)**	**(1,046)**
Minority interests' share in capital increases of subsidiaries	(a)	35	16
Acquisitions of minority interests without gain of control		(9)	(93)
Changes in investment-related liabilities following the exercise of put options of minority shareholders	(8.1)	(3)	0
Dividends paid to minority shareholders of consolidated subsidiaries	(a)	(37)	(55)
Change in dividends payable		(13)	11
Transactions with minority interests		**(27)**	**(121)**
Increase (decrease) in bank overdrafts and other short-term debt		62	(4)
Increase in long-term debt	(b) (9.3)	2,708	2,512
Decrease in long-term debt	(b) (9.3)	(1,045)	(942)
Changes in gross debt		**1,725**	**1,566**
Decrease in lease liabilities	(b) (9.3)	(815)	(775)
Changes in gross debt including lease liabilities		**910**	**791**
NET CASH FROM (USED IN) FINANCING ACTIVITIES		**59**	**(376)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS		**2,290**	**(548)**
Net effect of exchange rate changes on cash and cash equivalents		7	(39)
Net effect of changes in fair value on cash and cash equivalents		2	0
Cash and cash equivalents classified within assets held for sale		0	(9)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR		**2,688**	**3,284**
CASH AND CASH EQUIVALENTS AT END OF YEAR		**4,987**	**2,688**

* The restatements are explained in note 3 "Impact of new standards".

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

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

In 2019, income tax paid represented €493 million (€538 million in 2018), IFRS 16 rental expenses paid €809 million (€815 million in 2018), including €71 million in interest paid on lease liabilities (€77 million in 2018), and interest paid net of interest received €258 million (€267 million in 2018).

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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(number of shares) Issued	Outstanding		Capital stock	Additional paid-in capital and legal reserve	Retained earnings and consolidated net income	*(in € millions)* Cumulative translation adjustments	Fair value reserves	Treasury stock	Shareholders' equity	Minority interests	Total equity
553,557,091	**550,785,719**	**AT DECEMBER 31, 2017**	**2,214**	**5,944**	**12,167**	**(1,756)**	**22**	**(123)**	**18,468**	**384**	**18,852**
		IFRS 9 and IFRS 15* restatements			(24)				**(24)**		**(24)**
		IFRS 16 restatements**			(218)				**(218)**	(1)	**(219)**
553,557,091	**550,785,719**	**RESTATED AT JANUARY 1, 2018 FOR THE APPLICATION OF NEW STANDARDS**	**2,214**	**5,944**	**11,925**	**(1,756)**	**22**	**(123)**	**18,226**	**383**	**18,609**
		Hyperinflation in Argentina				61			**61**		**61**
553,557,091	**550,785,719**	**RESTATED AT JANUARY 1, 2018**	**2,214**	**5,944**	**11,925**	**(1,695)**	**22**	**(123)**	**18,287**	**383**	**18,670**
		Income and expenses recognized directly in equity	0	0	259	(80)	(146)	0	**33**	(18)	**15**
		Net income for the year**			397				**397**	77	**474**
		Total income and expense for the year	**0**	**0**	**656**	**(80)**	**(146)**	**0**	**430**	**59**	**489**
		Issues of capital stock									
4,932,767	4,932,767	Group Savings Plan	20	159					**179**		**179**
556,595	556,595	Stock option plans	2	12					**14**		**14**
		Dividends paid in shares							**0**		**0**
		Other							**0**	16	**16**
		Dividends paid (€1.30 per share)			(707)				**(707)**	(55)	**(762)**
	(14,050,245)	Shares purchased			(30)			(583)	**(613)**		**(613)**
	1,654,431	Shares sold			0			81	**81**		**81**
(12,461,449)		Shares canceled	(50)	(469)				519	**0**		**0**
		Share-based payments			28				**28**		**28**
		Changes in Group structure and other			(8)				**(8)**	(73)	**(81)**
546,585,004	**543,879,267**	**RESTATED AT DECEMBER 31, 2018**	**2,186**	**5,646**	**11,864**	**(1,775)**	**(124)**	**(106)**	**17,691**	**330**	**18,021**
		Income and expenses recognized directly in equity	0	0	(53)	308	867	0	**1,122**	1	**1,123**
		Net income for the year			1,406				**1,406**	48	**1,454**
		Total income and expense for the year	**0**	**0**	**1,353**	**308**	**867**	**0**	**2,528**	**49**	**2,577**
		Issues of capital stock									
5,999,997	5,999,997	Group Savings Plan	25	128					**153**		**153**
310,204	310,204	Stock option plans	1	11					**12**		**12**
		Dividends paid in shares							**0**		**0**
		Other							**0**	35	**35**
		Dividends paid (€1.33 per share)			(716)				**(716)**	(37)	**(753)**
	(9,777,969)	Shares purchased			(4)			(321)	**(325)**		**(325)**
	1,676,229	Shares sold						52	**52**		**52**
(8,211,754)		Shares canceled	(33)	(234)				267	**0**		**0**
		Share-based payments			28				**28**		**28**
		Changes in Group structure and other			(7)				**(7)**	(13)	**(20)**
544,683,451	**542,087,728**	**AT DECEMBER 31, 2019**	**2,179**	**5,551**	**12,518**	**(1,467)**	**743**	**(108)**	**19,416**	**364**	**19,780**

* Restatements in respect of IFRS 9 and IFRS 15 are explained in note 3 "Impact of new standards" to the 2018 consolidated financial statements.

** Restatements in respect of IFRS 16 are explained in note 3 "Impact of new standards".

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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

These consolidated financial statements were adopted on February 27, 2020 by the Board of Directors and will be submitted to the Shareholders' Meeting of June 4, 2020 for approval.

Accounting principles and policies are highlighted in a distinct color.

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, 2018, 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, 2019. These consolidated 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 https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002/.

1.1.1. Standards, interpretations and amendments to existing standards applicable for reporting periods beginning on or after January 1, 2019

The following standards, interpretations and amendments, effective since January 1, 2019, were applied to the consolidated financial statements for the year ended December 31, 2019:

- IFRS 16, "Leases"

The main quantitative and qualitative impacts of applying IFRS 16 are described in note 3 "Impact of new standards".

- IFRIC 23, "Uncertainty over Income Tax Treatments"

IFRIC 23 clarifies that IAS 12, "Income Taxes" is applicable to provisions for tax-related contingencies. IFRIC 23 also provides clarification concerning the basis for assessing, recognizing and measuring tax-related contingencies.

Saint-Gobain has chosen to apply IFRIC 23 using the simplified retrospective method. IFRIC 23 has no material impact on the Group's consolidated financial statements.

The following amendments to existing standards are applicable in the period:

- Amendments to IFRS 9, “Prepayment Features with Negative Compensation”
- Amendments to IAS 28, “Long-term Interests in Associates and Joint Ventures”
- Amendments to IAS 19, “Plan Amendment, Curtailment or Settlement”.

These amendments have no material impact on the Group consolidated financial statements.

Annual improvements to IFRSs – 2015-2017 cycle concern:

- IFRS 3, “Business Combinations”
- IFRS 11, “Joint Arrangements”
- IAS 12, “Income tax”
- IAS 23, “Borrowing Costs”

These amendments have no impact on the Group consolidated financial statements.

1.1.2. Standards, interpretations and amendments to existing standards available for early adoption in reporting periods beginning on or after January 1, 2019

The new standards, interpretations and amendments to existing standards applicable to accounting periods starting on or after January 1, 2020 were not early adopted by the Group at December 31, 2019. These are:

- Amendments to IAS 1 and IAS 8, “Definition of Material”
- Amendments to References to the Conceptual Framework in IFRS Standards
- Amendments to IFRS 9, IAS 39 and IFRS 7, “Interest Rate Benchmark Reform” – Phase 1
- Amendments to IFRS 3, “Definition of a Business”

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, in the prevailing economic and financial environment which makes it difficult to predict future business performance. Actual amounts may differ from those obtained through the use of these estimates and assumptions.

The main estimates and assumptions described in these notes concern the measurement of employee benefit obligations and share-based payment (note 5 "Employees, personnel expenses and employee benefit obligations"), asset impairment tests (note 6 "Intangible assets, property, plant and equipment, and right-of-use assets"), provisions for other liabilities and charges (note 8 "Other current and non-current liabilities and provisions, contingent liabilities and litigation"), the measurement of financial instruments and the determination of lease terms (note 9 "Financing and financial instruments"), and taxes (note 11 "Tax").

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

- Full consolidation

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

- 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.

- 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

- 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 all 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.

- 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.

- 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 within the next 12 months, are classified as non-current assets and liabilities held for sale. When several assets are held for sale in a single transaction, they are accounted for as a disposal group, which also includes any liabilities directly associated with those assets. The assets or disposal groups held for sale are measured at the lower of carrying amount and fair value less costs to sell. Depreciation/amortization ceases when non-current assets are classified as held for sale. Non-current assets and liabilities held for sale are presented separately on two lines of the consolidated balance sheet, and income and expenses continue to be recognized in the consolidated income statement on a line-by-line basis. The reclassified assets are carried at the lower of their fair value less costs to sell and their net book value. 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 transactions in the balance sheet and income statement 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. In the event of significant volatility in exchange rates or in the exchange rates of hyperinflationary economies, the financial statements of the subsidiaries concerned are translated at the exchange rates prevailing at year-end.

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, liquidated or deconsolidated. 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.

2.1.7. Hyperinflation in Argentina

Argentina has been classified as a hyperinflationary economy since July 1, 2018. IAS 29, "Financial Reporting in Hyperinflationary Economies", is therefore applicable to entities using the Argentine peso as their functional currency. Under IAS 29, financial statements prepared based on historical cost must be restated. This involves applying a general price index that enables the financial statements to be presented in the measuring unit in force at the reporting date. All non-monetary assets and liabilities must therefore be adjusted for inflation in order to reflect changes in purchasing power at the reporting date. Similarly, the income statement is adjusted for inflation during the period. Monetary items do not need to be restated as they already reflect purchasing power at the reporting date.

Following the IFRIC's tentative decision regarding the classification of translation reserves and restatements for hyperinflation, these equity items have been restated within the translation reserves with retroactive effect from January 1, 2018.

2.2. Changes in Group structure

Significant changes in the Group's structure during 2019 and 2018 are presented below and a list of the main consolidated companies at December 31, 2019 is provided in note 14 "Principal consolidated companies".

2.2.1. Transactions carried out in 2019

Saint-Gobain is pursuing a portfolio optimization strategy. Various acquisitions were completed in order to strengthen the Group's profile in high added-value businesses and in growing markets. In 2019, 18 acquisitions of consolidated companies or of companies in the process of being consolidated were completed for a total amount of around €260 million. Saint-Gobain also sold 15 consolidated companies for a total amount of €370 million.

The main transactions are summarized below:

- On January 11, 2019, Saint-Gobain sold its regional glass business Glassolutions Norway and Sweden to Mimir Invest AB, a Swedish investment firm;
- On February 1, 2019, Saint-Gobain completed the acquisition of American Seal and Engineering Co., a leader in technical sealing solutions;
- On April 24, 2019, Saint-Gobain completed the acquisition of the entire share capital of Knauf Mexico, a company specializing in the manufacture and distribution of plasterboard;

- On May 14, 2019, Saint-Gobain completed the sale of its silicon carbide grains and powders business to the private equity firm OpenGate Capital;
- On May 28, 2019, Saint-Gobain acquired UK-based Pritex, a key player in acoustic and thermal insulation solutions made from polymer-based composite materials and intended for the mobility market;
- On September 30, 2019, Saint-Gobain completed the sale of Saint-Gobain Building Distribution Deutschland to the Stark group;
- On October 1, 2019, Saint-Gobain completed the sale of K par K, specializing mainly in the door-to-door sale of customized woodwork and windows on the French market;
- On October 7, 2019, Saint-Gobain announced that it had completed the sale of its Optimera construction materials distribution business in Denmark to Davidsens Tommerhandel;
- On October 16, 2019, Saint-Gobain announced that it had acquired 100% of the mortars division of the Celima group in Peru. The mortars division leads the country's tiling adhesives market;
- On November 4, 2019, Saint-Gobain sold its regional glass transformation business Glassolutions in the Netherlands to the German family office Aequita;
- On November 29, 2019, Saint-Gobain completed the sale of Distribution Matériaux pour les Travaux Publics (DMTP) to the Frans Bonhomme group;
- On December 19, 2019, Saint-Gobain sold Hankuk Glass Industries, its construction glass activity in South Korea, to Glenwood Private Equity, a leading investment management company in South Korea specialized in industrial activities and the construction sector;
- On December 26, 2019, Saint-Gobain acquired Sonex, a Brazilian company specialized in the manufacture and supply of acoustic ceiling systems, marketed in particular under the Sonex, Nexacustic and Fiberwood brands;
- On December 31, 2019, Saint-Gobain acquired Belgium-based High Tech Metal Seals (HTMS), a designer and manufacturer of metal seals for the industrial, energy and aerospace markets;
- On December 31, 2019, Saint-Gobain entered into an agreement with Hirsch Servo and BEWiSynbra, through its subsidiary Placoplatre, to sell its expanded polystyrene (EPS) business in France.

Acquisitions in 2019 represent full-year sales of around €189 million and €36 million in EBITDA. Disposals in 2019 represent full-year sales of around €2.9 billion.

2.2.2. Transactions carried out in 2018

The main transactions are summarized below:

- On January 11, 2018, Saint-Gobain and the Kuwait-based company Alghanim Industries, who are already partners in insulation manufacturing joint ventures in Turkey (Izocam) and Saudi Arabia (SIIMCO), decided to extend their partnership in Kuwait with the KIMMCO joint venture;
- On March 1, 2018, Saint-Gobain acquired all of the shares of Per Strand. With 12 outlets in northern Norway, Per Strand is the leading building distribution generalist in its region;
- On March 1, 2018, Saint-Gobain acquired HyComp, a leading supplier of composite components made with proprietary carbon fibers and thermoplastic materials, used in high-temperature and long-life applications in the aerospace industry;
- On April 13, 2018, Saint-Gobain acquired the pharmaceutical business of Micro Hydraulics, an Ireland-based supplier and manufacturer of single-use fluid handling components and systems in high-performance plastics;
- On July 3, 2018, Saint-Gobain signed an agreement to purchase Hunter Douglas' North American ceilings business. A leading manufacturer of architectural ceilings, this business has two production sites in Norcross (Georgia) and Denver (Colorado);
- On August 1, 2018, Saint-Gobain acquired the German company HKO, which designs, produces and distributes a complete range of very high temperature thermal insulation and fire protection solutions;

- On September 20, 2018, Hankuk Glass Industries (HGI), a South Korean subsidiary of Saint-Gobain on the Seoul stock exchange, launched a tender offer to acquire the 23% of shares owned by minority shareholders. As a result of this successful offer, Saint-Gobain and HGI now hold 96.8% of the company's share capital, with a delisting planned;
- On October 5, 2018, Saint-Gobain signed an agreement to acquire all of the capital of Kaimann, one of Europe's leading manufacturers of elastomeric insulation products.

The Group's acquisitions in 2018 represented full-year sales of around €570 million.

On May 11, 2018, Saint-Gobain, through Schenker-Winkler Holding AG (SWH), became the largest shareholder of Sika, holding 10.75% of the share capital and voting rights (see the 2018 Registration Document for more details). Saint-Gobain and Sika agreed on lock-up (two years) and stand-still obligations (up to 10.75% for four years, and up to 12.875% for the following two years) with regard to this stake. In the event of an intended sale by SWH, these shares would first be offered to Sika, within the limit of 10.75% of Sika's capital.

In Saint-Gobain's 2018 consolidated financial statements, the transaction resulted in total income of €781 million, which includes a financial gain of €601 million (i.e., the difference between the fair value of the shares at the date of the transaction and the value of the call entered into in December 2014), and a compensatory indemnity of €180 million recorded in other business income. The Group has elected to recognize the subsequent changes in the fair value of the Sika shares held by SWH in income and expenses recognized directly in equity.

The Group's Venezuelan subsidiaries were deconsolidated in 2018: operational oversight of the businesses has become increasingly difficult owing to (i) the country's worsening political and economic climate, (ii) exchange rate volatility, as a result of which our Venezuelan operations are not material, and (iii) increasing difficulties in obtaining reliable financial information within the appropriate time frames.

The Group stepped up restructuring measures in China aimed at restoring the profitability of its Pipe business. Following the decision of the Xuzhou city council on April 8 to request operations at the local plant to be suspended in light of new environmental regulations, the Group concluded that it was unable to profitably operate the facility and that it would definitively shut down operations, with a portion of production being transferred to the other Chinese factory in Ma'anshan.

In parallel with the immediate launch of a process to close down the plant, the Group entered into talks with several investors with a view to selling the shares of the three legal entities concerned. On November 23, 2018, the Group completed the sale of the entities operating at the Xuzhou plant along with their industrial and real estate assets, to Nanjing Manyuan Technology Co., Ltd. (NMT).

2.3. Assets and liabilities held for sale

The Group announced the following disposals in the first half of 2019:

- Building materials distribution business in Denmark (Optimera): on June 19, 2019, Saint-Gobain entered into an agreement to sell the business to Davidsens Tommerhandel;
- Public Works business: Saint-Gobain has begun the process of divesting Distribution Matériaux Travaux Publics (DMTP) a subsidiary of Point.P. DMTP is France's leading supplier of building materials for civil engineering and public works.

Optimera Denmark was sold on October 7, 2019, while DMTP was sold on November 29, 2019.

Accordingly, at December 31, 2019, the Group had no discontinued operations and no assets and liabilities held for sale shown on its consolidated balance sheet.

At December 31, 2018, Saint-Gobain had launched a process to divest the following businesses, the assets and liabilities of which were classified as held for sale at that date:

- Silicon carbide business: Saint-Gobain entered into negotiations with the OpenGate Capital private equity firm to sell its silicon carbide operations (part of the High-Performance Materials business). This sale was effective on May 14, 2019;
- Distribution business in Germany: Saint-Gobain entered into an agreement to sell all of its shares in Saint-Gobain Building Distribution Deutschland (SGBDD) to the Stark group, an important player in building materials distribution in Scandinavia. The sale was completed on September 30, 2019.

Since these businesses meet the qualifying criteria set out in IFRS 5, the balance sheet accounts of the entities concerned were combined and measured within assets and liabilities held for sale in the consolidated balance sheet at December 31, 2018.

(in € millions)	**Dec. 31, 2018 restated**
Intangible assets, property, plant and equipment and goodwill, net	159
Right-of-use assets, net	176
Inventories, trade accounts receivable, other receivables and other non-current assets	444
Cash and cash equivalents	9
ASSETS HELD FOR SALE	**788**
Provisions for pensions and other employee benefits	82
Other current and non-current liabilities and provisions	18
Trade accounts payable, other payables and other current liabilities	196
Debt and bank overdrafts	207
LIABILITIES HELD FOR SALE	**503**
NET ASSETS (LIABILITIES) HELD FOR SALE	**285**

2.4. Changes in the number of consolidated companies

At December 31, 2019, the number of consolidated companies was as follows:

	France	**Outside France**	**Total**
Fully consolidated companies			
At December 31, 2018	**140**	**628**	**768**
Newly consolidated companies	2	42	44
Merged companies	(4)	(15)	(19)
Deconsolidated companies	(5)	(37)	(42)
Change in consolidation method			0
At December 31, 2019	**133**	**618**	**751**
Equity-accounted companies and joint arrangements			
At December 31, 2018	**4**	**97**	**101**
Newly consolidated companies		3	3
Merged companies			0
Deconsolidated companies	(2)	(3)	(5)
Change in consolidation method			0
At December 31, 2019	**2**	**97**	**99**
Total			
At December 31, 2018	**144**	**725**	**869**
At December 31, 2019	**135**	**715**	**850**

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

At December 31, 2019, non-cancelable purchase commitments include the commitment regarding shares in Continental Building Products. A forward purchase of US$1.3 billion was carried out on January 14, 2020 in respect of this commitment (see note 12 "Subsequent events").

NOTE 3 IMPACT OF NEW STANDARDS

This note sets out the new accounting policies applied with effect from January 1, 2019 and explains the impact on the consolidated financial statements of adopting IFRS 16, "Leases".

3.1. Accounting policies applied since January 1, 2019

IFRS 16, "Leases" eliminates the distinction between operating leases and finance leases that existed under IAS 17, introduces a single lessee accounting model and requires lessees to account for virtually all leases on their balance sheet by recognizing:
- an asset representing the right to use the leased asset over the lease term ("right-of-use asset");
- a liability representing the obligation to make lease payments ("lease liability");
- an equity impact net of deferred taxes.

In the income statement, rental expense is replaced by:
- depreciation of the right-of-use asset; and
- interest on the lease liability.

The Saint-Gobain group has chosen to apply IFRS 16 using the full retrospective method at January 1, 2019 (i.e., with effect from January 1, 2018) and has restated all of its leases that were identified ahead of first-time application of the standard. Entities' historical lease contracts were restated with effect from the date on which the entities were first consolidated by the Group.

The following recognition exemptions proposed by IFRS 16 have been used by the Group:
  - leases with a lease term of 12 months or less;
  - leases where the underlying asset has a value of less than US$ 5,000 when new.

- Property leases

The lease term corresponds to the non-cancelable period of the lease, plus any renewal (or termination) options that the Group is reasonably certain to exercise (or not to exercise). The Group determined whether or not lease renewal (or termination) options were reasonably certain to be exercised based on the location of, and any improvements inseparable from, the leased asset. The Group has adopted the position of the French accounting standard-setter (*Autorité des normes comptables* – ANC), i.e., assuming an enforceable period of up to nine years (including for automatically renewable leases) as the lease term for "3/6/9-year" commercial lease arrangements in France. The Group did not identify any material leases with similar characteristics in other countries.

At December 31, 2019 and with retroactive effect from January 1, 2018, Saint-Gobain took account of the IFRIC's November 2019 agenda decision in reviewing the terms of its automatically renewable leases, considering the importance of the underlying assets to its operations.

The discount rate used to calculate the lease liability is the incremental borrowing rate. This rate is applied at the commencement of the lease or at the date of the decision to renew the lease. The Group calculated the rate applicable to each lease contract on the basis of its duration, which reflects the payment profile of the lease liability.

The useful life of non-movable leasehold improvements cannot exceed the useful life of the right-of-use assets to which they relate.

- Leases other than property leases

The main leases identified correspond to leases of vehicles, machinery and production equipment.

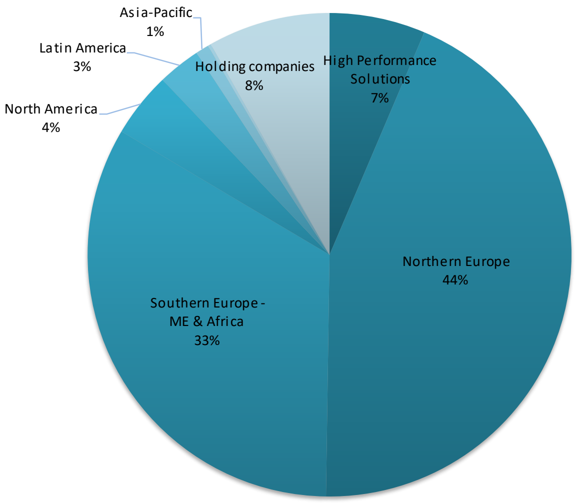
The lease capitalization period (lease term) represents the non-cancelable period of the lease. Where leases provide for a renewal (or termination) option, the Group determined whether or not that option was reasonably certain to be exercised based on the ease with which the leased asset could be replaced and its criticality.

The discount rate used to determine the lease liability is calculated using the same approach as for property leases.

The implicit interest rate of the lease is used as discount rate only in the case of non-property lease contract and only if the legal documentation of the contract stipulates it explicitly.

Although leases can generally incorporate indexation clauses, lease liabilities are measured based solely on indexes known at the end of the reporting period.

- Lease liabilities can be analyzed as follows by segment:



Distribution entities account for 88% of lease liabilities in Northern Europe and 86% of lease liabilities in Southern Europe - Middle East & Africa.

3.2. Impact on the consolidated financial statements

In accordance with the approach adopted by the Group, the consolidated financial statements for the year ended December 31, 2018 have been restated. The Group presents the balance sheet as restated at January 1 and December 31, 2018. Balance sheet amounts include assets and liabilities held for sale and any gains and losses on those items.

3.2.1. Impact on the consolidated balance sheet

The table below shows the impacts of applying IFRS 16 for the first time:

(in € millions)	Dec. 31, 2018 published	IFRS 16 impact	Dec. 31, 2018 restated	January 1, 2018 published	First-time application of IFRS 16	January 1, 2018 restated for new standards
ASSETS						
Intangible assets and property, plant and equipment	23,849	(80)	23,769	24,768	(74)	24,694
Right-of-use assets	0	2,803	2,803	0	3,000	3,000
Current and non-current financial and other assets	18,742	(2)	18,740	17,199	0	17,199
Deferred tax assets	837	23	860	947	29	976
Assets held for sale	614	174	788	0	0	0
TOTAL ASSETS	**44,042**	**2,918**	**46,960**	**42,914**	**2,955**	**45,869**
EQUITY AND LIABILITIES						
TOTAL EQUITY	**18,262**	**(241)**	**18,021**	**18,828**	**(219)**	**18,609**
Non-current portion of long-term debt	9,218	(62)	9,156	7,659	(60)	7,599
Non-current portion of long-term lease liabilities	0	2,392	2,392	0	2,570	2,570
Deferred tax liabilities	472	(23)	449	427	(21)	406
Non-current liabilities and provisions	3,561	(2)	3,559	3,980	(6)	3,974
NON-CURRENT LIABILITIES	**13,251**	**2,305**	**15,556**	**12,066**	**2,483**	**14,549**
Current portion of long-term debt	1,184	(17)	1,167	1,064	(15)	1,049
Current portion of long-term lease liabilities	0	683	683	0	698	698
Current liabilities and provisions	11,023	7	11,030	10,956	8	10,964
Liabilities held for sale	322	181	503	0	0	0
CURRENT LIABILITIES	**12,529**	**854**	**13,383**	**12,020**	**691**	**12,711**
TOTAL EQUITY AND LIABILITIES	**44,042**	**2,918**	**46,960**	**42,914**	**2,955**	**45,869**

Applying IFRS 16 (after restatement for the impacts of IAS 17) at the transition date notably led to the recognition of lease liabilities for €3,193 million (including €182 million relating to liabilities under automatically renewable leases – see section 3.1) and of right-of-use assets for €3,000 million (including €74 million relating to finance leases already recognized at December 31, 2018 in accordance with IAS 17).

3.2.2. Impact on the consolidated income statement

(in € millions)	2018 published	IFRS 16 impact	2018 restated
Net sales	41,774	0	41,774
Cost of sales	(31,172)	15	(31,157)
General expenses including research	(7,510)	70	(7,440)
Share in net income of core business equity-accounted companies	30	0	30
OPERATING INCOME	**3,122**	**85**	**3,207**
Other business income	435	2	437
Other business expense	(2,759)	(34)	(2,793)
BUSINESS INCOME	**798**	**53**	**851**
Borrowing costs, gross	(300)	3	(297)
Income from cash and cash equivalents	22	0	22
Borrowing costs, net, excluding lease liabilities	(278)	3	(275)
Interest on lease liabilities	0	(77)	(77)
Borrowing costs, net, including lease liabilities	(278)	(74)	(352)
Other financial income and expense	467	0	467
NET FINANCIAL INCOME (EXPENSE)	**189**	**(74)**	**115**
Share in net income of non-core business equity-accounted companies	0	0	0
Income taxes	(490)	(2)	(492)
NET INCOME	**497**	**(23)**	**474**
GROUP SHARE OF NET INCOME	**420**	**(23)**	**397**
Minority interests	77	0	77

(in € millions)	2018 published	IFRS 16 impact	2018 restated
EARNINGS PER SHARE, GROUP SHARE *(in €)*	**0.77**	**(0.04)**	**0.73**
Weighted average number of shares in issue	547,105,985	547,105,985	547,105,985
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in €)*	**0.76**	**(0.04)**	**0.72**
Weighted average number of shares assuming full dilution	550,016,438	550,016,438	550,016,438

Applying IFRS 16 led to an estimated increase in 2018 EBITDA of €789 million (including a €702 million increase in depreciation of right-of-use assets net of finance leases) and an estimated increase of €85 million in 2018 operating income.

3.2.3. Impact on the consolidated statement of cash flows

(in € millions)	2018 published	IFRS 16 impact	2018 restated
GROUP SHARE OF NET INCOME	**420**	**(23)**	**397**
Minority interests in net income	77	0	77
Depreciation, amortization and impairment of assets	3,205	(18)	3,187
Depreciation and impairment of right-of-use assets	0	756	756
Non-recurring SWH/Sika net income and other	(801)	(1)	(802)
Changes in operating working capital requirement	(453)	1	(452)
Changes in deferred taxes and provisions for other liabilities and charges	44	4	48
NET CASH FROM OPERATING ACTIVITIES	**2,492**	**719**	**3,211**
Investments	(3,423)	0	(3,423)
Divestments	117	36	153
Changes in loans, deposits and short-term loans	(113)	0	(113)
NET CASH FROM (USED IN) INVESTMENT AND DIVESTMENT ACTIVITIES	**(3,419)**	**36**	**(3,383)**
Transactions with shareholders of the parent company	(1,046)	0	(1,046)
Transactions with minority interests	(121)	0	(121)
Changes in gross debt	1,546	20	1,566
Changes in lease liabilities	0	(775)	(775)
NET CASH FROM (USED IN) FINANCING ACTIVITIES	**379**	**(755)**	**(376)**
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	**(548)**	**0**	**(548)**
Net effect of changes in exchange rates, fair value and assets held for sale on cash and cash equivalents	(48)	0	(48)
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	**3,284**	**0**	**3,284**
CASH AND CASH EQUIVALENTS AT END OF YEAR	**2,688**	**0**	**2,688**

NOTE 4 INFORMATION CONCERNING THE GROUP'S OPERATING ACTIVITIES

4.1. Income statement items

4.1.1. Revenue recognition

Revenue generated by the sale of goods or services is recognized net of rebates, discounts and sales taxes when control of the goods or services has been transferred to the customer. Revenue generated by the sale of goods is primarily recognized at the time the goods are delivered. Revenue generated by the sale of services is recognized when the services have been rendered, or based on the stage of completion of the services, as calculated based on costs incurred. Similarly, within the Distribution entities, estimated returns are recognized as a deduction from revenue (net sales) and reclassified within inventories for their net carrying amount, since there is a possibility that goods will be returned within the allotted timeframe. A liability relating to future refunds for goods returned is also recognized.

Revenue generated under construction contracts is accounted for by the Group's companies on a percentage-of-completion basis, as calculated based on costs incurred. The related costs are expensed as incurred. When the outcome of a construction contract cannot be estimated reliably, contract revenue is recognized 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.

4.1.2. Operating income

Operating income is a measure of the performance of the Group's different reporting segments 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.

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

Business income is detailed by type below:

4.1.3. 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.

(in € millions)	**2019**	**2018 restated**
NET SALES	**42,573**	**41,774**
Personnel expenses:		
Salaries and payroll taxes	(8,336)	(8,243)
Share-based payments(1)	(33)	(35)
Pensions and employee benefit obligations(1)	(158)	(180)
Depreciation and amortization of property, plant and equipment, intangible assets and right-of-use assets	(1,901)	(1,904)
Share in net income of core business equity-accounted companies	24	30
Other(2)	(28,779)	(28,235)
OPERATING INCOME	**3,390**	**3,207**
Other business income(3)	196	437
Other business expense	(1,033)	(2,793)
OTHER BUSINESS INCOME AND EXPENSE	**(837)**	**(2,356)**
BUSINESS INCOME	**2,553**	**851**

(1) Share-based payments (IFRS 2 expense) and changes in employee benefit expense are detailed in note 5 "Employees, personnel expenses and employee benefit obligations".

(2) The "Other" operating income line relates to cost of sales, supplier discounts and selling expenses for Distribution entities, and to transport costs, raw materials costs, and other production costs for the other entities. This item also includes research and development costs recorded under operating expenses, amounting to €466 million in 2019 (2018: €454 million).

(3) In 2018, "Other operating income" mainly included the compensatory indemnity of €180 million in connection with SWH/Sika and the gain on the disposal of entities operating at the Group's Xuzhou plant in China (see note 2 to the 2018 consolidated financial statements).

4.1.4. Other business income and expense

Other business income and expense mainly include changes in provisions for claims and litigation (excluding those arising in the ordinary course of operations) 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)	**2019**	**2018 restated**
Restructuring costs[1]	(248)	(308)
Provisions and expenses relating to claims and litigation[2]	(89)	(116)
Other [3]	(84)	143
NON-OPERATING INCOME AND EXPENSE	**(421)**	**(281)**
Impairment of assets and other[4]	(414)	(2,096)
Other business expense[5]	(198)	(235)
IMPAIRMENT OF ASSETS AND OTHER BUSINESS EXPENSES	**(612)**	**(2,331)**
GAINS ON DISPOSALS OF NON-CURRENT ASSETS	**196**	**256**
GAINS (LOSSES) ON DISPOSALS, ASSET IMPAIRMENT, ACQUISITION FEES AND CONTINGENT CONSIDERATION	**(416)**	**(2,075)**
OTHER BUSINESS INCOME AND EXPENSE	**(837)**	**(2,356)**

(1) Restructuring costs in 2019 mainly consist of severance payments totaling €59 million (2018: €127 million).

(2) In both 2019 and 2018, changes in provisions and expenses relating to litigation as detailed and explained in note 8 “Other current and non-current liabilities and provisions, contingent liabilities and litigation” chiefly concern asbestos-related litigation.

(3) “Other” in 2018 mainly included the €180 million compensatory indemnity in respect of SWH/Sika.

(4) The “Impairment of assets and other” line essentially includes (i) the impairment of goodwill, other intangible assets, property, plant and equipment and right-of-use assets relating to assets held for sale for €342 million in 2019 (2018: €2,039 million), (ii) the impairment of other assets for €61 million (2018: €34 million), and (iii) acquisition fees and contingent consideration incurred in connection with business combinations, representing a net expense of €11 million in 2019 (2018: net expense of €23 million).

(5) Other business expense in 2019 as in 2018, mainly include capital losses on assets divested or scrapped.

4.2. 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 in line with its internal reporting.

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 right-of-use assets.

A new organizational and management structure began to be put in place from January 1, 2019. The new structure intends to align the Group more closely with its end markets, taking into account the regional dimension of the majority of its markets and the global nature of its most innovative businesses.

The new structure consists of five reporting units: four regional businesses and a global High Performance Solutions unit. Segment information is presented for:

- High Performance Solutions (HPS), which is organized by market for global customers, i.e., Mobility, Life Sciences, Construction Industry and Industry.

And for four regions, plus the holding companies:

- Northern Europe, comprising the Nordic countries, United Kingdom, Ireland, Switzerland, Germany, Austria, Eastern Europe and Russia;
- Southern Europe – Middle East (ME) & Africa, comprising France, Benelux, Mediterranean, Middle East and Africa;
- Americas, comprising North America and Latin America;
- Asia-Pacific, comprising the Asia region and India;
- Other, comprising the Group's various holding companies.

These five reporting units replace the three former business Sectors. Segment information for 2018 has been restated to take into account the aforementioned business reorganization.

Segment information for 2019 and 2018 is as follows:

2019

(in € millions)	High Performance Solutions**	Northern Europe	Southern Europe** - ME & Africa	Americas	Asia-Pacific	Other*	Group Total
Net sales	7,584	15,058	13,624	5,555	1,888	(1,136)	42,573
Operating income	966	946	736	562	200	(20)	3,390
Business income	794	574	537	410	260	(22)	2,553
Share in net income of equity-accounted companies	1	9	(3)	15	4	(2)	24
Depreciation and amortization	345	610	582	238	99	27	1,901
Impairment of assets	0	224	86	7	23	2	342
EBITDA	1,211	1,455	1,244	666	292	2	4,870
Acquisitions of property, plant and equipment and intangible assets	424	475	418	316	139	46	1,818
Cash flow from operations	864	1,267	749	503	237	162	3,782
Goodwill, net	1,937	4,331	2,120	1,337	304	0	10,029
Non-amortizable brands	0	1,462	491	11	0	0	1,964
Total segment assets and liabilities	5,805	10,368	7,835	4,115	1,529	304	29,956

* "Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.
** France net sales and segment assets represent €10,684 million and €6,615 million, respectively.

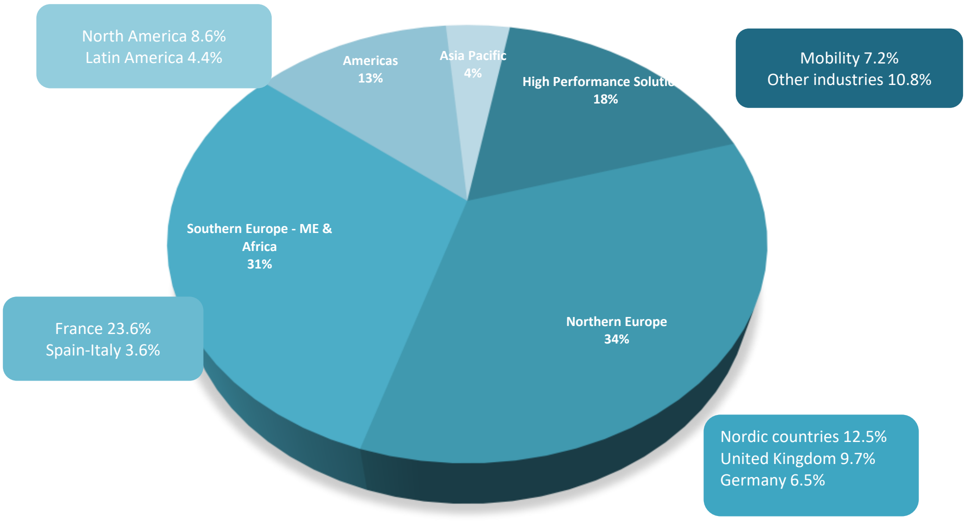
2018 restated

(in € millions)	High Performance Solutions**	Northern Europe	Southern Europe** - ME & Africa	Americas	Asia-Pacific	Other*	Group Total
Net sales	7,369	15,297	13,237	5,175	1,869	(1,173)	41,774
Operating income (expense)	986	856	603	578	194	(10)	3,207
Business income (expense)	701	(326)	(262)	386	204	148	851
Share in net income of equity-accounted companies	0	8	3	17	2	0	30
Depreciation and amortization	325	628	614	218	94	25	1,904
Impairment of assets	68	1,037	759	55	120	0	2,039
EBITDA	1,245	1,382	1,134	687	204	(3)	4,649
Acquisitions of property, plant and equipment and intangible assets	399	494	466	279	166	51	1,855
Cash flow from operations	962	1,187	683	513	215	177	3,737
Goodwill, net	1,873	4,402	2,140	1,292	283	0	9,990
Non-amortizable brands	0	1,399	491	11	0	0	1,901
Total segment assets and liabilities	5,614	10,434	8,050	3,994	1,708	(34)	29,766

* "Other" corresponds to the elimination of intragroup transactions for internal sales, and holding company transactions for the other captions.
** France net sales and segment assets represent €10,412 million and €6,460 million, respectively.

In 2019, sales made in Europe by entities in the industry segment totaled €10,115 million (2018: €9,923 million), while sales made in Europe by Distribution entities totaled €19,006 million (2018: €19,034 million).

In 2019, the breakdown of net sales by segment and for the Group's main countries is as follows:



4.3. Performance indicators

In the context of its new organization in place since January 1, 2019, Saint-Gobain reviewed its alternative performance indicators and revised its definition of EBITDA. The Group also replaced cash flow from operations with free cash flow (FCF), so as to provide the market with a more typical cash-oriented viewpoint. Saint-Gobain intends to use these new performance indicators over the long term.

4.3.1. EBITDA

The former definition of EBITDA, corresponding to operating income plus operating depreciation and amortization of property, plant and equipment and intangible assets, has been revised to include the depreciation of right-of-use assets, as well as non-operating income and expense.

EBITDA amounted to €4,870 million in 2019 (2018: €4,649 million), calculated as follows:

(in € millions)	**2019**	**2018 restated**
Operating income	3,390	3,207
Depreciation and amortization of property, plant and equipment and intangible assets	1,219	1,184
Depreciation of right-of-use assets	682	720
Non-operating income and expense*	(421)	(462)
EBITDA	**4,870**	**4,649**

* Excluding the €180 million compensatory indemnity in respect of SWH/Sika in 2018.

4.3.2. Free cash flow

Free cash flow (FCF) represents the surplus cash generated from the entity's operations. Free cash flow represents EBITDA plus net financial income/(expense), income tax and changes in working capital, less depreciation of right-of-use assets and investments in property, plant and equipment and intangible assets excluding additional capacity investments.

4.3.3. Operating free cash flow

Operating free cash flow (OFCF) represents the surplus cash generated from the entity's operations and is calculated as operating income plus non-operating income and expense and changes in working capital, less operating depreciation and amortization, investments in property, plant and equipment and intangible assets, and right-of-use assets.

4.3.4. Return on capital employed

Return on capital employed (ROCE) corresponds to annualized operating income adjusted for changes in the scope of consolidation (based on 12 months' of operating income for acquired companies and with no operating income taken into account for divested companies), 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.

4.3.5. Recurring net income

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

Recurring net income totaled €1,915 million in 2019 (2018: €1,741 million). Based on the weighted average number of shares outstanding at December 31 (542,079,771 shares in 2019 and 547,105,985 shares in 2018), recurring earnings per share amounted to €3.53 in 2019 and €3.18 in 2018.

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

(in € millions)	**2019**	**2018 restated**
GROUP SHARE OF NET INCOME	**1,406**	**397**
Less:		
Gains (losses) on disposals of assets	(2)	21
Impairment of assets and other*	(414)	(2,096)
Non-recurring SWH/Sika net income	0	781
Changes in provisions for non-recurring items	(128)	(139)
Impact of minority interests	(1)	2
Tax on disposal gains (losses), asset impairment and non-recurring provisions	36	87
GROUP SHARE OF RECURRING NET INCOME	**1,915**	**1,741**

* See note 4.1.4.

4.4. Working capital

Working capital can be analyzed as follows:

(in € millions)	Dec. 31, 2019	2018 restated
INVENTORIES, NET	**6,200**	**6,252**
TRADE ACCOUNTS RECEIVABLE, NET	**4,813**	**4,967**
Other operating receivables	1,471	1,407
Other non-operating receivables	138	201
OTHER RECEIVABLES, NET	**1,609**	**1,608**
CURRENT TAX RECEIVABLE	**194**	**286**
TRADE ACCOUNTS PAYABLE	**6,000**	**6,150**
Other operating payables	3,457	3,284
Other non-operating payables	547	558
OTHER PAYABLES	**4,004**	**3,842**
CURRENT TAX LIABILITIES	**156**	**104**
Operating working capital	3,027	3,192
Non-operating working capital (including current tax receivables and liabilities)	(371)	(175)
WORKING CAPITAL	**2,656**	**3,017**

4.4.1. 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, 2019 and 2018, inventories were as follows:

(in € millions)	**Dec. 31, 2019**	**Dec. 31, 2018**
Gross value		
Raw materials	1,494	1,494
Work in progress	344	363
Finished goods	4,856	4,849
GROSS INVENTORIES	**6,694**	**6,706**
Provisions for impairment		
Raw materials	(191)	(149)
Work in progress	(16)	(13)
Finished goods	(287)	(292)
TOTAL PROVISIONS FOR IMPAIRMENT	**(494)**	**(454)**
NET	**6,200**	**6,252**

The net value of inventories was €6,200 million at December 31, 2019 compared with €6,252 million at December 31, 2018. Impairment losses on inventories recorded in the 2019 income statement totaled €229 million (2018: €179 million). Reversals of impairment losses on inventories amounted to €198 million in 2019 (2018: €159 million).

4.4.2. 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, within the limit of expected credit losses.

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 impairment losses recognized are adjusted where appropriate.

The Group has various securitization and factoring programs for its trade receivables. Receivables transferred under some of these programs continue to be shown on the balance sheet with a corresponding liability in short-term debt if, based on an analysis of the contracts, the risks associated with the receivables are not transferred in substance to the financing institutions (further information is provided in notes 9.3.8 and 9.3.11).

▪ Trade and other accounts receivable

Trade and other accounts receivable can be analyzed as follows:

(in € millions)	Dec. 31, 2019	Dec. 31, 2018
Gross value	5,177	5,347
Provision for impairment	(364)	(380)
TRADE ACCOUNTS RECEIVABLE, NET	**4,813**	**4,967**
Discounts and advances to suppliers	660	633
Prepaid payroll taxes	35	36
Other prepaid and recoverable taxes (other than income tax)	476	478
Miscellaneous operating receivables	301	269
Other non-operating receivables and provisions	139	203
Provision for impairment of other operating receivables	(1)	(9)
Provision for impairment of other non-operating receivables	(1)	(2)
OTHER RECEIVABLES, NET	**1,609**	**1,608**

Changes in impairment provisions for trade accounts receivable in 2019 primarily reflect €99 million in additions (2018: €87 million) and €113 million in reversals (2018: €114 million), resulting from recoveries as well as write-offs. Write-offs of doubtful and bad debts are also reported under this caption for €92 million (2018: €76 million).

Trade accounts receivable at December 31, 2019 and 2018 are analyzed below by maturity:

(in € millions)	Gross value		Impairment		Net value	
	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
TRADE ACCOUNTS RECEIVABLE NOT YET DUE	**4,046**	**4,172**	**(34)**	**(32)**	**4,012**	**4,140**
Less than 3 months	471	478	(21)	(22)	450	456
1-3 months	184	206	(20)	(25)	164	181
More than 3 months	476	491	(289)	(301)	187	190
TRADE ACCOUNTS RECEIVABLE PAST DUE	**1,131**	**1,175**	**(330)**	**(348)**	**801**	**827**
TRADE ACCOUNTS RECEIVABLE	**5,177**	**5,347**	**(364)**	**(380)**	**4,813**	**4,967**

▪ Trade and other accounts payable

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

(in € millions)	Dec. 31, 2019	Dec. 31, 2018 restated
TRADE ACCOUNTS PAYABLE	**6,000**	**6,150**
Downpayments received and rebates granted to customers	1,338	1,161
Payables to suppliers of non-current assets	346	372
Grants received	108	87
Accrued personnel expenses	1,242	1,242
Accrued taxes other than on income	418	416
Other operating payables	459	465
Other non-operating payables	93	99
OTHER PAYABLES	**4,004**	**3,842**

4.5. Off-balance sheet commitments related to operating activities

4.5.1. 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 2019	Payments due by period			Total 2018
		Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	
Property, plant and equipment and intangible assets	45	44	1	0	43
Raw materials and energy	1,491	489	770	232	1,501
Services	276	85	174	17	128
TOTAL	**1,812**	**618**	**945**	**249**	**1,672**

Changes in non-cancelable purchase commitments (raw materials and services) essentially result from a shipping, road and rail transport agreement signed by the Gypsum business in the United Kingdom.

4.5.2. Guarantee commitments

In some cases, the Group grants seller's warranties to the buyers of divested businesses. A provision is recognized 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, 2019 (December 31, 2018: €83 million).

4.5.3. Commercial commitments

The Group's commercial commitments are shown below:

(in € millions)	Total 2019	Commitment amounts by period			Total 2018
		Due within 1 year	Due in 1 to 5 years	Due beyond 5 years	
Security for borrowings	44	20	17	7	48
Other commitments given	157	78	24	55	217
TOTAL	**201**	**98**	**41**	**62**	**265**

Guarantees given to the Group in respect of receivables totaled €83 million at December 31, 2019 (December 31, 2018: €107 million). At December 31, 2019, pledged assets represented €714 million (December 31, 2018: €577 million) and chiefly concerned fixed assets pledged in the United Kingdom.

4.5.4. Other commitments

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

Greenhouse gas emissions allowances allocated to Group companies by the European Union in 2019 represented approximately 2.8 million metric tons of CO_2. The new 2020 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.

It should be noted that following the fire at Notre-Dame cathedral in Paris on April 15, 2019, the Group indicated that Saint-Just glassworks would lend its expertise to help restore the monument's stained-glass windows. The precise arrangement for this assistance will be defined at a later stage of the reconstruction work.

NOTE 5 EMPLOYEES, PERSONNEL EXPENSES AND EMPLOYEE BENEFIT OBLIGATIONS

5.1. Employees of fully consolidated companies

- Average headcount

	2019	2018
Managerial-grade employees	30,555	30,292
Administrative employees	77,341	77,416
Other employees	73,045	73,828
TOTAL AVERAGE NUMBER OF EMPLOYEES	**180,941**	**181,536**

- Closing headcount

The total number of Group employees for fully consolidated companies was 170,643 at December 31, 2019 and 181,001 at December 31, 2018. The number of employees at the end of the reporting period takes account of the disposals carried out in the second half of 2019.

5.2. Management compensation

Direct and indirect compensation and benefits paid to the members of the Board of Directors and to the Group's senior management were as follows in 2019 and 2018:

(in € millions)	2019	2018
Remuneration paid to members of the Board of Directors	1.1	1.1
Direct and indirect compensation (gross)		
Fixed portion	7.7	9.7
Variable portion	3.7	5.7
Estimated cost of pensions and other employee benefit obligations (IAS 19)*	(2.0)	2.5
Share-based payment expense (IFRS 2)	7.6	9.2
Termination, retirement and other benefits	0.0	2.7
TOTAL	**18.1**	**30.9**

* The 2019 gain takes into account the impact of settling certain plans (see the note dealing with provisions for pensions and other employee benefits).

Total gross compensation and benefits paid in 2019 to Saint-Gobain management by the French and foreign companies in the Group amounted to €11.4 million (2018: €18.1 million), including €3.7 million in gross variable compensation (2018: €5.7 million) and nil in termination benefits (2018: €2.7 million).

Provisions for pensions and other post-employment benefit obligations (defined benefit obligations [DBO] in respect of length-of-service awards and pensions) accruing to Group management totaled €41.5 million at December 31, 2019 (December 31, 2018: €50.9 million).

5.3. Provisions for pensions and other employee benefits

5.3.1. Description of defined benefit plans

After retirement, some of 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". The asset ceiling corresponds to the maximum future economic benefit. Changes in the asset ceiling are recognized in equity.

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

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

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

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

In addition to length-of-service awards, there are three defined benefit plans, all of which are final salary plans. These plans were closed to new entrants by the companies concerned between 1969 and 1997. Effective March 1, 2012, a defined benefit plan complying with Article L.137-11 of France's Social Security Code (*Code de la sécurité sociale*) was set up by Compagnie de Saint-Gobain. Pursuant to an order of July 4, 2019 issued in the wake of France's "PACTE" law setting out an action plan for business growth and transformation, this plan was closed and any vested rights frozen at December 31, 2019.

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

On January 1, 2019, the main pension plan in the Netherlands covering 80% of employees was converted into a defined contribution plan with a residual defined benefit plan for a transitional period of up to 12 years.

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

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

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

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

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

5.3.2.1. Interest rate assumptions

Assumptions related to mortality, employee turnover and future salary increases take into account the economic conditions specific to each country and Group company. The discount rates are established by region or country based on observed bond rates at December 31, 2019.

For the Eurozone, two discount rates were calculated based on the term of the plans using a yield curve model developed by the consultants Mercer: one rate for plans with a term of 14 years or less and one for plans with a term of over 14 years.

The rates used in 2019 for the Group's main plans were the following:

	France		Eurozone		United Kingdom	United States
(in %)	Short-term plans	Long-term plans	Short-term plans	Long-term plans		
Discount rate	1.01%	1.39%	1.01%	1.39%	2.00%	3.20%
Salary increases	2.50%		1.80% to 2.40%		2.00%*	3.00%
Inflation rate	1.50%		1.00% to 1.70%		1.90%	2.20%

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

The rates used in 2018 for the Group's main plans were the following:

	France		Eurozone		United Kingdom	United States
(in %)	Short-term plans	Long-term plans	Short-term plans	Long-term plans		
Discount rate	1.80%	2.15%	1.80%	2.15%	2.80%	4.20%
Salary increases	2.50%		1.60% to 2.80%		2.10%*	3.00%
Inflation rate	1.50%		1.40% to 1.80%		2.10%	2.50%

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

As the above three regions account for substantially all of the pension obligation, the revised actuarial assumptions, notably the discount and inflation rates, contributed to an increase in the obligation, and therefore the provision, in an amount of €1,160 million.

The actual return on plan assets for almost all plans amount to €1,344 million. It is €1,078 million higher than the expected return, leading to a decrease in the provision of the same amount.

5.3.2.2. 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 €210 million for the US plans, €220 million for the Eurozone plans and €470 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 €620 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 between 4.50% and 5.96% per year, depending on the age of the beneficiary. A 1-point increase in this rate would lead to an increase of around €30 million in the related projected benefit obligation.

5.3.3. Breakdown of and changes in pensions and other post-employment benefit obligations

5.3.3.1. Carrying amount of provisions

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

(in € millions)	**Dec. 31, 2019**	**Dec. 31, 2018**
Pension obligations	1,824	1,732
Length-of-service awards	396	378
Post-employment healthcare benefits	287	276
TOTAL PROVISIONS FOR PENSIONS AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,507**	**2,386**
Healthcare benefits	26	27
Long-term disability benefits	12	11
Other long-term benefits	103	101
PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS	**2,648**	**2,525**

Provisions for all other long-term benefits totaled €141 million at December 31, 2019 (€139 million at December 31, 2018).

The following table shows net obligations under pensions and other post-employment benefit plans, excluding other long-term benefits:

(in € millions)	**Dec. 31, 2019**	**Dec. 31, 2018**
Provisions for pensions and other post-employment benefit obligations - liabilities	2,507	2,386
Pension plan surpluses - assets	(288)	(193)
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**2,219**	**2,193**

5.3.3.2. Analysis of obligations

At December 31, 2019, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region as follows:

(in € millions)	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
AVERAGE DURATION *(in years)*	**14**	**16**	**20**	**12**	**17**	**17**
Defined benefit obligations - funded plans	659	1,443	5,244	2,955	1,050	11,351
Defined benefit obligations - unfunded plans	314	144		250	176	884
Fair value of plan assets	(231)	(505)	(5,452)	(2,876)	(960)	(10,024)
DEFICIT/(SURPLUS)	**742**	**1,082**	**(208)**	**329**	**266**	**2,211**
Asset ceiling			2		6	8
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**742**	**1,082**	**(206)**	**329**	**272**	**2,219**

At December 31, 2018, pension obligations and provisions for other post-employment benefit obligations break down by major geographic region as follows:

(in € millions)	France	Eurozone	United Kingdom	United States	Rest of the World	Net total
AVERAGE DURATION *(in years)*	**15**	**16**	**20**	**12**	**16**	**16**
Defined benefit obligations - funded plans	628	1,337	4,526	2,606	920	10,017
Defined benefit obligations - unfunded plans	313	134		244	152	843
Fair value of plan assets	(235)	(503)	(4,605)	(2,473)	(861)	(8,677)
DEFICIT/(SURPLUS)	**706**	**968**	**(79)**	**377**	**211**	**2,183**
Asset ceiling			2		8	10
NET PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS	**706**	**968**	**(77)**	**377**	**219**	**2,193**

5.3.3.3. Changes in provisions

Changes in pensions 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 DECEMBER 31, 2017	**11,897**	**(9,274)**	**3**	**2,626**
Changes during the year				
Service cost	197			197
Interest cost/return on plan assets as per calculations	299	(244)		55
Employee contributions and plan administration costs		(1)		(1)
Past service cost	(33)			(33)
Plan curtailments/settlements	(199)	199		0
Pension contributions		(205)		(205)
Benefit payments	(497)	413		(84)
Actuarial gains and losses and asset ceiling	(816)	502	7	(307)
Translation adjustments	98	(86)		12
Changes in Group structure and reclassifications	20	(9)		11
Liabilities held for sale	(106)	28		(78)
TOTAL CHANGES	**(1,037)**	**597**	**7**	**(433)**
AT DECEMBER 31, 2018	**10,860**	**(8,677)**	**10**	**2,193**
Changes during the year				
Service cost	184			184
Interest cost/return on plan assets as per calculations	317	(266)		51
Employee contributions and plan administration costs		(2)		(2)
Past service cost				0
Plan curtailments/settlements	(51)	2		(49)
Pension contributions		(124)		(124)
Benefit payments	(535)	445		(90)
Actuarial gains and losses and asset ceiling	1,160	(1,078)	(2)	80
Translation adjustments	334	(335)		(1)
Changes in Group structure and reclassifications	(23)	12		(11)
Liabilities held for sale	(11)	(1)		(12)
TOTAL CHANGES	**1,375**	**(1,347)**	**(2)**	**26**
AT DECEMBER 31, 2019	**12,235**	**(10,024)**	**8**	**2,219**

In the United States and France, plan amendments led to a reduction of around €50 million in pension obligations in 2019, shown on the “Plan curtailments/settlements” line.

5.3.3.4. Actuarial gains and losses

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

(in € millions)	**2019**	**2018**
Pension obligations	1,160	(816)
Fair value of plan assets	(1,078)	502
Asset ceiling	(2)	7
TOTAL CHANGES	**80**	**(307)**

5.3.3.5. Plan assets

Plan assets have been progressively built up by contributions, primarily in the United Kingdom and the United States. Contributions paid by the Group in 2019 totaled €124 million (2018: €205 million).

A 0.5-point increase or decrease in the actual return on plan assets would have an impact of approximately €50 million on equity.

Plan assets mainly comprise:

	Dec. 31, 2019	Dec. 31, 2018
Equities	22%	23%
Bonds	61%	58%
Other	17%	19%

Contributions to pension plans for 2020 are estimated at around €110 million.

5.3.4. Defined contribution plans

Contributions to defined contribution plans are expensed as incurred.

Contributions to defined contribution plans for 2019 represented an estimated €653 million (2018: €667 million), including €428 million for government-sponsored basic pension schemes (2018: €442 million), €127 million for government-sponsored supplementary pension schemes, mainly in France (2018: €137 million), and €98 million for corporate-sponsored supplementary pension plans (2018: €88 million).

5.4. Share-based payments

5.4.1. Group Savings Plan

The Group Savings Plan (*Plan Epargne Group* - PEG) 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 with 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 2019, Saint-Gobain implemented a new PEG (*Plan Epargne Groupe*). The terms of the 2019 PEG are identical to the 2018 PEG and are described in this note.

In 2019, 5,999,997 new shares with a par value of €4 were issued to employees under the PEG at an average subscription price of €25.69 (2018: 4,932,767 shares at an average price of €36.31), representing a share capital increase of €153 million (€179 million in 2018), net of transaction fees.

No amount was expensed in respect of the plans in 2019 or 2018 owing to the lock-up cost.

The following table shows the main features of the standard plans, the amounts invested in the plans and the valuation assumptions applied in 2019 and 2018:

	2019	2018
Plan characteristics		
Date of Shareholders' Meeting	June 7, 2018 (17th Resolution)	June 8, 2017 (17th Resolution)
Date of the Chief Executive Officer's decision fixing the subscription price	March 18	March 19
Plan duration (in years)	5 or 10	5 or 10
Reference price (in €)	32.11	45.38
Subscription price (in €)	25.69	36.31
Discount (in %)	20.00%	20.00%
Total discount on the date of the Chief Executive Officer's decision (in %) **(a)**	22.02%	20.76%
Employee investments (in € millions)	154.1	179.1
Total number of shares subscribed	5,999,997	4,932,767
Valuation assumptions (5-year maturity)		
Interest rate applicable to employees*	4.85%	4.80%
Risk-free interest rate	-0.17%	0.09%
Repo rate	0.48%	0.34%
Lock-up discount (in %) **(b)**	22.11%	20.93%
Total cost to the Group (in %) **(a-b)**	-0.09%	-0.17%

* A 0.5-point decline in borrowing costs for the employee would have no material impact on the 2019 share-based payment expense as calculated in accordance with IFRS 2.

5.4.2. Stock option plans

Until 2018, Compagnie de Saint-Gobain operated stock option plans for certain employees.

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

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

Among the plans outstanding at December 31, 2019, the 2012 plan offers subscription options, while the 2013 and 2015 plans offer purchase options. For plans launched between 2016 and 2018, 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.

Since 2009, a performance condition has applied for all grantees in plans.

No new stock option plans were launched in 2019.

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

	€4 par value shares	Average exercise price (in €)
OPTIONS OUTSTANDING AT DECEMBER 31, 2017	**3,015,623**	**33.97**
Options granted	290,500	32.24
Options exercised	(568,380)	26.64
Options forfeited	(889,736)	28.05
OPTIONS OUTSTANDING AT DECEMBER 31, 2018	**1,848,007**	**38.78**
Options granted	0	0.00
Options exercised	(310,204)	36.33
Options forfeited*	(480,281)	37.40
OPTIONS OUTSTANDING AT DECEMBER 31, 2019	**1,057,522**	**24.09**

* Including 317,873 options under the 2009 stock subscription plan that remained unexercised upon expiry of the plan, 160,974 options under the 2015 plan that had lapsed because the performance condition had only been partly met, and 1,434 options under the 2015 plan that had lapsed after the service condition was considered.

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 a maximum of four years.

Stock option expense recorded in the income statement amounted to €1 million in 2019 (2018: €2 million).

The table below summarizes information about stock options outstanding at December 31, 2019, after taking into account partial fulfillment of the performance criteria attached to certain plans.

	Exercisable options			Non-exercisable options		Total options outstanding	
Grant date	**Exercise price** (in €)	**Number of options**	**Weighted average contractual life** (in months)	**Exercise price** (in €)	**Number of options**	**Number of options**	**Type of options**
2010	35.19	0	11			0	Subscription
2011	31.22	0	23			0	Subscription
2012	27.71	19,633	35			19,633	Subscription
2013	38.80	120,347	47			120,347	Purchase
2014	34.13		59			0	Purchase
2015	39.47	62,542	71			62,542	Purchase
2016			83	40.43	280,000	280,000	Subscription or purchase*
2017			95	49.38	284,500	284,500	Subscription or purchase*
2018			107	32.24	290,500	290,500	Subscription or purchase*
TOTAL		**202,522**			**855,000**	**1,057,522**	

* 2016, 2017 and 2018 plans: see above.

At December 31, 2019, 202,522 stock options were exercisable (at an average exercise price of €37.93) and 855,000 options (with an average exercise price of €40.63) had not yet vested.

5.4.3. Performance shares and performance unit grants

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 recognized over the vesting period, which covers a maximum of four years.

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.

5.4.3.1. Performance share plans

At December 31, 2019, there were four outstanding performance share plans, approved by the Board of Directors in 2016, 2017, 2018 and on November 21, 2019. These plans concern both managerial-grade employees and senior managers of the Group both within and outside France.

All plans are subject to service and performance conditions. The vesting period for the plans is four years and the shares will be delivered the day after the end of the vesting period for the 2016-2017 plans, and respectively on the third and fourth day after the end of the vesting period for the 2018 and 2019 plans.

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

	Number of rights
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2017	**3,487,440**
Performance share rights granted in November 2018	1,219,619
Shares issued/delivered	(438,468)
Lapsed and canceled rights	(91,602)
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2018	**4,176,989**
Performance share rights granted in November 2019	1,251,770
Shares issued/delivered	(341,150)
Lapsed and canceled rights*	(159,740)
NUMBER OF PERFORMANCE SHARE RIGHTS AT DECEMBER 31, 2019	**4,927,869**

* Rights granted under the 2015 plan including 134,598 rights that lapsed because the performance condition had only been partly met, and 25,142 rights that lapsed after the service condition was considered.

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

The expense recorded in the income statement in 2019 for these plans amounted to €27 million (2018: €26 million).

The following table shows the expected dates when shares under the four performance share plans outstanding at December 31, 2019 will be delivered (except in the case of early release following the grantee's death or disability, along with the service and performance conditions remaining to be fulfilled):

Grant date	Number of rights at December 31, 2019*	End of vesting and lock-up period	Type of shares
November 24, 2016	1,230,450	November 24, 2020	existing
November 23, 2017	1,226,230	November 23, 2021	existing
November 22, 2018	1,219,419	November 25, 2022	existing
November 21, 2019	1,251,770	November 24, 2023	existing
TOTAL	**4,927,869**		

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

5.4.3.2. 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 Saint-Gobain's share price.

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

In 2019, 352,372 performance units under the 2015 plan vested, while 203,968 performance units under the same plan lapsed, including 187,153 units because the performance condition had only been partly met and 16,815 units due to the application of the service condition.

There were no unvested performance unit plans at December 31, 2019.

The expense recorded in the income statement in 2019 for these plans amounted to €5 million (2018: €11 million).

NOTE 6 INTANGIBLE ASSETS, PROPERTY, PLANT AND EQUIPMENT, AND RIGHT-OF-USE ASSETS

6.1. Goodwill

When an entity is acquired by the Group, its identifiable assets and assumed liabilities are recognized at their fair value. IFRS allows a 12-month period after the acquisition date ("measurement period") to identify the assets and liabilities of the acquired entity that were not recognized in the initial accounting for the combination, and to retroactively modify the amounts initially allocated.

The final acquisition price ("consideration transferred" in IFRS 3R), including, as appropriate, the estimated fair value of any earn-out payments or other deferred consideration ("contingent consideration" in IFRS 3R), is determined in the 12 months following the acquisition. Under IFRS 3R, any adjustments to the acquisition price beyond this 12-month period are recorded in the income statement. Directly attributable acquisition costs are expensed as incurred.

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 2019 and 2018 are detailed below:

(in € millions)	2019	2018 restated
At January 1		
Gross value	12,396	12,023
Accumulated impairment	(2,406)	(1,448)
NET VALUE	**9,990**	**10,575**
Movements during the year		
Impairment	(104)	(1,116)
Translation adjustments and restatement for hyperinflation	138	57
Changes in Group structure	5	478
Assets held for sale	0	(4)
TOTAL MOVEMENTS	**39**	**(585)**
At December 31		
Gross value	12,495	12,396
Accumulated impairment	(2,466)	(2,406)
NET VALUE	**10,029**	**9,990**

In 2019, changes in Group structure relate mainly to newly consolidated companies and deconsolidated divested companies, and concern all segments (see note 2.2.). Impairment was essentially recognized on assets sold in the year. Brexit-related developments did not lead the Group to change the position it adopted at December 31, 2018. The 2019 translation adjustments and restatements for hyperinflation primarily reflect the impacts of fluctuations in the pound sterling, US dollar, Thai baht, Argentine peso, Norwegian krone and Swedish krona.

In 2018, changes in Group structure related mainly to newly consolidated companies in all segments (see note 2.2.). Impairment losses essentially concerned distribution businesses in the United Kingdom (€750 million) facing an uncertain context with Brexit, Pipe entities (€224 million) following the CGU impairment test and the valuation of distribution operations in Germany which were adjusted in connection with the sale of the business (€130 million). The 2018 translation adjustments and restatements for hyperinflation primarily reflected the impacts of fluctuations in the US dollar, Brazilian real, pound sterling, Argentine peso and Turkish lira.

6.2. 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.

Certain retail or manufacturing brands acquired 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 2019 and 2018 are analyzed below:

(in € millions)	Patents	Non-amortizable brands	Software	Development costs	Other	Total intangible assets
At December 31, 2017						
Gross value	149	2,682	1,093	119	505	4,548
Accumulated amortization and impairment	(129)	(667)	(854)	(88)	(207)	(1,945)
NET VALUE	**20**	**2,015**	**239**	**31**	**298**	**2,603**
Changes during the year						
Acquisitions	1	0	48	6	134	189
Disposals	(1)	0	(5)	(2)	(16)	(24)
Translation adjustments and restatement for hyperinflation	0	(8)	(1)	0	(1)	(10)
Amortization and impairment	(4)	(109)	(108)	(12)	(90)	(323)
Transfers	1	0	94	3	(98)	0
Changes in Group structure and other	2	3	8	(2)	81	92
Assets held for sale	0	0	(1)	0	0	(1)
TOTAL CHANGES	**(1)**	**(114)**	**35**	**(7)**	**10**	**(77)**
At December 31, 2018						
Gross value	148	2,649	1,170	121	568	4,656
Accumulated amortization and impairment	(129)	(748)	(896)	(97)	(260)	(2,130)
NET VALUE	**19**	**1,901**	**274**	**24**	**308**	**2,526**
Changes during the year						
Acquisitions	0	0	47	7	108	162
Disposals	0	0	(2)	(1)	(11)	(14)
Translation adjustments and restatement for hyperinflation	0	46	3	0	5	54
Amortization and impairment	(4)	0	(104)	(11)	(37)	(156)
Transfers	0	0	172	(2)	(170)	0
Changes in Group structure and other	4	17	4	1	113	139
Assets held for sale	0	0	(1)	0	(1)	(2)
TOTAL CHANGES	**0**	**63**	**119**	**(6)**	**7**	**183**
At December 31, 2019						
Gross value	152	2,712	1,365	122	612	4,963
Accumulated amortization and impairment	(133)	(748)	(972)	(104)	(297)	(2,254)
NET VALUE	**19**	**1,964**	**393**	**18**	**315**	**2,709**

The breakdown of non-amortizable brands by segment is provided in the segment information tables in note 4 “Information concerning the Group’s operating activities”.

In 2018, impairment was primarily recognized against Lapeyre entities.

6.3. 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. They are included within operating items on the line corresponding to the nature of the asset.

Changes in property, plant and equipment in 2019 and 2018 are analyzed below:

(in € millions)	Land and quarries	Buildings	Machinery and equipment	Assets under construction	Total property, plant and equipment
At December 31, 2017					
Gross value	2,454	8,558	19,575	1,335	31,922
Accumulated amortization and impairment	(577)	(5,116)	(14,583)	(56)	(20,332)
NET VALUE	**1,877**	**3,442**	**4,992**	**1,279**	**11,590**
IFRS 16 restatements	(5)	(15)	(54)	0	(74)
At January 1, 2018 restated					
Gross value	2,449	8,471	19,442	1,335	31,697
Accumulated depreciation and impairment	(577)	(5,044)	(14,504)	(56)	(20,181)
NET VALUE	**1,872**	**3,427**	**4,938**	**1,279**	**11,516**
Changes during the year					
Acquisitions	12	72	286	1,296	1,666
Disposals	(29)	(13)	(25)	(7)	(74)
Translation adjustments and restatement for hyperinflation	4	(20)	(30)	(6)	(52)
Depreciation and impairment	(145)	(498)	(1,067)	(38)	(1,748)
Transfers	0	255	862	(1,117)	0
Changes in Group structure and other	71	(13)	44	(3)	99
Assets held for sale	(56)	(24)	(45)	(29)	(154)
TOTAL CHANGES	**(143)**	**(241)**	**25**	**96**	**(263)**
At December 31, 2018 restated					
Gross value	2,458	8,294	19,651	1,421	31,824
Accumulated depreciation and impairment	(729)	(5,108)	(14,688)	(46)	(20,571)
NET VALUE	**1,729**	**3,186**	**4,963**	**1,375**	**11,253**
Changes during the year					
Acquisitions	16	70	303	1,267	1,656
Disposals	(29)	(26)	(31)	(5)	(91)
Translation adjustments and restatement for hyperinflation	22	42	58	16	138
Depreciation and impairment	(80)	(269)	(907)	(9)	(1,265)
Transfers	0	239	914	(1,153)	0
Changes in Group structure and other	54	(2)	(108)	(5)	(61)
Assets held for sale	54	(28)	30	21	77
TOTAL CHANGES	**37**	**26**	**259**	**132**	**454**
At December 31, 2019					
Gross value	2,485	8,444	20,031	1,552	32,512
Accumulated depreciation and impairment	(719)	(5,232)	(14,809)	(45)	(20,805)
NET VALUE	**1,766**	**3,212**	**5,222**	**1,507**	**11,707**

In 2019, changes in Group structure relate to newly consolidated companies and deconsolidated divested companies, and concern all segments (see note 2.2.). Impairment was essentially recognized on assets sold in the year. The 2019 translation adjustments and restatements for hyperinflation primarily reflect the impacts of fluctuations in the pound sterling, US dollar, Argentine peso, Mexican peso and Russian ruble.

In 2018, changes in Group structure related mainly to newly consolidated companies in all segments (see note 2.2.). Impairment losses in 2018 essentially related to the restructuring at Pipe, the start of restructuring measures at the Lapeyre entities, and distribution operations in Germany in connection with the intended sale of the business. The 2018 translation adjustments and restatements for hyperinflation primarily reflected the impacts of fluctuations in the US dollar, Brazilian real, pound sterling, Argentine peso and Turkish lira.

6.4. Right-of-use assets linked to leases

The table below presents right-of-use assets for lease contracts by category:

(in € millions)	Land and buildings	Machinery and equipment	Total
At January 1, 2018 restated			
Gross value	5,361	1,173	6,534
Accumulated depreciation and impairment	(2,972)	(562)	(3,534)
NET VALUE	**2,389**	**611**	**3,000**
Changes during the year			
New leases	495	235	730
Lease modifications	25	0	25
Disposals	(29)	(6)	(35)
Translation adjustments and restatement for hyperinflation	(16)	(3)	(19)
Depreciation and impairment	(508)	(248)	(756)
Assets held for sale	(148)	(27)	(175)
Changes in Group structure and other	32	1	33
TOTAL CHANGES	**(149)**	**(48)**	**(197)**
At December 31, 2018 restated			
Gross value	5,389	1,153	6,542
Accumulated depreciation and impairment	(3,149)	(590)	(3,739)
NET VALUE	**2,240**	**563**	**2,803**
Changes during the year			
New leases	718	242	960
Lease modifications	9	1	10
Disposals	(56)	(14)	(70)
Translation adjustments and restatement for hyperinflation	21	8	29
Depreciation and impairment	(491)	(227)	(718)
Changes in Group structure and other	(3)	(1)	(4)
Assets held for sale	(41)	(15)	(56)
TOTAL CHANGES	**157**	**(6)**	**151**
At December 31, 2019			
Gross value	5,786	1,118	6,904
Accumulated depreciation and impairment	(3,389)	(561)	(3,950)
NET VALUE	**2,397**	**557**	**2,954**

6.5. Impairment review

6.5.1. Impairment of property, plant and equipment, intangible assets, goodwill and right-of-use assets

Property, plant and equipment, goodwill, right-of-use assets 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, amortizable intangible assets and right-of-use 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 unamortized intangible assets (including brands with indefinite useful lives), an impairment test is performed at least annually based on financial forecasts. Goodwill is reviewed systematically and exhaustively at the level of each cash-generating unit (CGU).

The Group's new organization in place since January 1, 2019 led to changes in its segment reporting. In accordance with IFRS 8, which states that segment reporting must reflect an entity's internal organization and decision-making structure, the Group now has five reporting segments: four regional entities and a global High Performance Solutions unit. A new CGU structure was also defined to reflect these organizational changes. The new structure comprises 28 CGUs (compared to 30 CGUs at December 31, 2018), in accordance with IAS 36 criteria and the new basis for segment reporting.

The method used for these impairment tests is consistent with that employed by the Group for the valuation of companies acquired in business combinations or acquisitions of equity interests. The carrying amount of the CGUs is compared to their value in use, corresponding to the net present value of future cash flows excluding interest but including tax. It is determined using assumptions made by senior management based on estimates and judgments including future changes in net sales, profitability, investments and other cash flows arising from the use of the corresponding assets, as well as the discount rate applied to future cash flows. Cash flows for the last year of the business plan are rolled forward over the following two years. For impairment tests of goodwill, normative cash flows (corresponding to cash flows at the mid-point in the business cycle) are then projected to perpetuity using a low annual growth rate (between 1.5% and 2% barring exceptional cases). Growth data are supported by external data issued by prominent organizations. The average cost of capital remains unchanged at 6.85% for 2019. It had been reduced to 6.85% in 2018 from 7.25% in 2017 to reflect the continuing downward trend in the interest rates payable by the Group on its debt. This rate corresponds to the Group's average cost of capital, plus a country risk premium where applicable depending on the geographic area concerned. The discount rates applied in 2019 were 6.85% for Western Europe and North America, 7.85% 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.

6.5.2. 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, 2019, a 0.5-point increase in the discount rate for all CGUs would have led to approximately €18 million in additional impairment of non-current assets, while a 0.5-point decrease in the average annual cash flow growth rate projected to perpetuity for all CGUs would have resulted in additional non-current asset impairment of around €12 million. The impact of a 1-point decrease in the operating income rate for all industrial CGUs would have generated additional non-current asset impairment of roughly €126 million, primarily relating to entities in the Pipe business. A 0.5-point decrease in the rate for distribution activities would not have generated additional impairment.

(in € millions)	Impact of 0.5% increase in the discount rate	0.5% decrease in the growth rate	1 point decrease in the operating income rate	0.5 point decrease in the operating income rate
High Performance Solutions	0	0	0	0
Northern Europe	0	0	0	0
Southern Europe - ME & Africa	(16)	(10)	(103)	0
Americas	0	0	(13)	0
Asia-Pacific	(2)	(2)	(10)	0
TOTAL	**(18)**	**(12)**	**(126)**	**0**

NOTE 7 INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES AND OTHER NON-CURRENT ASSETS

A joint venture is a joint arrangement whereby the parties have joint control of the arrangement, and decisions about the relevant activities require the unanimous consent of the parties sharing control. The parties that have joint control of the arrangement have rights to the net assets of the arrangement. By contrast, an associate is an entity over which a partner has significant influence over the power to participate in decisions, but not control.

Under IAS 28, investments in both associates and joint ventures must be recognized using the same equity-accounting consolidation method.

7.1. Changes in investments in equity-accounted companies

Changes in investments in equity-accounted companies in 2019 and 2018 can be analyzed as follows:

(in € millions)	2019	2018 restated
At January 1		
Group share in:		
Associates	185	173
Joint ventures	207	187
TOTAL	**392**	**360**
Goodwill	20	19
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**412**	**379**
Changes during the year		
Group share in net income of:		
Associates	11	11
Joint ventures	13	19
TOTAL	**24**	**30**
Dividends paid	(16)	(11)
Translation adjustments and restatement for hyperinflation	(2)	(2)
Transfers, share issues and other changes	32	16
Changes in Group structure	(13)	0
TOTAL CHANGES	**25**	**33**
At December 31		
Group share in:		
Associates	182	185
Joint ventures	236	207
TOTAL	**418**	**392**
Goodwill	19	20
INVESTMENTS IN EQUITY-ACCOUNTED COMPANIES	**437**	**412**

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

	2019			2018		
(in € millions)	Associates	Joint ventures	Total	Associates	Joint ventures	Total
Net sales	802	647	1,449	774	670	1,444
Net income	24	29	53	52	41	93
Non-current assets	535	420	955	480	372	852
Current assets	498	292	790	528	305	833
Non-current liabilities	763	610	1,373	783	561	1,344
Current liabilities	270	102	372	225	116	341
Shareholders' equity	631	499	1,130	622	444	1,066

7.2. Transactions with equity-accounted companies – related parties

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

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

(in € millions)	Dec. 31, 2019	Dec. 31, 2018
Financial receivables	4	2
Inventories	0	0
Short-term receivables	10	9
Cash and cash equivalents	0	0
Provisions for asset impairment	0	0
Short-term debt	3	5
Cash advances	0	0

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

(in € millions)	2019	2018
Purchases	11	2
Sales	36	33

7.3. Other non-current assets

Changes in other non-current assets in 2019 and 2018 are analyzed below:

(in € millions)	Equity investments and other	Loans, deposits and surety	Pension plan surpluses	Total
At December 31, 2017				
Gross value	111	516	161	788
Provision for impairment	(10)	(4)		(14)
NET VALUE	**101**	**512**	**161**	**774**
Changes during the year				
Increases/(decreases)	1,756	113	34	1,903
Provisions for impairment	(1)	(7)		(8)
Translation adjustments and restatement for hyperinflation	(5)	(1)	(2)	(8)
Transfers and other movements	0	(2)		(2)
Changes in Group structure	(68)	5		(63)
Change in fair value	(69)	0		(69)
TOTAL CHANGES	**1,613**	**108**	**32**	**1,753**
At December 31, 2018				
Gross value	1,742	625	193	2,560
Provision for impairment	(28)	(5)		(33)
NET VALUE	**1,714**	**620**	**193**	**2,527**
Changes during the year				
Increases/(decreases)	72	(58)	83	97
Provisions for impairment	1	(2)		(1)
Translation adjustments and restatement for hyperinflation	0	2	12	14
Transfers and other movements	0	2		2
Changes in Group structure	0	1		1
Change in fair value	871	0		871
TOTAL CHANGES	**944**	**(55)**	**95**	**984**
At December 31, 2019				
Gross value	2,685	574	288	3,547
Provision for impairment	(27)	(9)		(36)
NET VALUE	**2,658**	**565**	**288**	**3,511**

Changes in the fair value of equity investments in both 2019 and 2018 relate mainly to Sika shares.

NOTE 8 OTHER CURRENT AND NON-CURRENT LIABILITIES AND PROVISIONS, CONTINGENT LIABILITIES AND LITIGATION

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

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

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

8.1. Provisions for other liabilities and charges

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

(in € millions)	Provisions for claims and litigation	Provisions for environmental risks	Provisions for restructuring costs	Provisions for personnel expenses	Provisions for customer warranties	Provisions for other contingencies	Total provisions for other liabilities	Investment-related liabilities	Total provisions for other liabilities and investment-related liabilities
At December 31, 2017									
Current portion	137	30	38	21	102	71	399	13	412
Non-current portion	409	124	41	94	96	164	928	125	1,053
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**546**	**154**	**79**	**115**	**198**	**235**	**1,327**	**138**	**1,465**
IFRS 16 restatement	0	1	(18)	0	0	0	(17)		(17)
At January 1, 2018 restated									
Current portion	137	30	27	21	102	71	388	13	401
Non-current portion	409	125	34	94	96	164	922	125	1,047
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**546**	**155**	**61**	**115**	**198**	**235**	**1,310**	**138**	**1,448**
Changes during the year									
Additions	122	11	148	35	71	51	438		438
Reversals	(3)	(2)	(8)	(14)	(23)	(53)	(103)		(103)
Utilizations	(126)	(13)	(42)	(31)	(54)	(49)	(315)		(315)
Changes in Group structure	0	2	(32)	0	0	1	(29)		(29)
Other changes (reclassifications and translation adjustments)	25	0	(4)	(2)	2	(6)	15	35	50
TOTAL CHANGES	**18**	**(2)**	**62**	**(12)**	**(4)**	**(56)**	**6**	**35**	**41**
At December 31, 2018 restated									
Current portion	127	28	95	19	102	73	444	11	455
Non-current portion	437	125	28	84	92	106	872	162	1,034
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**564**	**153**	**123**	**103**	**194**	**179**	**1,316**	**173**	**1,489**
Changes during the year									
Additions	128	20	85	31	63	70	397		397
Reversals	(8)	(6)	(18)	(10)	(21)	(18)	(81)		(81)
Utilizations	(122)	(9)	(112)	(21)	(37)	(44)	(345)		(345)
Changes in Group structure	0	(7)	18	(1)	(3)	(10)	(3)		(3)
Other changes (reclassifications and translation adjustments)	11	7	4	(1)	6	(16)	11	3	14
Liabilities held for sale	0	0	(2)	0	(1)	1	(2)		(2)
TOTAL CHANGES	**9**	**5**	**(25)**	**(2)**	**7**	**(17)**	**(23)**	**3**	**(20)**
At December 31, 2019									
Current portion	56	32	54	18	106	65	331	12	343
Non-current portion	517	126	44	83	95	97	962	164	1,126
TOTAL PROVISIONS FOR OTHER LIABILITIES AND INVESTMENT-RELATED LIABILITIES	**573**	**158**	**98**	**101**	**201**	**162**	**1,293**	**176**	**1,469**

* At December 31, 2019, the provision for claims and litigation in the United States mainly covered lawsuits relating to asbestos (€513 million versus €496 million at December 31, 2018) and PFOA (€21 million versus €30 million at December 31, 2018).

8.1.1. Provisions for claims and litigation

At December 31, 2019 and 2018, provisions for claims and litigation mainly covered asbestos- and PFOA-related lawsuits filed against the Group. These provisions are described in further detail in note 8.2 "Contingent liabilities and litigation".

8.1.2. Provisions for environmental risks

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

8.1.3. Provisions for restructuring costs

Provisions for restructuring costs amounted to €98 million at December 31, 2019 (December 31, 2018: €123 million), including net additions of €67 million during the year.

8.1.4. Provisions for personnel expenses

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

8.1.5. 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 contingencies in the context of a specific claim.

8.1.6. Provisions for other contingencies

At December 31, 2019, provisions for other contingencies amounted to €162 million (December 31, 2018: €179 million) and mainly concerned France (€43 million), Brazil (€41 million), the United States (€38 million), and Italy (€12 million).

8.1.7. 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 2019, changes in investment-related liabilities primarily concerned minority shareholder puts.

8.2. Contingent liabilities and litigation

8.2.1. Anti-trust law and related proceedings

Legal provisions covering competition apply to the Group companies in countries in which it operates. Violation of competition law exposes the Group to fines and, in certain countries, potential criminal sanctions on the Group and its employees involved. Any litigation filed by a competition authority could, in the event of conviction, give rise to the payment of fines and potentially damages, which is likely to have significant impact on the Group's reputation, financial situation and operating results.

The Saint-Gobain Group is firmly committed to opposing any practice that might violate competition rules and has long applied the principle of zero tolerance. A plan for compliance with competition law (the "Competition Plan") has been in place within the Group since 2007.

8.2.1.1. Investigation by the Swiss Competition Commission in the sanitary products wholesale industry

In November 2011, the Swiss Competition Commission (Commission Suisse de la Concurrence) opened an investigation into anti-competitive practices in the sanitary products wholesale industry. In May 2014, the Commission Secretariat issued a notice of complaints against Sanitas Troesch and other wholesalers in the industry 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 imposed on all companies involved is CHF 80 million. For Sanitas Troesch, the fine is CHF 28.5 million. Sanitas Troesch appealed this decision on May 2, 2016 and continues to firmly refute the claims made. The hearing took place before the Federal Administrative Court in January 2020 and the date on which the Federal Administrative Court will issue its decision is not yet known. However, a provision for claims and litigation was recognized at December 31, 2015 in an amount equivalent to the fine (unchanged at December 31, 2019).

8.2.1.2. Investigation by the French Competition Authority in the building insulation products industry

On August 6, 2014, the French Competition Authority sent a statement of objections to Saint-Gobain Isover and Compagnie de Saint-Gobain (as parent company of the Saint-Gobain Group). A hearing took place on May 11, 2016, whereupon the Competition Authority sent the case back for further investigation in light of the arguments put forward by Saint-Gobain Isover and Compagnie de Saint-Gobain. In October 2018, Saint-Gobain Isover and Compagnie de Saint-Gobain received a second statement of objections, in which the Competition Authority alleges anti-competitive practices in the building insulation products market, between 2001 and 2013.

Saint-Gobain Isover and Compagnie de Saint-Gobain reject the allegations in their response to the second statement of objections which was filed in January 2019.

A new report was sent by the Authority at the end of 2019, which gave rise to comments in response from Saint-Gobain Isover and Compagnie de Saint-Gobain on February 11, 2020.

To date, no decision of the French Competition Authority has been issued on the merits.

On the civil law front, Actis served in March 2013 a damages claim on Saint-Gobain Isover, the Centre Scientifique et Technique du Bâtiment, and the FILMM before the Paris Civil Court (*Tribunal de grande instance*) based on the facts being investigated 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.

8.2.2. Asbestos-related litigation

Current legal actions related to asbestos are described below.

8.2.2.1. Asbestos-related litigation in France

- Inexcusable fault lawsuits

In France, eight further individual lawsuits were filed in 2019 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 that affect or have affected them. As of December 31, 2019, a total of 830 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, 2019, 794 of these 830 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 €5 million.

Concerning the 36 lawsuits outstanding against Everite and Saint-Gobain PAM at December 31, 2019, one has been completed in terms of both liability and quantum, but is still pending on the determination of who will pay the compensation due.

Out of the 35 remaining lawsuits, at December 31, 2019, the procedures relating to the merits of 33 cases were at different stages, with five in the process of being investigated by the French Social Security authorities and 28 pending before the Civil Courts (*Tribunaux de Grande Instance*), which since January 1st, 2019 have been substituted to the social security courts as competent courts. The last two actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

In addition, as of December 31, 2019, 249 similar suits had been filed since the outset of the litigation by current or former employees, or persons claiming through them, of 13 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, 2019, 221 lawsuits had been completed. In 138 of these cases, the employer was held liable for “inexcusable fault”.

At the same date, compensation paid by these companies totaled approximately €8 million.

As regards the 28 suits outstanding at December 31, 2019, three cases were still being investigated by the French Social Security authorities and 22 were being tried – including 18 pending before the Civil Courts (*Tribunaux de Grande Instance*) and four before the Appeal Courts. Lastly, three actions have been cancelled but the plaintiffs may request their restoration at any time within a two-year period following their cancellation.

- Anxiety claims

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

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

As of December 31, 2019, a total of 824 suits had been brought by current or former employees claiming compensation for prejudice of anxiety suffered as a result of their alleged exposure to asbestos. None of these plaintiffs were suffering from an asbestos-related disease and some of them were not receiving the ACAATA benefit. Of these 824 lawsuits, 720 have been finally disposed of, representing total amount of compensation of €7.6 million at December 31, 2019. The remaining 104 lawsuits are pending before the competent labor tribunals or appeal courts.

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

The provision related to the asbestos-related litigation in France amounted to €4.1 million as of December 31, 2019 (€4.2 million as of December 31, 2018).

8.2.2.2. 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 and specialized insulation, have been 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 that have been manufacturers, distributors, installers or users of products containing asbestos.

- Developments in 2019

Approximately 2,600 new asbestos-related claims were filed against CertainTeed Corporation in the United States in 2019, stable compared to 2018.

Virtually all lawsuits involving CertainTeed have either been settled out of court or dismissed. Around 2,500 of the pending claims were settled in 2019, compared to 4,300 in 2018 and 3,900 in 2017. Taking into account the number of claims outstanding at the end of 2018 (32,600), new claims arising during the year and settled claims, some 32,700 claims remain outstanding on active court dockets at December 31, 2019. A large number of these pending claims were filed more than five years ago and many of these claims were likely abandoned or otherwise lack merit.

Compensation paid in respect of these claims against CertainTeed Corporation (including claims settled prior to 2019 but only paid out in 2019 as well as claims fully settled and paid out in 2019), as well as compensation paid in 2019 by other Group businesses in the United States in connection with asbestos litigation, amounted to US$59 million (compared to US$67 million in 2018 and US$76 million in 2017).

- Action taken to achieve equitable and permanent resolution of the former CertainTeed Corporation's legacy asbestos liabilities in the United States

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina, that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that it filed, on January 23, 2020, a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Western District of North Carolina in Charlotte in an effort to achieve a certain, final and equitable resolution of all current and future claims arising from the asbestos-related liabilities of the former CertainTeed Corporation.

DBMP LLC intends to seek court authority to establish a trust under Section 524(g) of the U.S. Bankruptcy Code - a specific provision that is applicable to companies that face substantial numbers of asbestos-related claims - to achieve a fair and equitable resolution of its asbestos-related liabilities. Upon establishment of the trust, current and future plaintiffs with qualifying claims will be able to receive faster payment of their claims without the delay, stress and uncertainty of litigation in the tort system; at the same time, the creation and funding of such a trust will permanently resolve DBMP LLC's liabilities.

During the course of this bankruptcy process, which can take 3 to 8 years, all asbestos litigation will be stayed and all related costs suspended, allowing DBMP LLC the time and protection to negotiate an agreement to be approved on behalf of all claimants and by the court.

This action has been taken as a result of the increasing risks presented in the US tort system. Despite the aging of the population and lessening opportunity for claimants to assert legitimate claims of exposure to the former CertainTeed Corporation asbestos-containing products, naming practices in the tort system continued to result in a steady volume of claims against DBMP LLC, with no foreseeable end in sight and, in general, an escalation of settlement demands and verdicts.

- Impact on the Group's financial statements

The Group has recorded the estimated costs related to the resolution of the DBMP LLC bankruptcy proceedings. This amount, determined with the assistance of external experts and advisors, amounts to $576 million as of December 31, 2019.
The provision for asbestos-related litigation recorded in the accounts of the former CertainTeed Corporation in the United States amounted to $568 million as of December 31, 2018.

At this stage of the proceedings, the stay of litigation as of January 23, 2020 results in all legal costs and indemnity payments related to DBMP LLC's numerous asbestos tort claims being suspended, and no more annual charges in relation to such claims ($99 million, corresponding to €88 million, in 2019).

8.2.2.3. Situation in Brazil

In Brazil, former employees of Brasilit, that once manufactured fiber cement containing asbestos, suffering from asbestos-related occupational illnesses are offered, depending on the case, either financial compensation alone or lifetime medical assistance combined with financial compensation. Around 1,200 contractual instruments have accordingly been signed to date.

Two class actions were initiated against Brasilit in 2017 by two associations defending former employees exposed to asbestos at the São Caetano (São Paulo state) and Recife (Pernambouc state) plants, asking for their medical assistance and compensation to be revised. These suits are currently at an early stage and first court decisions have not yet been made.

A third class action was initiated against Brasilit in 2019 in Capivari (State of São Paulo) by the Labor prosecutor asking for health insurance, as well as collective moral damages, in favor of employees, former employees and their respective families, as well as subcontractors who were exposed to asbestos. This suit is at an early stage.

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

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

8.2.3. Environmental disputes

- PFOA matters in the United States

Levels of PFOA (perfluorooctanoic acid) in excess of U.S. Environmental Protection Agency (EPA) health advisories or state maximum contaminent levels for drinking water 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, installed carbon filtration systems on the municipal water supply in Hoosick Falls and agreed to fund the installation of a carbon filtration system on the Merrimack Valley District's municipal water supply. In addition, it has voluntarily funded both completed and on-going construction of water line extensions in certain communities in the Merrimack and Bennington areas. The investigations are on-going and the scope of responsibility for SG PPL arising from environmental remediation and clean-up obligations at these sites has not yet been established. Without admitting liability, SGPPL has signed consent orders with the environmental regulators in New York in 2016, in Vermont in 2017, and in New Hampshire in 2018, pursuant to which SGPPL has agreed to complete investigations, implement interim or final remediation measures at its current and former facilities and in the case of Vermont and New Hampshire, fund construction of water lines. Responsibility, if any, is expected to be shared with other parties as regards in particular the Hoosick Falls site.

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

On December 31, 2019, the provision recorded by the Company in respect of this matter amounts to €21 million.

8.2.4. Other contingent liabilities

- Grenfell Tower fire in the United Kingdom

Celotex provides insulation materials for specific applications for the building and construction industry.
Insulation materials from two Celotex ranges were purchased via distributors and used in refurbishing Grenfell Tower, London in 2015/2016, including as one component of the rainscreen cladding system designed and installed (by third parties) on the tower's external facade.

Following the Grenfell Tower fire on June 14, 2017, a Public Inquiry is underway, which will consider, among other things, the modifications made to the building as part of the refurbishment, the role played by the various construction professionals, and the information provided by the manufacturers of the products used. A criminal investigation into the circumstances of the fire is also in progress.

There are a large number of issues and circumstances that need to be explored and the implications for Celotex are unlikely to be known for some time. The extent to which Celotex may incur civil or criminal liability in connection with the production, marketing, supply or use of its products is currently unclear.

8.2.5. Other proceedings and disputes

Some of the Group's companies may also be the subject of other claims made by their employees or by the tax authorities, or in the context of the enforcement of seller's warranties granted by the Group to the buyers of divested businesses. 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 have had, in the last 12 months, a significant impact on the financial position or profitability of the Company and/or Group.

NOTE 9 FINANCING AND FINANCIAL INSTRUMENTS

9.1. Financial risks

9.1.1. Liquidity risk

9.1.1.1. Liquidity risk on financing

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

The Group's overall exposure to liquidity risk on its net debt is managed by the Treasury and Financing Department of Compagnie de Saint-Gobain, the Group's parent company. The subsidiaries generally enter into short- or long-term financing arrangements with Compagnie de Saint-Gobain or with the regional 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 constituted by bond issues which generally are issued under the Medium Term Notes program. The Group also uses lease financing, perpetual bonds, participating securities, long-term securitization program, a factoring program and bank borrowings.

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 9.3, 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 April 30, 2014 and Baa2 with a stable outlook by Moody's since June 2, 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.

9.1.1.2. Liquidity risk on investments

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

9.1.2. 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 counterparty 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.

9.1.3. Market risks

9.1.3.1. 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 contracted in accordance with the Group's purchasing policy.

These hedges (excluding fixed-price purchases negotiated directly with suppliers by the Purchasing Department) are generally arranged by the Group Treasury and Financing Department (or with regional 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 or engage in the CO_2 emissions market, in accordance with the same principles as those outlined above for energy purchases.

Note 9.4 provides a breakdown of instruments used to hedge energy and commodity risks.

9.1.3.2. Interest rate risk

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.

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, 2019 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	13	11
Interest rate decrease of 50 basis points	(13)	(11)

Note 9.4 to the consolidated financial statements provides a breakdown of interest rate risk hedging instruments and of gross debt by type of interest (fixed or variable) after hedging.

9.1.3.3. 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 on their behalf, or through the regional 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, 2019, 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, 2019:

(in millions of euro equivalent)	**Long**	**Short**
EUR	2	11
USD	7	9
Other currencies	0	2
TOTAL	**9**	**22**

The table below gives an analysis, as of December 31, 2019, of the sensitivity of the Group's pre-tax income to a 10% increase in the exchange rates of the following currencies given the subsidiaries' residual net foreign exchange exposure:

Currency of exposure *(in millions of euro equivalent)*	**Impact on pre-tax income**
EUR	(0.9)
USD	(0.2)
Other currencies	(0.2)
TOTAL	**(1.3)**

Assuming that all other variables remained unchanged, a 10% fall in the exchange rates for these currencies at December 31, 2019 would have the opposite impact.

Note 9.4 provides a breakdown of foreign exchange risk hedging instruments.

9.1.3.4. Saint-Gobain share price risk

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

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

Note 9.4 provides a breakdown of these share price risk hedging instruments.

9.2. Net financial income (expense)

Net financial income (expense) includes borrowing and other financing costs, income from cash and cash equivalents, interest on lease liabilities, interest cost for pensions and other post-employment benefit plans net of the return on plan assets, and other financial income and expense.

Net financial income (expense) in 2019 and 2018 includes:

(in € millions)	**2019**	**2018 restated**
Borrowing costs, gross	(300)	(297)
Income from cash and cash equivalents	27	22
BORROWING COSTS, NET, EXCLUDING LEASE LIABILITIES	**(273)**	**(275)**
Interest on lease liabilities	(71)	(77)
TOTAL BORROWING COSTS, NET	**(344)**	**(352)**
Interest cost – pension and other post-employment benefit obligations	(321)	(303)
Return on plan assets	266	244
INTEREST COST – PENSION AND OTHER POST-EMPLOYMENT BENEFIT OBLIGATIONS, NET	**(55)**	**(59)**
Other financial expense	(109)	(107)
Other financial income*	40	633
OTHER FINANCIAL INCOME AND EXPENSE	**(69)**	**526**
NET FINANCIAL INCOME (EXPENSE)	**(468)**	**115**

* Including €601 million in 2018 for the SWH/Sika transaction and €28 million in 2019 in dividends received from Sika.

9.3. Net debt

9.3.1. Long- and short-term debt

9.3.1.1. Long-term debt

Long-term debt includes bonds, perpetual bonds, participating securities, long-term securitization and all other types of long-term financial liabilities, including 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.

9.3.1.2. Short-term debt

Besides the current portion of long-term debt described above, short-term debt includes financing programs such as commercial paper, short-term securitization, bank overdrafts and other short-term financial liabilities including 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.

9.3.1.3. Lease liabilities

Lease liabilities represent obligations to make lease payments in accordance with IFRS 16.

9.3.1.4. 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, 2019	Dec. 31, 2018 restated*
Bond issues	9,505	8,309
Perpetual bonds and participating securities	203	203
Long-term securitization	350	400
Other long-term financial liabilities	228	244
NON-CURRENT PORTION OF LONG-TERM DEBT	**10,286**	**9,156**
Bond issues	1,480	949
Long-term securitization	150	100
Other long-term financial liabilities	121	118
CURRENT PORTION OF LONG-TERM DEBT	**1,751**	**1,167**
Short-term financing programs (*NEU CP, US CP, Euro CP*)	0	0
Short-term securitization	0	160
Bank overdrafts and other short-term financial liabilities	224	319
SHORT-TERM DEBT	**224**	**479**
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES	**12,261**	**10,802**
Lease liabilities	3,217	3,075
TOTAL GROSS DEBT	**15,478**	**13,877**
Cash at banks	(2,052)	(1,551)
Mutual funds and other marketable securities	(2,935)	(1,137)
CASH AND CASH EQUIVALENTS	**(4,987)**	**(2,688)**
TOTAL NET DEBT	**10,491**	**11,189**

* Figures have been restated for lease liabilities.

Changes in the Group's long-term debt (excluding lease liabilities) can be analyzed as follows:

(in € millions)	Dec. 31, 2018 restated*	Cash impact		No cash impact			Dec. 31, 2019
		Increases	Decreases	Changes in Group structure	Translation adjustments	Other	
Non-current portion of long-term debt	9,156	2,704	(91)	4	53	(1,540)	10,286
Current portion of long-term debt	1,167	4	(954)	0	0	1,534	1,751
TOTAL LONG-TERM DEBT	**10,323**	**2,708**	**(1,045)**	**4**	**53**	**(6)**	**12,037**

* Figures have been restated for lease liabilities.

The main changes with an impact on cash are described in note 9.3.3. The main change with no cash impact in the "Other" column relates to the reclassification of debt maturing within 12 months in the current portion of long-term debt.

The fair value of gross long-term debt (including the current portion), excluding lease liabilities, managed by Compagnie de Saint-Gobain amounts to €12 billion at December 31, 2019 (for a carrying amount of €11.2 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.

9.3.2. Gross debt repayment schedule

The schedule of the Group's total gross debt as of December 31, 2019 is as follows:

(in € millions)	Currency	Within 1 year	1 to 5 years	Beyond 5 years	Total
Bond issues	EUR	1,480	4,196	4,666	10,342
	GBP		352	291	643
Perpetual bonds and participating securities	EUR			203	203
Long-term securitization	EUR	150	350		500
Other long-term financial liabilities	All currencies	16	71	157	244
Accrued interest on long-term debt	All currencies	105			105
TOTAL LONG-TERM DEBT		**1,751**	**4,969**	**5,317**	**12,037**
SHORT-TERM DEBT	All currencies	**224**	**0**	**0**	**224**
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES		**1,975**	**4,969**	**5,317**	**12,261**
Lease liabilities	All currencies	665	1,489	1,063	3,217
TOTAL GROSS DEBT		**2,640**	**6,458**	**6,380**	**15,478**

At December 31, 2019, future interest payments on gross long-term debt (excluding lease liabilities) managed by Compagnie de Saint-Gobain (short and long-term) can be broken down as follows:

(in € millions)	Within 1 year	1 to 5 years	Beyond 5 years	Total
Future interest payments on gross long-term debt	207	608	603	1,418

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

9.3.3. Bonds

Compagnie de Saint-Gobain issued:

- On March 15, 2019:
  - €750 million worth of 0.625% fixed-interest bonds, maturing on March 15, 2024,
  - €750 million worth of 1.875% fixed-interest bonds, maturing on March 15, 2031. The nominal amount of this bond issue was increased to €1,044 million through three additions on March 26 (€124 million), on April 5 (€70 million) and on May 15, 2019 (€100 million);
- On March 22, 2019: a €750 million private placement paying floating-rate interest at 3-month Euribor +0.35%, maturing on March 22, 2021;
- On May 3, 2019: a €100 million private placement paying fixed-rate interest of 1.875%, maturing on May 3, 2035.

On September 30, 2019, Compagnie de Saint-Gobain redeemed a bond that had been increased to €950 million with a coupon of 4.5%.

These issues extended the average maturity of Saint-Gobain's debt while also optimizing average borrowing costs.

9.3.4. Perpetual bonds

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

A total of 18,496 perpetual bonds have since been bought back and canceled, and 6,504 perpetual bonds were outstanding at December 31, 2019, 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 2019 was €1.6.

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

9.3.5. Participating securities

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

A certain number of these participating securities have been bought back over the years. At December 31, 2019, 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 2019 was €1.92.

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

A certain number of these securities have been bought back over the years. At December 31, 2019, 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 2019 was €60.78, paid in two installments (€33.53 and €27.25).

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

9.3.6. 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, 2019, issuance under these programs was as follows:

(in € millions)	**Authorized drawings**	**Authorized limits at Dec. 31, 2019**	**Balance outstanding at Dec. 31, 2019**	**Balance outstanding at Dec. 31, 2018**
Medium Term Notes	1 to 30 years	15,000	11,129	9,435
NEU CP	up to 12 months	3,000		0
US Commercial Paper	up to 12 months	890 *		0
Euro Commercial Paper	up to 12 months	890 *		0

* Equivalent to US$1,000 million based on the exchange rate at December 31, 2019.

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.

9.3.7. Syndicated lines of credit

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

- a €2.5 billion syndicated line of credit, maturing in December 2024, after the exercise of the two one-year rollover options;
- a second €1.5 billion syndicated line of credit also maturing in December 2024 after the exercise of two one-year rollover options.

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, 2019.

9.3.8. Receivables securitization programs

The Group has set up a receivables securitization program for up to €500 million through its French subsidiary Point.P Finances GIE.

An amount of €500 million had been drawn under this program at both December 31, 2019 and December 31, 2018. 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.

At December 31, 2018, the Group had another securitization program through its US subsidiary Saint-Gobain Receivables Corporation.

The US program, covering an amount of up to US$400 million, expired on October 16, 2019. It had an equivalent euro value of €160 million at December 31, 2018.

9.3.9. Collateral

At December 31, 2019, €9 million of Group debt was secured by various non-current assets (real estate and securities).

9.3.10. Factoring

The Group has set up several trade receivables factoring programs. Based on an analysis of the risks and rewards within the meaning of IFRS 9, the Group has derecognized virtually all of the receivables sold under these programs. A total of €471 million factored receivables were derecognized at December 31, 2019, compared to €517 million at December 31, 2018.

9.4. Financial instruments

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

In accordance with IAS 32 and IFRS 9, 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 IFRS 9.

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.

- 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.

- 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.

- 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.

- Fair value of financial instruments

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

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

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

(in € millions)	Fair value				Nominal amount by maturity			
	Derivatives recorded in assets	Derivatives recorded in liabilities	Dec. 31, 2019	Dec. 31, 2018	Within 1 year	1 to 5 years	Beyond 5 years	Dec. 31, 2019
FAIR VALUE HEDGES	**0**	**0**	0	**0**	**0**	**0**	**0**	0
Cash flow hedges								
Currency	1	(1)	0	2	203	0	0	203
Interest rate	0	(78)	(78)	(85)	0	95	374	469
Energy and commodities	1	(5)	(4)	(7)	23	4	0	27
Other risks: equities	0	(2)	(2)	(13)	2	45	0	47
CASH FLOW HEDGES – TOTAL	**2**	**(86)**	(84)	**(103)**	**228**	**144**	**374**	746
Derivatives not qualifying for hedge accounting mainly contracted by Compagnie de Saint-Gobain								
Currency	5	(5)	0	(2)	2,148	0	0	2,148
Interest rate	0	0	0	0	0	0	0	0
Energy and commodities	0	0	0	0	0	0	0	0
DERIVATIVES NOT QUALIFYING FOR HEDGE ACCOUNTING – TOTAL	**5**	**(5)**	0	**(2)**	**2,148**	**0**	**0**	2,148
TOTAL	**7**	**(91)**	(84)	**(105)**	**2,376**	**144**	**374**	2,894

9.4.1. 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.

9.4.2. 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).

9.4.3. Energy and commodities

- Energy and commodity swaps

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

9.4.4. 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.

9.4.5. 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, 2019, credit value adjustments were not material.

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

At December 31, 2019, the cash flow hedging reserve carried in equity in accordance with IFRS had a debit balance of €61 million, consisting mainly of:

- a debit balance of €35 million in relation to cross-currency swaps designated as cash flow hedges that are used to convert a GBP bond issue into euros;
- a debit balance of €22 million corresponding to the changes in fair value of interest rate swaps qualified as cash flow hedges;
- a debit balance of €4 million corresponding to changes in the value of energy and raw materials hedges classified as cash flow hedges.

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

9.4.7. 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" was zero at December 31, 2019 compared to a loss of €2 million taken to income at December 31, 2018.

9.4.8. 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, 2019, no embedded derivatives deemed to be material at Group level were identified.

9.4.9. Group debt structure (excluding lease liabilities)

The weighted average interest rate on total gross debt under IFRS and after hedging (interest rate swaps, currency swaps and cross-currency swaps) was 1.8% at December 31, 2019, compared with 2.3% at December 31, 2018.

The average internal rate of return for the main component of long-term debt before hedging (bonds) was 2.1% at December 31, 2019, compared with 2.4% at December 31, 2018.

The table below presents the breakdown by interest rate (fixed or variable) of the Group's gross debt at December 31, 2019, taking into account interest rate, currency and cross-currency swaps.

(in € millions)		**Gross debt, excluding lease liabilities, after hedging**	
	Variable rate	**Fixed rate**	**Total**
EUR	1,812	9,438	11,250
Other currencies	473	348	821
TOTAL	**2,285**	**9,786**	**12,071**
(in %)	19%	81%	100%
Accrued interest and other			190
TOTAL GROSS DEBT EXCLUDING LEASE LIABILITIES			**12,261**

9.5. Financial assets and liabilities

Financial assets and liabilities are classified as follows in accordance with IFRS 9:

At December 31, 2019

(in € millions)	Notes	Financial instruments: Fair value through profit or loss	Financial instruments: Fair value through the statement of recognized income and expense	Financial instruments: Amortized cost	Total financial instruments	Financial instruments at fair value: Level 1 inputs	Financial instruments at fair value: Level 2 inputs	Financial instruments at fair value: Level 3 inputs	Total financial instruments measured at fair value
Trade and other accounts receivable				6,419	**6,419**				**0**
Loans, deposits and surety	(7.3)			565	**565**				**0**
Equity investments and other	(7.3)		2,658		**2,658**	2,554		104	**2,658**
Derivatives recorded in assets		5	2		**7**		7		**7**
Cash and cash equivalents		2,935		2,052	**4,987**	2,935			**2,935**
TOTAL FINANCIAL ASSETS		**2,940**	**2,660**	**9,036**	**14,636**	**5,489**	**7**	**104**	**5,600**
Trade and other accounts payable				(9,995)	**(9,995)**				**0**
Long- and short-term debt				(12,183)	**(12,183)**				**0**
Long- and short-term lease liabilities	(3.1) (3.2)			(3,217)	**(3,217)**				**0**
Derivatives recorded in liabilities		(5)	(86)		**(91)**		(91)		**(91)**
TOTAL FINANCIAL LIABILITIES		**(5)**	**(86)**	**(25,395)**	**(25,486)**	**0**	**(91)**	**0**	**(91)**
FINANCIAL ASSETS AND LIABILITIES - NET		**2,935**	**2,574**	**(16,359)**	**(10,850)**	**5,489**	**(84)**	**104**	**5,509**

At December 31, 2018 restated

(in € millions)	Notes	Financial instruments: Fair value through profit or loss	Financial instruments: Fair value through the statement of recognized income and expense	Financial instruments: Amortized cost	Total financial instruments	Financial instruments at fair value: Level 1 inputs	Financial instruments at fair value: Level 2 inputs	Financial instruments at fair value: Level 3 inputs	Total financial instruments measured at fair value
Trade and other accounts receivable				6,570	**6,570**				**0**
Loans, deposits and surety	(7.3)			620	**620**				**0**
Equity investments and other	(7.3)		1,714		**1,714**	1,685		29	**1,714**
Derivatives recorded in assets		3	4		**7**		7		**7**
Cash and cash equivalents		1,137		1,551	**2,688**	1,137			**1,137**
TOTAL FINANCIAL ASSETS		**1,140**	**1,718**	**8,741**	**11,599**	**2,822**	**7**	**29**	**2,858**
Trade and other accounts payable				(9,969)	**(9,969)**				**0**
Long- and short-term debt				(10,715)	**(10,715)**				**0**
Long- and short-term lease liabilities	(3.1) (3.2)			(3,075)	**(3,075)**				**0**
Derivatives recorded in liabilities		(5)	(107)		**(112)**		(112)		**(112)**
TOTAL FINANCIAL LIABILITIES		**(5)**	**(107)**	**(23,759)**	**(23,871)**	**0**	**(112)**	**0**	**(112)**
FINANCIAL ASSETS AND LIABILITIES - NET		**1,135**	**1,611**	**(15,018)**	**(12,272)**	**2,822**	**(105)**	**29**	**2,746**

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 10 SHAREHOLDERS' EQUITY AND EARNINGS PER SHARE

10.1. Equity

10.1.1. Equity

As of December 31, 2019, the number of shares composing the capital stock of Saint-Gobain was 544,683,451 shares with a par value of €4 (546,585,004 shares at December 31, 2018).

10.1.2. 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.

10.1.3. Retained earnings and consolidated net income

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

10.1.4. 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, 2019, 2,595,723 shares were held in treasury (December 31, 2018: 2,705,737 shares). In 2019, the Group acquired 9,777,969 shares (2018: 14,050,245 shares) directly on the market and 1,676,229 shares were sold (2018: 1,654,431 shares). Lastly, 8,211,754 shares were canceled in 2019 and 12,461,449 shares in 2018.

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

10.1.5. Dividends

The Annual Shareholders' Meeting of June 6, 2019 approved the recommended dividend payout for 2018 representing €1.33 per share.

10.2. Earnings per share

10.2.1. Basic 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.

Basic earnings per share are as follows:

	2019	2018 restated
Group share of net income *(in € millions)*	1,406	397
Weighted average number of shares in issue	542,079,771	547,105,985
BASIC EARNINGS PER SHARE, GROUP SHARE *(in €)*	2.59	0.73

10.3. Diluted earnings per share

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.

Diluted earnings per share are as follows:

	2019	2018 restated
Group share of net income *(in € millions)*	1,406	397
Weighted average number of shares assuming full dilution	545,159,839	550,016,438
DILUTED EARNINGS PER SHARE, GROUP SHARE *(in €)*	2.58	0.72

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 8,287 and 3,071,782 shares, respectively, at December 31, 2019.

NOTE 11 TAX

11.1. Income taxes

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

Income tax expense breaks down as follows:

(in € millions)	**2019**	**2018 restated**
CURRENT TAXES	**(601)**	**(405)**
France	(83)	(36)
Outside France	(518)	(369)
DEFERRED TAXES	**(30)**	**(87)**
France	(32)	24
Outside France	2	(111)
TOTAL INCOME TAX EXPENSE	**(631)**	**(492)**

Theoretical tax expense was reconciled with current tax expense using a tax rate of 34.43% in 2019 and 2018, and can be analyzed as follows:

(in € millions)	**2019**	**2018 restated**
Net income	1,454	474
Less:		
Share in net income of equity-accounted companies	24	30
Income taxes	(631)	(492)
PRE-TAX INCOME OF CONSOLIDATED COMPANIES	**2,061**	**936**
French tax rate	34.43%	34.43%
Theoretical tax expense at French tax rate	(709)	(322)
Impact of different tax rates	219	136
Asset impairment, capital gains and losses on asset disposals	(117)	(311)
Deferred tax assets not recognized	(30)	(57)
Liability method	24	(7)
Research tax credit, tax credit for competitiveness and employment (CICE) and value-added contribution for businesses (CVAE)	(16)	6
Costs related to dividends	(2)	(10)
Other taxes and provision writebacks	0	73
TOTAL INCOME TAX EXPENSE	**(631)**	**(492)**

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

11.2. Deferred tax

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

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

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

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

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

(in € millions)	**Net deferred tax asset/(liability)**
At December 31, 2017	
NET VALUE	**511**
At January 1, 2018 restated	
IFRS 9 and IFRS 15 restatements	9
IFRS 16 restatements	50
NET VALUE	**570**
At December 31, 2018 restated	
Deferred tax (expense)/benefit	(88)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	(69)
Liability method on actuarial gains and losses	(1)
Translation adjustments and restatement for hyperinflation	9
Assets and liabilities held for sale	(20)
Changes in Group structure and other	10
NET VALUE	**411**
At December 31, 2019	
Deferred tax (expense)/benefit	(53)
Changes in deferred taxes relating to actuarial gains and losses (IAS 19)	27
Liability method	23
Translation adjustments and restatement for hyperinflation	(15)
Assets and liabilities held for sale	(1)
Changes in Group structure and other	(7)
NET VALUE	**385**

The table below shows the main deferred tax components:

(in € millions)	Dec. 31, 2019	Dec. 31, 2018 restated
Pensions	474	460
Brands	(411)	(397)
Depreciation and amortization, accelerated capital allowances and tax-driven provisions	(689)	(659)
Tax loss carry-forwards	546	562
Other	465	445
NET DEFERRED TAX	**385**	**411**
Of which:		
Deferred tax assets	833	860
Deferred tax liabilities	(448)	(449)

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 €833 million were recognized at December 31, 2019 (€860 million at December 31, 2018), primarily in France (€207 million), the United States (€166 million), Germany (€166 million) and Italy (€60 million). Deferred tax liabilities of €448 million were recognized at December 31, 2019 (€449 million at December 31, 2018), including €190 million in the United Kingdom, €51 million in Switzerland, €48 million in India, and €41 million in Denmark. Deferred tax liabilities in other countries were not material.

11.3. 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 plans and the strategy for the long-term recovery of tax losses applied in each country.

The Group recognized deferred tax assets for tax loss carry-forwards for a net amount of €546 million at December 31, 2019 and €562 million at December 31, 2018. 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 generally ensures that deferred tax can be recovered. In these countries, tax losses may be carried forward indefinitely. Nevertheless, after analyzing each situation, the Group may decide not to recognize them.

At December 31, 2019, deferred tax assets whose recovery is not considered probable totaled €412 million (December 31, 2018: €451 million) and a provision had been accrued for the full amount. Unrecognized deferred tax assets chiefly relate to France, China, Germany, Spain and the United States.

NOTE 12 SUBSEQUENT EVENTS

On January 30, 2020, Saint-Gobain announced that Continental Building Products (NYSE: CBPX) had obtained shareholder approval to be acquired by Saint-Gobain and that the US Competition Authority had authorized the transaction. The deal closed on February 3, 2020. Upon completion of the transaction, Saint-Gobain will have acquired all of the shares of Continental Building Products for US$37.00 per share in a transaction valued at approximately US$1.4 billion (around €1.3 billion). Continental Building Products presents strong geographic complementarity with Saint-Gobain's North American operations.

DBMP LLC, an affiliate of CertainTeed LLC based in North Carolina (United States), that holds the legacy asbestos liabilities of the former CertainTeed Corporation, announced that on January 23, 2020 it had filed a voluntary petition for Chapter 11 relief in the US Bankruptcy Court for the Western District of North Carolina in Charlotte Pursuant to Chapter 11 relief under US bankruptcy law, even though the Group remains the legal owner of the shares comprising the entire share capital of DBMP LLC, its assets are frozen and placed under the control of the competent court of the city of Charlotte. Accordingly, the assets and liabilities of the entity and its wholly-owned subsidiary M&P LLC (operating income estimated at €12 million on an annual basis) have been removed from the consolidated financial statements with effect from January 23, 2020.

NOTE 13 FEES PAID TO THE STATUTORY AUDITORS

Total fees paid to the Statutory Auditors and recognized in the income statement in 2019 and 2018 are detailed in the "Additional information and cross-reference tables" section of the Registration Document.

NOTE 14 PRINCIPAL CONSOLIDATED COMPANIES

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

High Performance Solutions	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Diamantwerkzeuge GmbH, Norderstedt*	Germany	Full consolidation	100.00%
Saint-Gobain Abrasives GmbH, Wesseling*	Germany	Full consolidation	100.00%
Supercut Europe GmbH, Baesweiler*	Germany	Full consolidation	100.00%
Ernst Winter & Sohn Norderstedt GmbH & Co. KG, Norderstedt*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Isofluor GmbH, Neuss*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics MG Silikon GmbH, Lindau*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Pampus GmbH, Willich*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics L+S GmbH, Wertheim*	Germany	Full consolidation	100.00%
Saint-Gobain Performance Plastics Biolink GmbH, Waakirchen*	Germany	Full consolidation	100.00%
Saint-Gobain Adfors Deutschland GmbH, Neustadt an der Donau*	Germany	Full consolidation	100.00%
H.K.O. Isolier- und Textiltechnik GmbH, Oberhausen*	Germany	Full consolidation	100.00%
BEUHKO Fasertechnik GmbH, Leinefelde-Worbis*	Germany	Full consolidation	100.00%
SEPR Keramik GmbH & Co. KG, Aachen*	Germany	Full consolidation	100.00%
Freudenberger Autoglas GmbH, München*	Germany	Full consolidation	99.99%
Freeglass GmbH & Co. KG, Schwaikheim*	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%
Saint-Gobain Sekurit Deutschland GmbH & CO Kg, Herzogenrath*	Germany	Full consolidation	99.99%
FABA Autoglas Technik GmbH & Co. Betriebs-KG, Berlin*	Germany	Full consolidation	99.99%
Saint-Gobain Autover Deutschland GmbH, Kerpen*	Germany	Full consolidation	99.99%
Saint-Gobain Innovative Materials Belgium	Belgium	Full consolidation	100.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canada, Inc.	Canada	Full consolidation	100.00%
Saint-Gobain Performance Plastics (Shanghaï) Co., LTD	China	Full consolidation	100.00%
Saint-Gobain Abrasives (Shanghaï) Co., LTD	China	Full consolidation	100.00%
SG Hanglas Sekurit (Shanghaï) Co., Ltd	China	Full consolidation	98.99%
Hankuk Sekurit Limited	South Korea	Full consolidation	97.87%
Saint-Gobain Cristaleria S.L	Spain	Full consolidation	99.83%
Saint-Gobain Adfors America, Inc.	United States	Full consolidation	100.00%
Saint-Gobain Performance Plastics Corporation	United States	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 Abrasifs	France	Full consolidation	99.98%
Société Européenne des Produits Réfractaires - SEPR	France	Full consolidation	100.00%
Saint-Gobain Sekurit France	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 Mexico	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 Innovative Materials Polska Sp Zoo	Poland	Full consolidation	99.85%
Saint-Gobain Adfors CZ S.R.O.	Czech Republic	Full consolidation	100.00%
Saint-Gobain Sekurit CZ, Spol S.R.O	Czech Republic	Full consolidation	100.00%

Northern Europe	**Country**	**Consolidation method**	**Percentage held directly and indirectly**
Saint-Gobain Glass Deutschland 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%
Saint-Gobain Deutsche Glas GmbH, Stolberg*	Germany	Full consolidation	99.99%
Glasverarbeitungs-Gesellschaft Bremen mbH, Bremen*	Germany	Full consolidation	99.99%
Saint-Gobain Glassolutions Nord GmbH, Melsdorf*	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 Glassolutions Objekt-Center GmbH, Radeburg*	Germany	Full consolidation	99.99%
Saint-Gobain Isover G+H Aktiengesellschaft	Germany	Full consolidation	99.91%
Saint-Gobain Rigips GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Weber GmbH	Germany	Full consolidation	100.00%
Saint-Gobain PAM Deutschland GmbH	Germany	Full consolidation	100.00%
Saint-Gobain Construction Products Belgium	Belgium	Full consolidation	100.00%
Saint-Gobain Denmark A/S	Denmark	Full consolidation	99.97%
Saint-Gobain Distribution Denmark	Denmark	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Saint-Gobain Finland OY	Finland	Full consolidation	100.00%
Saint-Gobain Construction Products (Ireland) Limited	Ireland	Full consolidation	100.00%
Glava As	Norway	Full consolidation	100.00%
Saint-Gobain Byggevarer AS	Norway	Full consolidation	100.00%
Optimera As	Norway	Full consolidation	100.00%
Saint-Gobain Polska Sp Zoo	Poland	Full consolidation	99.90%
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 Glass (United Kingdom) Limited	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products United Kingdom Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Building Distribution Ltd	United Kingdom	Full consolidation	100.00%
Saint-Gobain Construction Products Russia ooo	Russia	Full consolidation	100.00%
Saint-Gobain Ecophon AB	Sweden	Full consolidation	100.00%
Saint-Gobain Sweden AB	Sweden	Full consolidation	100.00%
Saint-Gobain Distribution Nordic Ab	Sweden	Full consolidation	100.00%
Vetrotech Saint-Gobain International	Switzerland	Full consolidation	100.00%
Saint-Gobain Weber AG	Switzerland	Full consolidation	100.00%
Sanitas Troesch Ag	Switzerland	Full consolidation	100.00%

Southern Europe - ME & Africa	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Construction Products South Africa Ltd	South Africa	Full consolidation	100.00%
Saint-Gobain Cristaleria S.L	Spain	Full consolidation	99.83%
Saint-Gobain Placo Iberica	Spain	Full consolidation	99.83%
Saint-Gobain Idaplac, S.L.	Spain	Full consolidation	99.83%
Saint-Gobain Distribucion Construccion, S.L	Spain	Full consolidation	99.83%
Saint-Gobain Glass Solutions Menuisiers Industriels	France	Full consolidation	100.00%
Saint-Gobain Glass France	France	Full consolidation	100.00%
Eurofloat	France	Full consolidation	100.00%
Placoplatre SA	France	Full consolidation	99.80%
Saint-Gobain Isover	France	Full consolidation	100.00%
Saint-Gobain Weber	France	Full consolidation	100.00%
Saint-Gobain PAM	France	Full consolidation	100.00%
Distribution Sanitaire Chauffage	France	Full consolidation	100.00%
Lapeyre	France	Full consolidation	100.00%
Saint-Gobain Distribution Bâtiment France	France	Full consolidation	100.00%
Saint-Gobain Glass Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain PPC Italia S.p.a	Italy	Full consolidation	100.00%
Saint-Gobain Construction Products Nederland BV	Netherlands	Full consolidation	100.00%
Saint-Gobain Distribution The Netherlands B.V	Netherlands	Full consolidation	100.00%
Izocam Ticaret VE Sanayi A.S.	Turkey	Full consolidation	47.53%

Asia-Pacific	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Pipelines Co., Ltd	China	Full consolidation	100.00%
Saint-Gobain India Private Limited	India	Full consolidation	99.03%
Mag-Isover K.K.	Japan	Full consolidation	99.98%
Vinh Tuong Industrial Corporation	Vietnam	Full consolidation	98.65%

Americas	Country	Consolidation method	Percentage held directly and indirectly
Saint-Gobain Argentina S.A	Argentina	Full consolidation	100.00%
Cebrace Cristal Plano Ltda	Brazil	Full consolidation	50.00%
Saint-Gobain Do Brasil Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Canalizaçao Ltda	Brazil	Full consolidation	100.00%
Saint-Gobain Distribuiçao Brasil Ltda	Brazil	Full consolidation	100.00%
CertainTeed Gypsum Canada, Inc.	Canada	Full consolidation	100.00%
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%
DBMP LLC	United States	Full consolidation	100.00%

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