Financial statements

» Due to rounding differences, figures or percentages may not add up to the total.

Consolidated statement of income

USD millions, except share information	Notes	2019	2018
Revenue from contracts with customers	2.1, 2.3	12,858	12,928
Other income	2.2	78	126
Revenue and other income		12,936	13,054
Raw materials, energy costs and freight expenses	2.4	(9,317)	(10,096)
Change in inventories of own products		(17)	144
Payroll and related costs	2.5	(1,180)	(1,207)
Depreciation and amortization	4.1, 4.2, 4.5	(922)	(807)
Impairment loss	4.7	(43)	(150)
Expected and realized credit loss on trade receivables	3.2	(7)	(13)
Other operating expenses	2.6	(460)	(523)
Operating costs and expenses		(11,946)	(12,652)
Operating income		989	402
Share of net income in equity-accounted investees	4.3	65	82
Interest income and other financial income	2.7	76	81
Foreign currency translation gain/(loss)	2.7, 6.1	(145)	(278)
Interest expense and other financial items	2.7	(182)	(153)
Income before tax		803	134
Income tax expense	2.8	(214)	6
Net income		589	141
Net income attributable to			
Shareholders of the parent		599	159
Non-controlling interests	5.2	(10)	(19)
Net income		589	141
Basic earnings per share [1)]		2.20	0.58
Weighted average number of shares outstanding [2)]	5.1	272,319,232	273,169,994

1) Yara currently has no share-based compensation that results in a dilutive effect on earnings per share.
2) Weighted average number of shares outstanding was reduced in 4th quarter 2019 due to share buy-back program.

Consolidated statement of comprehensive income

USD millions	Notes	2019	2018
Net income		589	141
Other comprehensive income that may be reclassified to statement of income in subsequent periods (net of tax)			
Currency translation adjustments		30	(222)
Hedge of net investments	2.8, 6.2	(9)	(41)
Net other comprehensive income that may be reclassified to statement of income in subsequent periods, net of tax		20	(263)
Other comprehensive income that will not be reclassified to statement of income in subsequent periods (net of tax)			
Currency translation adjustments [1)]		(24)	(126)
Net gain/(loss) on equity instruments at fair value through other comprehensive income	6.3	(2)	(5)
Remeasurement gain/(loss) on defined benefit plans	2.8, 5.4	(9)	(73)
Net other comprehensive income that will not be reclassified to statement of income in subsequent periods, net of tax		(35)	(203)
Total other comprehensive income, net of tax		(14)	(465)
Total comprehensive income, net of tax		576	(325)
Total comprehensive income attributable to			
Shareholders of the parent		585	(278)
Non-controlling interests	5.2	(10)	(47)
Total		576	(325)

1) Currency translation adjustments that will not be reclassified to statement of income are related to entities with functional currency NOK as these are not classified as "foreign operations" to Yara International ASA.

Consolidated statement of changes in equity

USD millions	Notes	Share Capital [1]	Premium paid-in capital	Currency translation adjust-ments	Equity instruments at FVOCI [2]	Cash flow hedges	Hedge of net invest-ments	Total other reserves	Retained earnings	Attri-butable to share-holders of the parent	Non-controlling interests	Total equity
Balance at 31 December 2017		66	(49)	(1,000)	-	(3)	(159)	(1,161)	10,369	9,225	280	9,505
IFRS 9 and IFRS 15 implementation effect		-	-	-	-	-	-	-	(4)	(4)	-	(4)
Net income		-	-	-	-	-	-	-	159	159	(19)	141
Total other comprehensive income, net of tax		-	-	(320)	(5)	1	(41)	(364)	(73)	(437)	(28)	(465)
Transactions with non-controlling interests	5.2	-	-	-	-	-	-	-	(7)	(7)	(6)	(13)
Transfer to retained earnings	6.3	-	-	-	2	-	-	2	(2)	-	-	-
Treasury shares [3]	5.1	-	-	-	-	-	-	-	(33)	(33)	-	(33)
Share capital increase in subsidiary, non-controlling interest	5.2	-	-	-	-	-	-	-	-	-	2	2
Dividends distributed	5.1	-	-	-	-	-	-	-	(219)	(219)	(2)	(221)
Balance at 31 December 2018		66	(49)	(1,319)	(2)	(3)	(199)	(1,523)	10,189	8,683	227	8,910
Net income		-	-	-	-	-	-	-	599	599	(10)	589
Total other comprehensive income, net of tax		-	-	7	(2)	-	(9)	(4)	(9)	(14)	-	(14)
Transactions with non-controlling interests	5.2	-	-	(54)	-	-	-	(54)	(97)	(151)	(137)	(288)
Treasury shares [4]	5.1	-	-	-	-	-	-	-	(83)	(83)	-	(83)
Dividends distributed	5.1	-	-	-	-	-	-	-	(203)	(203)	(2)	(205)
Balance at 31 December 2019		66	(49)	(1,367)	(4)	(2)	(209)	(1,582)	10,395	8,830	79	8,909

1) Par value NOK 1.70.
2) See note 6.3 Financial instruments.
3) As approved by General Meeting 8 May 2018.
4) As approved by General Meeting 7 May 2019.

Consolidated statement of financial position

USD millions	Notes	31 Dec 2019	31 Dec 2018
Assets			
Non-current assets			
Deferred tax assets	1, 2.8	484	407
Intangible assets	1, 4.2	1,031	1,052
Property, plant and equipment	1, 4.1	8,614	8,430
Right-of-use assets	4.5	428	-
Associated companies and joint ventures	4.3	970	1,027
Other non-current assets	4.6	414	420
Total non-current assets		11,940	11,337
Current assets			
Inventories	3.1	2,360	2,568
Trade receivables	3.2	1,564	1,601
Prepaid expenses and other current assets	3.3	553	741
Cash and cash equivalents	3.4	300	202
Non-current assets and disposal group classified as held-for-sale	7.2	9	206
Total current assets		4,785	5,319
Total assets		16,725	16,656

Consolidated statement of financial position

USD millions, except share information	Notes	31 Dec 2019	31 Dec 2018
Equity and liabilities			
Equity			
Share capital reduced for treasury stock	5.1	66	66
Premium paid-in capital		(49)	(49)
Total paid-in capital		17	17
Other reserves		(1,582)	(1,523)
Retained earnings		10,395	10,189
Total equity attributable to shareholders of the parent		8,830	8,683
Non-controlling interests	5.2	79	227
Total equity		8,909	8,910
Non-current liabilities			
Employee benefits	1, 5.4	498	485
Deferred tax liabilities	2.8	416	416
Other long-term liabilities	6.3	247	201
Long-term provisions	5.6	303	238
Long-term interest-bearing debt	5.3	2,698	2,776
Long-term lease liabilities	4.5	337	-
Total non-current liabilities		4,499	4,116
Current liabilities			
Trade and other payables	5.5	1,614	1,835
Prepayments from customers	2.1	399	343
Current tax liabilities	1, 2.8	140	63
Short-term provisions	5.6	72	55
Other short-term liabilities	6.3	101	88
Short-term interest-bearing debt	5.3	494	397
Current portion of long-term debt	5.3	398	824
Short-term lease liabilities	4.5	98	-
Liability associated with non-current assets and disposal group classified as held-for-sale	7.2	-	26
Total current liabilities		3,317	3,630
Total equity and liabilities		16,725	16,656
Number of shares outstanding [1]		271,040,624	272,697,830

1) Number of shares outstanding was reduced in 4th quarter 2019 due to share buy-back program.

The Board of Directors of Yara International ASA
Oslo, 17 March 2020

Geir Isaksen
Chairperson

Trond Berger
Board member

Hilde Bakken
Board member

Håkon Reistad Fure
Board member

Kimberly Lein-Mathisen
Board member

Adele Bugge Norman Pran
Board member

John Thuestad
Board member

Kari-Marie Nøstberg
Board member

Eva Safrine Aspvik
Board member

Rune Bratteberg
Board member

Geir O. Sundbø
Board member

Svein Tore Holsether
President and CEO

Consolidated statement of cash flows

USD millions	Notes	2019	2018
Operating activities			
Operating Income		989	402
Adjustments to reconcile operating income to net cash provided by operating activities			
Depreciation and amortization	4.1, 4.2, 4.5	922	807
Impairment loss	4.7	43	150
Write down inventory and trade receivables		12	11
Income taxes paid		(135)	(110)
Dividend from equity-accounted investees	4.3	166	155
Interest and bank charges received/(paid) [1]		(169)	(158)
(Gain)/loss on disposal	4.1, 4.2	(33)	(13)
Other		(4)	(3)
Working capital changes that provided/(used) cash			
Trade receivables		(5)	(209)
Inventories		171	(468)
Prepaid expenses and other current assets		(21)	(125)
Trade and other payables		(54)	249
Other interest-free liabilities		25	66
Net cash provided by operating activities		1,907	756
Investing activities			
Purchases of property, plant and equipment	4.1	(1,066)	(1,336)
Net cash outflow on business combinations	7.1	-	(648)
Purchases of other long-term investments	4.2	(30)	(58)
Proceeds from sales of property, plant and equipment		13	9
Net cash flow on divested assets		3	-
Proceeds from sales of other long-term investments		37	34
Net cash used in investing activities		(1,044)	(2,000)
Financing activities			
Loan proceeds [2]	5.3	538	1,602
Principal payments [2]	5.3	(920)	(464)
Payments of lease liabilities [3]	4.5	(108)	-
Purchase of treasury shares	5.1	(65)	(21)
Dividend	5.1	(203)	(219)
Net cash transfers from/(to) non-controlling interest	5.2	(1)	-
Net cash provided by financing activities		(758)	897
Foreign currency effects on cash and cash equivalents		(7)	5
Net increase/(decrease) in cash and cash equivalents		98	(341)
Cash and cash equivalents at 1 January		202	544
Cash and cash equivalents at 31 December [4]	3.4	301	202
Bank deposits not available for the use of other group companies	3.4	35	52

1) Including interest expenses on lease liabilities.
2) Loan proceeds and principal payments related to short-term borrowings for which maturity is three months or less, are presented net.
3) In 2018, cash flows related to operational leases according to IAS17 were included in "Net cash provided by operating activities".
4) Excluded expected credit loss provisions on bank deposits, which amounts to USD 0.9 million (2018: USD 0.4 million). See note 3.4 for more information.

Basis for preparation

Corporate information
Yara (the Group) consists of Yara International ASA and its subsidiaries. Yara International ASA is a public limited company incorporated in Norway. The Company's registered office is at Drammensveien 131, Oslo, Norway. The principal activities of the Group are described in note 2.3 Segment information, note 4.3 Associated companies and joint ventures, and note 4.4 Joint operations.

The consolidated financial statements consist of the Group and the Group's interests in associated companies and jointly controlled entities. Information on the Group's structure is provided in note 8.4 Composition of the Group. Information on other related party relationships of the Group is provided in note 8.1 Related parties

Statement of compliance
The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU) and effective as of 31 December 2019. Yara also provides additional disclosures in accordance with requirements in the Norwegian Accounting Act.

The consolidated financial statements have been prepared under the historical cost convention; modified to include revaluation to fair value of equity instruments, derivative financial instruments, contingent consideration and defined benefit plan assets.

The consolidated financial statements are presented in US dollars (USD). All values are rounded to the nearest USD million, except when otherwise indicated. The functional currency of Yara International ASA is Norwegian kroner (NOK).

Materiality judgments
These financial statements aim to provide useful financial information which meet the common information needs of its primary users. Materiality judgments are necessary to meet this objective, and Yara has made such judgments related to recognition, measurement, presentation and disclosures. With reference to the complete set of financial statements, information is considered material if omitting, misstating or obscuring it could reasonably be expected to influence decisions taken by primary users based on the information provided. The materiality judgments are reassessed at each reporting date and updated based on changed facts and Yara specific circumstances.

Basis of consolidation
The consolidated financial statements include Yara International ASA and entities controlled by Yara International ASA (its subsidiaries). Control is achieved when the Group has power over the investee, is exposed to, or has rights to, variable returns from its involvement with the investee, and has the ability to use its power to affect its returns. When the Group has less than a majority of the voting rights of an investee, it has power over the investee if the voting rights in practice are sufficient to unilaterally direct the relevant activities of the investee. The Group re-assesses if it controls an investee when facts and circumstances indicate that there are changes to one or more elements of control.

Consolidation of a subsidiary begins when the Group obtains control and ceases when the Group loses control. This means that income and expenses of subsidiaries acquired or disposed of are included in the consolidated statement of comprehensive income from the effective date of acquisition and up to the effective date of disposal, as appropriate. Total comprehensive income of subsidiaries is attributed to the owners of Yara International ASA and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

All intra group transactions, balances, income and expenses are eliminated in full upon consolidation. Accounting policies of subsidiaries are changed if necessary to ensure consistency with the policies adopted by the Group.

Profit or losses from transactions with associates and joint ventures are recognized in the Group's consolidated financial statements only to the extent of interest in the associate or joint venture that is not related to the Group.

Changes in the Group's ownership in subsidiaries that do not result in the Group losing control, are accounted for as equity transactions. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received, is recognized directly in equity and attributed to owners of the Company.

EU Directive 83/349
Yara GmbH & Co. KG with legal seat in Dülmen, Germany, and its directly and indirectly owned subsidiaries, are included in the consolidated financial statement of Yara International ASA as defined by sec. 291 HGB (German commercial code). For the purpose of sec. 264b HGB, Yara GmbH & Co. KG makes use of the relief to not disclose any independent financial statement and notes.

Foreign currency translation
Group companies
The individual financial statements of a subsidiary are prepared in the subsidiary's functional currency. In preparing the consolidated financial statements, the financial statements of foreign operations are translated using the exchange rates at year-end for statement of financial position items and monthly average exchange rates for statement of income items. Translation gains and losses, including effects of exchange rate changes on transactions designated as hedges of net foreign investments, are included in other comprehensive income as a separate component. The translation difference derived from each foreign subsidiary, associated company or jointly controlled entity, is reversed through the statement of income as part of the gain or loss arising from the divestment or liquidation of such a foreign operation.

Transactions and balances
In individual companies, transactions in currencies other than the entity's functional currency are recognized by applying the exchange rate at the date of transaction. Monetary items denominated in foreign currencies are translated using the exchange rate at the balance sheet date.

Non-monetary items that are measured in terms of historical cost in a foreign currency are not re-translated.

All foreign currency translations are recognized in the statement of income except for foreign currency translations on foreign currency borrowings that provide a hedge against a net investment in a foreign entity, or monetary items that are regarded as a part of the net investments. Such foreign currency translations are recognized as a separate component of other comprehensive income, including tax charges and credits attributable to these borrowings and monetary items. When the net investment is disposed of, or the monetary item is settled, they are recognized in the consolidated statement of income.

Significant accounting policies

Significant accounting policies are included in the relevant notes to the Consolidated Financial Statements as follows:

Accounting Policies	Note
Revenue recognition	2.1
Dividends received	2.7
Interest income	2.7
Income taxes	2.8
Inventories	3.1
Property, plant and equipment	4.1
Goodwill	4.2
Intangible assets	4.2
Research and development expenditures	4.2
Investments in associates and joint ventures	4.3
Investments in joint operations	4.4
Leases	4.5
Impairment of non-current assets other than goodwill	4.7
Own shares	5.1
Dividends paid	5.1
Employee benefit obligations	5.4
Provisions	5.6
Hedge accounting	6.2
Financial Instruments	6.3
Fair value measurement	6.3
Business combinations	7.1

New and revised accounting standards and interpretations

Adopted

The Group has applied the below amendments to IFRS that are effective for accounting periods beginning on or after 1 January 2019, and which are relevant for Yara. Except for IFRS 16 Leases, Yara has not identified significant impact to the Group's consolidated financial statements as a result of the mentioned amendments.

- IFRS 16 Leases (issued 2016)

  IFRS 16 replaced IAS 17 Leases and related interpretations from its effective date. Please find information on implementation effects in Note 4.5 Leases.

- IFRIC Interpretation 23 Uncertainty over Income Tax Treatments (issued 2017)

  The Interpretation addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of IAS 12 Income Taxes.

- Amendments to IFRS 9 Financial Instruments - Prepayment features with negative compensation

  Under IFRS 9, a debt instrument can be measured at amortized cost or at fair value through other comprehensive income, provided that the contractual cash flows are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to IFRS 9 clarify that a financial asset passes the SPPI criterion regardless of the event or circumstance that causes an early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract.

- Amendments to IAS 19 Employee Benefits

  When accounting for defined benefit plans under IAS 19, the standard generally required entities to measure the current service cost using actuarial assumptions determined at the start of the annual reporting period. Similarly, the net interest was generally calculated by multiplying the net defined benefit liability (asset) by the discount rate, both as determined at the start of the annual reporting period. The amendments specify that when a plan amendment, curtailment or settlement occurs during the annual reporting period, an entity is required to:

  1) Determine current service cost for the remainder of the period after the plan amendment, curtailment or settlement, using the actuarial assumptions used to remeasure the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event.

  2) Determine net interest for the remainder of the period after the plan amendment, curtailment or settlement using: the net defined benefit liability (asset) reflecting the benefits offered under the plan and the plan assets after that event; and the discount rate used to remeasure that net defined benefit liability (asset).

  The amendments apply prospectively to plan amendments, curtailments, or settlements occurring on or after the beginning of the first annual reporting period that begins on or after 1 January 2019.

Not yet effective

The below amendments to IFRS applicable to Yara have been issued but were not yet effective on the balance sheet date. Yara has at the date of the Board approval of these financial statements, not identified significant impact to Yara's consolidated financial statements as a result of these amendments.

- Amendments to IFRS 3 - Definition of a Business

  Amendments to IFRS 3 are issued to help entities determine whether an acquired set of activities and assets are a business or not. These amendments narrow and clarify the definition of a business, and permit a simplified assessment of whether an acquired set of activities and assets is a group of assets rather than a business. They are effective for annual periods beginning on or after 1 January 2020 and Yara will prospectively apply them to transactions that are either business combinations or asset acquisitions for which the acquisition date is on or after the effective date.

- Amendments to IAS 1 and IAS 8 - Definition of Material

  Amendments to IAS 1 and IAS 8 are issued to clarify the definition of material and how it should be applied by (a) including in the definition guidance that until now has featured elsewhere in IFRS standards; (b) improving the explanations accompanying the definition; and (c) ensuring that the definition of material is consistent across all IFRS standards. The amendments are effective for annual periods beginning on or after 1 January 2020 and Yara will apply them prospectively.

- Amendments to IFRS 9, IAS 39 and IFRS 7 - Interest rate benchmark reform
  Effective for annual periods beginning on or after 1 January 2020, amendments to IFRS 9, IAS 39 and IFRS 7 are issued to respond to the effects of the interest rate benchmark reforms on financial reporting. The amendments to IFRS 9 and IAS 39 provide temporary reliefs which enable hedge accounting to continue for affected hedges during the period of uncertainty before the interest rate benchmarks are amended as a result of the reforms. The amendments to IFRS 7 introduce new disclosure requirements. The amendments are applicable to Yara as the Group has fair value hedges exposed to the interest rate benchmarks NIBOR and STIBOR as well as net investment hedges exposed to USD LIBOR, ref. note 6.2 Hedge accounting. Yara closely monitors the outcome of relevant interest rate benchmark reforms to determine the effects for Yara. Please see note 6.1 Financial risks for more information on Yara's strategy to manage the risk exposure related to the interest rate benchmark reforms. Yara will implement the changes from their effective date, due to the endorsement by the European Union in January 2020.

- IFRS 17 Insurance Contracts
  IFRS 17 was issued in May 2017 and covers recognition, measurement, presentation and disclosure for insurance contracts. This new standard is expected to be effective for reporting periods starting on or after 1 January 2021, with comparative figures required. However, in June 2019 IASB issued an exposure draft proposing a deferral of the effective date for one year to 1 January 2022. Once effective, IFRS 17 will replace IFRS 4 Insurance contracts. Yara has not yet assessed implications of this new standard for the Group.

1 Key sources of estimation uncertainty, judgments and assumptions

General

The preparation of consolidated financial statements in accordance with IFRS and the use of Yara's accounting policies requires management to make judgments, estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. The estimates and underlying assumptions are based on historical experience and various other factors that are considered to be reasonable under the circumstances. Actual results may differ from these estimates. The estimates and the underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods. The judgments, estimates and assumptions made that may significantly differ from actual results and may lead to material adjustments to carrying amounts are listed below.

Key sources of estimation uncertainty

Impairment of assets

Property, plant and equipment

Yara has significant carrying amounts related to property, plant and equipment recognized in the consolidated statement of financial position. The value-in-use of some of these assets could be influenced by changes in market conditions in the regions where Yara carries out its business. Significant and prolonged adverse market conditions related for example to increases in natural gas cost and/or lower market prices for products sold could lead to temporary or permanent closures of production facilities. Such closures will be considered as an impairment indicator and an impairment test will be carried out. The outcome of such impairment tests may be that significant impairment losses are recognized in the statement of income. A reduction to the expected useful life of the assets can also lead to periods with higher depreciation expense going forward. Yara has carried out impairment tests for certain production facilities during 2019, mainly due to uncertain economic conditions in local markets. In November 2019, Yara announced the closure of the wholly-owned ammonia plant in Point Lisas, Trinidad and consequently production ceased in December 2019. The plant was fully impaired in 2016. No other facilities have been temporarily or permanently closed during 2019 due to adverse market conditions. Impairments recognized in prior periods have been evaluated for reversals. Total impairment recognized on property, plant and equipment in 2019 is USD 26 million. The carrying amount of property, plant and equipment at 31 December 2019 is USD 8,614 million. See note 4.1 and 4.7 for further details.

Goodwill and other intangible assets

Determining whether goodwill and other intangible assets are impaired requires an estimation of the value-in-use of the cash-generating units to which goodwill and other intangible assets have been allocated. The value-in-use calculation requires management to estimate the future cash flows expected to arise from the cash-generating unit and was a suitable discount rate in order to calculate present value. The carrying value of goodwill and other intangible assets at 31 December 2019 is USD 844 million and USD 187 million, respectively. Yara recognized impairment of goodwill of USD 3 million in 2019. Details of recognized goodwill are provided in note 4.2 and the impairment information, including sensitivity disclosures, is provided in note 4.7. Other intangible assets mainly comprises software, customer relationships and patent and trademarks either identified as part of the purchase price allocation of new business combinations or internally developed. See note 4.2 and 4.7 for further details.

Tax assets and liabilities

Yara recognizes deferred tax assets if it is probable that sufficient taxable income will be available in the future against which the temporary differences and unused tax losses can be utilized. Management has considered future taxable income in assessing whether these assets should be recognized, taking into consideration that stronger evidence for utilization is required for entities with a history of recent tax losses. The carrying amounts of deferred tax assets and deferred tax liabilities are USD 484 million and USD 416 million, respectively, at 31 December 2019. The amount of unrecognized deferred tax assets is USD 319 million, of which USD 173 million is related to unused tax losses in Brazil. Further information about deferred tax is provided in note 2.8.

Yara's operations in Brazil also generate tax credits. Recognition of these assets are based on Management assumptions related to future operating results and timing of utilization. Yara has recognized USD 213 million of such tax credits which are classified as non-current assets. Unrecognized amount of the same credits is USD 20 million which reflects the challenges of utilizing all credits through ordinary operations. Further information is provided in note 4.6.

Yara is engaged in a number of juridical and administrative proceedings related to disputed tax matters with uncertain outcome. Management is required to estimate the probability of cash outflow on a case-by case basis. The estimated maximum exposure on tax contingencies is approximately USD 284 million of which USD 151 million is related to tax cases in Brazil. The estimated maximum exposure of USD 284 million is excluding a separately disclosed case with the Dutch tax authorities. Further information is provided in note 5.6.

Yara has operations in multiple countries, each with its own taxation regime. Management is required to make judgments, estimates and assumptions in relation to tax treatments. In certain cases, it may be unclear how tax law applies to a particular transaction or circumstance until the relevant taxation authority or court takes a decision in the future. Consequently, this may affect tax assets or liabilities. When assessing whether uncertainty over tax treatments exists Yara will consider current tax law and regulations, general practice, decisions and rulings by the court or other relevant authorities as well as tax memorandum prepared by internal or external experts. In case of uncertain tax treatments Yara will consider the probability that a taxation authority will accept an uncertain tax treatment. When concluding that it is not probable that the taxation authority will accept an uncertain tax treatment, Yara will reflect the effect of uncertainty by using the method that provides better prediction resolution of uncertainty.

Employee benefits obligations

The fair value of pension liabilities is calculated based on several actuarial and economic assumptions. Any changes in the assumptions used would affect the estimated pension obligation. Changes in the discount rate have the most significant impact. The discount rate and other key assumptions are determined locally for each individual pension plan, based on the economic environment in which the plan is established. Assumptions are normally reviewed annually when the actuarial calculation is carried out, unless there are significant changes during the year. The carrying amount of the net pension and other long-term employee benefits liabilities at 31 December 2019 is USD 441 million. The gross pension and other long-term employee benefits liabilities have a carrying value of USD 2,241 million at the same date. Detailed information, including sensitivity disclosures, is provided in note 5.4.

Critical judgments in applying accounting policies

Assessment of influence and control and classification of joint arrangements

Management has used judgment in relation to the classification of Yara Freeport LLC DBA Texas Ammonia and classified it as a joint operation. The unit constructed an ammonia plant in the US which opened in April 2018. The company is owned 68% by Yara but controlled jointly with the other owner. The company has been classified as a joint operation because the partners have equal number of board representatives and because relevant activities that significantly affect the return on the investment requires approval of representatives from both partners. The same judgment have been made for the 50% owned Yara Pilbara Nitrates and the 49% owned Tringen, also on the basis of required consensus when making relevant decisions. See note 4.4 for further details on joint operations.

2 Results for the year

2.1 Revenues from contracts with customers

Overview and accounting policies

A description of the nature of external revenues in the Yara Group can be found in note 2.3 Segment information.

Under IFRS 15, Yara recognizes as revenue the agreed transaction price in a contract with a customer at the time when the Group transfers the control of a distinct product or service to the customer.

The nature of Yara's revenue recognition is categorized as follows:

Sale of fertilizer and chemical products

Yara sells fertilizer and chemical products to customers worldwide. Ordinary purchase orders are normally the contracts with the customer which create enforceable rights and obligations. Revenue is recognized when control of the products is transferred to the customer. This is normally determined by the incoterm used in the sales transactions. The use of incoterms varies between regions, markets and customers, but products are typically sold ex-warehouse.

Contracts with larger customers often include sales incentives leading to variable consideration amounts. Volume discounts are the dominant sales incentives used by Yara. These discounts may have prospective or retrospective effect. Volume discounts with retrospective effect are systematically accrued and recognized as reduction of revenue based on the best estimate of the amounts potentially due to the customer. If the discount cannot be reliably estimated, revenue is reduced by the maximum potential discount. Discount which qualify as material rights are accounted for as separate performance obligations.

Products are normally sold with standard warranties which provide protection to the customers that the product have the agreed-upon specifications. These standard warranties are accounted for using IAS 37 Provisions, Contingent Liabilities and Contingent Assets. The Group does not have any other significant obligations for returns or refunds.

The majority of sales in the Group have credit terms of less than 90 days. Normally customer contracts do not include a significant financing component.

Yara does not have significant incremental costs of obtaining or fulfilling contracts with customers which the Group expects to recover.

Freight/insurance services

Yara arranges delivery to the customer's location using different incoterms. When the Group uses incoterms which transfer the responsibility for the goods to the customer before the freight/insurance service is delivered (C-incoterms), Yara normally considers the freight/insurance service to be a distinct service which shall be accounted for as a separate performance obligation. This means that Yara allocates consideration to these freight/insurance services based on known or estimated standalone selling prices, and recognizes the corresponding revenue over time to the extent the freight/insurance service is performed. However, the timing effects are limited since the majority of deliveries to the customer's location are done within days. Shipping and handling activities that occur before customers take control of the goods are considered to be part of fulfilling the sale of the goods.

Other products and services

Other products and services include a number of different offerings including equipment and services to store or handle product, and technology offerings in Yara's Environmental Solutions Business. Revenues from sale of equipment are recognized upon delivery to the customer. Revenues from sale of services are recognized over time as the service is performed. Revenues from technology offerings in Yara's Environmental Solutions Business are recognized over time using the percentage of completion method if they meet the criteria for over time recognition in IFRS 15. The percentage of completion method is an input method (based on costs incurred) and provides a faithful depiction of the transfer of these offerings since it is reasonably possible to estimate the stages of project completion on an ongoing basis. Offerings which represent multiple element arrangements are analyzed to identify distinct goods or services that shall be accounted for as separate performance obligations.

Urea sales in India

The business combination of Tata Chemicals Limited's urea business in India was closed 12 January 2018. The acquired business manufactures and sells urea to dealers who in turn sell to farmers and retailers. Yara sells urea under a pricing scheme policy issued by the Government of India (GoI). This policy aims to promote balanced nutrient application and sustained agricultural growth by making urea available to farmers across India at affordable prices on a timely basis.

The price at which Yara can sell urea to registered dealers under the pricing scheme policy is regulated and determined by GoI. This price is generally less than the cost of production and GoI provides a compensation based on a predefined method considering the sales price set by GoI to be charged registered dealers, the cost for natural gas, other variable cost (including cost of bags, water, electricity and freight) and fixed cost.

Control of goods transfers at the time the registered dealer receives the goods. The consideration received is based on the dealer's receipt of goods and constitutes of the fixed sales price to be paid by the registered dealer and the estimated compensation to be paid by GoI. As Yara has the inventory risk and controls the goods until they are delivered to the registered dealers, the compensation from GoI is presented as revenue in the consolidated statement of income.

Disaggregation of external revenues by nature

USD millions	Fertilizer and chemical products	Freight/ insurance services	Other products and services	Total
2019				
Sales & Marketing	10,345	366	18	10,729
New Business	862	87	384	1,333
Production	657	68	59	784
Other and eliminations	-	-	12	12
Total	11,864	520	473	12,858
2018 Restated [1]				
Sales & Marketing	10,561	367	13	10,941
New Business	829	85	150	1,064
Production	782	64	67	913
Other and eliminations	1	-	9	9
Total	12,173	517	239	12,928

1) The 2018 segment figures have been restated according to the new segment structure. The Yara Group figures are unchanged.

Disaggregation of external revenues by product group

USD millions	2019	2018
Ammonia	949	1,140
Urea	2,710	2,864
Nitrate	1,872	1,811
NPK	4,131	4,165
CN	551	545
UAN	301	258
SSP	157	216
DAP/MAP	269	294
MOP/SOP	575	452
Other fertilizer and chemical products	870	945
Other products and services	473	239
Total revenues	12,858	12,928

Yara serves a large number of customers. No revenues from transactions with any single customer amount to ten percent or more of Yara's total revenues.

Disaggregation of external revenues by geographical area

USD millions	Europe	Brazil	Latin America ex. Brazil	Asia	North America	Africa	Total
2019							
Sales & Marketing	3,416	3,481	844	1,361	1,029	597	10,729
New Business	684	109	73	181	165	121	1,333
Production	148	75	31	243	287	-	784
Other and eliminations	12	-	-	-	-	-	12
Total	4,259	3,665	948	1,785	1,482	718	12,858
2018 Restated [1]							
Sales & Marketing	3,549	3,370	995	1,494	1,001	531	10,941
New Business	503	75	68	141	163	114	1,064
Production	128	97	31	311	346	-	913
Other and eliminations	9	-	-	-	-	-	9
Total	4,190	3,542	1,094	1,947	1,511	645	12,928

1) The 2018 segment figures have been restated according to the new segment structure. The Yara Group figures are unchanged.

Revenues from external costumers of an amount of USD 234 million (2018: USD 244 million) are attributed to Norway (Yara's country of domicile).

Customer contract balances and unsatisfied performance obligations

The timing of revenue recognition, billings and cash collections results in billed trade receivables, unbilled receivables (contract assets), and prepayments and deposits from customers (contract liabilities). Information on billed trade receivables can be found in note 3.2.

Unbilled receivables (contract assets) are limited and refer mainly to technology offerings in Yara's Environmental Solutions Business with revenue recognition over time in accordance with the percentage of completion method. For such offerings, billing generally occurs upon achievement of contractual milestones subsequent to revenue recognition. Contract assets are transferred to receivables when Yara has an unconditional right to consideration.

Prepayments and deposits from customers (contract liabilities) mainly refer to Yara's fertilizer sales in Brazil where prepayments up front of the fertilizer season is common practice to reduce price risk for the customers. Prepayments in Brazil are normally received less than 90 days before delivery of the goods. To a limited extent contract liabilities also refer to up-front payments on technology offerings in Yara's Environmental Solutions Business.

Unsatisfied performance obligations refers mainly to technology deliveries in Yara's Environmental Solutions Business. For other deliveries unsatisfied performance obligations which are part of contracts that have an expected value of one year or less are not disclosed. In addition, unsatisfied performance obligations are not disclosed when Yara's right to consideration corresponds directly with the value to the customer of Yara's performance completed to date.

USD millions	Notes	2019	2018
Contract assets			
Opening balance 01.01		42	14
Transferred to receivables in the period		(117)	(12)
Increase due to measure of progress in the period		113	40
Revenue recognized in the period from performance obligations satisfied in previous periods		-	-
Impairment		-	-
Currency translation effect		-	(1)
Closing balance 31.12	3.3	38	42
Contract liabilities			
Opening balance 01.01		343	265
Share of opening balance recognized as revenue in the period		(319)	(262)
Cash received not recognized as revenue in the period [1]		376	342
Currency translation effect		-	(1)
Closing balance 31.12		399	343
Unsatisfied performance obligations			
Initial contract price on signed contracts		621	593
Aggregate contract revenue incurred to date [2]		(420)	(138)
Transaction price allocated to unsatisfied performance obligations		201	456
Unsatisfied performance obligations to be recognized within			
1 year		149	296
2-3 years		52	160
Transaction price allocated to unsatisfied performance obligations		201	456

1) Presented net of amounts created and released within the same reporting period.
2) Based on the percentage of completion method.

2.2 Other income

Accounting policies

A white certificate is an instrument issued by an authorized body guaranteeing that a specified amount of energy savings has been achieved. Yara receives such instruments from voluntarily participating in the white certificate scheme in Italy. The white certificates under this scheme is tradable and Yara sells these instruments to energy producers in the scheme on a running basis. Yara recognizes the white certificates received at zero cost and recognizes a gain equal to the selling price once they are sold.

Compensation from insurance companies is recognized in profit and loss when it becomes a receivable. The compensation becomes receivable when it is "virtually certain" that the it will be received.

Please see separate notes referred to in the table below for the accounting for other specified items.

Specification

USD millions	Notes	2019	2018
Sale of white certificates		37	35
Insurance compensations		14	27
Commodity based derivatives gain/(loss)	6.3	13	4
Derecognition of deferred consideration related to GICS (former Galvani)	7.2	-	21
Change in fair value of contingent consideration related to santa Quiteria	7.2	-	15
Recognition of take-or-pay compensation from customer		-	15
Other		15	9
Total		78	126

2.3 Segment information

As part of Yara's crop nutrition focused strategy, Yara has simplified its operating model and changed its operating segments effective from 1 January 2019. Yara's new segment structure is comprised of three segments:

Sales & Marketing
New Business
Production

The new Sales & Marketing segment includes the former Crop Nutrition units, in addition to the lines of business of Base Chemicals, Industry Reagents and Animal Nutrition (excluding South Africa) which were transferred from the former Industrial segment.

The New Business segment includes the business units Environmental Solutions, Mining Applications, Animal nutrition South Africa and Industrial Nitrates from the former Industrial segment.

Yara has moved plants that are operating in local markets from the former Crop Nutrition segment to the Production segment. These plants are Babrala (India), Rio Grande (Brazil) and Ponta Grossa (Brazil). In addition, Yara has moved fertilizer Sales & Marketing activity in GICS and Cubatão previously reported within the Production segment to the new Sales & Marketing segment.

The operating segments presented are the key components of Yara's business. These segments are managed and monitored as separate and strategic businesses which are evaluated on a regular basis by Yara's Chief Executive Officer (CEO) as the Chief Operating Decision Maker.

Financial and operational information is prepared for each segment, and the information disclosed is the same as used by the CEO to assess performance and allocate resources.

A separate appendix containing restated segment figures for 2018 was published on 20 March 2019. The appendix is available in the Investor relations section on Yara.com. Due to the changes in the segment structure, new descriptions of the segments are presented below.

Sales & Marketing

The Sales & Marketing segment offers a comprehensive portfolio of nitrogen-based fertilizer including urea, urea ammonium nitrate (UAN), calcium ammonium nitrate (CAN), ammonium nitrates (AN), calcium nitrates (CN) and compound fertilizer (NPK) that contain all of the three major plant nutrients: nitrogen (N), phosphorus (P) and potassium (K) as well as foliar and fertigation solutions through micronutrients. The segment also sells phosphate and potash-based fertilizers, which to a large extent are sourced from third parties. In some markets the segment delivers equipment and services to store or handle products.

The variety of fertilizer products are mainly sold spot to distributors based on ordinary purchase orders and underlying frame agreements. To a certain extent the products are also sold directly to farmers, to co-operatives, and spot without underlying agreements. The composition and degree of customers and products sold differs between local and regional markets, and the off-take of product varies throughout the fertilizer seasons in the different markets.

In addition to offering nitrogen-based fertilizer, the Sales & Marketing segment offers products for animal nutrition and industry solutions. Animal nutrition deliveries include urea and phosphates that are used as raw materials for feed products in both agriculture and aquaculture. Industrial solutions include products such as ammonia, urea and nitric acid used as input factors for a large range of products and applications. These deliveries have normally less price volatility because of longer term contracts.

The volume sold is mainly purchased from the Production segment based on the arm's length principle. Consequently, the Sales & Marketing segment mainly increases Yara's margins through distribution, management of working capital, and Sales & Marketing activities, rather than manufacturing of product. The segment is therefore characterized by a high capital turnover, a relatively low EBITDA margin in relation to revenues, and a low ratio of property, plant and equipment to total assets compared to a production-oriented fertilizer operation.

New Business

The New Business segment focuses on developing, commercializing, and scaling up profitable businesses for the benefit of Yara. Its mandate is to grow ideas, to develop new businesses, and to create new revenues streams. The main businesses in the segment sell urea, technical ammonium nitrate and calcium nitrate for industrial applications within mining applications, environmental solutions and industrial nitrates. These products are based on Yara's core production outputs and the volume sold is mainly purchased from the Production segment based on the arm's length principle. The customer contracts are to a large extent medium to long-term contracts, however products are also sold spot based on ordinary purchase orders. In some markets the segment delivers equipment and services to store or handle products.

Yara's portfolio of environmental solutions includes total solutions for NOx abatement for industrial plants and transport at both land and sea. The main external revenues within this area are derived from the product AdBlue/Air1 a high concentration urea-based reagent used by heavy-duty diesel vehicles to reduce nitrogen oxide emission.

Production

The Production segment comprises the manufacturing plants producing ammonia, fertilizer and industrial products. About 90% of the sales in the segment are group internal sales. The remaining external sales mainly relate to Yara's global trade and shipping of ammonia.

The Production segment holds ownership interests in associates and joint arrangements. The investments in the joint arrangements Trinidad Nitrogen Company Ltd, Yara Pilbara Nitrates Pty Ltd and Yara Freeport LLC DBA Texas Ammonia are classified as joint operations, for which Yara consolidate its share of assets, liabilities, revenues and costs. The investments in Qatar Fertilizer Company ("QAFCO") and Libyan Norwegian Fertilizer Company ("LIFECO") are accounted for using the equity method of accounting.

The Production segment's operating results are highly influenced by volume output. In addition, operating results are strongly linked to its production margins. These are primarily driven by the price levels for ammonia, urea, nitrates, NPK, phosphoric acid, and the price level of energy and raw materials such as phosphate rock and potash. Operating results can also be strongly influenced by movements in currency exchange rates.

The fluctuation of the Production segment's operating results is similar to other fertilizer producers. It is typically less stable than the operating results of Yara's Sales & Marketing and New Business segments.

Other and eliminations

In the segment information, "Other and eliminations" consists mainly of cross-segment eliminations and Yara's headquarter costs. Profits on sales from Production to Sales & Marketing and New Business are not recognized in the Yara consolidated statement of income before the products are sold to external customers. These internal profits are eliminated in "Other and eliminations". Changes in "Other and eliminations" EBITDA therefore usually reflect changes in Production-sourced stock (volumes) held by Sales & Marketing and New Business, but can also be affected by changes in Production margins on products sold to Sales & Marketing and New Business as transfer prices move in line with arm's length market prices. With all other variables held constant, higher stocks in Sales & Marketing and New Business would result in a higher (negative) elimination effect in Yara's results, as would higher Production margins. Over time these effects tend to even out, to the extent that stock levels and margins normalize.

Consolidated statement of income

USD millions, except percentages	2019	2018 Restated [1]
External revenues and other income		
Sales & Marketing	10,748	10,968
New Business	1,334	1,063
Production	843	1,017
Other and eliminations	12	5
Total	12,936	13,054
Internal revenues and other income		
Sales & Marketing	174	160
New Business	3	3
Production	6,296	6,183
Other and eliminations	(6,473)	(6,346)
Total	-	-
Revenues and other income		
Sales & Marketing	10,922	11,128
New Business	1,337	1,067
Production	7,139	7,200
Other and eliminations	(6,461)	(6,340)
Total	12,936	13,054
Operating income [2]		
Sales & Marketing	528	427
New Business	160	103
Production	315	(35)
Other and eliminations	(14)	(93)
Total	989	402
EBITDA [2]		
Sales & Marketing	743	613
New Business	190	115
Production	1,140	856
Other and eliminations	22	(62)
Total	2,095	1,523
Effect on EBITDA of implementing IFRS 16 [3]		
Sales & Marketing	55	-
New Business	14	-
Production	39	-
Other and eliminations	10	-
Total	118	-
EBITDA on IAS17 basis [3]		
Sales & Marketing	688	613
New Business	176	115
Production	1,102	856
Other and eliminations	12	(62)
Total	1,977	1,523
ROIC (12-month rolling average) [2]		
Sales & Marketing	15.2%	14.4%
New Business	40.2%	32.9%
Production	3.1%	0.6%
Total [4]	6.6%	3.8%

1) The 2018 segment figures have been restated according to the new segment structure. The Yara Group figures are unchanged.
2) See "Alternative performance measures" section for reconciliation of alternative performance measures in the Yara Group.
3) The effect on EBITDA of implementing IFRS 16 and EBITDA on IAS 17 basis is provided for information purposes only.
4) A normalized operating cash requirement is employed in the ROIC calculation for Yara, but not for the segments. This effect explains the variance in ROIC between Yara and the segments. See "Alternative performance measures" section for more information.

Reconciliation of operating income to EBITDA

USD millions	Operating Income	Equity-accounted investees	Interest income and other financial income	Depreciation and amortization [1]	Impairment loss [2]	EBITDA
2019						
Sales & Marketing	528	3	62	144	5	743
New Business	160	2	1	24	3	190
Production	315	60	4	727	34	1,140
Other and eliminations	(14)	-	9	27	-	22
Total	989	65	76	922	43	2,095
2018 Restated [3]						
Sales & Marketing	427	5	67	86	28	613
New Business	103	1	1	10	-	115
Production	(35)	76	4	689	122	856
Other and eliminations	(93)	-	10	22	-	(62)
Total	402	82	81	807	150	1,523

1) Including amortization on excess value in equity-accounted investees.
2) Including impairment loss on excess value in equity-accounted investees.
3) The 2018 segment figures have been restated according to the new segment structure. The Yara Group figures are unchanged.

Consolidated statement of financial position

USD millions	2019	2018 Restated [1]
Total assets [2]		
Sales & Marketing	4,347	4,514
New Business	484	450
Production	11,412	11,478
Other and eliminations	483	213
Total	16,725	16,656
Current assets [2]		
Sales & Marketing	3,187	3,442
New Business	345	326
Production	1,429	1,894
Other and eliminations	(175)	(343)
Total	4,785	5,319
Non-current assets [2]		
Sales & Marketing	1,160	1,072
New Business	139	124
Production	9,983	9,584
Other and eliminations	658	557
Total	11,940	11,337
Equity-accounted investees		
Sales & Marketing	53	52
New Business	29	27
Production	887	947
Other and eliminations	1	1
Total	970	1,027
Investments [3]		
Sales & Marketing	71	308
New Business	4	9
Production	1,038	1,723
Other and eliminations	20	41
Total	1,134	2,080

1) The 2018 segment figures have been restated according to the new segment structure. The Yara Group figures are unchanged.
2) Assets excludes internal cash accounts and accounts receivable related to Group relief.
3) Investments comprise property, plant and equipment, intangible assets, equity-accounted investees and other equity investments. The figures presented are capitalized amounts, and may deviate from cash flow from investing activities due to timing of cash outflows.

Information about geographical areas

USD millions	Non-current assets [1] 2019	Non-current assets [1] 2018
Europe	4,512	4,334
Brazil	1,928	1,635
Latin America ex. Brazil	361	361
Asia [2]	2,405	2,407
North America	1,683	1,672
Africa	289	263
Total	11,178	10,671

1) The identification of non-current assets and investments is based on location of operation. Excluded from non-current assets are financial instruments, deferred tax assets, post-employment benefit assets, and rights arising under insurance contracts.
2) Yara is present in Asia (Qatar) through the investment in QAFCO which is accounted for by the equity method and represents USD 873 million (2018: USD 935 million) of the total non-current assets in Asia.

Non-current assets of an amount of USD 1,183 million (2018: USD 1,127 million) are attributed to Norway (Yara's country of domicile).

Information related to disaggregation of external revenues by geographical area, nature and product group can be found in note 2.1.

2.4 Raw materials, energy costs and freight expenses

USD millions	Notes	2019	2018
Raw material, energy costs and freight expenses			
Raw material and energy costs		(6,968)	(7,485)
Freight expense		(942)	(989)
Other production related costs		(1,407)	(1,622)
Total		(9,317)	(10,096)

In 2019, Yara provided for energy taxes of USD 32 million and calculated interest cost of USD 3 million after an internal review of a production facility's compliance with energy tax rules. When the taxation authority issued reassessed taxes and interest charges, these were in line with the provisions made. The taxes and interest charges were fully paid during 2019.

2.5 Payroll and related costs

USD millions	Notes	2019	2018
Payroll and related costs			
Salaries	8.2	(922)	(942)
Social security costs	8.2	(146)	(146)
Social benefits	8.2	(8)	(9)
Net periodic pension cost	5.4, 5.6, 8.2	(104)	(110)
Total		(1,180)	(1,207)

2.6 Other operating expenses

USD millions	Notes	2019	2018
Other operating expenses			
Selling and administrative expense		(217)	(244)
Expensed leases	4.5	(11)	(41)
Travel expense		(47)	(59)
Fees auditors, lawyers, consultants	8.3	(133)	(122)
Other expenses		(52)	(58)
Total		(460)	(523)
Research costs	4.2	(60)	(43)

2.7 Financial income and expenses

Accounting policies

Interest income is recognized in the statement of income as it is accrued, based on the effective interest method.

Dividends from investments are recognized in the statement of income when the Group has a right to receive the dividends.

Interest expense is recognized as it is accrued.

Capitalized interest expense refers to borrowing costs which are added to the cost of PP&E that take a substantial period of time to get ready for their intended use or sale ("qualifying assets") if they are directly attributable to the acquisition, construction or production of such assets.

Specification

USD millions	Notes	2019	2018
Net interest income on customer credits		56	63
Interest income, other		18	15
Dividends and net gain/(loss) on securities		2	3
Interest income and other financial income		76	81
Net foreign currency translation gain/(loss)	6.1	(145)	(278)
Interest expense		(197)	(187)
Interest expense on lease liabilities	4.5	(15)	-
Capitalized interest	4.1	55	60
Net interest on net long-term employee benefit obligations	5.4	(9)	(7)
Other financial expense		(15)	(19)
Interest expense and other financial items		(182)	(153)
Net financial income/(expense)		(251)	(350)

The foreign currency translation loss this year of USD 145 million comprised a loss of USD 76 million on the US dollar denominated debt positions and a loss of USD 69 million on internal positions in other currencies than USD. In 2018, the reported net loss of USD 278 million stemmed mainly from Yara's US dollar denominated debt positions.

2.8 Income taxes

Accounting policies

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year.

Deferred tax is recognized on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax base used in the computation of taxable profit. It is accounted for by using the liability method. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences, carry forward of unused tax credits, and any unused tax losses. However, deferred tax assets are recognized only to the extent these can be utilized against probable taxable profits.

Deferred tax assets and liabilities are not recognized if the temporary difference arises from goodwill, or from the initial recognition of other assets and liabilities in a transaction (other than in a business combination) that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries, associates and interests in jointly controlled entities, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests, are recognized only to the extent it is probable that sufficient taxable profits are expected to reverse in the foreseeable future to utilize the benefits of the temporary differences.

Current and deferred taxes are recognized as expense or income in the statement of income, except when they relate to items recognized directly in equity or in other comprehensive income. If the tax relates to items recognized in other comprehensive income or directly in equity, the tax is also recognized as other comprehensive income or directly in equity. Uncertain tax positions, for example from unresolved disputes with tax authorities, are provided for if there are probable cash outflows. In certain cases, it may be unclear how tax law applies to a particular transaction or circumstance until the relevant taxation authority or court takes a decision in the future. Consequently, this may affect tax assets or liabilities. When assessing whether uncertainty over tax treatments exists Yara will consider current tax law and regulations, general practice, decisions and rulings by the court or other relevant authorities as well as tax memorandum prepared by internal or external experts. In case of uncertain tax treatments Yara will consider the probability that a taxation authority will accept an uncertain tax treatment. When concluding that it is not probable that the taxation authority will accept an uncertain tax treatment, Yara will reflect the effect of uncertainty by using the method that provides better prediction resolution of uncertainty.

Yara implemented the new lease standard IFRS 16 on 1 January 2019. In tax jurisdictions where the tax deductions are based on rental payments, Yara has applied the requirements in IAS 12 to the leasing transaction as a whole. No temporary difference was recognized at inception of the new lease standard. Subsequently, deferred taxes arise due to timing differences between IFRS 16 lease cost and deductible rental payments.

The major components of income tax expense for the year ended 31 December:

USD millions	2019	2018
Consolidated statement of income		
Current taxes		
Current year	(224)	(78)
Prior years adjustment [1]	(40)	11
Total	(264)	(67)
Deferred taxes		
Deferred tax income/(expense) recognized in the current year	67	100
Adjustments to deferred tax attributable to changes in tax rates and laws	1	5
(Write-downs)/reversal of previous write-downs of deferred tax assets	(18)	(32)
Total	50	74
Total tax income/(expense) recognized in statement of consolidated income	(214)	6
Other comprehensive income		
Current tax		
Hedge of net investment	3	12
Total	3	12
Deferred tax		
Pensions	5	21
Total	5	21
Total tax income/(expense) recognized directly in other comprehensive income	8	33
Total tax income/(expense) recognized in comprehensive income	(207)	39

1) Income tax provision of USD 38 million is recognized based on a recent court ruling. See note 5.6.

Taxable income differs from net income before tax as reported in the income statement because it excludes items of income or expense that are taxable or deductible in future years (temporary differences). It also excludes items that are never taxable or deductible (permanent differences). The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the balance sheet date.

Reconciliation of Norwegian nominal statutory tax rate to effective tax rate

USD millions, except percentages	2019		2018	
Income before tax		803		134
Expected income taxes at statutory tax rate [1]	22%	(177)	23%	(31)
Tax law changes	(0.2%)	1	(2.8%)	4
Foreign tax rate differences	(2.6%)	21	(39.4%)	53
Unused tax losses and tax offsets not recognized as deferred tax assets	5.3%	(43)	44.8%	(60)
Previously unrecognized and unused tax losses and deductible temporary differences now recognized as deferred tax assets	(1.9%)	15	(18.7%)	25
Non-deductible expenses	1.3%	(11)	10.7%	(14)
Share of net income equity-accounted investees	(1.7%)	13	(14.0%)	19
Tax free income miscellaneous	(2.3%)	22	(17.5%)	24
Prior year adjustment [2]	5.1%	(41)	(8.1%)	11
Withholding tax	2.5%	(7)	11.4%	(15)
Other, net	(0.9%)	(9)	5.8%	(8)
Total income tax income/(expense)		(214)		6
Effective tax rate		26.7%		(4.8%)

1) Calculated as Norwegian nominal statutory tax rate of 22% (2018: 23%) applied to income before tax.
2) Income tax provision of USD 38 million is recognized based on a recent court ruling. See note 5.6.

Specification of deferred tax assets/(liabilities)

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities.

2019

USD millions	Opening balance	Charged to income	Changes in tax rate	Recognized in other comprehen-sive income	Acquisitions/ disposals	Foreign currency translation	Closing balance
Non-current items							
Intangible assets	(7)	(5)	1	-	(2)	-	(13)
Property, plant and equipment	(394)	(25)	(2)	-	(4)	(6)	(431)
Pensions	93	(2)	(2)	5	-	2	96
Equity securities	-	-	-	-	-	-	1
Other non-current assets	(156)	53	1	-	(3)	2	(103)
Other non-current liabilities and accruals	115	23	(1)	-	-	(1)	136
Total	(348)	43	(3)	5	(9)	(2)	(315)
Current items							
Inventory valuation	30	24	(2)	-	-	-	52
Accrued expenses	41	(3)	(6)	-	-	-	31
Assets classified as held for sale	0	1	-	-	-	-	1
Total	71	21	(8)	-	-	-	84
Tax loss carry forwards	582	3	1	-	-	26	612
Unused tax credits	5	(1)	-	-	-	-	4
Valuation allowance	(320)	(18)	12	-	-	7	(319)
Net deferred tax asset/(liability)	(9)	48	1	5	(9)	30	67

2018

USD millions	Opening balance	Charged to income	Changes in tax rate	Recognized in other comprehen-sive income	Acquisitions/ disposals	Foreign currency translation	Closing balance
Non-current items							
Intangible assets	(16)	13	-	-	(5)	1	(7)
Property, plant and equipment	(377)	(43)	2	-	(3)	27	(394)
Pensions	81	-	6	21	(2)	(12)	93
Equity securities	-	-	-	-	-	-	-
Other non-current assets	(115)	(61)	7	-	5	9	(156)
Other non-current liabilities and accruals	50	72	(1)	-	-	(5)	115
Total	(378)	(21)	14	21	(5)	21	(348)
Current items							
Inventory valuation	8	16	5	-	-	1	30
Accrued expenses	35	11	-	-	-	(3)	41
Total	42	27	5	-	-	(3)	71
Tax loss carry forwards	525	93	(16)	-	7	(27)	582
Unused tax credits	3	2	-	-	-	-	5
Valuation allowance	(324)	(32)	3	-	-	33	(320)
Net deferred tax asset/(liability)	(130)	69	5	21	2	24	(9)

Valuation allowance on deferred tax assets

USD millions	2019	2018
Unrecognized deferred tax assets are attributable to the following		
Tax losses	261	259
Deductible temporary differences	58	61
Total	319	320

Of the unrecognized deferred tax assets related to tax losses, USD 173 million is related to Brazil (2018: USD 178.8 million). Utilization of the tax loss carry forwards in Brazil is without time limitation but restricted to 30% of taxable income each year.

Specification of expiration of tax loss carry forwards

USD millions	2019
2020	6
2021	17
2022	9
2023	7
2024	2
After 2024	201
Without expiration	1,966
Total tax loss carry forwards	2,208
Deferred tax effect of tax loss carry forwards	612
Valuation allowance on tax loss carry forwards	(261)
Recognized in the statement of financial position	351

Yara's recognized tax losses carry forwards primarily relate to the business in Norway, France, Australia and Brazil, where tax losses are without expiration. The tax losses are mainly related to incurred currency losses, non-recurring transactions and loss from operations. The recognized tax assets for all units are all supported by estimated future profit level.

Deferred tax presented in the statement of financial position

USD millions	2019	2018
Deferred tax assets	484	407
Deferred tax liabilities	(416)	(416)
Net deferred tax asset/(liability)	67	(9)

Undistributed earnings of foreign subsidiaries and in foreign associates and joint arrangements is amounting to approximately USD 8.2 billion that for the main part can be distributed as tax-free dividends. For the expected part of dividend that cannot be distributed as tax-free income, a deferred tax liability of USD 2 million is recognized.

3 Current assets

3.1 Inventories

Overview

Inventories comprise finished goods, work in progress, raw materials and spare parts. Finished goods refer to own produced products and goods purchased for resale. Work in progress are partly processed, unfinished products. Raw materials include own produced raw materials, mainly ammonia and nitric acids, as well as raw materials purchased from external parties such as phosphate, potassium and other input factors used in the production. Spare parts include packing, operating and maintenance supplies. Inventories in stock in the New Business segment comprises environmental solutions, scrubbers for the maritime industry, feed phosphates, chemicals and other.

Accounting policies

Inventories are stated at the lower of cost, using weighted average, and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and other selling costs.

All amounts presented are net of write-downs. A write-down is recognized for the amount by which the carrying amount exceeds its net realizable value.

The cost of inventories comprises all costs of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. This include direct materials, direct labor, and an appropriate portion of production overhead, or the purchase price of the inventory. Yara is using the standard costing method for cost measurement which consider normal levels of materials and supplies, labor, efficiency and capacity utilization.

Spare parts held as inventories are spare parts which do not meet the criteria for being classified as Property, Plant & Equipment (PP&E).

Yara has internal sales from the production segment to the Sales & Marketing segment and the New business segment. These sales create internal margins which are eliminated and presented as "other and eliminations".

Inventory stock 2019

USD millions	Sales & Marketing	New Business	Production	Other and eliminations	Total 31 Dec 2019
Finished goods	1,090	47	300	(125)	1,312
Work in progress	2	3	42	-	47
Raw materials	411	5	319	(2)	733
Spare parts	5	1	261	-	267
Total	1,509	56	921	(126)	2,360

Inventory stock 2018

USD millions	Sales & Marketing	New Business	Production	Other and eliminations	Total 31 Dec 2018
Finished goods	1,160	47	353	(145)	1,416
Work in progress	4	3	47	-	54
Raw materials	458	8	378	(2)	842
Spare parts	7	1	248	-	256
Total	1,629	59	1,026	(147)	2,568

Write-down 2019

USD millions	Sales & Marketing	New Business	Production	Other and eliminations	Total 31 Dec 2019
Balance at 1 January	(11)	(1)	(17)	5	(24)
New write-downs recognized during the year	(31)	(1)	(24)	16	(39)
Write-downs reversed due to product sold	15	1	9	(14)	11
Write-downs reversed, other	12	1	10	-	23
Foreign currency translation gain/(loss)	-	-	-	-	-
Balance at 31 December	(15)	-	(22)	7	(30)

Write-down 2018

USD millions	Sales & Marketing	New Business	Production	Other and eliminations	Total 31 Dec 2018
Balance at 1 January	(20)	(1)	(13)	7	(27)
New write-downs recognized during the year	(19)	(2)	(48)	30	(40)
Write-downs reversed due to product sold	23	1	37	(32)	29
Write-downs reversed, other	5	-	7	-	12
Foreign currency translation gain/(loss)	-	-	1	-	1
Balance at 31 December	(11)	(1)	(17)	5	(24)

No inventories were pledged as security at end of 2019 or 2018.

3.2 Trade receivables

Accounting policies

Trade receivables are initially recognized according to IFRS 15 at the agreed transaction price in the contract with the customer. Subsequently they are measured at amortized cost using the effective interest method. Short-term receivables are normally not discounted.

In accordance with the expected credit loss model introduced by IFRS 9, Yara records lifetime expected credit losses on all trade and lease receivables (the simplified approach). The calculation of expected credit loss (ECL) is based on both historical and forward looking information, and is done on local unit level. When calculating ECL for trade receivables not yet due and trade receivables less than 90 days overdue, the last 5 years historical loss percentage is used as an allowance floor. Forward looking information is taken into account by assessing available information on local unit level which could indicate an expected future loss that is higher or lower than the experience, including regional macroeconomic information. Calculation of ECL for trade receivables more than 90 days overdue is based on a separate, individual assessment of each receivable.

A receivable is considered to be in default when it is overdue and enforcement activities have started. If there is a reasonable expectation that enforcement activities will not lead to recovery, the receivable is credit impaired. The receivable is written off when enforcement activities lead to objective evidence of the receivable being irrecoverable.

Specification

USD millions	Notes	2019	2018
Trade receivables		1,664	1,707
Allowance for expected credit loss		(101)	(106)
Total [1]	6.3	1,564	1,601

1) Of the total balance of USD 1,564 million about USD 752 million refers to credit insured receivables.

Movement in allowance for expected credit loss

USD millions	2019	2018
Balance at 1 January	(106)	(107)
Implementation effect IFRS 9	-	(3)
Lifetime expected credit losses recognized for existing business	(14)	(26)
Change in lifetime expected credit losses due to acquired business during the year	-	5
Amounts written off as uncollectible	6	12
Lifetime expected credit losses reversed	10	8
Foreign currency translation	2	6
Other changes	1	1
Balance at 31 December	(101)	(106)

Aging analysis of trade receivables at 31 December

Gross trade receivables

USD millions	Total	Not past due gross trade receivables [1]	Past due gross trade receivables			
			< 30 days	30 - 90 days	91 - 180 days	> 180 days
2019	1,664	1,315	138	59	27	125
2018	1,707	1,368	128	58	26	127

1) Included in this amount is USD 194 million receivables against the Government of India with no specific due date. Of this amount, USD 78 million is recognized more than 180 days ago. The accounting policy for recognition of urea sales in India is provided on page 97.

Net trade receivables

USD millions	Total	Neither past due nor impaired	Past due but not impaired			
			< 30 days	30 - 90 days	91 - 180 days	> 180 days
2019	1,564	1,313	137	55	25	32
2018	1,601	1,364	126	56	23	32

Impairment of trade receivables

USD millions	Total	Impairment on not past due receivables	Impairment on past due receivables			
			< 30 days	30 - 90 days	91 - 180 days	> 180 days
2019	(101)	(3)	(1)	(3)	(2)	(92)
2018	(106)	(3)	(2)	(1)	(3)	(95)

3.3 Prepaid expenses and other current assets

USD millions	Notes	2019	2018
Financial instruments:			
Foreign exchange contracts	6.1	-	5
Receivables and deposits	6.3	138	117
Contracts assets	2.1	38	42
Expected credit loss on other current assets	6.3	(1)	(1)
Total financial instruments		175	163
Non-financial assets:			
VAT and sales related taxes	4.6	123	146
Prepaid income taxes		63	197
Prepaid expenses		192	235
Total non-financial assets		378	577
Total	6.3	553	741

3.4 Cash and cash equivalents

Accounting policies

Cash and cash equivalents include bank deposits and monetary items which are due in less than three months. They are initially recognized at fair value and subsequently measured at amortized cost using the effective interest method. However they are normally not discounted as they are short-term items. On deposits, Yara records a 12-month's expected credit loss if there has not been any significant increase in credit risk since initial recognition (the general approach).

Specification

USD millions	Notes	2019	2018
Cash and cash equivalents	6.3	300	202

Expected credit loss provision on bank deposits is USD 0.9 million (2018: USD 0.4 million).

External bank deposits that are not available for use by the group at 31 December 2019 have a carrying value of USD 35 million (2018: USD 52 million), mainly related to cash held by joint operations. More information about bank deposits and dividend resolutions in subsidiaries with significant non-controlling interests is provided in note 5.2.

The average interest rate for liquid assets is approximately 1.7% as of 31 December 2019 (2018: 2.2%).

Yara minimizes its counterparty exposure by keeping its cash deposits in various Nordic and international banks with established limits for exposure towards each institution.

4 Non-current assets

4.1 Property, plant and equipment

Overview

Property, plant and equipment (PP&E) mainly refers to Yara's many production plants across the world which is reported in the Production Segment, and which hold assets such as land, buildings, machinery, equipment and periodic maintenance. In addition, they hold investments in self-constructed assets not yet in use and which are categorized as assets under construction. The remaining PP&E refers to assets in the Sales & Marketing Segment which mainly consists of buildings, machinery and equipment for bagging and blending of products, as well as terminals and warehouses. PP&E in the New Business Segment is very limited.

Accounting policies

An item of property, plant and equipment is recognized at cost if it is probable that the item will generate future economic benefits for Yara and the cost can be measured reliably. The carrying value of PP&E is comprised of the historical cost less accumulated depreciation and any impairment loss. If a legal or constructive obligation exists to decommission PP&E, the carrying value of the assets are increased with the discounted value of such obligations. Borrowing costs are added to the cost of assets that take a substantial period of time to get ready for their intended use or sale ("qualifying assets") if they are directly attributable to the acquisition, construction or production of such assets.

Depreciation of an asset begins when it is available for use. An asset is available for use when the asset is in the location and condition necessary for it to be capable of operating in the manner intended by management. Decommissioning obligations and borrowing costs added to the carrying amount of PP&E are depreciated over the useful life of the respective PP&E.

PP&E are depreciated on a straight-line basis over their expected useful life. Individual parts of PP&E with different useful lives are accounted for and depreciated separately. Expected useful lives and residual values are, unless immaterial, re-assessed annually.

Gain or loss due to sale or retirement of PP&E is calculated as the difference between sales proceeds and the carrying value, and is recognized in the statement of income.

An impairment is recognized if an asset's carrying value is higher than the recoverable amount. Non-current assets other than goodwill are tested for impairment whenever events or changes in circumstances indicate that such carrying amounts may not be recoverable. Please see note 4.7 Impairment of non-current assets.

Costs related to periodic maintenance of plants ("turnarounds") and recurring investments to extend the current plant performance for a longer period of time, are recognized as assets and depreciated on a systematic basis until the next periodic maintenance if cycle is more than one year on average. Major replacements and renewals are capitalized and depreciated separately based on their specific useful lives. Replaced assets are derecognized. Most of the remaining repair and maintenance costs are expensed as incurred.

Removal of mine waste materials ("stripping costs") in the production phase of existing mines are capitalized as a component of existing tangible mine assets when the activity gives improved access to ore. Stripping activity assets are depreciated on a straight-line basis over the useful lives of the underlying mine assets.

Capitalization of investments as self-constructed PP&E start when defined decision gates are met. These investments are then categorized as assets under construction until they are ready for use as intended by management. Once they are ready for use they are transferred to the applicable classes of PP&E and depreciation starts.

Government grants are recognized in the consolidated financial statement when the Group has reasonable assurance that it will comply with conditions attached to them and the grants will be received. Government grants that compensate the Group for the cost of an asset are deducted in the carrying amount of the asset, and recognized in the statement of income on a systematic basis over the useful life of the asset as a reduction to depreciation expense.

2019

USD millions, except percentages and year	Land	Buildings	Machinery and equipment	Periodic maintenance	Asset under construction	Vessels	Other	Total
Cost								
Balance at 1 January	321	2,245	9,730	486	1,591	280	73	14,726
Addition at cost	-	103	254	61	718	-	3	1,138
Derecognition	(1)	(20)	(132)	(76)	(16)	-	(3)	(249)
Transfers to asset held for sale	(2)	(5)	(3)	-	-	-	-	(11)
Other transfers [1]	-	167	333	17	(576)	-	-	(59)
Foreign currency translation	(8)	(23)	(64)	(8)	(56)	-	(2)	(161)
Balance at 31 December	309	2,466	10,117	481	1,660	280	72	15,384
						-		
Depreciation and impairment						-		
Balance at 1 January	(6)	(889)	(5,085)	(239)	(10)	(35)	(32)	(6,296)
Depreciation	-	(92)	(569)	(87)	-	(13)	(4)	(765)
Impairment loss [2]	-	(5)	(8)	(4)	(1)	-	-	(18)
Reversed impairment	-	-	3	-	-	-	-	3
Derecognition	-	17	101	65	-	-	4	187
Transfers to asset held for sale	-	4	2	-	-	-	-	5
Other transfers [3]	-	5	30	-	1	-	-	37
Foreign currency translation	-	12	50	15	-	-	1	77
Balance at 31 December	(6)	(948)	(5,476)	(250)	(10)	(48)	(32)	(6,770)
Carrying value								
Balance at 1 January	315	1,356	4,645	248	1,581	245	41	8,430
Balance at 31 December	303	1,517	4,641	231	1,650	232	40	8,614
Useful life in years	Indefinite	10 - 60	2 - 40	2 - 5		20	5 - 25	
Depreciation rate		2 - 6%	3 - 50%	15-50%		5%	5 - 20%	

1) Includes mainly transfers from assets under construction to other categories of PP&E due to completion of construction projects, which is netted off to 0 at total. The total balance refers to transfers from PP&E to other accounts. Of the balance, USD (62) million was transferred to Leases per IFRS 16 implementation. Please see note 4.5 Leases for more information.
2) Please see note 4.7 Impairment of non-current assets.
3) Total balance relates to transfers to Leases per IFRS 16 implementation. Please see note 4.5 Leases for more information.

Main changes in 2019

The main additions to assets under construction refers to construction of a new plant in Serra do Salitre (Brazil) and an expansion and modernization of the Rio Grande plant (Brazil).

The largest transfers from assets under construction to other categories of PP&E refer to construction projects related to the production of nitric acid in Köping in Sweden and an ammonia tank in Tertre in Belgium.

Idle items of property, plant and equipment

Yara Pilbara Nitrates owns a technical ammonium nitrate (TAN) plant next to Yara's ammonia plant in the Pilbara region of Australia. Please refer to Note 4.4 Joint operations and note 4.7 Impairment of non-current assets for more information.

Assets used as security

PP&E pledged as security was USD 27 million in 2019 (2018: USD 28 million).

Government grants

Government grants related to assets have been recognized as deduction to the carrying value by reducing "Addition at cost" with USD 12 million in 2019 (2018: USD 10 million).

Borrowing costs

The amount of borrowing cost capitalized amounted to USD 55 million in 2019 (2018: USD 60 million). The average rate for the borrowing cost capitalized was 4.7% in 1H and 3.7% in 2H 2019.

Compensations

Insurance compensations on PP&E recognized in the consolidated statement of income amounted to USD 3 million in 2019 (2018: USD 5 million).

Contractual commitments

Please find information on contractual obligations on PP&E in note 4.8 Committed future investments.

2018

USD millions, except percentages and year	Land	Buildings	Machinery and equipment	Periodic maintenance	Asset under construction	Vessels	Other	Total
Cost								
Balance at 1 January	235	2,153	8,699	430	2,097	280	121	14,016
Addition at cost	1	61	372	123	909	-	5	1,471
Derecognition	(2)	(9)	(200)	(79)	(3)	-	-	(293)
Acquisitions	119	54	309	-	21	-	-	504
Transfers to asset held for sale	(17)	(30)	(31)	(6)	(22)	-	(40)	(146)
Other transfers [1]	14	144	1,066	37	(1,277)	-	-	(15)
Foreign currency translation	(29)	(129)	(485)	(19)	(135)	-	(13)	(810)
Balance at 31 December	321	2,245	9,730	486	1,591	280	73	14,726
Depreciation and impairment								
Balance at 1 January	(7)	(767)	(4,948)	(251)	(10)	(22)	(44)	(6,049)
Depreciation	-	(108)	(549)	(78)	-	(13)	(7)	(755)
Impairment loss [2]	(3)	(83)	(35)	(5)	(4)	-	(5)	(136)
Reversed impairment	1	1	1	-	-	-	-	3
Derecognition	-	7	177	77	-	-	-	262
Transfers to asset held for sale	3	9	15	5	4	-	18	54
Other transfers	-	2	(3)	1	-	-	-	-
Foreign currency translation	-	50	257	13	-	-	5	325
Balance at 31 December	(6)	(889)	(5,085)	(239)	(10)	(35)	(32)	(6,296)
Carrying value						-		
Balance at 1 January	228	1,386	3,750	179	2,087	258	78	7,967
Balance at 31 December	315	1,356 [3]	4,645 [4]	248	1,581	245	41	8,430
Useful life in years	Indefinite	10 - 60	2 - 40	2 - 5		20	5 - 25	
Depreciation rate		2 - 6%	3 - 50%	15-50%		5%	5 - 20%	

1) Transfers from assets under construction to other categories of PP&E due to completion of construction projects.
2) Please see note 4.7 Impairment of non-current assets.
3) Includes net carrying value related to finance leases of USD 14 million in 2018.
4) Includes net carrying value related to finance leases of USD 12 million in 2018.

Main changes in 2018

Additions due to acquisitions refers mainly to the acquisition of Vale Cubatão Fertilizantes in Brazil and to the acquisition of Tata Chemicals' urea business in India, which comprises the Babrala urea plant and distribution business in Uttar Pradesh. Additions to assets under construction refer to the establishment of phosphate operations in Serra do Salitre (Brazil) and the expansion and moderation of the Rio Grande plant (Brazil).

The largest transfers from assets under construction to other categories of PP&E refer to construction projects related to the completion of the ammonia plant in Freeport, US as a joint venture with BASF and capacity expansions in Porsgrunn, Norway.

4.2 Intangible assets

Accounting Policies

Intangible assets with finite useful lives, and that are acquired separately, are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period. The effect of any changes in estimate is accounted for on a prospective basis. Intangible assets with indefinite useful lives, and that are acquired separately, are carried at cost less accumulated impairment losses.

Goodwill is initially measured at cost being the excess of the aggregate of the consideration transferred, the amount recognized for non-controlling interest, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net identifiable assets acquired and liabilities assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss. After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Useful lives are set as indefinite with no amortization as there is no foreseeable limit to the cash flows generated by goodwill. Instead of amortization, goodwill is tested for impairment. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to cash-generating units (CGUs) that are expected to benefit from the combination. For more information on impairment, please see note 4.7 Impairment of non-current assets. The Group's accounting policy for goodwill arising on the acquisition of an associate or joint arrangement is described in note 4.3 Associated companies and joint ventures.

Intangible assets other than goodwill are tested for impairment whenever events or changes in circumstances indicate that such carrying amounts may not be recoverable. Please see note 4.7 Impairment of non-current assets.

Expenditures on research activities are expensed in the period in which they incur. An internally-generated intangible asset arising from development is recognized if, an only if, all of the following have been demonstrated;

- The technical feasibility of completing the intangible asset so that it will be available for use or sale
- The intention to complete the intangible asset and use or sell it
- The ability to use or sell the intangible asset
- How the intangible asset will generate probable future economic benefits
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset
- Its ability to measure reliably the expenditure attributable to the intangible asset during its development

Where no internally-generated intangible asset can be recognized, development expenditures are recognized in profit or loss in the period in which they incur.

2019

USD millions, except percentages	Goodwill	Software	Other intangibles [1]	Total
Cost				
Balance at 1 January	883	185	408	1,475
Addition at cost	-	11	15	26
Derecognition	-	(1)	2	1
Other transfers	-	11	(10)	-
Foreign currency translation	5	(3)	(4)	(2)
Balance at 31 December	887	203	411	1,501
Amortization and impairment				
Balance at 1 January	(41)	(110)	(274)	(424)
Amortization	-	(23)	(22)	(46)
Impairment loss	(3)	-	-	(3)
Derecognition	-	-	(2)	(2)
Foreign currency translation	-	2	2	4
Balance at 31 December	(44)	(131)	(296)	(471)
Carrying value				
Balance at 1 January	842	75	135	1,052
Balance at 31 December	844	72	115	1,031
Useful life in years	Indefinite	3 - 5	5 - 40	
Amortization rate		20 - 35%	3 - 35%	

1) Other intangibles comprises mainly customer relationships, patents and trademarks, and intangible assets arising from development.

Expenditures on research and development activities

Expenditures on research and development activities are expensed in the period of the amount of USD 60 million (USD 43 million in 2018).

Assets used as security

No intangible assets were pledged as security in 2019 and 2018. See note 5.8 for more information.

2018

USD millions, except percentages	Goodwill	Software	Other intangibles [1]	Total
Cost				
Balance at 1 January	906	152	455	1,513
Addition at cost	-	27	19	46
Derecognition	-	(12)	(7)	(19)
Acquisition new companies	38	-	34	72
Transfer to asset held for sale	(7)	-	(30)	(37)
Other transfers	-	29	(31)	(1)
Foreign currency translation gain/(loss)	(55)	(12)	(32)	(99)
Balance at 31 December	883	185	408	1,475
Amortization and impairment				
Balance at 1 January	(41)	(102)	(264)	(407)
Amortization	-	(25)	(27)	(52)
Impairment loss [2]	(9)	-	(8)	(16)
Derecognition	-	11	6	17
Transfer to asset held for sale	7	-	6	13
Other transfer	-	-	1	1
Foreign currency translation gain/(loss)	2	6	13	21
Balance at 31 December	(41)	(110)	(274)	(424)
Carrying value				
Balance at 1 January	866	50	191	1,106
Balance at 31 December	842	75	135	1,052
Useful life in years	Indefinite	3 - 5	5 - 40	
Amortization rate		20 - 35%	3 - 35%	

1) Other intangibles comprises mainly customer relationships, patents and trademarks, and intangible assets arising from development.
2) Impairment loss on goodwill is mainly related to assets held for sale in GICS (former Galvani). For further information, see note 4.7.

4.3 Associated companies and joint ventures

Accounting policies

Associated companies are investments in companies where the Group has significant influence, but not control. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies. Significant influence normally exists when the Group holds directly or indirectly between 20% and 50% of the voting rights.

A joint arrangement is an arrangement in which two or more parties have joint control. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties' sharing control. A joint arrangement is either a joint operation or a joint venture. The classification depends upon rights and obligations of the parties to the arrangement. In a joint operation the parties have rights to the assets and obligations for the liabilities of the arrangement. In a joint venture the parties have rights to the net assets of the arrangement.

The share of results, assets and liabilities of associated companies and joint ventures are incorporated into the consolidated financial statements using the equity method of accounting. Under the equity method of accounting, the investment is initially recognized at cost and the carrying value is subsequently increased or decreased to recognize Yara's share of profit or loss of the investee after the date of acquisition. Any excess of the cost of acquisition of the Group's share of the net fair value of the identifiable assets, liabilities and contingent liabilities recognized at the date of acquisition is recognized as goodwill. The goodwill is included within the carrying amount of the investment. The equity-accounted investees are tested for impairment if indications of loss in value are identified. An impairment loss is recognized if the recoverable amount, estimated as the higher of fair value less costs to sell and value-in-use, is below the carrying value. Accounting policies of equity-accounted investees are changed where necessary to ensure consistency with the policies adopted by the Yara Group.

2019

USD millions	Balance at 1 January	Investments/ (sale, and assets held-for-sale), net and long-term loans	Share of net income in equity-accounted investees	Dividends/ Repayment of capital	Posted directly in equity	Foreign currency translation and other	Balance at 31 December
QAFCO	934	41 [1]	55	(158)	-	-	873 [2]
Others	93	2	10	(8)	-	1	97
Total	1,027	44	65	(166)	-	1	970

1) Profit attributable to foreign shareholder (Yara) is subject to tax in Qatar. The tax is paid by QAFCO, but refunded by Yara.
2) Included in the carrying amount is a USD 30 million accrual for income tax payable. Excluding the tax liability, the carrying amount is USD 903 million.

2018

USD millions	Balance at 1 January	Investments/ (sale, and assets held-for-sale), net and long-term loans	Share of net income in equity-accounted investees	Dividends/ Repayment of capital	Posted directly in equity	Foreign currency translation and other	Balance at 31 December
QAFCO	1,003	2 [1]	71	(150)	1	8	934
Others	94	-	11	(6)	-	(7)	93
Total	1,096	2	82	(155)	1	1	1,027

1) Profit attributable to foreign shareholder (Yara) is subject to tax in Qatar. The tax is paid by QAFCO, but refunded by Yara.

Ownership, sales and receivables/payables

USD millions, except percentages	Place of incorporation and operation	Percentage owned by Yara 2019 [1]	Sales from Investees to Yara Group [2]		Yara's current receivables/ (payables) net with investees	
			2019	2018	2019	2018
LIFECO	Libya	50.0%	-	(87)	(3)	(1)
Others			(22)	(23)	2	1
Total			(22)	(111)	(1)	-

1) Equals voting rights.
2) Included in raw materials, energy cost and freight expenses.

Business in equity-accounted investees

QAFCO (Qatar)

Yara is the owner of 25% of Qatar Fertiliser Company (S.A.Q.), ("QAFCO"), the owner and operator of a fertilizer complex in Mesaieed in Qatar. The remaining 75% of QAFCO is owned by Industries Qatar, a Doha Stock Market listed company, owned 51% by Qatar Petroleum, and the rest is shared between various Qatari funds and by general public. QAFCO operates six ammonia plants and six urea plants. QAFCO 5 and QAFCO 6, the two newest ammonia and urea trains, commenced production during 2012. Total production capacity for QAFCO is approximately 3.7 and 5.7 million tonnes of ammonia and urea, respectively. Yara is buying a significant amount of Urea produced by QAFCO from Muntajat, a Qatari company coordinating sales and marketing of chemical products produced in Qatar. QAFCO has 70% ownership in Gulf Formaldehyde Company, which produces and sells Urea Formaldehyde Concentrate, mainly used in the urea production process. In addition, QAFCO owns 60% of Qatar Melamine Company, which owns a melamine plant located at the QAFCO site, and with a capacity of 60,000 tonnes per year.

LIFECO (Libya)

Yara owns 50% in Libyan Norwegian Fertilizer Company ("LIFECO"), while Libya's National Oil Corporation (NOC) and the Libyan Investment Authority (LIA) each hold a 25% stake. LIFECO owns and operates two urea and two ammonia plants with nominal capacity of approximately 850,000 tonnes of urea and 120,000 tonnes of merchant ammonia per year. More than 90% of the ammonia and urea from LIFECO is exported. Yara impaired its investments in LIFECO in 2015. The plant has been operating since then, but with operating losses and limited load primarily due to insufficient gas supply and severe repeating technical problems of the plant due to the inability to bring foreign contractors to Libya as a result of the security situation. Yara is evaluating the security of the operation of the plants on an on-going basis in cooperation with the management and the other partners, with a view to protect the safety of the employees as well as the assets.

Financial information

The following table sets forth summarized unaudited financial information of Yara's associated companies and joint ventures based on a 100% combined basis. Yara's share of these investments, which is also specified above, is accounted for using the equity method. QAFCO and LIFECO are associated companies while others includes both joint ventures and associated companies.

Financial position

	31 December 2019			31 December 2018		
USD millions (unaudited, 100% basis)	QAFCO	LIFECO	Others	QAFCO	LIFECO	Others
Cash and cash equivalents	337	9	33	474	30	29
Current assets excluding cash and cash equivalents	480	112	195	514	108	173
Non-current assets	3,162	95	121	3,324	67	111
Current liabilities	(174)	(311)	(143)	(243)	(272)	(142)
Non-current liabilities	(137)	-	(28)	(81)	-	(18)
Non-controlling interest	(39)	-	(1)	(58)	-	(5)
Net assets	3,629	(95)	177	3,930	(67)	148
% Share of Yara	25%	50%		25%	50%	
Yara's share of total equity	907	(48)	92	983	(34)	85
Reclassified to assets held-for-sale	-	-	-	-	-	-
Tax effect of QAFCO [1]	(34)			(48)		
Losses not recognized by Yara [2]	-	48	-	-	34	-
Goodwill and fair value adjustments	-	-	6	-	-	8
Yara's share of total equity (carrying amount)	873	-	97	934	-	93

1) Tax effect is tax on profit attributable to Yara from QAFCO. The tax is paid by QAFCO, but refunded by Yara.
2) Losses in excess of Yara's interest in LIFECO.

Income statement

		2019			2018		
USD millions (unaudited, 100% basis)		QAFCO	LIFECO	Others	QAFCO	LIFECO	Others
Total operating revenues		1,563	23	697	1,711	91	511
Interest income		43	-	-	-	-	3
Depreciation, amortization & impairment loss		(289)	(48)	(34)	(289)	(21)	(12)
Operating income		278	(72)	105	457	(46)	70
Interest expense		(5)	-	(3)	-	-	-
Income tax expense		-	-	(7)	-	-	(4)
Non-controlling interest		3	-	(1)	(5)	-	(2)
Net income (100%)	A	320	(72)	94	512	(45)	66
% Share of Yara		25%	50%		25%	50%	
Yara's share of net income		80	(36)		128	(23)	11
Tax effect of QAFCO [1]		(28)			(50)		
Losses not recognized by Yara [2]		-	36		-	23	
Yara group elimination		3	-		(6)	-	
Currency translation effects [3]		-	-		(2)	-	
Yara's share of net income (as per books)		55	-	9	71	-	11
Net other comprehensive income that may be reclassified to profit and loss account in subsequent period		-	-	-	-	-	-
Net other comprehensive income that will not be reclassified to profit and loss account in subsequent period		(4)	-	-	6	-	-
Total other comprehensive income, net of tax (100%)	B	(4)	-	-	6	-	-
% Share of Yara		25%	50%		25%	50%	
Yara's share of other comprehensive income, net of tax		(1)	-		1	-	11
Total comprehensive income	C = A+B	316	(72)	94	518	(45)	66

1) Tax effect is tax on profit attributable to Yara from QAFCO. The tax is paid by QAFCO, but refunded by Yara.
2) Losses in excess of Yara's interest in LIFECO.
3) Certain financial information from equity-accounted investees is only collected once per year and translated at the average rate for the year. Deviations against figures reported and translated on a monthly basis can occur.

4.4 Joint operations

Accounting policies

In a joint operation the parties have rights to the assets and obligations for the liabilities of the arrangement. The Group recognizes in relation to its interests in a joint operation:

- Its assets, including its share of assets held jointly;
- Its liabilities, including its share of any liabilities incurred jointly;
- Its revenue from the sale of its share of the output arising from the joint operation;
- Its share of the revenue from the sale of the output by the joint operation and;
- Its expenses, including its share of any expenses incurred jointly.

The Group accounts for these assets, liabilities, revenues and expenses in accordance with the applicable IFRSs.

Yara Pilbara Nitrates Pty Ltd

Yara Pilbara Nitrates owns a technical ammonium nitrate (TAN) plant next to Yara's ammonia plant in the Pilbara region of Australia. The plant has an annual production capacity of about 330.000 metric tonnes of TAN and will primarily supply the mining operations in the region. The company is 50% owned by Yara and 50% by Orica. The plant has not been in production for most of the year 2019 to allow necessary rectification works to bring it to its intended capacity. The plant is scheduled to ramp up and commence operations in first half 2020. For further information please see note 4.1.

Trinidad Nitrogen Co. Ltd. (Tringen)

Tringen owns an ammonia complex consisting of two separate ammonia plants which are managed and operated by Yara under a management and operating agreement. In addition, Yara provides marketing support through sales agency agreements. The two plants have an annual production capacity of about 1 million metric tonnes of ammonia which is mainly exported to other markets. Yara has a 49% ownership stake in Tringen, the remaining 51% of Tringen is owned by National Enterprises Limited, which is a publicly listed Company, in which the Government of the Republic of Trinidad and Tobago has majority shareholding.

Yara Freeport LLC DBA Texas Ammonia

Yara and the BASF Group have constructed an ammonia plant at BASF's site in Freeport, Texas, US. Commercial operations commenced in 2018. BASF manages and operates the plant. The plant has an annual production capacity of about 750.000 metric tonnes of ammonia and each party off-takes ammonia from the plant in accordance with their ownership share. The company is 68% owned by Yara and 32% by BASF.

The following table shows the effect of consolidating joint operations according to IFRS 11 on Yara's financial statements. The table is based on unaudited financial information of Yara's joint operations based on their IFRS financial statements.

Financial position

	31 December 2019				31 December 2018			
USD millions (unaudited)	Yara Pilbara Nitrates	Tringen	Yara Freeport LLC DBA Texas Ammonia	Yara's share of consolidated Joint Operations	Yara Pilbara Nitrates	Tringen	Yara Freeport LLC DBA Texas Ammonia	Yara's share of consolidated Joint Operations
Assets								
Deferred tax assets	27	-	-	27	18	-	-	18
Intangible assets	-	-	-	-	-	-	4	4
Property, plant and equipment	370	76	283	729	333	79	293	706
Right-of-use asset	1	-	4	5				
Other Non-current assets	-	1	2	3	-	-	-	-
Total Non-current assets	399	77	288	764	351	79	297	727
Inventories	3	13	3	18	3	12	3	18
External trade receivables	-	-	11	11	6	-	18	24
Internal trade receivables	-	6	-	6	-	7	-	7
Prepaid expenses and other current assets	4	12	1	17	1	24	-	25
Cash and cash equivalents	10	7	15	32	41	7	30	78
Total Current assets	17	38	31	85	51	50	51	152
Total assets	416	115	319	850	403	129	349	881
Total equity	156	55	304	515	102	54	291	447
Liabilities								
Employee benefits	-	12	-	12	-	13	-	13
Deferred tax liabilities	-	7	-	7	-	8	3	11
Other long-term liabilities	46	-	-	46	45	-	4	49
Long-term provisions	25	-	-	25	15	-	-	15
External long-term interest bearing debt	-	8	4	12	-	10	20	31
Internal long-term interest bearing debt	162	-	-	162	218	-	-	218
Total non-current liabilities	233	27	4	264	278	31	27	337
External trade and other payables	24	17	11	51	11	15	31	56
Internal trade and other payables	1	2	-	3	1	1	-	2
Current tax liabilities	1	-	-	1	-	-	-	-
Short-term provisions	1	-	-	1	-	-	-	-
Other short-term liabilities	-	2	-	2	11	2	-	13
Bank loans and other short-term interest-bearing debt	-	12	-	12	-	25	-	25
Total current liabilities	27	33	11	71	23	44	31	98
Total equity and liabilities	416	115	319	850	403	129	349	881

Income statement

	2019				2018			
USD millions (unaudited)	Yara Pilbara Nitrates	Tringen	Yara Freeport LLC DBA Texas Ammonia	Yara's share of consolidated Joint Operations	Yara Pilbara Nitrates	Tringen	Yara Freeport LLC DBA Texas Ammonia	Yara's share of consolidated Joint Operations
Revenue and other income	7	79	145	231	3	92	94	189
Operating costs and expenses	(46)	(75)	(134)	(255)	(98)	(84)	(88)	(270)
Operating income/(loss)	(39)	4	11	(24)	(95)	8	6	(81)
Earnings before interest expense and tax	(38)	4	11	(23)	(95)	8	6	(81)
Income before tax	(49)	2	11	(36)	(103)	6	6	(91)
Income tax expense	8	(1)	-	7	14	(3)	-	5
Net income	(41)	1	11	(30)	(88)	4	6	(85)

4.5 Leases

Accounting policies

The Yara Group adopted IFRS 16 Leases for reporting periods beginning on and after 1 January 2019. IFRS 16 sets out the principles for recognition, measurement, presentation and disclosures of leases and replaces IAS 17 and other previous guidance on lease accounting within IFRS. The new standard represents a significant change in Yara's accounting for leases as a lessee, but keeps the accounting model for Yara as a lessor mainly unchanged.

IFRS 16 defines a lease as a contract that conveys the right to control the use of an identified asset for a period of time in exchange for consideration. For each contract that meets this definition, IFRS 16 requires lessees to recognize a right-of-use asset and a lease liability in the balance sheet with certain exemptions for short term and low value leases. Lease payments are to be reflected as interest expense and a reduction of lease liabilities, while the right-of-use assets are to be depreciated over the shorter of the lease term and the assets' useful life. The portion of lease payments representing payments of lease liabilities shall be classified as cash flows used in financing activities in the statement of cash flows. Payments for short term leases, low value assets and variable amounts not included in the measurement of the lease liability, shall be classified within operating activities.

Yara has applied the following policies and practical expedients available upon transition:

- For contracts already assessed under IAS 17, no reassessment of whether a contract is or contains a lease is done.
- The modified retrospective method.
- Prior year comparatives are not restated.
- Lease liabilities are measured at the present value of remaining lease payments, discounted using the incremental borrowing rate 1 January 2019.
- Right-of-use assets are measured at an amount equal to the lease liability, adjusted for prepaid lease payments.
- Leases for which the lease term ends during 2019 will be expensed as short term leases.

In addition Yara has taken advantage of the accounting policy choice in IFRS 16 to not apply the standard to leases of intangible assets. This means that leases of intangible assets will be accounted for by applying IAS 38 Intangible assets as before.

Significant lease liabilities for the Group comprise of leases of land, vessels, product storage assets (warehouses, terminals etc.), office buildings and other buildings. Other, less significant leases in Yara comprise of transportation and logistics assets, machinery and equipment, employee cars, IT infrastructure and office equipment. Yara has applied different accounting policies to different assets as follows:

- Yara expenses services and other non-lease components embedded in lease contracts for land, vessels, product storage assets, office buildings and other buildings. For leases of other assets, Yara capitalizes non-lease components subject to fixed payments as part of the lease.
- Yara expenses short term leases of machinery, office equipment and other equipment in accordance with the general short term exemption in IFRS 16. In addition Yara has expensed all other leases which expired in 2019 in accordance with the short term exemption available upon transition 1 January 2019.
- Yara expenses low value leases of office equipment and other equipment in accordance with the general low value exemption in IFRS 16.

Lease terms are determined by including extension and termination options which are reasonably certain to be exercised. Yara strives to consider all relevant facts and circumstances that create an economic incentive for Yara to exercise such options. However, use of significant judgment may be needed.

Yara discounts the lease liability by using incremental borrowing rates. However, the interest rate implicit in the lease may be used for selected lease arrangements which are material on Group level if the rate can be readily determined. The incremental borrowing rates are updated on a quarterly basis and are determined for all relevant currencies and lease terms taking into account the risk free rate, Yara's credit risk premium, local unit risk premium above Yara's, country risk premium and asset risk premium. Updated incremental borrowing rates are applied to new lease arrangements recognized during that quarter, as well as for modifications of existing leases.

As prior years comparatives are not restated, 2018 comparatives are prepared in accordance with IAS 17 and other previous guidance on lease accounting within IFRS. Under this previous guidance finance leases were accounted for as property, plant and equipment at the present value of minimum lease payments, or fair value if this is lower, and depreciated over the estimated useful lives of the assets or lease term if shorter. The corresponding finance lease liabilities were initially included in long-term debt and subsequently reduced by the amount of lease payments less the effective interest expense. Other leases were accounted for as operating leases with lease payments recognized as an expense over the lease terms.

Right-of-use assets

USD millions	Land	Vessels	Buildings	Product storage	Transportation & logistics	Other assets	Total
Carrying value							
Prepaid lease payments	10	-	-	2	-	-	13
Leases previously accounted for as PP&E (finance leases)	-	-	14	-	-	11	25
Leases capitalized due to implementation of IFRS 16	113	20	85	83	55	52	409
Balance ROU assets at 1 January 2019	123	20	99	85	55	63	447
Additions and lease modifications	30	22	12	13	31	6	114
Depreciation	(7)	(11)	(20)	(30)	(26)	(17)	(111)
Impairment	(17)	-	-	-	-	-	(17)
Foreign currency translation gain/(loss)	(1)	-	(2)	-	(1)	(1)	(4)
Balance at 31 December 2019	129	31	89	69	59	50	428

Lease liabilities

USD millions	Long term	Short term	Total
Carrying value			
Lease obligations under IAS 17 (finance leases)	17	6	23
New lease obligations due to implementation of IFRS 16	327	82	409
Balance lease obligations at 1 January 2019	344	88	432
Additions and lease modifications	116	-	116
Reclassification to short term	(119)	119	-
Lease payments	-	(108)	(108)
Foreign currency translation gain/(loss)	(4)	-	(4)
Balance at 31 December 2019	337	98	435

The weighted average incremental borrowing rate applied to lease liabilities at initial application 1 January 2019 was 3.8 percent. Interest expense on lease liabilities in the period amounts to USD 15 million.

Yara is committed to further lease arrangements not yet commenced as of 31 December 2019 of USD 14 million.

There are no material restrictions or covenants imposed by leases.

Maturity analysis of contractual undiscounted cash flows

USD millions	2019
2020	114
2021	88
2022	55
2023	42
2024	27
Thereafter	259
Total undiscounted lease liabilities at 31 December 2019	585

Leases expensed in the period

USD millions	2019
Expenses relating to variable fee leases not included in the measurement of lease liabilities	21
Expenses relating to short-term leases	43
Expenses relating to leased assets of low value, excluding short-term leases	3
Total leases expensed	67

Cash outflows in the period

USD millions	2019
Principal payments on recognized lease liabilities	108
Interest payments on recognized lease liabilities	13
Payments on leases expensed in the period	66
Total cash outflows for leases	187

IAS 17 operating lease commitments 31 Dec 2018 compared to IFRS 16 lease liability 1 January 2019

USD millions	1 January 2019
Operating, non-cancellable, nominal lease commitments disclosed according to IAS 17 as of year-end 2018	578
Discounted using the incremental borrowing rate at 1 January 2019	435
Finance lease liabilities recognized at 31 December 2018	23
Accounting policy choices for non-lease components and other adjustments	(64)
Recognition exemption for short term leases	(42)
Recognition exemption for low-value assets	(1)
Extension and termination options reasonably certain to be exercised	81
Lease liabilities recognized at 1 January 2019	432

IFRS 16 adjustment for each financial statement line item

Consolidated statement of income

USD millions	2019 as reported (IFRS 16)	Impact IFRS 16	2019 adjusted (IAS 17)	2018 as reported (IAS 17)
Other operating expenses	(460)	(118)	(578)	(523)
EBITDA [1)]	2,095	(118)	1,977	1,523
Depreciation and amortization	(922)	111	(811)	(807)
Operating income [1)]	989	(7)	983	402
Interest expense and other financial items	(182)	15	(166)	(153)
Income before tax [1)]	803	9	812	134

1) Impairment of ROU assets has not been assessed in the context of IAS 17.

IFRS 16 impact on EBITDA for the Group's operating segments is included in note 2.3 Segment information.

Consolidated statement of financial position

USD millions	1 Jan 2019 Opening balance (IFRS 16)	Impact IFRS 16	31 Dec 2018 as reported (IAS 17)	31 Dec 2019 as reported (IFRS 16)	Impact IFRS 16	31 Dec 2019 adjusted (IAS 17)
Property, plant & equipment	8,404	25	8,430	8,614	24	8,638
Right-of-use assets	447	(447)	-	428	(428)	-
Prepaid expenses and other current assets	729	13	741	553	12	565
Total assets	17,065	(409)	16,656	16,725	(392)	16,334
Long-term interest bearing debt	2,759	17	2,776	2,698	14	2,713
Long-term lease liabilities	344	(344)	-	337	(337)	-
Short-term interest bearing debt	391	6	397	494	6	500
Other short-term liabilities	88	-	88	101	(2)	99
Short-term lease liabilities	88	(88)	-	98	(98)	-
Total equity and liabilities	17,065	(409)	16,656	16,725	(417)	16,308

4.6 Other non-current assets

USD millions	Notes	2019	2018
Financial instruments:			
Equity instruments	6.1, 6.3	19	21
Receivables and deposits	6.3	83	56
Expected credit loss on long-term loans and receivables	6.3	(1)	(1)
Total financial instruments		100	76
Non-financial assets:			
Prepayments for long-term employee obligations	5.4	57	59
Prepayment for property, plant and equipment		43	72
Tax and VAT receivables		213	212
Total non-financial assets		313	344
Total		414	420

Long-term VAT receivables in Brazil

At year-end 2019, Yara has recognized USD 213 million of tax credits related to value added taxes in Brazil (2018: USD 207 million). This is included in the line "Tax and VAT receivables" in the table above. The Brazilian tax system is highly complex. There are a number of taxes by Federal, State and Municipal authorities and the legislation is subject to constant changes. The indirect taxes, such as value added taxes, are levied at Federal (PIS/COFINS) and State (ICMS) level. PIS/COFINS are charged over gross revenues, with a rate of 1.65% and 7.6%. However, fertilizer sales have a PIS/COFINS tax rate of zero. Yara accumulates credits over the acquisition of inputs and other costs (mainly bags, services and freights). These accumulated credits can be used to offset other federal taxes in many circumstances and projections indicate these will be consumed in the operation and/or refunded by the tax authorities in the following years, without any need of accounting adjustments.

The general rates for ICMS are 18%, 17%, 12%, 7% and 4%, but a temporary benefit granted for fertilizers and other industries reduces these rates to 0% on internal operations within most of the States and to 4,90% or 8,4% on interstate operations. The current legislation results in accumulation of ICMS tax credits in a number of States. Yara maintains a provision for expected discounts/losses where these credits are not expected to be realized in full through normal operations. The provision is USD 20 million at year-end 2019 (2018: USD 20 million).

4.7 Impairment on non-current assets

Accounting policies

Cash-generating units (CGUs) to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. Any impairment loss is allocated first to reduce the carrying amount of goodwill allocated to the CGU, and then to the CGU's other assets on a pro rata basis of the carrying amounts. An impairment loss recognized for goodwill is not reversed in a subsequent period. On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the gain or loss on disposal.

Non-current assets other than goodwill are tested for impairment whenever events or changes in circumstances indicate that such carrying amounts may not be recoverable. Indications that could trigger an impairment test include for instance:

- Significant underperformance relative to historical or projected future results
- Significant changes in the Group's use of the assets or the strategy for the overall business
- Significant negative industry or economic trends

An impairment loss is recognized to the extent that the assets' carrying value exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less cost to sell and value-in-use. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash inflows which are largely independent of the cash inflows from other assets or groups of assets (cash-generating units). In assessing value-in-use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate.

Previously recognized impairment losses, except for impaired goodwill, are reversed if the assumptions for impairment are no longer present. Impairment losses are only reversed to the extent that the asset's carrying value does not exceed the carrying value that would have been determined, net of depreciation, if no impairment had been recognized.

Recognized impairment loss

USD millions	2019	2018
Asset class		
Goodwill	(3)	(9)
Other intangible assets	-	(8)
Property, plant and equipment	(26)	(136)
Right-of-use assets	(17)	-
Total impairment of non-current assets	(46)	(151)
Reversal of impairment of non-current assets	3	3
Net impairment loss	(43)	(150)

USD millions	2019	2018
Segment split		
Production	(34)	(122)
Sales & Marketing	(5)	(28)
New Business	(3)	-
Other	-	1
Net impairment loss	(43)	(150)

Impairment charges in 2019

Impairment of property, plant and equipment is mainly related to an additional impairment on the Montoir plant in France with USD 10 million, and impairment of assets in GICS (former Galvani) previously classified as held-for-sale with USD 8 million. More information about the impairment in Galvani is provided in note 7.2.

The right-of-use assets for the Montoir plant have also been impaired with USD 17 million.

Impairment charges in 2018

Impairment of goodwill and intangible assets was mainly related to assets in GICS (former Galvani) reclassified to held-for-sale. More information is provided in note 7.2.

The largest impairments of property, plant and equipment was the partial impairment of the TAN plant in Pilbara, Australia, which accounts for USD 50 million of the total amount, and a USD 24 million impairment on Yara's production plants in Italy. Property, plant and equipment in GICS (former Galvani) reclassified to held-for-sale has also been impaired with USD 21 million. More information is provided in note 7.2.

The remaining impairment charge comprises a number of smaller impairments, of which the largest were related to an additional impairment on the Montoir plant in France with USD 13 million, and an impairment of a fertilizer distribution terminal in North America with USD 15 million.

Impairment testing

The mandatory impairment testing of cash generating units with allocated goodwill or assets with indefinite useful life are carried out during third quarter each year. Yara has also performed testing of other CGUs with various impairment indicators. The recoverable amounts for units with allocated goodwill have been determined based on "value-in-use".

Main assumptions

Discount rate

Discount rates used in the calculation of "value-in-use" reflect the current market assessment of the risks specific to each cash-generating unit. The discount rates were estimated based on the weighted average cost of capital for the industry. This rate was further adjusted to reflect the currency in which the CGU operates and market assessments of any risk specific to the CGU for which future estimates of cash flows have not been adjusted.

Currency rates and inflation

The value-in-use calculation is performed in the most relevant currency for the CGU. When converting foreign currency cash flows to the testing currency, Yara uses the forecasted annual average rates estimated by IHS based on the "purchasing power parity" (PPP) principle. The projections include long term inflation (CPI) in which each CGU is located.

Testing of Production plants

The valuation of Yara's production plants are based on Yara's long-term commodity and energy price forecasts. Due to the cyclicality of the fertilizer industry, Yara includes cash flow projections for a longer period than five years. Despite a relatively steady growth in market demand, history shows that there are periods with oversupply. Yara's internal commodity forecasts reflect its assessment of the supply/demand balance in the short to medium term. After a period of maximum eight years, all the main commodity sales price assumptions reflect an annual nominal growth that is not exceeding the relevant inflation rates. The main assumptions for the impairment testing of Yara's plants are:

- Fertilizer prices
  The urea price is the most important assumption when testing nitrogen fertilizer plants for impairment, as urea is the global price setter for commodity nitrogen. Yara's nitrate and NPK prices are estimated using urea as the base adding the estimated premiums on top of the commodity value of the nutrient. These premiums reflect an agronomic value-add of the products, and the estimated premiums for each plant are based on historically achieved premiums above the Yara average premium in main markets. For both NPK and nitrates, internally developed forecasts are used since there are no active forward markets for these products. External market intelligence reports are used as one of many input factors.

- Ammonia prices
  For a number of Yara's plants, the ammonia price is a key assumption for calculating the value-in-use. Some plants are net buyers of ammonia, in which case increased ammonia prices has a negative impact on earnings while other plants are net sellers of ammonia and these plants will benefit from higher ammonia prices. Internally developed price forecasts

are used since there is no active forward market for ammonia. External market intelligence reports are used as one of many input factors.

- Natural gas purchase prices
  Natural gas is the most important cost factor for several of Yara's production plants. Yara maximizes the use of observable gas market input for the purpose of impairment testing. For certain regions, where no liquid market for natural gas exists, Yara prepares internal forecasts based on the expected supply/demand balance.

- Production reliability
  Production reliability is important for the plants' profitability as this impacts both the production volume and the energy consumption factor (energy per tonne produced). The reliability assumption is plant specific, taking into consideration the historical experienced reliability and implemented improvement initiatives.

- Capital expenditures
  Ammonia and finished fertilizer plants require significant maintenance investments. The estimated amounts reflect past experience and plant specific knowledge. To the best of management's judgment, estimated capital expenditures do not include capital expenditures that enhance the current performance of assets, and related cash flows have been treated consistently.

Testing of Sales & Marketing and New Business units

Yara Sales & Marketing markets and distributes a complete range of crop nutrition products, technologies and knowledge globally. The New Business segment develops and markets environmental solutions and essential products for industrial applications. By combining knowledge with the product, both segments are able to create value over and above the commodity value of the product. The premiums and earnings generated in these two segments are generally more stable than in the Production segment, which is exposed to price volatility on both sales prices and input costs. Management forecasts are used for a period not exceeding five years with the first year derived from the CGU's business plan. After a period of five year, Yara uses a steady growth rate that is not exceeding the growth for the products, industry or countries in which the CGUs operate. The growth rate is maximum 2% (nominal) after year five.

Cash generating units with goodwill

Goodwill acquired through business combinations has been allocated to these CGUs, presented together with the applicable discount rates used for the impairment testing:

		Goodwill		Discount rate pre-tax	
USD millions, except percentages	Segment	2019	2018	2019	2018
Production Belle Plaine (Canada)	Production	270	259	9.4%	10.5%
Pilbara Ammonia (Australia)	Production	111	111	8.5%	9.1%
Finland	Production	89	90	7.6%	7.7%
Ammonia trade (Switzerland)	Production	55	55	7.4%	8.9%
Yara Dallol (Ethiopia)	Production	-	-	13.8%	14.8%
Other Production [1]	Production	8	8		
Sales & Marketing segment allocation	Sales & Marketing	83	83	8.6%	11.2%
Brazil	Production / Sales & Marketing	81	84	14.2%	14.5-16.3%
Sales & Marketing Belle Plaine (Canada)	Sales & Marketing	15	15	9.3%	9.8%
Latin America	Sales & Marketing	14	15	16.8%	17.3%
India	Production / Sales & Marketing	34	35	11.1%	11.7%
Other Sales & Marketing [1]	Sales & Marketing	53	47		
Environmental Solutions Stationary	New Business	5	8	9.8%	10.2%
Environmental Solutions Maritime	New Business	18	18	7.8%	8.3%
Other New Business [1]	New Business	8	14		
Total		844	842		

1) Goodwill presented within "Other" per segment are allocated to various cash-generating units but presented together due to materiality.

Sensitivities for main CGUs with allocated goodwill

Production Belle Plaine (Canada)

The Production site has one ammonia plant, one nitric acid plant and one urea granulation plant, with an annual production capacity of 0.7 million tonnes ammonia, 0.1 million tonnes nitric acid, 1.1 million tonnes urea and 0.3 million tonnes UAN. The majority of the ammonia and nitric acid produced is used in the production of UAN and granular urea, but some of the ammonia is sold for agricultural purposes during peak ammonia seasons. The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Pilbara Ammonia (Australia)

This is an ammonia plant located in Western Australia with an annual production capacity of approximately 0.8 million tonnes. The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Finland

Finland has several production sites. The Siilinjärvi site produces mainly NPK fertilizers and phosphoric acid, but also other industrial chemicals. It consists of several plants in addition to a mine. Uusikaupunki has three nitric acid plants as well as two fertilizer plants producing for the Finnish market and for export. Kokkola produces mainly potassium sulfate for the Mediterranean and Chinese markets and feed phosphates for markets worldwide. The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Ammonia Trade (Switzerland)

The global ammonia trade and supply unit is supplying and/or off-taking the necessary ammonia volumes for Yara's production plants. The CGU also includes five Yara owned LPG carriers. The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Yara Dallol (Ethiopia)

The company is developing a potash resource in Dallol in the Danakil Depression of Ethiopia. In February 2015, Yara announced that an independent study identified an annual production of 0.6 million tonnes sulphate of potash (SOP) over 23 years from the reserves. Yara signed a mining agreement with the Ethiopian authorities in 2017. The CGU has a remaining carrying amount of USD 218 million. The cash inflow for this project starts several years in to the future and there are multiple uncertainties related to the project's profitability, mineability of the reserves, financing, and necessary governmental permits and agreements. The project is currently on hold, while working on a structural solution for the next stage of development of the project. Negative impacts on any of the above risks or failure to ensure a structural solution, could result in a decision to stop the project, and a resulting impairment loss.

Sales & Marketing segment allocation

The goodwill in relation to fertilizer trade and supply is tested on Sales & Marketing segment level since the organization is serving all business units within the segment. The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Brazil

The CGU covers several aspects of fertilizer production and distribution, including phosphate mining, production of Single Super Phosphate (SSP) as well as blending and distribution of fertilizers, delivering approximately 9 million tonnes of fertilizers and covering approximately one fourth of the Brazilian market demand. The main production and blending assets comprised by the CGU are the Salitre plant and the Rio Grande plant. The Salitre plant is not operational at the end of 2019. Expected completion is during the second half of 2021. After finalization of the construction, the Salitre plant, including the mine, will have an annual production capacity of approximately 1–1.2 million tonnes of phosphate rock and 1 million tonnes of finished fertilizer (SSP equivalents), in addition to a blending capacity of approximately 1 million tonnes. Currently, The Rio Grande plant has a production capacity of 0.8 million tonnes of finished fertilizer (NPK and SSP depending on market demand), in addition to a blending capacity of approximately 1.6 million tonnes. However, there is an ongoing expansion project at the Rio Grande plant, which is expected to be finalized during the end of 2020. After finalization of the expansion project, the Rio Grande plant will have an annual production capacity of approximately 1.1 million tonnes of finished fertilizer (NPK and SSP depending on market demand), in addition to a blending capacity of approximately 2.2 million tonnes.

CGU Brazil comprises the former Crop Nutrition Brazil and Production GICS (former Galvani). During 2019, a reassessment of the CGU has taken place, resulting in these two former CGUs being combined into one. The triggering event for the reassessment was the acquisition of the 40% non-controlling interest. More information about the acquisition is provided in note 7.2. As a result of the acquisition, Yara has been able to fully integrate the GICS (former Galvani) business into the value chain, which would not have been possible with the previous partnership arrangement. Going forward the main asset of the former Galvani business, the Salitre plant, will channel more than half of its output of phosphate rock into the former Crop Nutrition business, and thereby replacing raw material volumes that were sourced externally or from other Yara plants under the previous partnership arrangement. As a result of the full vertical value chain integration, the two former CGUs are from now on considered as one.

The CGU's value-in-use is significantly higher than the carrying amount. No reasonable possible change in any of the key assumptions would cause the unit's recoverable amount to be lower than the carrying value.

Latin America

Business unit Latin America comprises 14 blending units with a total capacity of around 2 million tonnes, and a distribution network that includes Mexico, Guatemala, Costa Rica, Panama, Colombia, Ecuador, Peru, Bolivia, Chile and Argentina. The production facility in Cartagena has one ammonia plant, three nitric acid plants, one NPK plant, three ammonium nitrate solution units and one calcium nitrate plant. The CGU has a carrying amount of USD 573 million and a value-in-use that is 25% higher. The business plan for 2020 is the most important input factor, together with the discount rate and the annual growth rate. An isolated reduction to the estimated EBITDA during the projected period of 14%, a reduction to the terminal growth rate after year five of 5 percentage points or an increase to the post-tax discount rate of 3 percentage points would reduce the headroom to nil.

India

Yara acquired Tata Chemicals Limited's urea business in India on 12 January 2018 which included the Babrala urea plant and the related distribution business. The plant produces 0.7 million tonnes ammonia and 1.2 million tonnes urea. The CGU includes Yara's preexisting Crop Nutrition activity. The CGU has a carrying amount of USD 455 million and a value-in-use that is 36% higher. The premium product sales growth is the most important assumption together with the discount rate. The premium product sales growth is estimated for the first five years and a terminal growth of 2% has been used in the valuation model. Should the estimated premium product sales growth not materialize, and the growth from 2020 only be 2%, it would trigger an impairment of approximately USD 70 million. An isolated increase to the post-tax discount rate of 3 percentage points would reduce the headroom to nil.

Sensitivities for main CGUs with no allocated goodwill

Yara has performed testing of several CGUs with impairment indicators. The impairments recognized during 2019 are explained above.

Some of the CGUs that were tested based on impairment indicators presented low headroom between the recoverable value, calculated based on value-in-use, and their carrying values. The main CGUs that are sensitive are described below:

Production Yara Pilbara Nitrates

The joint operation Yara Pilbara Nitrates owns a TAN plant in Australia. Carrying value of the CGU is USD 359 million, representing Yara's 50% ownership stake. The plant has not been in production for most of the year 2019 to allow necessary rectification works to bring it to its intended capacity. The plant is scheduled to ramp up and commence operations during the first half of 2020. An impairment of USD 50 million was recognized in 2018, and the investment is still highly sensitive for additional impairments at the end of 2019. The key assumptions are the TAN margin above ammonia cost, which is estimated for the TAN market in Western Australia, and the discount rate (9.6% on pre-tax basis). An individual reduction to the margin above ammonia cost of 10% would trigger an additional impairment of USD 79 million. An increase in the post-tax discount rate of 1 percentage point would trigger an additional impairment of USD 57 million.

Production Italy

Production Italy comprises two sites, with an annual production capacity of 0.6 million tonnes ammonia, 0.4 million tonnes nitrates, 0.6 million tonnes urea and 0.4 million tonnes NPK. The CGU has a carrying value of USD 251 million. An impairment of USD 24 million was recognized in 2018, and the CGU is still highly sensitive for additional impairments at the end of 2019. The projected fertilizer prices, natural gas purchase price and the discount rate (10.4% on pre-tax basis) are the key assumptions. An individual reduction to the fertilizer prices of 10% for all years would trigger an additional impairment of USD 178 million. An increase in the natural gas purchase price of 10% would trigger an additional impairment of USD 164 million. An increase in the post-tax discount rate of 1 percentage point would trigger an additional impairment of USD 1 million.

Production Tertre

Yara's production site in Tertre, Belgium comprises one ammonia plant, one nitric acid plant and one nitrates plant, with an annual production capacity of 0.4 million tonnes ammonia, 0.7 million tonnes nitric acid and 1 million tonnes nitrates. The majority of the ammonia and nitric acid produced is used in the production of nitrates, which are sold to various European markets. The CGU has a carrying amount of USD 261 million and a value-in-use that is 24% higher. The key assumptions for the testing are the urea price, the natural gas cost and the discount rate. An individual reduction of the urea price of 3% for all years, an increase of the natural gas cost of 6% or an increase of the post-tax discount rate of 1 percentage point would reduce the headroom to nil.

Future potential reversals of impairment

Yara has recognized impairment losses on several CGUs over time. These impairments will be reversed, fully or partly, when and if the situation improves and the recoverable value is determined to be higher than the carrying amount. The increased carrying amount cannot exceed the carrying amount that would have been determined (net of amortization or depreciation) had no impairment loss been recognized in prior periods.

The table below provides an overview of the main CGUs with impairments, presented with the maximum amount of potential reversals at year-end 2019 and the key conditions for such reversals to materialize.

USD millions	Asset class	Potential reversals YE 2019	Key conditions for reversals
Montoir plant (France)	Property, plant and equipment, right-of-use assets	88	Fertilizer price increase
Yara Pilbara Nitrates	Property, plant and equipment	47	Stable production and TAN price increase
LIFECO (Libya)	Equity-accounted investee (associate)	16	Improved political situation in Libya, more stable gas supply and urea price increase
QAFCO (Qatar)	Equity-accounted investee (associate)	29	Melamine price increase
Production Italy	Property, plant and equipment	18	Volume increase, fertilizer price increase and reduced natural gas purchase price

Impairment related to assets held-for-sale in GICS (former Galvani), as described in note 7.2, is not included in the table above.

4.8 Committed future investments

USD millions	Investments 2020	Investments thereafter	Investments total
Contract commitments for investments in property, plant and equipment	336	12	348
Contract commitments for acquisition or own generated intangible assets	21	-	21
Total	357	12	369

Yara has publicly communicated committed growth investments of USD 400 million in 2020 which corresponds to investments that passed decision gate that commits fund but for which external contracts are not necessarily signed. These investments are related to projects in Brazil (Rio Grande and the Salitre mining project). USD 183 million of these investments are included as contractual commitments in the table above.

Commitments related to equity-accounted investees

USD millions	Investments 2020	Investments thereafter	Investments total
Contract commitments for investments in property, plant and equipment	43	48	92
Total	43	48	92

Figures in the table above are presented on a 100% basis. Yara's share of committed investments related to equity-accounted investees in 2019 is USD 23 million. The commitments are mainly related to investments in QAFCO.

5 Equity and liabilities

5.1 Share information

The Annual General Meeting in May 2019 approved a dividend for 2018 of NOK 1,772 million (NOK 6.50 per share), which was paid out during second quarter 2019 (USD 203 million). Dividends are recognized as a liability in the period that they are declared by the Annual General Meeting.

In May 2019, the Annual General Meeting authorized the Board of Directors to acquire up to 13,620,131 shares in the open market and from the Norwegian State. Shares may be purchased within a price range from NOK 10 to NOK 1,000. The shares shall be subsequently cancelled. Yara has renewed its agreement with the Norwegian State according to which the State's shares will be redeemed on a pro-rata basis to ensure the State's ownership is unchanged in the event of a cancellation of shares bought back. Yara has purchased 1,362,013 own shares under the 2019 buy-back program for a total consideration of NOK 486 million (USD 53 million). Pursuant to the agreement with the Norwegian State, total equity attributable to the shareholders of the parent has been reduced with an additional NOK 273 million (USD 30 million) for the commitment to redeem 773,187 shares from the Norwegian State.

In 2018, Yara purchased 520,000 own shares under the 2018 buy-back program for a total consideration of NOK 181 million (USD 21 million). These shares were cancelled at the Annual General meeting on 7 May 2019. Pursuant to the agreement with the Norwegian State, total equity attributable to the shareholders of the parent was reduced with an additional NOK 103 million (USD 12 million) for the redemption of 295,193 shares from the Norwegian State.

When own shares are repurchased the amount of consideration paid, including directly attributable costs, is recognized as a change in equity. Repurchased shares are classified as treasury shares and presented as a deduction from total equity. Gain/loss from the sale of own shares is recognized as a change in equity.

Yara has one class of shares, all with equal voting rights and the right to receive dividends.

	Ordinary shares	Own shares	Number of shares outstanding
Total at 31 December 2017	273,217,830	-	273,217,830
Treasury shares - share buy-back program [1]	-	(520,000)	(520,000)
Total at 31 December 2018	273,217,830	(520,000)	272,697,830
Redeemed shares Norwegian State [2]	(295,193)	-	(295,193)
Shares cancelled [2]	(520,000)	520,000	-
Treasury shares - share buy-back program [2]		(1,362,013)	(1,362,013)
Total at 31 December 2019	272,402,637	(1,362,013)	271,040,624

1) As approved by the General Meeting 8 May 2018.
2) As approved by the General Meeting 7 May 2019.

5.2 Non-controlling interests

Summarized financial information in respect of each of the Group's subsidiaries that has material non-controlling interests is set out below.

2019

USD millions	Total at 1 January	Share of profit	Dividend distributed	Disposals	Share capital increase	Foreign currency translation	Total at 31 December
GICS Indústria, Comércio e Serviços S.A. [1]	148	(9)	-	(139)	-	-	-
Yara Dallol B.V.	69	(2)	-	-	-	-	67
Other	10	1	(2)	2	-	-	12
Total	227	(10)	(2)	(137)	-	-	79

2018

USD millions	Total at 1 January	Share of profit	Dividend distributed	Disposals	Share capital increase	Foreign currency translation	Total at 31 December
GICS Indústria, Comércio e Serviços S.A. [1]	194	(17)	(2)	-	-	(28)	148
Yara Dallol B.V.	69	(2)	-	-	2	-	69
Other	16	-	-	(6)	-	-	10
Total	280	(19)	(2)	(6)	2	(28)	227

Place of incorporation and percentage of non-controlling interests

Company name	Place of incorporation	Percentage non-controlling interests [2] 2019	Percentage non-controlling interests [2] 2018
GICS Indústria, Comércio e Serviços S.A.[1]	Brazil	-	40.00%
Yara Dallol B.V.[3]	The Netherlands	41.83% [4]	45.89%

1) Galvani Industria, Comercio e Servicos S.A. changed name to GICS Industria, Comercio e Servicos S.A. in 2019.
2) Equals voting rights.
3) Place of operations is Ethiopia.
4) The ownership percentage of non-controlling interests is reduced by 4.06 percentage points in 2019 (2018: 0.99 percentage points).

Restrictions and other information related to significant non-controlling interests

The shareholders in Yara Dallol have agreed that no dividends shall be distributed from the company before the start of production. After that, the company shall pay out as much as permitted by applicable law and possible restrictions in future financing agreements. At 31 December 2019, Yara Dallol held USD 3 million in cash and cash equivalents (2018: USD 5 million).

Financial position for companies with significant non-controlling interests

USD millions	2019	2018	
	Yara Dallol	Galvani	Yara Dallol
Current Assets	5	100	8
Non-current assets	227	966	212
Current liabilities	(12)	(633)	(10)
Non-current liabilities	(25)	(38)	(25)
Equity attributable to owners of the company	(129)	(422)	(117)
Non-controlling interests	(67)	(148)	(69)

Income statement for companies with significant non-controlling interests

	2019	2018	
USD millions	Yara Dallol	Galvani	Yara Dallol
Total operating revenues and other income	-	238	-
Expenses	(5)	(280)	(5)
Net income/(loss)	(5)	(42)	(5)
Net income attributable to shareholders of the parent	(3)	(25)	(3)
Net income attributable to non-controlling interests	(2)	(17)	(2)
Net income/(loss)	(5)	(42)	(5)
Other comprehensive income attributable to shareholders of the parent	-	(43)	-
Other comprehensive income attributable to non-controlling interests	-	(28)	-
Other comprehensive income/(loss) for the year	-	(71)	-
Total comprehensive income attributable to shareholders of the parent	(3)	(68)	(3)
Total comprehensive income attributable to non-controlling interests	(2)	(45)	(2)
Total comprehensive income/(loss) for the year	(5)	(113)	(5)
Net cash inflow/(outflow) from operating activities	(1)	542	(2)
Net cash inflow/(outflow) from investing activities	(15)	(183)	(15)
Net cash inflow/(outflow) from financing activities	14	(342)	12
Net cash inflow/(outflow)	(2)	17	(4)

5.3 Interest-bearing debt

Accounting policies

Interest-bearing borrowings are initially recognized at fair value less direct transaction costs. Subsequently they are measured at amortized cost using the effective interest method.

Specification

				Denominated amounts 2019		Carrying amounts	
USD millions, except percentages and denominated amounts	Notes	Maturity	Weighted average interest rates	Currency millions	USD millions	2019	2018
NOK (Coupon NIBOR + 0.70%)	6.1	2019	-	-	-	-	254
USD (Coupon 7.88%)	6.1	2019	-	-	-	-	500
NOK (Coupon 2.55%)	6.1	2021	2.6%	700	80	79	80
NOK (Coupon NIBOR + 0.75%)	6.1	2022	2.6%	1,250	142	142	144
SEK (Coupon STIBOR + 1.00%)	6.1	2022	0.8%	450	48	48	50
SEK (Coupon 1.10%)	6.1	2022	1.2%	800	86	86	89
NOK (Coupon 3.00%)	6.1	2024	3.0%	600	68	68	69
NOK (Coupon 2.45%)	6.1	2024	2.5%	1,000	114	111	113
USD (Coupon 3.80%)	6.1	2026	3.9%	500	500	498	498
NOK (Coupon 2.90%)	6.1	2027	2.9%	1,000	114	111	112
USD (Coupon 4,75%)	6.1	2028	4.8%	1,000	1,000	996	996
Total unsecured debenture bonds						2,139	2,905
USD	2.9%	2.9%	2.9%	933	933	933	631
BRL	-	-	-	-	-	-	17
Total unsecured bank loans						933	648
Mortgage loans						21	22
Other long-term debt						3	3
Total						24	24
Outstanding long-term debt						3,096	3,577
Less: Current portion						(398)	(824)
Total						2,698	2,753

The carrying values include issuance discount, capitalized issuance costs and fair value hedge accounting adjustments as indicated above (see also note 6.3 for further information about fair value of financial instruments).

At 31 December 2019, the fair value of the long-term debt, including the current portion, is USD 3,195 million and the carrying value is USD 3,096 million.

Yara builds its funding on a negative pledge structure with the basic funding ranging pari passu. Substantially all unsecured debenture bonds and unsecured bank loan agreements therefore contain provisions restricting the pledging of assets to secure future borrowings.

Of the long-term debt at the end of 2019, USD 1,500 million in bond debt originates from Yara's June 2018 and June 2016 bond issues in the US market according to 144A/Regulation S. Further, NOK 1,300 million originates from Yara's December 2014 bond issues in the Norwegian market while NOK 3,250 million and SEK 1,250 million originate from Yara's December 2017 bond issues in the Norwegian market. The entire NOK and SEK denominated bond debt is converted to USD exposure through cross-currency swaps. Bond debts of USD 500 million and NOK 2,200 million were repaid upon maturity in June 2019 and December 2019 respectively.

Yara's additional long-term funding is based on bank loans. Yara's term loan from the Nordic Investment Bank has been reduced to USD 60 million through scheduled downpayments, and linear installments will continue until December 2023. Likewise, the loan facility established in January 2018 with partial support by a guarantee from The Norwegian Export Credit Guarantee Agency (GIEK) has been reduced to USD 214 million through scheduled downpayments, and semi-annual installments will continue until August 2026. Both the USD 150 million term loan due 2022 from the International Finance Corporation and the USD 150 million term loan due 2024 from Svensk Exportkredit AB remain fully drawn at year-end 2019. A further minor portion of the long-term bank loans is borrowed in emerging markets.

Yara has undrawn revolving credit facilities totaling USD 1,100 million due 2025 and USD 250 million due 2021. The former replaced the revolving credit facility due 2020 as from July 2019.

Of the fixed interest rate debenture bonds, NOK 3,300 million and SEK 800 million are exposed to floating interest rates through interest rate swaps, see note 6.1 Financial risks.

Contractual payments on long-term debt

USD millions	Debentures [1)]	Bank Loans	Other long-term loans	Total [2)]
2020	-	397	-	398
2021	79	53	2	134
2022	277	194	-	471
2023	-	45	-	45
2024	179	180	-	359
Thereafter	1,605	63	21	1,689
Total	2,139	933	24	3,096

1) Yara International ASA is responsible for the entire amount.
2) Including current portion.

Short-term interest bearing debt

USD millions, except percentages	Notes	2019	2018
Credit facilities		418	237
Overdraft facilities		26	93
Other		50	67
Total	6.3	494	397
Weighted Average Interest Rates [1)]			
Credit facilities		4.3%	5.9%
Overdraft facilities		9.5%	8.6%
Other		2.5%	2.7%

1 Repricing minimum annually.

Reconciliation of liabilities arising from financing activities

USD millions	31 Dec 2018	Cash flows	Non-cash changes: Debt assumed as part of acquisition	Transfer to liability held-for-sale	Foreign exchange movement	Amortization [1]	Other [2]	Reclassification	31 Dec 2019
Long-term interest-bearing debt	2,776	350	-	-	(10)	2	(23)	(396)	2,698
Short-term interest-bearing debt	397	80	-	-	(2)	-	19	-	494
Current portion of long-term debt	824	(811)	-	-	(11)	-	-	396	398
Total liabilities from financing activities	3,997	(381)	-	-	(23)	2	(4)	-	3,590

1) Amortization of transaction cost.
2) Including lease liabilities reclassified to Long-term lease liabilities in the statement of financial position and provision for buy-back of the Norwegian State's shares.

See note 4.5 Leases for reconciliation of liabilities arising from leasing activities.

5.4 Employee benefits

Overview

The Group companies provide various retirement plans in accordance with local regulations and practices in the countries in which they operate.

Defined benefit plans are generally based on years of service and average or final salary levels, offering retirement benefits in addition to what is provided by state pension plans. Most of the defined benefit plan obligations are covered by external insurance companies or by pension funds. By definition, both investment risk and actuarial risk (i.e. the actual level of benefits to be paid in the future) are retained by the Group companies.

Defined contribution plans require the companies to make agreed contributions to a separate fund when employees have rendered services entitling them to the contributions. The companies have no legal or constructive obligation to pay further contributions.

Some companies make contributions to multi-employer pension plans included in a joint arrangement with others. All multi-employer plans are accounted for as defined contribution plans.

Some companies have recognized provisions for jubilee benefits, which are classified as Other long-term employee benefits.

Accounting policies

Defined benefit plans

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan. The amount is an estimation of future benefits that the employees have earned in return for their service in current and prior periods. The benefit is discounted to determine its present value, and the fair value of plan assets is deducted. The discount rate is the yield at the balance sheet date on high quality corporate bonds or government bonds where no market for high quality corporate bonds exists. If the bond has a different maturity from the obligation, the discount rate is adjusted. Qualified actuaries using the projected credit unit method perform the calculations.

Past service costs arising from the amendment of plan benefits are recognized immediately in profit or loss. Remeasurement gains and losses are recognized as retained earnings through other comprehensive income in the period they occur, and will not be reclassified to profit or loss in subsequent periods.

Defined contribution plans

Obligations for contributions to defined contribution plans are recognized as an expense in the statement of income when employees have rendered services entitling them to the contributions. Prepaid contributions are recognized as an asset to the extent that a cash refund or deduction in future payments is available.

Other long-term benefits

The Group's obligation in respect of other long-term benefits is the amount of future benefits that the employees have earned in return for their service in current and prior periods. The obligation is discounted based on the same principles as defined benefit plans.

Long-term employee benefit obligations recognized in the statement of financial position

USD millions	Notes	2019	2018
Defined benefit plans		(480)	(468)
Surplus on funded defined benefit plans		57	59
Net liability for defined benefit plans		(424)	(410)
Termination benefits		(3)	(3)
Other long-term employee benefits		(14)	(14)
Net long-term employee benefit obligations recognized in Statement of financial position		(441)	(426)
Of which classified as Prepayments for long-term employee obligations	4.6	57	59
Of which classified as Long-term employee benefit obligations		(498)	(485)

Expenses for long-term employee benefit obligations recognized in the statement of income

USD millions	Notes	2019	2018
Defined benefit plans		(48)	(49)
Defined contribution plans		(30)	(31)
Multi-employer plans		(9)	(9)
Termination benefits		(23)	(19)
Other long-term employee benefits		(2)	(9)
Net expenses recognized in Statement of income		(113)	(117)
Of which classified as Payroll and related costs	2.5	(104)	(110)
Of which classified as Interest expense and other financial items	2.7	(9)	(7)

Defined benefit plans

Yara International ASA and Norwegian subsidiaries have incurred obligations under a funded defined benefit plan. The pension plan was closed to new entrants in 2006 and employees below the age of 55 at that time received a paid-up policy for previously earned benefit entitlements. The defined benefit plan was replaced by a defined contribution plan from the same date. Further pension obligations in Norway include certain unfunded pension arrangements as well as early retirement schemes. Retirement age is flexible from age 62 to age 67.

A majority of Yara's obligations under defined benefit plans are related to subsidiaries within the Eurozone:

Employees of Yara's Dutch subsidiaries hired before 1 August 2014 are members of a funded Defined Benefit pension plan. Employees born before 1950 and who were in service before 2006 are entitled to a pension scheme based on final salary at the age of retirement. The other employees are members of an Average Pay scheme. Retirement age is 68. The funded Defined Benefit pension plan has been closed for new members from 1 August 2014. New hires are enrolled in a Defined Contribution pension plan from the same date.

Obligations in Finland include the statutory TyEL pension scheme, as well as a voluntary defined benefit plan which is closed to new entrants. Both schemes are covered by pension funds. The TyEL pension scheme provides for a flexible retirement age from 63 to 68 based on the employee's salary each year and with accelerated earning of retirement benefits beyond the age of 63. A reform of the Employees Pensions Act was agreed in 2017, which will gradually increase the minimum retirement age from 63 to 65 while also gradually increase the maximum retirement age from 68 to 70. Further, accrual rates will change and retirement age will be linked to life expectancy (from year 2027). The voluntary pension plan regulations have also been amended in order to adapt to the revised pension legislation.

Subsidiaries of Yara are also liable to retirement benefits in France, Germany, Belgium and Italy within the Eurozone.

Yara sponsors a funded defined benefit pension plan for qualifying UK employees. Under the fund, employees are entitled to annual pensions on retirement at age 62 of 1/57th of final pensionable salary for each year of service (some members have a retirement age of 65 and accrue at a rate of 1/60). Benefits are also payable on death and following other events such as withdrawing from active service. The plan was closed for new members from 2001. Broadly, about 16% of the liabilities are attributable to current employees, 21% to former employees and 63% to current pensioners.

Other defined benefit plan obligations include employees of subsidiaries in Sweden, Trinidad and South Africa.

Most defined benefit plans include benefits in case of disability, death in service and death after retirement, which are included in the valuation of liabilities.

The provision for defined benefit plans also includes liabilities for medical plans in Great Britain, Trinidad, Brazil and South Africa with a total of USD 16 million (2018: USD 17 million).

Pension cost recognized in Statement of income

The assumptions used to value the defined benefit obligations at 31 December are used in the following year to determine the net pension cost. The discount rate is used to calculate the interest income from plan assets.

The following items have been recognized in the Statement of income

USD millions	2019	2018
Current service cost	(37)	(39)
Contribution by employees	3	3
Administration cost	(2)	(2)
Past service cost	(3)	(4)
Social security cost	(1)	(1)
Payroll and related costs	(39)	(42)
Interest expense on obligation	(46)	(46)
Interest income from plan assets	37	39
Net interest expense on the net obligation	(9)	(7)
Net pension cost recognized in Statement of income	(48)	(49)

USD millions	2019	2018
Payroll and related costs		
Finland	(6)	(6)
The Netherlands	(14)	(13)
Great Britain	(2)	(6)
Norway	(5)	(6)
Net interest income/(expense) on the net obligation/asset		
Finland	(1)	-
The Netherlands	(1)	1
Great Britain	(1)	(1)
Norway	(1)	(1)

Remeasurement gains/ losses) recognized in other comprehensive income

USD millions	2019	2018
Remeasurement gains/ losses) on obligation for defined benefit plans	(165)	(11)
Remeasurement gains/(losses) on plan assets for defined benefit plans	157	(65)
Increase in recognized net liability due to minimum funding requirement and asset ceiling limit [1]	(8)	(8)
Net remeasurement gains/(losses) for defined benefit plans	(17)	(84)
Change in deferred tax related to remeasurement gains/(losses) for defined benefit plans [2]	8	10
Remeasurement gains/(losses) recognized from equity-accounted investees (net of tax)	-	1
Total remeasurement gains/(losses) recognized in other comprehensive income	(9)	(73)

1) Yara (UK) Ltd is committed to pay an annual contribution until 2022 in order to make good a funding deficit. Present value of future contributions will lead to an unrecognized surplus based on current IAS 19 valuation, and as Yara does not have an unconditional right to recoup any surplus arising in the Fund, an additional liability needs to be recognized. The value of plan assets is also reduced to restrict the funded status to zero (asset ceiling limit).
2) Includes impact from reduction of tax percentage.

Remeasurement gains and losses include experience adjustments, reflecting the difference between estimated and actual changes in obligations and plan assets during the year, as well as the impact of change in demographic and financial assumptions when measuring the present value of pension liabilities at year-end with revised assumptions. Remeasurement gains and losses are permanently recognized directly in retained earnings in the period in which they occur.

Actuarial valuations provided the following results

USD millions	2019	2018
Present value of fully or partially funded liabilities for defined benefit plans	(1,948)	(1,799)
Present value of unfunded liabilities for defined benefit plans	(250)	(248)
Present value of liabilities for defined benefit plans	(2,198)	(2,047)
Fair value of plan assets	1,836	1,688
Adjustment in respect of minimum funding requirement	(26)	(34)
Unrecognized asset due to asset ceiling limitation	(19)	-
Social security tax liability on defined benefit plans	(17)	(16)
Net liability recognized for defined benefit plans	(424)	(410)

Defined benefit obligations and plan assets by origin

	2019		2018	
USD millions	Obligations	Assets	Obligations	Assets
Finland	(334)	310	(341)	307
The Netherlands	(753)	683	(679)	620
Other Eurozone	(289)	114	(266)	103
Great Britain [1]	(444)	417	(412)	377
Norway [2]	(306)	227	(288)	220
Other	(115)	65	(111)	61
Total	(2,240)	1,816	(2,097)	1,688

1) Including liability for minimum funding requirement and asset ceiling adjustment.
2) Including social security tax liability.

Development of defined benefit obligations

USD millions	2019	2018
Defined benefit obligation at 1 January	(2,047)	(2,123)
Current service cost	(37)	(39)
Interest cost	(46)	(46)
Experience adjustments	15	8
Effect of changes in financial assumptions	(189)	(37)
Effect of changes in demographic assumptions	9	18
Past service cost	(3)	(4)
Benefits paid	84	83
Obligation assumed upon acquisition of business [1]	-	(5)
Transfer of obligation (in)/out	-	(3)
Foreign currency translation on foreign plans	16	100
Defined benefit obligation at 31 December	(2,198)	(2,047)

1) Related to the acquisition of Cubatão

Development of plan assets

USD millions	2019	2018
Fair value of plan assets at 1 January	1,688	1,835
Interest income from plan assets	37	39
Administration cost on plan assets	(2)	(2)
Return on plan assets (excluding the calculated interest income)	157	(65)
Employer contributions	34	32
Employees' contributions	3	3
Benefits paid	(72)	(71)
Transfer of plan assets in/(out)	-	3
Foreign currency translation on foreign plans	(10)	(88)
Fair value of plan assets at 31 December	1,836	1,688

Depending on local regulations, Yara may be required to ensure a certain funding level of the pension plans. In the UK Yara is paying an annual contribution until 2022 in order to make good a funding deficit determined in the actuarial valuation of 2017. In The Netherlands, an agreement is in place in which Yara will need to ensure a minimum level of funding by making additional contribution to the fund. On the other hand, Yara will be able to recover parts of the contribution which has been paid to the fund, in case the funding ratio reaches a certain level. In Norway, Yara may be required to increase the capital buffer of the pension fund.

The pension funds have the legal form of foundations, independently governed by their Board of Directors or Board of Trustees. It is the responsibility of the Board to determine the investment strategy, and to review the administration of plan assets and the funding level of the pension plans.

Yara's defined benefit plan obligations are inherently exposed to inflation risk, interest rate risk and longevity risk. The investment strategies of the pension funds ensure diversement of investments in order to keep market volatility risk at a desired level. An exception is the pension fund of Yara in Finland, which has invested about 1/3 of the fair value of plan assets into shares of non-listed Pohjolan Voima Oy, a company producing electricity and heat for its shareholders on an at cost-basis. The Boards of the pension funds are targeting a satisfactory level of risk and return corresponding to the maturity profile of future pension benefit payments.

At the end of the year, the plan assets were invested as follows

USD millions, except percentages	2019		2018	
Cash and cash equivalents	24	1%	22	1%
Shares	515	28%	456	27%
Other equity instruments	37	2%	18	1%
High yield debt instruments	81	4%	106	6%
Investment grade debt instruments	711	39%	665	39%
Properties	72	4%	72	4%
Other quoted plan assets [1]	259	14%	212	13%
Total investments quoted in active markets	1,700	93%	1,550	92%
Shares and other equity instruments	95	5%	99	6%
Other plan assets [2]	41	2%	38	2%
Total unquoted investments	136	7%	137	8%
Total plan assets	1,836		1,688	

1) Other quoted plan assets include insurance policies, hybrid funds and other fund investments.
2) Other unquoted plan assets is mainly a loan to Yara Suomi Oy.

Contributions expected to be paid to the defined benefit plans for 2020 are USD 46 million (including benefits to be paid for unfunded plans). Contributions paid in 2019 were USD 46 million.

Duration of liabilities at the end of the year

Duration of liabilities (in years)	2019
Finland	15
The Netherlands	20
Great Britain	17
Norway	13
Total [1]	17

1) Weighted average.

Valuation of defined benefit obligations

The defined benefit plans are valued at 31 December using updated financial and demographical assumptions and taking into account the relevant economic environment of each pension plan.

The discount rate is a weighted average of the yields at the balance sheet date on high quality corporate bonds, or government bonds where no deep market exists for high quality corporate bonds. The discount rate is adjusted by extrapolation if necessary, to take into account differences in maturities.

The following financial assumptions have been applied for the valuation of liabilities

Discount rate (in %)	2019	2018
Finland	0.9	1.8
The Netherlands	1.1	1.8
Great Britain	2.0	2.9
Norway	2.1	2.7
Total [1]	1.5	2.2

1) Weighted average.

Expected salary increase (in %)	2019	2018
Finland	2.1	2.3
The Netherlands	2.3	2.3
Great Britain	3.7	3.9
Norway	2.2	2.6
Total [1]	2.6	2.8

1) Weighted average.

Expected pension indexation (in %)	2019	2018
Finland	1.0	1.5
The Netherlands	1.6	1.6
Great Britain	3.0	3.0
Norway	1.0	1.1
Total [1]	1.8	1.9

1) Weighted average.

The following table presents indicators of life expectancy of the mortality tables applied for valuation of the obligations, by showing expected longevity of a current employee aged 45 today from the date he or she reaches age 65, and the expected longevity of a current retiree aged 65.

Expected longevity (in years)	Current employee	Current retiree
Finland	25.9	23.4
The Netherlands	24.8	22.7
Great Britain	23.9	22.2
Norway	25.0	23.2

Sensitivity of assumptions

Measurement of defined benefit obligations and pension costs requires the use of a number of assumptions and estimates. The table below indicates the sensitivity of the most significant assumptions applied to the defined benefit obligation, by showing the estimated result from a reasonable increase or decrease in any one of the key assumptions applied. Holding all other assumptions constant represents a limitation of the analysis, as some of the assumptions may be correlated. The methods used in preparing the analysis are consistent with previous years.

USD millions	2019	2018
Actual valuation	(2,198)	(2,047)
Discount rate +0.5%	(2,044)	(1,912)
Discount rate -0.5%	(2,370)	(2,200)
Expected rate of salary increase +0.5%	(2,218)	(2,065)
Expected rate of salary increase -0.5%	(2,178)	(2,030)
Expected rate of pension increase +0.5%	(2,324)	(2,161)
Expected rate of pension increase -0.5%	(2,085)	(1,947)
Expected longevity +1 year	(2,280)	(2,084)
Expected longevity -1 year	(2,116)	(1,975)

5.5 Trade payables and other payables

Accounting policies

Trade payables are initially recognized at fair value. Subsequently they are measured at amortized cost using the effective interest method. Short-term payables are normally not discounted.

Specification

USD millions	Notes	2019	2018
Trade payables		1,285	1,475
Payroll and value added taxes		259	259
Other liabilities [1]		70	101
Total	6.3	1,614	1,835

1) Included in Other liabilities is USD 11 million regarding short-term derivative instruments (at fair value) and USD 26 million regarding short-term contingent consideration.

Trade payables are non interest-bearing and have an average term of 60 days. Payroll and value-added taxes are mainly settled bimonthly or on a quarterly basis. Other payables are non interest-bearing and normally settled within 12 months.

5.6 Provisions and contingencies

Accounting policies

A provision is recognized when the Group has a present obligation (legal or constructive) following a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of the cash flows.

A restructuring provision is recognized when the Group has developed a detailed formal plan for the restructuring, and has raised a valid expectation that it will carry out the restructuring by starting to implement the plan or announcing its main features to those affected by it. The restructuring provision includes only the direct expenditures arising from the restructuring. These expenditures are those that are both necessarily entailed by the restructuring and not associated with the ongoing activities of the entity.

Present obligations arising under onerous contracts are recognized and measured as provisions. An onerous contract is considered to exist where the Group has a contract where the unavoidable costs of meeting the obligations under it exceeds the economic benefits expected to be received from the contract.

Decommissioning refers to the process of dismantling and removing equipment and site restoration when a site is closed down. A liability is recognized as soon as a decommissioning obligation arises. The obligation can be legal or constructive, and is accounted for based on a best estimate discounted to the present value. The discounted provision is progressively unwound, with the unwinding charge presented as a finance cost. The unwinding charge takes the provision from its current net present value to its future end value.

If an obligation exits to decommission PP&E, the carrying value of the assets is increased with the discounted value of the obligation. This is also the case if an obligation arises during construction or due to new legal requirements. The decommissioning asset is depreciated over the useful life of the asset. If an obligation arises as a result of day-to-day operations where the asset has been used to produce inventory, the cost is expensed as incurred.

Decommissioning provisions are updated when new information becomes available.

Yara is party to a number of lawsuits related to laws and regulations in various jurisdictions arising out of the conduct of its business. Legal claims are assessed on an individual basis and provisions are recognized if the specific claims give rise to present, probable obligations and the costs can be reliably measured.

When a legal or constructive environmental obligation arises as a result of a past event, and the cost can be reliably measured, a provision is recognized.

Due to EU regulations in regard to greenhouse gas emissions, Yara receives annual emissions rights. These emission rights can be used to settle the Group's obligation that arises as a result of actual emissions. Granted emission rights received in a period are initially recognized at nominal value (nil value). Purchased emission rights are initially recognized at cost (purchase price) within intangible assets. A provision is recognized when the level of emissions exceeds the level of allowances granted. If Yara's emissions are less than the emission rights allocated to its operations, these may be sold in the market. Gains are recognized if and when such transactions occur.

2019

USD millions	Environmental	Restructuring	Legal Claims	Decommission	Other	Total
Balance at 1 January 2019	75	48	23	122	24	292
Additional provision in the year	13	21	10	45	43	133
Interest expense on liability	(2)	-	2	-	-	1
Unused provision	-	-	(5)	-	(3)	(9)
Utilization of provision	(7)	(13)	(4)	(2)	(12)	(38)
Companies purchased/(sold)	-	-	-	-	-	-
Currency translation effects	(2)	(1)	-	(1)	1	(4)
Balance at 31 December 2019	77	55	25	164	54	375

2018

USD millions	Environmental	Restructuring	Legal Claims	Decommission	Other	Total
Balance at 1 January 2018	48	34	16	79	28	205
Additional provision in the year	15	23	12	31	18	100
Interest expense on liability	-	-	2	3	-	5
Unused provision	1	(1)	(3)	(5)	(8)	(16)
Utilization of provision	(8)	(6)	(2)	(2)	(13)	(32)
Companies purchased/(sold)	22	-	-	27	-	48
Currency translation effects	(3)	(2)	(2)	(10)	-	(17)
Balance at 31 December 2018	75	48	23	122	24	292

Provisions presented in the consolidated statement of financial position

USD millions	2019	2018
Current liabilities	72	55
Non-current liabilities	303	238
Total	375	292

Provisions

Environmental provisions

Yara's future cost for environmental remediation depends on a number of uncertain factors, such as changes in regulations or authorities approval for the extent of actions. The estimates are followed up frequently. Due to the uncertain nature to define the exact levels of pollution and precise needs for cleanup, it is possible that they could be revised in the near term. In addition, conditions which could require future expenditures may be determined to exist for various sites, including Yara's major production facilities and warehouses.

Restructuring provisions

In November 2019, Yara provided for closure costs of USD 20 million following the announcement to close the wholly-owned ammonia plant in Point Lisas, Trinidad. The cost is reflected in Yara's Production segment. The Yara Trinidad plant is one of the three ammonia plants operated by Yara Trinidad Ltd. The remaining two plants, Tringen I and Tringen II, are jointly owned by Yara International ASA and National Enterprises Ltd (NEL). The Trinidad plant is one of Yara's smallest ammonia plants, with an annual production capacity of approximately 270,000 tonnes ammonia. In addition to small scale, the plant has a lower energy efficiency than Yara's average. Plant profitability has also been impacted by lower ammonia prices, and in addition negotiations with The National Gas Company of Trinidad and Tobago (NGC) has failed to reach an agreement that could sustain plant operations. The plant ceased production of ammonia in December 2019 and has been fully impaired in previous periods.

For comparison did Yara recognize a provision of USD 19 million in 2018 related to centralization of certain supply chain functions in Europe, where USD 10 million was reported in the Crop Nutrition segment and USD 9 million in the Industrial segment.

Restructuring mainly relates to closure or significant reorganization of business locations in a country or region. The provision is a best estimate based on the detailed formal plan for the business and location affected.

Legal claims

Yara is party to a number of lawsuits in various jurisdictions arising out of the conduct of its business. None of these lawsuits, individually or in aggregate, are anticipated to have a material adverse effect on Yara.

Decommission provisions

Provisions have been made for where Yara has legal obligation for decommissioning. Most significant decommissioning provisions relate to contractual obligations for operations on leased land, the main ones being plants in Australia, France and UK. The increase in decommission provisions during 2019 is mainly due to reduced discount rates.

Other provisions

Other include onerous contracts, liquidated damages, warranties and various other provisions. The main reason for the increase in other provisions is higher warranty provisions due to increased deliveries by Yara's Maritime business.

Contingencies

Legal contingencies

Yara is party to a number of lawsuits related to laws and regulations in various jurisdictions arising out of the conduct of its business. While acknowledging the uncertainties of litigation, Yara is of the opinion that based on the information currently available, these matters will be solved without material adverse effect.

On 21 January 2020, Yara announced that the Comisión Nacional de los Mercados y la Competencia (CNMC) has initiated an investigation against Yara Iberian SA of possible infringements of the Spanish Competition Act. Yara cooperated fully with the CNMC during the dawn raid.

In connection with Yara Fertiliser India Pvt Ltd's acquisition of Tata Chemical Ltd's urea business, stamp duty may be payable on the lease of the Babrala plant site. Yara's position is that the stamp duty on this lease is less than USD 1 million. In order to ascertain the amount of stamp duty payable, Yara sought adjudication of the amount by the local tax authorities. On 18 January 2019, the authority assessed stamp duty on the lease at approximately USD 36 million. Yara is of the view that the authority's decision is incorrect, and remains of the view that the correct amount of stamp duty is less than USD 1 million.

Yara Fertiliser India Pvt Ltd are of the view that the authority's decision is incorrect and have filed a written petition in the high court of Uttar Pradesh in March 2019 to seek the court's decision and affirmation of our position. State of Uttar Pradesh has filed its response to the Petition filed by Yara Fertilisers India Pvt Ltd. No date has yet been scheduled for substantial hearing of the petition. It may take up to 5 years to receive a decision from the Uttar Pradesh State Court.

In addition to the stamp duty on the lease, Yara has also sought adjudication of stamp duty in the same state on the court order for the acquisition. Yara's position is that the stamp duty payable is less than USD 6 million. As of today, the relevant authority has not yet issued its decision. The provisions made for stamp duties in the Uttar Pradesh state corresponds to Yara's assessment.

Further information related to two ongoing environmental cases in Brazil, where Yara is a part due to the acquisition of Adubos Trevo from the Trevisa Group in the year 2000, is provided below since it is not possible to provide a reliable estimate of the maximum potential exposure:

- Yara has together with other companies related to the Trevisa Group been sued by an association representing approximately 1,300 potential victims in two separate lawsuits. The lawsuits are related to mine and lead industry activities performed by the company Plumbum Comércio e Representações de Produtos Mineirais e Industriais (Plumbum) in the cities Santo Amaro da Purificação and Boquira in Bahia state in Brazil. Plumbum was formerly part of the Trevisa Group. Adubos Trevo has not been involved in any of the activities included in the lawsuits. The lawsuits include claims for various personal losses, damage to properties, institution of relief funds, environmental restoration and clean-up activities. The lawsuits were filed in 2011 and 2012 but are still in the initial phase. Yara denies liability for any potential damage caused by the activities of Plumbum and has not made any provision for the claims.

- Yara is together with 22 other companies, defendants in a lawsuit filed by São Paulo Public Attorney in 1985 with a claim for compensation for environmental damage related to former activities by the defendants in the Cubatão industrial district. The defendants deny the claim on the basis that necessary actions have already been taken to recover potential damages from former activities. In September 2017, the court of first instance ruled against the defendants determining that the defendants were jointly liable to repair the damage. The nature of and amount of potential damages have not been determined and will be calculated by an expert. Yara has made a provision related to this case of USD 1.8 million. Yara and the other defendants have appealed the decision.

Tax contingencies

In relation to an ongoing tax dispute and to safeguard their taxation rights, the Dutch tax authorities issued in 2018 a new tax assessment for business restructuring ("exit tax assessment"). The tax assessment would increase the tax cost with USD 500 million, plus USD 200 million in accumulated interest. It is Yara's position that the tax assessment is unreasonable and unfounded, and no provision has been made for the exit tax claim. The tax authorities principal claim is significantly lower and Yara has considered that claim separately from the exit tax assessment. Yara expects that the exit tax assessment will not trigger any immediate payment and that tax payments will be deferred until the case has been fully resolved or the tax assessment has been withdrawn.

Several subsidiaries are engaged in juridical and administrative proceedings related to various disputed tax matters where the probability of cash outflow is not considered probable. A majority of these contingencies are related to indirect taxes in Brazil, with an estimated maximum exposure of approximately USD 151 million. Tax contingencies outside Brazil and excluding the above-mentioned exit tax assessment in the Netherlands have an estimated maximum exposure of approximately USD 83 million. In 2019, Yara recognized a USD 38 million income tax provision and a USD 13 million provision for interest expense related to a previously reported contingency outside Brazil. The provisions are based on a recent court ruling against one of Yara's subsidiaries. Yara has appealed the ruling.

In 2019, Yara International ASA received a notification and request for information from the Norwegian Tax Authorities in relation to a transfer price audit. In the notification and request for information, the Tax Authorities have stated that they consider changing the company's tax assessment for the years 2015, 2016 and 2017. Yara International ASA has recently submitted its response. The Tax Authorities have not disclosed any potential amount or provided guidance on how a potential change will impact the tax assessment for these years.

Contingent assets

Contingent assets are typically related to insurance compensation. As of year-end 2019 there are no significant contingent assets.

5.7 Contractual obligations

Take-or-pay and long-term contracts

Yara has entered into take-or-pay and long-term contracts providing for future payments to transportation capacity, raw materials and energy.

The non-cancellable future obligations at 31 December 2019 (undiscounted amounts)

USD millions	Total
2020	487
2021	257
2022	154
2023	105
2024	63
Thereafter	661
Total	1,727

Future "take-or-pay" obligations are included in the table above only if they are non-cancellable and the contractually agreed pricing is fixed or may otherwise deviate from observable market prices at the time of delivery.

Yara did not need to pay any significant amount to fulfill take-or-pay clauses in 2019.

For further information regarding future obligations, see note 5.4 for future obligations related to pensions, note 5.6 for provisions and contingencies and 4.5 for future commitments related to lease arrangements.

5.8 Secured debt and guarantees

USD millions	2019	2018
Amount of secured debt	26	28
Assets used as security for debt		
Machinery and equipment, etc.	4	5
Buildings and structural plant	23	24
Total	27	28
Assets used as security for non-financial liabilities		
Buildings and structural plant	22	23
Total	22	23
Guarantees (off-balance sheet)		
Contingency for discounted bills	1	1
Contingency for sales under government schemes	57	72
Non-financial parent company guarantees	723	684
Non-financial bank guarantees	236	228
Total	1,016	985

Off-balance sheet guarantees consist mainly of commercial guarantees related to contract obligations (Bid Bonds, Performance Guarantees and Payment Guarantees) and various mandatory public guarantees (Customs Guarantees, Receivable VAT Guarantees). These guarantees are issued on behalf of Yara International ASA, its subsidiaries and equity-accounted investees. The guarantor could be required to perform in the event of a default of a commercial contract or non-compliance with public authority regulations.

Guarantees of debt issued on behalf of consolidated companies are not included since the drawings under such credit lines are included in the consolidated statement of financial position. The guarantee obligation under such guarantees is at any time limited to the amount drawn under the credit facility.

Guarantees related to pension liabilities are included to the extent such guarantees exceed the liability included in the consolidated statement of financial position.

Guarantees issued to public authorities covering tax and VAT liabilities are not included as these obligations are already included in the consolidated statement of financial position.

Contingent liabilities related to the de-merger from Norsk Hydro ASA

Yara is contingently liable for unfunded pension liabilities accrued prior to the consummation of the de-merger from Norsk Hydro ASA (Hydro) as a matter of the joint and several liability provided by Norwegian law. Hydro's unfunded pension liabilities, calculated in accordance with Hydro's accounting policies, amounted to approximately NOK 2 billion at demerger March 24, 2004 and have been reduced by payments thereafter.

6 Financial risk

6.1 Financial risks

Risk management policies

Risk management in Yara is based on the principle that risk evaluation is an integral part of all business activities. Yara's strategic approach is to determine appropriate risk levels or limits for the main risks and to constantly maintain and develop tools and procedures for monitoring the associated exposures. The Group's policies, approved by the Board of Directors, thus provide written principles on funding risk, currency risk, interest rate risk, credit risk, and the investment of excess liquidity. In general, risks arising from operational activities may either be accepted or reduced. The policies restrict transactions that will increase the Group's exposure beyond the level stemming from operations.

Yara's Executive Management is responsible for reviewing and operationalizing the board defined policies, while the operating segments and expert organizations act as risk owners. The financial risks related to the operations of the Group are thus monitored and managed by Yara's Finance, Treasury & Insurance function through internal risk reports that analyze each exposure by degree and magnitude of risk. These risks include market risks such as currency and interest rate risk, credit risk and liquidity risk. The Finance, Treasury & Insurance function reports regularly to the Group's Executive Management.

Based on the overall evaluation of risk, Yara may seek to reduce its inherent exposures by using insurance policies, trade finance contracts, guarantees or derivative instruments such as forward contracts, options and swaps. The use of such instruments is also governed by Board approved policies.

Yara may designate and document the use of certain derivatives and other financial assets or liabilities as hedging instruments against changes in fair value of recognized assets and liabilities (fair value hedges), highly probable forecast transactions (cash flow hedges) and net investments in foreign operations (net investment hedges). The prospective effectiveness of any such hedge is assessed at inception and verified on a quarterly basis. Derivatives not designated in a hedging relationship are classified as undesignated derivatives and acquired and managed within the framework and policies defined by the Board of Directors also when hedge accounting is not applied.

There were no principal changes in the Group's approach to capital management during the years ending 31 December 2019 and 31 December 2018. Yara's liquidity surplus, kept as short-term bank deposits, increased in 2019 compared with the year before.

Funding risk

The capital structure of the Group consists of interest-bearing debt as disclosed in note 5.3, cash and cash equivalents as disclosed in note 3.4 plus equity attributable to equity holders of the parent, comprising paid-in capital and retained earnings as disclosed in note 5.1 and statement of changes in equity.

Yara is focused on maintaining a sound funding structure. Main elements of the funding strategy are to keep a long-term debt base and to uphold the security and flexibility obtained through using diversified capital sources, avoiding dependency on single institutions or markets.

Yara does not have specific debt ratio targets and the only financial covenant is to have a debt to equity ratio, calculated as net interest-bearing debt divided by shareholders' equity plus non-controlling interests, below 1.4. At the end of 2019, the ratio was 0.42 compared with 0.43 at the end of 2018. The Group is not subject to any externally imposed capital requirements.

Through its financial structure, Yara has the necessary flexibility to capture the right industrial opportunities when they arise. As such opportunities typically materialize in periods characterized by industry margins and earnings below peak levels, Yara will seek to maintain adequate financial capacity throughout the business cycle. Yara aims to maintain a long-term mid investment grade rating level, i.e. minimum BBB according to Standard & Poor's methodology and Baa2 according to Moody's methodology. During 2019, Yara did maintain both the Baa2 rating by Moody's and the BBB rating by Standard & Poor's.

Currency risk

Prices of Yara's most important products are either directly denominated or determined in US dollars. In markets outside the US, local prices will generally adjust to fluctuations in the US dollar exchange rate, however with a certain time lag. Yara's raw materials costs, such as natural gas used in the production of ammonia, are either denominated in US dollars or highly correlated to changes in the US dollar exchange rate. In order to hedge Yara's long-term exposure to fluctuations in the US dollar exchange rate, Yara incurs most of its debt in US dollars. Throughout the year, the part of Yara's US dollar debt constituting a hedge of future earnings increased gradually from around USD 2,000 million to around USD 2,600 million (2018: increased gradually from around USD 1,500 million to around USD 2,000 million). A certain portion of the total debt is kept in various local currencies in order to finance local currency exposed business positions.

Yara thus primarily manages currency risks by adjusting the composition of the debt or liquidity portfolios to changes in Yara's overall risk exposure. Derivative instruments may also be used to manage currency risk related to future cash flows or to offset short-term liquidity needs in one currency with surplus liquidity in another currency. Such forward contracts are not designated as hedging instruments for accounting purposes. Changes in fair value are therefore recognized in the income statement.

Sensitivity - net income

USD millions	2019	2018
A 10% weakening [1] of the US dollar at the reporting date would have increased/(decreased) net income by	241	259
A 10% weakening [1] of the euro at the reporting date would have increased/(decreased) net income by	(263)	(270)

1) Against functional currencies.

This analysis is done for illustrative purposes only, taking into consideration only the effect on the value of financial instruments in the balance sheet as at year-end. Since all other variables are assumed to remain constant, the analysis does not reflect subsequent effects on operating income, EBITDA or equity. The analysis was performed on the same basis for 2018.

A 10% strengthening of the currencies above at 31 December would have had the opposite effect of the amounts shown above.

Sensitivity - Other comprehensive income

USD millions	2019	2018
A 10% weakening [1] of the Norwegian krone at the reporting date would have increased/(decreased) other comprehensive income by	(259)	(279)
A 10% weakening [1] of the Canadian dollar at the reporting date would have increased/(decreased) other comprehensive income by	(116)	(103)
A 10% weakening [1] of the Brazilian real at the reporting date would have increased/(decreased) other comprehensive income by	(58)	(80)
A 10% weakening [1] of the euro at the reporting date would have increased/(decreased) other comprehensive income by	(7)	7

1) Against US dollar (presentation currency of the Group).

This analysis is done for illustrative purposes only, taking into consideration only the effect on equity in foreign operations as at year-end. Since all other variables are assumed to remain constant, the analysis does not reflect subsequent effects on equity. The analysis was performed on the same basis for 2018.

Interest rate risk

Yara's exposure to changes in interest rates is mainly linked to fair value risk and cash flow risk from its debt portfolio as disclosed in note 5.3 Interest-bearing debt.

Yara has a defined framework for fair value risk arising from exposure towards fixed interest rates. In accordance with that framework, all bank loans have been borrowed at floating rates. A portion of the bond debt has been retained at fixed interest rates, while the remaining part of the bond debt has been converted to floating rates through interest rate swaps and cross-currency swaps. Consequently, the interest expense related to the converted (hedged) part of the bond debt will fluctuate in line with market changes. At the reporting date, the interest rate exposure arising from the bonds issued at fixed interest rates can be summarized as follows:

				Conversion to floating rates				Carrying amounts 2019		Carrying amounts 2018	
USD millions	Notes	Maturity	Denominated amounts 2019	Fixed interest rate	Basis for exposure hedged	Receive fixed interest payments	Pay floating interes rate [1]	Fixed interest rate	Floating interest rate	Fixed interest rate	Floating interest rate
Floating interest rate bonds											
NOK (Coupon NIBOR + 0.70%)	5.3	2019	-					-	-	-	254
NOK (Coupon NIBOR + 0.75%)	5.3	2022	142					-	142	-	144
SEK (Coupon STIBOR + 1.00%)	5.3	2022	48					-	48	-	50
Fixed interest rate bonds											
USD (Coupon 7.88%)	5.3	2019	-	-	-			-	-	500	-
NOK (Coupon 2.55%)	5.3, 6.2	2021	80	2.55%	80	2.55%	USD LIBOR 3M +1,14%	-	79	-	80
SEK (Coupon 1.10%)	5.3, 6.2	2022	86	1.10%	86	1.10%	USD LIBOR 3M +1,00%	-	86	-	89
NOK (Coupon 3.00%)	5.3, 6.2	2024	68	3.00%	68	3.00%	USD LIBOR 3M +1,33%	-	68	-	69
NOK (Coupon 2.45%)	5.3, 6.2	2024	114	2.45%	114	2.45%	USD LIBOR 3M +1,18%	-	111	-	113
USD (Coupon 3.80%)	5.3	2026	500	3.80%	-			498	-	498	-
NOK (Coupon 2.90%)	5.3, 6.2	2027	114	2.90%	114	2.90%	USD LIBOR 3M +1,44%	-	111	-	112
USD (Coupon 4,75%)	5.3	2028	1,000	4.75%	-	-		996	-	996	-
Total unsecured debenture bonds			2,153		462			1,494	645	1,994	911

1) Through a combination of interest rate swaps and cross-currency swaps.

Interest rate profile of the Group's interest-bearing financial instruments

USD millions	Notes	2019	2018
Net interest-bearing debt at 31 December [1]		3,725	3,794
Portion of bonds with fixed interest rate	5.3	1,495	1,994
Net interest-bearing debt/(deposits) less portion of bonds with fixed interest rate		2,230	1,800

1) For definition of net interest-bearing debt, please see chapter Financial performance in the Financial review section of the Annual report.

Sensitivity

USD millions	2019	2018
An increase of 100 basis points in USD interest rates at the reporting date would have increased/(decreased) net income by	(15)	(13)
An increase of 100 basis points in BRL interest rates at the reporting date would have increased/(decreased) net income by	-	(2)

All other variables remain constant. This analysis is done for illustrative purposes only, taking into consideration only the effect on financial instruments in the balance sheet as at year-end. The analysis was performed on the same basis for 2018. A decrease of 100 basis points at the reporting date would have increased profit or loss with similar, but opposite amounts.

Specific risks associated with the upcoming interest rate benchmark reform

Within its hedge accounting relationships, the Group is exposed to NIBOR, STIBOR and USD LIBOR (collectively "IBORs") interest rate benchmarks subject to interest rate benchmark reform. As listed in note 6.2 Hedge accounting, the hedged items include issued NOK and SEK fixed rate debt plus foreign currency translation risk associated with Yara's net investment in USD denominated foreign operations.

Yara Finance, Treasury & Insurance has established an IBOR transition program to understand the specific exposures and prepare an action plan in order to enable a smooth transition to alternative benchmark rates. Risks hitherto identified include, but may not be limited to, the items listed in below table.

Risk	Potential impact
Lack of standardized alternative term rates	Cash flow uncertainty, operational challenges
Economic difference vs. IBORs and alternative rates	Changes in fair value of affected contracts
Different speed of transition across products and currencies	Basis risk on hedge accounting relations
Operational adjustments required	Upgrade of IT systems, renegotiation of agreements

As none of Yara's current IBOR linked contracts already include fall back provisions in case the referenced benchmark interest rate ceases to be available, Yara monitors the output from the various working groups managing the transition to new benchmark rates carefully and will look to implement appropriate fall back language in due course.

Credit risk

Yara has a well-established system for customer credit risk management with established limits at both customer and country level. Yara's geographically diversified portfolio reduces the overall credit risk of the Group. Credit risk arising from the inability of the counterparty to meet the terms of Yara's derivative financial instruments is generally limited to amounts, if any, by which the counterparty's obligations exceed Yara's obligations.

The exposure to credit risk is represented by the carrying amount of each class of financial assets, including derivative financial instruments, recorded in the statement of financial position and as disclosed in note 6.3 Financial instruments.

Yara's policy is to enter into financial instruments with various international banks with established limits for transactions with each institution. Yara also has agreed limits for credit exposure (collateral agreements) with most of its main banks. At the end of the reporting period, Yara had deposited USD 74.8 million (2018: USD 82.8 million) in cash with its counterparties to mitigate exposure from financial liabilities covered by such agreements. These deposits are reported as "other current assets" in the consolidated statement of financial position. Collateral deposits are made at overnight terms and required collateral is being reassessed twice every month.

Yara may undertake a number of measures to reduce credit risk of particular receivables. Such measures include letters of credit, bank guarantees and credit insurance agreements. The effect of credit risk reduction from these measures is not considered to be material for the Group.

Liquidity risk

Yara manages liquidity risk by maintaining adequate reserves and committed bank facilities and by continuously monitoring forecasted and actual cash flows. Yara aims at an even debt repayment schedule and has secured committed undrawn credit facilities to provide sufficient reserves to meet unforeseen liquidity needs.

Note 5.3 Interest-bearing debt includes a list of undrawn facilities that the Group has at its disposal.

Contractual maturities of financial liabilities, including estimated interest payments

31 December 2019

USD millions	Carrying amount	Contractual cash flows	On demand	6 months or less	6-12 months	1-2 years	2-5 years	More than 5 years
Non-derivative financial liabilities								
Short-term interest-bearing debt	(494)	(519)	(40)	(383)	(97)	-	-	-
Long-term interest-bearing debt [1]	(3,096)	(3,731)	(2)	(426)	(78)	(223)	(1,150)	(1,852)
Accrued interest expense	(14)	(16)	-	(14)	-	-	(2)	-
Trade payables	(1,285)	(1,302)	(3)	(1,270)	(29)	-	-	-
Payroll and value added taxes	(259)	(259)	(1)	(226)	(32)	-	-	-
Other short-term liabilities	(59)	(59)	-	(52)	(7)	-	-	-
Other long-term liabilities	(133)	(144)	-	(1)	(19)	(45)	(67)	(13)
Derivative financial instruments								
Freestanding financial derivatives	(79)							
Outflow		(1,139)	-	(343)	(12)	(112)	(539)	(133)
Inflow		1,052	-	334	9	96	489	124
Commodity derivatives	(20)							
Outflow		(23)	-	(2)	(2)	(10)	(10)	-
Inflow		-	-	-	-	-	-	-
Hedge designated derivatives	(7)							
Outflow		(64)	-	(6)	(6)	(12)	(28)	(11)
Inflow		58	-	-	11	11	25	10
Total	(5,446)	(6,147)	(45)	(2,388)	(262)	(295)	(1,281)	(1,875)

1) Includes current portion of long-term interest bearing debt amounting to USD 398 million.

See note 4.5 for contractual maturities of lease liabilities.

31 December 2018

USD millions	Carrying amount	Contractual cash flows	On demand	6 months or less	6-12 months	1-2 years	2-5 years	More than 5 years
Non-derivative financial liabilities								
Short-term interest-bearing debt	(397)	(502)	(128)	(367)	(7)	-	-	-
Long-term interest-bearing debt [1]	(3,600)	(4,283)	(2)	(108)	(868)	(154)	(921)	(2,230)
Accrued interest expense	(29)	(29)	-	(18)	(11)	-	-	-
Accounts payable	(1,475)	(1,506)	(3)	(1,471)	(32)	-	-	-
Payroll and value added taxes	(259)	(259)	(11)	(220)	(28)	-	-	-
Other short-term liabilities	(46)	(49)	(3)	(33)	(12)	-	-	-
Other long-term liabilities	(79)	(83)	-	(4)	-	(50)	(16)	(13)
Derivative financial instruments								
Freestanding financial derivatives	(107)							
Outflow		(1,476)	-	(374)	(301)	(20)	(439)	(342)
Inflow		1,449	-	358	261	49	461	320
Commodity derivatives	(37)							
Outflow		(36)	-	-	(5)	(10)	(21)	-
Inflow		-	-	-	-	-	-	-
Hedge designated derivatives	(6)							
Outflow		(76)	-	(3)	-	(1)	(2)	(70)
Inflow		70	-	-	11	11	29	19
Total	(6,035)	(6,780)	(147)	(2,240)	(992)	(175)	(910)	(2,316)

1) Includes current portion of long-term interest bearing debt amounting to USD 824 million.

Derivative instruments

USD millions	Notes	2019	2018
Total fair value of derivatives			
Forward foreign exchange contracts	6.3	(7)	(46)
Cross-currency swaps	6.3	(72)	(62)
Interest rate swaps designated for hedging	6.3	(7)	(6)
Embedded commodity derivatives	6.3	(20)	(37)
Balance 31 December		(106)	(151)
Derivatives presented in the statement of financial position			
Non-current assets		1	-
Current assets		-	5
Non-current liabilities		(96)	(101)
Current liabilities		(11)	(55)
Balance 31 December		(106)	(151)

Outstanding committed forward foreign exchange contracts at 31 December

USD millions	2019	2018
Forward foreign exchange contracts, notional amount	427	730

All outstanding forward foreign exchange contracts at 31 December 2019 have maturity in 2020, except non-deliverable forward contracts totaling INR 4,622 million that mature in 2021. Buy positions are mainly in US dollars against Norwegian kroner or Brazilian reals. Sell positions are in various operating currencies towards Norwegian kroner.

6.2 Hedge accounting

A description of the Group's general risk management policies and principles can be found in note 6.1 Financial risks.

Accounting policies

Yara applies hedge accounting according to IFRS 9 and designates certain derivatives as either hedges of the fair value of recognized assets or liabilities (fair value hedges), hedges of foreign currency risk of recognized assets or liabilities (cash flow hedges), or hedges of net investments in foreign operations.

Changes in fair value of financial instruments designated as fair value hedges are recognized in the consolidated statement of income. The carrying amount of the hedged item is adjusted for changes in the fair value attributable to the hedged risk.

Changes in fair value of financial instruments used as hedging instruments in cash flow hedges are recognized in equity until the hedged transactions are recognized. Any ineffective part of a hedge is recognized in the Consolidated statement of income.

Changes in fair value of financial instruments used as hedges of net investment in foreign operations are recognized as other comprehensive income. Any ineffective part of a hedge is recognized in the Consolidated statement of income.

Hedge accounting ceases when the hedging instrument expires, is sold, terminated or exercised. Hedge accounting also ceases if the hedge relationship for some reason no longer fulfill the requirements for hedge accounting.

Fair value hedges

In December 2014, Yara designated a portfolio of long-term NOK fixed-to-floating interest rate swaps as hedging instruments. The hedged risk is the change in fair value due to changes in risk-free interest rates (NIBOR) of the NOK 700 million and NOK 600 million fixed rate bond debt from 2014.

In December 2017, Yara designated a portfolio of long-term NOK and SEK fixed-to-floating interest rate swaps as hedging instruments. The hedged risk is the change in fair value due to changes in risk-free interest rates (NIBOR) of the NOK 1,000 million and NOK 1,000 million fixed rate bond debt and the change in fair value due to changes in risk-free interest rates (STIBOR) of the SEK 800 million fixed rate bond debt, all from 2017.

Subsequent to initial recognition, Yara measures interest-bearing borrowings at amortized cost. However, the designation of interest rate swaps as hedging instruments and use of hedge accounting enables Yara to include the fair value of changes in interest rates in the carrying value of the bonds. The corresponding adjustment in the Consolidated statement of income offsets the effects of the recognized interest rate swaps, leading to less volatility in net income.

As the key parameters of the hedging instruments (interest basis, inception dates and maturity dates) are identical to the respective hedged items, no ineffectiveness has been identified.

Cash flow hedges

Yara had no cash flow hedges in 2019 or 2018. However, Yara has used derivative instruments to hedge cash flows of planned transactions in the past and may do so also in the future.

Net investment hedges

At 31 December 2019, Yara has designated in total USD 930 million (2018: USD 930 million) of its USD denominated interest-bearing debt as hedges of net investments in foreign (USD based) entities. The hedging instruments comprise USD denominated bonds, term loans and the currency component of a portion of the Group's cross-currency swap portfolio.

The designation of interest-bearing debt as hedges of net investments leads to changes of foreign currency translation (gain/loss) being recognized in the Consolidated Statement of Comprehensive income instead of in the Consolidated Statement of Income.

As both the hedged net investments and the hedging instruments are sensitive only to fluctuations in the USD/NOK spot rate, no ineffectiveness has been identified.

Effect on financial position and performance in 2019

USD millions	Currency	Hedge rates	Carrying amount of the hedged item [1]		Accumulated amount of hedge adjustment on the hedged item [4]		Line item in the Consolidated statement of financial position in which the hedged item is included	Line item in the Consolidated statement of financial position in which the hedging instrument is included	Change in value of the hedged item used for calculating hedge ineffectiveness	This year's change in value of the hedging instrument	Hedge ineffectiveness recognized in Consolidated statement of income
			Assets	Liabilities	Assets	Liabilities					
Fair value hedges											
Interest rate risk											
- Fixed interest, NOK bonds (2014)	NOK	3M NIBOR	-	147	1	-	Long-term interest-bearing debt	Other long-term liabilities	1	(1)	-
- Fixed interest, NOK bonds (2017)	NOK	3M NIBOR	-	221	6	-	Long-term interest-bearing debt	Other long-term liabilities	-	-	-
- Fixed interest, SEK bonds (2017)	SEK	3M STIBOR	-	86	-	-	Long-term interest-bearing debt	Other long-term liabilities	-	-	-
Net investment hedges											
Foreign exchange risk											
- Net equity in subsidiaries [2]	USD	Spot USD NOK	930	-	-	209	Other reserves	Long-term interest-bearing debt [3]	9	(9)	-

1) The designated nominal amounts of the hedging instruments equal the nominal amounts of the hedged items.
2) Amounts are after tax. See note 2.8 Income tax expense for the tax effect.
3) Includes USD 1 million related to the part of the hedging instrument (cross-currency swap) which refers to the line item Other long-term liabilities.
4) Included in the carrying amount of the hedged item on fair value hedges.

For either hedging category, there are no balances remaining from a hedging relationship for which hedge accounting is no longer applied.

Effect on financial position and performance in 2018

USD millions	Currency	Hedge rates	Carrying amount of the hedged item [1]		Accumulated amount of hedge adjustment on the hedged item [4]		Line item in the Consolidated statement of financial position in which the hedged item is included	Line item in the Consolidated statement of financial position in which the hedging instrument is included	Change in value of the hedged item used for calculating hedge ineffectiveness	This year's change in value of the hedging instrument	Hedge ineffectiveness recognized in Consolidated statement of income
			Assets	Liabilities	Assets	Liabilities					
Fair value hedges											
Interest rate risk											
- Fixed interest, NOK bonds (2014)	NOK	3M NIBOR	-	149	-	-	Long-term interest-bearing debt	Other long-term liabilities	2	(2)	-
- Fixed interest, NOK bonds (2017)	NOK	3M NIBOR	-	224	6	-	Long-term interest-bearing debt	Other long-term liabilities	2	(2)	-
- Fixed interest, SEK bonds (2017)	SEK	3M STIBOR	-	89	-	-	Long-term interest-bearing debt	Other long-term liabilities	(1)	1	-
Net investment hedges											
Foreign exchange risk											
- Net equity in subsidiaries [2]	USD	Spot USD NOK	930	-	-	199	Other reserves	Long-term interest-bearing debt [3]	41	(41)	-

1) The designated nominal amounts of the hedging instruments equal the nominal amounts of the hedged items.
2) Amounts are after tax. See note 2.8 Income tax expense for the tax effect.
3) Includes USD 20 million related to the part of the hedging instrument (cross-currency swap) which refers to the line item Other long-term liabilities.
4) Included in the carrying amount of the hedged item on fair value hedges.

For either hedging category, there are no balances remaining from a hedging relationship for which hedge accounting is no longer applied.

6.3 Financial instruments

Accounting policies

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Financial assets and financial liabilities are recognized when the Group becomes party to the contractual obligations of the instrument.

Under IFRS 9 Financial Instruments, Yara classifies financial assets based on the business model in which they are managed and their contractual cash flows. The principal categories are amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL).

Derivatives

The Group uses derivative financial instruments to hedge exposure against currency risk, interest rate risk and commodity price risk arising in operating, financing and investment activities. These derivatives are initially recognized at fair value and subsequently measured at fair value through profit or loss at each balance sheet date. Embedded derivatives are separated and treated as derivatives when the risks and characteristics of the derivative are not closely related to the host contract, and the host contract is not measured at fair value with changes in fair value recognized in the consolidated statement of income. Embedded derivatives may refer to financial transactions and sale and purchase transactions for gas, ammonia and other commodities.

Fair value on derivatives is measured based on quoted market prices when these are available. When quoted prices from active markets are not available, the Group estimates fair value by using valuation models that make maximum use of observable market data. The resulting change in fair value is recognized immediately in the statement of income. If the derivative is designated and effective as a hedging instrument, the timing of the recognition in the consolidated statement of income depends on the nature of the hedge relationship. A derivative is classified as non-current if the remaining maturity of the derivative is more than 12 months, and as current if the remaining maturity of the derivative is less than 12 months.

All commodity contracts are bilateral contracts, or embedded derivatives in bilateral contracts, for which there are no active markets. Fair value of all items in this category, is therefore calculated using valuation techniques with maximum use of market inputs and assumptions that reasonably reflect factors that market participants would consider in setting a price, relying as little as possible on entity-specific inputs. Fair values of commodity contracts are especially sensitive to changes in forward commodity prices. None of the derivatives in this category are designated in hedge relationships.

Receivables and deposits

See note 3.2 for information on Trade receivables and note 3.4 for Cash and Cash equivalents.

Other short-term and long-term receivables and deposits are initially recognized at fair value. Subsequently they are measured at amortized cost using the effective interest method. Short term items are normally not discounted. The carrying amounts of receivables and deposits are adjusted for expected credit losses and are considered to represent reasonable estimates on fair value. Interest-free receivables are discounted if it has a material impact on fair value. Yara records 12-months expected credit losses if there has not been any significant increase in credit risk since initial recognition (the general approach). If there has been a significant increase in credit risk, lifetime expected credit loss is recorded. The 12-months expected credit loss reflect loss from default events that are possible within the next 12 months. They are calculated as the Probability of Default based on the credit rating of different counterparts multiplied with the Loss Given Default based on listed corporate bonds. If a significant increase in credit risk since initial recognition is identified, a lifetime expected credit loss for the specific receivable or deposit will be recognized based on an individual assessment. The credit risk has normally increased significantly when a receivable is defaulted.

A receivable is considered to be in default when it is overdue and enforcement activities have started. If there is a reasonable expectation that enforcement activities will not lead to recovery, the receivable is credit impaired. The receivable is written off when enforcement activities lead to objective evidence of the receivable being irrecoverable.

Yara's expected credit loss on receivables and deposits are limited. As a result, disclosures are reduced due to materiality.

Equity instruments

The Group has equity shares within the scope of IFRS 9 to a limited extent. These are initially recognized at fair value. Subsequently they are measured at fair value through other comprehensive income (no recycling).

Financial liabilities

Trade payables are initially recognized at fair value. Subsequently they are measured at amortized cost using the effective interest method. Short term payables are normally not discounted. However, short-term payables and other short-term debt are discounted if it has material impact on fair value. Fair value of these liabilities are assumed to be equal to their carrying amounts.

Interest-bearing borrowings are initially recognized at fair value less direct transaction costs. Subsequently they are measured at amortized cost using the effective interest method. Fair value on long-term interest-bearing debt and other long-term liabilities differs from the carrying amounts since the USD debenture bonds are held with fixed interest rates and are not subject to hedge accounting. For these USD debenture bonds with fixed interest rates and for other long term liabilities, no active market is available and fair value is calculated based on the present value of future principal and interest cash flows. Cash flows are estimated by using LIBOR with different maturities as a benchmark, and adding a credit margin derived from recent transactions or other information available.

See note 4.5 for information on lease liabilities.

Contingent consideration is initially recognized at fair value and subsequently measured at fair value through profit or loss. Fair value of contingent consideration is calculated considering the present value of expected payments, discounted using a risk-adjusted discount rate. The expected payment is determined by considering the possible scenarios of financial performance, the amount to be paid under each scenario and the probability of each scenario.

Financial instruments at fair value

Financial instruments at fair value (FV) refer to derivatives at FV through profit and loss (P&L), equity instruments at FV through OCI (other comprehensive income) and financial liabilities at FV through P&L. They are valued according to different levels in the fair value hierarchy in IFRS. The different levels are defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: 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).

Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Carrying amounts and fair value per category

31 December 2019

		Derivatives		Receivables and deposits	Equity instruments	Financial liabilities		Non-financial assets/liabilities	
USD millions	Notes	Fair value through P&L	Designated for hedging	Amortized cost	FV through OCI (no recycling)	Amortized cost	Fair value through P&L	Historic cost	Total
Non-current assets									
Other non-current assets	4.6	-	-	82	19	-	-	312	414
Current assets									
Trade receivables	3.2	-	-	1,564	-	-	-	-	1,564
Prepaid expenses and other current assets	3.3	-	-	176	-	-	-	377	553
Cash and cash equivalents	3.4	-	-	300	-	-	-	-	300
Sum financial assets		1	-	2,121	19	-	-	689	2,830
Non-current liabilities									
Other long-term liabilities	6.2	(89)	(7)	-	-	(116)	(17)	(18)	(247)
Long-term interest-bearing debt	5.3	-	-	-	-	(2,698)	-	-	(2,698)
Long-term lease liabilities	4.5	-	-	-	-	(337)	-	-	(337)
Current liabilities									
Trade and other payables	5.5	(11)	-	-	-	(1,577)	(26)	-	(1,614)
Prepayments from customers		-	-	-	-	-	-	(399)	(399)
Other short-term liabilities		-	-	-	-	(14)	-	(87)	(101)
Short-term interest-bearing debt	5.3	-	-	-	-	(494)	-	-	(494)
Current portion of long-term debt	5.3	-	-	-	-	(398)	-	-	(398)
Short-term lease liabilities	4.5	-	-	-	-	(98)	-	-	(98)
Sum financial liabilities		(100)	(7)	-	-	(5,732)	(43)	(505)	(6,386)
Total net balance		(99)	(7)	2,121	19	(5,732)	(43)	185	(3,556)
Fair value		(99)	(7)	2,121	19	(5,830)	(43)		
Unrecognized gain/(loss)		-	-	-	-	(98)	-		

Unrecognized loss on financial instruments at amortized cost is mainly related to long-term interest-bearing debt with fixed interest rate. See note 5.3 for details.

Equity instruments that are not traded in active markets are measured based on recent market transactions and valuation techniques. Equity instruments as of year-end 2019 refer mainly to shares in Pohhjolan Voima Oyj. These investments are long term and not held for trading. No dividend is received in 2019.

31 December 2018

USD millions	Notes	Derivatives		Receivables and deposits	Equity instruments	Financial liabilities		Non-financial assets/liabilities	Total
		Fair value through P&L	Designated for hedging	Amortized cost	FV through OCI (no recycling)	Amortized cost	Fair value through P&L	Historic cost	
Non-current assets									
Other non-current assets	4.6	-	-	56	21	-	-	343	420
Current assets									
Trade receivables	3.2	-	-	1,601	-	-	-	-	1,601
Prepaid expenses and other current assets	3.3	5	-	159	-	-	-	577	741
Cash and cash equivalents	3.4	-	-	202	-	-	-	-	202
Sum financial assets		5	-	2,018	21	-	-	920	2,964
Non-current liabilities									
Other long-term liabilities	6.2	(95)	(6)	-	-	(61)	(17)	(22)	(201)
Long-term interest-bearing debt	5.3	-	-	-	-	(2,776)	-	-	(2,776)
Current liabilities									
Trade and other payables	5.5	(55)	-	-	-	(1,774)	(6)	-	(1,834)
Prepayments from customers		-	-	-	-	-	-	(343)	(343)
Other short-term liabilities		-	-	-	-	(29)	-	(60)	(88)
Short-term interest-bearing debt	5.3	-	-	-	-	(397)	-	-	(397)
Current portion of long-term debt	5.3	-	-	-	-	(824)	-	-	(824)
Sum financial liabilities		(149)	(6)	-	-	(5,861)	(23)	(424)	(6,464)
Total net balance		(144)	(6)	2,018	21	(5,861)	(23)	496	(3,499)
Fair value		(144)	(6)	2,018	21	(5,855)	(23)		
Unrecognized gain/(loss)		-	-	-	-	6	-		

Unrecognized gain on financial instruments at amortized cost is mainly related to long-term interest-bearing debt with fixed interest rate. See note 5.3 for details.

Financial instruments at fair value

31 December 2019

USD millions	Level 1	Level 2	Level 3	Total
Equity instruments	-	-	19	19
Derivatives, net	-	(84)	(22)	(106)
Financial liabilities	-	(6)	(37)	(43)
Net total balance	-	(90)	(40)	(130)

There were no transfers between Level 1 and Level 2 in the period.

31 December 2018

USD millions	Level 1	Level 2	Level 3	Total
Equity instruments	-	-	21	21
Derivatives, net	-	(116)	(35)	(151)
Financial liabilities	-	(6)	(17)	(23)
Net total balance	-	(122)	(31)	(153)

There were no transfers between Level 1 and Level 2 in the period.

Reconciliation of fair value instruments at Level 3 from opening to closing balance

USD millions	2019	2018
Balance at 1 January	(31)	(77)
Total gains or (losses):		
in income statement	16	9
in other comprehensive income	(2)	(1)
Payments made	1	-
Disposals or (additions)	(23)	24
Reclassification from level 3 to level 2 of the fair value hierarchy	-	6
Foreign currency translation	(2)	8
Balance at 31 December	(40)	(31)

Sensitivity of fair value measurement of financial instruments at Level 3 at 31 December 2019

	Effect on profit or loss		Effect on other comprehensive income	
USD millions	Favorable	(Unfavorable)	Favorable	(Unfavorable)
Derivatives (20% decrease/(increase) in ammonia price)	12	(18)	-	-
Equity instruments (20% increase/(decrease) in electricity price)	2	(4)	2	-
Financial liabilities (20% decrease/(increase) in Yara DAP price)	3	(5)	-	-
Total	17	(27)	2	-

The favourable and unfavourable effects on derivatives refer to embedded derivatives in energy contracts. The effects are calculated by decreasing/increasing the input of ammonia prices by 20 percent for the whole contract period, also for long-term contracts. All other variables remain constant.

The favourable and unfavourable effects on equity instruments refer to fair value of unlisted equity securities. The effects are calculated based on a valuation model for estimation of fair value, increasing/decreasing the forward electricity prices used in the model by 20 percent. All other variables remain constant.

The favourable and unfavourable effects on financial liabilities refer to contingent consideration regarding the binding agreement with the former non-controlling interest in Galvani (former Galvani). The effects are calculated by decreasing/increasing Yara DAP price. All other variables remain constant. In addition to these effects, there is a conditional future payment of maximum USD 30 million related to future project success in GICS (see note 7.2 for details). Fair value of this future payment is included as contingent consideration, but it is not included in the sensitivity analysis.

Gains and losses from financial instruments recognized in the Consolidated statement of income and Consolidated statement of comprehensive income

2019

USD millions	Notes	Derivatives		Equity instruments	Financial liabilities		Total
		Fair value through P&L	Designated for hedging	FV through OCI (no recycling)	Amortized cost	Fair value through P&L	
Consolidated statement of income 1)	6.1, 6.2	(17)	-	-	-	2	(15)
Consolidated statement of comprehensive income 2)	6.2	-	-	(2)	(12)	-	(14)
Total		(17)	-	(2)	(12)	2	(29)

1) Effects of foreign currency translation on other financial instruments than derivatives are not included in the overview.
2) Amounts are presented before tax. Please see note 2.8 for specification of taxes.

2018

USD millions	Notes	Derivatives		Equity instruments	Financial liabilities		Total
		Fair value through P&L	Designated for hedging	FV through OCI (no recycling)	Amortized cost	Fair value through P&L	
Consolidated statement of income 1)	6.1, 6.2	(71)	(3)	-	-	26	(48)
Consolidated statement of comprehensive income 2)	6.2	-	1	(5)	(52)	-	(56)
Total		(71)	(2)	(5)	(52)	26	(104)

1) Effects of foreign currency translation on other financial instruments than derivatives are not included in the overview.
2) Amounts are presented before tax. Please see note 2.8 for specification of taxes.

7 Business combinations and other business initiatives

7.1 Business combinations

Accounting policies

Acquisitions of businesses are accounted for using the acquisition method. The cost of an acquisition is the aggregate of the consideration transferred measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. Acquisition-related costs are recognized in profit or loss as incurred.

Identifiable assets acquired and liabilities assumed are recognized at their acquisition date fair values, if not otherwise stated. The non-controlling interest is measured either at fair value or at the proportionate share of the acquiree's identifiable net assets.

If the business combination is achieved in stages, the acquisition date fair value of Yara's previously held equity interest in the acquiree is re-measured to the fair value at the acquisition date. Any gain or loss is recognized in profit or loss or other comprehensive income, as appropriate.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items where the accounting is incomplete. Those provisional amounts are adjusted within the next 12 months from the acquisition date to reflect new information obtained about facts and circumstances that existed at the acquisition date, and which would have affected the amounts recognized at that date.

Any contingent consideration is recognized at fair value at the acquisition date as part of the consideration transferred in exchange for the acquiree. Contingent considerations classified as assets or liabilities are subsequently measured at fair value at each reporting date with changes in fair value recognized in profit or loss. Contingent consideration classified as equity is not re-measured and its subsequent settlement is accounted for within equity. Changes in the fair value of a contingent consideration are adjusted retrospectively in goodwill within 12 month from the acquisition date if the changes relate to additional information on facts and circumstances that existed at the acquisition date.

Business combinations

During 2019 Yara had no business combinations. All the information below are related to the operations in 2018.

The business combination of Tata Chemicals Limited's urea business in India was closed 12 January 2018. The acquired business comprises the Babrala urea plant and distribution business in Uttar Pradesh. The plant has an annual production of 0.7 million tonnes ammonia and 1.2 million tonnes urea. The plant was commissioned in 1994, and is the most energy efficient plant in India. The primary reason for the business combination is to further accelerate Yara's growth in India by creating an integrated position in the world's second-largest fertilizer market. The acquisition is reported in the Production segment.

The business combination of the Vale Cubatão Fertilizantes complex in Brazil was closed 15 May 2018. The Cubatão asset is a nitrogen and phosphate complex with an annual production capacity of approximately 0.2 million tonnes of ammonia, 0.5 million tonnes of nitrates and 0.7 million tonnes of phosphate fertilizer. The acquisition brings nitrogen production assets into Yara's growing portfolio in Brazil, strengthening and growing Yara's integrated position within both industrial and fertilizer markets. The plant is reported in the Production segment, while sales are reported in Sales & Marketing and New Business segments.

Consideration paid during 2018

USD millions	Babrala	Cubatão
Cash transferred	421	255
Net working capital adjustment	(9)	(12)
Total consideration	412	243

Acquisition costs of USD 1 million for the Cubatão acquisition and USD 9 million for the Babrala acquisition have been excluded from the consideration transferred and recognized as an expense within "Other operating expenses" in the consolidated statement of income in 2018. Transaction costs related to the Babrala acquisition are mainly related to stamp duties and may be subject to change. Contingent liability related to stamp duties is described in note 5.6. Integration and acquisition-related costs for the Babrala acquisition of USD 2 million have been recognized previous years.

Identifiable assets acquired and liabilities recognized at the date of acquisition (fair value)

USD millions	Babrala 12 January 2018	Cubatão 15 May2018
Assets		
Deferred tax asset	-	2
Distribution network	31	-
Intangible assets	-	4
Property, plant and equipment	234	270
Inventories	4	67
Trade receivables [1)]	113	18
Prepaid expenses and other current assets	16	3
Cash and cash equivalents	-	13
Other liquid assets	-	-
Total assets	398	377
Liabilities		
Employee benefits	3	5
Long-term provisions	-	48
Trade and other payables	17	9
Prepayments from external customers / deferred revenue	1	23
Other short-term liabilities	2	5
Short-term provisions	-	3
Bank loans and other interest-bearing short-term debt	-	41
Total liabilities	23	134
Total identifiable net assets at fair value	374	243

1) For Babrala acquisition, the amount consists mainly of receivables under the pricing scheme policy of Government of India. See accounting policies on page 97. The receivables acquired in the business combination of Babrala have a fair value of USD 11 million lower than the gross contractual amount of USD 124 million. The receivables acquired in the business combination of Vale Cubatão have a gross contractual amount approximately equal to their fair value.

Goodwill arising on acquisition

USD millions	Babrala 12 January 2018	Cubatão 15 May2018
Total consideration	412	243
Fair value of net identifiable assets acquired	374	243
Goodwill arising on acquisition	38	-

Goodwill of the Babrala acquisition consists of Yara specific synergies and future benefits from the assembled workforce, in addition to a willingness to pay to get an integrated position in the world's second-largest fertilizer market. The goodwill will be deductible for tax purposes.

Net cash outflow on acquisition

USD millions	Babrala 12 January 2018	Cubatão 15 May2018
Consideration paid in cash at date of acquisition	(421)	(255)
Net working capital settlement	7	11
Paid stamp duties	(3)	-
Cash and cash equivalent balances acquired	-	13
Net cash outflow on acquisition of subsidiaries	(416)	(231)

Net cash outflow is presented as part of "Cash outflow on business combinations" in the consolidated statement of cash flows.

Impact of the acquisition on total assets of the Group recognized 2018

USD millions	Babrala 12 January 2018	Cubatão 15 May2018
Consolidated identifiable assets	398	377
Goodwill arising on the acquisition	38	-
Total impact on the total assets of the Group	435	377

Impact of the acquisition on the results of the Group in 2018

USD millions	Babrala 12 January 2018	Cubatão 15 May2018
Included in year-to-date consolidated figures		
Revenues	394	326
of which internal revenues	-	(64)
EBITDA	34	48
Net income before tax	(6)	38

The Babrala result is negatively impacted by USD 9 million in stamp duties directly related to the business combination.

Pro-forma figures

If the acquisition of Cubatão had taken place at the beginning of the year, the effect on Yara's "pro-forma" year-to-date consolidated income before tax for 2018 would have been:

USD millions	Cubatão
Revenues	117
Consolidated income before tax	(13)

In determining the pro-forma revenues and net income before tax, the following adjustments have been made:

- calculated depreciation of tangible and intangible assets acquired on the basis of fair values arising in the initial accounting for the business combination rather than the carrying amounts recognized in the pre-acquisition financial statements
- calculated increased interest expense on debt used for financing the acquisition of shares
- calculated unwinding expense of decommissioning liabilities based on liabilities recognized at acquisition rather than on decommissioning liabilities recognized in the pre-acquisition financial statements
- eliminated sales from Vale Cubatão to Yara Brazil during the period 1 January to 15 May 2018

If the acquisition of Babrala had taken place at the beginning of the year, rather than on 12 January 2018, the effect on Yara's "pro-forma" year-to-date consolidated income before tax would not be material.

7.2 Other business initiatives

Minority buy-out

In 2018, Yara signed an agreement with the non-controlling interest in GICS (GICS Indústria, Comércio e Serviços S.A., former Galvani) to acquire their 40% equity interest. Assets and liabilities related to GICS were classified as held-for-sale at the end of 2018. The transaction was closed on 10 July 2019. As part of the consideration, the non-controlling interest took full ownership to certain assets and liabilities in GICS, including the production unit in Luis Eduardo Magalhães, the mining units in Angico dos Dias and Irece (all three in the state of Bahia) and the Santa Quiteria greenfield phosphate project. The fair value of the disposal group was determined to be lower than its carrying amount and an impairment of USD 33 million was recognized upon reclassification to disposal group held-for-sale in 2018. A further assessment led to an additional impairment of USD 8 million in 2019.

In addition to fair value of assets and liabilities transferred, consideration includes a cash payment of USD 70 million over a three-year period from closing and a conditional future payment related to project success of maximum USD 30 million. Yara through GICS also provided a capital contribution to the new entity of USD 30 million as starting capital, minus adjustments for a normalized level of working capital (USD 2.6 million). The remaining cash flow will follow the payment schedule over a three-year period.

The carrying amount of the non-controlling interest in GICS at the date of closing (10 July 2019) was USD 139 million. The difference between the carrying amount and the consideration, including fair value of assets and liabilities that have been transferred, was recognized in equity attributable to shareholders of the parent. Effect on equity attributable to the shareholders of the parent was a reduction of USD 151 million.

Equity transactions with the non-controlling interest in GICS (former Galvani)

USD millions	GICS
Carrying amount of non-controlling interests acquired/(divested)	139
Consideration	(290)
Increase/(decrease) in equity attributable to owners to the group	(151)
Presented in the statement of changes in equity:	
Increase/(decrease) to other reserves	(54)
Increase/(decrease) to retained earnings	(97)
Total	(151)

Major classes of assets and liabilities held-for-sale

USD millions	2019	2018
Deferred tax assets	-	1
Intangible assets	-	31
Property, plant and equipment	9	111
Other non-current assets	-	6
Inventories	-	27
Trade receivables	-	28
Prepaid expenses and other current assets	-	1
Assets held-for-sale	9	206
Deferred tax liabilities	-	10
Long-term provisions	-	5
Trade and other payables	-	10
Liabilities directly associated with assets held-for-sale	-	26
Net assets held-for-sale	9	180

Other business initiatives

Yara has announced it is evaluating an IPO or spin-off of its industrial nitrogen business in 2019. The IPO/spin-off evaluation and scope assessment is expected to be completed by mid 2020.

8 Other disclosures

8.1 Related parties

The Norwegian State
At 31 December 2019, the Norwegian State owned 98,640,995 shares, representing 36.21% of the total number of shares issued. On the same date, the National Insurance Fund, Norway owned 17,893,478 shares, representing 6.57% of the total number of shares issued.

Yara Pension fund
One of Yara International ASA's pension plans is arranged through Yara Pension Fund. This plan has been closed for new members since July 2006. During 2019, Yara has contributed to the pension fund through deductions from premium fund.

Equity-accounted investees
Transactions with equity-accounted investees are described in note 4.3.

Board of Directors
Members of the Board of Directors are elected for two year terms. Their rights and obligations as board members are solely and specifically provided for the company's articles of association and Norwegian law. The company has no significant contracts in which a Board Member has a material interest.

Executive Management
Executive Management remuneration is disclosed in note 8.2.

Board of Directors compensation 2019 and number of shares owned 31 December 2019

USD thousands, except number of shares	Compensation earned in 2019 [5]	Number of shares
Geir Isaksen, Chairperson [1]	76	84
Trond Berger [2]	61	3,000
Hilde Bakken [1]	42	800
John Gabriel Thuestad [4]	53	1,200
Rune Asle Bratteberg [2] [3]	49	326
Geir O. Sundbø [1] [3]	42	298
Håkon Reistad Fure (from 7 May 2019) [4]	41	22,500
Adele Bugge Norman Pran (from 7 May 2019) [2]	32	10
Kimberly Lein-Mathiesen (from 7 May 2019)	25	-
Eva Safrine Aspvik (from 7 May 2019) [3]	25	531
Kari Marie Nøstberg (from 1 September 2019) [3]	13	447
Maria Moræus Hanssen (till 7 May 2019) [2] [4]	23	n/a
Kjersti Aass (till 1 September 2019)	25	n/a

1) Member of the HR Committee in 2019.
2) Member of the Audit Committee in 2019.
3) Interest-free loan of USD 1.346 given through a trust in accordance with a Yara share purchase offer for employees.
4) John Gabriel Thuestad, Håkon Reistad Fure and Maria Moræus Hanssen receive an additional remuneration for Board members resident outside Scandinavia, currently NOK 23.000 per meeting.
5) Compensation in NOK translation rate to USD: 0,1137.

Compensation of Board of Directors was USD 509 thousand in 2019 compared to USD 431 thousand in 2018.

The Chairperson and the members of the Board have no agreements for further compensation due to termination or changes in the position.

Compensation 2019 and number of shares owned by the deputy Board Members at 31 December 2019

USD thousands, except number of shares	Compensation earned in 2019	Number of shares
Inge Stabæk [1]	-	483
Toril Svendsen	-	-
Vidar Viskjer [1]	-	326
Morten Ødegård [1]	-	905
Maiken Sandland	-	85
Tove Marie Fløtten (from 7 May 2019) [1]	-	219
Veronique Revoy (from 7 May 2019)	-	997

1) Interest-free loan of USD 1.346 given through a trust in accordance with a Yara share purchase offer for employees.

8.2 Yara Executive Management remuneration

Yara Executive Management: Compensation and number of shares owned at 31 December 2019

USD thousands, except number of shares	Salary [2]	Shared Based Remuneration [1]	Other benefits	Pension benefits	Short-term incentive payout accrued [4]	Sum	Number of shares	Short-term incentive payout paid [3]
Svein Tore Holsether [5) 7)]	768	231	30	224	353	1,606	34,613	311
Tove Andersen [5) 7)]	401	100	26	27	133	686	7,862	140
Terje Knutsen [5) 7)]	376	93	53	178	130	830	9,531	136
Lair Hanzen [8)]	521	148	1	57	334	1,062	16,081	471
Kristine Ryssdal [5) 7)]	349	69	31	15	110	576	5,795	94
Lene Trollnes [5) 7)]	389	97	29	15	138	669	12,861	138
Pablo Barrera Lopez [5) 7)]	345	94	33	16	147	635	3,337	103
Lars Røsæg [5) 7)]	372	97	24	15	151	659	3,442	78
Yves Bonte (till June 30, 2019) [6) 9)]	367	-	2	43	142	554	n/a	271
Terje Morten Tollefsen (till August 22, 2019) [5) 6) 7)]	229	-	15	35	59	338	n/a	82

1) Fixed cash amount as part of Shared Based Remuneration (see description on page 163).
2) For Yara Executive Management employed in Norway, no salary increase was applied. For Yara Executive Management member employed in Belgium, an inflation increase of 2% was applied, no salary increase was applied. For Yara Executive Management member employed in Brazil, a salary increase of 0,02% in line with the minimum increase under Brazil collective agreement was applied. The development in base salary and actual paid salary may differ from one year to the next due to effects of the Norwegian holiday pay system, where a change in number of days holiday taken and/or annual holiday allowance impact salary paid.
3) Short-term incentive payout earned in 2018, paid in 2019.
4) Estimated short-term incentive payout (excluding holiday allowance) earned in 2019 to be paid in 2020.
5) Interest-free loan of USD 1,346 given through Yara International ASA in accordance with a Yara share purchase offer.
6) The numbers presented are for the period as member of Yara Executive Management in 2019.
7) Salary in NOK translation rate to USD: 0,1140.
8) Salary in BRL translation rate to USD: 0.2536.
9) Salary in EUR translation rate to USD: 1.1302.

Yara Executive Management: Compensation and number of shares owned at 31 December 2018

USD thousands, except number of shares	Salary [2]	Shared Based Remuneration [1]	Other benefits	Pension benefits	Short-term incentive payout accrued [4]	Sum	Number of shares	Short-term incentive payout paid [3]
Svein Tore Holsether [5) 7)]	821	249	45	198	299	1,613	31,908	180
Tove Andersen [5) 7)]	427	107	29	25	134	723	6,646	102
Terje Knutsen [5) 7)]	411	111	54	101	131	809	8,278	63
Yves Bonte [9)]	744	189	9	90	247	1,280	15,979	179
Lair Hanzen [8)]	561	153	3	60	487	1,264	13,484	295
Kristine Ryssdal [5) 7)]	382	75	41	17	90	605	4,935	55
Terje Morten Tollefsen [5) 7)]	380	75	33	31	78	597	7,033	60
Lene Trollnes [5) 7)]	405	105	35	17	132	694	11,557	95
Pablo Barrera Lopez (from April 1, 2018) [5) 6) 7)]	260	88	21	13	99	481	2,320	-
Lars Røsæg (from November 19, 2018) [5) 6) 7)]	48	-	4	2	75	129	474	-
Petter Østbø (till November 19, 2018) [6) 7) 10)]	402	114	20	21	-	557	n/a	109
Alvin Rosvoll (till March 21, 2018) [6) 7)]	70	-	24	22	-	116	n/a	36
Torgeir Kvidal (till March 21, 2018) [6) 7)]	76	-	7	20	-	104	n/a	58
Pierre Herben (till March 21, 2018) [6) 9) 11)]	56	-	5	18	-	79	n/a	37

1) Fixed cash amount as part of Shared Based Remuneration (see description on page 163).
2) The base salaries of Yara Executive Management employed in Norway increased with 6.6% on weighted average. For Yara Executive Management member employed in Belgium, an increase of 1.5% was applied in addition to an inflation increase of 2%. For Yara Executive Management member employed in Brazil, an inflation increase of 4% was applied, no salary increase was applied due to salary moderation applicable in Brazil. The development in base salary and actual paid salary may differ from one year to the next due to effects of the Norwegian holiday pay system, where a change in number of days holiday taken and/or annual holiday allowance impact salary paid.
3) Short-term incentive payout earned in 2017, paid in 2018.
4) Estimated short-term incentive payout (excluding holiday allowance) earned in 2018 to be paid in 2019.
5) Interest-free loan of USD 1,453 given through Yara International ASA in accordance with a Yara share purchase offer.
6) The numbers presented are for the period as member of Yara Executive Management in 2018.
7) Salary in NOK translation rate to USD: 0.1227.
8) Salary in BRL translation rate to USD: 0.2726.
9) Salary in EUR translation rate to USD: 1.1777.
10) In addition to the figures above, a termination settlement with Petter Østbø amounts to USD 362 thousand and is related to six months period of notice without obligation to work and compensation for three months of parental leave that was not taken.
11) In addition to the figures above, a termination settlement with Pierre Herben amounts to USD 373 thousand equal to 7.75 months of total remuneration according to Belgian legislation.

CEO Remuneration 2019

Svein Tore Holsether's remuneration consist of the following elements:

Annual Base Salary

The Annual Base Salary is USD 769,356 (NOK 6,758,400). No adjustment of his base salary was made during 2019 and it has remained unchanged since June 2018.

Short-Term Incentive Plan

The CEO is eligible for Short-Term Incentive payout according to the plan described below. The Target payout is 40% with a capped payout of 50% of Annual Base Salary.

Share Based Remuneration

The CEO is entitled to Share Based Remuneration of 30% of Annual Base Salary according to the plan described below.

Pension Plans and Personal Insurance Plans

Svein Tore Holsether is member of the following pension plans:

- A funded Defined Contribution (DC) plan providing contribution equal to 7% of part of pensionable salary up to 7.1 times Norwegian Social Security Base Amount (G) plus 18% of salary between 7.1G and 12G;
- An unfunded DC plan for salaries above 12G with contribution equal to 25% of pensionable salary exceeding 12G

Provided that he is employed by Yara at age 65 he will be entitled to an Age Limit Compensation. This provides a benefit equal to 65% of his Annual Base Salary at that time until age 67. In case he would be entitled to Severance Pay or if it is mutually agreed between him and the Yara Board of Directors to continue the employment beyond age 65 he will not be entitled to the Age Limit Compensation.

The CEO is member of the personal insurance schemes applicable to Yara employees in Norway.

Other compensation elements

The CEO is granted benefits in kind according to the applicable market standard, the main element being a fixed car allowance of USD 19,921 (NOK 175,000) annually.

Comments to remuneration of other members of Executive Management in 2019

Lair Hanzen has Short-Term Incentive Pay in line with market conditions for Brazil. His setup consists of one Short Term Incentive scheme with 60% Incentive Target and an additional scheme with 40 Incentive Target where a three-year vesting period applies. The Short-Term Incentive Payout is not limited to 50% of annual base salary as for the other members of Yara Executive Management. He is member of the Yara Brazil pension plan which is a DC pension plan providing 12% employer contribution.

Other members of Yara Executive Management are included in Yara's plans for employees in Norway. Since 2006 Yara in Norway has transitioned from Defined Benefit Pension Plans to DC pension plan and simplified the pension plans. This work was completed in 2015 and new hires are now enrolled in one DC pension plan covering salary up to 12 times Norwegian Social Security Base Amount (G). When former pension plans were closed, existing members have been offered transitional or compensation arrangements.

Guidelines for remuneration of executives in Yara

The Board of Directors determines the remuneration of the President and CEO based on a proposal from the HR Committee and approves the general terms of the company's incentive plans for Executive Management and other key employees. The President and CEO determines the compensation to the other members of Yara's Executive Management.

The statement is prepared in accordance with the Public Limited Companies Act section 6-16a. Pursuant to the Public Limited Companies Act section 5-6 (3) the statement will be presented to the Annual General Meeting (AGM) for advisory vote except for the parts regarding Share-Based Remuneration (SBR) and Voluntary Share Purchase Program which will be presented to the AGM for approval. The Ministry of Trade, Industry and Fisheries disclosed amended guidelines for remuneration of executives in state-owned and partly state-owned companies with effect from 13 February 2015. Yara's remuneration principles applying to the Executive Management comply with these guidelines. For executives employed by Yara companies in other countries remuneration may deviate from the guidelines depending on local market conditions. There is currently one member of Yara's Executive Management who is employed by a non-Norwegian Yara company.

General Principle

Yara's policy concerning remuneration of the CEO and other members of Yara's Executive Management is to provide remuneration opportunities which:

- Are attractive to recruit and retain executives;
- Are responsible as well as competitive but not market leading;
- Reward the executives' performance, measured as their contribution to the overall success of Yara;
- Support the creation of sustainable value to Yara's shareholders and other stakeholders

Total compensation for each member of Executive Management is compared to the relevant market on a regular basis. Yara's remuneration of the Executive Management includes the following elements:

Base Salary

Base Salary is reviewed once a year as per 1st June along with the Annual Salary Review for all employees in Yara. The development of basic salary for Executive Management is based on the following:

- Annual salary adjustment for employees in Yara International ASA and Norwegian subsidiaries;
- Benchmark of Executive Management Salaries in peer companies

Share Based Remuneration

The main purpose of the Share Based Remuneration (SBR) is to support the alignment between executives and shareholder interests and to ensure retention of key talent in the company. The SBR provides a cash amount to eligible executives, who are required to invest the net amount after tax in Yara shares within a period of one month after the grant, and to retain the shares for minimum 3 years. After the lock-in period, executives are free to keep or sell the shares at their discretion. Executives who resign from Yara must reimburse to the company at the time of resignation the net proceeds of the selling of the shares that are still within the lock-in period. The grant of SBR is conditional on Yara's Net Result excluding special items and currency gain/loss being positive over the last three years.

Yara's CEO can in any case decide that SBR shall not be granted in a given year and Yara's Board of Directors can decide that SBR shall not be granted to the CEO. Such an evaluation will amongst other factors be evaluated against Yara's performance towards its strategic targets of sustainable value creation, hereunder Key Performance Indicators (KPIs) linked to environmental, social and financial performance. The amount granted is linked to the responsibility in the position. For Yara CEO, SBR is 30% of Base Salary. For the other members of Executive Management, SBR is 20% or 25%.

Short-Term Incentive Plan

Yara has defined and communicated long-term strategic targets. Those targets form the basis for the annual Business Plan. The annual KPIs are ambitious and stretched and are taken from Yara's business plan for the current year as a step towards achieving the company's long-term strategic targets. The relationship between the long-term strategic targets and the Key Performance Indicators is illustrated in the table below.

Strategic Priorities	Long-term targets		KPIs
Advance operational excellence	Delivering improved operations and superior profits	Yara Improvement Program EBITDA improvements > MUSD 600 in 2023 vs 2018	Fixed Cost Produced Volumes Energy Efficiency in production Inventory Days Credit Days Customer satisfaction EBITDA impact by Business Unit Procurement savings
	Driving quality and diversity through an engaged and respected workforce	Engagement index >80% by 2025, and >20% female top managers by 2020 and >25% by 2025	Total Recordable Injuries (TRI) % Female senior Leadership position holders % Employee engagement
	Protecting the planet by aiming for climate neutrality by 2050	>10% decline in kg CO_2e/kg N produced by 2025	Tonne CO_2 eqv./tonne N
Create scalable solutions	Improving margins and nitrogen use efficiency through premium product growth	>3.5 million tonnes premium products growth and >100 million units of YaraVita sales by 2025, improving overall EBITDA/t in Sales & Marketing	Product deliveries (kt) Commercial CB1/t EBITDA/t
	Build profitable global food chain partnerships	>2 million tonnes of crop solution sales generated through food companies by 2025	Product deliveries (kt)
Drive innovative growth	Building closeness to farmers through scaling up digital farming	>10 million ha under management in 2020 and positive EBITDA from digital farming in 2022	KPI's driving progress towards successful completion of defined development projects
	Solving global challenges and growing profitable business through innovation	Shaping the industry by delivering sustainable and profitable innovations with de-carbonization and circular economy	

The Short-Term Incentive Plan depends on four main factors;

- A trigger which must be met for any incentive at all to be paid out, the trigger is having a net income above zero

Provided this is in place, the other three factors are multipliers defining the pay-out to each member of the plan;

- Target Incentive as a percentage of Base Salary;
- Yara Financial Performance measured by Yara's Return on Invested Capital (ROIC) excluding Special Items;
- Executive Management's contribution to the achieved results of the KPIs and strategic targets. The KPIs should express ambitious and stretched goals

These three elements are described in further detail below:

Target Incentive

The Target Incentive is linked to the responsibility in the position and comparison with the market. The Target Incentive is 40% of base salary for Yara CEO and 28% to 35% of base salary for the other members of Executive Management on Norwegian employment contracts. For executives employed by Yara companies in other countries the Target Incentive sometimes deviate from the above depending on local market conditions.

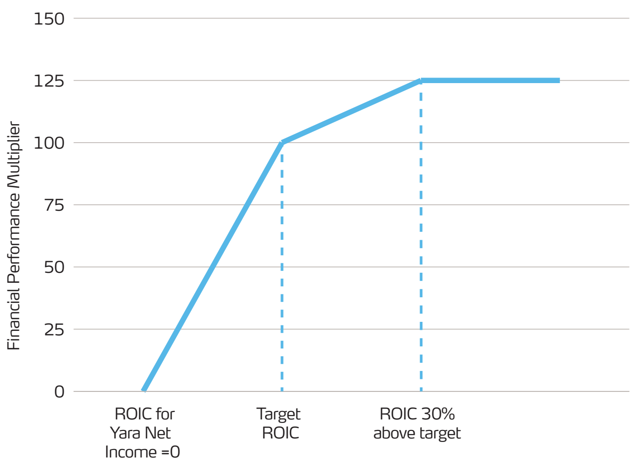
Yara Financial Performance

Given that Yara's net income is above zero, the financial performance multiplier will be in the range of 0 up to maximum 125% depending on the targeted and achieved ROIC. The multiplier scale is shown in the table below.

The basis for setting the ROIC target is Yara's long-term strategic target of 10% return on capital employed. The target for an individual year will vary depending on where we are in the industry cycle and will for some years be lower and for other years higher than the strategic target. The annual target for ROIC is approved by Yara International ASA Board of Directors.

Yara ROIC

In %



Note: Yara Net Income and ROIC are both excluding special items and currency effects

Special Items are substantial, one-time expenses or sources of income not being expected to recur in future years. For example, restructuring costs, earnings from discontinued operations, etc. In addition, significant events affecting ROIC not considered in the target setting might cause negative or positive adjustments subject to BoD approval. Such events are mainly:

- Change in gas prices
- Change in nitrogen commodity prices

Executive Management Performance

The Executive Management Performance multiplier is based on measurable KPIs, the promotion of Yara's Mission, Vision and Values and demonstrated behaviors. The relationship between Yara's long-term strategic targets and the annual KPIs is shown in the table above.

To achieve 100% multiplier on Executive Management Performance, all the KPI targets must be fully achieved and the executive must have demonstrated behavior according to Yara's Values.

Short-Term Incentive Payout

For executives on Norwegian employment contracts the maximum Short-Term Incentive Payout is capped at 50% of Annual Base Salary. It is not permitted to accrue any calculated payout in excess of the capped amount to future year where the payment may be less than 50% of Base Salary. For executives employed by Yara companies in other countries the payout may exceed 50% depending on local market conditions. For the year 2016 to 2018 the annual payouts for Yara CEO varied between 21% and 36% of Base Salary. The average annual payouts for the other executives on Norwegian employment contracts varied between 16% and 31% of Base Salary.

Benefit Plans

Company paid Pension Plans

Pension Plans in Yara should be defined contribution (DC) plans. Executive Management on Norwegian employment contracts are eligible to the company paid DC Pension Plan applicable for all Yara employees in Norway. The contribution rates to this plan is 7% of part of pensionable salary up to 7.1 times Norwegian Social Security Base Amount (G) and 18% of pensionable salary between 7.1G and 12G.

Yara has a DC Pension Plan covering salary in excess of 12G applicable for employees on Norwegian employment contracts. From December 2015 this plan was closed for new members. For internal recruits to the Executive Management who are members of the plan at commencement, future contribution to the plan stops and they become deferred members of the plan. Current members of the Executive Management at 3 December 2015 remain active members of the plan with future contributions.

For employees on Norwegian employment contracts, the upper retirement age is 70 years with the possibility for flexible retirement from age 62 in the company paid DC plans. Yara has a defined benefit early retirement plan for executives on Norwegian employment contracts covering the period from age 65 to 67 with a defined benefit equal to 65% of final salary limited to 12G. From 1st January 2015, the plan was closed for new members and ceased for employees below age 50. A DC pension plan was established to compensate members for the shortfall. Executives who were previously members of other Defined Benefit Pension Plans being terminated or converted to DC plans might have cash allowances to compensate for the shortfall.

Executives employed by Yara companies in other countries will be covered by company paid pension plans according to national plans and markets.

Personal Insurance Schemes

The executives are members of the personal insurance schemes applicable to all Yara employees. These are Group Life Insurance, Disability Pension, lump-sum payment in the event of disability, occupational diseases, occupational and non-occupational accident and Health Insurance. In addition, they are provided with a Travel Insurance covering both the executive and family.

Other compensation elements

Executives are granted benefits in kind according to the applicable market standard. These are typically cell phone, internet connection and company car, alternatively fixed car allowance.

Members of Yara Executive Management on Norwegian contracts are entitled to a severance pay equal to six months basic salary on certain conditions. The severance pay is calculated from the end of the notice period. Other income the executive receives during the severance pay period will be deducted from the severance pay.

Voluntary Share Purchase Program

Executive Management members employed in Norway can take part in the annual offer to all permanent Yara employees in Norway where they can buy Yara shares to a value of NOK 7,500 alternatively NOK 15,000 with a tax-exempt discount of NOK 1,500 in the first alternative and NOK 3,000 in the latter. Yara offers the employees an interest-free loan with repayment of one year for the purchase of the shares. This plan comes in addition to the SBR.

Salary and other benefits earned in 2019 are disclosed above. For additional information about existing pension plans see note 5.4.

Covid-19

In light of the demanding situation globally related to the Covid-19 virus, Yara's Executive Management will for the second year running abstain from any salary increase in 2020. Furthermore, short-term incentive payout for Executive Management accrued for 2019 which would normally be paid out in April 2020 will be frozen. A conclusion on whether to cancel or pay the bonuses will be made once the macro-economic situation has normalized.

8.3 External audit remuneration

Deloitte AS (Deloitte) is Yara's auditor. A few subsidiaries of Yara International ASA have appointed other audit firms. The following table shows total audit and other services delivered to the group by the appointed auditor.

USD thousands	Audit fee	Assurance services	Tax services	Other non-audit services	Total
2019					
Deloitte Norway	643	105	-	51	799
Deloitte abroad	3,413	71	384	120	3,988
Total Deloitte	4,056	176	384	171	4,787
Others	207	72	110	31	421
Total	4,262	249	494	202	5,208
2018					
Deloitte Norway	573	267	28	62	931
Deloitte abroad	3,680	138	278	17	4,112
Total Deloitte	4,253	405	306	79	5,043
Others	189	6	89	67	351
Total	4,442	411	396	146	5,394

8.4 Composition of the group

The consolidated financial statement of Yara comprises 134 legal companies that are controlled by Yara. The material subsidiaries are disclosed in the table below, including the main parent(s). This list also includes major holding companies.

Subsidiaries	Ownership	Registered office	Main parent(s)
Yara Argentina S.A.	100%	Argentina	Yara Iberian S.A.U.
Yara Australia Pty Ltd.	100%	Australia	Yara Technology B.V.
Yara Nipro Pty Ltd.	100%	Australia	Yara Australia Pty Ltd.
Yara Pilbara Fertilisers Pty Ltd.	100%	Australia	Chemical Holdings Pty Ltd.
Chemical Holdings Pty Ltd.	100%	Australia	Yara Australia Pty Ltd.
Yara Environmental Technologies GmbH	100%	Austria	Yara Investment GmbH
Yara Barbados Inc.	100%	Barbados	Fertilizer Holdings AS
Yara Belgium S.A./N.V.	100%	Belgium	Yara Nederland B.V.
Yara Tertre S.A.	100%	Belgium	Yara Belgium S.A./N.V.
Yara Trinidad Ltd.	100%	Bermuda	Yara Caribbean Ltd.
GICS Indústria, Comércio e Serviços S.A.	100%	Brazil	Yara Brasil Fertilizantes S.A.
Yara Brasil Fertilizantes S.A.	100%	Brazil	Yara South America Investments B.V.
Yara Belle Plaine Inc.	100%	Canada	Yara Canada Holding Inc.
Yara Canada Holding Inc.	100%	Canada	Fertilizer Holdings AS
Yara Canada Inc.	100%	Canada	Fertilizer Holdings AS
Yara Trading (Shanghai) Co. Ltd.	100%	China	Yara Asia Pte Ltd.
Yara Colombia S.A.	99.4%	Colombia	Yara International ASA (70,4%) and OFD Holding S. de R.L. (29%)
Yara Costa Rica S. de R.L.	87.6%	Costa Rica	Yara Iberian S.A.U.
Yara Danmark A/S	100%	Denmark	Fertilizer Holdings AS
Yarecuador Compania Ltd.	100%	Ecuador	Yara Colombia S.A.
Yara Dallol B.V.	58.2%	Ethiopia	Yara Nederland B.V.
Yara Phosphates Oy	100%	Finland	Yara Suomi Oy
Yara Suomi Oy	100%	Finland	Yara Nederland B.V.
Yara France SAS	100%	France	Yara Nederland B.V.
Yara Besitz GmbH	100%	Germany	Yara GmbH & Co. KG
Yara Brunsbüttel GmbH	100%	Germany	Yara GmbH & Co. KG
Yara GmbH & Co. KG	100%	Germany	Yara Investments Germany SE
Yara Investment GmbH	100%	Germany	Yara GmbH & Co. KG
Yara Investments Germany SE	100%	Germany	Yara Nederland B.V.
Yara Ghana Ltd.	100%	Ghana	Yara Nederland B.V.
Yara Hellas S.A.	100%	Greece	Yara Nederland B.V.
Yara Guatemala S.A.	100%	Guatemala	Yara International ASA
Yara Hungaria Gyarto es Kereskedelmi KFT	100%	Hungary	Yara Suomi Oy
Yara Fertilisers India Pvt. Ltd.	100%	India	Yara Asia Pte Ltd.
P.T. Yara Indonesia	100%	Indonesia	Yara Asia Pte Ltd.
Yara Insurance DAC	100%	Ireland	Fertilizer Holdings AS
Yara Italia S.p.A.	100%	Italy	Yara Investment GmbH (72,3%) and Yara Nederland B.V. (27,7%)

Table continues >>

>> Table continued

Subsidiaries	Ownership	Registered office	Main parent(s)
Yara Côte d'Ivoire S.A.	100%	Ivory Coast	Fertilizer Holdings AS
Yara East Africa Ltd.	100%	Kenya	Yara Overseas Ltd.
Yara International (M) Sdn. Bhd.	70.0%	Malaysia	Yara Asia Pte Ltd.
Yara México S. de R.L. de C.V.	99.9%	Mexico	OFD Holding S. de R.L. (70,7%) and Yara Nederland B.V. (29,2%)
Yara Mozambique Lda.	100%	Mozambique	Yara Nederland B.V.
Fertilizer Holdings AS	100%	Norway	Yara International ASA
Herøya Nett AS	100%	Norway	Yara Norge AS
Yara Marine Technologies AS	100%	Norway	Marine Global Holding AS
OFD Holding S. de R.L.	100%	Norway	Fertilizer Holdings AS
Yara AS	100%	Norway	Fertilizer Holdings AS
Yara Birkeland AS	100%	Norway	Fertilizer Holdings AS
Yara Norge AS	100%	Norway	Yara International ASA
Yara LPG Shipping AS	100%	Norway	Fertilizer Holdings AS
Yara Peru R.L.	100%	Peru	OFD Holding S. de R.L.
Yara Fertilizers Philippines Inc.	100%	Philippines	Yara Asia Pte Ltd.
Yara Poland Sp.zo.o	100%	Poland	Yara Nederland B.V.
Yara Asia Pte Ltd.	100%	Singapore	Yara International ASA
Yara Animal Nutrition South Africa (Pty) Ltd.	100%	South Africa	Yara Phosphates Oy
Yara Africa Fertilizers (Pty) Ltd.	100%	South Africa	Yara Nederland B.V.
Yara Iberian S.A.U.	100%	Spain	Yara Nederland B.V.
Yara Marine Technologies AB	100%	Sweden	Yara Marine Technologies AS
Yara AB	100%	Sweden	Fertilizer Holdings AS
Yara Switzerland Ltd.	100%	Switzerland	Yara Nederland B.V.
Yara Tanzania Ltd.	100%	Tanzania	Fertilizer Holdings AS
Yara Thailand Ltd.	100%	Thailand	Yara Asia Pte Ltd.
Yara Holding Netherlands B.V.	100%	The Netherlands	Fertilizer Holdings AS
Yara Nederland B.V.	100%	The Netherlands	Yara Holding Netherlands B.V.
Yara Sluiskil B.V.	100%	The Netherlands	Yara Nederland B.V.
Yara South America Investments B.V.	100%	The Netherlands	Yara Nederland B.V.
Yara Technology B.V.	100%	The Netherlands	Yara Nederland B.V.
Yara Vlaardingen B.V.	100%	The Netherlands	Yara Nederland B.V.
Yara Caribbean Ltd.	100%	Trinidad and Tobago	Yara Barbados Inc.
Yara UK Ltd.	100%	United Kingdom	Fertilizer Holdings AS
Yara North America Inc.	100%	United States	Yara International ASA
Freeport Ammonia LLC	100%	United States	Yara North America Inc.
Yara West Sacramento Terminal LLC	100%	United States	Yara North America Inc.
Yara Fertilizer Zambia Ltd.	100%	Zambia	Yara Nederland B.V.

8.5 Post balance sheet date events

On 21 January 2020, Yara announced that the Comisión Nacional de los Mercados y la Competencia (CNMC) had initiated an investigation against Yara Iberian S.A.U. of possible infringements of the Spanish Competition Act. Yara cooperated fully with the CNMC during the dawn raid.

Yara's Board will propose to the Annual General Meeting a dividend of NOK 15 per share for 2019, which amounts to a total of NOK 4,054 million.

On 8 March 2020, Yara announced that it had signed a share purchase agreement with Qatar Petroleum (QP) to sell its 25% share in Qatar Fertiliser Company (QAFCO). The parties have agreed on a purchase price of USD 1 billion for Yara's shares in QAFCO. The transaction is conditional on obtaining necessary local regulatory approvals and customary closing conditions. As QAFCO has been classified as an associated company of Yara, the investment has been accounted for based on the equity method. Yara has reported its share of QAFCO in its Production segment. More information about the investment is provided in note 4.3. In first quarter 2020, Yara has reclassified the investment to held-for-sale and stopped recognizing its share of the result in QAFCO. Derecognition of the investment will take place at closing. Following the closing, Yara will evaluate potential extraordinary dividends and/or share buy-backs, in line with its policy of maintaining a mid to long-term net debt/EBITDA [1] range of 1.5-2.0.

Covid-19 crisis

After the closure of the 2019 accounting, the Covid-19 crisis has emerged and become global. Yara has set up a Crisis Response Team reporting directly to the CEO. The company priorities are firstly, to safeguard our employees, contractors, partners, neighbors and society at large. Secondly, to be a responsible company and behave according to government guidelines. And thirdly, to keep our operations running, to help support continued food supply, as well as supply of other essential products to society – also in times of crisis.

Yara is at the time of its annual report experiencing limited operational impact from COVID-19, but the situation is dynamic and could change quickly, in particular with regard to operational staff and logistical challenges. Yara has a strong focus on maintaining sufficient financial capacity to responsibly mitigate the situation and will closely monitor the situation in the coming weeks and months.

1) Definition is provided on page 197.

Financial statements

Financial statements for Yara International ASA

» Due to rounding differences, figures or percentages may not add up to the total.

YARA INTERNATIONAL ASA

Income statement

NOK millions	Notes	2019	2018
Revenues	4	2,107	2,690
Other income		1	1
Revenues and other income		2,108	2,691
Raw materials, energy costs and freight expenses		(10)	(7)
Change in inventories of own production		(7)	2
Payroll and related costs	2	(1,035)	(1,003)
Depreciation, amortization and impairment loss	3	(171)	(134)
Other operating expenses	4	(1,986)	(1,933)
Operating costs and expenses		(3,209)	(3,075)
Operating income		(1,102)	(384)
Financial income/(expense), net	5	(331)	2,772
Income before tax		(1,432)	2,388
Income tax expense	6	294	217
Net income		(1,138)	2,605
Appropriation of net income and equity transfers			
Dividend proposed		4,054	1,771
Retained earnings		(5,192)	834
Total appropriation	11	(1,138)	2,605

YARA INTERNATIONAL ASA

Balance sheet

NOK millions	Notes	31 Dec 2019	31 Dec 2018
ASSETS			
Non-current assets			
Deferred tax assets	6	1,141	820
Intangible assets	3	697	674
Property, plant and equipment	3	83	74
Shares in subsidiaries	7	19,853	19,855
Intercompany receivables	13	44,927	45,118
Other non-current assets	8	411	399
Total non-current assets		67,111	66,939
Current assets			
Inventories	8	12	22
Trade receivables		9	4
Intercompany receivables	13	9,202	12,119
Prepaid expenses and other current assets	10	829	864
Cash and cash equivalents		1,189	375
Total current assets		11,240	13,384
Total assets		78,351	80,324

YARA INTERNATIONAL ASA

Balance sheet

NOK millions	Notes	31 Dec 2019	31 Dec 2018
Liabilities and shareholders' equity			
Equity			
Share capital reduced for treasury stock		459	463
Premium paid-in capital		117	117
Total paid-in capital		577	580
Retained earnings		14,981	20,225
Treasury shares		(1,037)	(283)
Shareholders' equity	11	14,521	20,522
Non-current liabilities			
Employee benefits	1	965	894
Long-term interest-bearing debt	12	23,035	23,108
Other long-term liabilities		705	602
Total non-current liabilities		24,705	24,604
Current liabilities			
Trade and other payables		213	242
Short-term interest-bearing debt	8	2,519	1,759
Current portion of long-term debt	12	3,342	6,798
Dividends payable	11	4,054	1,771
Intercompany payables	13	28,615	23,836
Current income tax	6	10	-
Other current liabilities		370	792
Total current liabilities		39,124	35,197
Total liabilities and shareholders' equity		78,351	80,324

The Board of Directors of Yara International ASA
Oslo, 17 March 2020

Geir Isaksen
Chairperson

Trond Berger
Board member

Hilde Bakken
Board member

Håkon Reistad Fure
Board member

Kimberly Lein-Mathisen
Board member

Adele Bugge Norman Pran
Board member

John Thuestad
Board member

Kari-Marie Nøstberg
Board member

Eva Safrine Aspvik
Board member

Rune Bratteberg
Board member

Geir O. Sundbø
Board member

Svein Tore Holsether
President and CEO

YARA INTERNATIONAL ASA

Cash flow statement

NOK millions	Notes	2019	2018
Operating activities			
Operating Income		(1,102)	(384)
Adjustments to reconcile operating income to net cash provided by operating activities			
Depreciation, amortization and impairment loss	3	171	134
Write-down inventory and trade receivables		-	1
Tax received/(paid)	6	(2)	52
Group relief received		4,500	12,723
Interest and bank charges received/(paid)		(751)	(660)
Other		(4)	4
Change in working capital			
Trade receivables		(4)	5
Short term intercompany receivables/payables	13	4,037	(21,553)
Prepaid expenses and other current assets		62	(379)
Trade payables		(13)	(62)
Other current liabilities		(477)	(56)
Net cash provided by operating activities		6,417	(10,174)
Investing activities			
Acquisition of property, plant and equipment	3	(20)	(12)
Acquisition of other long-term investments	3	(204)	(286)
Net cash from/(to) long-term intercompany loans	13	138	(1,964)
Proceeds from sales of long-term investments		1	(1)
Net cash provided by/(used in) investing activities		(86)	(2,263)
Financing activities			
Loan proceeds	12	3,039	10,128
Principal payments		(6,198)	1,315
Purchase of treasury stock	11	(586)	(181)
Dividend paid	11	(1,772)	(1,776)
Net cash used in financing activities		(5,518)	9,485
Foreign currency effects on cash and cash equivalents		-	29
Net increase/(decrease) in cash and cash equivalents		814	(2,922)
Cash and cash equivalents at 1 January		375	3,298
Cash and cash equivalents at 31 December		1,189	375

Notes to the financial statements

Accounting policies

General

The financial statements for Yara International ASA have been prepared in accordance with the Norwegian Accounting Act and generally accepted accounting principles in Norway (NGAAP). Preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses as well as disclosures of contingencies. Actual results may differ from estimates.

Yara International ASA primarily holds shares in subsidiaries and provides financing to entities in the Yara Group. Please note that the information in note 5.3 to the consolidated financial statements related to payments on long-term debt also applies to Yara International ASA. Revenue mainly stem from allocation of costs related to intragroup services provided.

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

Shares in subsidiaries

Shares in subsidiaries are presented according to the cost method. Dividends and Group reliefs are recognized in the income statement when these are proposed by the subsidiary. Group relief received is included in dividends. Shares in subsidiaries are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may exceed the fair value of the investment. Indications may be operating losses or adverse market conditions. Fair value of the investment is estimated based on valuation model techniques. If it is considered probable that the fair value is below Yara's carrying value, the investment is impaired. The impairment is reversed if the impairment situation is no longer present.

Foreign currency transactions

The functional currency of Yara International ASA is Norwegian kroner (NOK). Transactions in currencies other than the functional currency are recorded at the exchange rate at the date of transaction. Monetary items denominated in foreign currencies are translated at the exchange rate at the balance sheet date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not re-translated.

Realized and unrealized currency gains and losses on transactions, assets and liabilities, denominated in a currency other than the functional currency, and that do not qualify for hedge accounting treatment, are included in net income.

Revenue

In all material respects, revenue stem from sale of intercompany services. These are recognized when the services are delivered based on intragroup allocation of costs.

Interest income is recognized in the income statement as it is accrued, based on the effective interest method.

Receivables

Trade receivables and short-term intercompany receivables are recognized at nominal value, less the accrual for expected losses of receivables. The accrual for losses is based on an individual assessment of each receivable.

Cash and cash equivalents

Cash and cash equivalents include bank deposits and monetary items which are due in less than three months.

The cash held by Yara International ASA reflects that most external bank deposits are channeled through the group treasury function. Consequently, the level of cash held should be seen in context with the intercompany receivables and payables.

Payables

Trade payables and short-term intercompany payables are recognized at nominal value.

Financial assets and liabilities

Financial assets, other than derivatives, are initially recognized in the balance sheet at fair value (cost) and subsequently at the lower of cost or fair value. Financial liabilities are initially recognized in the balance sheet at fair value (cost) and subsequently at amortized cost.

Cost of sales and other expenses

Cost of sales and other expenses are recognized in the same period as the revenue to which they relate. If there is no clear connection between the expense and revenue, an estimated allocation is done. Other exceptions to the matching criteria are disclosed where appropriate.

Income taxes

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year.

Deferred income tax expense is calculated using the liability method in accordance with the preliminary Norwegian Accounting Standard on Income Taxes ("NRS Resultatskatt"). Under this standard, deferred tax assets and liabilities are measured based on the differences between the carrying values of assets and liabilities for financial reporting and their tax basis, which is considered temporary in nature. Deferred income tax expense represents the change in deferred tax asset and liability balances during the year, except for deferred tax related to items charged to equity. Changes resulting from amendments and revisions in tax laws and tax rates are recognized when the new tax laws or rates are adopted.

Intangible assets
Intangible assets acquired individually or as a group are initially recognized at fair value, and subsequently amortized on a straight-line basis over their useful life. They are tested for impairment whenever indications of impairment are present.

Research costs are expensed as incurred. Costs incurred in development of internally generated intangible assets are capitalized if defined recognition criteria are met. If these recognition criteria is not met, development cost are expensed in the period they incur.

Property, plant and equipment
Property, plant and equipment are carried at cost less accumulated depreciation. Depreciation is determined using the straight-line method over the assets' useful life. Assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

Inventories
Inventories are valued at the lower of cost, using weighted average, and net realizable value. The cost of inventories comprise all costs incurred in bringing the inventories to their present location and condition, including direct materials, direct labor, and an appropriate portion of production overhead, or the purchase price of the inventory.

Leased assets
Assets which are leased on conditions which substantially transfer all the economic risks and rewards to Yara (finance lease) are accounted for as property, plant and equipment at the present value of minimum lease payments, or fair value if this is lower. The corresponding finance lease liabilities are initially included in long-term debt. Property, plant and equipment are depreciated over the estimated useful lives of the assets or lease term if shorter. The related liabilities are reduced by the amount of lease payments less the effective interest expense.

Other leases are accounted for as operating leases with lease payments recognized as an expense over the lease term.

Forward currency contracts
Forward currency contracts are initially recognized in the balance sheet at fair value. Subsequent changes in fair value are recognized in the income statement.

Interest rate and foreign currency swaps
Interest income and expense relating to swaps that are not designated as hedge instruments are recognized as net income or expense over the life of the contract. Foreign currency swaps are translated into Norwegian kroner at the applicable exchange rate at the balance sheet date with the resulting unrealized currency translation gain or loss recorded in "Financial income/(expense), net" in the income statement.

Shared-based remuneration
Yara has a shared-based remuneration program which provides a fixed cash amount to eligible top executives. Yara purchases the shares on behalf of the executives at market prices. The executives holds all shareholder rights from the date of purchase but cannot sell the shares in the three years vesting period. This program does not have dilutive effect since it represents ordinary shares outstanding.

The fair value of the purchased shares is recognized as reduction in equity. The costs for the Shared Based Remuneration program is expensed in the year when the shares are granted. However, the costs are re-invoiced within the same year to Yara units globally as part of the shared cost model. The employee tax is calculated and expensed at the grant date.

The Company also gives employees the possibility to purchase shares in Yara at a reduced price. The related cost is recognized when the employee exercises this option.

Employee retirement plans
Employee retirement plans are measured in accordance with IAS 19 Employee Benefits, as this is permitted by the Norwegian accounting standard on pensions ("NRS 6 Pensjonskostnader"). Past service cost is recognized immediately in the Statement of income together with any gains and losses arising from curtailments and settlements. Remeasurement gains and losses are recognized directly in retained earnings.

1 Employee benefits

Yara International ASA has incurred obligations under a funded defined benefit plan. The pension plan was closed to new entrants in 2006 and employees below the age of 55 received a paid-up policy for previously earned benefit entitlements. The defined benefit plan was replaced by a defined contribution plan from the same date, which requires Yara International ASA to make agreed contributions when employees have rendered service entitling them to the contributions. Yara International ASA has no legal or constructive obligation to pay further contributions. This new plan applies to the future pension earnings of existing employees below the age of 55 in 2006 and all new employees. Pension liabilities for defined benefit plans also include certain unfunded obligations.

Other long-term employee benefits include a provision for jubilee benefits.

Yara International ASA is obliged to and does fulfill the requirements of the act regarding mandatory occupational pension scheme ("Lov om obligatorisk tjenestepensjon").

Defined benefit plans
The Company's net obligation in respect of defined benefit plans is calculated separately for each plan. The amount is an estimation of future benefits that the employees have earned in return for their service in current and prior periods. The benefit is discounted to determine its present value, and the fair value of plan assets is deducted. The discount rate is the yield at the balance sheet date on high quality corporate bonds or government bonds where no market for high quality corporate bonds exists. If the bond has a different maturity from the obligation, the discount rate is adjusted. Qualified actuaries using the projected credit unit method perform the calculations.

Past service costs arising from the amendment of plan benefits are recognized immediately in profit or loss. Remeasurement gains and losses are recognized as retained earnings through other comprehensive income in the period they occur, and will not be reclassified to profit or loss in subsequent periods.

Defined contribution plans

Obligations for contributions to defined contribution plans are recognized as an expense in the statement of income when employees have rendered services entitling them to the contributions. Prepaid contributions are recognized as an asset to the extent that a cash refund or deduction in future payments is available.

Other long-term benefits

The Company's obligation in respect of other long-term benefits is the amount of future benefits that the employees have earned in return for their service in current and prior periods. The obligation is discounted based on the same principles as defined benefit plans.

Long-term employee benefit obligations recognized in the Statement of financial position

NOK millions	Notes	2019	2018
Pension liabilities for defined benefit plans		(956)	(885)
Termination benefits and other long-term employee benefits		(9)	(9)
Surplus on funded defined benefit plan	8	348	351
Net long-term employee benefit obligations		(617)	(543)

Expenses for long-term employee benefit obligations recognized in the Statement of income

NOK millions	2019	2018
Defined benefit plans	(42)	(44)
Defined contribution plans	(57)	(53)
Termination benefits and other long-term employee benefits	(11)	(10)
Net expenses recognized in Statement of income	(110)	(107)

Defined benefit plans

Yara International ASA is the sponsor of Yara Pensjonskasse, a funded pension plan which also covers employees of its subsidiary Yara Norge AS. Plan benefits are based on years of service and final salary levels. Determination of the required annual contribution to Yara Pensjonskasse from each of the participating legal entities is defined by the bylaws of the pension fund, and is based on actuarial calculations. The distribution of pension costs to the participating entities is based on the same calculations. At 31 December 2019, the number of active participants in the funded defined benefit plan who were employed by Yara International ASA, was 1 and the number of retirees was 134. In addition, 366 current and previous employees of Yara International ASA have earned paid-up policies in the pension fund.

Yara International ASA participates in a multi-employer plan (AFP - "Avtalefestet pensjon") which entitles most of its employees the right to retire from the age of 62. Participating entities are required to pay an annual fee for each of its active employees. As the information required to account for this part of the plan as a defined benefit plan is not available from the plan administrator, it is accounted for as if it were a defined contribution plan. The provision for defined benefit plans includes however the calculated obligation to pay a percentage of benefits paid to its employees who have chosen early retirement under this plan. A further defined benefit obligation is recognized to account for a gratuity offered by Yara International ASA to its employees who retire with the AFP scheme.

Norwegian employees at position level of department manager or above are members of an unfunded early retirement plan. The plan covers the period from age 65 to 67 with a defined benefit equal to 65% of final salary. From 2006 accrual of pension in this plan has been limited to a salary of 12G (i.e. 12 times the Norwegian Social Security Base Amount, which from 1 May 2019 was NOK 99,858).

Effective 1 January 2015 Yara International ASA implemented changes to the early retirement schemes, both the AFP gratuity plan and the plan for early retirement from 65 to 67 for positions as department manager or above, in which all employees below age 50 were transferred to new contribution-based plans which offer increased contribution rates compared to the ordinary defined contribution plan, as well as compensation contributions, where applicable. Employees aged 50 or above retained their rights from the old plans, however with the option to choose a transfer to the new contribution-based plans. As the compensation contribution plans are unfunded and Yara International ASA retains investment risk, they are accounted for as defined benefit plans.

All Norwegian employees with salary above 12G as of 3 December 2015 are members of an unfunded plan which requires Yara International ASA to contribute with an amount equal to 25% of pensionable salary in excess of 12G for each year of service, with the addition of annual return on the accumulated balance. The plan was closed to new members from 3 December 2015. As the plan is unfunded and investment risk is retained by Yara International ASA, the plan is included in the obligation for defined benefit plans.

Valuation of defined benefit obligations

The defined benefit plans are valued at 31 December using updated financial and demographical assumptions and taking into account relevant economic environment factors.

It is the opinion of the management of Yara International ASA that there is a sufficiently deep market for high quality corporate bonds in Norway, which is therefore used as reference for determination of the discount rate. Normal assumptions for demographical and retirement factors have been used by the actuary when calculating the obligation. Estimated future mortality is based on published statistics and mortality tables. The actuary has used the K2013BE mortality table. According to K2013BE a current employee aged 45 today would be expected to live 25.0 years after reaching the retirement age of 65, whereas an employee aged 65 today would on average be expected to live 23.2 years.

The following financial assumptions have been applied for the valuation of liabilities

In percentages	2019	2018
Discount rate	2.1	2.7
Expected rate of salary increases	2.2	2.6
Future rate of pension increases	1.0	1.1

Actuarial valuations provided the following results

NOK millions	2019	2018
Present value of unfunded obligations	(838)	(776)
Present value of wholly or partly funded obligations	(765)	(713)
Total present value of obligations	(1,602)	(1,489)
Fair value of plan assets	1,113	1,065
Social security on defined benefit obligations	(118)	(109)
Total recognized liability for defined benefit plans	(608)	(534)

Duration of liabilities at the end of the year

Duration of liabilities (in years)	2019
Funded plan	15.9
Unfunded plans	11.2

Pension cost recognized in Statement of income

The assumptions used to value the defined benefit obligations at 31 December are used in the following year to determine the net pension cost. The discount rate is used to calculate the interest income from plan assets.

The following items have been recognized in the Statement of income

NOK millions	2019	2018
Current service cost	(23)	(25)
Administration cost	(2)	(2)
Social security cost	(6)	(6)
Payroll and related costs	(31)	(33)
Interest on obligation	(39)	(37)
Interest income from plan assets	28	26
Interest expense and other financial items	(11)	(10)
Total expense recognized in income statement	(42)	(44)

Sensitivity of assumptions

Measurement of defined benefit obligations and pension costs requires the use of a number of assumptions and estimates. Below table indicates the sensitivity of the most material financial assumptions applied to the defined benefit obligation, by showing the result from an increase or decrease in any one of the assumptions applied (all other assumptions held constant).

NOK millions	2019	2018
Actual valuation	(1,602)	(1,489)
Discount rate +0.5%	(1,514)	(1,407)
Discount rate -0.5%	(1,699)	(1,579)
Expected rate of salary increase +0.5%	(1,616)	(1,498)
Expected rate of salary increase -0.5%	(1,590)	(1,480)
Expected rate of pension increase +0.5%	(1,686)	(1,567)
Expected rate of pension increase -0.5%	(1,526)	(1,418)
Expected longevity +1 year	(1,658)	(1,540)
Expected longevity -1 year	(1,546)	(1,438)

Development of defined benefit obligations

NOK millions	2019	2018
Defined benefit obligation as of 1 January	(1,489)	(1,498)
Current service cost	(23)	(25)
Interest cost	(39)	(37)
Experience adjustments	(14)	19
Effect of changes in financial assumptions	(98)	(8)
Benefits paid	61	60
Defined benefit obligation as of 31 December	(1,602)	(1,489)

Development of plan assets

NOK millions	2019	2018
Fair value of plan assets as of 1 January	1,065	1,073
Interest income from plan assets	28	26
Administration cost	(2)	(2)
Return on plan assets (excluding calculated interest income)	51	(5)
Benefits paid	(29)	(28)
Fair value of plan assets as of 31 December	1,113	1,065

Yara Pensjonskasse (the pension fund) is a separate legal entity, independently governed by its Board of Directors. It is the responsibility of the pension fund's Board of Directors to determine the investment strategy, and to review the administration of plan assets and the funding level of the pension fund. If needed, Yara International ASA will be required to increase the capital buffer of the pension fund.

Yara International ASA's defined benefit plan obligations are inherently exposed to inflation risk, interest rate risk and longevity risk. The investment strategies of the pension fund ensures diversement of investments in order to keep market volatility risk at a desired level. The pension fund Board of Directors is targeting a satisfactory level of risk and return corresponding to the maturity profile of future pension benefit payments.

At the end of the year, the plan assets were invested as follows

NOK millions, except percentages	2019	2019	2018	2018
Cash and cash equivalents	33	3%	33	3%
Shares	388	35%	349	33%
Other equity instruments	95	9%	82	8%
Investment grade debt instruments	575	52%	578	54%
Properties	20	2%	22	2%
Total plan assets	1,113	100%	1,065	100%

Yara Pensjonskasse (the pension fund) does not hold any investments that do not have a quoted market price in an active market. Nor does it hold any financial instruments issued by Yara Group companies.

Contributions expected to be paid by Yara International ASA to the defined benefit plans for 2020 are NOK 26 million. The amount includes any premium to be paid to Yara Pensjonskasse and all benefits to be paid for unfunded plans.

Remeasurement gains/(losses) recognized in retained earnings

NOK millions	2019	2018
Cumulative amount recognized directly in retained earnings pre-tax at 1 January	(152)	(158)
Remeasurement gains/(losses) on obligation for defined benefit plans	(112)	10
Remeasurement gains/(losses) on plan assets for defined benefit plans	51	(5)
Social security on remeasurement gains/(losses) recognized directly in equity this year	(7)	1
Cumulative amount recognized directly in retained earnings pre-tax at 31 December	(219)	(152)
Deferred tax related to remeasurement gains/(losses) recognized directly in retained earnings	48	33
Cumulative amount recognized directly in retained earnings after tax at 31 December	(171)	(118)

2 Remuneration and other

Remuneration and direct ownership of shares of the chairperson and of the board of directors are disclosed in note 8.1 to the consolidated financial statement.

Remuneration to the President and Yara management, as well as number of shares owned and Shared Based Remuneration program, are disclosed in note 8.2 to the consolidated financial statements.

Partners and employees of Yara's independent auditors, Deloitte AS, own no shares in Yara International ASA, or in any of its subsidiaries. Yara International ASA's fee to Deloitte AS (Norway) for ordinary audit was NOK 4,996 thousand (2018: NOK 3,908 thousand), fee for assurance services NOK 952 thousand (2018: NOK 1,704 thousand), NOK 54 thousand for tax services (2018: NOK 245 thousand) and NOK 416 thousand for non-audit services (2018: NOK 535 thousand). Audit remuneration for the group is disclosed in note 8.3 to the consolidated financial statement.

At 31 December 2019, the number of employees in Yara International ASA was 599 (2018: 639)

NOK millions	2019	2018
Payroll and related costs		
Salaries	(821)	(799)
Social security costs	(115)	(108)
Net periodic pension costs	(99)	(97)
Total	(1,035)	(1,003)

Yara provided a guarantee for unsecured loans which were granted from external banks to the Norwegian employees. Yara did not compensate the banks for these services. At 31 December 2019, the aggregate balance of all the outstanding loans for which Yara is providing a guarantee is approximately NOK 0.2 millions, and the number of loans are 1. The scheme in question ceased to apply and the loans are expected to be settled within 1 year.

Yara continued to give employees in Norway an opportunity to take part in a share purchase program in 2019. All permanent employees in Norway have been offered shares with a discount and given an interest-free loan with a 12-month repayment profile. In order to handle this arrangement in an efficient way, Yara has established a foundation for employees' shares in Yara. The foundation has purchased 40,200 shares during 2019. In total 40,439 shares have been sold during 2019 to 965 persons, 48 persons were allotted 21 shares and 917 persons were allotted 43 shares. As at 31 December 2019, the foundation owns 157 shares in Yara.

3 Intangible assets, property, plant and equipment

2019

NOK millions, except percentages and years	Intangible assets [1]	Property, plant and equipment [2]	Total
Cost			
Balance at 1 January	1,170	168	1,339
Addition at cost	181	23	203
Derecognition	(1)	(1)	(2)
Balance at 31 December	1,350	190	1,541
Depreciation, amortization and impairment loss			
Balance at 1 January	(497)	(95)	(590)
Depreciation and amortization	(158)	(13)	(171)
Balance at 31 December	(654)	(107)	(761)
Carrying value			
Balance at 1 January	674	74	748
Balance at 31 December	697	83	780
Useful life in years	3 - 5	4 - 50	
Depreciation rate	20 - 35%	2 - 25%	

1) Intangible assets mainly consist of computer software systems and capitalized technology assets.
2) Property, plant and equipment for Yara International ASA consists mainly of buildings and furnishings. There were no assets pledged as security at 31 December 2019.

2018

NOK millions, except percentages and years	Intangible assets [1]	Property, plant and equipment [2]	Total
Cost			
Balance at 1 January	900	171	1,071
Addition at cost	306	12	318
Derecognition	(35)	(15)	(50)
Balance at 31 December	1,170	168	1,339
Depreciation, amortization and impairment loss			
Balance at 1 January	(402)	(98)	(500)
Depreciation and amortization	(123)	(11)	(134)
Derecognition	29	15	44
Balance at 31 December	(497)	(95)	(590)
Carrying value			
Balance at 1 January	497	73	570
Balance at 31 December	674	74	748
Useful life in years	3 - 5	4 - 50	
Depreciation rate	20 - 35%	2 - 25%	

1) Intangible assets mainly consist of computer software systems and capitalized technology assets.
2) Property, plant and equipment for Yara International ASA consists mainly of buildings and furnishings. There were no assets pledged as security at 31 December 2018.

4 Specification of items in the income statement

Revenue

Information about sales to geographical areas

NOK millions	2019			2018		
	External	Internal	Total	External	Internal	Total
Norway	-	91	91	-	98	98
European Union	38	1,715	1,753	22	2,258	2,280
Europe, outside European Union	-	4	4	-	3	3
Africa	-	21	21	-	23	23
Asia	-	57	57	-	45	45
North America	-	35	35	-	45	45
Latin America	-	126	126	-	176	176
Australia and New Zealand	-	20	20	2	17	19
Total	38	2,069	2,107	25	2,665	2,690

Other operating expenses

NOK millions	2019	2018
Selling and administrative expense	(1,508)	(1,341)
Rental and leasing [1]	(58)	(65)
Travel expense	(49)	(65)
Other	(371)	(461)
Total	(1,986)	(1,933)
Of which research costs [2]	(506)	(328)

1) Expenses mainly relate to office and lease contracts for company cars.
2) Over the last few years, Yara has focused on orienting research and development resources towards commercial activities, both with respect to process and product improvements and agronomical activities.

5 Financial income and expenses

NOK millions	Notes	2019	2018
Dividends and Group relief from subsidiaries		900	4,500
Write-down shares in subsidiaries [1]		-	(466)
Loss on sale of shares in subsidiaries [2]		(2)	-
Interest income group companies	13	1,017	1,094
Other interest income		34	53
Interest expense group companies	13	(274)	(319)
Other interest expense		(1,367)	(1,165)
Interest expense defined pension liabilities	1	(39)	(37)
Return on pension plan assets	1	28	26
Net foreign exchange gain/(loss)		(613)	(875)
Other financial income/(expense)		(15)	(40)
Financial income/(expense), net		(331)	2,772

1) Yara Colombia S.A.
2) Yara Costa Rica S. de RL.

6 Income taxes

Specification of income tax expense

NOK millions	2019	2018
Current tax expense [1]	(12)	(11)
Deferred tax income/(expense) recognized in the current year	306	227
Income tax income/(expense)	294	216

1) Withholding taxes and prior years adjustment, see specification in the table below.

Reconciliation from nominal statutory tax rate to effective tax rate

NOK millions	2019	2018
Income before taxes	(1,432)	2,388
Statutory tax rate	22%	23%
Expected income taxes at statutory tax rate	315	(549)
The tax effect of the following items:		
Group relief received from subsidiary with no tax effect	-	920
Withholding taxes	(7)	(16)
Prior years adjustment	(5)	5
Tax law changes	-	(36)
Non-deductible expenses	(16)	(107)
Other	7	(1)
Income tax income/(expense)	294	216
Effective tax rate	21%	9%

Specification of deferred tax assets/(liabilities)

NOK millions	Opening balance	Charged to income	Reclassified from equity to profit or loss	Charged to equity	Closing balance
Non-current items					
Intangible assets	-				
Property, plant and equipment	6	-			7
Pension liabilities	156	(51)		14	120
Other non-current assets	(1,189)	440	1		(748)
Other non-current liabilities and accruals	650	(151)			499
Total	(379)	239	1	14	(125)
Current items					
Accrued expenses	27	1			29
Total	27	1	-		29
Tax loss carry forwards	1,173	63	-		1,236
Net deferred tax asset/(liability)	820	303	1	14	1,140

Tax loss carry forwards are expected to be fully utilized by taxable interest income on group funding and taxable group contributions from Yara's operating companies in Norway.

In 2019, Yara International ASA received a notification and request for information from the Norwegian Tax Authorities in relation to a transfer price audit. In the notification and request for information, the Tax Authorities have stated that they consider changing the company's tax assessment for the years 2015, 2016 and 2017. Yara International ASA has recently submitted its response. The Tax Authorities have not disclosed any potential amount or provided guidance on how a potential change will impact the tax assessment for these years.

7 Shares in subsidiaries

Company name	Ownership [1]	Ownership by other group companies	Registered office	Functional currency	Total equity in the company 2019 functional currency millions	Net income/ (loss) 2019 in functional currency millions	Carrying value 2019 NOK millions	Carrying value 2018 NOK millions
Subsidiaries owned by Yara International ASA								
Fertilizer Holdings AS	100%	-	Norway	NOK	28,984	701	16,178	16,178
Yara Norge AS	100%	-	Norway	NOK	2,058	1,083	1,303	1,303
Yara Asia Pte. Ltd.	100%	-	Singapore	USD	1,301	107	1,114	1,114
Yara Colombia S.A.	70.39%	29%	Colombia	COP	390,583	335	763	763
Yara North America Inc.	100%	-	USA	USD	366	(20)	468	468
Yara Guatemala S.A.	100%	-	Guatemala	GTQ	200	14	24	24
Yara Lietuva, UAB	100%	-	Lithuania	EUR	(4)	(4)	1	1
Yara International Employment Co. AG	100%	-	Switzerland	EUR	2	-	1	1
Profesionistas AAL	0.04%	99.96%	Mexico	MXN	-	2	-	-
Operaciones BPT	10%	90%	Mexico	MXN	-	-	-	-
Yara Costa Rica S. de RL. [2]	-	87.56%	Costa Rica	CRC	-	-	-	2
Total							19,853	19,855

1) Percentage of shares owned equals percentage of voting shares owned. A number of the above mentioned companies also own shares in other companies as specified in their annual reports. See also note 8.4 to the consolidated financial statements.
2) Disposed of in 2019, shares were sold to Yara Iberian S.A.

8 Specification of balance sheet items

NOK millions	Notes	2019	2018
Other non-current assets			
Surplus on funded defined benefit plans	1	348	351
Long-term fair value derivative hedging instrument		2	-
Interest rate swap designated for hedging (external)		4	4
Other		57	43
Total		411	399
Inventories			
Finished goods		11	18
Raw materials		1	3
Total		12	22
Short-term interest-bearing debt			
External loans	12	2,379	1,317
Bank overdraft		141	441
Total		2,519	1,759

9 Guarantees

NOK millions	2019	2018
Guarantees (off-balance sheet)		
Guarantees for debt in subsidiaries	5,749	5,645
Non-financial guarantees	9,658	6,684
Total	15,408	12,329

Yara International ASA provides guarantees arising in the ordinary course of business, including performance bonds and various payment or financial guarantees. See note 5.8 Secured debt and guarantees to the consolidated financial statements for further information about guarantees.

10 Financial risks and hedge accounting

Financial risks in Yara and the use of derivative instruments are described in note 6.1 to the consolidated financial statement. The exposure to credit risk is represented by the carrying amount of each class of financial assets, including derivative financial instruments, recorded in the balance sheet.

Liquidity risk

Yara International ASA manages liquidity risk by continuously monitoring forecasted and actual cash flows. Non-current intercompany receivables are related to funding of subsidiaries and have a maturity profile matching the external debt maturities (see note 12 for details). Current intercompany receivables and payables mainly reflect intercompany current account balances and will fluctuate with fertilizer seasons. Committed liquidity reserves are maintained to meet unforeseen events.

Yara International ASA has the following derivative instruments outstanding at 31 December

NOK millions	2019	2018
Fair value of derivatives		
Forward foreign exchange contracts (external)	(31)	(388)
Forward foreign exchange contracts (Yara Group internal)	7	358
Cross currency swaps (external)	(631)	(534)
Interest rate swaps designated for hedging (external)	(61)	(54)
Balance at 31 December	(716)	(618)
Derivatives presented in the balance sheet		
Non-current assets	6	4
Current assets	10	379
Non-current liabilities	(697)	(592)
Current liabilities	(35)	(408)
Balance at 31 December	(716)	(618)

Forward foreign exchange contracts

Yara is committed to the following outstanding forward foreign exchange contracts

NOK millions	2019	2018
Forward foreign exchange contracts (external), notional amount	2,268	5,172
Forward foreign exchange contracts (Yara Group internal), notional amount	6,939	7,585

All outstanding forward foreign exchange contracts at 31 December 2019 have maturity in 2020, except non-deliverable forward contracts totaling NOK 572 million that mature in 2021. External buy positions are mainly in US dollars against Norwegian kroner or Brazilian reals. External sell positions are in various operating currencies towards Norwegian kroner.

Hedge accounting

Fair value hedges

In December 2014, Yara designated a portfolio of long-term NOK fixed-to-floating interest rate swaps as hedging instruments. The hedged risk is the change in fair value due to changes in risk-free interest rates (NIBOR) of the NOK 700 million and NOK 600 million fixed rate bond debt from 2014. The swaps have different interest payment dates (quarterly vs. annually), but identical interest basis and maturity as the hedged debt and are assessed to be highly effective.

In December 2017, Yara designated a portfolio of long-term NOK and SEK fixed-to-floating interest rate swaps as hedging instruments. The hedged risk is the change in fair value due to changes in risk-free interest rates (NIBOR) of the NOK 1,000 million and NOK 1,000 million fixed rate bond debt and the change in fair value due to changes in risk-free interest rates (STIBOR) of the SEK 800 million fixed rate bond debt, all from 2017. The swaps have different interest payment dates (quarterly vs. annually), but identical interest basis and maturity as the hedged debt and are assessed to be highly effective.

Subsequent to initial recognition, Yara measures interest-bearing borrowings at amortized cost. However, the designation of interest rate swaps as hedging instruments and use of hedge accounting enables Yara to include the fair value of changes in interest rates in the carrying value of the bonds. The corresponding adjustment in the Consolidated Statement of Income offsets the effects of the recognized interest rate swaps, leading to less volatility in net income.

Cash flow hedges

Yara had no cash flow hedges in 2019 or 2018. However, Yara has used derivative instruments to hedge cash flows of planned transactions in the past and may do so also in the future.

In 2007, Yara used treasury locks to hedge the future cash flows of a USD 300 million portion of the June 2009 bond issue. The loss on these contracts was recognized directly in equity and was proportionally reclassified into interest expense and deferred tax until 2019 when the bond expired. Amount reclassified to interest expense in 2019 was NOK 5 million after tax (2018: NOK 5 million).

Effect on financial position and performance in 2019

			Carrying amount of the hedged item [1]		Accumulated amount of hedge adjustment on the hedged item included in the carrying amount of the hedged item						
NOK millions	Currency	Hedge rates	Assets	Liabilities	Assets	Liabilities	Line item in the balance sheet in which the hedged item is included	Line item in the balance sheet in which the hedging instrument is included	Change in value of the hedged item used for calculating hedge ineffectiveness [2]	Change in value of the hedging instrument [2]	Hedge ineffectiveness recognized in income statement
Fair value hedges											
Interest rate risk											
- Fixed interest, NOK bonds (2014)	NOK	3M NIBOR	-	1,288	11	-	Long-term interest-bearing debt	Other long-term liabilities	9	(9)	-
- Fixed interest, NOK bonds (2017)	NOK	3M NIBOR	-	1,946	52	-	Long-term interest-bearing debt	Other long-term liabilities	1	(1)	-
- Fixed interest, SEK bonds (2017)	SEK	3M STIBOR	-	756	-	2	Long-term interest-bearing debt	Other long-term liabilities	(2)	2	-

1) The designated nominal amounts of the hedging instruments equal the nominal amounts of the hedged items.
2) All amounts are pre-tax.

For either hedging category, there are no balances remaining from a hedging relationship for which hedge accounting is no longer applied.

Effect on financial position and performance in 2018

			Carrying amount of the hedged item [1]		Accumulated amount of hedge adjustment on the hedged item included in the carrying amount of the hedged item						
NOK millions	Currency	Hedge rates	Assets	Liabilities	Assets	Liabilities	Line item in the balance sheet in which the hedged item is included	Line item in the balance sheet in which the hedging instrument is included	Change in value of the hedged item used for calculating hedge ineffectiveness [2]	Change in value of the hedging instrument [2]	Hedge ineffectiveness recognized in income statement
Fair value hedges											
Interest rate risk											
- Fixed interest, NOK bonds (2014)	NOK	3M NIBOR	-	1,297	2	-	Long-term interest-bearing debt	Other long-term liabilities	11	(11)	-
- Fixed interest, NOK bonds (2017)	NOK	3M NIBOR	-	1,946	51	-	Long-term interest-bearing debt	Other long-term liabilities	17	(17)	-
- Fixed interest, SEK bonds (2017)	SEK	3M STIBOR	-	775	-	-	Long-term interest-bearing debt	Other long-term liabilities	(5)	5	-

1) The designated nominal amounts of the hedging instruments equal the nominal amounts of the hedged items.
2) All amounts are pre-tax.

For either hedging category, there are no balances remaining from a hedging relationship for which hedge accounting is no longer applied.

Specific risks associated with the upcoming interest rate benchmark reform

Within its hedge accounting relationships, the Yara is exposed to NIBOR, STIBOR and USD LIBOR (collectively "IBORs") interest rate benchmarks subject to interest rate benchmark reform. The hedged items include issued NOK and SEK fixed rate debt plus foreign currency translation risk associated with Yara's net investment in USD denominated foreign operations.

Yara Finance, Treasury & Insurance has established an IBOR transition program to understand the specific exposures and prepare an action plan in order to enable a smooth transition to alternative benchmark rates. Risks hitherto identified include, but may not be limited to, the items listed in below table.

Risk	Potential impact
Lack of standardized alternative term rates	Cash flow uncertainty, operational challenges
Economic difference vs. IBORs and alternative rates	Changes in mark-to-market value of affected contracts
Different speed of transition across products and currencies	Basis risk on hedge accounting relations
Operational adjustments required	Upgrade of IT systems, renegotiation of agreements

As none of Yara's current IBOR linked contracts already include fall back provisions in case the referenced benchmark interest rate ceases to be available, Yara monitors the output from the various working groups managing the transition to new benchmark rates carefully and will look to implement appropriate fall back language in due course.

11 Number of shares outstanding, shareholders, equity reconciliation etc.

Yara International ASA was established 10 November 2003. The company was established with a share capital of NOK 108,610,470 consisting of 63,888,512 shares at NOK 1.70 per share. At 31 December 2019, the company has a share capital of NOK 463,084,483 consisting of 272,402,637 ordinary shares at NOK 1.70 per share.

Yara owns 1,362,013 own shares at 31 December 2019. For further information on these issues see note 5.1 to the consolidated financial statement.

Shareholders holding 1% or more of the total 272,402,637 shares issued as of 31 December 2019 are according to information from Nasdaq.

Name	Number of shares	Holding (%)
Ministry of Trade, Industry and Fisheries	98,640,995	36.2%
Norwegian National Insurance Scheme fund	17,893,478	6.6%
Sprucegrove Investment Management, Ltd.	6,496,700	2.4%
The Vanguard Group, Inc.	5,203,959	1.9%
BlackRock Institutional Trust Company, N.A.	5,104,435	1.9%
Fidelity Management & Research Company	4,875,087	1.8%
TemplexInvestment Counsel, L.L.C.	4,807,414	1.8%
Polaris Capital Management, LLC	4,440,776	1.6%
SAFE Investment Company Limited	3,652,404	1.3%
KLP Forsikring	3,640,472	1.3%
DNB Asset Management AS	3,410,541	1.3%
Capital World Investors	3,321,609	1.2%
Storebrand Kapitalforvaltning AS	3,248,079	1.2%
Nordea Funds Oy	3,225,947	1.2%
Pelham Capital Ltd	3,174,733	1.2%
State Street Global Advisors (US)	3,083,417	1.1%

Shareholders' equity

NOK millions	Paid-in-capital	Retained earnings	Total shareholders equity
Balance 31 December 2017	582	19,382	19,963
Net income of the year	-	2,605	2,605
Dividend proposed	-	(1,771)	(1,771)
Cash flow hedges	-	5	5
Actuarial gain/(loss) [1]	-	3	3
Treasury shares [2]	(1)	(283)	(284)
Balance 31 December 2018	581	19,942	20,522
Net income of the year	-	(1,138)	(1,138)
Dividend proposed [5]	-	(4,054)	(4,054)
Cash flow hedges	-	2	2
Actuarial gain/(loss) [1]	-	(53)	(53)
Adjustment to proposed dividend previous years	-	(2)	(2)
Treasury shares [3] [4]	(4)	(754)	(757)
Balance 31 December 2019	577	13,943	14,521

1) Yara International ASA has decided to use the option in NRS 6A to adopt IAS19. For further information, see the accounting policies on page 173.
2) As approved by General Meeting 8 May 2018.
3) As approved by General Meeting 7 May 2019.
4) See note 5.1 to the consolidated financial statement for more information.
5) Based on total shares issued less 1.362.013 own shares less commitment to redeem 773.187 shares from the Norwegian State.

12 Long-term debt

NOK millions, except percentages and denominated amounts	Notes	Maturity	Weighted average interest rates	Denominated amounts 2019		Carrying amounts	
				Currency millions	NOK millions	2019	2018
Unsecured debenture bonds in NOK (Coupon NIBOR + 0.70%)			-	-	-	-	2,199
Unsecured debenture bonds in USD (Coupon 7.88%)	6.1		0.0%	-	-	-	4,338
Unsecured debenture bonds in NOK (Coupon 2.55%)	6.1	2021	2.6%	700	700	693	698
Unsecured debenture bonds in NOK (Coupon NIBOR + 0.75%)		2022	2.6%	1,250	1,250	1,250	1,248
Unsecured debenture bonds in SEK (Coupon STIBOR + 1.00%)		2022	0.8%	450	426	425	436
Unsecured debenture bonds in SEK (Coupon 1.10%)	6.1	2022	1.2%	800	756	756	775
Unsecured debenture bonds in NOK (Coupon 3.00%)	6.1	2024	3.0%	600	600	595	599
Unsecured debenture bonds in NOK (Coupon 2.45%)	6.1	2024	2.5%	1,000	1,000	974	977
Unsecured debenture bonds in USD (Coupon 3.80%)	6.1	2026	3.9%	500	4,397	4,378	4,319
Unsecured debenture bonds in NOK (Coupon 2.90%)	6.1	2027	2.9%	1,000	1,000	972	969
Unsecured debenture bonds in USD (Coupon 4.75%)	6.1	2028	4.8%	1,000	8,793	8,752	8,637
Unsecured bank loans in USD			2.9%	545	4,790	7,584	4,711
Outstanding long-term debt						26,377	29,906
Less: Current portion						(3,342)	(6,798)
Total						23,035	23,108

At 31 December 2019, the fair value of the long-term debt, including the current portion, is NOK 27,254 million and the carrying value is NOK 26,377 million. See notes 5.3 Interest-bearing debt and 6.1 Financial risks to the consolidated financial statements for further information about long-term debt.

Payments on long-term debt fall due as follows

NOK millions	Debentures	Bank loans	Total [1]
2020	-	3,342	3,342
2021	693	264	958
2022	2,430	1,577	4,006
2023	-	264	264
2024	1,568	1,583	3,152
Thereafter	14,102	553	14,655
Total	18,793	7,584	26,377

1) Including current portion.

13 Transactions with related parties

Transactions with related parties are mainly associated with the group treasury function and rendering of group services by the employees of Yara International ASA.

NOK millions	Notes	2019	2018
Income statement			
Yara Belgium S.A.		1,297	1,744
Yara Norge AS		88	104
Yara Sluiskil B.V.		80	94
Yara Brasil Fertilizantes S.A.		67	89
Other		537	634
Internal revenues	4	2,069	2,665
Yara Norge AS		900	500
Fertilizer Holdings AS		-	4,000
Dividends and Group relief from subsidiaries	5	900	4,500
Yara Nederland B.V.		274	401
Yara Holding Netherlands B.V.		261	234
Yara Norge AS		177	154
Yara Sluiskil B.V.		61	59
Yara AB		32	28
Yara Suomi Oy		32	30
Other		181	189
Interest income group companies	5	1,018	1,095
Fertilizer Holdings AS		(47)	(174)
Yara Switzerland Ltd		(47)	(17)
Yara Asia Pte Ltd		(33)	(23)
Yara Caribbean Ltd		(32)	(38)
Yara Canada Holding Inc.		(30)	(15)
Other		(85)	(52)
Interest expense group companies	5	(274)	(319)

NOK millions	Notes	2019	2018
Non-current assets			
Yara Holding Netherlands B.V.		18,796	18,862
Yara Norge AS		4,831	4,770
Yara Sluiskil B.V.		4,505	4,544
Yara Nederland B.V.		4,196	7,942
Yara Investments Germany SE		3,166	2,446
Yara Suomi Oy		3,105	3,132
Yara Investment GmbH		1,648	-
Yara AB		1,547	1,582
Other		3,132	1,841
Intercompany receivables		44,927	45,118
Current assets			
Yara AS		3,575	2,411
Yara France SAS		1,080	939
Yara Norge AS		999	721
Freeport Ammonia LLC		523	589
Yara LPG Shipping AS		467	608
Yara Phosphates Oy		456	361
Yara Belgium S.A.		349	25
Fertilizer Holdings AS		-	4,000
Other		1,752	2,465
Intercompany receivables		9,202	12,119
Current liabilities			
Yara Nederland B.V.		(6,579)	(4,329)
Yara Asia Pte Ltd		(3,181)	(1,923)
Yara Switzerland Ltd		(2,536)	(780)
Yara Canada Holding Inc.		(2,007)	(661)
Yara Tertre S.A.		(1,985)	(2,029)
Fertilizer Holdings AS		(1,912)	(4,343)
Other		(10,416)	(9,771)
Intercompany payables		(28,615)	(23,836)
Trinidad Nitrogen Company Ltd.		(118)	(105)
Yara Freeport LLC DBA Texas Ammonia		(198)	(383)
Yara Pilbara Nitrates Pty Ltd		(12)	(287)
Other		(17)	(5)
Short-term interest-bearing loans from Group associates and joint arrangements		(345)	(780)

Remuneration to the Board of Directors and Yara Management is disclosed in notes 8.1 and 8.2 to the consolidated financial statements.
Yara International ASA has transactions with Yara Pensjonskasse (pension fund). See note 1 for more information.

Directors' responsibility statement

2019

WE CONFIRM TO THE BEST OF OUR KNOWLEDGE THAT:

- The consolidated financial statements for 2019 have been prepared in accordance with IFRS as adopted by the EU, as well as additional information requirements in accordance with the Norwegian Accounting Act, and that
- The financial statements for the parent company for 2019 have been prepared in accordance with the Norwegian Accounting Act and generally accepted accounting practice in Norway, and that
- The information presented in the financial statements gives a true and fair view of the Company's and Group's assets, liabilities, financial position and result for the period viewed in their entirety, and that
- The Board of Directors' report gives a true and fair view of the development, performance and financial position of the Company and Group, and includes a description of the principle risks and uncertainties
- That the country by country report for 2019 has been prepared in accordance with the Norwegian Accounting Act § 3-3d and the Norwegian Security Trading Act § 5-5a.

The Board of Directors of Yara International ASA
Oslo, 17 March 2020

Geir Isaksen
Chairperson

Trond Berger
Board member

Hilde Bakken
Board member

Håkon Reistad Fure
Board member

Kimberly Lein-Mathisen
Board member

Adele Bugge Norman Pran
Board member

John Thuestad
Board member

Kari-Marie Nøstberg
Board member

Eva Safrine Aspvik
Board member

Rune Bratteberg
Board member

Geir O. Sundbø
Board member

Svein Tore Holsether
President and CEO

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To the General Meeting of Yara International ASA

INDEPENDENT AUDITOR'S REPORT

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Yara International ASA, which comprise:

- The financial statements of the parent company Yara International ASA (the Company), which comprise the balance sheet as at 31 December 2019, the income statement and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and
- The consolidated financial statements of Yara International ASA and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2019, the consolidated statement of income, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion:

- The financial statements are prepared in accordance with the law and regulations.
- The accompanying financial statements give a true and fair view of the financial position of the Company as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway.
- The accompanying consolidated financial statements give a true and fair view of the financial position of the Group as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the EU.

Basis for Opinion

We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs). Our responsibilities under those 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 Company and the Group as required by laws and regulations, 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.

Key Audit Matters

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.

The key audit matters identified in our audit are:

- Tax assets and liabilities
- Impairment of goodwill and property, plant and equipment

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Tax assets and liabilities

Key audit matter	How the matter was addressed in the audit
As detailed in note 1 and 2.8, the Group has recognized deferred tax assets of USD 484 million. Total unrecognized deferred tax assets are USD 319 million, of which USD 173 million represent unused tax losses in Brazil. Furthermore, Yara's operations in Brazil also generate tax credits. As disclosed in note 1 and 4.6, the Group has recognized an amount of USD 213 million in tax credits related to the operations in Brazil. Recognition of these assets are based on management assumptions related to future operating results and timing of utilization. As detailed in note 1, and 2.8, management applies judgment to determine to what extent these deferred tax assets and tax credits qualify for recognition in the statement of financial position. This involves judgment as to the likelihood of the realization of deferred tax assets and tax credits. The expectation that the benefit of these deferred tax assets and tax credits will be realized is dependent on sufficient taxable profits in future periods and the ability to utilize the tax credits. Recoverability of the tax credits is also dependent on interpretation of laws and regulations, which may be subject to change over time. As detailed in note 1 and 5.6, the Group is engaged in a number of juridical and administrative proceedings related to disputed tax matters with uncertain outcome. Management is required to make certain judgments and estimates to recognize and measure the effect of uncertain tax positions. Due to the significant management judgment involved in estimation and recognition of deferred tax assets, uncertain tax positions and tax credits, we have assessed this to be a Key Audit Matter.	Our audit procedures included the following, among others: • We evaluated relevant controls associated with accounting for tax balances, including deferred tax assets, tax credits and uncertain tax positions. • We involved our tax specialists in evaluating management's judgments and conclusions. • We challenged the appropriateness of management's assumptions and estimates in relation to the likelihood of generating future taxable profits to support the recognition of deferred tax assets. We evaluated the forecasted taxable profits and consistency of these forecasts with historical performance. • We evaluated management's assessment of the probable outcome related to uncertain tax positions. • We reviewed applicable third-party evidence and correspondence with tax authorities. • We considered the adequacy of the Group's disclosures related to uncertain tax positions, deferred tax assets and tax credits.

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Impairment of goodwill, property, plant and equipment

Key audit matter	How the matter was addressed in the audit
As disclosed in note 1, 4.1 and 4.2, the Group has recognized goodwill of USD 844 million and property, plant and equipment (PP&E) of USD 8,614 million. The Company's goodwill is tested for impairment on an annual basis while PP&E is tested for impairment when events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Determining whether goodwill and PP&E are impaired requires estimation of the value in use. As disclosed in note 4.7, the value in use calculation requires management to make significant estimates and assumptions related to future commodity prices, gas prices as well as assumptions related to discount rates, future production levels and capital expenditures. Changes in these assumptions could have a significant impact on the value of goodwill and PP&E. Net impairment losses of USD 43 million were recognized in the year ended 31 December 2019. Due to the significant judgment involved in determining the assumptions used in the testing for impairment of goodwill, property, plant and equipment we have assessed this to be a Key Audit Matter.	Our audit procedures included the following, among others: • We evaluated relevant controls associated with the impairment review process. • We challenged management's key assumptions used in the cash flow forecasts included within the impairment models. • We challenged specifically the urea- and ammonia prices, gas prices, assumed production levels, capital expenditure and discount rate assumptions, including consideration of the risk of management bias. • We compared urea- and ammonia and gas prices to third party publications. • We used internal valuation specialists in assessing discount rate assumptions used and testing the models. • We validated the mathematical accuracy of cash flow models, and agreed relevant data to the latest production plans and approved budgets. • We considered the adequacy of the disclosures provided by the Group in relation to its impairment reviews.

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Independent Auditor's Report –
Yara International ASA

Other information

Management is responsible for the other information. The other information comprises information in the annual report, except the financial statements and our auditor's report thereon.

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

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the 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.

Responsibilities of the Board of Directors and the President and CEO for the Financial Statements

The Board of Directors and the President and CEO (Management) are responsible for the preparation in accordance with law and regulations, including fair presentation of the financial statements of the Company in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for the preparation and fair presentation of the consolidated financial statements of the Group in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as management 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, management is responsible for assessing the Company's and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern. The financial statements of the Company use the going concern basis of accounting insofar as it is not likely that the enterprise will cease operations. The consolidated financial statements of the Group use the going concern basis of accounting unless management 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 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's or the Group's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company and the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company and the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

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Independent Auditor's Report –
Yara International ASA

Report on Other Legal and Regulatory Requirements

Opinion on the Board of Directors' report and the statements on Corporate Governance and Corporate Social Responsibility

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report and in the statements on Corporate Governance and Corporate Social Responsibility concerning the financial statements and the going concern assumption is consistent with the financial statements and complies with the law and regulations.

Opinion on Registration and Documentation

Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements *(ISAE) 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, it is our opinion that management has fulfilled its duty to produce a proper and clearly set out registration and documentation of the Company's accounting information in accordance with the law and bookkeeping standards and practices generally accepted in Norway.

Oslo, 17 March 2020
Deloitte AS

Aase Aa. Lundgaard
State Authorised Public Accountant (Norway)

Reconciliation of alternative performance measures in the Yara Group

Yara makes regular use of certain non-GAAP alternative financial performance measures (APMs), both in absolute terms and comparatively from period to period. The APMs used are the following:

- Operating income
- EBITDA
- EBITDA exclusive special items
- EBITDA per tonne Sales & Marketing segment
- Return on invested capital (ROIC)
- Fixed cost
- Net operating capital (days)
- Net interest-bearing debt
- Net debt/equity ratio
- Net debt/EBITDA exclusive special items
- Basic earnings per share exclusive currency and special items

Definitions and explanations for use of the APMs are described below. Reconciliations of the APMs to the most directly reconcilable line item, subtotal or total presented in the financial statements are provided on the following pages.

Operating income

Operating income is directly identifiable from Yara's consolidated statement of income and is considered to be key information in order to understand the Group's financial performance. It provides performance information which covers all activities which normally are to be considered as "operating". Share of net income in equity-accounted investees is however not included.

EBITDA

Earnings before interest, tax, depreciation and amortization (EBITDA) is used for providing consistent information on Yara's operating performance and debt servicing ability which is relative to other companies and frequently used by securities analysts, investors and other stakeholders. EBITDA, as defined by Yara, includes operating income, interest income from external customers, other financial income and share of net income in equity-accounted investees. It excludes depreciation, amortization and impairment loss, as well as amortization of excess values in equity-accounted investees. Yara's definition of EBITDA may differ from that of other companies.

EBITDA exclusive special items

EBITDA exclusive special items is an adjusted EBITDA measurement which is used in the internal financial reporting to management and which Yara also considers to be relevant for external stakeholders. It aims to better mirror the underlying performance in the reported period, adjusting for items which are not primarily related to the period in which they are recognized. See section "Financial performance" page 39 for details on special items.

EBITDA in USD per tonne Sales & Marketing segment

One of Yara's strategic priorities is to improve margins by promoting sustainable solutions using nitrate-based products (premium products). Nitrate-based products maximize agricultural productivity and nitrogen use efficiency, reducing greenhouse gas emissions and increasing farm profitability. This strategic priority is measured by the 12-months rolling EBITDA per tonne in the Sales & Marketing segment, which is defined as the EBITDA for this segment excluding special items divided by the total deliveries by this segment.

ROIC

With effect from 2019, Yara replaced the previous CROGI and ROCE performance measures with Return on Invested Capital (ROIC). The rationale for the change is that ROIC enables better benchmarking with comparable companies and businesses, both for internal and external stakeholders.

ROIC is defined as Net Operating Profit After Tax (NOPAT) divided by average invested capital calculated on a 12-months rolling average basis. NOPAT is defined as operating income excluding amortization and impairment of intangible assets, plus interest income from external customers, minus tax cost calculated on the previous mentioned items with a 25% flat rate, and plus net income from equity-accounted investees. Average invested capital is defined as total current assets excluding cash and cash equivalents, plus a normalized cash level of USD 200 million, minus total current liabilities excluding bank loans and other interest-bearing short-term debt and current portion of long-term debt, plus property, plant and equipment, plus right-of-use assets, plus goodwill and plus equity-accounted investees.

NOPAT and average invested capital are defined and reconciled as components in reporting ROIC as an APM. They are not considered to be separate APMs.

Basic earnings per share excluding currency and special items

Earnings per share excluding currency and special items is an adjusted EPS measurement which Yara considers to be relevant for both internal and external stakeholders as it aims to mirror the underlying performance in the reported period, adjusting for currency effects and items which are not primarily related to the period in which they are recognized. This APM represent net income after non-controlling interests, excluding foreign currency translation gain/loss and special items after tax, divided by average number of shares outstanding in the period. Tax effect on foreign currency and special items is calculated based on relevant statutory tax rate for simplicity.

Capital structure measures

Yara reports the Group's net interest-bearing debt, net debt/equity ratio and net debt/EBITDA excluding special items ratio to provide information on the Group's financial position as reference to the targeted capital structure as communicated in Yara's financial policy. In addition, Yara's reporting of net interest-bearing debt highlights key development factors which are considered to be relevant supplements to the consolidated statement of cash flows. Net interest-bearing debt is defined by Yara as cash and cash equivalents, reduced for short-term and long-term interest-bearing debt, including current portion, and lease liabilities. The net debt/equity ratio is calculated as net interest-bearing debt divided by shareholders' equity plus non-controlling interests. The net debt/EBITDA ratio is calculated as net interest-bearing debt divided by EBITDA exclusive special items on a 12-months rolling basis.

Yara Improvement Program (YIP)

Yara has established a corporate program to drive and coordinate existing and new improvement initiatives, the Yara Improvement Program. At its Capital Markets Day on 26 June 2019, Yara launched an extended version of this program which distinguish between three defined pillars; a) higher production returns and lower variable costs, b) leaner cost base, and c) smarter working capital management. At the same time, Yara moved to reporting operational metrics on underlying value drivers to provide information on project performance to management, and which Yara also considers to be relevant for external stakeholders. The operational metrics are reported on a rolling 12-months basis and include:

- production volume (kt),
- energy efficiency (Gj/T),
- fixed cost (USD millions),
- net operating capital (days).

The fixed cost and net operating capital measures represent financial alternative performance measures and are defined below. The production volume and energy efficiency are physical measures and is defined and reported on page 36.

Fixed cost is defined as the subtotal "operating costs and expenses" in the consolidated income statement minus variable product cost (raw materials, energy, freight), other variable operating expenses, depreciation, amortization and impairment loss. The reported amounts are adjusted for items which are not considered to be part of underlying business performance for the period (see section "Financial performance" page 39 for details on special items), currency effects, and items which relate to portfolio and structural changes. The currency effects are calculated by converting from local currency to reporting currency using baseline exchange rates as of 2018. The portfolio and structural changes refer to the acquisition of the Vale Cubatão Fertilizantes complex in Brazil and the ammonia plant in Freeport. Furthermore, the fixed cost amount reported for 2018 is adjusted for the effects of implementing IFRS 16 in 2019.

Net operating capital days are reported on a 12-months average basis and is defined as the net of credit days, inventory days and payable days. Credit days are calculated as trade receivables, adjusted for VAT payables, relative to total revenue and interest income from customers. Inventory days are calculated as the total inventory balance relative to product variable costs. Payable days are calculated as trade payables relative to supplier related operating costs and expenses.

Reconciliation of operating income to EBITDA excluding special items

USD millions		2019	2018
Operating income		989	402
Share of net income in equity-accounted investees		65	82
Interest income and other financial income		76	81
Earnings before interest expense and tax (EBIT)		1,130	566
Depreciation and amortization [1)]		923	807
Impairment loss [2)]		43	150
Earnings before interest, tax and depreciation/amortization (EBITDA)		2,095	1,523
Special items included in EBITDA [3)]		70	2
EBITDA, excluding special items	A	2,165	1,525

1) Including amortization of excess value in equity-accounted investees.
2) Including impairment loss on excess value in equity-accounted investees.
3) See section "Variance analysis and special items" for details on special items.

Reconciliation of operating income to net operating profit after tax

USD millions		2019	2018
Operating income		989	402
Amortization and impairment of intangible assets		46	60
Interest income from external customers		60	69
Calculated tax cost (25% flat rate) on items above		(274)	(133)
Share of net income in equity-accounted investees		65	82
Net operating profit after tax (NOPAT)	B	886	481

Reconciliation of net income to net operating profit after tax

USD millions		2019	2018
Net income		589	141
Amortization and impairment of intangible assets		46	60
Interest income from external customers		60	69
Interest income and other financial items		(76)	(81)
Interest expense and other financial items		182	153
Foreign currency translation (gain)/loss		145	278
Income tax, added back		214	(6)
Calculated tax cost (25% flat rate)		(274)	(133)
Net operating profit after tax (NOPAT)	B	886	481

Reconciliation of invested capital and ROIC calculation

USD millions		12-months average 2019	12-months average 2018
Total current assets		5,375	5,281
Cash and cash equivalents		(306)	(573)
Normalized level of operating cash		200	200
Total current liabilities		(3,738)	(3,255)
Bank loans and other interest-bearing short-term debt		430	467
Current portion of long-term debt		726	373
Short-term lease liabilities		83	-
Property, plant and equipment		8,386	8,277
Right-of-use assets		389	-
Goodwill		841	913
Equity-accounted investees		1,007	1,041
Capital employed 12-month average	C	13,395	12,725
Return on invested capital (ROIC)	D=B/C	6.6%	3.8%

Reconciliation of EBITDA to income before tax

USD millions		2019	2018
EBITDA		2,095	1,523
Depreciation and amortization [1]		(923)	(807)
Impairment loss [2]		(43)	(150)
Foreign currency translation gain/(loss)		(145)	(278)
Interest expense and other financial items		(182)	(153)
Income before tax		803	134

1) Including amortization of excess value in equity-accounted investees.
2) Including impairment loss on excess value in equity-accounted investees.

Reconciliation of EBITDA in USD per tonne Sales & Marketing segment

USD millions (except deliveries shown in thousand tonnes)		2019	2018
EBITDA Sales & Marketing segment [1]		743	613
Special items within Sales & Marketing EBITDA [2]		3	(29)
EBITDA Sales & Marketing excl. special items		740	641
Total deliveries Sales & Marketing segment [3]		30,540	31,622
EBITDA (excl. special items) in USD per tonne Sales & Marketing segment		24.24	20.28

1) Reference to note 2.3 Segment information.
2) See section "Variance analysis and special items" for details on special items.
3) See section "Deliveries" for details on deliveries.

Reconciliation of operating costs and expenses to fixed cost

USD millions		2019	2018
Operating costs and expenses		11,946	12,652
Variable part of Raw materials, energy costs and freight expenses		(8,714)	(9,259)
Variable part of Other operating expenses		(25)	(36)
Depreciation and amortization [1)]		(923)	(807)
Impairment loss [2)]		(43)	(150)
Currency effects (using baseline exchange rates as of 2018)		102	-
Special items within fixed cost		(53)	(44)
Estimated IFRS 16 effects		-	(110)
Adjustment for portfolio and structural changes		-	68
Fixed cost		2,291	2,314

1) Including amortization of excess value in equity-accounted investees.
2) Including impairment loss on excess value in equity-accounted investees.

Reconciliation of Net operating capital days

USD millions		2019	2018
Trade receivables as reported		1,564	1,601
Adjustment for VAT payables		(64)	(90)
Adjustment for 12-months average		186	(14)
Adjusted trade receivables (12-months average)	E	1,686	1,497
Revenue from contracts with customers		12,858	12,928
Interest income from external customers		60	69
Total revenue and interest income from customers	F	12,918	12,997
Credit days	G=(E/F)*365	48	42
Inventories as reported		2,360	2,568
Adjustment for 12-months average		140	(146)
Inventories (12-months average)	H	2,500	2,422
Raw materials, energy costs and freight expenses		9,334	9,952
Fixed product costs and freight expenses external customers		(1,564)	(1,683)
Product variable costs	I	7,770	8,269
Inventory days	J=(H/I)*365	117	107
Trade and other payables as reported		1,614	1,835
Adjustment for other payables		(329)	(360)
Adjustment for 12-months average		137	(72)
Trade payables (12-months average)	K	1,422	1,403
Operating costs and expenses		11,946	12,652
Depreciation and amortization [1)]		(923)	(807)
Impairment loss [2)]		(43)	(150)
Other non-supplier related costs		(701)	(745)
Operating costs and expenses, adjusted	L	10,280	10,950
Payable days	M=(K/L)*365	50	47
Net operating capital days	N=G+J-M	115	102

1) Including amortization of excess value in equity-accounted investees.
2) Including impairment loss on excess value in equity-accounted investees.

Net operating capital

USD millions		31 Dec 2019	31 Dec 2018
Trade receivables		1,564	1,601
Inventories		2,360	2,568
Trade payables [1]		(1,285)	(1,475)
Prepayments from customers		(399)	(343)
Net operating capital [2]		2,240	2,352

1) Trade and other payables in the statement of financial position also includes payables related to payroll and value added taxes, which is not included in the calculation of net operating capital above.
2) Change in net operating capital as presented in the table above does not reconcile to change in net operating capital as presented in the Condensed consolidated interim statement of cash flows due to currency effects and items included in trade payables which are related to investments.

Net interest-bearing debt

USD millions		31 Dec 2019	31 Dec 2018
Cash and cash equivalents		300	202
Short-term interest-bearing debt		(494)	(397)
Current portion of long-term debt		(398)	(824)
Short-term lease liabilities		(98)	-
Long-term interest-bearing debt		(2,698)	(2,776)
Long-term lease liabilities		(337)	-
Net interest-bearing debt	O	(3,725)	(3,794)

Net debt/equity ratio

USD millions		31 Dec 2019	31 Dec 2018
Net interest-bearing debt	O	(3,725)	(3,794)
Total equity	P	(8,909)	(8,910)
Net debt/equity ratio	Q=O/P	0.42	0.43

Net debt/EBITDA excluding special items ratio

USD millions		31 Dec 2019	31 Dec 2018
Net interest-bearing debt	O	(3,725)	(3,794)
EBITDA, excluding special items (last 12 months)	A	2,165	1,525
Net debt/EBITDA excluding special items ratio	R=(O)/A	1.72	2.49

Earnings per share

USD millions, except earnings per share and number of shares		2019	2018
Weighted average number of shares outstanding	S	272,319,232	273,169,994
Net income attributable to shareholders of the parent	T	599	159
Foreign currency translation gain/(loss)	U	(145)	(278)
Tax effect on foreign currency translation	V	38	77
Non-controlling interest share of foreign currency translation (gain)/loss, net after tax	W	(1)	(3)
Special items within income before tax [1]	X	(126)	(148)
Tax effect on special items	Y	23	37
Special items within income before tax, net after tax	Z=X+Y	(102)	(112)
Special items within income tax [2]	AA	(38)	-
Non-controlling interest's share of special items, net after tax	AB=T–U–V+W–Z+AA	(2)	(9)
Net income excluding currency and special items	AC=T–U–V+W–Z-AA+AB	842	460
Basic earnings per share	AD=T/S	2.20	0.58
Basic earnings per share excluding foreign currency translation and special items	AE=AC/S	3.09	1.68

1) See section "Variance analysis and special items" for details on special items, totaling to USD 113 million in 2019 (within operating income). In addition to this, an amount of USD 13 million relates to interest on the USD 38 million tax provision recognized in fourth quarter 2019. See note 5.6 Provisions and contingencies for more information.
2) The full amount of USD 38 million relates to the income tax provision recognized in fourth quarter 2019. See note 5.6 Provisions and contingencies for more information.