Financial report

Detailed contents

Consolidated financial statements

Consolidated Income Statement

For the year ended 31 December

in millions of Swiss francs, except for earnings per share data	Note	2018	2017
Sales	7	5,527	5,051
Cost of sales		(3,198)	(2,801)
Gross profit		**2,329**	**2,250**
as % of sales		42.1%	44.5%
Selling, marketing and distribution expenses		(716)	(669)
Research and product development expenses		(477)	(424)
Administration expenses		(208)	(178)
Share of (loss) profit of jointly controlled entities	10	5	–
Other operating income	11	63	42
Other operating expense	12	(113)	(152)
Operating income		**883**	**869**
as % of sales		16.0%	17.2%
Financing costs	14	(55)	(42)
Other financial income (expense), net	15	(56)	(32)
Income before taxes		**772**	**795**
Income taxes	16	(109)	(75)
Income for the period		**663**	**720**
Attribution			
Income attributable to non-controlling interests		–	
Income attributable to equity holders of the parent		663	720
as % of sales		12.0%	14.2%
Earnings per share – basic (CHF)	**17**	**71.92**	**78.18**
Earnings per share – diluted (CHF)	**17**	**71.36**	**77.54**

The notes on pages 125 to 180 form an integral part of these financial statements.

Consolidated Statement of Comprehensive Income

For the year ended 31 December

in millions of Swiss francs	Note	2018	2017
Income for the period		**663**	**720**
Items that may be reclassified to the income statement			
Cash flow hedges			
Movement in fair value, net		(4)	3
Gains (losses) removed from equity and recognised in the consolidated income statement		8	5
Movement on income tax	16	–	–
Exchange differences arising on translation of foreign operations			
Movement in fair value arising on hedging instruments of the net assets in foreign operations		37	
Change in currency translation		(140)	63
Movement on income tax	16	–	–
Items that will not be reclassified to the income statement			
Defined benefit pension plans			
Remeasurement gains (losses) of post employment benefit obligations	8	162	55
Movement on income tax	16	(35)	(38)
Other comprehensive income for the period		**28**	**88**
Total comprehensive income for the period		**691**	**808**
Attribution			
Total comprehensive income attributable to non-controlling interests		–	
Total comprehensive income attributable to equity holders of the parent		691	808

The notes on pages 125 to 180 form an integral part of these financial statements.

Consolidated Statement of Financial Position

As at 31 December

in millions of Swiss francs	Note	2018	2017
Cash and cash equivalents	5, 18	423	534
Derivative financial instruments	5	11	16
Financial assets at fair value through income statement	5	4	2
Accounts receivable - trade	5, 19	1,253	1,147
Inventories	20	1,098	902
Current tax assets	16	41	32
Prepayments		53	123
Other current assets	5	238	98
Current assets		**3,121**	**2,854**
Derivative financial instruments	5	2	1
Property, plant and equipment	21	1,759	1,579
Intangible assets	22	3,999	2,482
Deferred tax assets	16	208	207
Post-employment benefit plan assets	8	22	21
Financial assets at fair value through income statement	5	61	63
Jointly controlled entities	10	33	33
Investment property	23	2	16
Other long-term assets		61	53
Non-current assets		**6,147**	**4,455**
Total assets		**9,268**	**7,309**
Short-term debt	5, 24	4	308
Derivative financial instruments	5	12	12
Accounts payable - trade and others	5	719	662
Accrued payroll and payroll taxes		178	149
Current tax liabilities	16	95	49
Financial liability - own equity instruments	27	93	93
Provisions	26	24	57
Other current liabilities		225	195
Current liabilities		**1,350**	**1,525**
Derivative financial instruments	5	43	60
Long-term debt	5, 24	3,266	1,300
Provisions	26	73	67
Post-employment benefit plan liabilities	8	490	644
Deferred tax liabilities	16	238	99
Other non-current liabilities		85	76
Non-current liabilities		**4,195**	**2,246**
Total liabilities		**5,545**	**3,771**
Share capital	28	92	92
Retained earnings and reserves	28	5,811	5,682
Own equity instruments	27	(142)	(157)
Other components of equity		(2,051)	(2,079)
Equity attributable to equity holders of the parent		**3,710**	**3,538**
Non-controlling interests		13	
Total equity		**3,723**	**3,538**
Total liabilities and equity		**9,268**	**7,309**

The notes on pages 125 to 180 form an integral part of these financial statements.

GRI Disclosure 102 – 7

Consolidated Statement of Changes in Equity

For the year ended 31 December

2018 in millions of Swiss francs	Share Capital	Retained earnings and reserves	Own equity instruments	Cash flow hedges	Currency translation differences	Remeasure-ment of post employment benefit obligations	Equity attributable to equity holders of the parents	Non-controlling interests	Total equity
Note	28	28	27, 28			8			
Balance as at 1 January	**92**	**5,682**	**(157)**	**(65)**	**(1,456)**	**(558)**	**3,538**		**3,538**
Income for the period		663					663	–	663
Other comprehensive income for the period				4	(103)	127	28		28
Total comprehensive income for the period		**663**		**4**	**(103)**	**127**	**691**	**–**	**691**
Dividends paid		(534)					(534)		(534)
Movement on own equity instruments, net			15				15		15
Non-controlling interests								13	13
Net change in other equity items		**(534)**	**15**				**(519)**	**13**	**(506)**
Balance as at 31 December	**92**	**5,811**	**(142)**	**(61)**	**(1,559)**	**(431)**	**3,710**	**13**	**3,723**

2017 in millions of Swiss francs	Share Capital	Retained earnings and reserves	Own equity instruments	Cash flow hedges	Currency translation differences	Remeasure-ment of post employment benefit obligations	Equity attributable to equity holders of the parents	Non-controlling interests	Total equity
Note	28	28	27, 28			8			
Balance as at 1 January	**92**	**5,477**	**(109)**	**(73)**	**(1,519)**	**(575)**	**3,293**		**3,293**
Income for the period		720					720		720
Other comprehensive income for the period				8	63	17	88		88
Total comprehensive income for the period		**720**		**8**	**63**	**17**	**808**		**808**
Dividends paid		(515)					(515)		(515)
Movement on own equity instruments, net			(48)				(48)		(48)
Net change in other equity items		**(515)**	**(48)**				**(563)**		**(563)**
Balance as at 31 December	**92**	**5,682**	**(157)**	**(65)**	**(1,456)**	**(558)**	**3,538**		**3,538**

The notes on pages 125 to 180 form an integral part of these financial statements.

Consolidated Statement of Cash Flows

For the year ended 31 December

in millions of Swiss francs	Note	2018	2017
Income for the period		663	720
Income tax expense	16	109	75
Interest expense	14	42	29
Non-operating income and expense	14, 15	69	45
Operating income		**883**	**869**
Depreciation of property, plant and equipment	21	127	114
Amortisation of intangible assets	22	125	104
Impairment of long-lived assets	21, 22	10	2
Other non-cash items			
- share-based payments		38	35
- pension expense	8	39	14
- additional and unused provisions, net	26	(7)	69
- other non-cash items		(43)	(52)
Adjustments for non-cash items		**289**	**286**
(Increase) decrease in inventories		(9)	(107)
(Increase) decrease in accounts receivable		(72)	(125)
(Increase) decrease in other current assets		(35)	(29)
Increase (decrease) in accounts payable		(11)	136
Increase (decrease) in other current liabilities		38	12
(Increase) decrease in working capital		**(89)**	**(113)**
Income taxes paid		**(73)**	**(73)**
Pension contributions paid	8	(46)	(53)
Provisions used	26	(25)	(10)
Purchase and sale of own equity instruments, net		(23)	(45)
Cash flows from (for) operating activities		**916**	**861**
Increase in long-term debt	25	1,971	350
(Decrease) in long-term debt	25	(258)	(17)
Increase in short-term debt	25	2,345	670
(Decrease) in short-term debt	25	(2,620)	(705)
Cash flows from debt, net		**1,438**	**298**
Interest paid	25	(29)	(24)
Purchase and sale of derivative financial instruments, net	25	(22)	–
Other, net	25	(5)	(7)
Cash flows from financial liabilities		**1,382**	**267**
Distribution to the shareholders paid	28	(534)	(515)
Cash flows from (for) financing activities		**848**	**(248)**
Acquisition of property, plant and equipment	21	(239)	(191)
Acquisition of intangible assets	22	(55)	(53)
Payments for investment property	23		(1)
Acquisition of subsidiaries, net of cash acquired	6	(1,694)	(224)
Proceeds from the disposal of property, plant and equipment	21	110	2
Proceeds from disposal of investment property	23	14	
Interest received		2	3
Dividends received from jointly controlled entities		4	2
Purchase and sale of financial assets at fair value through income statement, net		5	–
Impact of financial transactions on investing, net		(3)	35
Other, net		(3)	(2)
Cash flows from (for) investing activities		**(1,859)**	**(429)**
Net increase (decrease) in cash and cash equivalents		**(95)**	**184**
Net effect of currency translation on cash and cash equivalents		(16)	22
Cash and cash equivalents at the beginning of the period	18	534	328
Cash and cash equivalents at the end of the period	**18**	**423**	**534**

The notes on pages 125 to 180 form an integral part of these financial statements.

Notes to the consolidated financial statements

1. Group Organisation

Givaudan SA and its subsidiaries (hereafter 'the Group') operate under the name Givaudan. Givaudan SA is a limited liability company incorporated and domiciled in Switzerland. The Group is headquartered in Vernier, near Geneva, Switzerland. Givaudan is a leading supplier of creative fragrance and flavour products to the consumer goods industry. It operates in over 100 countries and has subsidiaries and branches in more than 40 countries. Worldwide, it employs 13,598 people. A list of the principal Group companies is shown in Note 33 to the consolidated financial statements.

The Group is listed on the SIX Swiss Exchange (GIVN).

2. Summary of Significant Accounting Policies

The significant accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all years presented, unless otherwise stated.

2.1 Basis of Preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the IASB and Swiss law.

They are prepared under the historical cost convention as modified by the revaluation of financial assets and financial liabilities at fair value through the income statement, and of own equity instruments classified as derivatives. Historical cost is generally based on the fair value of the consideration given in exchange for goods and services. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique.

The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent liabilities at the date of the financial statements, and reported amounts of revenues and expenses during the reporting period. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. Critical accounting estimates and judgments are disclosed in Note 3.

Givaudan SA's Board of Directors approved these consolidated financial statements on 23 January 2019.

2.1.1 Changes in Accounting Policies and Disclosures Standards, amendments and interpretations effective in 2018

The accounting policies adopted are consistent with those of the annual financial statements for the year ended 31 December 2017, as described in the 2017 consolidated financial statements, with the exception of the adoption as of 1 January 2018 of the standards described below:

IFRS 9 Financial Instruments (as revised in 2014). The Group has early adopted this standard in 2016.

IFRS 15 Revenue from Contracts with Customers. IFRS 15 deals with revenue recognition and establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. Revenue is recognised when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. The standard replaces existing revenue recognition guidance including IAS 18 Revenues, IAS 11 Construction Contracts and IFRIC 13 Customers Loyalty Programme.

The Group has evaluated the impact of this standard. Contracts with customers relate primarily to the delivery of manufactured products and molecules of fragrance and flavour to the agreed upon specifications and may contain additional performance obligations for certain clients such as the assignment of specific application technologies, joint market research and particular stock conditions. Most of these additional performance obligations are not distinct because they are highly dependent on the delivery of manufactured products and molecules of fragrance and flavour. Generally, the transaction price includes estimating variable consideration such as rebates granted to customers.

The adoption of this standard and interpretation did not impact the consolidated financial statements, and it did not require retrospective adjustments.

Amendments to IFRS 2: Classification and Measurement of Share-based Payment Transactions clarify the accounting for cash-settled share-based payment transactions that include a performance condition, the classification of share-based payment transactions with net settlement features, and the accounting for modifications of share-based payment transactions from cash-settled to equity-settled. The adoption of these amendments has no impact on the current share-based payments programmes held within the Group.

Amendments to IFRS 4: Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts do not change the impact of the earlier adoption of IFRS 9 as the Group is not affected by IFRS 4.

Amendments to IAS 40: Transfers of Investment Property reinforce the principle for transfers into, or out of, investment property under IAS 40. These amendments are not relevant for the Group.

Annual Improvements to IFRS Standards 2014 – 2016 Cycle set out amendments across three different standards, related basis for conclusions and guidance, out of which two are effective in 2018, namely amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards and amendments to IAS 28 Investments in Associates and Joint Ventures. These amendments are not relevant for the Group.

IFRIC 22: Foreign Currency Transactions and Advance Consideration sets out requirements about which exchange rate to use when recording a foreign currency transaction on initial recognition in an entity's functional currency. The adoption of this interpretation does not change the current practice applied by the Group.

2.1.2. IFRSs and IFRICs issued but not yet effective

New and revised standards and interpretations, issued but not yet effective, have been reviewed to identify the nature of the future changes in accounting policy and to estimate the effect of any necessary changes in the consolidated financial statements and supporting notes upon their adoption.

a) Issued and effective for 2019

IFRIC 23 Uncertainty over Income Tax Treatments clarifies the accounting for uncertainties in income taxes. The clarification confirms the current practices of the Group.

Amendments to IAS 28: Long-term Interests in Associates and Joint Ventures clarify that an entity must apply IFRS 9 Financial Instruments to long-term interests in an associate or joint venture that form part of the net investment in the associate or joint venture but to which the equity method is not applied. The adoption of these amendments has no impact on the joint arrangements currently held by the Group.

Amendments to IFRS 9: Prepayment Features with Negative Compensation address the concerns about how IFRS 9 Financial Instruments classifies particular prepayable financial assets. These amendments are not relevant as the Group does not enter in such particular instruments.

Annual Improvements to IFRS Standards Cycle 2015 – 2017 set out amendments across four different standards, related basis for conclusions and guidance, namely amendments to IFRS 3 Business Combinations and IFRS 11 Joint Arrangements , IAS 12 Income Tax and IAS 23 Borrowing Costs. These amendments are not relevant for the Group.

Plan Amendment, Curtailment or Settlement: Amendments to IAS 19 state that if a plan amendment, curtailment or settlement occurs, it is now mandatory that the current service cost and the net interest for the period after the remeasurement are determined using the assumptions used for the remeasurement. It also clarifies the effect of a plan amendment, curtailment or settlement on the requirements regarding the asset ceiling. The clarification confirms the current practice of the Group.

IFRS 16 Leases provides a single lessee accounting model, requiring lessees to recognise assets and liabilities for all leases, and lessors to confirm the continuation of classifying leases as operating or finance. The Group is not a lessor and is impacted by the standard only for the lessee accounting.

At inception of a contract, the Group assesses whether it is or contains a lease. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease agreements, except for short-term leases, defined as leases with a lease term of 12 months or less, which are recognised on a straight-line basis as expense in profit or loss.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the implicit borrowing rate and if not available the incremental borrowing rate, which is defined as the interest rate that the Group would have to pay to borrow, over a similar term and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability, by reducing the amount to reflect lease payments made, and by any lease modifications. The lease liability is presented under the lines short-term debt and long-term debt in the consolidated statement of financial position.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses, and adjusted for any remeasurement of the lease liability. They are depreciated over the shorter period of lease term and useful life of underlying asset. The right-of-use-assets are presented on the consolidated statement of financial position in the line property, plant and equipment.

All lease payments on leases are presented as part of cash flows from financing activities.

The Group will apply the standard from its mandatory adoption date of 1 January 2019. The Group will apply the simplified transition approach and will not restate comparative amounts for the year prior to first adoption.

During 2018, the Group performed a detailed impact assessment of the implementation of IFRS 16. As at 31 December 2018, the Group has non-cancellable operating lease commitments of CHF 377 million (Note 29) and finance leases of CHF 11 million with a corresponding lease liability of CHF 7 million. Based on the impact assessment, the Group estimates to recognise right-of-use assets of CHF 226 million and a lease liability of CHF 226 million on 1 January 2019.

b) Issued and effective for 2020 and after

IFRS 17 Insurance Contracts establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts. The standard is not relevant for the Group as it does not operate in the insurance business.

Amendments to IFRS 10 and IAS 28: Sales or Contribution of Assets between an Investor and its Associate or Joint Venture clarify that in a transaction involving an associate or joint venture the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business. The adoption of these amendments has no impact on the accounting of the joint arrangements currently held by the Group.

Definition of Material: Amendments to IAS 1 and IAS 8 align the definition used in the Conceptual Framework and the standards themselves. The clarification does not impact the current practice of the Group.

Definition of Business: Amendments to IFRS 3 narrow and clarify the definition of a business. They also permit a simplified assessment of whether an acquired set of activities and assets is a group of assets rather than a business. The amendments do not impact the current practice of the Group.

2.2 Consolidation

The subsidiaries that are consolidated are those companies controlled, directly or indirectly, by Givaudan SA. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The Group reassesses whether or not it controls an investee if there are indications of a change in facts and circumstances.

Companies acquired during the year are consolidated from the date on which operating control is transferred to the Group, and subsidiaries to be divested are included up to the date on which control passes to the acquirer.

The acquisition method of accounting is used to account for the acquisition of subsidiaries. The cost of an acquisition is measured as the fair value of the assets acquired, shares issued and liabilities undertaken or assumed at the date of acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed are measured initially at their fair values at the acquisition date. Acquisition related costs are expensed as incurred. The excess of the cost of acquisition over the fair value of the Group's share of net assets of the subsidiary acquired is recognised as goodwill.

Where necessary, changes are made to the accounting policies of subsidiaries to bring and ensure consistency with the policies adopted by the Group.

Assets and liabilities, equity, income, expenses and cash flows resulting from inter-company transactions are eliminated in full on consolidation.

2.3 Interest in a Joint Venture

A joint venture is a joint arrangement whereby the Group and other parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists when the strategic, financial and operating decisions relating to the activities of the joint venture require the unanimous consent of the parties sharing control.

The results and assets and liabilities of joint ventures are incorporated in the consolidated financial statements using the equity method of accounting until the date on which the Group ceases to have joint control over the joint venture. Under the equity method, an investment in a joint venture is initially recognised at cost and adjusted thereafter to recognise the Group's share of the income statement and the other comprehensive income of the joint venture. Adjustments are made where necessary to bring the accounting policies in line with those adopted by the Group. Unrealised gains and losses on transactions between the Group and a jointly controlled entity are eliminated to the extent of the Group's interest in the joint venture.

2.4 Foreign Currency Valuation

2.4.1 Functional and presentation currency

Items included in the financial statements of each entity in the Group are measured using the functional currency of that entity. The functional currency is normally the one in which the entity primarily generates and expends cash. The consolidated financial statements are presented in millions of Swiss francs (CHF), the Swiss franc being the Group's presentation currency.

2.4.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing on the dates of the transactions, or using a rate that approximates the exchange rates on the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at the reporting period-end rates of monetary assets and liabilities denominated in foreign currencies are recognised in other financial income (expense), net, except for:

- Exchange differences deferred in equity as qualifying cash flow hedges on certain foreign currency risks and qualifying net investment hedges;

- Exchange differences on monetary items to a foreign operation for which settlement is neither planned nor likely to occur, therefore forming part of the net investment in the foreign operation, which are recognised initially in other comprehensive income and reclassified from equity to the income statement on disposal of the net investment or on partial disposal when there is a loss of control of subsidiary or a loss of joint control over a jointly controlled entity; and

- Exchange differences on foreign currency borrowings relating to assets under construction which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings.

Non-monetary items that are measured in terms of historical cost in foreign currencies are not retranslated.

2.4.3 Translation of the financial statements of foreign subsidiaries
For the purpose of presenting consolidated financial statements, the assets and liabilities of Group companies reporting in currencies other than Swiss francs (foreign operations) are translated into Swiss francs using exchange rates prevailing at the end of the reporting period. Cash flows, income and expenses items of Group companies are translated each month independently at the average exchange rates for the period when it is considered a reasonable approximation of the underlying transaction rate. All resulting exchange differences are recognised in other comprehensive income and accumulated in equity.

2.4.4 Hyperinflationary economies
Restatement of financial statements is required for subsidiaries whose functional currencies have experienced a cumulative inflation rate of more than 100% over the past three years. The gain or loss on the net monetary position as well as the gain or loss incurred upon adjusting the carrying amounts of non-monetary assets and liabilities for inflation are recognised in the consolidated income statement and then translated into Swiss francs. Restatement to current units of currency is made using the change in a general price index.

2.5 Segment Reporting
The operating segments are identified on the basis of internal reports that are regularly reviewed by the Executive Committee, the members of the Executive Committee being the chief operating decision makers, in order to allocate resources to the segments and to assess their performance. The internal financial reporting is consistently prepared along the lines of the two operating divisions: Fragrances and Flavours.

The business units of each division, respectively Fine Fragrances, Consumer Products, and Fragrance Ingredients and Active Beauty for the Fragrance Division and Beverages, Dairy, Savoury, Sweet Goods and Natural Ingredients for the Flavour Division, are not considered as separately reportable operating segments as decision making about the allocation of resources and the assessment of performance are not made at this level.

Inter-segment transfers or transactions are set on an arm's length basis.

Information about geographical areas is determined based on the Group's operations; Switzerland, Europe, Africa and Middle East; North America; Latin America and Asia Pacific. Revenues from external customers are shown by destination and by segment.

2.6 Revenue from Contracts with Customers
The Group manufactures and sells manufactured products and molecules of fragrance and flavour to the agreed upon specifications and may contain additional performance obligations for certain clients such as the assignment of specific application technologies, joint market research and particular stock conditions. Most of these additional performance obligations are not distinct because they are highly dependent on the delivery of manufactured products and molecules of fragrance and flavour.

Sales are recognised when control of the goods has transferred, being when the goods are delivered to the customer, the customer has full discretion over the channel and price to sell the goods, and there is no unfulfilled obligation that could affect the customer's acceptance of the goods. Delivery occurs when the customer has accepted the goods in accordance with the sales contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

The goods are often sold with volume discounts based on aggregate sales over a 12 months period. Revenue from these sales is recognised based on the price specified in the contract, net of the estimated volume discounts provided that it is highly probable that a significant reversal will not occur. No element of financing is deemed present as the sales are made with credit terms that are consistent with market practice.

A receivable is recognised when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

2.7 Research and Product Development

The Group is active in research and in formulas, technologies and product developments. In addition to its internal scientific efforts, the Group collaborates with outside partners.

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

Internal developments or developments obtained through agreements on formula, technology and product costs are capitalised as intangible assets when there is an identifiable asset that will generate probable economic benefits and when the cost can be measured reliably. When the conditions for recognition of an intangible asset are not met, development expenditure is recognised in the income statement in the period in which it is incurred.

2.8 Employee Benefit Costs

Wages, salaries, social security contributions, annual leave and paid sick leave, bonuses and non-monetary benefits are expensed in the year in which the associated services are rendered by the Group's employees.

2.8.1 Pension obligations

A defined benefit plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, principally dependent on an employee's years of service and remuneration at retirement. Plans are usually funded by payments from the Group and employees to financially independent trusts. The liability recognised in the statement of financial position is the aggregate of the present value of the defined benefit obligation at the statement of financial position date less the fair value of plan assets. Where a plan is unfunded, only a liability representing the present value of the defined benefit obligation is recognised in the statement of financial position. The present value of the defined benefit obligation is calculated by independent actuaries using the projected unit credit method twice a year, at interim and annual publication. This reflects the discounted expected future payment required to settle the obligation resulting from employee service in the current and prior periods. The future cash outflows incorporate actuarial assumptions primarily regarding the projected rates of remuneration growth, and long-term indexation rates. Discount rates, used to determine the present value of the defined benefit obligation, are based on the market yields of high quality corporate bonds in the country concerned. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Past service costs are recognised immediately in the income statement. Pension assets and liabilities in different defined benefit schemes are not offset unless the Group has a legally enforceable right to use the surplus in one plan to settle obligations in another plan.

A defined contribution plan is a pension plan under which the Group pays fixed contributions into publicly or privately administrated funds. The Group has no further payment obligations once the contributions have been made. The contributions are charged to the income statement in the year to which they relate.

2.8.2 Other post-retirement obligations

Some Group companies provide certain post-retirement healthcare and life insurance benefits to their retirees, the entitlement to which is usually based on the employee remaining in service up to retirement age and completing a minimum service period. The expected costs of these benefits are accrued over the periods in which employees render service to the Group.

2.9 Share-Based Payments

The Group has established a performance share plan to align the long-term interests of key executives and members of the Board of Directors with the interests of the shareholders.

Key executives are awarded a portion of their performance-related compensation in equity-settled share-based payment transactions. The costs are recorded in each relevant functions part of the employees' remuneration as personnel expenses with a corresponding entry in equity in own equity instruments for equity-settled share-based payment transactions. The different share-based payments are described below:

2.9.1 Performance Share Plan

Key executives are awarded a portion of their performance-related compensation in equity-settled share-based payment transactions in the form of a performance share plan.

The performance share plan is established with Givaudan registered shares and a vesting period of three years. The Group has at its disposal either treasury shares or conditional share capital.

The cost of equity-settled instruments is expensed as employee remuneration over the vesting period, together with a corresponding increase in equity in own equity instruments. The cost is determined by reference to the fair value of the shares expected to be delivered at the date of vesting. Performance conditions are included in the assumptions in which the number of shares varies. No market conditions are involved.

The fair value is determined as the market price at grant date reduced by the present value of dividends expected or any other expected distribution to the shareholders to be paid during the vesting period, as participants are not entitled to receive dividends or any other distribution to the shareholders during the vesting period.

At each statement of financial position date the Group revises its estimates of the number of shares that are expected to be delivered. Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation.

2.9.2 Restricted Shares Plan

The members of the Board of Directors receive a portion of their compensation in equity-settled share-based payment transactions in the form of restricted share units.

Restricted shares are set generally with a vesting period of three years, during which the restricted shares cannot be settled or transferred. The Group has at its disposal treasury shares for the delivery of the restricted shares.

The cost of these equity-settled instruments to be expensed, together with a corresponding increase in equity, over the vesting period, is determined by reference to the fair value of the restricted shares granted at the date of the grant. Service conditions are included in the assumptions about the number of restricted shares that are expected to become deliverable. No performance conditions are included.

The fair value is determined as the market price at grant date reduced by the present value of dividends expected or any other expected distribution to the shareholders to be paid during the vesting period, as participants are not entitled to receive dividends or any other distribution to the shareholders during the vesting period.

At each statement of financial position date the Group revises its estimates of the number of restricted shares that are expected to be delivered. Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation.

2.10 Taxation

Income taxes include all taxes based upon the taxable profits of the Group, including withholding taxes payable on the distribution of retained earnings within the Group. Other taxes not based on income, such as property and capital taxes, are included either in operating expenses or in financial expenses according to their nature. The Group's liability for current income tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred income taxes are provided based on the full liability method, under which deferred tax consequences are recognised for temporary differences between the tax bases of assets and liabilities and their carrying values. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary differences, unused tax losses and unused tax credits to the extent that it is probable that taxable profit will be available against which those items can be utilised. Management considers that these tax benefits are probable on the basis of business projections on the relevant entities.

Such deferred tax assets and liabilities are not recognised if the temporary difference arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither the accounting nor the taxable income.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled, based on tax rates that have been enacted or substantively enacted at the balance sheet date.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and interests in jointly controlled entities, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Current tax assets and liabilities are offset and deferred income tax assets and liabilities are offset when the income taxes are levied by the same taxation authority and when there is a legally enforceable right to offset them.

Current and deferred tax are recognised as an expense or income in the income statement, except when they relate to items that are recognised outside the income statement, in which case the tax is also recognised outside the income statement.

2.11 Cash and Cash Equivalents

Cash and cash equivalents comprise cash on hand and demand deposits with banks and similar institutions. Cash equivalents are held for the purpose of meeting short-term cash commitments (maturity of three months or less from the date of acquisition) and are subject to an insignificant risk of changes in value.

2.12 Financial Assets

Financial assets are classified as financial assets at fair value through the income statement except for trade receivables which are classified at amortised cost. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Regular way purchases or sales of financial assets require delivery of assets within the time frame established by regulation or convention in the marketplace. All regular way purchases or sales of financial assets are recognised and derecognised at the settlement date (i.e. the date that the asset is delivered to or by the Group). Financial assets are classified as current assets, unless they are expected to be realised beyond twelve months of the statement of financial position date.

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party. On derecognition of a financial asset in its entirety, the following amounts are recognised in the income statement: (i) the difference between the asset's carrying amount and the sum of the consideration received and receivable; (ii) the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity.

Dividend income from investments is recognised in other financial income (expense), net when the right to receive payment has been established. Interest income is accrued on a time basis and included in other financial income (expense), net.

2.12.1 Financial assets at fair value through the income statement

Financial assets such as debt instruments, equity securities, investment funds and derivatives not designated as effective hedging instruments are classified in this category.

Debt instruments are held with the objective to manage cash flows by both collecting their contractual cash flows and selling them at market price when needed. The main purpose of such instruments is to fund obligations related to employees. They are designated as financial assets measured at fair value through the income statement to avoid recognition inconsistency resulting from changes in fair values of the financial assets and the obligations.

Other financial assets which are not debt instruments are held with the main objectives to participate in long-term partnerships, to hedge certain financial risks, and to fund obligations related to employees. Their designation as financial assets measured at fair value through the income statement is in line with management intentions to hold such assets.

These financial assets are initially measured at fair value whereas directly attributable transaction costs are expensed in the income statement. At the end of each period, the carrying value is adjusted to the fair value with a corresponding entry in the income statement until the investment is derecognised.

The subsidiaries in the United States of America entered over the years into various life insurance contracts called corporate-owned life insurance (COLI) to fund long-term obligations related to employees. For both the COLI contracts and the associated long-term obligations, adjustments to the fair value, gains and losses, are recognised in the income statement.

For quoted equity instruments, the fair value is the market value, being calculated by reference to share exchange quoted selling prices at close of business on the statement of financial position date. Non-quoted financial assets are valued at fair value based on observable market transactions or if not available based on prices given by reputable financial institutions or on the price of the latest transaction.

2.12.2 Financial assets at amortised cost

Trade receivables are the only financial assets classified as subsequently measured at amortised cost. They reach the objective of collecting contractual cash flows over their life.

Trade receivables are carried at amortised cost less allowances for loss. They generally do not contain a significant financing component. The allowance loss measurement is then determined by applying a simplified approach equalling the lifetime expected credit losses. Under this approach the tracking of changes in credit risk is not required but instead the base lifetime expected credit loss at all times is applied. An allowance for loss is made for potentially impaired receivables during the year in which they are identified based on a periodic review of all outstanding amounts. Losses are recorded within selling, marketing and distribution expenses in the income statement. Trade receivables are deemed as impaired when there is an indication of significant financial difficulties of the debtor (delinquency in or default on payments occurs, probability of bankruptcy or need for financial reorganisation).

Trade receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

2.13 Derivative Financial Instruments and Hedging Activities

Most derivative instruments are entered into to provide economic hedges. They are initially recognised at fair value on the date a derivative contract is entered into and are subsequently measured at their fair value. The method to recognise the resulting gain or loss depends on whether the derivative is designated as a hedging instrument and, if so, the nature of the item being hedged.

The Group documents, at the inception of the transaction, the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, as to whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items.

Movements on the hedging reserve in shareholders' equity are shown in the statement of changes in equity. These derivatives are presented as current or non-current on the basis of their settlement dates.

2.13.1 Cash flow hedge

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in the cash flow hedge reserve within other comprehensive income, limited to the cumulative change in fair value of the hedged item on a present value basis from the inception of the hedge. The gain or loss relating to the ineffective portion is immediately recognised in financing costs in the income statement.

Amounts accumulated in equity are reclassified to the income statement in the periods when the hedged transaction affects the income statement, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or liability, the amounts are transferred from equity and included in the initial measurement of the cost of the non-financial asset or liability.

When forward contracts are used to hedge forecast transactions such as future debt issuance, management assumes that the sources of hedge effectiveness in regards of the characteristics of the hedging relationship is sufficiently immaterial to exclusively perform a qualitative assessment.

When the hedging instrument expires or is sold, terminated or exercised, or the hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the ultimate forecast transaction occurs. If the forecast transaction is no longer expected to occur, any cumulative gain or loss existing in equity is immediately taken to the income statement.

2.13.2 Derivatives at fair value through the income statement

Certain derivative instruments do not qualify for hedge accounting and are accounted for at fair value through the income statement. At each statement of financial position date these derivative instruments are valued at fair value based on quoted market prices, with the unrealised gain or loss recognised in the income statement. They are derecognised when the Group has lost control of the contractual rights of the derivatives, at which time a realised gain or loss is recognised in the income statement.

2.14 Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using a weighted average cost formula. The cost of finished goods and work in process comprises raw materials, direct labour, other direct costs and related production overheads but excludes borrowing costs. Cost of sales includes the corresponding direct production costs of goods manufactured and services rendered as well as related production overheads. Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs necessary to make the sale.

2.15 Property, Plant and Equipment

Property, plant and equipment are initially recognised at cost of purchase or construction and subsequently at cost less accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment includes expenditure that is attributable to the purchase or construction. It includes, for qualifying assets, borrowing costs in accordance with the Group's accounting policy (Note 2.19), and cost of its dismantlement, removal or restoration, related to the obligation for which an entity incurs as a consequence of installing the asset.

The assets are depreciated on a straight-line basis, except for land, which is not depreciated. Estimated useful lives of major classes of depreciable assets are as follows:

– Buildings and land improvements	40 years
– Machinery and equipment	5 – 15 years
– Office equipment	3 years
– Motor vehicles	5 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each statement of financial position date.

The carrying values of plant and equipment are written down to their recoverable amount when the carrying value is greater than their estimated recoverable amount (Note 2.18).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount with gains being recognised within other operating income and losses being recognised within other operating expense within the income statement. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. Subsequent costs such as repairs and maintenance are recognised as expenses as incurred.

2.16 Leases

Leases of assets are classified as operating leases when substantially all the risks and rewards of ownership of the assets are retained by the lessor. Operating lease payments are charged to the income statement on a straight-line basis over the term of the lease.

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. Assets held under finance leases are recognised as assets of the Group at their fair value or, if lower, at the present value of the minimum lease payments, each determined at the inception of the lease. The corresponding liability to the lessor is included in the statement of financial position as other non-current liabilities.

2.17 Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net assets of the acquired subsidiary at the date of acquisition. Goodwill on acquisitions is recognised in the statement of financial position as an intangible asset. Goodwill is tested annually for impairment or more frequently when there are indications of impairment, and carried at cost less accumulated impairment losses. Impairment charges on goodwill are not reversed. Any goodwill or fair value adjustments to the carrying amounts of assets and liabilities arising on the acquisition of a foreign operation are recognised in the local currency at the effective date of the transaction and translated at year-end exchange rates. For the purpose of impairment testing, goodwill is allocated to the cash-generating units being the Group's reportable operating segments: Flavour Division and Fragrance Division, which itself includes a lower level of cash-generating unit related to Expressions Parfumées.

Intangible assets acquired in a business combination are identified and recognised separately from goodwill when they satisfy the definition of an intangible asset and their fair values can be measured reliably.

Internal developments are capitalised as intangible assets when there is an identifiable asset that will generate probable economic benefits and when the cost can be measured reliably. Costs include all costs directly attributable to preparing the asset for use. Development costs previously recognised as an expense are not recognised as an asset in subsequent periods.

Separately acquired intangible assets are capitalised when the identifiable asset will generate probable economic benefits and when its cost can be measured reliably.

Intangible assets are carried at cost less accumulated amortisation and accumulated impairment losses. Amortisation is on a straight-line basis over the estimated economic useful life of the asset. Useful life is determined based on the character of the asset and may be indefinite. In that case, the asset is not amortised but annually tested for impairment. Estimated definite useful life of major classes of amortisable assets are as follows:

– Name and product brands	2 – 7 years
– Software/ERP system	3 – 7 years
– Process-oriented technology	5 – 20 years
– Client relationships	15 – 23 years
– Supplier relationships	3 years

Gains or losses arising on the disposal of intangible assets are measured as the difference between the net disposal proceeds and the carrying amount with gains being recognised within other operating income and losses being recognised in other operating expense within the income statement.

2.18 Impairment of Long-Lived Assets

Non-financial assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When the recoverable amount of a non-financial asset, being the higher of its fair value less cost to sell and its value in use, is less than its carrying amount, then the carrying amount is reduced to the asset's recoverable value. This reduction is recognised as an impairment loss within other operating expense within the income statement. Value in use is determined by using pre-tax cash-flow projections over a five-year period and a terminal value. These are discounted using a pre-tax discount rate that reflects current market conditions of the time value of money and the risks specific to the asset.

Intangible assets with indefinite useful life are tested for impairment annually, and whenever there is an indication that the asset may be impaired.

An impairment loss is reversed if there has been a change in the circumstances used to determine the recoverable amount. A previously recognised impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

2.19 Borrowing Costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to prepare for their intended use, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation. All other borrowing costs are recognised in the income statement in the period in which they are incurred.

2.20 Accounts Payable – Trade and Others

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers and are carried at amortised cost.

2.21 Debt

The proceeds of straight bonds, of private placements and of debt issued are recognised as the proceeds received, net of transaction costs incurred. Any discount arising from the coupon rate, represented by the difference between the net proceeds and the redemption value, is amortised using the effective interest rate method and charged to interest expense over the life of the bonds or the private placements. Debt is derecognised at redemption date.

Debt is classified within current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least twelve months after the statement of financial position date.

2.22 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and for which a reliable estimate of the amount of the obligation can be made. Provisions are reviewed regularly and are adjusted where necessary to reflect the current best estimates of the obligation.

2.23 Own Equity Instruments

Own equity instruments are own shares and derivatives on own shares. Purchases and sales are accounted for at the settlement date.

Purchases of own shares are recognised at acquisition cost including transaction costs as a deduction from equity. The original cost of acquisition, results from resale and other movements are recognised as changes in equity, net. Treasury shares acquired by the execution of own equity derivatives are recognised at the execution date market price.

The settlement and the contract for derivatives on own shares determine the categorisation of each instrument. When the contract assumes the settlement is made by exchanging a fixed amount of cash for a fixed number of treasury shares, the contract is recognised in equity except for a forward contract to buy and write put options which is recognised as a financial liability. When the contract assumes the settlement either net in cash or net in treasury shares or in the case of option of settlement, the contract is recognised as a derivative. Instruments recognised in equity are recognised at acquisition cost including transaction costs. Instruments recognised as financial liabilities are recognised at the net present value of the strike price of the derivative on own shares with the interest charge recognised over the life of the derivative in the line Financing costs of the income statement. They are derecognised when the Group has lost control of the contractual rights of the derivative, with the realised gain or loss recognised in equity.

At each statement of financial position date instruments recognised as derivatives are valued at fair value based on quoted market prices, with any unrealised gain or loss recognised in the line Other financial income (expense), net in the income statement. They are derecognised when the Group has lost control of the contractual rights of the derivatives, with any realised gain or loss recognised.

2.24 Share Capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

2.25 Statement of Cash Flows

Cash flows from operating activities arise from the principal activities of the Group in the Fragrance and Flavour businesses. The indirect method is used whereby the operating income is adjusted for the transactions of a non-cash nature in order to derive the cash generated from operations. It includes income tax paid on all activities.

Cash flows from financing activities are primarily the proceeds from the issue and repayment of the debt instruments, the dividend payment to shareholders and interest paid. Cash flows from long-term and short-term borrowings are reported separately of gross cash receipts and gross cash payments.

Cash flows from investing activities arise principally from the investments in property, plant and equipment and intangible assets, from the acquisition of subsidiaries, and from the transactions with jointly controlled entities.

2.26 Distribution to the Shareholders

Dividend distributions or distributions out of statutory capital reserves from 'capital contributions – additional paid-in capital' are recognised in the period in which they are approved by the Group's shareholders.

3. Critical Accounting Estimates and Judgments

The estimates and underlying assumptions are reviewed on an ongoing basis and are based on historical experience and other factors, including expectation of future events that are believed to be reasonable under the circumstances.

3.1 Critical Accounting Estimates and Assumptions

The key assumptions concerning the future, and other key sources of estimation uncertainty at the statement of financial position date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are for the most part related to:

- In a business combination, the determination of the fair value of the identifiable assets acquired, particularly intangibles, and the liability requiring estimations which are based on all available information and in some cases on assumptions with respect to the timing and amount of future revenues and expenses associated with an asset. The purchase price is allocated to the underlying acquired assets and liabilities based on their estimated fair value at the time of acquisition. The excess is reported as goodwill. As a result, the purchase price allocation impacts reported assets and liabilities, future net earnings due to the impact on future depreciation and amortisation expense and impairment charges (Note 6);

- The impairment of goodwill requiring estimates of the value in use of the cash-generating units to which goodwill is allocated (Note 22);

- The impairment of long-lived assets requiring estimates to measure the recoverable amount of an asset or group of assets (Note 21 and 22);

- The calculation of the present value of defined benefit obligations requiring financial and demographic assumptions (Note 8);

- The determination and provision for income taxes requiring estimated calculations for which the ultimate tax determination is uncertain (Note 16);

- The provisions requiring assumptions to determine reliable best estimates (Note 26); and

- The contingent liabilities assessment (Note 30).

If, in the future, estimates and assumptions, which are based on management's best judgement at the date of the financial statements, deviate from the actual circumstances, the original estimates and assumptions will be modified as appropriate in the year in which the circumstances change.

3.2 Critical Judgments in Applying the Entity's Accounting Policies

In the process of applying the Group's accounting policies, management has made the following judgments, apart from those involving estimates, which have the most significant effect on the amounts recognised in the consolidated financial statements:

- Computer software and Enterprise Resource Planning: Computer software is internally developed programmes or modifications that result in new or in substantial improvements of existing IT systems and applications (Note 22); and

- Internal developments on formulas, technologies and products: The outcome of these developments depends on their final assemblage and application, which varies to meet customer needs, and consequently the future economic benefits of these developments are not certain. Thus the criteria for the recognition as an asset of the internal developments on formulas, technologies and products are generally not met. The expenditures on these activities are recognised as expense in the period in which they are incurred.

4. Foreign Exchange Rates

Foreign currency to Swiss francs exchange rates	ISO code	Units	**31 Dec 2018**	**Average 2018**	31 Dec 2017	Average 2017	31 Dec 2016	Average 2016
US Dollar	USD	1	0.98	0.98	0.97	0.98	1.02	0.99
Euro	EUR	1	1.13	1.15	1.17	1.11	1.07	1.09
Pound	GBP	1	1.25	1.30	1.32	1.27	1.25	1.34
Yen	JPY	100	0.90	0.88	0.86	0.88	0.87	0.91
Singapore dollar	SGD	1	0.72	0.72	0.73	0.71	0.70	0.71
Real	BRL	1	0.25	0.27	0.30	0.31	0.31	0.29
Renminbi	CNY	1	0.14	0.15	0.15	0.15	0.15	0.15
Mexican peso	MXN	100	5.01	5.08	4.96	5.20	4.93	5.33
Rupiah	IDR	10,000	0.68	0.69	0.72	0.73	0.75	0.74

5. Financial Risk Management

5.1 Capital Management

The objective of the Group when managing capital is to maintain the ability to continue as a going concern whilst maximising shareholder value through an optimal balance of debt and equity.

In order to maintain or adjust the capital structure, management may increase or decrease leverage by issuing or reimbursing debt, and may propose to adjust the amounts distributed to the shareholders, return capital to shareholders, issue new shares and cancel shares through share buyback programmes.

The Group monitors its capital structure on the basis of a leverage ratio, defined as net debt divided by the equity plus net debt. Net debt is calculated as the total of the consolidated short-term and long-term debt, less cash and cash equivalents. Equity is calculated as the total equity attributable to equity holders of the parent excluding the defined benefit pension plans remeasurement elements.

The Group has entered into several private placements which contain various covenants with externally imposed capital requirements. The Group was in compliance with these requirements as at 31 December 2018 and 2017.

The leverage ratio as at 31 December was as follows:

in millions of Swiss francs	Note	**2018**	2017
Short-term debt	24	4	308
Long-term debt	24	3,266	1,300
Less: cash and cash equivalents	18	(423)	(534)
Net debt		**2,847**	**1,074**
Total equity attributable to equity holders of the parent		3,710	3,538
Remeasurement of post employment benefit obligations	8	431	558
Equity		**4,141**	**4,096**
Net debt and equity		**6,988**	**5,170**
Leverage ratio		**41%**	**21%**

The Group intends to maintain its medium term leverage ratio below 25%.

As at 31 December 2018, the leverage ratio increased to 41% compared to 21% as at 31 December 2017. The net debt was CHF 2,847 million at December 2018 up from CHF 1,074 million as at December 2017, following the acquisitions during the year.

5.2 Financial Risk Management

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group generally enters into financial derivative transactions to hedge underlying business related exposures.

Risk management is carried out by a team within the central treasury department (hereafter 'Group Treasury') under the risk management policies approved by the Board of Directors. The Board of Directors provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk and credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

Group Treasury monitors and manages financial risks relating to the operations of the Group through internal risk reports which analyse exposures by degree and magnitude of risk. To manage the interest rate and currency risk arising from the Group's operations and its sources of finance, the Group enters into derivative transactions, primarily interest rate swaps, forward currency contracts and options. Compliance with policies and exposure limits is reviewed by the treasury controlling on a continuous basis. Group Treasury issues monthly reports for the Chief Financial Officer and quarterly reports for the Audit Committee.

Categories of financial instruments

The accounting policies for financial instruments have been applied to the line items below:

2018 in millions of Swiss francs	Note	At amortised cost	At fair value through the income statement	Derivatives used for hedge accounting	Other financial liabilities	Total
Current financial assets						
Cash and cash equivalents	18	423				423
Derivative financial instruments	5.3		11			11
Financial assets at fair value through income statement	5.3		4			4
Accounts receivable – trade	19	1,253				1,253
Other current assets [a]		238				238
Non-current financial assets						
Derivative financial instruments [b]	5.3			2		2
Financial assets at fair value through income statement	5.3		61			61
Total financial assets as at 31 December		**1,914**	**76**	**2**		**1,992**
Current financial liabilities						
Short-term debt	24				4	4
Derivative financial instruments	5.3		12			12
Accounts payable					719	719
Non-current financial liabilities						
Derivative financial instruments [b]	5.3			43		43
Long-term debt	24				3,266	3,266
Total financial liabilities as at 31 December			**12**	**43**	**3,989**	**4,044**

a) Other current assets consist of other receivables non trade.
b) Derivatives qualified as hedge accounting on non-current transactions are classified and presented as non-current assets or liabilities (Note 2.13).

2017 in millions of Swiss francs	Note	At amortised cost	At fair value through the income statement	Derivatives used for hedge accounting	Other financial liabilities	Total
Current financial assets						
Cash and cash equivalents	18	534				534
Derivative financial instruments	5.3		16			16
Financial assets at fair value through income statement	5.3		2			2
Accounts receivable – trade	19	1,147				1,147
Other current assets [a]		98				98
Non-current financial assets						
Derivative financial instruments [b]	5.3			1		1
Financial assets at fair value through income statement	5.3		63			63
Total financial assets as at 31 December		**1,779**	**81**	**1**		**1,861**
Current financial liabilities						
Short-term debt	24				308	308
Derivative financial instruments	5.3		12			12
Accounts payable					662	662
Non-current financial liabilities						
Derivative financial instruments [b]	5.3			60		60
Long-term debt	24				1,300	1,300
Total financial liabilities as at 31 December			**12**	**60**	**2,270**	**2,342**

a) Other current assets consist of other receivables non trade.
b) Derivatives qualified as hedge accounting on non-current transactions are classified and presented as non-current liabilities (Note 2.13).

The carrying amount of each class of financial assets and liabilities disclosed in the previous tables approximates the fair value. The fair value of each class of financial assets and liabilities, except financial assets at amortised cost, is determined by reference to published price quotations and is estimated based on valuation techniques using the quoted market prices. Given the nature of the Group's accounts receivable trade items, the carrying value is considered as equivalent to the fair value.

5.2.1 Market Risk

The Group's activities primarily expose it to the financial risks of changes in foreign currency exchange rates, interest rates and commodity prices. The Group enters into a number of derivative financial instruments to manage its exposure to foreign currency risk and interest rate risk, including:

- Currency derivatives, mainly forward foreign exchange contracts, to hedge the exchange rate risk arising from recorded transactions; and

- Interest rate swaps and other instruments to mitigate the risk of interest rate increases and/or to optimally manage interest rate costs depending on the prevailing interest rate environment.

Market risk exposures are measured using sensitivity analysis. There has been no change during the year in the structure of the Group's exposure to market risks or the manner in which these risks are managed.

5.2.1.1 Foreign Exchange Risk

The Group operates across the world and is exposed to movements in foreign currencies affecting its net income and financial position. Foreign exchange risk arises from future commercial transactions, recognised assets and liabilities, and net investments in foreign operations.

It is the Group's policy to enter into derivative transactions to hedge current, forecasted foreign currency transactions, and translation risk arising from certain investments in foreign operations with a functional currency different from the Group's presentation currency.

In 2018 the Group applied hedge accounting on the net investment in foreign currency in the holding of Naturex with the aim of being protected from the foreign currency risk on the translation of the investment in Naturex (e.g. EUR) into the Group's presentation currency (e.g. CHF). The Euro straight bonds are designated as hedge instrument for an amount of EUR 1,292 million corresponding to the net investment in Naturex. It results in a gain of CHF 37 million recognised in the currency translation differences in equity.

The Group applied hedge accounting on the foreign currency risk related to the foreseen acquisition of Albert Vieille SAS (Note 35).

In 2017 the Group applied hedge accounting on the foreign currency risk related to the acquisition of Vika B.V. and the foreseen acquisitions of Centroflora Nutra and Expressions Parfumées that occurred in 2018.

Group Treasury centrally manages foreign exchange risk management activities against the functional currency of each subsidiary, and is required to hedge, whenever cost-effective, their largest exposures.

The measurement of the foreign currency risk expresses the total exposure by currency, which is in the opinion of Group Treasury a representative manner to monitor the risk. It measures the cumulative foreign exchange risk of all subsidiaries of recognised assets and liabilities that are denominated in a currency (e.g. USD) that is not the subsidiary's functional currency (e.g. other than USD).

The following table summarises the significant exposures to the foreign currency risk at the date of the consolidated statement of financial position:

Currency exposure 2018 in millions of Swiss francs	USD	EUR	CHF	GBP	SGD
Currency exposure without hedge [a]	484	(334)	12	(152)	155
Hedged amount	(458)	327	9	151	(162)
Currency exposure including hedge	26[b]	(7)	21	(1)	(7)

a) + long position; - short position.
b) Mainly due to unhedged positions in countries where hedging is not cost-effective.

Currency exposure 2017 in millions of Swiss francs	USD	EUR	CHF	GBP	SGD
Currency exposure without hedge [a]	337	(415)	(75)	(155)	144
Hedged amount	(332)	411	38	152	(160)
Currency exposure including hedge	5[b]	(4)	(37)	(3)	(16)

a) + long position; - short position.
b) Mainly due to unhedged positions in countries where hedging is not cost-effective.

In the exposure calculations the intra-Group positions, except those related to net investments in foreign operations, are included. The Euro straight bonds designated as hedge instrument for an amount of EUR 1,292 million corresponding to the net investment in the holding of Naturex has been excluded from the EUR exposure to align the currency risk.

The following table summarises the sensitivity to transactional currency exposures of the main currencies as at 31 December.

The sensitivity analysis is disclosed for each currency representing significant exposure:

Currency risks 2018 in millions of Swiss francs	USD	EUR	CHF	GBP	SGD
Reasonable shift	9%	14%	7%	8%	7%
Impact on income statement if the currency strengthens against all other currencies	2	(6)	1	–	(1)
Impact on income statement if the currency weakens against all other currencies	(2)	6	(1)	–	1

Currency risks 2017 in millions of Swiss francs	USD	EUR	CHF	GBP	SGD
Reasonable shift	11%	6%	6%	10%	7%
Impact on income statement if the currency strengthens against all other currencies	(1)	–	(2)	–	(1)
Impact on income statement if the currency weakens against all other currencies	1	–	2	–	1

The sensitivity is based on the exposure at the date of the consolidated statement of financial position and based on assumptions deemed reasonable by management, showing the impact on income before tax. Management uses historical volatilities of the significant currencies contributing to the exposure to determine the reasonable change.

Argentina became hyperinflationary effective 1 July 2018, requiring retroactive implementation of hyperinflation accounting as of 1 January 2018. The impact of the restatement of the non-monetary assets and liabilities of the subsidiaries in Argentina with the general price index at the beginning of the period is recorded in retained earnings in equity. The subsequent gain resulting from the restatement of non-monetary assets of CHF 1 million is recorded in other financial income (expense), net.

5.2.1.2 Interest Rate Risk

The Group is exposed to interest rate risk because entities in the Group borrow funds at both fixed and floating interest rates, and invests in debt financial instruments. Borrowings issued at variable rates expose the Group to cash flow interest rate risk which is partially counterbalanced by cash held at variable rates. Borrowings issued at fixed rates expose the Group to fair value interest rate risk.

Group Treasury manages interest rate risk centrally by simulating various scenarios on liabilities taking into consideration refinancing, renewal of existing positions and hedging. Hedging strategies are applied by either positioning the liabilities or protecting interest expense through different interest cycles. Hedging activities are regularly evaluated to align interest rate views and define risk limits. Group Treasury manages interest rate risk mainly by the use of interest rate swap contracts.

The following table shows the sensitivity to interest rate changes:

As at 31 December 2018 in millions of Swiss francs	150 basis points increase	25 basis points decrease
Impact on income statement	–	–
Impact on equity	57	(11)

As at 31 December 2017 in millions of Swiss francs	150 basis points increase	25 basis points decrease
Impact on income statement	–	–
Impact on equity	65	(13)

The sensitivity is based on exposure on liabilities at the date of the consolidated statement of financial position using assumptions which have been deemed reasonable by management showing the impact on the income before tax.

Cash flow hedges

Inception date	Hedged items	Hedge instruments	Objectives	Comments
2011/ 2012	Highly probable future debt issuances in 2014.	Several forward starting interest rate swaps commencing in 2014, totalling CHF 250 million with an average rate of 1.54% and a 5 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	In March 2014, the Group issued a 1.00% 6.5 year public bond with a nominal value of CHF 100 million; and a 1.75% 10 year public bond with a nominal value of CHF 150 million. Correspondingly, hedge positions assigned to this bond issuance have been closed. The amortisation of the realised loss of CHF 15 million is recognised in Financing costs over 5 years until 19 March 2019.
2012	Highly probable future debt issuances in 2016.	Several forward starting interest rate swaps commencing in 2016, totalling CHF 75 million with an average rate of 1.63% and a 5 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	In December 2016, the Group issued a 0.000% 6 year public bond with a nominal value of CHF 100 million; and a 0.625% 15 year public bond with a nominal value of CHF 200 million. Correspondingly, hedge positions assigned to this bond issuance have been closed. The amortisation of the realised loss of CHF 8 million is recognised in Financing costs over 5 years until 7 December 2021.
2012	Highly probable future private placements issuance in the USA in 2013.	Several derivatives instruments fixing the interest rate at 1.80% on average for a total amount of USD 100 million.	Protection against short-term increases in USD interest rates and to fix the interest rates.	The cash flow hedges were effective during the period. The amount of USD 1 million (equivalent to CHF 1 million) deferred in hedging reserve in other comprehensive income is recycled over the next 10 years as Financing cost from 6 February 2013, the date when the proceeds were received.
2012/ 2014	Highly probable future debt issuances in 2018.	Several forward starting interest rate swaps commencing in 2018, totalling CHF 150 million with an average rate of 1.90% and a 5 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	In April 2018, the Group issued a 2 year floating rate public bond with a nominal value of CHF 150 million; and a 7 year 0.375% fixed rate public bond with a nominal value of CHF 200 million. Correspondingly, hedge positions assigned to this bond issuance have been closed. The amortisation of the realised loss of CHF 15 million is recognised in Financing costs over 5 years until April 2023.
2014/ 2015	Highly probable future debt issuances in 2020.	Several forward starting interest rate swaps commencing in 2020, totalling CHF 75 million with an average rate of 2.12% and a 10 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
2014/ 2015	Highly probable future debt issuances in 2021.	Several forward starting interest rate swaps commencing in 2021, totalling CHF 125 million with an average rate of 2.05% and a 10 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
2014/ 2015	Highly probable future debt issuances in 2024.	Several forward starting interest rate swaps commencing in 2024, totalling CHF 100 million with an average rate of 2.35% and a 10 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
2016/ 2017	Highly probable future debt issuances in 2031.	Several forward starting interest rate swaps commencing in 2031, totalling CHF 100 million with an average rate of 0.92% and a 10 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
2018	Highly probable future debt issuance in 2020.	One forward starting interest rate swap commencing in 2020, totalling CHF 25 million with an average rate of 0.52% and a 5 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
2018	Highly probable future debt issuance in 2025.	One forward starting interest rate swap commencing in 2025, totalling CHF 25 million with an average rate of 1.28% and a 5 year maturity.	Protection against future increases in CHF interest rates and to fix the interest rates.	The cash flow hedges were effective during the year.
June 2018	Highly probable future debt issuance in December 2018.	Several forward starting interest rate swaps commencing in December 2018 totalling EUR 400 million with an average rate of 1.05% and respectively 7 and 10 year maturities.	Protection against future increase in EUR interest rates and to fix the interest rates.	In September 2018, the Group issued a dual tranche placement of Euro bond, totalling EUR 1,300 million, respectively of EUR 500 million at a rate of 1.125% for 7 years and EUR 800 million at the rate of 2.000% for 12 years. Correspondingly, hedge positions assigned to this bond issuance have been closed. The amortisation of the realised loss is recognised in Financing costs for CHF 1 million over 7 years until September 2025, and CHF 5 million over 10 years until September 2028.

5.2.1.3 Price Risk

The Group is exposed to equity price risk arising from equity investments held classified at fair value through income statement. The Group manages its price risk through a diversification of portfolios within the limits approved by the Board of Directors.

The Group holds its own shares to meet future expected obligations under the various share-based payment schemes.

Sensitivity analysis

The Group's equity portfolio is composed exclusively of US shares. The benchmark for the reasonable change is an average of historical volatility of US indexes (16% for the last three years).

The sensitivity analysis has been determined based on the exposure to equity price risks at the end of the reporting period:

2018 in millions of Swiss francs	Equity price increase	Equity price decrease
Impact on income statement	5	(5)

2017 – reasonable shifts: 16%US in millions of Swiss francs	Equity price increase	Equity price decrease
Impact on income statement	6	(6)

5.2.2 Credit Risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in a financial loss to the Group. Commercial credit risk is managed by the Group's subsidiaries and monitored on a Group basis whilst counterparty risk related to financial institutions is centrally managed within the Group Treasury function.

Trade receivables are subject to a policy of active risk management which focuses on the assessment of country risk, credit limits, ongoing credit evaluation and account monitoring procedures. Generally, there is no significant concentration of trade receivables or commercial counterparty credit risk, due to the large number of customers that the Group deals with and their wide geographical spread with the exception of one single external customer that generates revenues, mainly attributable to the Fragrance Division, of approximately CHF 573 million (2017: CHF 583 million). Countries, credit limits and exposures are continuously monitored.

The credit risk on liquid funds, derivatives and other monetary financial assets is limited because the counterparties are financial institutions with investment grade ratings.

The following table presents the credit risk exposure to individual financial institutions:

	2018			2017		
	Total in Mio CHF	Max. with any individual bank in Mio CHF	Number of banks	Total in Mio CHF	Max. with any individual bank in Mio CHF	Number of banks
AAA – range	2	2	1	7	7	1
AA – range	75	74	2	147	147	1
A – range	102	72	11	225	121	7
BBB – range	232	128	7	155	91	6

The carrying amount of financial assets recognised in the consolidated financial statements, which is net of impairment losses, represents the Group's maximum exposure to credit risk.

5.2.3 Liquidity Risk

The Group manages liquidity risk by maintaining sufficient cash, marketable securities, availability of funds through an adequate amount of committed credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying businesses, Group Treasury maintains flexibility in funding by maintaining availability under committed and uncommitted credit lines.

Group Treasury monitors and manages cash at the Group level and defines the maximum cash level at subsidiary level. Cash surpluses held by subsidiaries over and above amounts required for working capital management are transferred to the central treasury centre. The surplus of cash is generally invested in interest bearing current accounts, time deposits, money market deposits and funds. When necessary, intercompany loans are granted by the Group to subsidiaries to meet their non-recurrent payment obligations.

The following table analyses the Group's remaining contractual maturity for financial liabilities and derivative financial instruments. The table has been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group is obliged to pay. The table includes both interest and principal cash flows:

2018 in millions of Swiss francs	Up to 6 months	6 – 12 months	1 – 5 years	Over 5 years	Total
Short-term debt (excluding bank overdrafts)					
Accounts payable	(719)				(719)
Net settled derivative financial instruments			(11)	(30)	(41)
Gross settled derivative financial instruments – outflows	(1,435)	(420)			(1,855)
Gross settled derivative financial instruments – inflows	1,435	419			1,854
Long-term debt	(14)	(32)	(1,137)	(2,459)	(3,642)
Balance as at 31 December	**(733)**	**(33)**	**(1,148)**	**(2,489)**	**(4,403)**

2017 in millions of Swiss francs	Up to 6 months	6 – 12 months	1 – 5 years	Over 5 years	Total
Short-term debt (excluding bank overdrafts)	(308)				(308)
Accounts payable	(662)				(662)
Net settled derivative financial instruments		(2)	(18)	(41)	(61)
Gross settled derivative financial instruments – outflows	(1,394)	(524)			(1,918)
Gross settled derivative financial instruments – inflows	1,396	526			1,922
Long-term debt	(20)	(8)	(588)	(823)	(1,439)
Balance as at 31 December	**(988)**	**(8)**	**(606)**	**(864)**	**(2,466)**

5.3 Fair Value Measurements

The following tables present the Group's assets and liabilities that are measured subsequent to initial recognition at fair value, grouped into levels 1 to 3 based on the degree to which the fair value is measured:

- **Level 1** inputs to measure fair value are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- **Level 2** inputs to measure fair value are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- **Level 3** inputs to measure fair value are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

2018 in millions of Swiss francs	Level 1	Level 2	Level 3	Total
Financial assets at fair value through income statement				
Forward foreign exchange contracts		11		11
Swaps (hedge accounting)		2		2
Corporate owned life insurance		31		31
Equity securities	2	13		15
Debt securities		19		19
Total assets	**2**	**76**		**78**
Financial liabilities at fair value through income statement				
Forward foreign exchange contracts		12		12
Swaps (hedge accounting)		43		43
Swaps (no hedge accounting)				
Total liabilities		**55**		**55**

2017 in millions of Swiss francs	Level 1	Level 2	Level 3	Total
Financial assets at fair value through income statement				
Forward foreign exchange contracts		16		16
Swaps (hedge accounting)		1		1
Corporate owned life insurance		32		32
Equity securities	2	15		17
Debt securities		16		16
Total assets	**2**	**80**		**82**
Financial liabilities at fair value through income statement				
Forward foreign exchange contracts		12		12
Swaps (hedge accounting)		60		60
Swaps (no hedge accounting)		–		–
Total liabilities		**72**		**72**

Financial assets and liabilities at fair value through income statement are measured with Level 1 and Level 2 inputs. They mainly consist of forward foreign exchange contracts that are measured using quoted forward exchange rates and yield curves derived from quoted interest rates matching maturities of the contracts, of interest swaps that are measured using quoted interest rates and yield curves derived from quoted interest rates matching maturities of the contracts, and of corporate owned life insurance (COLI) that are measured on quoted instruments with similar credit ratings and terms in a mix of money market, fixed income and equity funds managed by unrelated fund managers.

There was no transfer between the level categories in the period.

6. Acquisitions

Acquisitions 2018

During the year 2018 Givaudan made three acquisitions, Naturex, Expressions Parfumées and Centroflora Nutra.

Naturex

On 5 June 2018 Givaudan acquired 40.5% of the shares of Naturex for a price of EUR 135 per share and a total consideration of EUR 523 million, equivalent to CHF 606 million, and subsequently launched a mandatory public cash tender offer for the remaining shares on 28 June 2018. On 9 August 2018, following the primary tender offer period, Givaudan held 97.24% of the shares of Naturex and has taken effective control of the company. Following the completion of a second tender offer period on 13 September 2018, Givaudan held 98.06% of the shares of Naturex and achieved 100% share ownership on 18 September 2018, following completion of the 'squeeze out' process of the remaining shares. The total consideration paid for the completed acquisition amounts to EUR 1,292 million, equivalent to CHF 1,489 million.

Naturex is an international leader in plant extraction and the development of natural ingredients and solutions for the food, health and beauty sectors. Naturex is headquartered in Avignon, France and reported sales of EUR 405 million in 2017. It operates from 16 production sites around the world and employs 1,700 people.

Givaudan classified its initial investment in Naturex as a financial instrument, as it did not control or exert significant influence over Naturex, demonstrated by the absence of Givaudan representatives in the Board of Directors or Executive Management of Naturex. As of the acquisition date Naturex has been fully consolidated into the Givaudan Group. Immediately prior to the acquisition date the fair value of the initial investment remained unchanged at EUR 523 million (CHF 606 million), therefore no gain or loss has been recognised in the statement of comprehensive income. From the date of acquisition, the acquisition contributed CHF 150 million of sales and a loss of CHF 12 million to the Group's consolidated results.

The identifiable assets and liabilities of Naturex acquired are recorded at fair value at the date of acquisition and are as follows:

in millions of Swiss francs	Fair value	
Cash and Cash equivalents		20
Accounts receivable		85
Inventories		186
Other current assets		28
Property, plant and equipment		203
- Client relationships	285	
- Supplier relationships	42	
- Process-oriented technology and other	111	
- Name and product brands	57	
- Software / ERP system	3	
Total identified intangible assets		498
Other non-current assets		28
Accounts payable		(52)
Other payables		(32)
Provisions		(13)
Debt		(248)
Deferred tax liabilities		(117)
Net assets acquired		**586**
Cash consideration		1,448
Non-controlling interest		54
Goodwill		**916**

The goodwill of CHF 916 million (EUR 794 million) arising on the acquisition relates mainly to the value of the qualified workforce and expected synergies that do not meet the criteria for recognition as separable intangible assets. The total amount of goodwill that is expected to be deductible for tax purposes is nil.

The acquired receivables are fair valued at CHF 85 million. The gross contractual amounts of the receivables acquired are CHF 86 million. The best estimation at the acquisition date of the contractual cash flows not to be collected amounts to CHF 1 million.

The non-controlling interest at the date of acquisition consists of a non-controlling interest of 2.76% of the shares of Naturex valued at EUR 135 per share for a total amount of CHF 41 million (EUR 35 million). The non-controlling interest also includes 81,710 vested equity-settled share based instruments valued at a price of EUR 135 per instrument for an amount of CHF 13 million (EUR 11 million). At the point in time in the future when the vested equity-settled shared based instruments will be exercised, Givaudan has the right to purchase the shares back at a price of EUR 135 per share.

In compliance with IFRS 3, the fair values determined are provisional and the Group has twelve months from the date of acquisition to finalise the allocation of the acquisition price.

Expressions Parfumées
On 4 June 2018 Givaudan acquired 100% of the share capital of Expressions Parfumées and its affiliates for a purchase price of CHF 199 million. Expressions Parfumées, a French fragrance creation house, strengthens the access to local and regional customers and expands naturals capabilities in the fragrance business. With headquarters in Grasse, France, the historic area of perfumery, Expressions Parfumées operates throughout Europe, Africa and the Middle East from locations in Grasse (France), Milan (Italy) and Dubai (United Arab Emirates), employing globally 200 people. From 4 June 2018, the acquisition contributed CHF 46 million of sales to the Group's consolidated results.

The goodwill of CHF 145 million arising on the acquisition relates mainly to the value of the qualified workforce and expected synergies that do not meet the criteria for recognition as separable intangible assets.

The identifiable assets and liabilities of Expressions Parfumées acquired are recorded at fair value at the date of acquisition. Total net assets acquired of CHF 54 million consist of cash (CHF 7 million), working capital (CHF 18 million), fixed assets (CHF 26 million), intangible assets which are comprised of process knowledge, client relationships, name brand (CHF 46 million), deferred tax liabilities (CHF 16 million) and other liabilities (CHF 27 million). The total purchase price of CHF 199 million was settled in cash, resulting in a goodwill of CHF 145 million.

In compliance with IFRS 3, these values determined are provisional and the Group has twelve months from the date of acquisition to finalise the allocation of the acquisition price.

Centroflora Nutra
On 14 May 2018 Givaudan acquired 100% of the share capital of Centroflora Nutra, the Nutrition Division of Centroflora Group, for a purchase price of CHF 55 million. The company manufactures botanical extracts and dehydrated fruits for the food, beverage and consumer goods sectors and offers a wide variety of plant extracts from various regions of the world, with a particular focus on those from the great biodiversity of Brazil. With headquarters and a manufacturing facility in Botucatu, Brazil, Centroflora Nutra employs 116 people and exports products globally. From 14 May 2018, the acquisition contributed CHF 9 million of sales to the Group's consolidated results.

The goodwill of CHF 39 million arising on the acquisition relates mainly to the value of the qualified workforce and expected synergies that do not meet the criteria for recognition as separable intangible assets.

The identifiable assets and liabilities of Centroflora Nutra acquired are recorded at fair value at the date of acquisition.

In compliance with IFRS 3, these values determined are provisional and the Group has twelve months from the date of acquisition to finalise the allocation of the acquisition price. Since the date of the acquisition the allocation of the acquisition price has been updated and an additional CHF 2 million has been allocated to the goodwill.

Acquisitions 2017

During 2017 Givaudan made two acquisitions, Activ International and Vika B.V.

Activ

On 16 January 2017 Givaudan acquired 100% of the share capital of Activ International and its affiliates for a purchase price of CHF 114 million. Activ International offers a range of natural and organic flavours, marine extracts, seafood and vegetable based culinary solutions to customers. Activ operates from locations in Bienne (Switzerland), Somerset (New Jersey, USA), Melaka (Malaysia), Mitry-Mory (Paris, France) and Arequipa (Peru), employing globally 165 employees. The goodwill of CHF 75 million on the acquisition relates mainly to the value of the qualified workforce and expected synergies that do not meet the criteria for recognition as separable intangible assets.

The assets acquired and liabilities assumed of Activ International are recorded at fair value at the date of acquisition. Total net assets acquired of CHF 39 million consist of cash (CHF 3 million), working capital (CHF 8 million), fixed assets (CHF 16 million), intangible assets which are made up of process knowledge, research expertise, client relationships, name and product brands (CHF 32 million), deferred tax liabilities (CHF 8 million) and other liabilities (CHF 12 million). The total purchase price of CHF 114 million was settled in cash, resulting in a goodwill of CHF 75 million. The value of acquired assets and liabilities has been finalised, with no adjustment having been made to the acquisition values.

Vika

On 1 September 2017 Givaudan acquired 100% of the share capital of Vika B.V. and its affiliates for a purchase price of CHF 116 million. Vika offers a range of natural dairy ingredients, fonds and stocks, as well as meat and plant based extracts to customers in the food and beverage industry. Vika operates from locations in Ede (The Netherlands), Higham Ferrers (United Kingdom), Maasmechelen (Belgium) and Auckland (New Zealand), employing globally 200 employees.

The identifiable assets and liabilities of Vika are recorded at fair value at the date of acquisition. Total net assets acquired of CHF 76 million consist of cash (CHF 3 million), working capital (CHF 14 million), fixed assets (CHF 24 million), intangible assets which are made up of process knowledge, research expertise, client relationships, name and product brands (CHF 73 million), deferred tax liabilities (CHF 20 million) and other liabilities (CHF 18 million). The total purchase price of CHF 116 million was settled in cash, resulting in a goodwill of CHF 40 million that relates mainly to the value of the qualified workforce and expected synergies that do not meet the criteria for recognition as separable intangible assets. The value of acquired assets and liabilities has been finalised, with no adjustment having been made to the acquisition values.

7. Segment Information

Management has determined the operating segments based on the reports reviewed by the Executive Committee that are used to allocate resources to the segments and to assess their performance. The Executive Committee considers the business from a divisional perspective:

Fragrances Manufacture and sale of fragrances into three global business units: Fine Fragrances, Consumer Products and, Fragrance Ingredients and Active Beauty. Expressions Parfumées is included in Fine Fragrances and Consumer Products; and

Flavours Manufacture and sale of flavours into five business units: Beverages, Dairy, Savoury, Sweet Goods and Natural Ingredients. The information of these business units are reviewed by the Executive Committee primarily by region.

The performance of the operating segments is based on EBITDA as a percentage of sales.

Business segments

		Fragrances		Flavours		Group	
in millions of Swiss francs	Note	2018	2017	2018	2017	2018	2017
Segment sales		2,525	2,343	3,009	2,717	5,534	5,060
Less inter segment sales[a]		–	–	(7)	(9)	(7)	(9)
Segment sales to third parties		**2,525**	**2,343**	**3,002**	**2,708**	**5,527**	**5,051**
EBITDA		**508**	**486**	**637**	**603**	**1,145**	**1,089**
as % of sales		20.1%	20.7%	21.2%	22.3%	20.7%	21.6%
Depreciation	21	(51)	(48)	(76)	(66)	(127)	(114)
Amortisation	22	(44)	(42)	(81)	(62)	(125)	(104)
Impairment of long-lived assets	21, 22	–		(10)	(2)	(10)	(2)
Additions to Property, plant and equipment	21	84	90	174	123	258	213
Acquisitions of Property, plant and equipment	6, 21	30		201	40	231	40
Additions to Intangible assets	22	26	25	29	22	55	47
Acquisitions of Intangible assets (excluding goodwill)	6, 22	47		513	105	560	105
Total gross investments		**187**	**115**	**917**	**290**	**1,104**	**405**

a) Transfer prices for inter-divisional sales are set on an arm's length basis.

The amounts by division provided to the Executive Committee are measured in a consistent manner in terms of accounting policies with the consolidated financial statements.

Reconciliation table to Group's operating income

	Fragrances		Flavours		Group	
in millions of Swiss francs	2018	2017	2018	2017	2018	2017
EBITDA	**508**	**486**	**637**	**603**	**1,145**	**1,089**
Depreciation	(51)	(48)	(76)	(66)	(127)	(114)
Amortisation	(44)	(42)	(81)	(62)	(125)	(104)
Impairment of long-lived assets	–		(10)	(2)	(10)	(2)
Operating income	**413**	**396**	**470**	**473**	**883**	**869**
as % of sales	16.4%	16.9%	15.7%	17.5%	16.0%	17.2%
Financing costs					(55)	(42)
Other financial income (expense), net					(56)	(32)
Income before taxes					**772**	**795**
as % of sales					14.0%	15.7%

Entity-wide disclosures

The breakdown of sales from the major group of similar products is as follows:

in millions of Swiss francs	2018	2017
Fragrance Division		
Fragrance Compounds	2,199	2,036
Fragrance Ingredients and Active Beauty	326	307
Flavour Division		
Flavour Compounds	3,002	2,708
Total sales	**5,527**	**5,051**

The Group operates in five geographical areas: Switzerland (country of domicile); Europe, Africa and Middle-East; North America; Latin America; and Asia Pacific.

	Fragrances Segment sales [a]		Flavours Segment sales [a]		Group Segment sales [a]		Group Non-current assets [b]	
in millions of Swiss francs	**2018**	2017	**2018**	2017	**2018**	2017	**2018**	2017
Switzerland	37	30	22	19	59	49	1,408	1,490
Europe	773	690	750	622	1,523	1,312	2,042	625
Africa and Middle-East	184	152	216	210	400	362	72	54
North America	491	478	950	874	1,441	1,352	1,365	1,182
Latin America	332	344	297	274	629	618	216	151
Asia Pacific	708	649	767	709	1,475	1,358	688	592
Total geographical segments	**2,525**	**2,343**	**3,002**	**2,708**	**5,527**	**5,051**	**5,791**	**4,094**

a) Segment sales are revenues from external customers and are shown by destination.
b) Non-current assets other than financial instruments, deferred tax assets, post-employment benefit assets. They consist of property, plant and equipment, intangible assets and investments in jointly controlled entities.

Revenues of approximately CHF 573 million (2017: CHF 583 million) are derived from a single external customer. These revenues are mainly attributable to the Fragrance Division.

8. Employee Benefits

The following amounts related to employee remuneration and benefits are included in determining operating income:

in millions of Swiss francs	**2018**	2017
Wages and salaries	934	841
Social security costs	140	121
Post-employment benefits: defined benefit plans	39	14
Post-employment benefits: defined contribution plans	35	33
Equity-settled instruments	38	35
Other employee benefits	103	97
Total employees' remuneration	**1,289**	**1,141**

Retirement Benefit Plans

The Group operates a number of defined benefit and defined contribution plans throughout the world, the assets of which are generally held in separate trustee-administered funds. The pension plans are generally funded by payments from employees and by the relevant Group companies, taking account of the recommendations of independent qualified actuaries. The most significant plans are held in Switzerland, United States of America and United Kingdom (further information by country is disclosed at the end of this note).

In December 2018 the benefits of the UK pension schemes were equalised for the inequality of Guaranteed Minimum Pensions between men and women. The change resulted in past service cost of CHF 1 million recognised in other operating income/(expense) in the consolidated income statement.

During 2017 the defined benefit plan held in Switzerland was amended principally by reducing the conversion rate used to convert the retirement savings capital into a pension and by increasing savings contributions from both the employees and employer. These plan amendments resulted in a one-off non-cash gain of CHF 4 million recognised net in other operating income in the consolidated income statement.

During 2017 the supplemental medical coverage of the US post-retirement medical plan was changed. The plan amendment resulted in a one-time past service gain of CHF 16 million recognised in other operating income in the consolidated income statement.

Non-pension plans consist primarily of post-retirement healthcare and life insurance schemes, principally in the United States of America.

The amounts recognised in the consolidated income statement are as follows:

			2018			2017
in millions of Swiss francs	Pension Plans	Non-pension Plans	Total	Pension Plans	Non-pension Plans	Total
Current service cost	37	1	38	30	4	34
Loss (gain) arising from settlement	1		1	(4)	(16)	(20)
Total included in employees' remuneration	**38**	**1**	**39**	**26**	**(12)**	**14**
Net interest cost included in financing costs	8	2	10	10	2	12
Total components of defined benefit cost	**46**	**3**	**49**	**36**	**(10)**	**26**
Of which arising from:						
Funded obligations	42	3	45	32	(13)	19
Unfunded obligations	4	–	4	4	3	7

The amounts recognised in other comprehensive income are as follows:

			2018			2017
in millions of Swiss francs	Pension Plans	Non-pension Plans	Total	Pension Plans	Non-pension Plans	Total
(Gains) losses from change in demographic assumptions	(61)	–	(61)	(10)	1	(9)
(Gains) losses from change in financial assumptions	(104)	(2)	(106)	30	3	33
Experience (gains) losses	(12)	(1)	(13)	9	–	9
Return on plan assets less interest on plan assets	18	–	18	(88)	–	(88)
Remeasurement (gains) losses of post employment benefit obligations	**(159)**	**(3)**	**(162)**	**(59)**	**4**	**(55)**
Of which arising from:						
Funded obligations	(155)	(3)	(158)	(60)	4	(56)
Unfunded obligations	(4)	–	(4)	1		1

The amounts recognised in the statement of financial position are as follows:

			2018			2017
in millions of Swiss francs	Pension Plans	Non-pension Plans	Total	Pension Plans	Non-pension Plans	Total
Funded obligations						
Present value of funded obligations	(1,958)	(53)	(2,011)	(2,128)	(56)	(2,184)
Fair value of plan assets	1,618	–	1,618	1,640	–	1,640
Recognised asset (liability) for funded obligations, net	**(340)**	**(53)**	**(393)**	**(488)**	**(56)**	**(544)**
Unfunded obligations						
Present value of unfunded obligations	(71)	(11)	(82)	(74)	(11)	(85)
Recognised asset (liability) for unfunded obligations	**(71)**	**(11)**	**(82)**	**(74)**	**(11)**	**(85)**
Total defined benefit asset (liability)	**(411)**	**(64)**	**(475)**	**(562)**	**(67)**	**(629)**
Deficit recognised as liabilities for post employment benefits	(433)	(64)	(497)	(583)	(67)	(650)
Surplus recognised as part of the other long-term assets	22		22	21		21
Total net asset (liability) recognised	**(411)**	**(64)**	**(475)**	**(562)**	**(67)**	**(629)**

Amounts recognised in the statement of financial position for post-employment defined benefit plans are predominantly non-current. The non-current portion is reported as non-current assets and non-current liabilities. The current portion is reported as current liabilities within other current liabilities.

Changes in the present value of the defined benefit obligations are as follows:

in millions of Swiss francs	Pension Plans	Non-pension Plans	2018 Total	Pension Plans	Non-pension Plans	2017 Total
Balance as at 1 January	**2,202**	**67**	**2,269**	**2,174**	**81**	**2,255**
Amounts recognised in the income statement						
Current service cost	37	1	38	30	4	34
Interest cost	38	2	40	39	2	41
Amounts recognised in the other comprehensive income						
(Gains) losses from change in demographic assumptions	(61)	–	(61)	(10)	1	(9)
(Gains) losses from change in financial assumptions	(104)	(2)	(106)	30	3	33
Experience (gains) losses	(12)	(1)	(13)	9	–	9
Employee contributions	14		14	11	1	12
Benefit payments	(79)	(3)	(82)	(79)	(4)	(83)
Settlements	(21)		(21)	(4)	(16)	(20)
Acquisitions	33		33			
Currency translation effects	(18)		(18)	2	(5)	(3)
Balance as at 31 December	**2,029**	**64**	**2,093**	**2,202**	**67**	**2,269**

Changes in the fair value of the plan assets are as follows:

in millions of Swiss francs	Pension Plans	Non-pension Plans	2018 Total	Pension Plans	Non-pension Plans	2017 Total
Balance as at 1 January	**1,640**		**1,640**	**1,538**	**1**	**1,539**
Amounts recognised in the income statement						
Interest income	30		30	29	–	29
Amounts recognised in the other comprehensive income						
Return on plan assets less interest on plan assets	(18)		(18)	88	–	88
Employer contributions	43	3	46	50	3	53
Employee contributions	14		14	11	1	12
Benefit payments	(79)	(3)	(82)	(79)	(4)	(83)
Settlements	(22)		(22)			
Acquisitions	26		26			
Currency translation effects	(16)		(16)	3	(1)	2
Balance as at 31 December	**1,618**		**1,618**	**1,640**		**1,640**

Plan assets are comprised as follows:

in millions of Swiss francs		2018		2017
Debt	518	32%	386	24%
Equity	511	32%	590	36%
Property	222	13%	214	13%
Insurances policies and other	367	23%	450	27%
Total	**1,618**	**100%**	**1,640**	**100%**

The investment strategies are diversified within the respective statutory requirements of each country providing long-term returns with an acceptable level of risk. The plan assets are primarily quoted in an active market with exception of the property and insurance policies.

The plan assets do not include Givaudan registered shares. They do not include any property occupied by, or other assets used by, the Group.

The Group operates defined benefit plans in many countries for which the actuarial assumptions vary based on local economic and social conditions. The assumptions used in the actuarial valuations of the most significant defined benefit plans, in countries with stable currencies and interest rates, are as follows:

Weighted percentage	2018	2017
Discount rates	2.1%	1.8%
Projected rates of remuneration growth	1.2%	1.8%
Future pension increases	0.5%	0.8%
Healthcare cost trend rate	1.2%	4.9%

The overall discount rate and the overall projected rates of remuneration growth are calculated by weighting the individual rates in accordance with the defined benefit obligation of the plans.

Sensitivity analysis

The defined benefit obligations are calculated on the basis of various financial and demographic assumptions. The below information quantifies the consequences of a change in some key assumptions.

The effects ((gain)/loss) of the change in assumptions are as follows:

in millions of Swiss francs	Change in assumption	Effects of the change	Increase in assumption	Decrease in assumption
Discount rate	0.5%	on the current service cost	(5)	6
		on the defined benefit obligation	(156)	174
Salary increases	0.5%	on the current service cost	1	(1)
		on the defined benefit obligation	10	(10)
Pension increases	0.5%	on the current service cost	3	–
		on the defined benefit obligation	105	(34)
Medical cost trend	1.0%	on the current service cost	–	–
		on the defined benefit obligation	3	(3)
Life expectancy	1 year	on the current service cost	1	(1)
		on the defined benefit obligation	66	(67)

Information by country

Switzerland

According to the Swiss Federal Law on Occupational Retirement, Survivors and Disability (LPP/BVG), the pension plan is managed by an independent, legally autonomous entity which has the legal structure of a foundation. The plan was amended during the second half of 2017 principally by reducing the conversion rate used to convert the retirement savings capital into a pension and by increasing savings contributions from both the employee and employer.

The Board of Trustees of the foundation is composed of equal numbers of employee and employer representatives. Each year the Board of Trustees decides the level of interest, if any, to apply to the retirement accounts in accordance with the pension policy. It is also responsible for the investment of the assets defining the investment strategy for long-term returns with an acceptable level of risk. The foundation provides benefits on a defined contribution basis.

The majority of the employees are participants to the plan and are insured against the financial consequences of old age, disability and death. The employer and employees pay contributions to the pension plan at rates set out in the foundation rules based on a percentage of salary. The amount of the retirement account can be taken by the employee at retirement in the form of pension or capital.

Under IAS 19 employee benefits, the pension plan is classified as defined benefit plan due to the promises and underlying benefits guarantees. Consequently the pension obligation is calculated by using the projected unit credit method.

The Group expects to contribute CHF 24 million to these plans during 2019.

United States of America
The main US pension plan is qualified under and is managed in accordance with the requirements of US federal law. In accordance with federal law the assets of the plan are legally separate from the employer and are held in a pension trust. The plan was frozen in 2016 and consequently no further accrual of benefits will continue as at the date of enforcement of the plan change.

The law requires minimum and maximum amounts that can be contributed to the trust, together with limitations on the amount of benefits that may be provided under the plan. There are named fiduciaries that are responsible for ensuring the plan is managed in accordance with the law. The fiduciaries are responsible for the investment of the assets defining the investment strategy for long-term returns with an acceptable level of risk. The plan provides benefits on a defined benefit basis.

The accrued benefits based on service to the plan freeze are payable at retirement and on death in service. With exceptions for optional lump sum amounts for certain sections of the plan, the benefits are paid out as annuities.

Under IAS 19 employee benefits, the pension obligations are calculated by using the projected unit credit method.

The Group expects to contribute CHF 5 million to these plans during 2019.

United Kingdom
The two occupational pension schemes (Quest UK Pension Scheme and Givaudan UK Pension Plan) are arranged under the applicable UK Pension Schemes and Pensions Acts and managed as legally autonomous pension trusts by the Boards of Trustees. The plans were frozen during 2016 and consequently no further accrual benefits will continue as at the date of enforcement of the plan change.

The Boards of Trustees are composed of two employee representatives and four employer representatives, for the Quest UK Pension Scheme, and three employee representatives, three employer representatives plus two pensioner representatives for the Givaudan UK Pension Plan. The Boards of Trustees are responsible for the investment of the assets defining the investment strategy for long-term returns with an acceptable level of risk. In their respective sections, both trusts provide benefits on a defined benefit basis and are now frozen to future accruals and members.

The accrued benefits based on service to the plan freeze are payable at retirement and on death in service. With exceptions for trivial amounts, transfer values, lump sum death benefits and tax free lump sums, the benefits are paid out as annuities.

Under IAS 19 employee benefits, the pension obligations in the defined benefit sections of both the Quest UK Pension Scheme and the Givaudan UK Pension Plan are calculated by using the projected unit credit method.

The Group expects to contribute CHF 7 million to these plans during 2019.

Rest of the world
The Group operates other retirement plans classified either as defined benefit or defined contribution plans in some other countries. No individual plan other than those described above is considered material to the Group.

The Group expects to contribute CHF 3 million to these plans in 2019.

The funding position of the funded defined benefit plans are as follows:

As at 31 December 2018 in millions of Swiss francs	Switzerland	United States of America	United Kingdom	Other countries	Total
Present value of defined benefit obligations	1,161	404	317	76	1,958
Fair value of plan assets	894	348	337	39	1,618
Deficit / (surplus)	**267**	**56**	**(20)**	**37**	**340**
Funding ratio	77.0%	86.1%	106.3%	51.3%	82.6%

As at 31 December 2017 in millions of Swiss francs	Switzerland	United States of America	United Kingdom	Other countries	Total
Present value of defined benefit obligations	1,202	453	390	83	2,128
Fair value of plan assets	823	403	370	44	1,640
Deficit / (surplus)	**379**	**50**	**20**	**39**	**488**
Funding ratio	68.5%	89.0%	94.9%	53.0%	77.1%

Key assumptions

2018 in percentage	Switzerland	United States of America	United Kingdom
Discount rate	0.80	4.28	2.90
Future salary increases	1.99	n/a	n/a
Future pension increases	0.00	0.00	3.03
Future average life expectancy for a pensioner retiring at age 65	22.8	21.7	23.9

2017 in percentage	Switzerland	United States of America	United Kingdom
Discount rate	0.70	3.70	2.40
Future salary increases	2.00	n/a	n/a
Future pension increases	0.00	n/a	2.25
Future average life expectancy for a pensioner retiring at age 65	23.4	21.8	23.0

Assumptions regarding future mortality experience are set based on actuarial advice in accordance with published statistics and experience in each territory. Mortality assumptions for the most important countries are based on the following tables:

- Switzerland: BVG2015
- United States of America: RP2014
- United Kingdom: S2PA

Allowance for future improvements in mortality have been allowed for as appropriate in each country. In Switzerland the generational rates have been used adopting the CMI (2016) approach with a 1.50% long term rate of improvement. In the United States of America the published rates have been adjusted and projected in accordance with the MP2018 scale. In the United Kingdom the rates reflect the latest (2017) CMI projections with a 1.25% long term rate of improvement.

GRI Disclosure 201 – 3, pages 152 – 157

9. Share-Based Payments

Performance share plan

Performance shares are granted on a yearly basis. The performance shares are converted into tradable and transferable shares of Givaudan SA after the vesting period, subject to performance conditions. The performance metric is a combination of the average sales growth of selected peer companies and the cumulative free cash flow margin. There is no market vesting condition involved and participation in this plan is mandatory.

Year of grant	Commencing date	Vesting date	Number of shares expected to be delivered at vesting date	Fair value at grant date (CHF)
2016	31 Mar 2016	15 Apr 2019	22,044	1,709.4
2017	31 Mar 2017	15 Apr 2020	21,161	1,621.6
2018	31 Mar 2018	15 Apr 2021	19,758	1,993.3

The cost of the equity-settled instruments of CHF 36 million (2017: CHF 33 million) has been expensed in the consolidated income statement. A marginal portion of the number of shares expected to be delivered can be settled in cash in the jurisdictions where a physical delivery is not permitted.

Equity-settled instruments related to restricted shares

Restricted shares shown in the table below have been granted on a yearly basis. These shares are tradable and transferable after the vesting period. Participation in these plans is mandatory.

Restricted shares outstanding at the end of the year have the following terms:

Year of grant	Commencing date	Vesting date	Restricted share at grant date (CHF)	**Number of restricted share 2018**	Number of restricted share 2017
2015	31 Mar 2015	31 Mar 2018	1,595.9		1,092
2016	31 Mar 2016	15 Apr 2019	1,709.4	935	935
2017	31 Mar 2017	15 Apr 2020	1,621.6	900	900
2018	31 Mar 2018	15 Apr 2021	1,993.3	730	

Of the 2,565 outstanding restricted shares (2017: 2,927), no share (2017: none) was deliverable. The cost of these equity-settled instruments of CHF 2 million (2017: CHF 2 million) has been expensed in the consolidated income statement.

Movements in the number of restricted shares outstanding are as follows:

Number of restricted shares	**2018**	2017
As at 1 January	**2,927**	**3,217**
Granted	730	900
Delivered/sold	(1,092)	(1,190)
As at 31 December	**2,565**	**2,927**

For these plans, the Group has at its disposal treasury shares.

10. Jointly Controlled Entities

Year of incorporation	Name of Joint ventures	Principal activity	Country of incorporation	Ownership interest
2014	Jiangsu Xinrui Aromatics Ltd	Production of fragrance ingredients	China	49%
2014	BGN Tech LLC	Innovative natural ingredients	USA	49%
2015	Natural Extracts International Ltd	Natural ingredient derivatives production	Mauritius	49%
2016	Vanilla International Ltd	Natural ingredient collection and extract	Mauritius	49%

Summarised financial information in respect of the Group's joint ventures is set out below. The following net assets represent 100% of the jointly controlled entities:

As at 31 December in millions of Swiss francs	**2018**	2017
Current assets	118	113
Non-current assets	40	67
Current liabilities	(49)	(99)
Non-current liabilities	(37)	(14)
Total net assets of joint ventures	**72**	**67**

As at 31 December in millions of Swiss francs	**2018**	2017
Income	29	36
Expenses	(28)	(35)

11. Other Operating Income

in millions of Swiss francs	**2018**	2017
Gains on disposal of fixed assets	26	1
Other income	37	41
Total other operating income	**63**	**42**

Included in the gains on disposal of fixed assets, is a gain of CHF 25 million realised on the sale of the Zurich Innovation Centre (ZIC) (Note 21). For the year ended 31 December 2018 the Group received CHF 20 million of insurance proceeds in relation to prior year environmental litigation costs. For the year ended 31 December 2017 the Group recognised one-off non-cash gains of CHF 16 million in the United States of America and CHF 4 million in Switzerland related to defined benefit plans.

12. Other Operating Expense

in millions of Swiss francs	**2018**	2017
Project related expenses [a]	41	107
Amortisation of intangible assets	10	12
Impairment of long-lived assets	10	2
Losses on disposal of fixed assets	5	4
Environmental provisions	2	1
Business taxes	14	15
Acquisition and integration related expenses	19	1
Other expenses	12	10
Total other operating expense	**113**	**152**

a) Primarily relates to Givaudan Business Solutions (GBS).

13. Expenses by Nature

in millions of Swiss francs	Note	2018	2017
Raw materials and consumables used		2,374	1,980
Total employee remuneration	8	1,289	1,141
Depreciation, amortisation and impairment charges	21, 22	262	220
Transportation expenses		53	48
Freight expenses		112	96
Consulting and service expenses		151	140
Energies		64	56
IT related costs		53	50
Other expenses		286	451
Total operating expenses by nature		**4,644**	**4,182**

14. Financing Costs

in millions of Swiss francs	Note	2018	2017
Interest expense		42	29
Net interest related to defined benefit pension plans	8	10	12
Amortisation of debt discounts		3	1
Total financing costs		**55**	**42**

15. Other Financial (Income) Expense, Net

in millions of Swiss francs	2018	2017
Fair value and realised (gains) losses from derivatives instruments, net (at fair value through income statement)	23	(79)
Exchange (gains) losses, net	16	103
Unrealised (gains) losses from financial instruments measured at fair value through income statement	4	(8)
Interest (income) expense	(3)	(3)
Capital taxes and other non business taxes	10	10
Other (income) expense, net	6	9
Total other financial (income) expense, net	**56**	**32**

16. Income Taxes

Amounts charged to (credited in) the consolidated statement of comprehensive income are as follows:

in millions of Swiss francs	Income statement	Other comprehensive income	Own equity instruments	2018 Total	Income statement	Other comprehensive income	Own equity instruments	2017 Total
Current taxes								
- in respect of current year	129	2		131	100	(3)	(1)	96
- in respect of prior years	–			–	(17)			(17)
Deferred taxes								
- in respect of current year	(17)	33		16	(6)	40	–	34
- reclassified from equity to income statement	–	–		–	–	–		–
- in respect of prior years	(3)			(3)	(2)	1		(1)
Total income tax expense	**109**	**35**		**144**	**75**	**38**	**(1)**	**112**

Since the Group operates globally, it is subject to income taxes in many different tax jurisdictions. As such, in determining the provision for income taxes, judgment is required as there are transactions for which the ultimate tax determination is uncertain at the time of preparing the financial statements. As a result, any differences between the final tax outcome and the amounts that were initially recorded impact the current and deferred taxes in the period in which such final determinations are made.

The Group calculates on the basis of the income statement its average applicable tax rate as a weighted average of the tax rates in the tax jurisdictions in which the Group operates, including research tax credits and withholding tax on dividends, interest and royalties.

The Group's average applicable tax rate differs from the Group's effective tax rate as follows:

	2018	2017
Group's average applicable tax rate	**15%**	**16%**
Tax effect of		
Income not taxable	(2%)	(2%)
Expenses not deductible	1%	1%
Change in tax rate	–	(2%)
Other adjustments of income taxes of prior years	(1%)	(3%)
Other differences	1%	(1%)
Group's effective tax rate	**14%**	**9%**

The variation in the Group's average applicable tax rate arises due to changes in the composition of the Group's profitability within the Group's subsidiaries, in accordance with the Group's business profile in terms of geographical presence, product mix and customer portfolio, as well as external factors related to changes in local statutory tax rates.

In December 2017 the United States of America introduced a new tax law with an effective date of 1 January 2018. The new law contains a Corporate Tax rate of 21% compared to 35% under the previous tax law. The revised rate has been applied to the temporary differences recognised in the 2017 and 2018 statement of financial position of the Group's United States subsidiaries.

Income tax assets and liabilities

Amounts recognised in the statement of financial position related to income taxes are as follows:

As at 31 December in millions of Swiss francs	**2018**	2017
Current income tax assets	41	32
Current income tax liabilities	(95)	(49)
Total net current income tax asset (liability)	**(54)**	**(17)**

2018 in millions of Swiss francs	Property, plant & equipment	Intangible assets	Pension plans	Tax loss carry forward	Other differences	Total
Net deferred tax asset (liability) as at 1 January	**(87)**	**(59)**	**144**	**6**	**104**	**108**
Acquisition	(13)	(120)	1	12	3	(117)
(Credited) debited to consolidated income statement	8	3	3	(1)	7	20
(Credited) debited to other comprehensive income			(35)		2	(33)
(Credited) debited to own equity instruments					–	–
Currency translation effects	(3)	(2)	(1)	–	(2)	(8)
Net deferred tax asset (liability) as at 31 December	**(95)**	**(178)**	**112**	**17**	**114**	**(30)**
Deferred tax assets						208
Deferred tax liabilities						(238)
Net deferred tax asset (liability) as at 31 December						**(30)**

2017 in millions of Swiss francs	Property, plant & equipment	Intangible assets	Pension plans	Tax loss carry forward	Other differences	Total
Net deferred tax asset (liability) as at 1 January	**(94)**	**(58)**	**190**	**32**	**96**	**166**
Acquisition	(3)	(25)			1	(27)
(Credited) debited to consolidated income statement	11	24	(7)	(26)	6	8
(Credited) debited to other comprehensive income			(38)		(3)	(41)
(Credited) debited to own equity instruments					–	–
Currency translation effects	(1)	–	(1)	–	4	2
Net deferred tax asset (liability) as at 31 December	**(87)**	**(59)**	**144**	**6**	**104**	**108**
Deferred tax assets						207
Deferred tax liabilities						(99)
Net deferred tax asset (liability) as at 31 December						**108**

Amounts recognised in the statement of financial position for deferred taxes are reported as non-current assets and non-current liabilities. The current portion will be charged or credited to the consolidated income statement during 2019.

Deferred tax assets on loss carry forwards of CHF 21 million (2017: CHF 6 million) have been recognised principally in the subsidiaries in France and in the USA, the majority of which expires after 2022. The management considers that there will be future taxable profit available against which these tax losses can be recovered. Deferred tax assets on unused tax losses of CHF 16 million (2017: nil) which have not been recognised are mainly located in subsidiaries in Spain and India.

Deferred tax assets on tax credits of CHF 74 million (2017: CHF 69 million) have been recognised.

A deferred tax liability of CHF 28 million has been recognised in 2018 (2017: CHF 25 million) for certain foreign subsidiaries which have undistributed earnings subject to withholding tax when paid out as dividend as the parent entity is in a position to forecast the timing of distributions expected in the foreseeable future, whereas no deferred tax liability could be recognised for undistributed earnings of CHF 492 million (2017: CHF 467 million).

17. Earnings per Share

Basic earnings per share

Basic earnings per share is calculated by dividing the net income attributable to shareholders by the weighted average number of shares outstanding:

	2018	2017
Income attributable to equity holder of the parent (in millions of Swiss francs)	**663**	**720**
Weighted average number of shares outstanding		
Ordinary shares	9,233,586	9,233,586
Treasury shares	(14,812)	(24,120)
Net weighted average number of shares outstanding	**9,218,774**	**9,209,466**
Basic earnings per share (CHF)	**71.92**	**78.18**

Diluted earnings per share

For the calculation of diluted earnings per share, the weighted average number of shares outstanding is adjusted to assume conversion of all potentially dilutive shares:

	2018	2017
Income attributable to equity holder of the parent (in millions of Swiss francs)	**663**	**720**
Weighted average number of shares outstanding for diluted earnings per share of 72,781 (2017: 76,464)	**9,291,555**	**9,285,930**
Diluted earnings per share (CHF)	**71.36**	**77.54**

18. Cash and Cash Equivalents

in millions of Swiss francs	2018	2017
Cash on hand and balances with banks	267	273
Short-term investments	156	261
Balance as at 31 December	**423**	**534**

19. Accounts Receivable – Trade

in millions of Swiss francs	2018	2017
Accounts receivable	1,271	1,162
Notes receivable	3	1
Less: allowance for doubtful accounts	(21)	(16)
Balance as at 31 December	**1,253**	**1,147**

Ageing list:

in millions of Swiss francs	2018	2017
Neither past due nor impaired	1,154	1,062
Less than 30 days	77	71
30 – 60 days	17	14
60 – 90 days	6	4
Above 90 days	20	12
Less: allowance for doubtful accounts	(21)	(16)
Balance as at 31 December	**1,253**	**1,147**

Movement in the allowance for doubtful accounts:

in millions of Swiss francs	2018	2017
Balance as at 1 January	**(16)**	**(14)**
Increase in allowance for doubtful accounts recognised in consolidated income statement	(7)	(5)
Amounts written off as uncollectible	–	–
Reversal of allowance for doubtful accounts	1	3
Currency translation effects	1	
Balance as at 31 December	**(21)**	**(16)**

No significant impairment charge has been recognised in the consolidated income statement in 2018 or in 2017. Past due and impaired receivables are still considered recoverable. The carrying amount of accounts receivable – trade is considered to correspond to the fair value.

20. Inventories

in millions of Swiss francs	2018	2017
Raw materials and supplies	425	359
Work in process	30	34
Intermediate and finished goods	706	549
Less: allowance for slow moving and obsolete inventories	(63)	(40)
Balance as at 31 December	**1,098**	**902**

In 2018 the amount of write-down of inventories was CHF 36 million (2017: CHF 35 million). At 31 December 2018 and 2017 no significant inventory was valued at net realisable value.

21. Property, Plant and Equipment

2018 in millions of Swiss francs	Land	Buildings and land improvements	Machinery, equipment and vehicles	Construction in progress	Total
Net book value					
Balance as at 1 January	**109**	**738**	**535**	**197**	**1,579**
Additions	–	4	10	244	258
Acquisitions	24	112	73	22	231
Disposals	(7)	(135)	(3)		(145)
Transfers	10	155	84	(249)	
Impairment			(8)		(8)
Depreciation		(38)	(89)		(127)
Reclassified as investment property					
Currency translation effects	(2)	(8)	(10)	(9)	(29)
Balance as at 31 December	**134**	**828**	**592**	**205**	**1,759**
Cost	134	1,334	1,750	205	3,423
Accumulated depreciation		(491)	(1,146)		(1,637)
Accumulated impairment		(15)	(12)		(27)
Balance as at 31 December	**134**	**828**	**592**	**205**	**1,759**

2017 in millions of Swiss francs	Land	Buildings and land improvements	Machinery, equipment and vehicles	Construction in progress	Total
Net book value					
Balance as at 1 January	**95**	**722**	**531**	**94**	**1,442**
Additions	–	1	4	208	213
Acquisitions	13	14	12	1	40
Disposals	–	(2)	(3)		(5)
Transfers	–	41	67	(108)	
Impairment		(2)	–		(2)
Depreciation		(33)	(81)		(114)
Reclassified as investment property	(2)	(13)	–		(15)
Currency translation effects	3	10	5	2	20
Balance as at 31 December	**109**	**738**	**535**	**197**	**1,579**
Cost	109	1,218	1,627	197	3,151
Accumulated depreciation		(465)	(1,088)		(1,553)
Accumulated impairment		(15)	(4)		(19)
Balance as at 31 December	**109**	**738**	**535**	**197**	**1,579**

At 31 December 2018 and 2017 no significant capitalised borrowing costs were accounted for.

In 2018 the Group sold and leased back its Zurich Innovation Centre (ZIC) for an amount of CHF 173 million. CHF 100 million has been received in 2018 and the remainder will be received at completion of the centre in 2019, for which the Group still has a liability of CHF 29 million for construction costs during 2019. The gain realised on the sale of CHF 25 million has been recognised in other operating income in 2018.

22. Intangible Assets

2018 in millions of Swiss francs	Goodwill	Process-oriented technology and other	Client relationships	Supplier relationships	Name and product brands	Software/ERP system	Total
Net book value							
Balance as at 1 January	**1,912**	**190**	**243**		**4**	**133**	**2,482**
Additions		7				48	55
Acquisitions	1,100	142	313	42	58	5	1,660
Disposals		(2)					(2)
Impairment		(2)					(2)
Amortisation		(42)	(36)	(5)	(4)	(38)	(125)
Currency translation effects	(53)	(6)	(9)		(1)	–	(69)
Balance as at 31 December	**2,959**	**287**	**511**	**37**	**57**	**148**	**3,999**
Cost	2,959	1,004	787	42	64	720	5,576
Accumulated amortisation		(711)	(276)	(5)	(7)	(572)	(1,571)
Accumulated impairment		(6)					(6)
Balance as at 31 December	**2,959**	**287**	**511**	**37**	**57**	**148**	**3,999**

2017 in millions of Swiss francs	Goodwill	Process-oriented technology and other	Client relationships	Supplier relationships	Name and product brands	Software/ERP system	Total
Net book value							
Balance as at 1 January	**1,791**	**184**	**203**		**3**	**130**	**2,311**
Additions		4				43	47
Acquisitions	115	34	68		3	–	220
Disposals							
Impairment							
Amortisation		(34)	(28)		(2)	(40)	(104)
Currency translation effects	6	2	–		–	–	8
Balance as at 31 December	**1,912**	**190**	**243**		**4**	**133**	**2,482**
Cost	1,912	863	483		7	667	3,932
Accumulated amortisation		(669)	(240)		(3)	(534)	(1,446)
Accumulated impairment		(4)					(4)
Balance as at 31 December	**1,912**	**190**	**243**		**4**	**133**	**2,482**

Classification of amortisation expenses is as follows:

			2018			2017
in millions of Swiss francs	Fragrances	Flavours	Total	Fragrances	Flavours	Total
Cost of sales	5	10	15	9	9	18
Selling, marketing and distribution expenses	16	24	40	15	23	38
Research and product development expenses	15	33	48	9	21	30
Administration expenses	4	8	12	3	3	6
Other operating expenses	4	6	10	6	6	12
Total	**44**	**81**	**125**	**42**	**62**	**104**

Impairment test for goodwill

Goodwill is allocated to the Group's cash-generating units (CGUs), which are defined as the Flavour Division and the Fragrance Division, which itself includes a lower level of cash-generating unit related to Expressions Parfumées. Goodwill allocated to these CGUs was CHF 2,245 million (2017: CHF 1,322 million) to the Flavour Division, CHF 574 million (2017: CHF 590 million) to the Fragrance Division and CHF 140 million (2017: none) to Expressions Parfumées.

The recoverable amount of each CGU has been determined based on value in use calculations. These calculations use pre-tax cash flow projections based on financial business plans and budgets approved by management covering a five year period, as well as a terminal value. The basis of the key assumptions is market growth adjusted for estimated market share gains. The terminal value assumes the long-term inflation rate for growth beyond the five year period. The discount rate used to discount the estimated future cash flows has a number of components which are derived from capital market information where the cost of equity corresponds to the return expected by the shareholders by benchmarking with comparable companies in the fragrance and flavour industry, and where the cost of debt is based on the conditions on which companies with similar credit rating can obtain financing.

A discount rate of 10.9% (2017: 10.3%) was applied to cash flow projections of the Fragrance Division, 10.7% (2017: 10.3%) was applied to cash flow projections of the Flavour Division and 11.8% (2017: none) was applied to cash flow projections of Expressions Parfumées. These discount rates are pre-tax.

No impairment loss in any of the CGUs resulted from the impairment tests for goodwill. The outcome of the impairment test was not sensitive to reasonable changes in the cash flows and in the discount rate in the periods presented.

Process-oriented technology and other

This consists mainly of process-oriented technology, formulas, molecules, delivery systems as well as process knowledge and research expertise in innovative cosmetic solutions, acquired when the Group purchased Food Ingredients Specialties (FIS), International Bioflavors (IBF), Quest International, Soliance, Induchem, Spicetec, Activ International, Vika, Centroflora Nutra, Expressions Parfumées and Naturex.

The Group invested CHF 12 million in bioscience through an agreement with outside partner to apply strain technology to active beauty which represents an intangible asset with indefinite useful life.

Client relationships

As part of the acquisition of Quest International, Induchem, Spicetec, Activ International, Vika, Centroflora Nutra, Expressions Parfumées and Naturex the Group acquired client relationships in the Flavour and Fragrance Divisions, mainly consisting of client relationships with key customers.

Supplier relationships

As part of the acquisition of Naturex the Group acquired supplier relationships in the Flavour Division, mainly consisting of supplier relationships with key suppliers.

Name and product brands

In connection with the acquisition of Induchem, Spicetec, Activ International, Vika, Centroflora Nutra, Expressions Parfumées and Naturex the Group acquired name and product brands in active beauty and in natural flavour businesses.

Software/ERP system

This consists of internally generated intangible assets associated with the development of identifiable software products and ERP systems.

The residual useful lives of the acquired intangible assets carried at cost, being their fair value at acquisition date, are determined in accordance with the principles set out in Note 2.17. Remaining useful lives of major classes of amortisable intangible assets are as follows:

– Software	2.6 years
– Name and product brands	17.4 years
– Process-oriented technology and other	6.7 years
– Client relationships	17.8 years
– Supplier relationships	2.7 years

23. Investment Property

In 2017 the Group entered into an agreement to develop real estate at its facility in Kemptthal with a third party. As the agreement meets the criteria of IAS 40, the value of land and buildings has been transferred to Investment property. During the year 2018 most of the asset was sold at cost price. The remaining asset of CHF 2 million will be sold in 2019.

24. Debt

2018 in millions of Swiss francs	Floating rate debt Bank borrowings	 Bank facility	 Bank overdrafts	 Straight bonds	 Private placements	 Total	Fixed rate debt Bank borrowings	 Straight bonds	 Private placements	 Total	Total short-term and long-term debt
Balance as at 1 January	**1**		**7**		**117**	**125**	**9**	**998**	**476**	**1,483**	**1,608**
Cash flows	30	169	(5)	151		345	(259)	1,352		1,093	1,438
Non-cash changes											
- Amortisation of debt discount				–	–	–	2	1	–	3	3
- Acquisition / Divestment			1			1	259			259	260
- Currency effects	(31)	–			(5)	(36)		3	(6)	(3)	(39)
Balance as at 31 December		**169**	**3**	**151**	**112**	**435**	**11**	**2,354**	**470**	**2,835**	**3,270**
Within 1 year			3			3	1			1	4
Within 1 to 3 years				151		151	5	249	39	293	444
Within 3 to 5 years		169			112	281	4	100	147	251	532
Thereafter							1	2,005	284	2,290	2,290
Balance as at 31 December		**169**	**3**	**151**	**112**	**435**	**11**	**2,354**	**470**	**2,835**	**3,270**

2017 in millions of Swiss francs	Floating rate debt Bank borrowings	 Bank facility	 Bank overdrafts	 Straight bonds	 Private placements	 Total	Fixed rate debt Bank borrowings	 Straight bonds	 Private placements	 Total	Total short-term and long-term debt
Balance as at 1 January			**7**			**7**		**997**	**254**	**1,251**	**1,258**
Cash flows	(42)		(3)		116	71	(5)		232	227	298
Non-cash changes											
- Amortisation of debt discount								1		1	1
- Acquisition / Divestment	13		3			16	14			14	30
- Currency effects	30				1	31			(10)	(10)	21
Balance as at 31 December	**1**		**7**		**117**	**125**	**9**	**998**	**476**	**1,483**	**1,608**
Within 1 year			7			7	1	300		301	308
Within 1 to 3 years	1					1	2	100	39	141	142
Within 3 to 5 years					117	117	2	249		251	368
Thereafter							4	349	437	790	790
Balance as at 31 December	**1**		**7**		**117**	**125**	**9**	**998**	**476**	**1,483**	**1,608**

On 7 December 2011 the Group issued a dual tranche public bond transaction of CHF 150 million each, totalling CHF 300 million, respectively of 1.250% for five years and of 2.125% for ten years. The bond was issued by Givaudan SA. The first tranche was redeemed in December 2016.

In November 2012 Givaudan United States, Inc. entered into three private placements for a total amount of USD 250 million (CHF 245 million) respectively USD 40 million redeemable in February 2020 with an annual interest rate of 2.74%, USD 150 million redeemable in February 2023 with an annual interest rate of 3.30% and USD 60 million redeemable in February 2025 with an annual interest rate of 3.45%. The proceeds of these transactions have been received on 6 February 2013. There are various covenants contained in these transactions covering conditions on net worth, indebtedness and EBITDA ratio to net interest expense of Givaudan United States, Inc. The company is and has been in full compliance with the covenants set.

On 19 March 2014 the Group issued a 1.00% six and a half year public bond with a nominal value of CHF 100 million and a 1.75% ten year public bond with a nominal value of CHF 150 million. These bonds were issued by Givaudan SA.

In December 2016 the Group issued a 0.00% six year public bond with a nominal value of CHF 100 million and a 0.625% fifteen year public bond with a nominal value of CHF 200 million. These bonds were issued by Givaudan SA.

In December 2017 the Group entered into a five year floating rate private placement (Schuldschein) with a nominal value of EUR 100 million (CHF 112 million) and a seven year 1.331% fixed rate private placement (Schuldschein) with a nominal value of EUR 200 million (CHF 225 million). The proceeds of EUR 300 million were used mainly to repay the short-term borrowings withdrawn during the year 2017.

The Group issued a two year floating rate public bond with a nominal value of CHF 150 million and a seven year 0.375% fixed rate public bond with a nominal value of CHF 200 million. These bonds were issued by Givaudan SA on 9 April 2018. The proceeds of CHF 350 million were used mainly to repay the 2.5% seven year public bond with a nominal value of CHF 300 million which was redeemed on 15 June 2018.

In September 2018 the Group issued a dual tranche placement of senior debt notes (the 'Notes') totalling EUR 1,300 million (CHF 1,455 million), respectively of EUR 500 million (CHF 559 million) at a fixed rate of 1.125% for seven years and EUR 800 million (CHF 896 million) at the fixed rate of 2.000% for twelve years. These Euro bonds were issued by Givaudan SA.

As at 31 December 2018 the Group had borrowings of EUR 150 million (CHF 169 million) under the Group bank credit facility.

in millions of Swiss francs	**2018**	2017
Swiss franc	1,050	998
US Dollar	247	244
Euro	1,972	365
Other currencies	1	1
Total debt as at 31 December	**3,270**	**1,608**

The weighted average effective interest rates at the statement of financial position date were as follows:

	2018	2017
Private placements USD	3.2%	3.2%
Private placements EUR	1.1%	1.1%
Straight bond EUR	1.7%	
Straight bond CHF	0.8%	1.6%
Bank facility EUR	0.5%	
Weighted average effective interest rates on gross debt	**1.4%**	**1.7%**

25. Changes in liabilities arising from financing activities

2018 in millions of Swiss francs	Balance as at 1 January	Cash impact Cash flows Inflow (Outflow)	Non-cash changes Amortisation of debt discount / premium	Acquisition / Divestment	Fair values changes and Others	Currency effects	Balance as at 31 December
Total short-term and long-term debt	1,608	1,438	3	260		(39)	3,270
Interest on liabilities	8	(29)			34	–	13
Derivative financial instruments	60	(22)		2	3	–	43
Capitalised lease liabilities		–		7	–	–	7
Others, net	13	(5)		1	8	–	17
Total liabilities from financing activities	**1,689**	**1,382**	**3**	**270**	**45**	**(39)**	**3,350**

2017 in millions of Swiss francs	Balance as at 1 January	Cash impact Cash flows Inflow (Outflow)	Non-cash changes Amortisation of debt discount / premium	Acquisition / Divestment	Fair values changes and Others	Currency effects	Balance as at 31 December
Total short-term and long-term debt	1,258	298	1	30		21	1,608
Interest on liabilities	8	(24)		–	24	–	8
Derivative financial instruments	62	–			(2)		60
Others, net	12	(7)			9	(1)	13
Total liabilities from financing activities	**1,340**	**267**	**1**	**30**	**31**	**20**	**1,689**

26. Provisions

2018 in millions of Swiss francs	Restructuring	Claims and litigation	Environmental	Others	Total
Balance as at 1 January	**58**	**10**	**24**	**32**	**124**
Acquisitions		4		1	5
Additional provisions	9	2	3	5	19
Unused amounts reversed	(24)	(1)		(1)	(26)
Utilised during the year	(18)	(3)	(1)	(3)	(25)
Currency translation effects	–	–	–	–	–
Balance as at 31 December	**25**	**12**	**26**	**34**	**97**
Current liabilities	17	2	4	1	24
Non-current liabilities	8	10	22	33	73
Balance as at 31 December	**25**	**12**	**26**	**34**	**97**

2017 in millions of Swiss francs	Restructuring	Claims and litigation	Environmental	Others	Total
Balance as at 1 January	**3**	**8**	**26**	**28**	**65**
Acquisitions					
Additional provisions	60	3		7	70
Unused amounts reversed	(1)	–		–	(1)
Utilised during the year	(4)	(1)	(2)	(3)	(10)
Currency translation effects	–	–	–	–	–
Balance as at 31 December	**58**	**10**	**24**	**32**	**124**
Current liabilities	51	1	3	2	57
Non-current liabilities	7	9	21	30	67
Balance as at 31 December	**58**	**10**	**24**	**32**	**124**

Significant judgment is required in determining the various provisions. A range of possible outcomes is determined to make reliable estimates of the obligation that is sufficient for the recognition of a provision. Differences between the final obligations and the amounts that were initially recognised impact the income statement in the period in which such determination is made.

Restructuring provisions

Restructuring provisions arise from reorganisations of the Group's operations and management structure primarily related to Givaudan Business Solutions (GBS) and from reorganisations in the Flavour division. During the year, CHF 24 million, that was initially related to the provision for GBS, was reversed due to the fact that a number of personnel that was supposed to leave have been rehired in the Group in different positions, or have left the Group of their own accord.

Claims and litigation

These provisions are made in respect of legal claims brought against the Group and potential litigations. Related estimated legal fees are also included in these provisions.

Environmental

Givaudan's affiliate, Givaudan Fragrances Corporation, is one of approximately 100 companies identified by the US Environmental Protection Agency ('EPA') as 'Potentially Responsible Parties' ('PRP') for alleged contamination of the Passaic River. The EPA released a Focused Feasibility Study ('FFS') covering only the lower 8 miles of the River in 2014. In March 2016, the EPA issued its Record of Decision ('ROD') to confirm the remediation solution related to the FFS. The chosen solution entails a bank-to-bank dredge of the River, and the installation of an engineered cap, with an estimated cost of CHF 1.4 billion. One PRP agreed in 2016 to conduct the detailed remediation design, which is expected to take up to four years to complete. The EPA has also selected an expert to work with the PRP's on the allocation of the remediation costs, which is expected to take approximately two years to conclude.

The Cooperating Parties Group ('CPG'), of which Givaudan had been a member, issued a draft Remedial Investigation/Feasibility Study ('RI/FS') in April 2014, which proposed a Sustainable Remedy for the entire lower 17 miles of the River. The CPG is still responding to EPA comments on the RI/FS, which remains in draft form today.

At this time, there are many uncertainties associated with the final remediation plan and the Company's share of the costs, if any. However, in accordance with accounting guidance, the Group has recorded a reserve which it believes can reasonably be expected to cover the Company's obligation, if any, given the information currently available.

The other material components of the environmental provisions consist of costs to sufficiently clean and refurbish contaminated sites and to treat where necessary.

Other provisions

These consist largely of provisions related to long-term deferred compensation plan and to restoring expenses related to leased facilities.

27. Own Equity Instruments

Details of own equity instruments are as follows:

As at 31 December 2018	Settlement	Category	Maturity	Strike price (CHF)	in equivalent shares	Fair value in millions of Swiss francs
Registered shares		Equity			11,906	27
Purchased calls	Gross shares	Equity	2019	1,753.5 - 2,232.0	53,000	17
Written puts	Gross shares	Financial liability	2019	1,753.5 - 2,192.0	47,000	2

As at 31 December 2017	Settlement	Category	Maturity	Strike price (CHF)	in equivalent shares	Fair value in millions of Swiss francs
Registered shares		Equity			23,838	54
Purchased calls	Gross shares	Equity	2018	1,786.1 - 1,962.1	50,312	18
Written puts	Gross shares	Financial liability	2018	1,679.5 - 1,959.0	50,312	–

28. Equity

Share capital

As at 31 December 2018, the share capital amounts to CHF 92,335,860, divided into 9,233,586 fully paid-up registered shares, with a nominal value of CHF 10.00 each. Every share gives the right to one vote.

The Board of Directors has at its disposal conditional capital of a maximum aggregate amount of CHF 7,481,980 that may be issued through a maximum of 748,198 registered shares, of which a maximum of CHF 1,618,200 can be used for executive share option plans.

At the Annual General Meeting held on 22 March 2018 the distribution of an ordinary dividend of CHF 58.00 per share (2017: CHF 56.00 per share) was approved. The dividend payment has been paid out of available retained earnings.

Movements in own equity instruments are as follows:

		Price in Swiss francs			
2018	Number	High	Average	Low	Total in millions of Swiss francs
Balance as at 1 January	**23,838**				**157**
Purchases at cost	12,312	1,959.0	1,877.2	1,791.0	23
Sales and transfers	(24,244)	1,844.0	1,844.0	1,844.0	(45)
(Gains) losses, net recognised in equity					
Movement on registered shares, net					**(22)**
Movement on derivatives on own shares, net					**7**
Income taxes					
Balance as at 31 December	**11,906**				**142**

		Price in Swiss francs			
2017	Number	High	Average	Low	Total in millions of Swiss francs
Balance as at 1 January	**31,137**				**109**
Purchases at cost	25,750	1,920.2	1,843.6	1,690.0	47
Sales and transfers	(33,049)	1,491.2	1,491.2	1,491.2	(49)
(Gains) losses, net recognised in equity					
Movement on registered shares, net					**(2)**
Movement on derivatives on own shares, net					**50**
Income taxes					**–**
Balance as at 31 December	**23,838**				**157**

29. Commitments

As at 31 December 2018, the Group had operating lease commitments mainly related to buildings. Future minimum payments under non-cancellable operating leases are as follows:

in millions of Swiss francs	2018	2017
Within one year	46	36
Within two to five years	125	85
Thereafter	206	32
Total minimum payments	**377**	**153**

The total minimum operating lease commitments include the lease back commitment of CHF 184 million of the Zurich Innovation Centre (ZIC) that was sold in December 2018 (Note 21). This lease commitment has a duration of 30 years.

The charge in the 2018 consolidated income statement for all operating leases was CHF 48 million (2017: CHF 45 million).

The Group has capital commitments for the purchase or construction of property, plant and equipment totalling CHF 111 million (2017: CHF 105 million).

30. Contingent Liabilities

From time to time and in varying degrees, Group operations and earnings continue to be affected by political, legislative, fiscal and regulatory developments, including those relating to environmental protection, in the countries in which it operates.

The activities in which the Group is engaged are also subject to physical risks of various kinds. The nature and frequency of these developments and events, not all of which are covered by insurance, as well as their effect on the future operations and earnings are not predictable.

Givaudan Group companies are involved in various legal and regulatory proceedings of a nature considered typical of its business, including contractual disputes and employment litigation.

One of the Group's US affiliates, Givaudan Flavors Corporation was named as a defendant in several lawsuits brought against it and other flavour and raw chemical supply companies. The plaintiffs alleged that they sustained pulmonary injuries due to diacetyl-containing butter flavours manufactured by one or more of the flavour and raw chemical supply company defendants. The majority of the cases filed against Givaudan Flavors Corporation have been settled. The Group has already recovered or will recover amounts it is entitled to under the terms of its insurance policies.

31. Related Parties

Transactions between Givaudan SA and its subsidiaries, which are related parties of Givaudan SA, have been eliminated on consolidation and are not disclosed in this note.

Compensation of key management personnel

The compensation of the Board of Directors and the Executive Committee during the year was as follows:

in millions of Swiss francs	**2018**	2017
Salaries and other short-term benefits	11	13
Post-employment benefits	1	1
Share-based payments	13	11
Total compensation	**25**	**25**

No other related party transactions have taken place during 2018 (2017: nil) between the Group and the key management personnel.

Reconciliation table to the Swiss code of obligations

	IFRS		Adjustments[a]		Swiss CO (Art. 663b bis)	
in millions of Swiss francs	**2018**	2017	**2018**	2017	**2018**	2017
Salaries and other short-term benefits	11	13	(4)	(6)	7	7
Post-employment benefits	1	1	1	1	2	2
Share-based payments	13	11	(2)	2	11	13
Total compensation	**25**	**25**	**(5)**	**(3)**	**20**	**22**

a) IFRS information is adjusted mainly to the recognition of the share-based payments, IFRS 2 versus economic value at grant date. IFRS information also includes security costs.

There are no other significant related party transactions including in the jointly controlled entities.

32. Board of Directors and Executive Committee Compensation

Compensation of members of the Board of Directors

Compensation of Board members consists of Director fees, Committee fees and Restricted Share Units (RSUs). Fees are paid at the end of each year in office completed. RSUs give participants the right to receive Givaudan shares (or a cash equivalent in countries where securities laws prevent the offering of Givaudan securities) at the end of a three-year blocking period.

The Chairman of the Board does not receive any additional Board Membership fees. Similarly, a Committee Chairman does not receive any additional Committee Membership fees. Each Board member receives an additional amount of CHF 10,000 to cover out-of-pocket expenses. This amount is paid for the coming year in office. The RSUs are also granted for the same period. The compensation paid to the Board members for the reporting period is shown in the table below:

2018 in Swiss francs	Calvin Grieder Chairman[e]	Victor Balli[e]	Prof. Dr-Ing. Werner Bauer[e]	Lilian Biner[e]	Michael Carlos[e]	Ingrid Deltenre[e]	Thomas Rufer[e]	**Total 2018**[a]
Director fees[b]	400,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
Committee fees[b]	65,000	50,000	65,000	25,000	65,000	50,000	55,000	375,000
Total fixed (cash)	465,000	150,000	165,000	125,000	165,000	150,000	155,000	1,375,000
Number of RSUs granted[c]	292	73	73	73	73	73	73	730
Value at grant[d]	582,044	145,511	145,511	145,511	145,511	145,511	145,511	1,455,110
Total compensation	**1,047,044**	**295,511**	**310,511**	**270,511**	**310,511**	**295,511**	**300,511**	**2,830,110**

a) Represents total compensation for the Board of Director paid in respect of the reporting year, reported in accordance with the accrual principle.
b) Represents Director and Committee fees paid in respect of the reporting year, reported in accordance with the accrual principle.
c) RSUs blocking period ends on 15 April 2021.
d) Economic value at grant according to IFRS methodology, with no discount applied for the blocking period.
e) The function of each member of the Board of Directors are indicated on pages 104 – 105 in the Corporate Governance section of the 2018 Integrated Annual Report.

Estimated social security charges based on 2018 compensation amounted to CHF 203,000 (2017: CHF 205,000).

2017 in Swiss francs	Calvin Grieder Chairman[e]	Victor Balli[e]	Prof. Dr-Ing. Werner Bauer[e]	Lilian Biner[e]	Michael Carlos[e]	Ingrid Deltenre[e]	Thomas Rufer[e]	Dr Jürg Witmer[f]	**Total 2017**[a]
Director fees[b]	325,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,025,000
Committee fees[b]	61,250	43,750	65,000	31,250	58,750	50,000	55,000	10,000	375,000
Total fixed (cash)	386,250	143,750	165,000	131,250	158,750	150,000	155,000	110,000	1,400,000
Number of RSUs granted[c]	360	90	90	90	90	90	90	–	900
Value at grant[d]	583,776	145,944	145,944	145,944	145,944	145,944	145,944	–	1,459,440
Total compensation	**970,026**	**289,694**	**310,944**	**277,194**	**304,694**	**295,944**	**300,944**	**110,000**	**2,859,440**

a) Represents total compensation for the Board of Director paid in respect of the reporting year, reported in accordance with the accrual principle.
b) Represents Director and Committee fees paid in respect of the reporting year, reported in accordance with the accrual principle.
c) RSUs vest on 15 April 2020.
d) Economic value at grant according to IFRS methodology, with no discount applied for the vesting period.
e) The function of each member of the Board of Directors are indicated on pages 63-65 in the Corporate Governance section of the 2017 Annual Report.
f) Retired at the Annual General Meeting in March 2017.

Other compensation, fees and loans to members or former members of the Board

No additional compensation or fees were paid to any member of the Board.
No Board member or related parties had any loan outstanding as of 31 December 2018.

Special compensation of members of the Board who left the company during the reporting period

No such compensation was incurred during the reporting period.

Compensation of members of the Executive Committee

The compensation of the Executive Committee during the year was as follows:

in Swiss francs	Gilles Andrier CEO 2018	Gilles Andrier CEO 2017	Executive Committee members (excluding CEO)[a] 2018	Executive Committee members (excluding CEO)[b] 2017	**Total 2018**	**Total 2017**
Base salary	1,058,023	1,045,952	3,194,282	3,970,375	4,252,305	5,016,327
Pension benefits[c]	571,766	445,076	947,880	1,048,011	1,519,646	1,493,087
Other benefits[d]	139,048	114,688	819,837	800,451	958,885	915,139
Total fixed compensation	1,768,837	1,605,716	4,961,999	5,818,837	6,730,836	7,424,553
Annual incentive[e]	954,070	977,142	1,824,033	2,513,556	2,778,103	3,490,698
Number of performance shares granted[f]	1,446	1,777	3,263	5,549	4,709	7,326
Value at grant[g]	2,882,312	2,881,583	6,504,138	8,998,258	9,386,450	11,879,841
Total variable compensation	3,836,382	3,858,725	8,328,171	11,511,814	12,164,553	15,370,539
Total compensation	**5,605,219**	**5,464,441**	**13,290,170**	**17,330,651**	**18,895,389**	**22,795,092**
Employer social security[h]	453,000	442,000	988,000	1,413,000	1,441,000	1,855,000

a) Represents (a) full year compensation of five Executive Committee members, (b) partial year compensation of two outgoing members and c) partial year compensation of the new Flavour Division President.
b) Represents full year compensation of eight Executive Committee members and partial year compensation of one outgoing Executive Committee member.
c) Company contributions to broad-based pension and retirement savings plans and annualised expenses accrued for supplementary executive retirement benefit.
d) Represents annual value of health and welfare plans, international assignment benefits and other benefits in kind.
e) Annual incentive accrued in reporting period based on performance in the reporting period.
f) 2018 Performance shares vest on 15 April 2021, 2017 Performance shares vest on 15 April 2020.
g) Value at grant calculated according to IFRS methodology and based on 100% achievement of performance targets.
h) 2018 estimated social security charges based on 2018 compensation; 2017 estimated social security charges based on 2017 compensation.

Other compensation, fees and loans to members or former members of the Executive Committee

No other compensation or fees were accrued for or paid to any member or former member of the Executive Committee during the reporting period. No member or former member of the Executive Committee or related parties had any loan outstanding as of 31 December 2018.

Special compensation of Executive Committee members who left the company during the reporting period

Members of the Executive Committee that stepped down during 2018 did not receive any special compensation as a result of their departure from the Company

Ownership of shares and unvested share rights

Details on the Givaudan share based payment plans are described in Note 9.

As per 31 December 2018, the Chairman and other Board members including persons closely connected to them held 3,906 Givaudan shares in total. For further details, please refer to the following table on the next page showing:

- The shares held individually by each Board member as per 31 December 2018.
- The RSUs that were granted in 2016 – 2018 and were still owned by members of the Board as per 31 December 2018.

2018 in numbers	Shares	Unvested RSUs
Calvin Grieder, Chairman	210	737
Victor Balli		248
Prof. Dr-Ing. Werner Bauer	1,180	248
Lilian Biner	587	248
Michael Carlos	1,012	248
Ingrid Deltenre	117	248
Thomas Rufer	800	248
Total 2018	**3,906**	**2,225**
Total 2017	3,360	2,041

The company is not aware of any other ownership of shares, share options/option rights, RSUs or performance shares as per 31 December 2018 by persons closely connected to members of the Board.

The Chief Executive Officer and other members of the Executive Committee, including persons closely connected to them, held 5,097 Givaudan shares. For further details, please refer to the table below showing:

- The shares held individually by each member of the Executive Committee as per 31 December 2018.
- The unvested performance shares that were granted in 2016-2018 and were still owned by members of the Executive Committee as per 31 December 2018.

2018 in numbers	Shares	Unvested performance shares
Gilles Andrier, CEO	2,400	4,909
Tom Hallam	438	1,304
Louie D'Amico	193	1,131
Maurizio Volpi	1,257	2,350
Simon Halle-Smith	260	1,403
Willem Mutsaerts	440	1,418
Anne Tayac	109	1,261
Total 2018	**5,097**	**13,776**
Total 2017	6,154	15,945

No member of the Executive Committee held any share options or option rights as at 31 December 2018 (31 December 2017: no member of the Executive Committee held any share options or option rights).

One person closely connected to a member of the Executive Committee owned 279 unvested Performance Shares as at 31 December 2018.

The company is not aware of any other ownership of shares, share options/option rights, RSUs or performance shares as per 31 December 2018 by persons closely connected to members of the Executive Committee.

33. List of Principal Group Companies

The following are the principal companies fully owned by the Group. Share capital is shown in thousands of currency units:

Switzerland	Givaudan SA	CHF	92,336
	Givaudan Suisse SA	CHF	4,500
	Givaudan Finance SA	CHF	100,000
	Givaudan International SA	CHF	100
	Vamara Holding SA	CHF	100
	Givaudan Treasury International SA	CHF	1,000
	Naturex AG	CHF	15,288
	Fondation Givaudan	-	-
Argentina	Givaudan Argentina SA	ARS	20,000
	Givaudan Argentina Servicios SA	ARS	8,000
Australia	Givaudan Australia Pty Ltd	AUD	35,812
	Naturex Australia Pty Ltd	AUD	0.003
Austria	Givaudan Austria GmbH	EUR	40
Belgium	Naturex SPRL	EUR	1,000
Bermuda	FF Holdings (Bermuda) Ltd	USD	12
	Givaudan International Ltd	USD	12
	FF Insurance Ltd	CHF	170
Brazil	Givaudan do Brasil Ltda	BRL	345,381
	G Nutra Ind Com Prod Alim e Nutricionais Ltda	BRL	31,219
	Naturex Ingredientes Naturais Ltda	BRL	7,035
Canada	Givaudan Canada Co	CAD	12,901
	Naturex Inc (Canada)	CAD	500
Chile	Givaudan Chile Ltda	CLP	5,000
	Chile Botanics SA	CLP	1,837,205
	Naturex Chile SA	CLP	1,731,600
China	Givaudan Fragrances (Shanghai) Ltd	USD	7,750
	Givaudan Flavors (Shanghai) Ltd	USD	10,783
	Givaudan Specialty Products (Shanghai) Ltd	USD	12,000
	Givaudan Hong Kong Ltd	HKD	7,374
	Givaudan Flavors (Nantong) Ltd	USD	39,000
	Naturex Trading Shanghai Co Ltd	CNY	5,608
Colombia	Givaudan Colombia SA	COP	6,965,925
Czech Republic	Givaudan CR, s.r.o.	CZK	200
Egypt	Givaudan Egypt SAE	USD	21,360
	Givaudan Egypt Fragrances LLC	EGP	50
France	Givaudan France SAS	EUR	5,006
	Espressions Parfumées SAS	EUR	3,794
	Oressences SAS	EUR	30,000
	Naturex SA	EUR	14,435
	SCI Les Broquetons	EUR	495
	SAS SGD	EUR	13,523
Germany	Givaudan Deutschland GmbH	EUR	4,100
	Naturex GmbH	EUR	150
Hungary	Givaudan Hungary Kft	EUR	15
	Givaudan Business Solutions Kft	EUR	12
India	Givaudan (India) Private Ltd	INR	87,330
	Naturex India Private Ltd	INR	64,416
	Valentine Foods Private Ltd	INR	100
Indonesia	P.T. Givaudan Indonesia	IDR	2,608,000
Italy	Givaudan Italia SpA	EUR	520
	Expressions Parfumées SRLA	EUR	10
	Naturex SpA	EUR	1,200
Ivory Coast	Naturex Ivory Coast Abidjan Purchasing	XOF	6,000

Japan	Givaudan Japan K.K.	JPY	1,000,000
	Naturex K.K.	JPY	5,000
Korea	Givaudan Korea Ltd	KRW	550,020
	Naturex Korea Seoul sales office	KRW	284,000
Malaysia	Givaudan Business Solutions Asia Pacific Sdn.Bhd	MYR	2,000
	Givaudan Flavours & Fragrances Malaysia Sdn.Bhd	MYR	3,981
Morocco	Naturex Morocco Casablanca	MAD	24,640
Mexico	Givaudan de Mexico SA de CV	MXN	53,611
	Naturex Ingredientes Naturales SA de CV	MXN	34,000
Netherlands	Givaudan Nederland B.V.	EUR	402
	Vika B.V.	EUR	20
	Virgula B.V.	EUR	20
	Naturex Coöperatief UA	EUR	1
New Zealand	Givaudan NZ Ltd	NZD	71
Nigeria	Givaudan (Nigeria) Ltd	NGN	10,000
Peru	Givaudan Peru SAC	PEN	1,303
	Activ International SAC	PEN	14,043
Poland	Givaudan Polska Sp. Z.o.o.	PLN	50
	Naturex Polska Sp. Z.o.o.	PLN	2,000
Russia	Givaudan Rus LLC	RUB	9,000
	Naturex LLC	RUB	1,500
Singapore	Givaudan Singapore Pte Ltd	SGD	24,000
	Naturex Holdings Singapore Private Ltd	SGD	160
South Africa	Givaudan South Africa (Pty) Ltd	ZAR	360,002
Spain	Givaudan Iberica, SA	EUR	8,020
	Naturex Iberian Partners, SL	EUR	3,497
Sweden	Givaudan North Europe AB	SEK	120
	Swedish Oat Fiber AB	SEK	1,000
Thailand	Givaudan (Thailand) Ltd	THB	100,000
Turkey	Givaudan Aroma Ve Esans Sanayi Ve Ticaret Limited Sirketi	TRY	34
United Kingdom	Givaudan UK Ltd	GBP	70
	Major International Ltd	GBP	50
	Givaudan Holdings UK Ltd	GBP	317,348
	Naturex Ltd	GBP	1,006
United Arab Emirates	Givaudan Middle East & Africa FZE	AED	1,000
	Expression Parfumées LLC	AED	300
United States of America	Givaudan United States, Inc.	USD	0.05
	Givaudan Flavors Corporation	USD	0.1
	Givaudan Fragrances Corporation	USD	0.1
	Givaudan Flavors and Fragrances, Inc.	USD	0.1
	Naturex Holdings, Inc.	USD	0.1
	Naturex, Inc.	USD	1
	Vegetable Juices, Inc.	USD	-
Venezuela	Givaudan Venezuela SA	VES	4.5

GRI Disclosure 102 – 45, pages 178 – 179

34. Disclosure of the Process of Risk Assessment

Risk management in Givaudan is an integral part of the business. It is a structured and continuous process of identifying, assessing and deciding on responses to risks. The reporting of the opportunities and threats that these risks create and how they might hinder the business in achieving its objectives is also part of managing risks.

Risk management is the responsibility of the Board of Directors, which delegates to the Executive Committee the management of the overall company risk management process. The Group actively promotes the continuous monitoring and management of risks at the operational management level.

The Givaudan Enterprise Risk Management Charter describes the principles, framework and process of the Givaudan Enterprise Risk Management, which ensure that material risks are identified, managed and reported. It defines the associated roles and responsibilities which are reflected in the delegated authorities. Enterprise Risk Management encompasses both the Fragrance and Flavour businesses, as well as Givaudan Group functions. It includes all types of risks in terms of their nature, their source or their consequences.

The process aims to be comprehensive, organised and documented in order to improve compliance with corporate governance regulations, guidelines and good practices; better understand the risk profile of the business; and provide additional risk-based management information for decision making.

The objectives of the Risk Management process are to continuously ensure and improve compliance with good corporate governance guidelines and practices as well as laws and regulations, where applicable; facilitate disclosure to key stakeholders of potential risks and the company's philosophy for dealing with them. At the same time, the process creates the awareness of all key executives of the magnitude of risks; provides risk-based management information for effective decision-making; and safeguard the values of the company and its assets, and protect the interests of shareholders.

Givaudan's management, at all levels, is accountable for ensuring the appropriateness, timeliness and adequacy of the risk analysis. Mitigation decisions are taken at individual and combined levels. This management is also responsible for implementing, tracking and reporting the risk mitigation directives of the Executive Committee, including periodic reporting to the Board.

The assessment is performed in collaboration between the Executive Committee, divisional and functional management teams and the Corporate Compliance Officer.

The Board of Directors' Audit Committee also promotes the effective communication between the Board, Givaudan's Executive Committee, other senior corporate functions and Corporate Internal Audit in order to foster openness and accountability.

Givaudan has carried out its annual review of internal controls over accounting and financial reporting. A risk assessment is performed throughout the Internal Control System for those identified risks which may arise from the accounting and financial reporting. Then, relevant financial reporting controls are defined for each risk.

35. Other information

On 14 December 2018, as part of its 2020 strategy to expand the capabilities of its fragrance business, Givaudan announced that it has entered into exclusive negotiations to acquire Albert Vieille SAS, a French natural ingredients company specialised in natural ingredients used in the fragrance and aromatherapy markets. With its origins dating back to 1920, and with more than 50 employees, Albert Vieille is based close to Grasse, in France, and has a manufacturing facility in Spain, with its products sold globally through a network of distributors.

As the closing of the acquisition is expected for 2019, these negotiations have no impact on the 2018 financial statements.

Deloitte.

Deloitte SA
Rue du Pré-de-la-Bichette 1
1202 Geneva
Switzerland

Phone: +41 (0)58 279 8000
Fax: +41 (0)58 279 8800
www.deloitte.ch

Statutory Auditor's Report

To the General Meeting of GIVAUDAN SA, Vernier

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of Givaudan SA and its subsidiaries (the Group), which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of financial position, consolidated statement of changes in equity, consolidated statement of cash flows for the year ended 31 December 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion the accompanying consolidated financial statements, presented on pages 120 to 180, give a true and fair view of the consolidated financial position of the Group as at 31 December 2018, its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for Opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our Audit Approach

Summary

Key audit matters	Based on our audit scoping, we identified the following key audit matters: – Acquisition accounting; – Pension; and – Taxation.
Materiality	Based on our professional judgment we determined materiality for the Group as a whole to be CHF 55 million.
Scoping	Based on our understanding of Givaudan's operations, we have defined 17 component operations in 11 countries that are in scope for group reporting purposes. We have requested from the auditors in these countries to perform audit procedures to address the risks identified in our risk assessment phase. Coverages as a ratio of group sales, operating income and total assets are disclosed below.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Deloitte.

Acquisition accounting

Key Audit Matter	How the scope of our audit responded to the Key Audit Matter
As described in the Critical Accounting Estimates and Judgments in Note 3, significant judgment is required in determining the fair value of the identifiable assets acquired, particularly intangibles, and the liabilities assumed. Such judgments require estimates that are not only based on available information but as well on assumptions with respect to the timing and amount of future revenues and expenses associated with an asset and a liability. In addition, the purchase price is allocated to the underlying acquired assets and liabilities based on their estimated fair value at the time of acquisition which adds to the complexity. As described in Note 6 to the consolidated financial statements, the Group completed the following acquisitions during 2018: – Acquisition of 100% of the share capital of Centroflora Nutra on 14 May 2018 for a total purchase price of CHF 55 million. The acquisition resulted in the recognition of a goodwill of CHF 39 million. – Acquisition of 100% of the share capital of Expressions Parfumées on 4 June 2018 for a total purchase price of CHF 199 million. The acquisition resulted in the recognition of a goodwill of CHF 145 million. – Acquisition of 40.5% of the shares of Naturex for EUR 135 per share and a total consideration of CHF 606 million on 5 June 2018. On 9 August 2018, Givaudan acquired the full control of Naturex. At that time, the non-controlling interests consisted of 2.76% of the shares of Naturex that have been fully acquired until 18 September 2018. The total purchase price of this acquisition amounts to CHF 1'489 million. The Group acquired cash for CHF 20 million, working capital valued at CHF 215 million, fixed assets valued at CHF 203 million, intangibles valued at CHF 498 million and other liabilities valued at CHF 350 million. The acquisition resulted in the recognition of a goodwill of CHF 916 million. These transactions are considered as business combinations as defined by IFRS 3 Business Combinations which requires management to perform a purchase price allocation to fair value the assets acquired and liabilities assumed. This requires exercise of judgments over the accounting and disclosure for the transactions. The accounting for the acquisition of assets and liabilities of these entities including the valuation of non-controlling interests, required a number of complex accounting judgments sensitive to key assumptions such as the discount rate, growth rate and other assumptions used in the business plan, internal rate of return, attrition rate. In addition, the amortisation period retained for intangibles acquired also requires judgment and constitutes a significant estimate that affects current and future financial periods. We focused on this area because of the complexity of acquisition accounting and the level of judgment relating to the identification of intangible assets and the purchase price allocation to the assets and liabilities acquired.	We obtained offering documents and sale and purchase agreements to evaluate the key terms and conditions, and confirming our understanding of the transactions by conducting inquiries with management. We challenged management on the identification and valuation of tangible and intangible assets acquired and liabilities identified in the acquisition accounting against the terms of the sale and purchase agreements. We reviewed and assessed the work performed by management's external valuation experts including valuation methodology for each category of assets and liabilities, along with the key judgments made in determining the fair values including any fair value adjustments. We performed procedures to assess the methods used by the management's valuation expert and compliance with IFRS 3 Business Combinations. We considered and challenged the reasonableness of the assumptions, finding them to be within an acceptable range. In particular, we challenged sales forecasts with historical data and market trends, we benchmarked assumptions used in determining the discount and the attrition rates. We also challenged the duration estimated by management for amortisation of the intangibles assets acquired, comparing them to current Group accounting policies and other recent acquisitions. We validated the appropriateness and completeness of the related disclosures in Note 3 and Note 6 to the consolidated financial statements. Based on the procedures performed above, we consider the assumptions and estimates used in the measurement of the acquired assets and liabilities to be appropriate.

Deloitte.

Pension

Key Audit Matter	How the scope of our audit responded to the Key Audit Matter
As described in the Summary of Significant Accounting Policies in Note 2 and in Note 3 on Critical Accounting Estimates and Judgments, significant judgment is required in determining the calculation of the present value of defined benefit obligations requiring financial and demographic assumptions. In addition, changes to the post-employment benefit liability may be accounted through the income statement or through other comprehensive income which adds to the complexity. The Group operates a number of defined benefit and defined contribution plans throughout the world. As disclosed in Note 8 to the consolidated financial statements, total plan assets amount to CHF 1'618 million, total post-employment funded obligations to CHF 2'011 million and post-employment unfunded obligations to CHF 82 million. The defined benefit obligations recognised in the consolidated statement of financial position represent the present value of defined benefit obligations calculated annually by independent actuaries. These actuarial valuations are sensitive to key assumptions such as discount rates. Changes in a number of the key assumptions can have a material impact on the position as disclosed in the Note 8 to the consolidated financial statements. During 2018, the Group has reviewed financial assumptions of certain pension plans in order to align them with local regulations. These transactions resulted in past service cost of CHF 1 million in the United Kingdom pension schemes. We focused on this area because of the complexity of accounting treatment of each plan amendment, the level of judgment required to determine the valuation of both pension assets and pension obligations and the significance of the balances to the consolidated financial statements as a whole.	We assessed the design and implementation of controls in respect of pension accounting. We evaluated management's implementation of Group policies and controls regarding the asset valuation and the pension obligation valuation. With support from our pension specialists, we held discussions with Group's actuaries and challenged key assumptions underpinning the valuation of the pension plans at the end of 2018. Specifically we challenged the discount rate, inflation and mortality assumptions applied in the calculation and benchmarked the assumptions applied against comparable third party data and assessed the appropriateness of the assumptions in the context of the Group's own position. We found them to be within an acceptable range. We tested the data used in the valuation of the pension plans, such as employee data and we obtained statements from financial institutions to verify the completeness and accuracy of the pension plan assets. We validated the compliance of the accounting treatment of transactions impacting pension plans with IAS 19 Employee Benefits. We validated the appropriateness and completeness of the related disclosures in Note 2, Note 3 and Note 8 to the consolidated financial statements. Based on our audit procedures performed, we obtained sufficient appropriate audit evidence to corroborate management's estimates regarding the valuation of both pension assets and pension obligations.

Deloitte.

Taxation

Key Audit Matter	How the scope of our audit responded to the Key Audit Matter
The Group operates in a large number of different jurisdictions and is therefore subject to many tax regimes with differing rules and regulations. As described in the Summary of Significant Accounting Policies in Note 2 and in Note 3 on Critical Accounting Estimates and Judgments, significant judgment is required in determining provision for income taxes, both current and deferred, as well as the assessment of provisions for uncertain tax positions including estimates of interest and penalties where appropriate. The effective tax rate of the group increased from 9% in 2017 to 14% in 2018. The consolidated statement of financial position includes current tax assets of CHF 41 million, current tax liabilities of CHF 95 million, together with deferred tax assets of CHF 208 million and deferred tax liabilities of CHF 238 million. The tax expense recognised in the consolidated income statement amounts to CHF 109 million. Details of all current and deferred tax balances are disclosed in Note 16 to the consolidated financial statements. Due to their significance to the financial statements as a whole, combined with the level of judgment and estimation required to determine their values, the evaluation of current and deferred tax balances including the assessment of provisions for uncertain tax positions is considered to be a key audit matter.	We evaluated management's implementation of Group policies and controls regarding current and deferred tax, as well as the reporting of uncertain tax positions. We assessed the design and implementation of controls in respect to provisions for current tax and the recognition and recoverability of deferred tax assets. We examined the procedures in place for the current and deferred tax calculations for completeness and valuation and audited the related tax computations and estimates in the light of our knowledge of the tax circumstances. Our work was conducted with the support of our tax specialists at group level. We performed an assessment of the material components impacting the Group's tax expense, balances and exposures. We reviewed and challenged the information reported by components with the support of our own local tax specialists, where appropriate. With the support of our tax specialists at group level, we verified the consolidation and analysis of tax balances. We considered management's assessment of the validity and adequacy of provisions for uncertain tax positions, evaluating the basis of assessment and reviewing relevant correspondence and legal advice where available including any information regarding similar cases with the relevant tax authorities. For the deferred tax assets and liabilities, we assessed the appropriateness of management's assumptions and estimates. We validated the appropriateness and completeness of the related disclosures in Note 16 to the consolidated financial statements. Based on the procedures performed, we obtained sufficient appropriate audit evidence to corroborate management's judgement and estimates regarding current and deferred tax balances including provisions for uncertain tax positions.

Deloitte.

Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgment we determined materiality for the Group as a whole to be CHF 55 million, based on a calculation of 7% of Group income before taxes, adjusted for non-recurring transactions. We selected Group income before taxes as the basis for determining our materiality because, in our view, this measure represents the performance of the Group and is one of the indicators against which Givaudan is commonly assessed and is a generally accepted benchmark. The materiality applied by the component auditors ranged from CHF 41.2 million to CHF 13.8 million depending on the scale of the component's operations, the component's contribution to Group sales, Group income before taxes, Group total assets and our assessment of risks specific to each location.

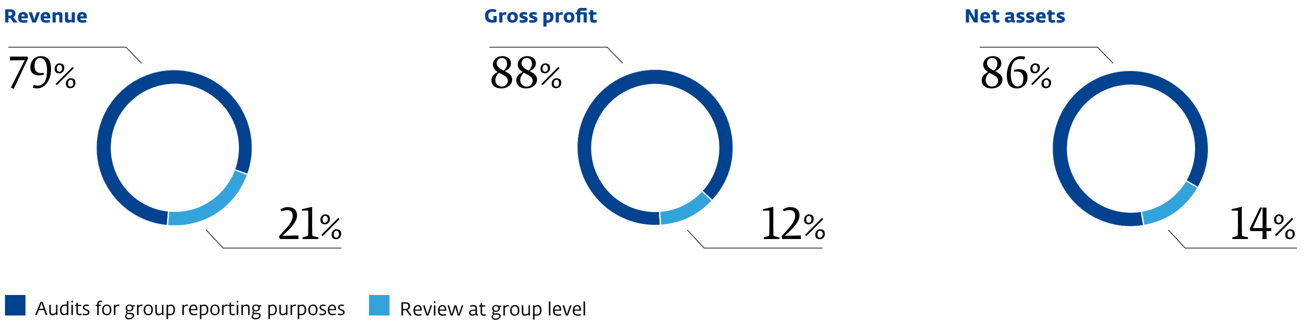
We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of CHF 2.7 million, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

An overview of the scope of our audit

We designed our audit by obtaining an understanding of the Group and its environment, including Group-wide controls, determining materiality and assessing the risks of material misstatement in the consolidated financial statements.

Based on our understanding of Givaudan's operations, we have defined 17 component operations in 11 countries that are in scope for the group reporting purposes. We have requested these countries to perform audit procedures to address the risks identified in our risk assessment phase.

These countries are spread across all regions, reflecting Givaudan's operations. We obtain assurance over these countries through a combination of audit procedures performed locally, within the Givaudan shared service centres and centrally at the Head office. In aggregate, these components represented scope coverage of:



All other wholly owned and joint venture businesses were subject to analytical review procedures for the purpose of the Group audit. Annual statutory audits are conducted by Deloitte at the majority of the Group's affiliates, although these are predominantly completed subsequent to our audit report on the consolidated financial statements.

At the parent entity level we tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to a full scope audit.

The group audit team visited some countries in scope as defined at planning stage. We are defining our visits based on significance of the affiliates and main events occurred during the year. All component audit partners were included in our team briefing, we discussed their risk assessment and reviewed documentation of the findings from their work.

Deloitte.

Other Information in the Annual Report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements of the Company and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibility of the Board of Directors for the Consolidated Financial Statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group'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 the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

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

A further description of our responsibilities for the audit of the financial statements is located at the website of EXPERTsuisse: http://expertsuisse.ch/en/audit-report-for-public-companies. This description forms part of our auditor's report.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

Deloitte SA

Karine Szegedi Pingoud	Laetitia Cejudo
Licensed Audit Expert	Licensed Audit Expert
Auditor in Charge	

Geneva, 23 January 2019

Statutory financial statements of Givaudan SA (Group Holding Company)

Income Statement

For the year ended 31 December

in millions of Swiss francs	Note	2018	2017
Income from investments in Group companies	3	205	145
Royalties from Group companies		973	1,002
Other operating income		1	1
Total Operating income		**1,179**	**1,148**
Research and development expenses to Group companies		(331)	(305)
Other operating expenses		(62)	(46)
Amortisation and impairment of intangible assets		(60)	(64)
Share of (loss) profit of jointly controlled entities	5	3	–
Total Operating expenses		**(450)**	**(415)**
Operating income		**729**	**733**
Financial expenses		(257)	(155)
Financial income		196	107
Non-operating expenses		(91)	(84)
Extraordinary, non-recurring expenses		–	
Income before taxes		**577**	**601**
Income taxes		(31)	(10)
Net income		**546**	**591**

Statement of Financial Position

in millions of Swiss francs	Note	31 December 2018	31 December 2017
Cash and cash equivalents	4	143	250
Accounts receivable from Group companies		218	186
Other current assets		20	24
Accrued income and prepaid expenses		1	13
Current assets		**382**	**473**
Loans to Group companies		150	150
Other long-term assets		12	1
Investments in Group companies	3	4,666	2,849
Jointly controlled entities	5	32	32
Other financial assets		10	10
Intangible assets		230	241
Non-current assets		**5,100**	**3,283**
Total assets		**5,482**	**3,756**
Short-term debt	6		300
Accounts payable to Group companies		99	96
Other current liabilities		51	19
Deferred income and accrued expenses		15	2
Current liabilities		**165**	**417**
Long-term debt	6	3,010	1,049
Other non-current liabilities		44	60
Non-current liabilities		**3,054**	**1,109**
Total liabilities		**3,219**	**1,526**
Share capital	8	92	92
Statutory retained earnings	8	18	18
Statutory capital reserves from capital contributions - additional paid-in capital	8	3	3
Voluntary retained earnings	8	1,542	1,542
Own shares	8, 9	(22)	(43)
Available retained earnings			
- Balance brought forward from previous year		84	27
- Net (loss) income for the year		546	591
Equity		**2,263**	**2,230**
Total liabilities and equity		**5,482**	**3,756**

Notes to the statutory financial statements

1. General Information

1.1. Structure and description of the activity

Givaudan SA is a holding company based in Vernier, near Geneva, whose main goal is to manage its investments in subsidiaries.

More specifically Givaudan SA invests in companies whose aim is to manufacture and commercialise natural and synthetic aromatic or fragrance raw materials as well as other related products. In addition, Givaudan SA invests in research and development and supplies services for the use of these products. Givaudan SA develops, registers and makes use of all trademarks, patents, licenses, manufacturing processes and formulas.

1.2. Employees

The average number of employees during the year was less than ten (2017: less than ten).

2. Summary of accounting principles adopted

The financial statements at 31 December 2018 are prepared in accordance with Swiss law.

The company is classified as a large entity as it meets the criteria to present group accounts under the definition of art. 961d al. 1 of the Swiss Code of Obligations. As Givaudan prepares and reports comprehensive consolidated financial statements under International Financial Reporting Standards (IFRS) including a cash flow statement, accompanying notes and a management report, Givaudan SA is exempt from preparing this information.

Valuation Methods and Translation of Foreign Currencies

Investments in, and loans to, Group companies are stated at cost less appropriate write-downs. Marketable securities are shown at the lower of cost and market value. Derivatives are recorded at fair value.

The currency in which Givaudan SA operates is Swiss francs (CHF) and the accounts are presented in Swiss francs. In the statement of financial position, foreign currency assets and liabilities are remeasured at year-end exchange rates with the exception of investments in Group companies which are valued at historical exchange rates. In the income statement, expenses and income in foreign currencies are converted in Swiss francs using the daily exchange rate of the transaction date. Foreign currency gains and losses are recognised in the income statement as they occur with the exception of unrealised gains which are deferred.

3. Subsidiaries

List of the direct subsidiaries of the company, which are wholly-owned unless otherwise indicated (percentage of voting rights):

Switzerland	Givaudan Suisse SA
	Givaudan Finance SA
	Prodiga AG
	Givaudan International SA
	Vamara Holding SA
	Kemptthal Immobilien Nord AG
	Givaudan Treasury International SA
Argentina	Givaudan Argentina SA
	Givaudan Argentina Servicios SA
Australia	Givaudan Australia Pty Ltd
Austria	Givaudan Austria GmbH
Bermuda	Givaudan Capital Transactions Ltd
Brazil	Givaudan do Brasil Ltda
Canada	Givaudan Canada Co
Chile	Givaudan Chile Ltda
China	Givaudan Fragrances (Shanghai) Ltd
	Givaudan Flavors (Shanghai) Ltd
	Givaudan Specialty Products (Shanghai) Ltd
	Givaudan Hong Kong Ltd
	Givaudan Flavors (Nantong) Ltd
	Givaudan Management Consulting (Shanghai) Ltd
	Givaudan Fragrances (Changzhou) Ltd
Colombia	Givaudan Colombia SA
Czech Republic	Givaudan CR, s.r.o.
Egypt	Givaudan Egypt SAE
	Givaudan Egypt Fragrances LLC
France	Givaudan France SAS
	Activ International SAS
	Oressences SAS
	Naturex SA
	SAS SGD
Germany	Givaudan Deutschland GmbH
Guatemala	Givaudan Guatemala SA
Hungary	Givaudan Hungary Kft
	Givaudan Finance Services Kft
India	Givaudan (India) Private Ltd
Indonesia	P.T. Givaudan Indonesia
	P.T. Givaudan Flavours and Fragrances Indonesia
Italy	Givaudan Italia SpA
Japan	Givaudan Japan K.K.
Korea	Givaudan Korea Ltd
Malaysia	Givaudan Malaysia Sdn.Bhd
	Givaudan Flavours & Fragrances Malaysia Sdn.Bhd
Mexico	Givaudan de Mexico SA de CV
	Grupo Givaudan SA de CV
Netherlands	Givaudan Nederland B.V.
	Virgula B.V.
Nigeria	Givaudan (Nigeria) Ltd
Peru	Givaudan Peru SAC
Poland	Givaudan Polska Sp. Z.o.o.
Russia	Givaudan Rus LLC
Singapore	Givaudan Singapore Pte Ltd
South Africa	Givaudan South Africa (Pty) Ltd
Spain	Givaudan Iberica, SA
Sweden	Givaudan North Europe AB
Thailand	Givaudan (Thailand) Ltd
Turkey	Givaudan Aroma Ve Esans Sanayi Ve Ticaret Limited Sirketi
United Kingdom	Givaudan Holdings UK Ltd
United Arab Emirates	Givaudan Middle East & Africa FZE
United States of America	Givaudan United States, Inc.
Venezuela	Givaudan Venezuela SA

In 2018 Givaudan SA increased its investments in Givaudan Argentina SA, Givaudan Argentina Servicios SA, Givaudan Egypt SAE, Givaudan Management Consulting (Shanghai) Ltd, Givaudan Flavors (Nantong) Ltd, Givaudan Fragrances (Changzhou) Ltd, Givaudan Peru SAC and incorporated Naturex SA, SAS SGD, Oressences SAS, Givaudan Flavours & Fragrances Malaysia Sdn.Bhd and Induchem AG. Active International SA, Select-Ingredient SA and Induchem have been merged into Givaudan Suisse SA during 2018.

4. Cash and cash equivalents

As at 31 December 2018, cash and cash equivalents include an amount of CHF 133 million related to the cash pooling agreements with a Group company.

As at 31 December 2017, an amount of CHF 236 million related to the cash pooling agreements with a Group company was included in the cash and cash equivalents.

5. Jointly Controlled Entities

Name of joint ventures	Principal activity	Country of incorporation	Ownership interest / Voting rights
Jiangsu Xinrui Aromatics Ltd	Production of fragrance ingredients	China	49%
BGN Tech LLC	Innovative natural ingredients	USA	49%
Natural Extracts International Ltd	Natural ingredient derivatives production	Mauritius	49%
Vanilla International Ltd	Natural ingredient collection and extract	Mauritius	49%

6. Debt

On 15 June 2011 Givaudan SA issued a 2.5% seven year public bond with a nominal value of CHF 300 million, which was redeemed in June 2018.

On 7 December 2011 Givaudan SA issued a dual tranche public bond transaction of CHF 150 million each, totalling CHF 300 million, respectively of 1.250% for five years and of 2.125% for ten years. The first tranche was redeemed in December 2016.

On 19 March 2014 Givaudan SA issued a 1.00% six and a half year public bond with a nominal value of CHF 100 million and a 1.75% ten year public bond with a nominal value of CHF 150 million.

In December 2016 Givaudan SA issued a 0.00% six year public bond with a nominal value of CHF 100 million and a 0.625% fifteen year public bond with a nominal value of CHF 200 million.

On 20 December 2017 Givaudan SA entered into a five year floating rate private placement (Schuldschein) with a nominal value of EUR 100 million (CHF 117 million) and a seven year 1.331% fixed rate private placement (Schuldschein) with a nominal value of EUR 200 million (CHF 233 million). The proceeds of EUR 300 million were used mainly to repay the short-term borrowings withdrawn during the year 2017.

Givaudan SA issued a two year floating rate public bond with a nominal value of CHF 150 million and a seven year 0.375% fixed rate public bond with a nominal value of CHF 200 million on 9 April 2018. The proceeds of CHF 350 million were used mainly to repay the 2.5% seven year public bond with a nominal value of CHF 300 million, which was redeemed on 15 June 2018.

In September 2018 Givaudan SA issued a dual tranche placement of senior debt notes (the 'Notes') totalling EUR 1,300 million (CHF 1,455 million), respectively of EUR 500 million (CHF 559 million) at a fixed rate of 1.125% for seven years and EUR 800 million (CHF 896 million) at a fixed rate of 2.000% for twelve years. The proceeds were used for the acquisition of Naturex.

As at 31 December 2018 Givandan SA had borrowings of EUR 150 million (CHF 169 million) under the Group bank credit facility.

7. Indirect Taxes

The company is part of a Group for VAT purposes with two other affiliates of the Group in Switzerland. The company is jointly and severally liable towards the tax authorities for current and future VAT payables of the VAT Group to which it belongs.

8. Equity

As at 31 December 2018, the share capital amounts to CHF 92,335,860, divided into 9,233,586 fully paid-up registered shares, with a nominal value of CHF 10.00 each. Every share gives the right to one vote.

The Board of Directors has at its disposal conditional capital of a maximum aggregate amount of CHF 7,481,980 that may be issued through a maximum of 748,198 registered shares, of which a maximum of CHF 1,618,200 can be used for executive share option plans.

At the Annual General Meeting held on 22 March 2018 the distribution of an ordinary dividend of CHF 58.00 per share (2017: CHF 56.00 per share) was approved. The dividend payment has been made out of available retained earnings.

The movements in equity are as follows:

2018 in millions of Swiss francs	Share Capital	Statutory retained earnings	Additional paid-in capital	Voluntary retained earnings	Available retained earnings	Own shares	Total
Balance as at 1 January	**92**	**18**	**3**	**1,542**	**618**	**(43)**	**2,230**
Registered shares							
Issuance of shares							
Movement of shares						21	21
Appropriation of available earnings							
Distribution to the shareholders paid relating to 2017					(534)		(534)
Net profit for the year					**546**		**546**
Balance as at 31 December	**92**	**18**	**3**	**1,542**	**630**	**(22)**	**2,263**

2017 in millions of Swiss francs	Share Capital	Statutory retained earnings	Additional paid-in capital	Voluntary retained earnings	Available retained earnings	Own shares	Total
Balance as at 1 January	**92**	**18**	**3**	**1,542**	**542**	**(45)**	**2,152**
Registered shares							
Issuance of shares							
Movement of shares						2	2
Appropriation of available earnings							
Distribution to the shareholders paid relating to 2016					(515)		(515)
Net profit for the year					**591**		**591**
Balance as at 31 December	**92**	**18**	**3**	**1,542**	**618**	**(43)**	**2,230**

Statutory capital reserves from capital contributions – additional paid-in capital are presented separately in equity. Any payments made out of these reserves are not subject to Swiss withholding tax, nor subject to income tax on individual shareholders who are resident in Switzerland.

9. Own Shares

The movements in own shares are as follows:

2018	Number	Price in Swiss francs High	Average	Low	Total in millions of Swiss francs
Balance as at 1 January	**23,838**				**43**
Purchases at cost	12,312	1,959.0	1,909.0	1,791.0	24
Sales and transfers at cost	(24,244)	1,843.5	1,843.5	1,843.5	(45)
Balance as at 31 December	**11,906**				**22**

2017	Number	Price in Swiss francs High	Average	Low	Total in millions of Swiss francs
Balance as at 1 January	**31,137**				**45**
Purchases at cost	25,750	1,920.2	1,843.6	1,690.0	47
Sales and transfers at cost	(33,049)	1,488.6	1,488.6	1,488.6	(49)
Balance as at 31 December	**23,838**				**43**

As at 31 December 2017 and 2018, there were no other companies controlled by Givaudan SA that held Givaudan SA shares.

As at 31 December 2018, William H. Gates III (13.86%), BlackRock Inc. (5.02%), MFS Investment Management (5.04%), Nortrust Nominees Ltd (nominee; 15.04%), Chase Nominees Ltd (nominee; 6.36%) and Messieurs Pictet & Cie (nominee; 4.54%) were the only shareholders holding more than 3% of total voting rights.

10. Board of Directors and Executive Committee Compensation

Information required by Swiss law, as per art. 663b bis CO, on the Board of Directors and Executive Committee compensation are disclosed in the Givaudan consolidated financial statements, Note 32.

11. Other information

On 14 December 2018, as part of its 2020 strategy to expand the capabilities of its fragrance business, Givaudan announced that it has entered into exclusive negotiations to acquire Albert Vieille SAS, a French natural ingredients company specialised in natural ingredients used in the fragrance and aromatherapy markets. With its origins dating back to 1920, and with more than 50 employees, Albert Vieille is based close to Grasse, in France, and has a manufacturing facility in Spain, with its products sold globally through a network of distributors.

As the closing of the acquisition is expected for 2019, these negotiations have no impact on the financial statements to December 2018.

Appropriation of available earnings and distribution from the statutory capital reserves from contributions – additional paid-in capital of Givaudan SA

Proposal of the Board of Directors to the General Meeting of Shareholders

Available earnings

in Swiss francs	**2018**	2017
Net income for the year	545,997,253	590,763,886
Balance brought forward from previous year	84,113,920	27,149,322
Total available earnings	**630,111,173**	**617,913,208**
2017 distribution proposal of CHF 58.00 gross per share		535,547,988
2018 distribution proposal of CHF 60.00 gross per share	554,015,160	
Total appropriation of available earnings	**554,015,160**	**535,547,988**
Distribution not paid on Treasury shares held by the Group		**1,748,700**
Amount to be carried forward	**76,096,013**	**84,113,920**

Statutory capital reserves from capital contributions – additional paid-in capital

in Swiss francs	**2018**	2017
Balance brought forward from previous year	3,322,955	3,322,955
Total additional paid-in capital	**3,322,955**	**3,322,955**
Amount to be carried forward	**3,322,955**	**3,322,955**

Deloitte.

Deloitte SA
Rue du Pré-de-la-Bichette 1
1202 Geneva
Switzerland

Phone: +41 (0)58 279 8000
Fax: +41 (0)58 279 8800
www.deloitte.ch

Statutory Auditor's Report

To the General Meeting of GIVAUDAN SA, Vernier

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Givaudan SA, which comprise the income statement, the statement of financial position for the year ended 31 December 2018, and notes, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements as at 31 December 2018, presented on pages 188 to 195, comply with Swiss law and the company's articles of incorporation.

Basis for Opinion

We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Report on Key Audit Matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Deloitte.

Valuation of Investments in Group companies

Key Audit Matter	How the scope of our audit responded to the Key Audit Matter
As described in Note 3 to the financial statements, the Company holds investments in Givaudan Group companies with a carrying value of CHF 4,666 million as of 31 December 2018, representing 85% of total assets. In accordance with Article 960 CO, each investment held is valued individually and reviewed annually for impairment indicators. Each investment showing another than temporary impairment indicator must be tested for impairment and an impairment would need to be recorded if the recoverable amount is lower than the carrying amount. The impairment test performed by Givaudan management is subject to judgment around the valuation method, key assumptions used and the susceptibility to the expected future market developments that could affect the profitability and positive cash flows of these entities. Accordingly, for the purposes of our audit, we identified judgement and estimates applied by Management on the valuation of these investments as representing a key audit matter.	We evaluated management's implementation of accounting policies and controls regarding the valuation of investments in Group companies. We evaluated the design and implementation of controls around the valuation of investments to determine whether appropriate controls are in place. We challenged the assessment of impairment indicators by the Company. We tested the valuations by critically assessing the methodology applied and the reasonableness of the underlying assumptions and judgments. We assessed the impairment testing models and calculations by: – checking the arithmetic accuracy of the impairment models and the extraction of inputs from source documents; and – challenging the significant inputs and assumptions used in impairment testing for investments in Givaudan Group companies, such as the ability of the Group companies to generate positive cash flows in the future. We validated the appropriateness and completeness of the related disclosures in Note 3 to the financial statements. Based on the procedures performed, we consider judgement and estimates applied by Management on the valuation of investments in Group companies to be reasonable.

Deloitte.

Responsibility of the Board of Directors for the Financial Statements

The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the entity'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 the Board of Directors either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located at the website of EXPERTsuisse: http://expertsuisse.ch/en/audit-report-for-public-companies. This description forms part of our auditor's report.

Report on Other Legal and Regulatory Requirements

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

Deloitte SA

Karine Szegedi Pingoud Licensed Audit Expert Auditor in Charge	Laetitia Cejudo Licensed Audit Expert

Geneva, 23 January 2019