

Notes to the Consolidated Financial Statements

1 General information

Neste Corporation (the Company) is a Finnish public limited liability company domiciled in Espoo, Finland. The company is listed on the NASDAQ Helsinki Oy. The address of its registered office is Keilaranta 21, P.O. Box 95, 00095 Neste, Finland.

Neste Corporation and its subsidiaries (together referred to as the Group) create sustainable solutions for transport, business, and consumer needs. Our wide range of renewable products enable our customers to reduce climate emissions. We are the world's largest producer of renewable diesel refined from waste and residues, introducing renewable solutions also to the aviation and plastics industries. We are also a technologically advanced refiner of high-quality oil products. We want to be a reliable partner with widely valued expertise, research, and sustainable operations.

Neste's customers benefit not only from the high-quality products, but also from the comprehensive supply and logistics services that Neste can provide in Finland and abroad. The Group's refineries are located in Finland, the Netherlands and Singapore and Neste is also a co-owner of a base oil plant in Bahrain. The Company has a network of service stations and other retail outlets in Finland, the Baltic countries and Northwest Russia.

The Board of Directors has approved these consolidated financial statements for issue on 5 February 2019.

2 Accounting policies

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

Basis of preparation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRS Interpretations Committee (IFRS IC) interpretations applicable to companies reporting under IFRS as adopted by the European Union. The consolidated financial statements also include compliance with Finnish accounting and corporate legislation. The consolidated financial statements have been prepared under the historic cost convention, as modified by the revaluation of financial assets and financial liabilities (including derivative financial instruments) at fair value through the comprehensive income statement.

The consolidated financial statements are presented in millions of euros unless otherwise stated. The figures in the tables are exact figures and consequently the sum of individual figures may deviate from the sum presented.

Neste discloses the accounting policies in conjunction with each note to provide enhanced understanding of each accounting area. The following symbols **IS**, **OCI**, **BS**, and **CF** are used to show which amounts in the notes can be reconciled to consolidated statement of income (**IS**), consolidated statement of comprehensive income (**OCI**), consolidated statement of financial position (**BS**) or consolidated cash flow statement (**CF**).

New standards, significant amendments and interpretations adopted by the Group

The following standards have been adopted by the Group for the financial year beginning on 1 January 2018:

IFRS 9 Financial instruments

The Group started to apply IFRS 9 from 1 January 2018. IFRS 9 addresses the classification, measurement and recognition of financial assets and liabilities, introduces new rules for hedge accounting and a new impairment model for financial assets. In accordance with the IFRS 9 transitional provisions, comparative information provided continues to be presented in accordance with the Group's previous accounting policy.

Financial assets are classified in the following measurement categories: amortized cost, fair value through other comprehensive income and fair value through profit or loss. The classification depends on used business model for managing the financial assets and the contractual terms of the cash flows. Amortized cost category consist of cash and cash equivalents, trade receivables and loan receivables where the business model is to hold the asset to collect the contractual cash flows which represent only payments of principal and interest. For assets measured at fair value, gains and losses will be recorded either in income statement or other comprehensive income. At the moment Neste does not have any instruments measured through other comprehensive income. Assets at fair value through profit or loss consist of unlisted equity investments and derivatives, which are held for trading or do not meet criteria for hedge accounting. There were no changes relating to classification and measurement of financial liabilities.

For trade receivables Neste applies the simplified expected credit loss model. Every business area uses a specific provision matrix for the trade receivables due to the different nature of the businesses. The general expected credit loss model is used for debt

instruments carried at amortized cost. The impairment methodology applied depends on whether there has been significant increase in credit risk.

For certain currency derivatives the Group applies cash flow hedge accounting and for certain interest rate derivatives cash flow or fair value hedge accounting. IFRS 9 requires documentation of economic relationship between the hedged item and hedging instrument, and the hedged ratio to be the same as the one management actually uses for risk management purposes. The concrete change for hedge accounting is the time value of foreign exchange options, which is recognized into other comprehensive income in equity together with the options' intrinsic value instead of being recognized directly into income statement. Otherwise the application of hedge accounting within existing hedge accounting relationships (cash flow and fair value hedges within foreign exchange and interest rate derivatives) continues under IFRS 9 as earlier.

IFRS 15 Revenue from contracts with customers

The Group started to apply IFRS 15 from 1 January 2018, and applies the modified retrospective model. The standard deals with revenue recognition and establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. Revenue is recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the good or service. The standard replaces all preceding requirements (IAS 18 Revenue and IAS 11 Construction contracts and related interpretations).

The implementation of IFRS 15 does not have a significant impact on the consolidated financial statements. Management has assessed the IFRS 15 impact on the different agreement types that are used in Neste's business areas. The majority of the Group's net sales comprise of fuel and other product sales which are mostly standard in nature, and the delivery terms have been investigated, with no major impact compared to the revenue recognition prior to the implementation of IFRS 15. Certain storage service contracts, rebates, bonuses, penalties, warranties and other special terms and conditions that deviate from the basic agreement types have also been analyzed in more detail, and these do not have an impact on Neste's revenue recognition compared to the previous accounting policy.

Some of the Group's product sales are under CIF Incoterm conditions, where the total sales price is allocated to the separate performance obligations; the first being the product and the second being the transportation (including other costs, insurance and freight). The sales price allocated to the product is recognized upon shipment, before delivery. The sales price for the transportation is recognized when the latter performance obligation has been fulfilled. However, the allocated sales price for these is a minor part of the total revenue from contracts with customers, and the postponed revenue would have been EUR 0.8 million on 31 December 2017. After the related costs the impact on the opening balance is EUR 0.0 million.

Subsidiary Neste Engineering Solutions' current revenue recognition based on the percentage of completion method is consistent with IFRS 15, as the revenue is already recognized over time.

Renewable products' RINs (Renewable Identification Number), LCFS (Low Carbon Fuels Standard) credits, and BTCs (Blender's Tax Credits) and other similar separate performance obligations have also been assessed, with no changes to the earlier revenue recognition.

Amendments to IFRS 2 Share-based payments

In June 2016, the IASB made amendments to IFRS 2 Share-based payments which clarified the effect of vesting conditions on the measurement of cash-settled share-based payment transactions, the classification of share-based payment transactions with net settlement features and the accounting for a modification of the terms and conditions that changes the classification of the transaction from cash-settled to equity-settled. The IFRS 2 amendments were endorsed by EU in February 2018.

The Group started to apply IFRS 2 amendments from 1 January 2018. As permitted by the transitional provisions, the Group has applied the new policy from that date and comparative information provided continues to be presented in accordance with the Group's previous accounting policy.

From 1 January 2018, the entire share-based payment transaction is accounted for as an equity-settled share-based payment transaction. Under the previous accounting policy, the expected tax liability to be paid to the tax authority was measured at fair value at each reporting date and recognized as a liability like a cash-settled share-based payment transaction. Under the new accounting policy, the entire transaction is measured at fair value prevailing at grant date of share-based incentive plan and the difference realized upon the settlement date is recognized in equity. On 1 January 2018 the share-based payments' taxes of EUR 6 million were reclassified from liabilities to Equity: EUR 4 million from Other non-current liabilities and EUR 2 million from Trade and other payables. There were no other changes in Neste Group due to IFRS 2 amendments.

New standards, amendments and interpretations not yet adopted

Certain new interpretations, amendments to existing standards or new standards have been published. The Group intends to adopt these standards when they become effective.

IFRS 16 Leases

IFRS 16 Leases, issued in January 2016, sets out the principles for the recognition, measurement, presentation and disclosure of leases. The objective is to ensure that lessees and lessors provide relevant information in a manner that faithfully represents those transactions. This information gives a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of the entity.

IFRS 16 supersedes IAS 17 Leases and IFRIC 4 Determining whether an Arrangement contains a Lease. The standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognize a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. In lessor accounting IFRS 16 substantially carries forward requirements in IAS 17. IFRS 16 has been endorsed by EU in November 2017 and is effective for annual periods beginning on or after 1 January 2019.

Neste will implement IFRS 16 with modified retrospective approach. The Group has reviewed its leasing, service and utility purchase contracts to calculate the effects of IFRS 16. The assets and liabilities increase approximately EUR 200–250 million on 1 January 2019 consisting mainly of leases related to land areas, tanks, containers and facilities. Singapore expansion project will increase the amount in 2019 and the coming years. The balance sheet impact is considered insignificant proportional to the Group's total assets. Adoption has also impact on Neste's financial statements and specific key figures as most of the long-term operating leases (presented in Note 28) will be in the balance sheet.

There are no other IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Group.

Estimates and judgements requiring management estimation

The preparation of Consolidated Financial Statements in conformity with the International Accounting Standard requires the Group's management to make estimates and assumptions which have an impact on reported assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the consolidated financial statements, and the reported amounts of income and expenses during the reporting period. In addition, management judgement may be required in applying the accounting principles, for example, classifying assets as held for sale.

These estimates, assumptions and judgements are based on management's historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The actual amounts may differ significantly from the estimates used in the financial statements.

The Group follows the changes in estimates, assumptions and the factors affecting them by using multiple internal and external sources of information. Possible changes in estimates and assumptions are recognized in the financial period the estimate or assumption is changed.

The sources of uncertainty which have been identified as most significant estimates by Group are presented in connection to the items considered to be affected.

Consolidation

Subsidiaries

The consolidated financial statements cover the parent company, Neste Corporation, and all those companies in which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group, and are no longer consolidated when this control ceases.

Acquired or established subsidiaries are accounted for by using the acquisition method. The consideration transferred and the identifiable asset acquired and liabilities assumed in the acquired company are measured at the fair value at acquisition date. The consideration transferred includes any assets transferred by the acquirer, liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer. Any contingent consideration related to the business combination is measured at fair value at the acquisition date and it is classified as either liability or equity. Contingent consideration classified as liability is re-measured at its fair value at the end of each reporting period and the subsequent changes to fair value are recognized in profit or loss. Contingent consideration classified as equity is not subsequently re-measured. The consideration transferred does not include any transactions accounted for separately from the acquisition. Acquisition-related costs are expensed as incurred.

All intra-group transactions, receivables, liabilities and unrealized margins, as well as distribution of profits within the Group, are eliminated in the preparation of consolidated financial statements.

The result for the period and items recognized in other comprehensive income are allocated to the equity holders of the company and non-controlling interests and presented in the statement of income and statement of other comprehensive income. Non-controlling interests are presented separately from the equity allocated to the equity holders of the company. Other comprehensive income is allocated to the equity holders of the company and to non-controlling interests even in situations where the allocation would result in the non-controlling interests' share being negative, unless non-controlling interests have an exemption not to meet obligations which exceed the non-controlling interests' investment in the company.

When the Group ceases to have control any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in the carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities.

Joint arrangements

A joint arrangement is an arrangement in which two or more parties have joint control, and in which the sharing of control has been contractually agreed between the parties. Joint control exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. Joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangement. The Group has assessed the nature of its joint arrangements and determined them to be either joint ventures or joint operations.

Joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities relating to the arrangement. Joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Joint ventures are accounted for using the equity method. Joint operations are consolidated for its share of the assets, liabilities, revenues, expenses and cash flow on a line-by-line basis. Under the equity method of accounting, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the Group's net investment in the joint ventures), the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealized gains on transactions between the Group and its joint arrangements are eliminated to the extent of the Group's interest in the joint ventures. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Structured entities

The Group engages in business activities with structured entities which are designed to achieve a specific business purpose. A structured entity is one that has been set up so that voting rights or similar rights are not the dominant factor in deciding who controls the entity. An example is when voting rights relate only to administrative tasks and the relevant activities are directed by contractual arrangements.

Structured entities are consolidated when the substance of the relationship between the Group and the structured entities indicate that the structured entities are controlled by the Group. The extent of the Group's interests to unconsolidated structured entities will vary depending on the type of structured entities. Entities are not consolidated because the Group does not control them through voting rights, contract, funding agreements, or other means.

Management uses judgement when determining the accounting treatment of the structured entities. In addition to the voting rights or similar rights the management considers other factors such as the nature of the arrangement, contractual arrangements and level of influence with the structured entities.

Foreign currency translation

(a) Presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in euros, which is the company's presentation currency.

(b) Transactions in foreign currencies

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies, are recognized in the income statement, except when deferred in other comprehensive income as qualifying cash flow hedges and qualifying net investment hedges.

(c) Group companies

The results and financial position of all the Group entities (none of which uses a hyperinflationary economy currency) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate quoted on the relevant balance sheet date;
- Income and expenses are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions);
- All resulting exchange differences are recognized as a separate component of equity.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities and currency instruments designated as hedges of such investments, are recognized to shareholders' equity. When a foreign operation is sold, exchange differences are recognized in the income statement as part of the gain or loss on the sale. Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the entity in question and translated at the closing rate.

3 Financial risk management

Financial risk management principles

Neste Board of Directors has approved the Corporate risk management policy. This policy together with the related principles and instructions defines the framework for financial risk management within Neste. Mandates and limits that are applicable to financial risks have been defined in the risk management policy.

For more information regarding Neste's risk management principles and key risk areas, please refer to the risk management section in the annual report.

Market risks

Market risk is the risk or uncertainty arising from possible market price movements and their impact on the future performance of a business. For Neste, the main types of market risk are commodity price risk, foreign exchange risk and interest rate risk. These are specified in more detail in the following sections. In accordance with the Corporate risk management policy, various derivatives transactions are executed to manage the risk exposure. The positions are monitored and managed on a daily basis.

1. Commodity price risks

The main commodity price risks Neste faces in its businesses are related to market prices for crude oil, renewable feedstocks, and other feedstocks, as well as refined petroleum and renewable products. These prices are subject to significant fluctuations resulting from a periodic over-supply and supply tightness in various regional markets, coupled with fluctuations in demand.

Neste's results of operations in any given period are principally driven by the demand for and prices of oil and renewable products relative to the supply and cost of raw materials. These factors, combined with Neste's own consumption of raw materials and output of refined products, drive operational performance and cash flows in Renewable Products and Oil Products, which are Neste's largest business areas in terms of revenue, profits and net assets.

Neste divides the commodity price risks affecting Neste's revenue, profits and net assets into two main categories; inventory price risk and refining margin risk.

Inventory price risk

From a price risk management perspective, Neste's refinery inventory consists of two components. The first and largest component remains relatively constant over time and is referred to as the 'base inventory'. The second and daily fluctuating component is the amount of inventories differing from the base inventory level and at Neste it is called 'transaction position'.

The base inventory is the minimum level that can reasonably assure the continuous operation of the refineries and preventing deliveries from being compromised. It comprises

inventories at the refineries and within the supply chain. The base inventory includes the minimum level of stocks that Neste is required to maintain under Finnish laws and regulations.

In Renewable Products base inventory level is approximately half of the annual renewables refining capacity used. In Oil Products the base inventory is approximately one tenth of the total annual fossil fuel refining capacity of roughly 14 million tons per annum.

The base inventory creates a risk in Neste's income statement and balance sheet since in Renewable Products Neste applies the FIFO method and in Oil Products weighted average method for measuring the cost of goods sold, raw materials and inventories. Hedging operations related to price risk do not target the base inventory. Instead, Neste's inventory risk management policies target the 'transaction position' inasmuch as these stocks create cash flow risks depending on the relationships between feedstocks purchases, refinery production and refined petroleum product sales over any given period. According to the Neste risk management principle, any open exposures of the transaction position are hedged without delay.

In hedging the transaction position, derivative financial instruments are used. Because of the differences between the quality of the underlying feedstocks or end products for which derivative financial instruments can be sold and purchased and the actual quality of Neste's feedstocks and end products, the business will remain exposed to some degree of basis risk. Basis risk is typically higher in the Renewables business due to the nature of the feedstock pool and limited availability of hedging instruments.

If crude or oil product markets are in contango where current forward prices are higher than current spot prices Neste has the capability to build physical contango storages from time to time. These storages are excluded from the transaction position and are hedged separately.

Refining margin risk

Neste is exposed to a greater margin volatility in the Renewable Products' business compared with that in fossil fuel refining. In the Renewables business, the refining margin is mainly an outcome of the renewable product sale price received and the cost of feedstocks used. The underlying indices used in renewable diesel pricing are primarily related to oil products or conventional biodiesel. Product prices fluctuate regionally depending on the nature of bio mandates and incentives, local supply and demand, and fossil fuel prices. Typical biodiesel qualities are Fatty Acid Methyl Ester (FAME) or Rapeseed-Oil Methyl Ester (RME). In North America, the local biodiesel reference and typical renewable fuel pricing driver is Soy Methyl Ester (SME). The cost of feedstocks depends on feedstock selection and is typically derived from different vegetable oils and fats. Feedstock prices are mainly driven by supply and demand balances, crop forecasts and regional weather. In Renewable Products business area, operational activities and margin hedges are the primary means of mitigating margin volatility.

Refining margin is an important determinant of Oil Products business area's earnings. Its fluctuations constitute a significant risk. The refining margin risk is a result of the revenue from sold petroleum products and the cost of raw materials together with other costs. Neste's exposure to low refining margins in traditional oil refining is partly offset by its high-conversion refineries.

With the aim of securing its margin and cash flow, Neste has defined margin hedging principles for its main refining businesses. The hedge ratio for Renewable Products business is measured and monitored as a percentage of the quarterly sales volumes and for Oil products as percentage of annual production volume. In the Renewable Products' business the targeted hedge ratios are typically higher and can be expected to fluctuate over time. In fossil fuel business the hedge ratios are typically moderate.

In hedging the refining margin, commodity derivatives are used. Hedging transactions are targeted at the components of Neste's refining margin, based on its forecast or committed sales and refinery production, which are exposed to international market price fluctuations. As in transaction hedging, also when hedging the refining margin, the business will remain exposed to certain degree of basis risk that comes from the differences between actual qualities of feedstocks and products and qualities of available hedging arrangements.

The exposure to open positions of commodity derivative contracts is summarized in Note 19.

2. Foreign exchange risk

As the pricing currency used in the oil industry is the U.S. dollar and Neste operates and reports in Euro, this factor is one that exposes Neste's business to currency risks. The objective of foreign exchange risk management in Neste is to limit the uncertainty created by changes in foreign exchange rates on the future value of cash flows and earnings, and in the Group's balance sheet. Generally, this is done by hedging currency risks in contracted and forecast cash flows and balance sheet exposures (referred to as transaction exposure) as well as the equity of non-euro-based subsidiaries (referred to as translation exposure).

Transaction exposure

In general, all business areas hedge their transaction exposure related to highly probable future cash flows. Net foreign currency cash flows are forecast over a 12-month period on a rolling basis and hedged on average 70% for the first six months and 30% of the next six months for the renewable business and on average 80% for the first six months and 40% for the following six months for the fossil fuel businesses. Deviations from the risk-neutral benchmark position are allowed in line with the limits set by treasury principles. The most important hedged currency is the U.S. dollar. Other material hedged currencies are the Malaysian Ringgit (MYR), Swedish Crown (SEK), Norwegian Crown (NOK) and Singapore Dollar (SGD). The Group's net exposure is managed through the use of forward contracts and options. All transactions are made for hedging purposes and the majority is also

hedge accounted for according to IFRS. Business areas are responsible for forecasting net foreign currency cash flows, while Group Treasury & Risk Management is responsible for implementing hedging transactions. In addition to the above mentioned foreign currency hedging programs the Group has started to hedge the Singapore expansion project related currency exposures up to 36 months. Both currency forwards and currency options can be used in order to manage this position.

Neste has several currency-denominated assets and liabilities in its balance sheet, such as foreign currency loans, deposits, net working capital and cash in other currencies than home currency. The principle is to hedge this balance sheet exposure fully using forward contracts. Similarly to commodity price risk management, the foreign exchange transaction hedging targets inventories in excess of the base inventory. Open exposures are allowed based on risk limits set by treasury principles. The largest and most volatile item in terms of balance sheet exposure is net working capital. Since many of the Group's business transactions, sales of products and services and purchases of crude oil and other feedstock are linked to the U.S. dollar, the daily exposure of net working capital is hedged as part of the balance sheet hedge in order to neutralize the effect of volatility in EUR/USD exchange rate. During 2018, the daily balance sheet exposure fluctuated between approximately EUR 942 million and 1,711 million (2017: EUR 769 million and 1,538 million). Group Treasury & Risk Management is responsible for consolidating various balance sheet items and carrying out hedging transactions. Foreign exchange risk is estimated by measuring the impact of currency rate changes based on historical volatility.

The exposure to open positions of foreign exchange derivative contracts is summarized in Note 19.

Translation exposure

Group Treasury & Risk Management is responsible for managing Neste's translation exposure. This consists of net investments in foreign subsidiaries and joint ventures. Although the main principle is to leave translation exposure unhedged, Neste may seek to reduce the volatility in equity in the consolidated balance sheet through hedging transactions. Any hedging decisions are made by Group Treasury & Risk Management. In the end of 2018 the most important translation exposures were Swedish Crown EUR 182 million, Russian Rouble EUR 52 million and U.S. dollar EUR 28 million (2017: Swedish Crown EUR 189 million, Russian Rouble EUR 54 million, U.S. dollar EUR 22 million). The Group has not hedged the exposures.

3. Interest rate risk

Neste is exposed to interest rate risk mainly through its interest-bearing net debt. The objective of the interest rate risk management is to limit the volatility of interest expenses in the income statement. The risk-neutral benchmark duration for the debt portfolio is 12 months, and duration can vary between six and 96 months. As of 31 December 2018, the

duration was 41 months (2017: 47 months). In addition to duration, Neste has defined a flow risk limitation.

Interest rate derivatives have been used to adjust the duration of the debt portfolio. The Group's interest rate risk management is handled by Group Treasury & Risk Management. The exposure to open positions of interest rate derivative contracts is summarized in Note 19.

The re-pricing period of interest-bearing debt occurs	Within 1 year	1 year – 5 years	> 5 years	Total
Financial instruments with floating interest rate				
Loans from financial institutions	119	0	0	119
Other loans	3	0	0	3
Effect of interest rate swaps	0	0	0	0
Financial instruments with fixed interest rate				
Bonds	148	320	399	867
Finance lease liabilities	3	24	73	101
Other loans	21	0	29	50
	294	344	501	1,140

4. Key sensitivities to market risks

Sensitivity of operating profit to market risks arising from the Group's operations

Due to the nature of its operations, the Group's financial performance is sensitive to the market risks described above. The following table details the approximate impact that movements in the Group's key price and currency exposures would have on its operating profit for 2019 (2018), based on assumptions regarding the Group's reference market and operating conditions, but excluding the impact of hedge transactions.

Approximate impact on operating profit, excluding hedges	2019	2018
+/- 10% in the EUR/USD exchange rate	EUR million –255/+311	–145/+177
+/- USD 1.00/barrel in total refining margin	USD million +/-110	+/-110
+/- USD 10/barrel in crude oil price ¹⁾	USD million +/-115	+/-100
+/- USD 100/t in Renewable Products raw material price ¹⁾	USD million +/-130	+/-125
+/- USD 50/t in Renewable Products refining margin ²⁾	USD million +/-135	+/-130

¹⁾ Inventory gains/losses excluded from comparable operating profit

²⁾ Based on name-plate capacity

Sensitivity to market risks arising from financial instruments as required by IFRS 7

The following analysis, required by IFRS 7, is intended to illustrate the sensitivity of the Group's profit for the period and equity to changes in oil prices, the EUR/USD exchange rate, the USD/MYR exchange rate, and interest rates, resulting from financial instruments, such as financial assets and liabilities and derivative financial instruments, as defined by IFRS, included in the balance sheet as of 31 December 2018 (2017). Financial instruments affected by the above market risks include net working capital items, such as trade and other receivables and trade and other payables, interest-bearing liabilities, deposits, liquid funds, and derivative financial instruments. When cash flow hedge accounting is applied, the change in the fair value of derivative financial instruments is assumed to be recorded fully in equity.

The following assumptions were made when calculating the sensitivity to the change in oil prices:

- The flat price variation for oil derivative contracts of crude oil, refined oil products and vegetable oil is assumed to be +/- 20%
- The sensitivity related to oil derivative contracts held for hedging refinery oil inventory position is included; the underlying physical oil inventory position is excluded from the calculation, since inventory is not a financial instrument
- The sensitivity related to oil derivative contracts held for hedging expected future refining margin is included; the underlying expected refining margin position is excluded from the calculation
- The sensitivity related to oil derivative contracts for the price difference between various petroleum product qualities is excluded from the calculation, as the price variation of these contracts is assumed to be zero
- The sensitivity related to oil derivative contracts for the time spread of crude oil and petroleum products is excluded from the calculation, as the price variation of these contracts is assumed to be zero

The following assumptions were made when calculating the sensitivity to changes in the EUR/USD exchange rate:

- The variation in EUR/USD-rate is assumed to be +/- 10%
- The position includes USD-denominated financial assets and liabilities, such as interest-bearing liabilities, deposits, trade and other receivables, trade and other payables, and liquid funds, as well as derivative financial instruments
- The position excludes USD-denominated future cash flows

The following assumptions were made when calculating the sensitivity to changes in the USD/MYR exchange rate:

- The variation in USD/MYR-rate is assumed to be +/- 10%
- The position includes MYR-denominated derivative financial instruments
- The position excludes MYR-denominated future cash flows

The following assumptions were applied when calculating the sensitivity to changes in interest rates:

- The variation of interest rate is assumed to be a 1% parallel shift in the interest rate curve
- The interest rate risk position includes interest-bearing liabilities, interest-bearing receivables, and interest rate swaps, however cash in bank accounts is excluded
- The income statement is affected by changes in the interest rates of floating-rate financial instruments, excluding those derivative financial instruments that are designated as and qualifying for cash flow hedges, which are recorded directly in equity

The sensitivity analysis presented in the following table may not be representative, since the Group's exposure to market risks also arises from balance sheet items other than financial instruments, such as inventories. As the sensitivity analysis does not take into account future cash flows, which the Group hedges in significant volumes, it only reflects the change in fair value of hedging instruments. In addition, the size of the exposure sensitive to changes in the EUR/USD exchange rate varies significantly, so the position on the balance sheet date may not be representative for the financial period on average. Equity in the following table includes items which are recorded directly in equity. Items affecting the income statement are not included in equity.

		2018		2017	
Sensitivity to market risk arising from financial instruments as required by IFRS 7		Income Statement	Equity	Income Statement	Equity
+/- 20% change in oil price ¹⁾	EUR million	-/+ 6	+/- 0	+/- 5	+/- 0
+/- 10% change in EUR/USD exchange rate	EUR million	+84/-103	+94/-104	+100/-124	+62/-61
+/- 10% change in USD/MYR exchange rate	EUR million	+/-0	+/-0	-/+9	+/-0
+/- 1% parallel shift in interest rates	EUR million	-/+2	+/-0	-/+1	+/-0

¹⁾ Includes crude oil, refined oil products and vegetable oil derivatives

Liquidity and refinancing risks

Liquidity risk is defined as financial distress or extraordinarily high financing costs arising due to a shortage of liquid funds in a situation where business conditions unexpectedly deteriorate and require financing. The objective of liquidity risk management is to maintain sufficient liquidity and to ensure that it is available fast enough to avoid uncertainty related to financial distress at all times.

Neste's principal source of liquidity is expected to be cash generated from operations. In addition, the Group seeks to reduce liquidity and refinancing risks by maintaining a diversified maturity profile in its loan portfolio. Certain other limits have also been set to minimize liquidity and refinancing risks. Amount of short-term financing is limited to the greater of the following: EUR 500 million or 30% of total interest-bearing liabilities. Unused committed credit facilities together with excess cash must always be in minimum EUR 500 million and sufficient to cover all forecasted negative free cash flows and interest bearing liabilities maturing within the next 12 month period.

The average loan maturity as of 31 December 2018 was 3.7 years (2017: 4.5 years). The most important financing programs in place are committed revolving multicurrency credit facility of EUR 1,500 million, committed overdraft facilities of EUR 150 million and uncommitted domestic commercial paper program of EUR 400 million.

Liquid funds and committed unutilized credit facilities	31 Dec 2018	31 Dec 2017
Liquid funds	1,210	783
Overdraft facilities, expiring within one year	150	150
Revolving credit facility, expiring beyond one year	1,500	1,500
Total	2,860	2,433
In addition: unused commercial paper program (uncommitted)	400	400

Maturity profile of financial liabilities based on contractual payments 31 Dec 2018

	2019	2020	2021	2022	2023	2024–	Total
Trade payables	1,033	0	0	0	0	0	1,033
Interest-bearing liabilities							
Bonds	147	0	0	321	0	400	868
Loans from financial institutions	119	0	0	0	0	0	119
Finance lease liabilities	3	6	6	6	7	73	101
Other loans	21	1	1	0	0	30	53
Interest	35	31	30	30	21	93	240
Total	1,358	38	37	357	28	596	2,414
Commodities	114	0	0	0	0	0	114
Interest rate swaps: inflow (–)	–2	0	0	0	0	0	–2
Gross settled forward foreign exchange contracts							
– inflow (–)	–2,541	–202	–139	0	0	0	–2,882
– outflow	2,564	202	138	0	0	0	2,904
Derivatives total	135	0	–1	0	0	0	134

Maturity profile of financial liabilities based on contractual payments 31 Dec 2017

	2018	2019	2020	2021	2022	2023–	Total
Trade payables	1,163	0	0	0	0	0	1,163
Interest-bearing liabilities							
Bonds	50	147	0	0	321	400	918
Loans from financial institutions	102	14	0	0	0	0	116
Finance lease liabilities	3	3	4	4	4	83	101
Other loans	8	22	1	1	1	28	61
Interest	36	35	28	27	25	121	272
Total	1,362	221	33	32	351	632	2,631
Commodities	70	0	0	0	0	0	70
Interest rate swaps: inflow (–)	0	–2	0	0	0	0	–2
Gross settled forward foreign exchange contracts							
– inflow (–)	–2,399	0	0	0	0	0	–2,399
– outflow	2,348	0	0	0	0	0	2,348
Derivatives total	19	–2	0	0	0	0	17

Credit and counterparty risk

Credit and counterparty risk arises from sales, hedging and trading transactions as well as from cash investments. The risk arises from the potential failure of the counterparty to meet its contractual payment obligations, and the risk depends on the creditworthiness of the counterparty as well as the size of the exposure. The objective of credit and counterparty risk management is to minimize the losses incurred as a result of a counterparty not fulfilling its obligations. Limits, mandates and management principles for credit and counterparty risk are covered in the Corporate risk management policy and separate instruction level documents.

The amount of risk is quantified as the expected loss to Neste in the event of a default by counterparty. Credit risk limits are set at the Group level, designated by different levels of authorization and delegated to Neste's business areas, which are responsible for counterparty risk management within these limits.

When determining the credit lines for sales contracts, counterparties are screened and evaluated vis-à-vis their creditworthiness to decide whether an open credit line is acceptable or collateral, for example, a letter of credit, bank guarantee or parent company guarantee has to be posted. In the event that collateral is required credit risk is evaluated based on a financial evaluation of the party posting the collateral. If appropriate in terms of the potential credit risk associated with a specific customer, advance payment is required before delivery of products or services. In addition, Neste may reduce its counterparty risks by selling trade receivables to a third party e.g. the bank. The sale of the receivables essentially transfers the title, benefits and interest in the trade receivables to the bank, indicating the bank to obtain all of the rights associated with the receivables. The sale and transfer shall be without guarantee from the seller in respect of the buyer's creditworthiness and with limited recourse to the seller. The seller receives the purchase price from the bank at the time of sale. Fees and other expenses are deducted from the payment or invoiced separately.

The credit lines for counterparties are divided into three categories according to contract type: physical sales contracts, derivative contracts and investments. Credit lines are restricted in terms of the time horizon associated with the payment and credit exposure risk. In determining counterparty credit limits, two levels of delegation are used: authority mandates to rated counterparties by general rating agencies and authority mandates related to unrated counterparties. For OTC (over-the-counter) derivative financial instrument contracts, Neste has negotiated framework agreements in the form of an ISDA (International Swaps and Derivatives Association) master agreement with the main counterparties concerning commodity, emission allowance, currency and interest rate derivative financial instruments. These contracts permit netting and allow for termination of the contract on the occurrence of certain events of defaults and termination events. Some of these agreements concerning commodity derivatives include Credit Support Annexes (CSA) with the aim of reducing credit and counterparty risk by requiring margin call deposits in the form of cash or letter of credit for balances exceeding the mutually agreed limit. At the end of December 2018 Neste had received EUR 0 million (2017: EUR 0 million) due to CSA agreements and paid EUR 31 million (2017: EUR 2 million) due to CSA agreements.

Financial impact of netting for instruments subject to an enforceable master netting agreement (or similar)

31 Dec 2018	Gross amount of recognized financial instruments	Related liabilities or assets subject to Master netting agreements	Net exposure
Financial assets			
Derivatives	209	62	147
Trade receivables	2	1	1
Financial liabilities			
Derivatives	149	62	87
Trade payables	19	1	18

31 Dec 2017	Gross amount of recognized financial instruments	Related liabilities or assets subject to Master netting agreements	Net exposure
Financial assets			
Derivatives	90	36	54
Trade receivables	4	3	1
Financial liabilities			
Derivatives	72	36	36
Trade payables	7	3	4

Neste reduces credit risk by executing treasury transactions only with approved counterparties. All counterparties have a minimum credit rating that is defined in Corporate risk management policy. Foreign subsidiaries may have bank accounts in unrated financial institutions. In order to decrease credit risk associated with local banks used by subsidiaries in foreign countries, the subsidiaries are required to deposit their excess cash balances with the Group Treasury on an ongoing basis.

As to counterparty risk management, minimum credit rating requirement for companies providing insurance for Neste Group is defined in treasury principles.

The Group has a large number of different counterparties on the international markets. As to the range of the counterparties, the most significant types are mainly large international oil companies and financial institutions. However, the Group's exposure to unexpected credit losses within one reporting segment may increase with the concentration of credit risk through a number of counterparties operating in the same industry sector or geographical area, which may be adversely affected by changes in economic, political or other conditions. These risks are reduced by taking geographical risks into consideration in decisions on creditworthiness.

Counterparties to contracts comprising derivative financial instruments exposure on 31 December 2018, near to 100% of the counterparties or their parent companies related to commodity derivative contracts have investment grade rating from an established international credit rating agency. Respectively, Group Treasury & Risk Management had an exposure for currency and interest rate derivative contracts as at 31 December 2018 with banks, of which all have investment grade rating at a minimum. Commodity derivative transactions are also done through exchange, which reduces credit risk.

The group assesses expected credit losses and calculates impairment loss from trade receivables based to historical credit loss experience combined with current conditions and forward looking macroeconomic analysis. The receivables have been divided in aging buckets and segments depending on business area and geographic region. Impairment loss from trade receivables for the period is EUR 8 million (2017: EUR 2 million). Recognized credit loss of trade receivables amounts to EUR 1 million (2017: EUR 1 million).

Analysis of trade receivables by age	31 Dec 2018	Probability of Credit Loss, %	31 Dec 2017
Undue	890	0–0.04%	912
1–30 days overdue	63	0.01–5%	72
31–60 days overdue	8	5–42%	1
61–90 days overdue	10	10–55%	1
91–180 days overdue	1	25–100%	4
more than 180 days overdue	7	100%	6
Trade receivables total	979		996
Impairment loss	–8		–2
Trade receivables – Net	972		994

Of the trade receivables portfolio exposure, 43% is from counterparties or their parent companies having an investment grade credit rating; 57% consists of trade receivables from counterparties not having an investment grade credit rating, most of it comprising from a large number of corporate and private customers.

Capital risk management

The Group's objective when managing capital is to secure a capital structure that ensures access to capital markets at all times despite the volatile nature of the industry in which Neste operates. Despite the fact that the Group does not have a public credit rating, the Group's target is to have a capital structure equivalent to that of other refining and marketing companies with a public investment grade rating. The capital structure of the Group is reviewed by the Board of Directors on a regular basis.

The Group monitors its capital on the basis of leverage ratio, the ratio of interest-bearing net debt to interest-bearing net debt plus total equity. Interest-bearing net debt is calculated as interest-bearing liabilities less liquid funds. Over the cycle, the Group's leverage ratio is likely to fluctuate, and it is the Group's objective to maintain the leverage ratio below 40%.

The leverage ratio	31 Dec 2018	31 Dec 2017
Total interest-bearing liabilities	1,140	1,195
Liquid funds	1,210	783
Interest-bearing net debt	–70	412
Total equity	4,630	4,338
Interest-bearing net debt and total equity	4,560	4,750
Leverage ratio	–1.5%	8.7%

Reconciliation of net debt 31 Dec 2018

	Other assets		Liabilities from financing activities		Total
	Cash and cash equivalents	Liquid investments	Finance leases	Borrowings	
Net debt as at 1 January 2018	783	0	-101	-1,095	-412
Cash flows	346	74	3	68	491
New finance leases	0	0	0	0	0
Foreign exchange differences and other valuations	7	0	-3	8	11
Other non-cash movements	0	0	0	-20	-20
Net debt as at 31 December 2018	1,136	74	-101	-1,039	70

Reconciliation of net debt 31 Dec 2017

	Other assets		Liabilities from financing activities		Total
	Cash and cash equivalents	Liquid investments	Finance leases	Borrowings	
Net debt as at 1 January 2017	788	0	-90	-1,381	-683
Cash flows	-3	0	3	281	281
New finance leases	0	0	-19	0	-19
Foreign exchange differences and other valuations	-2	0	5	6	10
Other non-cash movements	0	0	0	0	0
Net debt as at 31 December 2017	783	0	-101	-1,095	-412

4 Segment information

Accounting policy

The Group's operations are divided into four operating segments: Renewable Products, Oil Products, Marketing & Services and Others. The performance of the reporting segments are reviewed regularly by the chief operating decision-maker, Neste President & CEO, to assess performance and to decide on allocation of resources. Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker.

The segments' operating results are measured based on comparable operating profit and return on comparable net assets. The accounting policies applicable to the segment reporting are the same as those used for establishing the Group consolidated financial statements. All inter-segment transactions are on arm's length basis and are eliminated in consolidation. Segment operating profit include realized gains and losses from foreign currency and commodity derivative contracts hedging cash flows of commercial sales and purchases that have been recycled in the consolidated statement of income.

Segment operating assets and liabilities consists of assets and liabilities utilized in the segments' business operations. Assets consist primarily of property, plant and equipment, intangible assets, investments in joint ventures, inventories and receivables. They exclude deferred taxes, interest-bearing receivables, and derivative financial instruments designated as hedges of forecasted future cash flows. Segment operating liabilities consists of operating liabilities, pension liabilities, and provisions; and exclude items such as current and deferred taxes, interest-bearing liabilities, and derivative financial instruments designated as hedges of forecasted future cash flows.

Neste's business structure

The Group's operations are built around three business areas and seven common functions. The business areas act as profit centers and are responsible for their customers, products, and business development. Business areas are: Renewable Products, Oil Products, and Marketing & Services. The common functions are: Finance and Strategy, Human Resources and Safety, Sustainability and Public Affairs, Technology, Emerging Businesses, Communications and Brand Marketing and Legal Affairs.

Renewable Products

Oil Products

Marketing & Services

Operating segments

Operating segments are engaged in the following key business activities:

Renewable Products segment produces, markets and sells renewable diesel, renewable jet fuels and solutions, renewable solvents as well as raw material for bioplastics based on Neste's proprietary technology to domestic and international wholesale markets. Renewable diesel is produced at the Porvoo, Singapore, and Rotterdam refineries with total capacity of 2.7 million tons per year.

Oil Products segment produces, markets and sells an extensive range of low carbon solutions that are based on high-quality oil products and related services to a global customer base. The product range includes diesel fuel, gasoline, aviation and marine fuels, light and heavy fuel oils, base oils, gasoline components, special fuels, such as small engine gasoline, solvents, liquid gases and bitumens. Oil products are refined in Neste Finland Refineries in Porvoo and Naantali. Base oils are also produced by joint arrangement production plant in Bahrain. Oil refining capacity is 14 million tons per year. Neste Shipping's chartering operations are included in the Oil Products segment.

Marketing & Services segment markets and sells petroleum products and associated services directly to end-users, of which the most important are private motorists, industry, transport companies, farmers, and heating oil customers. Traffic fuels are marketed through Group's own service station network and direct sales.

Others segment consists of the engineering and technology solutions company Neste Engineering Solutions; Nynas, a joint-venture owned by Neste (49.99% share) and Petróleos de Venezuela, and common corporate costs. Neste acquired Jacobs Engineering's 40% stake in Neste Jacobs in September 2017 and after this transaction Neste holds all shares in Neste Jacobs. Neste Jacobs Oy company name was changed to Neste Engineering Solutions Oy on 1 January 2018.

The operating segments presented above do not include any segments which are formed from aggregating two or more smaller segments.

The 'other expenses' included in the consolidated statement of income for each business segment includes the following major items:

Renewable Products: repairs and maintenance, planning and consulting services, rents, other property costs, travel-, HSE- and marketing costs and insurance premiums

Oil Products: repairs and maintenance, planning and consulting services, rents, other property costs, HSE costs and insurance premiums

Marketing & Services: repairs and maintenance, rents, other property costs and marketing costs

Group's customer structure in 2018 and 2017 did not result in any major concentration in any given geographical area or operating segment.

Information about the Group's operating segments as of and for the years ended 31 December 2018 and 2017 is presented in the following tables.

2018	Renewable Products ¹⁾	Oil Products ²⁾	Marketing & Services	Others ³⁾	Eliminations	Group	Note
IS External revenue	2,943	7,601	4,279	95	0	14,918	
Internal revenue	298	2,504	36	169	-3,007	0	
IS Total revenue	3,241	10,105	4,315	264	-3,007	14,918	5
IS Other income	1	7	6	18	-15	17	6
IS, CF Share of profit (loss) of joint ventures	0	3	0	-12	0	-9	15
IS Materials and services	-2,033	-9,140	-4,097	-78	2,890	-12,459	7
IS Employee benefit costs	-47	-147	-35	-174	3	-400	8
IS, CF Depreciation, amortization and impairments	-128	-345	-25	-116	0	-614	
IS Other expenses	-137	-312	-88	-24	131	-429	9
IS Operating profit ¹⁾	899	170	77	-122	2	1,025	
IS Financial income and expense						-75	10
IS Profit before income taxes						951	
IS Income tax expense						-172	11
IS Profit for the period						779	
Comparable operating profit	983	397	77	-36	2	1,422	
inventory valuation gains/losses	-162	-108	0	0	0	-269	
changes in the fair value of open commodity and currency derivatives	82	35	0	0	0	117	
capital gains and losses	0	2	0	0	0	2	
insurance and other compensations	0	0	0	0	0	0	
impairments ^{2), 3)}	0	-112	0	-86	0	-198	
other adjustments	-4	-44	0	0	0	-48	
IS Operating profit	899	170	77	-122	2	1,025	

¹⁾ The retroactive US Blender's Tax Credit (BTC) decision for 2017 has a positive impact of EUR 140 million on the Renewable Products' operating profit in Q1 2018.

²⁾ Neste Oil Bahrain W.L.L.'s assets EUR 112 million were written down due to a disadvantageous tax judgement in December 2018.

³⁾ An impairment loss of EUR 86 million from Neste's share in Nynas AB was recognized in September 2018.

2018	Renewable Products	Oil Products	Marketing & Services	Others)	Eliminations	Group	Note
Capital expenditure and investments in shares	159	196	28	55	0	438	
Segment operating assets	2,475	3,727	551	318	-384	6,687	
BS Investments in joint ventures	0	23	0	83	0	106	15
BS Deferred tax assets						34	11
Unallocated assets						1,397	
BS Total assets	2,475	3,750	551	401	-384	8,224	
Segment operating liabilities	457	1,492	302	215	-380	2,087	
BS Deferred tax liabilities						260	11
Unallocated liabilities						1,247	
BS Total liabilities	457	1,492	302	215	-380	3,594	
Segment net assets	2,018	2,257	249	186	-4	4,706	
Return on net assets, %	48.0	6.7	29.1	-73.7			
Comparable return on net assets, %	52.4	15.7	29.1	-21.7			

2017	Renewable Products	Oil Products	Marketing & Services	Others	Eliminations	Group	Note
IS External revenue	2,865	6,384	3,879	89	0	13,217	
Internal revenue	379	2,106	33	148	-2,666	0	
IS Total revenue	3,243	8,490	3,912	237	-2,666	13,217	5
IS Other income	2	13	4	17	-14	22	6
IS, CF Share of profit (loss) of joint ventures	0	3	0	-2	0	1	15
IS Materials and services	-2,500	-7,237	-3,699	-70	2,579	-10,927	7
IS Employee benefit costs	-35	-144	-36	-157	0	-372	8
IS, CF Depreciation, amortization and impairments	-110	-213	-25	-24	0	-371	
IS Other expenses	-124	-262	-88	-25	101	-399	9
IS Operating profit	476	650	69	-24	0	1,171	
IS Financial income and expense						-77	10
IS Profit before income taxes						1,094	
IS Income tax expense						-180	11
IS Profit for the period						914	
Comparable operating profit	561	495	68	-24	0	1,101	
inventory valuation gains/losses	-80	111	0	0	0	31	
changes in the fair value of open commodity and currency derivatives	-5	29	0	0	0	24	
capital gains and losses	0	3	0	0	0	3	
insurance and other compensations	0	0	0	0	0	0	
impairments	0	0	0	0	0	0	
other adjustments	0	12	0	0	0	12	
IS Operating profit	476	650	69	-24	0	1,171	
Capital expenditure and investments in shares	122	307	37	70	0	536	
Segment operating assets	2,255	3,803	585	310	-308	6,646	
BS Investments in joint ventures	0	24	0	189	0	213	15
BS Deferred tax assets						35	11
Unallocated assets						899	
BS Total assets	2,255	3,827	585	499	-308	7,793	
Segment operating liabilities	392	1,330	306	206	-295	1,939	
BS Deferred tax liabilities						269	11
Unallocated liabilities						1,247	
BS Total liabilities	392	1,330	306	206	-295	3,455	
Segment net assets	1,863	2,497	280	292	-12	4,920	
Return on net assets, %	25.6	25.6	28.7	-8.7			
Comparable return on net assets, %	30.2	19.5	28.5	-8.7			

Geographical information

The Group operates production facilities in Finland, Singapore, the Netherlands and Bahrain and retail selling network in Finland, North-West Russia, Estonia, Latvia and Lithuania. The following table provides information of the Group's revenue which is allocated based on the country in which the customer is located, irrespective of the origin of the goods or services, and non-current assets and capital expenditure which are allocated based on where the assets are located.

Non-current assets consists of intangible assets, property, plant and equipment and investments in joint ventures. 'Other Nordic countries' include Sweden, Norway, Denmark and Iceland. 'Baltic rim' includes Estonia, Latvia, Lithuania, Russia and Poland. The Group's activities in this geographical area consists mainly of retail activities in the mentioned countries.

2018	Finland	Other Nordic countries	Baltic rim	Other European countries	North and South America	Other countries	Group
IS Revenue by destination	5,124	2,685	1,268	3,726	1,612	503	14,918
Non-current assets	2,513	124	99	670	0	560	3,967
Capital expenditure	281	0	12	58	0	85	438

2017	Finland	Other Nordic countries	Baltic rim	Other European countries	North and South America	Other countries	Group
IS Revenue by destination	4,545	2,561	1,226	3,038	1,411	435	13,217
Non-current assets	2,664	188	105	682	0	529	4,168
Capital expenditure	419	0	17	78	0	22	536

5 Revenue

Accounting policy

Revenue from the sale of goods is recorded in the consolidated statement of income when the control and significant risks and rewards related to the ownership of the goods have been transferred to the buyer. Revenue is recorded for the exchange of goods only when dissimilar goods are exchanged. Sales under fixed price engineering and construction contracts are recorded on a percentage-of-completion basis by recognizing the revenue according to the work hours incurred. Provisions for losses are made when identified and the amounts can be reliably estimated. Sales of technology licenses are recognized when the risks and rewards are transferred to the buyer. Revenue from services is recorded when services have been provided.

Revenue will be recognized as gross method when an entity is acting as a principal and it has exposure to the significant risks and rewards associated with the sale of goods. The amounts collected on behalf of the principal are not revenue; instead, revenue is the amount of commission. Revenue includes sales from actual operations, less discounts, indirect taxes such as value added tax and excise tax payable by the manufacturer, and statutory stockpiling fees.

Blender's Tax Credit (BTC), Low Carbon Fuels Standard credits (LCFS) and Renewable Identification Numbers (RINs) are recognized in revenue. Blender's Tax Credit is recognized if the Government of the United States will make decision to grant it. The decision is made annually. Blender's Tax Credit is an incentive given to fuel blenders to use more renewable fuel by making the bio mandates less costly to achieve.

	2018	2017
Sale of goods	14,645	13,060
Revenue from services	266	152
Royalty income	6	4
Other	2	1
IS Revenue	14,918	13,217

Sale of goods includes product sales from the Group's own refineries, other production facilities and retail stations as well as other sale of petroleum products, feedstock, raw materials and oil trading. Excise taxes included in the retail selling price of finished oil products amounting to EUR 1,452 million (2017: EUR 1,485 million) are included in product sales. The corresponding amount is included in the purchase price of petroleum products and included in 'Materials and Services', in Note 7.

Oil trading included in Sale of goods comprise of revenue from physical trading activities conducted on international and regional markets by taking delivery of and selling petroleum products and raw materials within a short period of time for the purpose of generating a profit from short-term fluctuations in product and raw material prices and margins.

Net gains/losses on financial instruments related to sales designated as cash flow hedges are included in Sale of goods amounting to EUR –9 million (2017: EUR 25 million).

Revenue from services mainly comprises revenue from the chartering services and Neste Engineering Solutions, which is included in the Others segment.

Revenue by category

	2018					2017				
	Renewable Products	Oil Products	Marketing & Services	Others	Total	Renewable Products	Oil Products	Marketing & Services	Others	Total
External revenue										
Fuels ¹⁾	2,943	6,691	4,147	0	13,781	2,862	5,396	3,752	0	12,010
Light distillates	130	2,930	1,110	0	4,170	113	2,370	1,106	0	3,589
Middle distillates	2,812	3,227	3,032	0	9,071	2,749	2,688	2,628	0	8,065
Heavy fuel oil	0	534	5	0	539	0	338	18	0	356
Other products	2	790	119	0	911	2	919	116	3	1,040
Other services	0	121	12	95	228	1	69	11	86	167
IS Total	2,943	7,601	4,279	95	14,918	2,865	6,384	3,879	89	13,217

¹⁾ Light distillates comprise motor gasoline, gasoline components, LPG, renewable naphtha and biopropane. Middle distillates comprise diesel, jet fuels, low sulphur marine fuels, heating oil, renewable fuels and renewable jet fuels. RINs (Renewable Identification Number), LCFS (Low Carbon Fuels Standard) credits, and BTCs (Blender's Tax Credits) are included in the corresponding fuel categories in Renewable Products segment.

Timing of revenue recognition

	2018					2017				
	Renewable Products	Oil Products	Marketing & Services	Others	Total	Renewable Products	Oil Products	Marketing & Services	Others	Total
External revenue										
Goods transferred at point in time	2,943	7,481	4,266	0	14,691	2,864	6,315	3,868	3	13,050
Services transferred at point in time	0	121	12	2	134	1	69	11	17	97
Services transferred over time	0	0	0	93	93	0	0	0	70	70
IS Total	2,943	7,601	4,279	95	14,918	2,865	6,384	3,879	89	13,217

Revenue by operating segment

2018	Renewable Products	Oil Products	Marketing & Services	Others	Eliminations	Total
External revenue	2,943	7,601	4,279	95	0	14,918
Internal revenue	298	2,504	36	169	-3,007	0
IS Total revenue	3,241	10,105	4,315	264	-3,007	14,918

2017	Renewable Products	Oil Products	Marketing & Services	Others	Eliminations	Total
External revenue	2,865	6,384	3,879	89	0	13,217
Internal revenue	379	2,106	33	148	-2,666	0
IS Total revenue	3,243	8,490	3,912	237	-2,666	13,217

Revenue by operating destination

	2018					2017				
	Renewable Products	Oil Products	Marketing & Services	Others	Total	Renewable Products	Oil Products	Marketing & Services	Others	Total
External revenue										
Finland	1	1,983	3,069	70	5,124	–4	1,738	2,751	60	4,545
Other Nordic countries	1,642	999	34	10	2,685	1,651	871	27	11	2,561
Baltic Rim	0	95	1,173	0	1,268	0	128	1,099	0	1,226
Other European countries	364	3,351	2	9	3,726	368	2,658	2	10	3,038
North and South America	914	698	0	0	1,612	833	578	0	0	1,411
Other countries	22	476	0	6	503	17	411	0	8	435
IS Total	2,943	7,601	4,279	95	14,918	2,865	6,384	3,879	89	13,217

6 Other income**Accounting policy**

Revenue from activities outside normal operations is reported in other income. This includes items such as capital gains on disposal of other non-current assets and rental income.

	2018	2017
Capital gains on disposal of other non-current assets	3	3
Rental income	3	7
Government grants	4	6
Insurance compensations	1	0
Other	6	7
IS Other income	17	22

Government grants relate mainly to the shipping operations, which are entitled to apply for certain grants based on Finnish legislation.

7 Materials and services

	2018	2017
Materials and supplies	12,279	11,007
Change in inventories	90	–150
External services	89	70
IS Materials and services	12,459	10,927

Materials and supplies include excise taxes included in the retail selling price of petroleum products amounting to EUR 1,452 million (2017: EUR 1,485 million). The corresponding amount is included in 'Revenue' in Note 5.

The net result of non-hedge accounted commodity and foreign exchange derivatives amounted to EUR –69 million (2017: EUR 85 million). Net gains/losses on derivative instruments related to purchases designated as cash flow hedges amounted to EUR 0 million (2017: EUR 0 million). Both above-mentioned items are included in Materials and supplies.

8 Employee benefit costs

	2018	2017
Wages and salaries	316	290
Social security costs	19	23
Pension costs – defined contribution plans	47	45
Pension costs – defined benefit plans	8	9
Other costs	10	5
IS Employee benefit costs	400	372

	2018	2017
Number of personnel (average)		
Renewable Products	372	301
Oil Products	1,709	1,718
Marketing & Services	1,482	1,432
Others	1,905	1,846
	5,468	5,297

9 Other expenses

	2018	2017
Repairs and maintenance	154	137
Services	118	120
Operating leases and other property costs	49	47
Insurances	18	17
Other	89	78
IS Other expenses	429	399

Operating leases include rents for land, premises and machinery and equipment. Services include planning and consulting services, IT services, research and lab services and other services. Other expenses include travel expenses, HSE and advertising costs.

Research expenditure is recognized as an expense as incurred and included in other expenses in the consolidated statement of income.

Fees charged by the statutory auditor, PricewaterhouseCoopers, EUR thousands

	2018	2017
Audit fees	1,310	1,326
Tax advisory	5	66
Other advisory services	589	352
	1,904	1,745

PricewaterhouseCoopers Oy has provided non-audit services to entities of Neste Group in total 562 thousand euros (2017: 361 thousand euros) during the financial year 2018. These services included tax advisory 5 thousand euros (2017: 33 thousand euros) and other advisory services 557 thousand euros (2017: 328 thousand euros).

10 Financial income and expenses

	2018	2017
Financial income		
Interest income from financial assets at amortized cost	7	4
	7	4
Financial expenses		
Interest expenses for financial liabilities at amortized cost	–43	–42
Interest rate derivatives, non-hedge accounted	0	1
Interest rate derivatives, cash flow hedge accounted	0	1
Other financial expenses ¹⁾	–5	–38
	–48	–79
Exchange rate and fair value gains and losses		
Financial instruments at amortized cost	11	–2
Financial instruments at fair value through profit or loss	–45	0
	–34	–2
IS Total financial income and expenses	–75	–77

¹⁾ 2017 'Other financial expenses' include one-off costs related to the partial repurchase of existing bonds in Q2/2017.

Net gains/losses on financial instruments included in operating profit and fixed assets

	2018	2017
Foreign exchange derivatives, hedge accounted ¹⁾		
Included in revenue	–9	25
Included in material and services	0	0
Included in fixed assets	0	0
Foreign exchange derivatives and commodity derivatives, non-hedge accounted		
Included in material and services	–69	85
	–78	110

¹⁾ During the reporting period the recognized ineffectiveness was EUR 0 million (2017: EUR 0 million).

11 Income taxes

Accounting policy

The Group's income tax expenses include taxes of Group companies calculated on the basis of the taxable profit for the period, with adjustments for previous periods, as well as the change in deferred income taxes. In respect of the deferred tax liability on undistributed foreign earnings, the amount recorded is based on expected circumstances and management expectations regarding the profit distribution. For items recognized directly in equity or other comprehensive income, the income tax effect is similarly recognized.

Deferred income taxes are stated using the balance sheet liability method, to reflect the net tax effect of temporary differences between the financial reporting and tax bases of assets and liabilities. Deferred income tax assets are recognized to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized. Deferred income tax is determined using tax rates that are in force at the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes relate to the same fiscal authority. Deferred tax assets are recognized for tax loss carryforwards and other unused tax credits to the extent that the utilization of the related tax benefit through future taxable profits is probable.

Estimates and judgements requiring management estimation

Determination of income taxes and deferred tax assets and liabilities and the amount of deferred tax asset to be recognized requires management judgement.

The Group has deferred tax assets and liabilities which are expected to be realized through the income statement over extended periods of time in the future. In calculating the deferred tax items, the Group is required to make certain assumptions and estimates regarding the future tax consequences attributable to differences between the carrying amounts of assets, and liabilities as recorded in the consolidated statement of income and their tax basis.

The major components of income tax expense in the consolidated statement of income:

	2018	2017
Current tax	172	166
Adjustments recognized for current tax for prior periods	-2	0
Change in deferred taxes	2	14
IS Income tax expense	172	180

The reconciliation of income taxes at the statutory tax rate in Finland and income tax expense recognized in the consolidated statement of income:

	2018	2017
IS Profit before income taxes	951	1,094
Hypothetical income tax calculated at Finnish tax rate 20%	-190	-219
Differences in tax rates in other countries	69	38
Change in Estonian income tax rate	0	1
Non-deductible expenses	-1	-1
Impairment of assets of Neste Oil Bahrain W.L.L.	-22	0
Impairment of assets of Nynas AB	-17	0
Tax exempt income	1	0
Tax on undistributed earnings	0	0
Taxes for prior periods	1	0
Net results of joint ventures	-2	0
Realisability of deferred tax assets	-9	0
Other	-1	1
IS Income tax expense	-172	-180

The Group's effective tax rate was 18% (16%), which is lower than the Finnish statutory tax rate 20% mainly due to lower taxation in Estonia, Lithuania, Singapore and Switzerland, where Neste has business operations. Neste's manufacturing investment in Renewable Products during 2008–2010 in Singapore is subject to tax exemption for 2010–2023 under the applicable Singapore legislation. The increase in the effective tax rate in 2018 is explained by the impairments related to Neste Oil Bahrain W.L.L. and joint venture Nynas AB, and by the losses in Neste Oil Bahrain W.L.L. for which no deferred tax asset has been recognized.

Changes in deferred tax assets and liabilities:

2018	On 1 Jan 2018	Charged to Income Statement	Charged in Other comprehensive income	Exchange rate differences and other changes	On 31 Dec 2018
Deferred tax assets					
Tax loss carried forward	2	-1	0	0	1
Provisions	4	0	0	0	4
Pensions	26	0	-1	0	25
Fixed assets	25	2	0	0	27
Financial instruments	0	0	5	0	5
Other temporary differences	6	0	0	0	6
Total deferred tax assets	62	2	4	0	68
Netting against liabilities	-27	-8	0	0	-35
BS Deferred tax assets	35	-6	4	0	34
Deferred tax liabilities					
Depreciation difference and untaxed reserves	244	0	0	0	244
Tax on undistributed earnings	11	0	0	0	11
Finance leases	0	0	0	0	0
Other fixed assets	34	4	0	0	38
Financial instruments	5	0	-4	0	1
Other temporary differences	1	0	0	0	1
Total deferred tax liabilities	295	4	-4	0	295
Netting against assets	-27	-8	0	0	-35
BS Deferred tax liabilities	269	-4	-4	0	260

2017	On 1 Jan 2017	Charged to Income Statement	Charged in Other comprehensive income	Exchange rate differences and other changes	On 31 Dec 2017
Deferred tax assets					
Tax loss carried forward	6	-4	0	0	2
Provisions	3	1	0	0	4
Pensions	27	-1	0	0	26
Fixed assets	12	13	0	0	25
Financial instruments	8	-8	0	0	0
Other temporary differences	4	2	0	0	6
Total deferred tax assets	59	3	0	0	62
Netting against liabilities	-20	-7	0	0	-27
BS Deferred tax assets	39	-4	0	0	35
Deferred tax liabilities					
Depreciation difference and untaxed reserves	234	10	0	0	244
Tax on undistributed earnings	11	0	0	0	11
Finance leases	0	0	0	0	0
Other fixed assets	19	14	0	0	34
Financial instruments	0	-7	12	0	5
Other temporary differences	2	-1	0	0	1
Total deferred tax liabilities	267	16	12	0	295
Netting against assets	-20	-7	0	0	-27
BS Deferred tax liabilities	246	9	12	0	269

There are altogether EUR 52 million (2017: EUR 3 million) tax loss carry forwards and other unused tax credits for which no deferred tax asset is recognized, majority of them relating to Neste Oil Bahrain W.L.L. Expiry dates are between 2019 and 2027 for EUR 2 million and no expiry for EUR 50 million.

A deferred tax liability has been recognized for undistributed earnings of subsidiaries where income taxes would be payable upon distribution.

Deferred tax recognized relating to components of other comprehensive income:

	2018		
	Before tax	Tax (charge) / credit	After tax
OCI Remeasurements of defined benefit plans	6	-1	4
OCI Translation differences	-16	0	-16
Cash flow hedges			
OCI recorded in equity	-64	11	-53
OCI transferred to income statement	9	-2	7
OCI Share of other comprehensive income of investments accounted for using the equity method	-4	0	-4
OCI Other comprehensive income	-70	9	-61

	2017		
	Before tax	Tax (charge) / credit	After tax
OCI Remeasurements of defined benefit plans	2	0	2
OCI Translation differences	-15	0	-15
Cash flow hedges			
OCI recorded in equity	84	-15	69
OCI transferred to income statement	-19	3	-15
OCI Share of other comprehensive income of investments accounted for using the equity method	2	0	2
OCI Other comprehensive income	54	-13	42

12 Earnings per share and dividend per share

Earnings per share

Basic earnings per share are calculated by dividing the profit for the period attributable to owners of the parent by the weighted average number of shares outstanding during the year. The average number of shares has been adjusted with treasury shares, 573,662 shares (2017: 613,545), as described in Note 20. Diluted earnings per share reflect the impact of the share-based incentive plans. The company has not granted any options.

	2018	2017
IS Profit for the period attributable to owners of the parent, EUR million	778	911
Weighted average number of shares outstanding during the year (thousands)	255,822	255,776
IS Basic earnings per share (euro per share)	3.04	3.56
Weighted average number of shares during the year, including treasury shares (thousands)	256,404	256,404
IS Diluted earnings per share (euro per share)	3.03	3.55

Dividend per share

The dividends paid in 2018 were EUR 1.70 per share, totalling EUR 435 million (2017: EUR 1.30 per share, totalling EUR 332 million). A dividend of EUR 2.28 per share will be proposed at the Annual General Meeting on 2 April 2019, corresponding to total dividends of EUR 583 million for 2018. This dividend is not reflected in the financial statements.

13 Intangible assets

Accounting policy

Intangible assets, except goodwill, are stated at historical cost and amortized in a straight-line method over expected useful lives. Intangible assets comprise the following:

Computer software

Computer software licenses are capitalized on the basis of the costs incurred to acquire and introduce the software in question. The costs include the software development employee costs and professional fees arising directly bringing the asset to its working condition. Capitalization depends also on the technology used e.g. cloud services are not capitalized. Costs are amortized over their estimated useful lives (three to five years). Costs associated with updates or maintaining computer software programs are recognized as an expense.

Trademarks and licenses

Trademarks and licenses have a definite useful life and are carried at cost less accumulated amortization. They are amortized over their estimated useful lives (three to ten years).

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net identifiable assets of the acquired subsidiary, associate or joint venture at the date of acquisition. Goodwill on acquisition of subsidiaries is included in 'intangible assets'. Separately recognized goodwill is tested for impairment and carried at cost, less accumulated impairment losses. The impairment testing is done annually and whenever there is an indication that the asset may be impaired. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold. Goodwill is allocated to cash-generating units for the purpose of impairment testing, using those cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

The discount rates used in impairment testing of goodwill represent the WACC specified for the business area in question after tax, which is adjusted by tax effects in connection with the test. The WACC formula inputs are risk-free rate of return, market risk premium, industry-specific beta factor, target capital structure, borrowing cost and country risks. WACC rates are specified for each of the cash generating units separately in the table below. WACC% and growth rate are used purely for the impairment testing.

The key assumptions used for the plans in Renewable Products are margin level and sales volumes and in Oil Products the demand and the margin level for oil products. The key assumptions used for the plans in Neste Engineering Solutions are the demand and the price level for engineering and project management services, as well as the billability rate. The key assumptions used in the impairment test are the billability rate affecting the EBITDA.

Emission allowances

Emission allowances, which are purchased to cover future periods deficit are recorded in intangible assets and measured at cost, and emission allowances received free of charge are recorded in their nominal value, i.e. at zero.

A provision is recognized to cover the obligation to buy emission allowances if emission allowances received free of charge and purchased emission allowances intended to cover the deficit do not cover actual emissions. The provision is measured at its probable settlement amount. The difference between emissions made and emission allowances received, as well as any change in the probable amount of the provision, are reflected in the operating profit.

Impairment of non-financial assets

Intangible assets that have an indefinite useful life or intangible assets not ready to use are not subject to amortization and are tested annually for impairment. Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized in the consolidated statement of income to the extent that the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

Estimates and judgements requiring management estimation

Intangible assets and property, plant and equipment are always tested for impairment, when there is any indication that an asset may be impaired. When the recoverable amount of an asset is less than the carrying amount, an impairment loss is recognized as an expense immediately and the carrying amount is reduced to the asset's recoverable amount.

The amounts recoverable from cash generating units' operating activities are determined based on value in use calculations. These calculations are based on estimated future cash flows approved by the Group's management, covering a period of three years. Preparation of these estimates requires management to make assumptions relating to future expectations. The main assumptions used relate to the estimated future operating cash flows and discount rates.

2018	Goodwill	Other intangible assets	Total
Gross carrying amount at 1 January 2018	11	228	240
Exchange rate differences	0	0	0
Acquisitions	13	2	15
CF Additions	0	34	34
Disposals	0	-1	-1
Reclassifications	0	1	1
Gross carrying amount at 31 December 2018	24	264	289
Accumulated amortization and impairment losses at 1 January 2018	0	140	140
Exchange rate differences	0	0	0
Disposals	0	-1	-1
Reclassifications	0	1	1
Amortization for the period	0	25	25
Accumulated amortization and impairment losses at 31 December 2018	0	165	165
BS Carrying amount at 1 January 2018	11	88	100
BS Carrying amount at 31 December 2018	24	99	124

2017	Goodwill	Other intangible assets	Total
Gross carrying amount at 1 January 2017	11	204	216
Exchange rate differences	0	0	0
CF Additions	0	28	28
Disposals	0	-4	-4
Reclassifications	0	0	0
Gross carrying amount at 31 December 2017	11	228	240
Accumulated amortization and impairment losses at 1 January 2017	0	129	129
Exchange rate differences	0	0	0
Disposals	0	-4	-4
Reclassifications	0	0	0
Amortization for the period	0	15	15
Accumulated amortization and impairment losses at 31 December 2017	0	140	140
Carrying amount at 1 January 2017	11	76	87
BS Carrying amount at 31 December 2017	11	88	100

Impairment test of goodwill

Goodwill is allocated to Group's cash-generating units (CGU's). From identified CGU's goodwill is allocated to the following: Renewable Products segment, Traffic Fuels within Oil Products segment and Neste Engineering Solutions sub-group within Others segment.

A segment-level summary of the goodwill allocation is presented below:

	WACC%	2018	2017
Renewable Products	6.1	13	0
Oil Products	5.7	2	2
Other	5.1	9	9
		24	11

A decrease of 10% in cash flows or 2%-points increase in the discount rate would not create a situation in which the carrying amounts of the cash generating units would exceed their recoverable amounts. Cash flows beyond the three-year period are extrapolated by using 1.0% nominal growth rate.

14 Property, plant and equipment

Accounting policy

Property, plant, and equipment mainly comprise oil refineries and other production plants and storage tanks, marine fleet, and retail station network infrastructure and equipment. The Group owns station network infrastructure with the exception of dealer stations. Property, plant, and equipment are stated at historical cost in the balance sheet, less depreciation and any accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items in question and the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located. Cost may also include transfers from equity of any gains/losses on qualifying cash flow hedges related to foreign currency purchases of property, plant, and equipment. Assets acquired through the acquisition of a new subsidiary are stated at their fair value on the date of acquisition.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. Costs for major periodic overhauls at oil refineries and other production plants on a 3–5 year cycle are capitalized when they occur and then depreciated during the shutdown cycle, i.e. the time between shutdowns. All other repairs and maintenance are charged to the consolidated statement of income during the financial period in which they are incurred.

Land areas are not depreciated. The bottom of crude oil rock inventory and precious metals in catalysts used in production process are included in other tangible assets and are depreciated according to possible usage. Depreciation on tangible assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives as follows:

Buildings and structures, including terminals	20–40 years
Production machinery and equipment	15–20 years
Marine fleet	15–20 years
Retail station network infrastructure and equipment	5–15 years
Other equipment and vehicles	3–15 years
Other tangible assets	20–40 years

The residual values and useful lives of assets are reviewed and adjusted where appropriate at each balance sheet date. The carrying amount of an asset is written down immediately to its recoverable amount if the former amount is greater than its estimated recoverable amount. Gains and losses on disposals are determined by comparing proceeds with carrying amounts. These are included in 'Other income' or 'Other expenses' in the consolidated statement of income.

Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset, a major initial investment, such as a new production facility, form part of the cost of that asset. Other borrowing costs are recognized as an expense.

Expenditure on development activities is capitalized only when it fulfills strict criteria e.g. development relates to new products that are technically and commercially feasible. The majority of the Group's development expenditure does not meet the criteria for capitalization and are recognized as expenses as incurred.

Finance leases

Lease arrangements that transfer substantially all the risks and rewards related to a leased asset to the lessee are classified as finance lease. Finance leases are capitalized at the commencement of the lease term at the lower of the fair value of the leased property or the present value of the minimum lease payments, as determined at the inception of the lease. Lease payments are allocated between the reduction of the outstanding liability and finance charges. The corresponding rental obligations, net of finance charges, are included in interest-bearing liabilities according to their maturities. The interest element of the finance cost is charged to the consolidated statement of income over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. Assets acquired under finance leases are depreciated over the useful life of the asset or the lease term, whichever is the shortest.

Determining whether an arrangement is, or contains, a lease is based on IFRIC interpretation 4 in such cases where an arrangement does not take the legal form of a lease but conveys a right to use an asset if the arrangement conveys to the purchaser (lessee) the right to control the use of the underlying asset.

Operating leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) relating to property, plant and equipment are charged to the consolidated statement of income on a straight-line basis over the period of the lease.

2018	Land	Buildings and constructions	Machinery and equipment	Other tangible assets	Assets under construction	Total
Gross carrying amount at 1 January 2018	76	2,288	4,563	267	274	7,468
Exchange rate differences	-1	-8	-4	0	0	-13
Additions	1	56	184	49	98	388
Disposals	0	-3	-66	-26	-1	-97
Reclassifications	0	109	109	-4	-216	-2
Gross carrying amount at 31 December 2018	75	2,442	4,787	286	154	7,745
Accumulated depreciation and impairment losses at 1 January 2018	0	971	2,557	84	0	3,612
Exchange rate differences	0	-4	-2	0	0	-7
Disposals	0	8	-76	-1	0	-70
Reclassifications	0	0	7	-8	0	-1
Depreciation for the period ¹⁾	0	95	373	3	1	473
Accumulated depreciation and impairment losses at 31 December 2018	0	1,069	2,858	78	1	4,007
BS Carrying amount at 1 January 2018	76	1,317	2,006	182	274	3,856
BS Carrying amount at 31 December 2018	75	1,373	1,929	207	153	3,737

¹⁾ Property plant & equipment was written down by EUR 82 million in Neste Oil Bahrain W.L.L. in addition to other assets EUR 30 million, totalling an impairment of EUR 112 million in the income statement.

2017	Land	Buildings and constructions	Machinery and equipment	Other tangible assets	Assets under construction	Total
Gross carrying amount at 1 January 2017	75	2,215	4,045	318	366	7,019
Exchange rate differences	-1	-5	-2	0	0	-8
Additions	2	73	455	16	-64	481
Disposals	-1	5	-14	-8	-4	-22
Reclassifications	0	0	79	-59	-24	-3
Gross carrying amount at 31 December 2017	76	2,288	4,563	267	274	7,468
Accumulated depreciation and impairment losses at 1 January 2017	0	899	2,266	108	0	3,272
Exchange rate differences	0	-2	-1	0	0	-4
Disposals	0	2	-11	-3	0	-12
Reclassifications	0	0	24	-25	0	-1
Depreciation for the period	0	73	279	4	0	356
Accumulated depreciation and impairment losses at 31 December 2017	0	971	2,557	84	0	3,612
Carrying amount at 1 January 2017	75	1,316	1,779	210	366	3,747
BS Carrying amount at 31 December 2017	76	1,317	2,006	182	274	3,856

Finance leases

Machinery and equipment include assets where the Group is a lessee under a finance lease as specified in the following table:

	2018	2017
Gross carrying amount	132	130
Accumulated depreciation	48	40
Carrying amount	84	90

Capitalized borrowing costs

During 2018 borrowing costs amounting to EUR 0.9 million (2017: EUR 6.5 million) were capitalized related mainly to Oil Products investments. They are included in 'Property, Plant and Equipment'. The Group's average interest rate of borrowings for each month was applied as the capitalization rate, which resulted in average capitalization rate of 3.2% (2017: 3.3%).

15 Investments in joint ventures

Carrying amount	2018	2017
On 1 January	213	216
IS, CF Share of profit (loss) of joint ventures	-9	1
Translation differences	-8	-8
OCI Share of other comprehensive income of investments accounted for using the equity method	-4	2
Impairments ¹⁾	-86	0
Other changes	0	2
BS On 31 December	106	213

¹⁾ Neste's share in Nynas AB was tested for impairment and as a result an impairment loss of EUR 86 million was recognized. Background for this impairment was the current US sanctions and unstable situation in Venezuela impacting Nynas' business. The carrying amount after the impairment is EUR 83 million.

The Group's interest in its principle joint ventures at 31 December, all of which are unlisted, are listed in the following table:

			2018	2017
	Country of incorporation	Nature of the relationship	% interest held	% interest held
Glacia Limited	Bermuda	Note 1	50.00	50.00
Nynas AB (publ)	Sweden	Note 2	49.99	49.99
Kilpilahti Power Plant Ltd	Finland	Note 3	40.00	40.00

Note 1: Glacia Limited is a joint venture company owned on a 50/50 basis by Neste and Stena Maritime AG (part of the Stena Group). The company owns an Aframax-size crude tanker, which joined the Neste fleet in January 2007.

Management has classified this ownership as a joint venture because the arrangement is structured through separate vehicle the legal form of which (limited liability company) separates the assets and liabilities of the arrangement from the assets and liabilities of its shareholders, and are directed so that the relevant activities of the company require unanimous consent from all shareholders.

Note 2: Nynas AB (publ) is a Swedish company that specializes in marketing and producing bitumen in Europe and naphthenics globally. Neste owns 49.99% of the shares of the company. The remaining 50.01% of the shares of Nynas is owned by a subsidiary of a Venezuelan oil company, Petróleos de Venezuela S.A. Nynas AB (publ) is governed as a 50/50 owned joint venture, although the other party owns the majority of the company's total share capital.

Management has classified this ownership as a joint venture because the arrangement is structured through a separate vehicle the legal form of which separates its assets and liabilities from the assets and liabilities of its shareholders, and that the terms and conditions of the shareholders' agreement or other facts and circumstances do not give Neste or Petróleos de Venezuela S.A. rights to the assets and obligations for the liabilities of Nynas AB (publ).

Note 3: Kilpilahti Power Plant Ltd is a joint venture company that produces and supplies steam and other utilities to Neste's refinery and Borealis' petrochemical plant in Porvoo, Finland. The joint venture is owned 40% each by Neste and Veolia and 20% by Borealis.

Management has classified this ownership as a joint venture because the arrangement is structured through separate vehicle the legal form of which separates its assets and liabilities of its shareholders and it is directed so that the relevant activities of the company require unanimous consent from all parties sharing control. The new power plant's capacity is meant to serve also external customers in addition to Neste and Borealis and thus optimize the returns of all shareholders in form of net profit. Management has also taken into account that Kilpilahti Power Plant Ltd plans and executes the power plant operations as its own business decisions which are operated by Veolia.

Joint ventures have been consolidated using the equity method.

Summarized financial information in respect of the Group's joint ventures is set out in the following table:

	Kilpilahti Power Plant Ltd		Glacia Limited		Nynas AB (publ)	
	2018	2017	2018	2017	2018	2017
Non-current assets	370	328	25	27	599	582
Current assets						
Cash and cash equivalents	56	42	20	15	96	84
Other current assets (excl. cash and cash equivalents)	56	43	0	0	745	676
Total current assets	112	85	21	15	840	760
Non-current liabilities						
Non-current financial liabilities (excl. trade payables and provisions)	384	345	0	0	683	462
Other non-current liabilities	0	0	0	0	119	116
Total non-current liabilities	384	345	0	0	802	579
Current liabilities						
Current financial liabilities (excl. trade payables and provisions)	0	0	0	0	28	113
Other current liabilities	82	56	0	1	271	274
Total current liabilities	82	56	0	1	299	387
Net assets	15	11	46	41	338	376
Revenue	146	124	8	9	1,589	1,522
Depreciation, amortization and impairments	5	8	3	4	61	59
Interest income	0	0	0	0	3	7
Interest expense	3	2	0	0	34	20
Income tax expense	0	0	0	0	-4	-1
Profit/loss	1	2	2	2	-24	-4

Reconciliation of summarized financial information

Reconciliation of the summarized financial information presented to the carrying amount of its interest in the joint venture.

	Kilpilahti Power Plant Ltd		Glacia Limited		Nynas AB (publ)	
	2018	2017	2018	2017	2018	2017
Opening net assets 1 January	10	0	41	42	376	388
Investment in joint venture	3	8	0	0	0	0
Profit for the period	1	2	2	2	-24	-4
Other comprehensive income	-12	0	1	-4	-14	-8
Closing net assets 31 December	2	10	44	41	338	376
Impairments	0	0	0	0	-173	0
Interest in joint venture	1	4	22	20	83	188
Carrying value	1	4	22	20	83	188

The financial statements of Nynas AB (publ) are not published within the Group's reporting timetable. Nynas AB (publ) 2018 and 2017 financial information above is based on 30 September 2018 and 30 September 2017 published interim reports. The share of profits of Glacia Limited and Kilpilahti Power Plant Ltd for 2018 are consolidated based on the companies' preliminary results for the financial period.

Transactions carried out with joint arrangements are disclosed in Note 25.

Contingent liabilities relating to the Group's interest in the joint arrangements are disclosed in Note 28.

16 Financial assets and liabilities by measurement categories

The Group classifies financial assets and liabilities according to IFRS 9 (2017 figures according to IAS 39). Accounting policies, classification criterias and other information relating to financial assets and liabilities can be found in Notes 17 and 21.

2018 Balance sheet item	Derivatives, hedge accounting	Fair value through profit or loss	Amortized cost	Carrying amount	Fair value	Level 1	Level 2	Level 3
Non-current financial assets								
BS Non-current receivables			87	87	87			
BS Derivative financial instruments	1	2		3	3		3	
BS Other financial assets		5		5	5			5
Current financial assets								
Trade and other receivables ¹⁾			1,224	1,224	1,224			
BS Derivative financial instruments	3	203		206	206	11	194	
BS Current investments			74	74	74			
BS Cash and cash equivalents			1,136	1,136	1,136			
Financial assets	4	209	2,521	2,735	2,735			
Non-current financial liabilities								
BS Interest-bearing liabilities			849	849	870	740	130	
BS Derivative financial instruments	0	0		0	0			
BS Other non-current liabilities			14	14	14			
Current financial liabilities								
BS Interest-bearing liabilities			291	291	295	151	143	
BS Derivative financial instruments	33	116		149	149	1	147	
BS Trade and other payables			1,749	1,749	1,749			
Financial liabilities	33	116	2,902	3,052	3,076			

¹⁾ excluding non-financial assets

Financial instruments that are measured at fair value in the balance sheet and the interest-bearing liabilities are presented according to fair value measurement hierarchy:

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

Level 2: inputs other than quoted price included within Level 1 that are observable for the assets or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)

Level 3: inputs for the assets or liability that is not based on observable market data (unobservable inputs).

Interest-bearing liabilities at level 1 consist of listed bonds. Derivative financial instruments at level 1 consist of commodity derivatives which are directly valued based on exchange quotations. The fair values of other financial instruments are not materially different from their carrying amounts. Other financial assets in Fair value through profit and loss -category include unlisted shares of EUR 5 million for which the fair value cannot be reliably determined.

During the year 2018 there were no transfers between Level 1 and Level 2 fair value measurements, and no transfers into and out of Level 3 fair value measurements. During the financial period there were no financial assets classified in Fair value through other comprehensive income -category.

On the date of initial application of IFRS 9 standard, 1 January 2018, the financial instruments of the company were the following, with any reclassifications noted:

Balance sheet item	IAS 39 Measurement Category	IFRS 9 Measurement Category	Carrying Amount		Diff.
			IFRS 9	IAS 39	
Non-current financial assets					
Non-current receivables	Loans and receivables	Amortized cost	51	51	
Derivative financial instruments	Derivatives, hedge accounting	Derivatives, hedge accounting	2	2	
Derivative financial instruments	Assets at fair value through income statement	Fair value through profit or loss	2	2	
Other financial assets	Available-for-sale financial assets	Fair value through profit or loss	5	5	
Current financial assets					
Trade and other receivables ¹⁾	Loans and receivables	Amortized cost	1,093	1,094	-1
Derivative financial instruments	Derivatives, hedge accounting	Derivatives, hedge accounting	29	29	
Derivative financial instruments	Assets at fair value through income statement	Fair value through profit or loss	58	58	
Cash and cash equivalents	Loans and receivables	Amortized cost	783	783	
Non-current financial liabilities					
Interest-bearing liabilities	Financial liabilities measured at amortized cost	Amortized cost	1,032	1,032	
Derivative financial instruments	Derivatives, hedge accounting	Derivatives, hedge accounting	0	0	
Derivative financial instruments	Liabilities at fair value through income statement	Fair value through profit or loss	0	0	
Other non-current liabilities	Financial liabilities measured at amortized cost	Amortized cost	17	17	
Current financial liabilities					
Interest-bearing liabilities	Financial liabilities measured at amortized cost	Amortized cost	163	163	
Derivative financial instruments	Derivatives, hedge accounting	Derivatives, hedge accounting	2	2	
Derivative financial instruments	Liabilities at fair value through income statement	Fair value through profit or loss	70	70	
Trade and other payables	Financial liabilities measured at amortized cost	Amortized cost	1,679	1,679	

¹⁾ excluding non-financial assets

On 1 January 2018 the time value of foreign exchange options EUR 1 million was reclassified from retained earnings to other comprehensive income.

2017 Balance sheet item	Derivatives, hedge accounting	Assets/ liabilities at fair value through income statement	Loans and receivables	Available-for- sale financial assets	Financial liabilities measured at amortized cost	Carrying amount	Fair value	Level 1	Level 2	Level 3
Non-current financial assets										
BS Non-current receivables			51			51	51			
BS Derivative financial instruments	2	2				4	4		4	
BS Other financial assets				5		5	5			5
Current financial assets										
Trade and other receivables ¹⁾			1,094			1,094	1,094			
BS Derivative financial instruments	29	58				86	86	1	86	
BS Cash and cash equivalents			783			783	783			
Financial assets	30	60	1,928	5	0	2,023	2,023			
Non-current financial liabilities										
BS Interest-bearing liabilities					1,032	1,032	1,065	900	165	
BS Derivative financial instruments	0	0				0	0			
BS Other non-current liabilities					17	17	17			
Current financial liabilities										
BS Interest-bearing liabilities					163	163	163		163	
BS Derivative financial instruments	2	70				72	72	8	64	
BS Trade and other payables					1,679	1,679	1,679			
Financial liabilities	2	70	0	0	2,892	2,964	2,997			

¹⁾ excluding non-financial assets

During the financial period 2017 there were no transfers between Level 1 and Level 2 fair value measurements, and no transfers into and out of Level 3 fair value measurements.

17 Financial assets

Accounting policy

Financial assets are classified in the following measurement categories: amortized cost, fair value through other comprehensive income and fair value through profit or loss. The classification depends on used business model for managing the financial assets and the contractual terms of the cash flows. Assets are classified as current assets, except for maturities over 12 months after balance sheet date, which are classified as non-current assets. Purchases and sales of financial assets are recognized on the settlement date (excluding derivatives, Note 19). Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

Amortized cost category consists of liquid funds, trade receivables and loan receivables where the business model is to hold the asset to collect the contractual cash flows which represent only payments of principal and interest. Financial assets recognized at amortized cost are valued using the effective interest method. In year 2017 these items were classified as loans and receivables and valued at amortized cost according to IAS 39.

Assets at fair value through profit or loss consists of equity investments (and derivatives which do not meet criteria for hedge accounting). The investments in unlisted companies can be measured at cost if their fair value cannot be reliably measured. Gains or losses of the equity investments are included in financial income and expenses. Equity investments were classified as available-for-sale financial assets and valued through income statement in 2017 according to IAS 39.

Liquid funds

Liquid funds consists of cash and cash equivalents and current investments. Cash and cash equivalents includes cash in hand, deposits held at banks, and other highly liquid investments with original maturities of three months or less. Current investments includes deposits held at banks and other highly liquid investments with original maturities from three to 12 months.

Impairment

The general expected credit loss model is used for debt instruments carried at amortized cost and the impairment is recognized through profit or loss if there is evidence of deterioration in credit quality. The credit loss is recognized based on individual assessment of receivable. The simplified expected credit loss model is applied for trade receivables. Every business area uses a specific provision matrix for the trade receivables due to the different nature of the businesses. The business area impairment process is based on historical credit loss experience combined with current conditions and forward looking macroeconomic analysis. The impairment or credit loss is recognized in the consolidated statement of income within other expenses. In 2017 the provision for impairment was recognized for receivables over 90 days overdue.

Liquid funds

	2018	2017
BS Current investments	74	0
BS, CF Cash and cash equivalents	1,136	783
Liquid Funds	1,210	783

The maximum exposure to credit risk is the carrying amount of the liquid funds. Note 3 sets out more information about credit risk. The impairment of liquid funds has not been recognized because the amount is immaterial.

Trade and other receivables

	2018	2017
Trade receivables	972	994
Other receivables	228	70
Advances paid	9	10
Accrued income and prepaid expenses	23	23
BS Trade and other receivables	1,231	1,097
Trade and other receivables excluding non-financial items	1,224	1,094

Due to the nature of short-term trade and other receivables their carrying amount is expected to be equal to their fair value. The maximum exposure to credit risk is the carrying amount of the trade and other receivables. Analysis of trade receivables by age, information about the impairment and credit losses are presented in Note 3, Financial risk management, section 'credit and counterparty risk'.

Non-current financial assets

	2018	2017
Non-current interest-bearing receivables	86	44
Other non-current receivables	1	7
BS Non-current receivables	87	51
BS Other financial assets	5	5

The fair value of non-current financial receivables is not materially different from the carrying amount which is also the maximum exposure to credit risk. The impairment has not been recognized because the amount is immaterial. Other financial assets consist of unlisted shares.

18 Inventories

Accounting policy

Inventories are stated at either cost or net realizable value, whichever is the lowest. Cost is determined using the first-in, first-out (FIFO) method in all other operating segments except Oil Products segment where inventory valuation policy has been amended during the second quarter in 2018. The weighted average method has been applied for determining Oil Products' inventory cost whereas first-in, first-out (FIFO) method was used previously. The change had an immaterial impact on Neste's consolidated financial statements (approximately EUR 1 million). The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs, and related production overheads (based on normal operating capacity). Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses. Inventories held for trading purposes are measured at fair value less selling expenses. Standard spare parts are carried as inventory and recognized in profit or loss as consumed. RINs (Renewable Identification Number) and LCFS (Low Carbon Fuels Standard) credits are treated as inventory items in Renewable Products segment and are included in Finished products and goods -category.

Estimates and judgements requiring management estimation

Estimates of net realizable value are based on the most reliable evidence available at the time the estimates are made. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the end of the period to the extent that such events confirm conditions existing at the end of the period.

	2018	2017
Materials and supplies	529	659
Finished products and goods	946	897
Other inventories	7	7
BS Inventories	1,482	1,563

Cumulative inventory valuation losses due to oil price changes amounted EUR 269 million (2017: gains EUR 31 million) of which EUR 191 million (2017: EUR 19 million) consisted of inventory write-downs recorded at the end of the period.

19 Derivative financial instruments

Accounting policy

Derivative financial instruments are initially recognized at fair value on the trade date and are subsequently re-measured at their fair value on the balance sheet date. The fair values of the foreign exchange forward and the interest rate swap contracts are calculated as the present values of the future cash flows and the fair values of foreign exchange options by using the Black and Scholes option pricing model. The fair value of the exchange traded commodity derivatives is based on exchange market quotations and the fair value of over-the-counter commodity derivative contracts is based on the net present value of cash flows. The fair value of all derivatives is calculated using the observable market inputs for currency and interest rates, volatilities and commodity price quotations on the closing date. Derivative contracts are included in current assets or liabilities, except derivatives maturities greater than 12 months after the balance sheet date, which are classified as non-current assets or liabilities.

Most of the derivatives do not qualify for hedge accounting, although these instruments are mainly held for economic hedging purposes. Changes in the fair value of the derivatives, for which hedge accounting is not applied, are recognized in the income statement either in operating profit or financial income and expenses, depending on the underlying hedged item. Impact to the income statement from the derivatives is presented in Note 10.

When hedge accounting is applied to the derivative contracts, the method of recognizing any resulting gain or loss depends on the nature of the item being hedged. The Group designates certain derivative financial instruments as either hedges of highly probable forecast transactions (cash flow hedges); or hedges of the fair value of recognized assets or liabilities or a firm commitment (fair value hedges); or hedges of net investments in foreign operations.

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

The effective portion of the changes in the fair value of the derivative financial instruments that are designated and qualified as cash flow hedges are recognized in equity. Forward points in currency forwards and time value of options are transaction related and thus recognized in equity and reclassified either to the income statement or adjusting the hedged item according to hedging relationship. In 2017 the changes in time value of currency options were recognized in the income statement according to hedge accounting under IAS 39. In cash flow hedges the critical terms in hedged item and hedging instruments are the same and hedge ratio is 1:1. Any potential gain or loss relating to the ineffective portion is recognized immediately in the income statement. Amounts accumulated in equity hedging future sales are recorded within revenue when the hedged item affects the income statement or in case of capital expenditures as part of acquisition cost. Accrued interest of interest rate swaps hedging floating rate interest-bearing liabilities is recognized in the income statement within financial expenses. If a forecast transaction is no longer expected to occur, the cumulative gain or loss reported in equity is immediately transferred to the income statement.

Certain interest rate swaps are designated as fair value hedges. Changes in the fair value of interest rate swaps that are designated and qualified as fair value hedges are recorded in the income statement in financial income and expenses, together with any changes in the fair value of the hedged asset or liability attributable to the hedged risk compensating the effect. Any gain or loss relating to the ineffective portion is recognized immediately in the income statement.

	2018					2017				
	Nominal value < 1 y	Nominal value > 1 y	Positive fair value	Negative fair value	Fair value net	Nominal value < 1 y	Nominal value > 1y	Positive fair value	Negative fair value	Net fair value
Foreign exchange and interest rate derivatives										
Interest rate swaps	0	0	0	0	0	50	0	0	1	-1
Foreign exchange derivatives, forwards	1,297	340	3	27	-24	714	0	22	0	22
Foreign exchange options										
– Purchased	320	0	0	3	-3	339	0	3	1	2
– Written	320	0	1	3	-2	339	0	3	0	3
Derivatives designated as cash flow hedges	1,936	340	3	33	-29	1,442	0	29	2	27
Interest rate swaps	74	0	1	0	1	0	74	2	0	2
Derivatives designated as fair value hedges	74	0	1	0	1	0	74	2	0	2
Interest rate swaps	26	0	0	0	0	0	26	1	0	1
Foreign exchange derivatives, forwards	1,269	0	4	2	2	1,634	0	29	0	29
Non-hedge accounting derivatives	1,295	0	5	2	2	1,634	26	30	0	30
Commodity derivatives										
Oil and vegetable oil derivatives										
– Sold forwards, million bbl	18	0	184	2	182	17	0	1	60	-59
– Purchased forwards, million bbl	18	0	1	112	-111	15	0	25	10	15
Electricity and gas derivatives										
– Purchased forwards, GWh	2,258	823	15	0	15	1,981	884	3	0	3
Non-hedge accounting derivatives			200	114	86			30	70	-41

The Group uses foreign exchange, interest rate and commodity derivatives to manage market risks (Note 3). Hedge accounting is not applied to commodity derivatives, although these are mainly held for economic hedging purposes. Commodity derivatives include oil, vegetable oil, freight, electricity and gas contracts. Group uses forwards as hedging instruments for commodities.

The Group has designated certain foreign currency and interest rate derivatives as hedges of future transactions i.e. as cash flow hedges. Such contracts are, e.g. foreign exchange derivatives hedging USD- and SEK-sales for the next twelve months according

to the Corporate risk management policy or hedging investment costs in Singapore refinery (Note 3). Group uses currency forwards and options as hedging instruments. Interest rate swap, which was classified as cash flow hedge matured in 2018. In 2018 and 2017 there has not been ineffectiveness concerning cash flow hedges. Certain interest rate swaps are designated as fair value hedges. The result of these hedging instruments recognized in the income statement was EUR -1 million (2017: EUR -2 million) and of hedged item EUR 1 million (2017: EUR 3 million).

20 Equity

Share capital

The Parent Company's share capital registered with the Trade Register as of 31 December 2018 totalled EUR 40,000,000, divided into 256,403,686 shares of equal value. The nominal value of one share is not determined. There have been no changes in share capital in 2018 or 2017.

	Number of shares, 1,000	Treasury shares, 1,000	Outstanding shares, 1,000
1 January 2018	256,404	-614	255,790
Transfer of treasury shares		40	40
31 December 2018	256,404	-574	255,830
1 January 2017	256,404	-687	255,717
Transfer of treasury shares		73	73
31 December 2017	256,404	-614	255,790

Treasury shares

On 15 March 2018 a total of 39,883 treasury shares of Neste Corporation has been conveyed without consideration to the key persons participating in the Long-term Incentive Plan 2013 according to the terms and conditions of the plan. The directed share issue is based on the authorization of the Annual General Meeting on 1 April 2015. The number of treasury shares after the directed share issue is 573,662 shares. The acquisition cost including transaction costs, has been deducted from equity.

On 15 March 2017 a total of 73,029 treasury shares was conveyed without consideration to the key persons participating in the Long-term Incentive Plan 2013 according to the terms and conditions of the plan. The directed share issue was based on the authorization of the Annual General Meeting on 1 April 2015. The number of treasury shares after the directed share issue was 613,545 shares. The acquisition cost including transaction costs, has been deducted from equity.

Other reserves

Reserve fund comprises of restricted reserves other than share capital.

Fair value and other reserves include the effective portion of the change in fair value of derivative financial instruments that are designated as and qualify for cash flow hedges, amounts recognized directly in equity concerning other financial assets, and concerning equity settled share based payments, the amount corresponding to the expense recognized in the consolidated statement of income.

Translation differences include exchange differences arising from the translation of the net investment in foreign entities on consolidation, change in the fair value of currency instruments designated as hedges of the net investment, and exchange differences resulting from the translation of income statement of foreign entities at the average exchange rates and balance sheet at the closing rates.

21 Financial liabilities

Accounting Policy

Financial liabilities are classified at amortized cost (except derivative financial liabilities whose accounting policy is presented at Note 19). Financial liabilities measured at amortized are recognized initially at fair value, net of transaction costs, on the settlement date and subsequently measured at amortized cost using the effective interest method. Any difference between net proceeds and nominal amount is recognized as interest cost over the period of the borrowing using the effective interest method. Financial liabilities are included in non-current liabilities, except for items with maturities less than 12 months after the balance sheet date, which are included in current liabilities. A financial liability is derecognized when the related obligation is discharged, cancelled or expires.

Bank overdrafts are recorded in current liabilities on the balance sheet. Fees of revolving credit facility are capitalized and amortized over the period of the facility.

The fair values of the listed bonds are driven from market quotations. The fair values of other interest-bearing liabilities at amortized cost are determined by using the discounted cash flow method employing market interest rates at the balance sheet date.

Non-current financial liabilities	2018	2017
Bonds	719	867
Loans from financial institutions	0	14
Finance lease liabilities	98	98
Other loans	32	53
Other non-current liabilities	13	14
Accruals and deferred income	1	4
Total	863	1,050
BS of which interest-bearing	849	1,032

Current financial liabilities	2018	2017
Bonds	148	50
Loans from financial institutions	119	102
Finance lease liabilities	3	3
Other loans	21	8
Advances received	15	13
Trade payables	1,033	1,163
Other current liabilities	588	398
Accruals and deferred expenses	113	104
Total	2,040	1,842
BS of which interest-bearing	291	163

The fair values of financial liabilities can be found in Note 16. Re-pricing periods of interest-bearing liabilities are disclosed in Note 3, Financial risk management, section 'Market risk'.

Listed bond issues

Issued/Maturity	Interest basis	Interest rate, %	Effective interest, %	Currency	Nominal million	Carrying amount EUR million
2012/2019	Fixed	4.0000	4.0780	EUR	147	148
2015/2022	Fixed	2.1250	2.2080	EUR	321	320
2017/2024	Fixed	1.5000	1.5080	EUR	400	399
Total					868	867

The future minimum lease payments of finance lease liabilities and their present value in the balance sheet

	2018			2017		
	Minimum lease payments	Future finance charges	Present value of minimum lease payments	Minimum lease payments	Future finance charges	Present value of minimum lease payments
Within one year	17	13	3	16	13	3
Between one and five years	83	59	24	80	60	20
More than 5 years	158	85	73	171	93	78
Total amounts payable	258	157	101	267	166	101

Finance lease liabilities arise from contracts related to Singapore refinery. The agreements are made with two local companies that provide utility and terminalling services. Major assets under these agreements are tanks and jetty used for storing, loading and discharging of products and feedstock and facilities used for recycling of refinery by-products. Lengths of the contracts are from 15 to 30 years.

22 Provisions

Accounting policy

The nature of certain Group's businesses exposes the Group to risks of environmental costs and potential contingent liabilities. The risks arise from the manufacture, use, storage, disposal and maritime and inland transport as well as sale of materials that may be considered to be contaminants when released into the environment. Liability may arise also through the acquisition, ownership or operation of properties or businesses.

A provision is recognized in the consolidated statement of financial position when the Group has a present legal or constructive obligation as a result of a past event, and it is probable that the obligation will result in payment, and the amount of payment can be estimated reliably. Provisions can arise from environmental risks, litigation, restructuring plans or onerous contracts. Environmental provisions are recorded based on current interpretations of environmental laws and regulations when the conditions referred to above are met. The Group has asset retirement obligations recorded in the consolidated statement of financial position.

Where there are a number of similar obligations, the likelihood that an outflow of resources will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognized even if the likelihood of an outflow with respect to any one item in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognized as an interest expense.

Estimates and judgements requiring management estimation

The existence of criteria for recognizing provisions and the amounts of provisions are determined based on estimates. The amount to be recorded is the best estimate of the cost required to settle the obligation at the reporting date or transfer to a third party. The estimate of the financial impact of the past event requires management judgement, which is based on similar events occurred in the past, and where applicable, the opinion of external experts. Estimates may differ from the actual future amount of the obligation and with respect to the existence of the obligation. In addition to the provisions recognized, there are some off-balance-sheet contingent liabilities for which the future potential outcome (timing, costs) cannot be estimated reliably.

The most significant provisions in the consolidated statement of financial position relate to environmental liabilities. Environmental provisions are based on management's best estimate of remediation costs. The restructuring provision is recognized when the Group has prepared a detailed restructuring plan and published it.

	Environ- mental provisions	Provision to return emission allowances	Other provisions	Total
BS On 1 January 2018	54	0	1	55
Additions	8	2	40	49
Amounts used during the period	-2	0	-1	-3
Reversed unused provisions	-1	0	0	-1
BS On 31 December 2018	58	2	40	100

	Environ- mental provisionst	Provision to return emission allowances	Other provisions	Total
On 1 January 2017	50	2	1	53
Additions	12	0	1	12
Amounts used during the period	-7	-2	0	-9
Reversed unused provisions	-1	0	0	-1
BS On 31 December 2017	54	0	1	55

Environmental provisions consists mostly of the Group's asset retirement obligations (ARO) that are related to retail stations and refineries which are expected to be realised in 1–50 years. The Group recognizes a provision for the decommissioning costs of an oil installation to the extent that Group is obliged to rectify damage already caused. The provisions are to be discounted, where the effect of the time value of money is material.

The exchange rate difference relating to the Group's provisions is immaterial.

Emission allowances

Neste Finland Refineries in Porvoo and Naantali come under the European Union's greenhouse gas emission trading system, and were granted a total of 20.4 million tons emission allowances for the period 2013–2020. In addition to refinery operations Neste purchases allowances to cover certain emissions of the local partners who provide utility services to Neste. A provision is recognized to cover the obligation to buy emission allowances if emission allowances received free of charge and purchased emission allowances intended to cover the deficit do not cover actual emissions. Emission allowances, which are purchased to cover future periods deficit are accounted for as intangible assets and measured at cost, and emission allowances received free of charge are accounted for at nominal value, i.e. at zero.

As at 31 December 2018 estimated obligation to purchase emission allowances were reflected in the balance sheet of Neste in provision amounting to EUR 1,9 million (31.12.2017 EUR 0 million). The actual amount of CO₂ emissions in 2018 were 3.2 million tons (2017: 3.4 million tons). The Group has traded emission allowances for net amount of 0.4 million tons during the financial period ended 31 December 2018 (2017: 0.8 million tons).

23 Employee benefit obligations

Accounting policy

The Group has pension arrangements in different countries, which are generally funded through insurance companies. Pension cover is based on the legislation and agreement in force in each country. Pension schemes consist of both defined benefit and defined contribution plans. Finnish statutory pensions are accounted for as a defined contribution plan in the consolidated financial statements.

Contributions to the defined contribution plans are charged directly to the statement of income in the year to which these contributions relate. In defined contribution plans, the Group has no legal or contractive obligations to pay further contributions in case the payment recipient is unable to pay the retirement benefits. All arrangements that do not fulfill these conditions are considered defined benefit plans.

In defined benefit plans, after the Group has paid the amount for the period, an excess or deficit may result. The defined benefit obligation represents the present value of future cash flows from payable benefits, which are calculated for by using the projected unit credit method. The discount rate assumed in calculating the present value of the pension obligation is based on the market yield of high-quality corporate bonds (AA-rated) with appropriate maturities. Pension costs are recognized in the consolidated statement of income so as to spread the current service cost over the service lives of employees based on actuarial calculations. The net interest is included as part of the finance cost in the consolidated statement of income.

The liability (or asset) recognized in the consolidated statement of financial position is the pension obligation at the closing date less the fair value of plan assets. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Actuarial valuations for the Group's defined benefit pension plans are performed annually.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognized as an interest expense.

Estimates and judgements requiring management estimation

Pension calculations under defined benefit plans in compliance with IAS 19 include the factors that rely on management estimates: the discount rate used in calculating pension expenses and obligations for the period, the rate of salary increase and the rate of future discretionary bonuses decided by the insurance company. Changes in these assumptions can significantly impact the amounts of pension liability and future pension expenses.

The Group has defined benefit pension plans in Finland, Belgium, Switzerland and the Netherlands. The largest plans are in Finland, which account for 97% (2017: 97%) of the Group's total defined benefit pension obligation and 98% of the Group's total plan assets. The voluntary pension plan in Finland accounting for most of this has been closed since 1 January 1994. The insured supplementary pension scheme consists of defined benefit group pension insurances, which are very similar in structure, with the exception of retirement age and pension accrual rules.

Other long-term employee benefits are long-service remunerations, which are accounted for as an unfunded defined benefit plan in accordance to IAS 19.

Characteristics of the post-employment defined benefit plans in Finland

In Finland the Group has a voluntary pension plan for a certain group of employees to fulfill an aggregated benefit after retirement. The voluntary pension plan is managed in an insurance company. There was a pension reform in Finland starting 1 January 2017. The Group did not compensate the changes in a majority of the defined benefit pension plans and thus the benefits of the plan did not change significantly due to the reform.

The voluntary plan's benefit is based on the aggregated benefits determined by the insurance contract. The voluntary benefit is the difference between aggregated benefits and compulsory benefits calculated at the age 63 in the old age plan. The aggregated benefits are at most 60% or 66% of the supplementary pension salary depending on the plan. The supplementary pension salary is calculated based on the last 10 years' salaries prior to the pension event adjusted by the index level. The benefits in the plans are old age and disability pensions, survivors' pensions for widows and children, and funeral grants. Old-age pension ages are 60, 62 and 65 years. In some pension schemes the pension cover also includes the right to early old-age pension retirement ages.

The insurance company collects premiums on yearly basis from the employer. The future premiums are adjusted so that the old-age pension will be fully funded until retirement. The disability and survivor's pension are also financed by risk premiums collected during the employment period. The premiums with fixed discount rate 1.5% are based on the last known salary without any assumptions on future salary increases. The insurance company guarantees the same interest yield to the assets in the plan, as the one they have used in calculating the premiums.

The employer finances the index-linkage by paying an additional premium covering the index increase during the year. Discretionary bonuses from the insurance company will lower the index premium. The insurance company decides the amount of the bonus annually.

The Group has insured the benefits index increases each year as the benefits have been increased. If the insurance company's granted bonus index does not cover the annual index increase, the insurance company collects a premium from the employer to cover the increase. The insurance company's bonus index varies on yearly basis.

Risks associated with defined benefit plans

Through its defined benefit pension plans the Group is exposed to a number of risks. The employer's defined benefit obligations pension liability depends on the discount rate which is determined to a yield of corporate bonds as at the reporting date. A decrease in used discount rates increase the defined benefits obligations. However, a decrease in the used discount rate yield also increases the fair value of the assets partially offsetting the total impact of change in yield on the net defined benefit pension liability.

The benefit of the plans is tied to the future benefit increase, which depends on inflation and common salary index. Higher inflation increases the benefit increase, which leads to an increase in liabilities and annual payments to the insurance company.

If the active employee's salary increases more than the common salary index, the amount of promised benefit and the benefit obligation increases together with annual payments to life insurance company.

The longevity risk is borne by the insurance company in case the actual mortality differs from the assumed. Possible adjustments in mortality assumption have an effect on the employer's liability according to IFRS. The insurance company completely bears the mortality risk on accrued benefits. The employers have a mortality risk only if the insurance company will raise its future benefit accruals premiums because of mortality adjustment.

Defined benefit plans

Cost of defined benefit plans	2018	2017
Service cost	8	9
Net interest (+expense/−income)	2	2
Remeasurements related to other long-term remunerations	0	0
Defined benefit cost recognized in the consolidated statement of income	10	11

Remeasurements of defined benefit plans	2018	2017
Actuarial gains/losses:		
Changes in demographic assumptions	0	−1
Changes in financial assumptions	15	4
Return on plan assets, excluding amounts included in net interest expense	−13	−9
Experience adjustments	4	7
Total remeasurements recognized in other comprehensive income	7	2

Amounts recognized in the consolidated statement of financial position	2018	2017
Present value of funded defined benefit obligations	464	493
Present value of unfunded defined benefit obligations	8	9
Fair value of plan assets	−349	−370
BS Net defined benefit liability	124	131

Changes in fair value of plan assets	2018	2017
January 1	370	381
Interest income	5	5
Return on plan assets (excluding amounts included in net interest expense)	−13	−9
Employer contributions	11	14
Benefits paid	−25	−20
December 31	349	370

The assets are the responsibility of the insurance company and a part of the insurance company's investment assets. The distribution within categories is not possible to provide.

Changes in the present value of the defined benefit obligation	2018		2017	
	Funded	Unfunded	Funded	Unfunded
January 1	493	9	508	8
Current service cost	7	1	8	1
Interest cost	7	0	7	0
Actuarial gains (−)/ losses (+)	−19	0	−11	0
Settlements	0	0	0	0
Benefits paid	−24	−1	−19	−1
December 31	464	8	493	9

The expected contributions to be paid to the defined benefit plans in 2019 are EUR 9 million.

Significant actuarial assumptions (presented as weighted average)	2018	2017
Discount rate, %		
Finland	1.57%	1.43%
Other countries	1.19%	0.96%
Future salary increase, %		
Finland	3.0%	3.0%
Other countries	2.0%	2.0%
Insurance company's bonus index, %		
Finland	0.0%	0.0%
Other countries	0.0%	0.0%
Future benefit increase, %		
Finland	1.7%	1.8%
Other countries	0.0%	0.0%

Sensitivity analysis of significant actuarial assumptions

Reasonably possible changes at the reporting date to one of the weighted principal assumptions, while holding all other assumptions constant, would have affected the defined benefit obligation as shown below:

Assumptions	Change in assumption		Impact on the defined benefit pension obligation	
			2018	2017
Discount rate				
	0.50% increase	EUR million	-31	-34
	0.50% decrease	EUR million	34	36
Future salary increase				
	0.50% increase	EUR million	4	9
	0.50% decrease	EUR million	-4	-9
Future benefit increase				
	0.50% increase	EUR million	28	29
	0.50% decrease	EUR million	-25	-28

- 0.50% increase/decrease in the discount rate would lead to a decrease/increase of 6.5%/7.3% in the defined benefit obligation.
- 0.50% increase/decrease in the rate of salary increase would lead to a increase/decrease of 0.9%/0.8% in the defined benefit obligation
- 0.50% increase/decrease in the rate of pension index would lead to a increase/decrease of 5.8%/5.3% in the defined benefit obligation.

The above sensitivity analysis may not be representative of the actual impact of change. If more than one assumption is changed simultaneously, the combined impact of changes would not necessarily be the same as the sum of the individual change. If the assumptions change to a different level compared to that presented above, the effect on the defined benefit obligation may not be linear.

Maturity profile of the undiscounted defined benefit obligation	2018
Within the next 12 months	2
Between 1 and 5 years	9
Between 5 and 10 years	11
Beyond 10 years	36
Total	58

The average duration of the defined benefit pension obligation at the end of the reporting period is 14 years.

24 Share-based payments

Accounting policy

The share-based incentive plans are accounted for as a share-based transaction. The portion of the earned reward for which the participants will receive shares is accounted for as an equity settled transaction, and the portion of the earned reward to be settled in cash to cover tax and other charges payable by the participants, is accounted for as a cash settled transaction. The earned reward is entered into the income statement spread over the earnings period and restriction period. In respect of the equity settled portion, the amounts recognized in the consolidated statement of income are accumulated in equity; and in respect of the cash settled portion, a respective liability is entered into the balance sheet. The equity-settled part is measured at fair value prevailing at grant date. The liability is measured at fair value at each reporting date, and the respective change in the fair value is reflected in operating profit in the consolidated statement of income.

The aim of all of the Company's share-based long-term incentives plans is to align the objectives of the company's owners and key personnel to increase the company's value and to commit key personnel to the company through an incentive system based on ownership of Group's shares. The Board annually selects the members of Group's senior management and other key personnel entitled to participate in the long-term incentive plans.

Share-based incentive plan as of 1 January 2019

The Board of Directors of Neste Corporation decided on 12 December 2018 to establish a new share-based long-term incentive scheme for selected members of the Company's management and key employees. The decision included a Performance Share Plan (also "PSP") as the main structure and a Restricted Share Plan (also "RSP") as a complementary structure for specific situations.

The Performance Share Plan consists of three annually commencing individual performance share plans, each with a three-year performance period, followed by the payment of the potential share reward. The three plans commence in the years 2019, 2020 and 2021. The commencement of each individual plan is, however, subject to a separate Board approval.

The first plan (PSP 2019–2021) commences effective as of the beginning of 2019 and the potential share reward thereunder will be paid in the spring 2022 provided that the performance target set by the Board of Directors is achieved. The potential reward will be paid in shares of Neste. The performance target based on which the potential share reward under PSP 2019–2021 is to be paid is the relative total shareholder return of the Company's share compared to STOXX Europe 600 index.

The combined amount of variable compensation paid to an individual participant any given year, including the long-term incentive scheme and the annual short-term incentive scheme, may not exceed 120% of the individual's annual gross base salary. If the individual's

employment with Neste terminates before the payment date of the share reward, the individual is not, as a main rule, entitled to any reward based on the plan. The plan does not include a separate restriction period after the performance period of 2019–2021.

The Restricted Share Plan consists of annually commencing individual restricted share plans, each with a three-year retention period after which the share rewards granted within the plan will be paid to the participants in shares of Neste. The commencement of each individual plan is subject to a separate Board approval. A precondition for the payment of the share reward based on the Restricted Share Plan is that the employment relationship of the individual participant with Neste continues until the payment date of the reward.

The first plan (RSP 2019–2021) within the Restricted Share Plan structure commences effective as of the beginning of 2019 and the potential share reward thereunder will be paid in the spring 2022.

Neste applies a share ownership policy to the members of the Neste Executive Committee. According to the policy each member of the Neste Executive Committee is expected to retain in his/her ownership at least half of the shares received under the share-based incentive programs of the company until the value of his/her share ownership in Neste corresponds to at least his/her annual gross base salary.

Share-based incentive plan as of 1 January 2016

The Board of Directors decided on 14 December 2015 to establish a new long-term share-based incentive plan for the Group's senior management and nominated key personnel. The plan includes three individual share plans, each with a three-year earning period. The plans have started in 2016, 2017 and 2018. Any possible payments will be made partly in Company shares and partly in cash in 2019, 2020, and 2021. The proportion to be paid in cash will cover taxes and other tax-related costs.

The earning criteria for the earning periods 2016–2018, 2017–2019 and 2018–2020 are the Group's cumulative comparable free cash flow (75%) and total return by the Group's share compared to STOXX Europe 600 index (25%). In plan 2016–2018 the target long-term incentive for the President & CEO and the other members of the Neste Executive Board (NEB) will be around 40% of individuals' annual fixed salary. In plans 2017–2019 and 2018–2020 the target long-term incentive for the President & CEO and the other members of the NEB is around 30% of individuals' annual fixed salary. The maximum long-term incentive for the President & CEO will be 100% of his annual fixed salary and 80% for the other members of the NEB. The combined amount of incentives paid based on earnings under the long-term incentive program together with the incentive paid on the annual short-term program, may not exceed 120% of participants' annual fixed salary in any given year.

Participants shall not be entitled to sell or transfer the shares they receive as incentives during a restriction period following the end of the earning period. The length of this period is three years in the 2016–2018 plan. In 2017–2019 and 2018–2020 plan the restriction period is one year.

Earnings period of share-based incentive plan 2015–2017 ended 31 December 2017. The earning criteria was met fully resulting in the delivery of shares to the participants in 2018. A gross reward of 95,779 shares equaling to EUR 5.5 million was delivered to the participants. The net amount of shares delivered totalled 39,883 shares and the rest of the reward was paid in cash to cover taxes. The fair value of the share as at delivery date was 57.8 euros. The members of company's Executive Board received a gross reward equaling to 33 515 shares.

There is Ownership requirement for all participants for shares earned from the long-term incentive plan 2016. For NEB, reward shares must be held until ownership exceeds 100% of annual gross base salary. For others, reward shares must be held until ownership exceeds 50% of annual gross base salary.

Share-based incentive plan as of 1 January 2013

The Board of Directors decided on 13 December 2012 to establish a long-term share-based incentive plan for the Group's senior management and nominated key personnel.

The plan includes three individual share plans, each with a three-year earning period. The share plans have started in 2013, 2014, and 2015. The earning criteria for the earning period 2013–2015 have been the Group's comparable free cash flow (75%) and the comparable operating profit of Renewable Products (25%). The earning criteria for the earning periods 2014–2016 and 2015–2017 have been the Group's cumulative comparable free cash flow (75%) and total return by the Group's share compared to a peer group of 10 oil industry peers (25%). The combined amount of incentives to be paid based on maximum-level earnings under the short-term program and this long-term incentive program may not exceed 120% of participants' annual fixed salary in any given year.

Participants shall not be entitled to sell or transfer the shares they receive as incentives during a restriction period following the end of the earning period. The length of this period is three years in respect of the President and CEO and the other members of the NEB, and one year in respect of other participants.

The following tables summarize the terms and the assumptions used in accounting for the performance share plan:

Plan	Long-Term Incentive Plan 2016		Long-Term Incentive Plan 2013		
Type	Share allocation		Money Allocation		
Instrument	Plan 2017–2019	Plan 2016–2018	Plan 2015–2017	Plan 2014–2016	Plan 2013–2015
Grant dates	19 Jan 2017	1 Feb 2016	11 Feb 2015	1 Feb 2014	10 Feb 2013
Grant prices, euros	30.18	26.09	–	–	–
Share price as at grant date, euros	34.22	28.74	–	–	–
Beginning of earnings period	1 Jan 2017	1 Jan 2016	1 Jan 2015	1 Jan 2014	1 Jan 2013
End of earnings period	31 Dec 2019	31 Dec 2018	31 Dec 2017	31 Dec 2016	31 Dec 2015
End of restriction period	31 Mar 2021	30 Apr 2022	31 Mar 2019 / 31 Mar 2021	31 Mar 2018 / 31 Mar 2020	31 Mar 2017 / 31 Mar 2019
Changes during the period, share allocation¹⁾	Shares	Shares			
Outstanding at the beginning of the reporting period, pcs	155,808	238,742			
Granted during the period	8,178	16,000			
Forfeited during the period	4,934	10,290			
Outstanding at the end of the period, pcs	159,052	244,452			
Number of persons at the end of the reporting year	81	85	69	9	6
Share price at the end of the reporting period, euros	67.36	67.36	53.35	33.96	26.52
Estimated rate of realization of the earnings criteria, %	88%	88%	100%	100%	100%
Estimated termination rate before the end of the restriction period, %	10%	5%	0%	0%	0%

¹⁾ Changes during the period, money allocation: 21,564 shares exercised from plan 2013–2015, 148,244 shares exercised and 4,475 shares forfeited from plan 2014–2016, 13,601 shares exercised and 5,641 shares forfeited and one 60,000 euro allocation returned from plan 2015–2017.

The grant price, i.e. fair value at grant date, has been determined as follows: grant price equals the share price as at grant date deducted by expected dividends payable during the three year earning period.

The expense included in the income statement is specified in the following table:

	2018	2017
Expense arising from equity-settled share-based payment transactions	2	3
Expense arising from cash-settled share-based payment transactions	2	5
Total expense arising from share-based payment transactions	5	7

The expense to be recognized during the financial periods 2019–2022 is estimated on 31 December 2018 to amount to EUR 9 million. The actual amount may differ from this estimate.

25 Related party transactions

The Group is controlled by the State of Finland, which owns 44.8% of the company's shares. The remaining 55.2% of shares are widely held.

The Group has a related party relationship with its subsidiaries, joint arrangements (Note 26) and the entities controlled by Neste's controlling shareholder the State of Finland. Related party also includes the members of the Board of Directors, the President and CEO and other members of the Neste Executive Board (key management persons), close members of the families of the mentioned key management persons and entities controlled or jointly controlled by the mentioned key management persons or close members of those persons' families.

Parent company of the Group is Neste Corporation. The transactions between the company and its subsidiaries, which are related parties of the company, have been eliminated during consolidation and are not disclosed in this note. Details of transactions between the Group and other related parties are disclosed below. All transactions between Neste and other companies controlled by the State of Finland are on an arm's length basis.

Transactions carried out with related parties

	Sales of goods and services	Purchases of goods and services	Receivables	Financial income and expense	Liabilities
2018					
Joint ventures	224	165	156	3	5
Other related parties	39	118	11	0	2
	263	283	167	3	6
2017					
Joint ventures	158	135	81	1	4
Other related parties	33	46	4	0	0
	191	182	84	1	4

There were no material transactions with key management persons or entities controlled by them.

The major part of business between Neste and its joint ventures becomes from Nynas AB and Kilpilahti Power Plant Ltd. Transactions with Nynas AB comprises of sales of bitumen production from Neste Finland refinery in Naantali based on a long-term agreement and sales of process oils from Neste Finland refinery in Porvoo. Neste's transactions with Kilpilahti Power Plant Ltd consist mainly of steam purchases and sales of heavy fuel oil, water and asphaltene.

Board of Directors and key management compensation

EUR thousand	2018	2017
Salaries and other short-term employee benefits	4,211	4,026
Statutory pensions	676	660
Supplementary pensions	1,536	1,682
Share-based payments	1,799	1,996
Total (Including statutory pensions)	8,222	8,364

Key management consists of President and CEO and other members of the Neste Executive Board. There were no outstanding loan receivables from key management on 31 December 2018 or 31 December 2017.

The amounts of share participations granted to the President and CEO and other members of the Neste Executive Board based on Management Performance Share Arrangements have been disclosed in Note 24, Share based payments.

Compensation to President and CEO and members of the Neste Executive Board

	President and CEO	Former President and CEO	Members of the Neste Executive Board		
EUR thousand	2018	2018	2017	2018	2017
Annual remuneration					
Base salary	150	582	667	1,980	1,973
Taxable benefits	0	18	22	108	107
Annual incentive (STI plan)	0	252	238	641	594
Total annual remuneration	150	852	927	2,730	2,674
Vested long term remuneration					
Supplementary pension (insurance contributions)	0	1,092	1,191	444	491
Share-based incentive plan	0	554	597	1,245	1,399
Total remuneration	150	2,498	2,715	4,419	4,563

Compensation to the Board of Directors

EUR thousand	2018	2017
Board of Directors at 31 December 2018		
Matti Kähkönen, as of 5 April 2017	77	47
Elizabeth Burghout, as of 5 April 2018	45	0
Martina Flöel, as of 5 April 2017	61	41
Laura Raitio	61	47
Jean-Baptiste Renard	61	54
Jari Rosendal, as of 5 April 2018	37	0
Willem Schoeber	61	52
Marco Wirén	55	47
Former Board members		
Jorma Eloranta, until 5 April 2018	21	77
Maija-Liisa Friman, until 5 April 2017	0	14
Kirsi Sormunen, until 5 April 2017	0	10
Heike van de Kerkhof, as of 5 April 2017, until 30 November 2017	0	37
Board of Directors, all members total	480	426

Compensation to the Board of Directors include annual remuneration and meeting fee paid to each member of the Board for each meeting attended as well as for any meetings of the Board committees attended. Board members are not covered by the company's remuneration systems and do not receive any performance or share related payments.

Should the company decide to give notice of termination, the President & CEO shall be entitled to his salary during the six-month period of notice, together with a severance payment equivalent to 6 months' salary. The retirement age of the President and CEO is according to the Finnish Employee's Pension Act (TyEL).

Net liability of defined benefit plans of former Presidents and CEOs on 31 December 2018 were EUR 1,376 thousand (2017: EUR 1,517 thousand).

26 Group companies

Subsidiaries	Group holding %	Country of incorporation
Kiinteistö Oy Espoon Keilaranta 21	100.00%	Finland
LLC Neste Saint-Petersburg	100.00%	Russia
Navidom Oy	50.00%	Finland
Neste (Suisse) S.A.	100.00%	Switzerland
Neste AB	100.00%	Sweden
Neste Affiliate B.V.	100.00%	The Netherlands
Neste Canada Inc.	100.00%	Canada
Neste Components B.V.	100.00%	The Netherlands
Neste Eesti AS	100.00%	Estonia
Neste Demeter B.V. (new)	51.00%	The Netherlands
Neste Insurance Limited	100.00%	Guernsey
Neste Italy S.R.L. (new)	100.00%	Italy
Neste Engineering Solutions AB	100.00%	Sweden
Neste Engineering Solutions AS	100.00%	Norway
Neste Engineering Solutions B.V.	100.00%	The Netherlands
Neste Engineering Solutions Oy	100.00%	Finland
Neste Engineering Solutions Pte. Ltd.	100.00%	Singapore
Neste Markkinointi Oy	100.00%	Finland
Neste N.V.	100.00%	Belgium
Neste Netherlands B.V.	100.00%	The Netherlands
Neste Oil Bahrain W.L.L.	100.00%	Bahrain
Neste Renewable Fuels Oy	100.00%	Finland
Neste Shipping Oy	100.00%	Finland
Neste Singapore Pte. Ltd.	100.00%	Singapore
Neste US, Inc.	100.00%	USA
Neste USA, L.L.C.	100.00%	USA
NSE Biofuels Oy Ltd	100.00%	Finland
SIA Neste Latvija	100.00%	Latvia
UAB Neste Lietuva	100.00%	Lithuania
US Active Oy	100.00%	Finland

Associated companies	Group holding %	Country of incorporation
Neste Arabia Co. Ltd. (inactive)	48.00%	Saudi Arabia

Joint arrangements	Group holding %	Classification	Country of incorporation
A/B Svartså Vattenverk – Mustijoen Vesilaitos O/Y	40.00%	Joint Operation	Finland
Bahrain Lube Base Oil Company B.S.C. (Closed)	45.00%	Joint Operation	Bahrain
Glacia Limited	50.00%	Joint Venture	Bermuda
Kilpilahti Power Plant Ltd	40.00%	Joint Venture	Finland
Nynas AB (publ)	49.99%	Joint Venture	Sweden
Oy Innogas Ab	50.00%	Joint Operation	Finland
Tahkoluodon Polttoöljy Oy	31.50%	Joint Operation	Finland
Tapaninkylän Liikekeskus Oy	40.03%	Joint Operation	Finland
Vaskiluodon Kalliovarasto Oy	50.00%	Joint Operation	Finland

Specification of financial information on subsidiaries with material non-controlling interests

	Neste Demeter B.V. 2018	Navidom Oy 2018	2017
Proportion of shares held by non-controlling interests	49.00%	50.00%	50.00%
Current assets	34	0	0
Non-current assets	0	0	0
Current liabilities	31	0	0
Non-current liabilities	0	0	0
Revenue	109	1	1
Profit for the period	1	0	0
Dividends paid to non-controlling interests	0	0	0
Cash flows from operating activities	6	0	0
Cash flows from investing activities	6	0	0
Cash flows from financing activities	-11	0	0

Unconsolidated structured entities

In 2015, Neste sold its shares of Aurora Kilpilahti Oy (former Kilpilahden Sähkönsiirto Oy) to InfraVia European Fund II, an infrastructure fund managed by InfraVia. After the sale Neste does not have direct or indirect investment in the company. Aurora Kilpilahti Oy is responsible for high- and medium-voltage electricity distribution in the Kilpilahti industrial area where Neste Finland Refinery in Porvoo is situated. In addition to Neste, Aurora Kilpilahti Oy's customers include other companies operating in the area.

As the Kilpilahti electricity distribution network requires significant investments, Neste selected InfraVia as its electricity distribution partner to contribute to the effective implementation of the investments and, therefore, secure reliable electricity distribution in Kilpilahti.

Under the contractual arrangements with Aurora Kilpilahti Oy Neste has been supplying small and decreasing part of the operating services needed in electricity distribution. It can be considered that Neste has the possibility to influence only limited development investments made by Aurora Kilpilahti Oy. Aurora Kilpilahti Oy distributes electricity to Neste and Neste remains to be the main user of the capacity of the electricity distribution network. Aurora Kilpilahti Oy operates on land leased from Neste for 30 years with an option to extend the lease. Neste has not provided any financial support or other significant support to Aurora Kilpilahti Oy without contractual obligation.

Based on the factors described above Neste has determined that it has limited influence though no control over Aurora Kilpilahti Oy and treats the company as unconsolidated structured entity in its consolidated financial statements. Management has assessed the company's exposure to losses by considering the nature of Neste's involvement in Aurora Kilpilahti Oy, and the company's significance to Neste from an operative perspective. Neste's exposure is mainly dependent upon the efficient operation of the distribution network.

Consolidated structured entities

Since 2014, Neste has treated the sold vessels' sale-and-leaseback agreements made with Ilmarinen Mutual Pension Insurance Company and Finland's National Emergency Supply Agency as structured entities. As a part of these arrangements, Neste guarantees the vessels' residual value and certain return on the investors' investments.

27 Acquisitions and disposals

Acquisitions

In May 2018 Neste and Demeter Holding B.V. agreed that Neste acquires sole control and 51% of the shares of the Dutch animal fats and proteins trader IH Demeter B.V. (Internationale Handelmaatschappij 'Demeter' B.V.), making Neste the controlling shareholder. The acquisition was closed on 31 August 2018 after regulatory approvals. The previous owners remained as co-owners with non-controlling interest, which have been measured at proportionate share of the net assets. The new company is called Neste Demeter B.V. and has been consolidated into Renewable Products segment.

The acquisition is an important step for Neste in its strategy of building a global waste and residue raw material platform to secure raw material availability and competitiveness. IH Demeter B.V. has a long history, and a solid track record of cooperating with Neste. With an efficient European-wide logistical setup, the company is well-positioned to serve Neste in delivering future raw material volumes to Neste's renewable product refineries.

The fair value of acquired net assets include supplier relations that have been recognized as intangible assets. The goodwill is non-deductible for income tax purposes. Transactions costs of the acquisition have been recognized as other expenses in the consolidated statement of income. The acquisition does not have material impact on Group's net sales nor result. In Q4/2018 the pension liabilities have been recognized according to IAS 19 which slightly affected to the fair value of the net assets. The purchase price was also fully settled in Q4/2018.

Values of acquired assets and liabilities at time of acquisition:	Recognized values
Intangible assets	2
Property, plant and equipment	0
Deferred tax assets	0
Inventories	28
Trade and other receivables	6
Cash and cash equivalents	0
Total assets	37
Interest bearing liabilities	12
Deferred tax liabilities	1
Pension liabilities	0
Current tax liabilities	2
Trade and other payables	19
Total liabilities	33
Fair value of net assets total	3
Consideration transferred	15
Proportionate share of net assets of non-controlling interests	2
Fair value of acquired net assets	-3
Goodwill	13
Cash flows of acquisition:	2018
Consideration, paid in cash	-15
Cash and cash equivalents in acquired company	0
Transaction costs of the acquisition	-1
Net cash flow on acquisition	-16

Disposals

During the financial period 2018, the Group sold its 33.33% interest in joint arrangement Porvoon Alueverkko Oy. The transaction was completed on 1 February 2018 and no material capital gains was recognized in the consolidated financial statements. No disposals took place in financial period 2017.

28 Contingencies and commitments

Contingent liabilities	Value of collateral 2018	Value of collateral 2017
On own behalf for commitments		
Real estate mortgages	26	17
Pledged assets	116	116
Other contingent liabilities	34	40
Total	177	174
On behalf of joint arrangements		
Pledged assets	45	45
Guarantees	0	1
Total	45	46
On behalf of others		
Guarantees	1	1
Total	1	1
	223	221

The pledged assets on own behalf for commitments are granted to finance parties as security for the timely and complete payment, performance and discharge by single ship company (SSC) of the secured obligations. The pledged assets mean the ship mortgage notes, all rights and interest of the SSC in and relating to the insurances, the receivables and the blocked account. The security period ends on the date upon which all the secured obligations have been unconditionally and irrevocably paid and discharged in full.

The pledged assets on behalf of joint arrangements are granted to the secured creditors as continuing security for due and punctual payment, discharge and performance of all or any part of the secured obligations of Kilpilahti Power Plant Ltd. The pledged assets mean all shareholder loan receivables, all contribution loan receivables and the shares of Kilpilahti Power Plant Ltd. The security period ends on the date on which all the secured obligations have been unconditionally and irrevocably paid and discharged in full.

Operating leases

Total future minimum lease payments under non-cancellable operating leases

Operating lease liabilities	2018	2017
Due within one year	81	74
Due between one and five years	86	61
Due later than five years	68	71
Total	235	206

The Group's operating lease commitments primarily relate to time charter vessels, land and office space. Lease rental expenses amounted to EUR 103 million (2017: EUR 121 million).

Capital commitments

Commitments	2018	2017
Commitments for purchase of property, plant and equipment	138	32
	138	32

Take-or-pay contracts

The Group's take-or-pay contracts relate to hydrogen supply agreements. Agreements include volume based hydrogen purchase obligations. The total fixed fees payable under the agreements during 2011–2026 as of 31 December 2018 are presented in the table below.

Fixed fees payable under take-or-pay contracts	2018	2017
Payable	17	17
Payable after the financial period	114	132
Total payable	131	149

29 Disputes and potential litigations

Neste had a dispute concerning the excise tax levied on the exported products. Finnish Customs levied excise tax, interest and additional tax totaling approximately EUR 16 million due to the default of entries to the Excise Movement and Control System (EMCS). Neste has received in January 2019 a decision by the Finnish Tax Authority in favor of Neste concerning a pending excise tax dispute of EUR 13 million, which will affect year 2019 results positively. Regardless of the given decision in the main issue, the Tax Authority did not decide the relating interest and additional tax of EUR 3 million in favor of Neste. Neste will appeal in this respect to the Administrative Court of Helsinki. The payment was charged to the income statement in 2016.

Neste Oil Bahrain W.L.L. has obtained a disadvantageous tax judgement in December 2018 and has appealed against it. As part of an impairment process, Neste has written down all Neste Oil Bahrain W.L.L.'s assets of EUR 112 million.

Neste is currently engaged in arbitration with the Bahrain base oil joint operation partners concerning a contractual dispute.

In addition, some Group companies are involved in legal proceedings or disputes incidental to their business. In management's opinion, the outcome of these cases is difficult to predict but not likely to have material effect on the Group's financial position.

30 Events after the balance sheet date

No significant events took place in the Group after the balance sheet date.

Parent Company Income Statement

EUR million	Note	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
Revenue	2	9,100	7,595
Change in product inventories		–8	18
Other operating income	3	12	15
Materials and services	4	–8,136	–6,397
Personnel expenses	5	–221	–207
Depreciation, amortization and write-downs	6	–205	–185
Other operating expenses	7	–374	–306
Operating profit/loss		168	533
Financial income and expenses	8	87	–47
Profit/loss before appropriations and taxes		255	486
Appropriations	9	564	252
Income tax expense	10	–141	–143
Profit for the year		678	595

Parent Company Balance Sheet

EUR million	Note	31 Dec 2018	31 Dec 2017
ASSETS			
Fixed assets and other long-term investments	11, 12		
Intangible assets		91	78
Tangible assets		1,904	1,914
Other long-term investments		2,092	2,122
		4,088	4,114
Current assets			
Inventories	13	703	788
Long-term receivables	14	9	4
Short-term receivables	15	2,098	1,403
Cash and cash equivalents		1,113	705
		3,924	2,900
Total assets		8,012	7,013
SHAREHOLDERS' EQUITY AND LIABILITIES			
Shareholders' equity	16		
Share capital		40	40
Other reverses		–1	26
Retained earnings		1,512	1,352
Profit for the year		678	595
		2,229	2,013
Accumulated appropriations	17	1,003	979
Provisions for liabilities and charges	18	38	2
Liabilities	19		
Long-term liabilities		1,090	1,034
Short-term liabilities		3,651	2,985
		4,741	4,019
Total equity and liabilities		8,012	7,013

Parent Company Cash Flow Statement

EUR million	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
Cash flows from operating activities		
Profit/loss before appropriations and taxes	255	486
Depreciation, amortization and write-downs	205	185
Other non-cash income and expenses	-105	-83
Financial income and expenses	-87	47
Divesting activities, net	-2	-3
Operating cash flow before change in working capital	266	632
Change in working capital		
Decrease (+) / increase (-) in interest-free receivables	-137	-161
Decrease (+) / increase (-) in inventories	84	-41
Decrease (-) / increase (+) in interest-free liabilities	401	533
Change in working capital	348	331
Cash generated from operations	613	963
Interest and other financial expenses paid, net	-19	-62
Dividends received	242	26
Income taxes paid	-121	-121
Realized foreign exchange gains and losses	-6	0
Net cash from operating activities	709	805
Cash flows from investing activities		
Capital expenditure	-216	-310
Proceeds from sale of fixed assets	2	4
Investments in shares in subsidiaries	0	-27
Investments in shares in other shares	0	0
Proceeds from shares in subsidiaries	0	0
Proceeds from other shares	0	0
Change in other investments, increase (-) / decrease (+)	-46	31
Net cash used in investing activities	-260	-302
Cash flow before financing activities	449	504

EUR million	1 Jan–31 Dec 2018	1 Jan–31 Dec 2017
Cash flows from financing activities		
Sale of treasury shares	0	0
Proceeds from long-term liabilities	450	399
Payments of long-term liabilities	-301	-681
Change in short-term liabilities	-60	10
Dividends paid	-435	-332
Group contributions, net	305	79
Cash flow from financing activities	-41	-526
Net increase (+) / decrease (-) in cash and cash equivalents	409	-23
Cash and cash equivalents at the beginning of the period	705	727
Cash and cash equivalents at the end of the period	1,113	705
Net increase (+) / decrease (-) in cash and cash equivalents	409	-23

Notes to the Parent Company Financial Statements

1 Accounting Policies

The financial statements of Neste Corporation (Parent company) are prepared in accordance with Finnish GAAP. The financial statements are presented in millions of euros unless otherwise stated. The figures in the tables are exact figures and consequently the sum of individual figures may deviate from the sum presented.

Revenue

Revenue include sales revenues from actual operations less discounts, indirect taxes such as value added tax and excise tax payable by the manufacturer and statutory stockpiling fees. Revenue is recorded for the exchange of goods only when dissimilar goods are exchanged.

Other operating income

Other operating income includes gains on the sales of fixed assets and contributions received as well as all other operating income not related to the sales of products or services, such as rents.

Foreign currency items

Transactions denominated in foreign currencies have been valued using the exchange rate at the date of the transaction. Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date have been valued using the exchange rate quoted on the balance sheet date. Exchange rate differences have been entered in the income statement. Net exchange rate differences relating to financing have been entered in financial income or expenses.

Financial assets and liabilities

Financial instruments are valued at fair value according alternative method of the Finnish Accounting act article 5.2a §. Loans and receivables and other financial liabilities are recognized at amortized cost. Available for sale financial assets include non-listed shares, which are at amortized cost.

Loans and receivables consist of cash and cash equivalents, loans granted together with trade and other receivables. Other financial liabilities include interest bearing liabilities together with trade and other payables.

Derivatives without hedge accounting status are recognized to profit and loss. Unrealized derivative financial instruments that are designated and qualify as cash flow hedges are recognized in equity when effective. Derivatives are recognized on the trade date at fair

value and other financial assets on the settlement date. Later derivatives are re-measured at their fair value each reporting date and any subsequent change is recognized at profit and loss if hedge accounting is not used.

Derivative financial instruments

The company uses derivative financial instruments mainly to hedge commodity price, foreign exchange and interest rate exposures. Derivatives without hedge accounting are recognized in the income statement in operating profit material and services or alternatively in financial income and expenses if they are relate to financial activities.

Hedge accounting

The company applies hedge accounting on certain forward foreign exchange contracts, options and interest rate derivatives.

Cash flow hedges

The company applies cash flow hedge accounting to reduce exposure of currency and interest rates. Currency derivative contracts hedging future currency cash flows and qualifying for hedge accounting are booked once matured and the underlying exposure occurs. Gains or losses for interest rate swaps derivative financial instrument used to hedge the interest rate risk exposure are accrued over the period to maturity and are recognized as an adjustment to the interest income or expense of the underlying liabilities.

Fair value hedges

The company applies fair value hedge accounting to reduce exposure to fair value fluctuations of interest-bearing liabilities due to changes in interest rates. Changes in fair value of derivatives designated and qualifying as fair value hedges, together with any changes in the fair value of hedged liabilities attributable to the hedged risk, are recognized in financial income and expenses.

Fixed assets and depreciation

The balance sheet value of fixed assets consists of historical costs less depreciation according to plan and other possible write-offs, plus revaluation permitted by local regulations. Fixed assets are depreciated using straight-line depreciation based on the expected useful life of the asset. Land areas are not depreciated.

The depreciation is based on the following expected useful lives:

Buildings and structures	20–40 years
Production machinery and equipment, including special spare parts	15–20 years
Other equipment and vehicles	3–15 years
Other tangible assets	20–40 years
Intangible assets	3–10 years

Inventories

Inventories are stated at either cost or net realizable value, whichever is the lowest. Cost was determined using the first-in, first-out (FIFO) during first quarter. Inventory valuation policy has been amended during the second quarter in 2018. The weighted average method has been applied for determining cost whereas first-in, first-out (FIFO) method was used previously. The change had an immaterial impact on financial statement (approximately EUR 1 million). The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs, and related production overheads (based on normal operating capacity). Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses. Inventories held for trading purposes are measured at fair value less selling expenses. Standard spare parts are carried as inventory and recognized in profit or loss as consumed.

Research and development

Research expenditure is recognized as an expense as incurred and included in other operating expenses in the income statement. Expenditure on development activities is capitalized only when it fulfills tight criteria e.g. development relates to new products that are technically and commercially feasible. The majority of the company's development expenditure does not meet the criteria for capitalization and are recognized as expenses as incurred.

Cash pool receivables/liabilities

Cash pool items are presented as short-term receivables or liabilities.

Pension expenses

An external pension insurance company manages the pension plan. The pension expenses are booked to income statement during the year they occur.

Appropriations

Appropriations consist of received or given group contributions from or to Neste Group companies and depreciation above the plan.

Deferred taxes

Deferred taxes are determined on the basis of temporary differences between the financial statement and tax bases of assets and liabilities. Deferred income tax is determined using tax rates that have been enacted at the balance sheet date and are expected to apply.

Provisions

Foreseeable future expenses and losses that have no corresponding revenue and which Neste Corporation is committed or obliged to settle, and whose monetary value can reasonably be assessed, are entered as expenses in the income statement and included as provisions in the balance sheet. These items include expenses relating to the pension liabilities, guarantee obligations, restructuring provisions, expenses relating to the future clean-up of proven environmental damage and obligation to return emission allowances. Provisions are recorded based on management estimates of the future obligation.

2 Revenue

Revenue by segment	2018	2017
Oil Products	8,986	7,529
Renewable Products	38	4
Marketing & Services	0	0
Other	76	62
Eliminations	0	0
	9,100	7,595

Revenue by market area	2018	2017
Finland	3,797	3,305
Other Nordic countries	997	713
Baltic countries, Russia and Poland	555	506
Other European countries	3,571	2,934
North and South America	2	2
Other countries	178	134
	9,100	7,595

3 Other operating income

	2018	2017
Rental income	6	9
Gain on sale of intangible and tangible assets	0	3
Gain on sale of shares	2	0
Insurance compensations	0	0
Government grants	1	1
Other	3	2
	12	15

4 Materials and services

	2018	2017
Materials and supplies		
Purchases during the period	8,052	6,412
Change in inventories	76	-24
	8,128	6,389
External services	9	9
	8,136	6,397

5 Personnel expenses

	2018	2017
Wages, salaries and remunerations	176	163
Indirect employee costs		
Pension costs	38	39
Other indirect employee costs	8	7
Wages and salaries capitalized in fixed assets	-2	-3
	221	207

Salaries and remuneration

Key management compensations are presented in Note 28 in the Neste Group consolidated financial statements.

	2018	2017
Average number of employees		
White-collar	1,387	1,393
Blue-collar	968	1,031
	2,355	2,424

6 Depreciation, amortization and write-downs

	2018	2017
Depreciation according to plan	204	183
Write-offs	1	3
Write-offs of fixed assets in progress	0	-1
	205	185

7 Other operating expenses

	2018	2017
Operating leases and other property costs	22	23
Repairs and maintenance	141	132
Other	210	151
	374	306

Fees charged by the statutory auditor, PricewaterhouseCoopers

EUR thousands	2018	2017
Audit fees	615	664
Tax advisory	5	28
Other advisory services	297	238
	917	930

8 Financial income and expenses

	2018	2017
Dividend income		
From Group companies	242	26
From associated companies	0	0
From others	0	0
Dividend income total	242	26
Interest income from long-term loans and receivables		
From Group companies	3	4
From others	1	1
Interest income from long-term loans and receivables total	4	5
Other interest and financial income		
From Group companies	0	0
Other	4	1
Other interest and financial income total	4	1
Write-downs on long-term investments	-100	0
Interest expenses and other financial expenses		
To Group companies	-2	-2
Other	-25	-62
Interest expenses and other financial expenses total	-27	-63
Exchange rate differences	-36	-16
Financial income and expenses total	87	-47
Total interest income and expenses	2018	2017
Interest income	8	6
Interest expenses	-22	-26
Net interest expenses	-14	-19

9 Appropriations

	2018	2017
Change in depreciation difference		
Difference between depreciation according to plan and depreciation in taxation	-25	-53
Group contributions		
Group contributions received	589	305
Appropriations total	564	252

10 Income tax expense

	2018	2017
Income taxes on regular business operations	143	143
Taxes for prior periods	-2	0
Change in deferred tax assets	0	0
	141	143

11 Fixed assets and long-term investments

Change in acquisition cost 2018

Intangible assets	Goodwill	Other intangible assets	Total
Acquisition cost as of 1 January 2018	1	178	178
Increases	0	32	32
Decreases	0	0	0
Transfers between items	0	0	0
Acquisition cost as of 31 December 2018	1	210	211
Accumulated amortization and write-downs as of 1 January 2018	1	100	101
Accumulated amortization and write-downs of decreases and transfers	0	0	0
Amortization for the period	0	19	19
Accumulated amortization and write-downs as of 31 December 2018	1	119	119
Balance sheet value as of 31 December 2018	0	91	91

Change in acquisition cost 2017

Intangible assets	Goodwill	Other intangible assets	Total
Acquisition cost as of 1 January 2017	1	151	152
Increases	0	27	27
Decreases	0	-1	-1
Transfers between items	0	0	0
Acquisition cost as of 31 December 2017	1	178	178
Accumulated amortization and write-downs as of 1 January 2017	1	87	88
Accumulated amortization and write-downs of decreases and transfers	0	-1	-1
Amortization for the period	0	13	13
Accumulated amortization and write-downs as of 31 December 2017	1	100	101
Balance sheet value as of 31 December 2017	0	78	78

Change in acquisition cost 2018

Tangible assets	Land areas	Buildings and structures	Machinery and equipment	Other tangible assets	Advances paid and construction in progress	Total
Acquisition cost as of 1 January 2018	26	1,206	2,809	90	129	4,260
Increases	0	15	76	4	82	177
Decreases	0	0	-15	0	0	-15
Transfers between items	0	49	50	2	-101	0
Acquisition cost as of 31 December 2018	26	1,271	2,920	96	109	4,421
Accumulated depreciation and write-downs as of 1 January 2018	0	626	1,708	39	0	2,374
Accumulated depreciation and write-downs of decreases and transfers	0	0	-15	0	0	-15
Depreciation and write downs for the period	0	34	149	2	0	186
Accumulated depreciation and write-downs as of 31 December 2018	0	660	1,842	41	0	2,544
Revaluations	6	21	0	0	0	27
Balance sheet value as of 31 December 2018	31	631	1,078	55	109	1,904
Balance sheet value of machinery and equipments used in production						1,078

Change in acquisition cost 2017

Tangible assets	Land areas	Buildings and structures	Machinery and equipment	Other tangible assets	Advances paid and construction in progress	Total
Acquisition cost as of 1 January 2017	26	1,164	2,442	119	260	4,011
Increases	0	51	359	2	287	699
Decreases	0	-8	-19	-4	-418	-450
Transfers between items	0	0	26	-26	0	0
Acquisition cost as of 31 December 2017	26	1,206	2,809	90	129	4,260
Accumulated depreciation and write-downs as of 1 January 2017	0	600	1,587	47	0	2,234
Accumulated depreciation and write-downs of decreases and transfers	0	-8	-14	-9	0	-31
Depreciation and write downs for the period	0	33	135	2	0	171
Accumulated depreciation and write-downs as of 31 December 2017	0	626	1,708	39	0	2,374
Revaluations	6	21	0	0	0	27
Balance sheet value as of 31 December 2017	31	602	1,101	51	129	1,914
Balance sheet value of machinery and equipments used in production						1,101

Other long-term investments	Shares in group companies	Receivables from group companies	Shares in associated companies	Receivables from associated companies	Other shares and holdings	Other receivables	Total
Acquisition cost as of 1 January 2018	2,000	72	3	43	3	0	2,122
Increases	0	154	1	7	0	0	162
Decreases	0	-171	0	-20	0	0	-191
Acquisition cost as of 31 December 2018	2,000	54	5	30	3	0	2,092
Accumulated depreciation and write-downs as of 1 January 2018	0	0	0	0	0	0	0
Accumulated depreciation and write-downs as of 31 December 2018	0	0	0	0	0	0	0
Balance sheet value as of 31 December 2018	2,000	54	5	30	3	0	2,092

Other long-term investments	Shares in group companies	Receivables from group companies	Shares in associated companies	Receivables from associated companies	Other shares and holdings	Other receivables	Total
Acquisition cost as of 1 January 2017	1,973	73	0	46	3	0	2,096
Increases	27	0	3	0	0	0	30
Decreases	0	-1	0	-3	0	0	-4
Acquisition cost as of 31 December 2017	2,000	72	3	43	3	0	2,122
Accumulated depreciation, amortization and write-downs as of 1 January 2017	0	0	0	0	0	0	0
Accumulated depreciation, amortization and write-downs as of 31 December 2017	0	0	0	0	0	0	0
Balance sheet value as of 31 December 2017	2,000	72	3	43	3	0	2,122

Interest-bearing and interest-free receivables	2018	2017
Interest-bearing receivables	84	114
Interest-free receivables	0	0
	84	115

12 Revaluations

	Revaluations as of Jan 1 2018	Increases	Decreases	Revaluations as of Dec 31 2018
Land areas	6	0	0	6
Buildings	21	0	0	21
Total	27	0	0	27

Policies and principles for revaluations and evaluation methods

The revaluations are based on fair values at the moment of revaluation.
Deferred taxes have not been booked on revaluations.

13 Inventories

	2018	2017
Raw materials and supplies	319	396
Products/finished goods	378	386
Advance payments on inventories	7	6
	703	788
Replacement value of inventories	719	796
Book value of inventories	703	788
Difference	16	8

14 Long-term receivables

	2018	2017
Long-term advance payments	0	1
Receivables from Group companies		
Other long-term receivables	3	4
Deferred tax assets	5	0
	9	4

15 Short-term receivables

	2018	2017
Trade receivables	377	337
Receivables from Group companies		
Trade receivables	480	386
Other receivables	725	458
Accrued income and prepaid expenses	118	59
Total	1,324	902
Receivables from associated companies		
Trade receivables	42	28
Other receivables	14	1
Total	56	29
Other receivables	144	44
Accrued income and prepaid expenses	197	90
	2,098	1,403

Short-term accrued income and prepaid expenses	2018	2017
Accrued interest	1	1
Derivative financial instruments	305	156
Other	10	8
	315	164

16 Changes in shareholders' equity

	2018	2017
Share capital at 1 January	40	40
Share capital at 31 December	40	40
Fair value reserve at 1 January	15	-22
Increases	800	1,585
Decreases	-830	-1,547
Fair value reserve at 31 December	-14	15
Invested non-restricted equity fund at 1 January	10	8
Transfer of treasury shares	2	2
Invested non-restricted equity fund at 31 December	13	10
Retained earnings at 1 January	1,947	1,685
Dividends paid	-435	-332
Profit for the year	678	595
Retained earnings at 31 December	2,191	1,947
Capitalized development expenditure	9	-10
Distributable equity	2,212	1,948

17 Accumulated appropriations

	2018	2017
Depreciation difference	1,003	979

18 Provisions for liabilities and charges

	2018					2017				
	Restructuring provisions	Provision for environment	Liability to return emission rights	Other provisions	Total	Restructuring provisions	Provision for environment	Liability to return emission rights	Other provisions	Total
Provisions as of 1 January	0	2	0	0	2	0	3	2	0	5
Increase	0	0	2	35	37	0	0	0	0	0
Decrease	0	1	0	0	1	0	1	2	0	3
Provisions as of 31 December	0	1	2	35	38	0	2	0	0	2

19 Liabilities

	2018	2017
Long-term liabilities		
Bonds	719	867
Loans from financial institutions	0	0
Advanced payments	13	8
Liabilities to Group companies		
Other long-term liabilities	351	150
Deferred tax liabilities	0	2
Other long-term liabilities	2	3
Accruals and deferred income	5	4
	1,090	1,034
Interest-bearing liabilities due after five years		
Bonds	399	719

The fair values of non-current liabilities are determined by using the discounted cash flow method employing market interest rates or market values at the balance sheet date. The fair value of the bonds was EUR 740 million (2017: EUR 900 million) of which EUR 740 million belong to level 1. The fair values of other non-current liabilities are not materially different from their carrying amounts.

Short-term liabilities	2018	2017
Bonds	148	50
Loans from financial institutions	0	0
Advances received	0	0
Trade payables	711	797
Liabilities to Group companies		
Advances received	0	0
Trade payables	197	89
Other short-term liabilities	1,614	1,504
Accruals and deferred income	153	35
Total	1,964	1,627
Liabilities to associated companies		
Trade payables	4	4
Total	4	4
Other short-term liabilities	514	332
Accruals and deferred income	310	175
	3,651	2,985

The fair values of current interest-free liabilities are determined by using the discounted cash flow method employing market interest rates or market values at the balance sheet date. The fair value of the bonds was EUR 151 million (2017: EUR 50 million) of which EUR 151 million belong to fair value hierarchy level 1. The fair values of other current liabilities are not materially different from their carrying amounts.

Short-term accruals and deferred income	2018	2017
Salaries and indirect employee costs	63	50
Accrued interests	11	11
Accrued taxes	51	31
Derivative financial instruments	339	117
Other short-term accruals and deferred income	0	1
	463	210

Interest-bearing and interest-free liabilities	2018	2017
Long-term liabilities		
Interest-bearing liabilities	1,071	1,020
Interest-free liabilities	19	15
	1,090	1,034
Short-term liabilities		
Interest-bearing liabilities	1,756	1,490
Interest-free liabilities	1,895	1,495
	3,651	2,985

Listed bond issues

Issue/Maturity	Interest basis	Interest rate, %	Effective interest, %	Currency	Nominal million	Carrying amount EUR million
2012/2019	Fixed	4.0000	4.0780	EUR	147	148
2015/2022	Fixed	2.1250	2.2080	EUR	321	320
2017/2024	Fixed	1.5000	1.5080	EUR	400	399
Total outstanding carrying amount 31 December 2018						867

20 Contingent liabilities

Contingent liabilities	2018	2017
Operating lease liabilities		
Due within a year	2	3
Due after a year	3	3
	5	6
Contingent liabilities given on own behalf		
Real estate mortgages	26	17
Pledged assets	0	0
Other contingent liabilities	21	21
	47	38
Contingent liabilities given on behalf of Group companies		
Guarantees	53	105
	53	105
Contingent liabilities given on behalf of associated companies		
Guarantees	0	1
	0	1
Contingent liabilities given on behalf of others		
Guarantees	1	1
	1	1
Contingent liabilities total	106	150

21 Derivative financial instruments

Nominal values of interest rate and currency derivative contracts	2018			2017		
	Remaining maturities		Total	Remaining maturities		Total
	< 1 year	1–2 years		< 1 year	1–3 years	
Derivative financial instruments						
Interest rate swaps	0	0	0	50	0	50
Forward foreign exchange contracts	592	0	592	518	0	518
Currency options						
– Purchased	126	0	126	120	0	120
– Written	126	0	126	120	0	120
	844	0	844	808	0	808
Derivative financial instruments designated as fair value hedges						
Interest rate swaps	74	0	74	0	74	74
	74	0	74	0	74	74
Non-hedge accounting derivative financial instruments						
Interest rate swaps	26	0	26	0	26	26
Forward foreign exchange contracts	1,971	340	2,312	1,830	0	1,830
Intra-group forward foreign exchange contracts	753	340	1,093	574	0	574
Currency options						
– Purchased	194	0	194	219	0	219
– Written	194	0	194	219	0	219
Intra-group currency options						
– Purchased	194	0	194	219	0	219
– Written	194	0	194	219	0	219
	3,526	681	4,207	3,280	26	3,306

Volumes of commodity derivative contracts

	2018			2017		
	Volume million bbl			Volume million bbl		
	Remaining maturities			Remaining maturities		
	< 1 year	1–3 years	Total	< 1 year	1–3 years	Total
Non-hedge accounting commodity derivative contracts excl. electricity and gas derivatives¹⁾						
Futures and forwards						
– Sales contracts	19	0	19	17	0	17
– Purchase contracts	19	0	19	16	0	16
Intra-group Futures and forwards						
– Sales contracts	18	0	18	15	0	15
– Purchase contracts	17	0	17	15	0	15
	73	0	73	63	0	63
	Volume GWh			Volume GWh		
	Remaining maturities			Remaining maturities		
	< 1 year	1–3 years	Total	< 1 year	1–3 years	Total
Non-hedge accounting electricity and gas derivative contracts						
Futures and forwards						
– Sales contracts	0	0	0	0	0	0
– Purchase contracts	2,258	823	3,081	1,981	884	2,865
Intra-group Futures and forwards						
– Sales contracts	1,018	439	1,457	832	372	1,204
– Purchase contracts	0	0	0	0	0	0
	3,276	1,262	4,538	2,813	1,256	4,069

¹⁾ Commodity derivative contracts with non-hedge accounting status include oil, vegetable oil, electricity and gas derivative contracts. They consist of trading derivative contracts and cash flow hedges without hedge accounting status.

Fair values of derivative financial instruments

	Fair value 2018				Fair value 2017			
	Positive < 1 year	1–2 years	Negative < 1 year	1–2 years	Positive < 1 year	1–3 years	Negative < 1 year	1–3 years
Interest rate and currency derivative contracts								
Derivative financial instruments designated as cash flow hedges								
Interest rate swaps	0	0	0	0	0	0	1	0
Forward foreign exchange contracts	1	0	15	0	17	0	0	0
Currency options								
– Purchased	0	0	1	0	2	0	0	0
– Written	0	0	2	0	1	0	0	0
	1	0	18	0	20	0	1	0
Derivative financial instruments designated as fair value hedges								
Interest rate swaps	1	0	0	0	0	2	0	0
	1	0	0	0	0	2	0	0
Non-hedge accounting derivative financial instruments								
Interest rate swaps	0	0	0	0	0	1	0	0
Forward foreign exchange contracts	5	1	14	0	35	0	0	0
Intra-group forward foreign exchange contracts	11	0	1	0	1	0	12	0
Currency options								
– Purchased	0	0	1	0	1	0	1	0
– Written	1	0	1	0	2	0	0	0
Intra-group currency options								
– Purchased	1	0	0	0	0	0	1	0
– Written	1	0	1	0	0	0	2	0
	19	1	18	0	39	1	16	0

	Fair value 2018				Fair value 2017			
	Positive		Negative		Positive		Negative	
	< 1 year	1–3 years	< 1 year	1–3 years	< 1 year	1–3 years	< 1 year	1–3 years
Commodity derivative contracts								
Non-hedge accounting commodity derivative contracts¹⁾								
Futures and forwards								
– Sales contracts	194	0	2	0	5	0	60	0
– Purchase contracts	14	2	123	0	28	1	14	0
Intra-group Futures and forwards								
– Sales contracts	121	0	3	0	14	0	21	0
– Purchase contracts	2	0	175	0	49	0	5	0
	331	2	302	0	96	1	100	0

¹⁾ Commodity derivative contracts with non-hedge accounting status include oil, vegetable oil, electricity and gas derivative contracts. They consist of trading derivative contracts and cash flow hedges without hedge accounting status.

	2018				2017			
	Assets		Liabilities		Assets		Liabilities	
	Current	Non-current	Current	Non-current	Current	Non-current	Current	Non-current
Balance sheet reconciliation								
Derivative financial instruments	352	3	338	1	156	4	117	0

Fair value estimations

Derivative financial instruments are initially recognized and subsequently re-measured at their fair values i.e. the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participant and the measurement date.

The fair values of the interest rate swaps are the present values of the estimated future cash flows. Foreign exchange forward contracts are calculated using the valuation model and the market rates as per last business day of financial year. The fair value of currency options are calculated using market rates as per last business day of financial year and by using the Black and Scholes option valuation model.

The fair value of exchange traded commodity futures and option contracts is determined using the forward exchange market quotations as per last business day of financial year. The fair value of over-the-counter derivative contracts is calculated using the net present value of the forward derivative contracts quoted market prices as per last business day of financial year.

Fair value hierarchy of derivatives, MEUR

	2018				2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets								
Non-current derivative financial instruments								
Interest rate derivatives	0	0	0	0	0	3	0	3
Currency derivatives	0	1	0	1	0	0	0	0
Commodity derivatives	0	2	0	2	0	1	0	1
Other financial assets	0	0	3	3	0	0	5	5
Current derivative financial instruments								
Interest rate derivatives	0	1	0	1	0	0	0	0
Currency derivatives	0	20	0	20	0	59	0	59
Commodity derivatives	34	297	0	331	7	89	0	96
Financial liabilities								
Non-current derivative financial instruments								
Interest rate derivatives	0	0	0	0	0	0	0	0
Currency derivatives	0	1	0	1	0	0	0	0
Commodity derivatives	0	0	0	0	0	0	0	0
Current derivative financial instruments								
Interest rate derivatives	0	0	0	0	0	1	0	1
Currency derivatives	0	36	0	36	0	14	0	14
Commodity derivatives	24	278	0	302	13	87	0	100

Financial instruments that are measured in the balance sheet at fair value are presented according to following fair value measurement hierarchy:

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

Level 2: inputs other than quoted price included within Level 1 that are observable for the assets or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)

Level 3: inputs for the assets or liability that is not based on observable market data (unobservable inputs).

22 Other contingent liabilities

Real estate investments

The Company is obliged to adjust VAT deductions made from real estate investments if the taxable utilization of real estate will decrease during a 10 years control period.

23 Shares and holdings

	Country of incorporation	No of shares	Holding -%	Book value 31 Dec 2018 EUR thousands
Subsidiary shares				
Kiinteistö Oy Espoon Keilaranta 21	Finland	16,000	100.00	36,725
LLC Neste Saint-Petersburg	Russia	10	100.00	58,427
Navidom Oy	Finland	50	50.00	1
Neste Eesti AS	Estonia	10,000	100.00	5,927
Neste Engineering Solutions Oy	Finland	2,100	100.00	27,780
Neste Markkinointi Oy	Finland	210,560	100.00	51,467
Neste AB	Sweden	2,000,000	100.00	23,972
Neste Components B.V.	Netherlands	40	100.00	8,022
Neste Affiliate B.V.	Netherlands	26,090	100.00	19,177
Neste Insurance Limited	Guernsey	7,000,000	100.00	3,000
Neste N.V.	Belgium	4,405,414	99.99	13,753
Neste (Suisse) S.A.	Switzerland	200	100.00	62
Neste US, Inc.	USA	1,000	100.00	19,528
Neste Renewable Fuels Oy	Finland	200	100.00	1,676,901
Neste Shipping Oy	Finland	101	100.00	55,452
				2,000,194

Associated companies

A/B Svartså Vattenverk – Mustjoen Vesilaitos O/Y	Finland	14	40.00	124
Kilpilahti Powerplant Ltd.	Finland	20,000	40.00	4,509
Neste Arabia Co. Ltd.	Saudi Arabia	480	48.00	0
Tahkoluodon Polttoöljy Oy	Finland	630	31.50	5
Vaskiluodon Kalliovarasto Oy	Finland	330	50.00	7
				4,645

	Country of incorporation	No of shares	Holding -%	Book value 31 Dec 2018 EUR thousands
Other shares and holdings				
CLEEN Oy	Finland	100		100
East Office of Finnish Industries Oy	Finland	1		10
Kiinteistö Oy Anttilankaari 8	Finland	51		545
Kiinteistö Oy Himoksen Aurinkopaikka	Finland	51		457
Kiinteistö Oy Katinkullan Hiekkaniemi	Finland	102		903
Kiinteistö Oy Katinkultaniemi	Finland	51		398
Kiinteistö Oy Kuusamon Tähti 1	Finland	51		457
Kiinteistö Oy Laavutieva	Finland	51		311
Kiinteistö Oy Lapinniemi & Osakeyhtiö Lapinniemi	Finland	24		125
Posintra Oy	Finland	190		34
				3,340

Telephone shares

Elisa Oyj	Finland	1		0
Pietarsaaren Seudun Puhelin Oy	Finland	3		1
Osuuskunta PPO	Finland	1		0
Savonlinnan Puhelinosuuskunta SPY Finland		1		1
				2

Connection fees

				63
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Total				2,008,244
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24 Disputes and potential litigations

Neste had a dispute concerning the excise tax levied on the exported products. Finnish Customs levied excise tax, interest and additional tax totaling approximately EUR 16 million due to the default of entries to the Excise Movement and Control System (EMCS). Neste has received in January 2019 a decision by the Finnish Tax Authority in favor of Neste concerning a pending excise tax dispute of EUR 13 million, which will affect year 2019 results positively.

Regardless of the given decision in the main issue, the Tax Authority did not decide the relating interest and additional tax of EUR 3 million in favor of Neste. Neste will appeal in this respect to the Administrative Court of Helsinki. The payment was charged to the income statement in 2016.

Neste is currently engaged in arbitration with the Bahrain base oil joint operation partners concerning a contractual dispute.

Proposal for the distribution of earnings and signing of the Review by the Board of Directors and the Financial Statements

The Parent company's distributable equity as of 31 December 2018 stood at EUR 2,181 million. The Board of proposes Neste Corporation to pay a dividend of EUR 2.28 per share for 2018, totalling EUR 583 million, and that any remaining distributable funds be allocated to retained earnings.

Espoo, 5 February 2019

Matti Kähkönen

Martina Flöel

Marco Wirén

Elizabeth Burghout

Laura Raitio

Jari Rosendal

Willem Schoeber

Jean-Baptiste Renard

Peter Vanacker
President and CEO

Helsinki, 5 February 2019

PricewaterhouseCoopers Oy
Authorised Public Accountants

Markku Katajisto
Authorized Public Accountant

Auditor's Report (Translation of the Finnish Original)

To the Annual General Meeting of Neste Oyj

Report on the Audit of the Financial Statements

Opinion

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial position and financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of the financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report to the Audit Committee.

What we have audited

We have audited the financial statements of Neste Oyj (business identity code 1852302-9) for the year ended 31 December 2018. The financial statements comprise:

- the consolidated statement of financial position, statement of income, statement of comprehensive income, statement of changes in equity, cash flow statement and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, statement of cash flows and notes.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

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

Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, the non-audit services that we have provided to the parent company and to the group companies are in accordance with the applicable law and regulations in Finland and we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014. The non-audit services that we have provided are disclosed in note 9 to the Financial Statements.

Our Audit Approach

Overview



As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They 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 the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial statements as a whole.

Overall group materiality	€ 50 million (previous year € 50 million)
How we determined it	Approximately 5% of profit before tax (previous year approximately 5% of profit before tax)
Rationale for the materiality benchmark applied	We chose profit before tax as the benchmark because, in our view, it is the benchmark against which the performance of the Group is most commonly measured by users, and is a generally accepted benchmark. We chose 5% which is within the range of acceptable quantitative materiality thresholds in auditing standards.

How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the group, the accounting processes and controls, and the industry in which the group operates.

The scope included the refineries and operations in Finland, Switzerland, Singapore, the Netherlands, Sweden and the USA, covering the most significant companies in the Renewable Products, Oil Products and Marketing & Services segments. We obtained, through our audit procedures at the aforementioned reporting units, combined with additional procedures at the Group level, sufficient and appropriate evidence regarding the financial information of the Group as a whole to provide a basis for our opinion on the consolidated financial statements.

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.

As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matter in the audit of the group

How our audit addressed the key audit matter

Timing of revenue recognition

Refer to note 5 in the financial statements

The group has several different revenue streams, under the Renewable Products, Oil Products, and Marketing & Services segments.

In both the Renewable Products and Oil Products segments, the company has deliveries, which can be considered individually significant. We consider there to be a risk of misstatement of the financial statements related to transactions occurring close to the year-end, as transactions could be recorded in the wrong financial period (cut-off). The Marketing & Services segment's revenues consist of several small transactions, with short payment terms, low complexity and significant automation, therefore resulting in a lower risk related to cut-off.

Accordingly, we focused our work on cut-off in the Renewable Products and Oil Products segments.

In order to address the risk of misstatement related to cut-off in revenue recognition, we tested balances recognised in the company's balance sheet and, tested individual transactions occurring either immediately before or after the year end.

We performed tests of details on the accrued revenue and accounts receivable balances recognised in the balance sheet at the year end.

Our tests of detail focused on transactions occurring within proximity of the year end in the Renewable Products and Oil Products segments, obtaining evidence to support the appropriate timing of revenue recognition, based on terms and conditions set out in sales contracts and delivery documents or system generated reports.

Key audit matter in the audit of the group

The valuation of inventories

Refer to note 18 in the financial statements

The company has significant inventory balances in both the Renewable Products and Oil Products segments. The inventory is valued at the lower of cost or net realisable value.

While the Renewable Products' main finished product, Renewable Diesel, is produced using a wide range of different feedstocks, the finished products in the Oil Products segment are refined from one type of input, being crude oil. We focused on the valuation of Renewable Products given the higher degree of complexity involved in the underlying inventory valuation calculations, as this introduces a higher risk of error.

The cost of inventory in the Renewable Products segment reflects purchase prices, which are impacted by the market prices of different feedstocks, such as waste and residues and vegetable oils, as well as the mix of feedstocks purchased.

The net realisable value of the inventory reflects management's best estimate of the likely sales prices, which depend on a number of different factors, and expected sales mix by feedstock.

How our audit addressed the key audit matter

We focused our procedures around the Renewable Products inventories. The valuation of Renewable Products inventory at cost is determined based on the assumption that goods are sold on in the same order in which they were purchased (the FIFO principle).

We compared the cost of raw materials and pre-treated products to purchase invoices, verifying the application of the FIFO principle and application of the appropriate purchase prices.

We tested the cost of the finished products by tracing the purchase cost of the used raw materials to purchase invoices. We also verified that the capitalised production costs were based on actual refining costs and thereby appropriate.

Our testing of the net realisable value covered raw materials, pre-treated products and finished products. We compared raw materials and pre-treated products to relevant market prices where these were available. Where no readily available market price could be found, we performed a compound level comparison to the respective compound's repurchase price or the average purchase price based on the latest purchases. We compared finished products to a weighted average of sales made or agreed during the last month of the year. We verified that the principle of valuing inventory at the lower of cost or net realisable value was appropriately applied.

Key audit matter in the audit of the group

System environment and internal controls

The group has a fragmented system environment, reflecting the different nature of the different operating segments. The group is in the process of implementing a new ERP system, with significant system rollouts occurring during 2018 and forward.

The ERP rollout together with the fragmented system environment introduce risks related to system access, change management and data transfer between the different systems, and we have accordingly designated this as a focus area in the audit.

Management has mitigated this risk by means of manual controls.

How our audit addressed the key audit matter

Our response to testing the ERP rollout included both the testing of the controls surrounding implementation as well as testing the migration of income statement and balance sheet balances between legacy systems and the new system. Our response to the risks related to the fragmented system environment includes both the test of IT and business process controls. We also performed sufficient tests of details as part of our audit.

We tested the company's controls around access and change management related to key IT systems. The scope of testing included the new ERP system.

We also tested the company's controls around system interfaces, and the transfer of data from one system to another.

We noted certain weaknesses related to access controls to certain key systems. We have reported these control weaknesses to management, and included sufficient tests of detail in our audit response in order to sufficiently mitigate the related risks in our audit.

Key audit matter in the audit of the group

Disputes and potential litigations Refer to notes 4 and 29 in the financial statements

As reported in note 31, the group is involved in a few legal proceedings. The accounting treatment of, and amounts to be recorded for claims depend on the merits of the claim as well as if a court judgement exists. In the case of arbitrations, management assesses whether the group will be liable to compensate the opponent. Provisions are recorded for cases, where management considers it likely that the group will be liable to compensate the opponent. Following a court judgement in a tax case, the group has in 2018 recorded an impairment, which has been disclosed in notes 4 and 29.

Management judgement is involved in assessing the accounting for claims, and in particular in considering the probability of a claim being successful and we have accordingly designated this as a focus area of the audit. The risk related to the claims is mainly associated with the completeness of the disclosure, and the completeness of the provisions in the financial statements.

How our audit addressed the key audit matter

We obtained external confirmations directly from Neste's legal advisors in order to evaluate the disclosures and provisions recorded. We discussed the cases with management. We read the minutes of the board meetings, and inspected the company's legal expenses, in order to ensure that all cases have been identified. We tested the recorded impairment by reviewing the group's calculations and consolidation adjustments. We reviewed the disclosures for completeness based on our procedures detailed above.

Key audit matter in the audit of the group

Biofuel credits in the USA

Refer to notes 5 and 18 in the financial statements

Neste has sales operations in the USA, which are mainly focused in California.

Neste earns biofuel credits related to the import and sale of renewable fuels in the US and California in the form of RINs (Renewable Identification Number) and LCFs (California Low Carbon Credit).

RINs and LCFs are accounted for as government grants upon receipt of the product inventory in the USA, and are accounted for as inventory to the extent they have been separated from the physical goods, which happens when renewable fuel is blended with fossil fuel.

We identified the biofuel credits in the USA as an area of focus in the audit as there is a risk related to the valuation of these.

We have no key audit matters to report with respect to our audit of the parent company financial statements.

There are no significant risks of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014 with respect to the consolidated financial statements or the parent company financial statements.

How our audit addressed the key audit matter

Our testing of the biofuel credits included verification of the balances against the systems administered by the EPA (Environmental Protection Agency) and verification of balances against purchase and sales contracts.

Our testing of the valuation of these included:

- Comparing the valuation of RINs and LCFs accounted for as inventory to quoted market prices, assessing the reasonability of the difference taking into account market conditions
- Comparing the value of RINs and LCFs against historical sales prices obtained by Neste

In addition, we agreed the calculated balances to the accounting records, verifying that these had been accounted for in line with Neste's accounting policy.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or to cease operations, or there is 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 good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with good auditing practice, 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, 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 parent 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 the Board of Directors' and the Managing Director'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 parent company's or 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 parent company or 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 so that the financial statements give a true and fair view.
- 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.

Other Reporting Requirements

Appointment

We were first appointed as auditors by the annual general meeting on 3 April 2014. Our appointment represents a total period of uninterrupted engagement of 5 years.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report and the Annual Report is expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above 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. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion

- the information in the report of the Board of Directors is consistent with the information in the financial statements
- the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, 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.

Other Statements

We support that the financial statements and the consolidated financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown in the balance sheet is in compliance with the Limited Liability Companies Act. We support that the Members of the Board of Directors and the Managing Director of the parent company should be discharged from liability for the financial period audited by us.

Helsinki 5 February 2019

PricewaterhouseCoopers Oy

Authorised Public Accountants

Markku Katajisto

Authorised Public Accountant (KHT)