The Biofore Company UPM

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UPM FINANCIAL STATEMENTS RELEASE 2018

UPM financial statements release 2018:

UPM delivered record earnings in 2018 – in a strong position for 2019

Q4 2018 highlights

- Sales grew by 6% to EUR 2,731 million (2,571 million in Q4 2017)
- Comparable EBIT increased by 10% to EUR 404 million (366 million)
- Sales prices increased in all business areas, outweighing the impact of higher input costs
- Operating cash flow was strong at EUR 420 million (407 million)
- Net debt decreased to EUR –311 million (174 million)
- UPM increased the fair value of its forest assets in Finland by EUR 345 million, mainly due to higher forest growth estimates
- UPM Jämsänkoski release liner expansion in Finland was completed

2018 highlights

- Sales grew by 5% to EUR 10,483 million (10,010 million in 2017)
- Comparable EBIT increased by 17% to EUR 1,513 million (1,292 million)
- Sales prices increased in all business areas, outweighing the impact of higher input costs and unfavourable currency exchange rates
- Operating cash flow was EUR 1,391 million (1,558 million), held back by an increase in working capital
- The Board proposes a dividend of EUR 1.30 (1.15) per share, an increase of 13% from previous year
- UPM initiated focused investments in Germany, Finland and China to grow in the attractive release liner segments

Key figures

	Q4/2018	Q4/2017	Q3/2018	Q1–Q4/2018	Q1–Q4/2017
Sales, EURm	2,731	2,571	2,650	10,483	10,010
Comparable EBITDA, EURm	461	451	487	1,823	1,631
% of sales	16.9	17.5	18.4	17.4	16.3
Operating profit, EURm	744	299	417	1,895	1,259
Comparable EBIT, EURm	404	366	420	1,513	1,292
% of sales	14.8	14.2	15.9	14.4	12.9
Profit before tax, EURm	731	273	401	1,839	1,186
Comparable profit before tax, EURm	390	340	404	1,457	1,218
Profit for the period, EURm	591	244	328	1,496	974
Comparable profit for the period, EURm	319	297	330	1,194	1,004
Earnings per share (EPS), EUR	1.11	0.46	0.61	2.80	1.82
Comparable EPS, EUR	0.60	0.56	0.61	2.24	1.88
Return on equity (ROE), %	24.9	11.5	14.5	16.2	11.5
Comparable ROE, %	13.4	14.0	14.6	12.9	11.9
Return on capital employed (ROCE), %	28.8	13.2	16.7	18.4	12.5
Comparable ROCE, %	15.5	15.9	16.8	14.6	12.8
Operating cash flow, EURm	420	407	434	1,391	1,558
Operating cash flow per share, EUR	0.79	0.76	0.81	2.61	2.92
Equity per share at the end of period, EUR	18.36	16.24	17.21	18.36	16.24
Capital employed at the end of period, EURm	10,575	9,777	9,942	10,575	9,777
Net debt at the end of period, EURm	–311	174	4	–311	174
Net debt to EBITDA (last 12 m.)	–0.17	0.11	0.00	–0.17	0.11
Personnel at the end of period	18,978	19,111	19,076	18,978	19,111

UPM presents certain performance measures of performance, financial position and cash flows, which are alternative performance measures in accordance with the guidance issued by the European Securities and Markets Authority (ESMA). The definitions of alternative performance measures are presented in *» UPM Annual Report 2017*.

As of 26 April 2018, UPM Paper ENA is renamed as UPM Communication Papers. The change has no impact on reported figures.

Jussi Pesonen, President and CEO, comments on Q4 and full year 2018 results:

"2018 was a record year for UPM. We achieved record earnings and our net debt fell below zero. The year was a commercial success and we succeeded in mitigating higher input costs. We laid the groundwork for future growth in our current and innovative new businesses and received exceptional recognition for our responsibility performance. The results in 2018 demonstrate the impact of many years of transformation and I wish to thank all UPMers and our partners for achieving excellent results together.

Our sales grew by 5% and comparable EBIT increased by 17% in 2018. Our cash flow was strong, and we finished the year with a record low negative net debt of EUR –311 million.

While the uncertainties in the global economy increased towards the end of the year, we delivered a strong fourth quarter. This marked the 23rd consecutive quarter of earnings growth. Our sales grew in Q4 by 6% and comparable EBIT increased by 10% to EUR 404 million.

UPM Biorefining had an excellent fourth quarter. Our pulp deliveries resumed growth despite the Pietarsaari mill maintenance shutdown. Biofuels continued to operate on a new level of profitability and production, which was achieved after the Q2 turnaround shutdown.

UPM Communication Papers continued to increase its earnings despite steadily declining market demand and steep increase in variable costs. This shows the result of consistent work for customer commitment, cost efficiency and effective use of assets. Also UPM Energy continued to improve its performance thanks to higher prices, even though hydropower volumes remained very low.

UPM Raflatac resumed sales growth, but its quarter was still impacted by variable cost increases. UPM Plywood enjoyed good demand, but deliveries were unfortunately held back by political strikes in Finland.

UPM Specialty Papers had a disappointing quarter. In the Asian fine paper business, margins continued to be under pressure as destocking in the value chain continued to pressure prices and pulp costs remained high. However, good demand continued in the label paper and release liner businesses. We will focus on measures to restore the profitability of the business.

Looking forward, we are excited about 2019. UPM is in great shape with competitive businesses, aiming higher culture and consistently strong cash flow. Additionally, we have net cash in the balance sheet, which is unforeseen in this industry.

Furthermore, we look forward to our transformative prospects that provide us with unique opportunities for significant long-term earnings growth. In Uruguay, preparations for the potential new world-class pulp mill are proceeding. The implementation of the investment agreement between UPM and the Government of Uruguay is now in an intensive phase, where tangible progress in the infrastructure initiatives is required. In January, we announced that UPM is taking part in the international public tendering process in the port of Montevideo. If the ongoing second preparation phase is concluded successfully, UPM will initiate the company's regular process of analysing and preparing an investment decision on the potential pulp mill project.

In UPM Biochemicals, we are continuing the basic engineering work for the potential first industrial-scale biochemicals refinery in Germany. In UPM Biofuels, we have completed the Environmental Impact Assessment for a possible biofuels refinery in Finland.

UPM's Board of Directors has today proposed a dividend of EUR 1.30 (1.15) per share for 2018, representing an increase of 13% from the previous year and 50% of operating cash flow per share. The proposal, which is above company's long-term dividend policy range of 30–40%, reflects UPM's exceptional financial position and confidence in future cash generation.

Overall, the long-term outlook for our businesses is stronger than ever. It is driven by global megatrends, more sustainable consumer choices and the need to reduce reliance on fossil resources. UPM is ready to grasp the limitless opportunities that bioeconomy offers for value creation and business growth."

Outlook for 2019

The global economic growth is estimated to continue in 2019, albeit at a slower pace than in 2018. There are, however, significant uncertainties related to this, including trade negotiations between China and the US, growth in China, the undefined nature of Brexit and political uncertainties in several countries. These issues may have an impact on the global economic growth and on UPM's product and raw material markets during 2019.

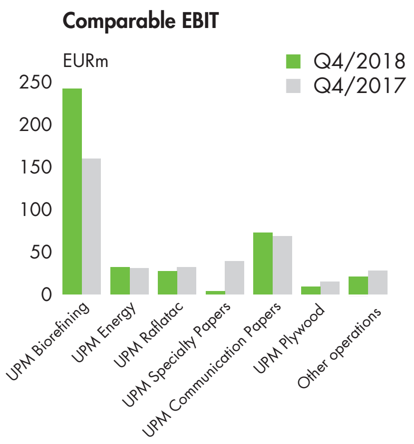
UPM reached record earnings in 2018. UPM's business performance is expected to continue at a good level in 2019.

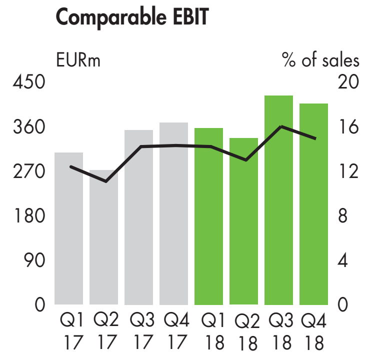
In 2019, favorable demand is expected to continue for most UPM businesses. Demand decline is expected to continue for UPM Communication Papers.

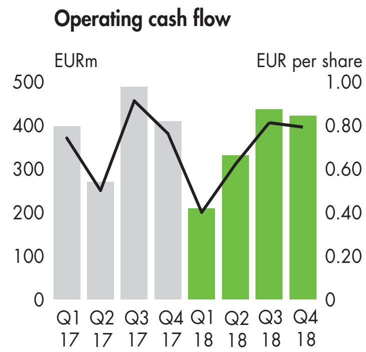
In the beginning of the year 2019, pulp prices are expected to be lower and graphic paper prices in Europe are expected to be higher than in Q4 2018.

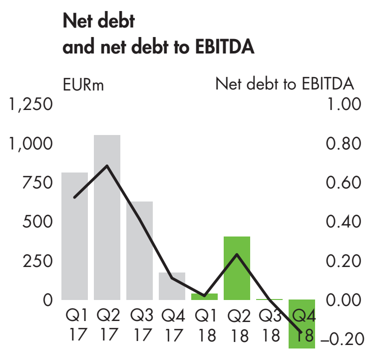
Input costs are expected to stabilise after the significant increases seen in 2018. UPM will continue measures to reduce both variable and fixed costs.

Fair value increases of forest assets are not expected to contribute meaningfully to comparable EBIT in 2019.









Results

Q4 2018 compared with Q4 2017

Q4 2018 sales were EUR 2,731 million, 6% higher than the EUR 2,571 million for Q4 2017. Sales grew in UPM Biorefining, UPM Communication Papers, UPM Specialty Papers, UPM Raflatac and UPM Energy, and remained unchanged in UPM Plywood.

Comparable EBIT increased by 10% to EUR 404 million, 14.8% of sales (366 million, 14.2%). Sales prices increased across all UPM business areas. The positive impact of higher sales prices was clearly larger than the negative impact of increased variable costs and changes in currency exchange rates.

Fixed costs increased by EUR 31 million, partly due to higher maintenance costs. Delivery volumes were on about the same level as in the comparison period.

Depreciation, excluding items affecting comparability, totalled EUR 105 million (112 million). The increase in the fair value of forest assets net of wood harvested and excluding items affecting comparability was EUR 47 million (26 million).

Operating profit totalled EUR 744 million (299 million). Items affecting comparability in operating profit totalled EUR 340 million in the period (–67 million). This included a EUR 345 million increase in the fair value of the forest assets in Finland, mainly due to higher forest growth estimates. In addition, the company adjusted its long-term wood price estimates slightly. Items affecting comparability also included EUR 9 million charge in UPM Energy, related to restructuring of ownership in the Meri-Pori power plant.

Net interest and other finance costs were EUR 15 million (22 million). The exchange rate and fair value gains and losses were gains of EUR 1 million (loss of EUR 1 million). Income taxes totalled EUR 139 million (29 million). Items affecting comparability in taxes totalled EUR 68 million expense (14 million income).

Profit for Q4 2018 was EUR 591 million (244 million), and comparable profit was EUR 319 million (297 million).

Q4 2018 compared with Q3 2018

Comparable EBIT decreased by 4% to EUR 404 million, 14.8% of sales (420 million, 15.9%).

Changes in sales prices across UPM business areas had a small positive impact on comparable EBIT. Variable costs were on the same level as in the comparison period, including the normal energy related refunds. Variable costs in the comparison period were impacted by turbine damage and downtime at the Plattling paper mill, which was back in operation in Q4 2018.

Deliveries increased slightly. Fixed costs increased by EUR 69 million due to a combination of seasonal factors and higher maintenance activity, including the Pietarsaari pulp mill maintenance shutdown in Q4 2018.

Depreciation, excluding items affecting comparability, totalled EUR 105 million (105 million). The increase in the fair value of forest assets net of wood harvested and excluding items affecting comparability was EUR 47 million (37 million).

Operating profit totalled EUR 744 million (417 million).

Full year 2018 compared with 2017

Sales in 2018 totalled EUR 10,483 million, 5% higher than the EUR 10,010 million for 2017. Sales grew in UPM Biorefining, UPM Specialty Papers, UPM Communication Papers and UPM Energy, and remained broadly unchanged in UPM Raflatac and UPM Plywood.

Comparable EBIT increased by 17% to EUR 1,513 million, 14.4% of sales (1,292 million, 12.9%). Sales prices increased across all UPM business areas. The positive impact of higher sales prices was clearly larger than the negative impact of increased variable costs and changes in currency exchange rates.

Fixed costs increased by EUR 69 million from the previous year, mainly due to higher maintenance costs. Delivery volumes in UPM Energy were higher, in other UPM business areas lower than in the previous year.

Depreciation, excluding items affecting comparability, totalled EUR 422 million (447 million). The increase in the fair value of forest assets net of wood harvested and excluding items affecting comparability was EUR 107 million (103 million).

Operating profit totalled EUR 1,895 million (1,259 million). Items affecting comparability in operating profit totalled EUR 382 million (–33 million). This included a EUR 345 million increase in the fair value of the forest assets in Finland, mainly due to higher forest growth estimates. In addition, the company adjusted its long-term wood price estimates slightly. The sale of UPM Communication Papers' hydropower facilities in Schongau and Ettringen, Germany, resulted in a sales gain of EUR 30 million. Items affecting comparability also included EUR 9 million charge in UPM Energy, related to restructuring of ownership in the Meri-Pori power plant, and reversals of previous years' restructuring provisions, totalling EUR 18 million for UPM Communication Papers.

Net interest and other finance costs were EUR 60 million (57 million). The exchange rate and fair value gains and losses resulted in a gain of EUR 3 million (loss of EUR 12 million).

Income taxes totalled EUR 342 million (212 million). Items affecting comparability in taxes totalled EUR 80 million expense (2 million income).

Profit for 2018 was EUR 1,496 million (974 million) and comparable profit was EUR 1,194 million (1,004 million).

Financing and cash flow

In 2018, cash flow from operating activities before capital expenditure and financing totalled EUR 1,391 million (1,558 million). Working capital increased by EUR 209 million during the period (decreased by EUR 91 million), driven by an increase in the price of UPM's products and raw materials and higher wood inventories compared with the very low level at the end of the previous year.

A dividend of EUR 1.15 per share (totalling EUR 613 million) was paid on 19 April 2018, in respect of the 2017 financial year.

Net debt decreased to EUR –311 million at the end of the year (174 million). The gearing ratio as of 31 December 2018 was –3% (2%). The net debt to EBITDA ratio, based on the latest 12 months' EBITDA, was –0.17 at the end of the period (0.11).

On 31 December 2018, UPM's cash funds and unused committed credit facilities totalled EUR 0.9 billion.

Capital expenditure

In 2018, capital expenditure totalled EUR 303 million, 2.9% of sales (329 million, 3.3% of sales).

Total capital expenditure in 2019, excluding investments in shares, is estimated to be approximately EUR 350 million, excluding any impact of UPM's potential transformative prospects.

In April 2017, UPM announced plans to strengthen its position in the label market and invest approximately EUR 6 million in capacity for special labels in Tampere, Finland. A new special label product line has been built, focusing on small series of production runs. In addition, internal logistics have been strengthened. The new product line was completed in January 2019.

In June 2017, UPM announced plans to further improve the efficiency and competitiveness of the UPM Kaukas pulp mill, with a EUR 30 million investment to upgrade the mill's fibre lines, recovery boiler, evaporation, bailing and wood handling. The project was completed in Q2 2018. The annual production capacity of the UPM Kaukas pulp mill increased by 30,000 tonnes to 770,000 tonnes of softwood and birch pulp.

In October 2017, UPM announced plans to expand its Chudovo plywood mill in Russia. The project will raise the mill's production capacity by 45,000 cubic metres to 155,000 cubic metres, while also broadening the mill's product portfolio. In addition to the production capacity growth, a new bio-heat boiler will be built at the mill site. The total investment will be approximately EUR 50 million and will be completed by the end of Q3 2019.

In January 2018, UPM announced that it intended to expand its glassine and supercalendered kraft (SCK) paper manufacturing capacity by rebuilding a calender at the UPM Jämsänkoski mill in Finland. The project increased annual capacity by approximately 40,000 tonnes and was completed during Q4 2018.

In April 2018, UPM announced that it would rebuild paper machine 2 at its Nordland mill in Dörpen, Germany and convert it from fine paper to glassine paper production. The machine will be equipped with new finishing equipment and will start producing glassine paper as of Q4 2019. The planned capacity after the rebuild will be 110,000 tonnes per year. The total investment in Nordland is EUR 116 million.

In April 2018, UPM announced plans to increase the release liner base paper capacity at the UPM Changshu mill in China. Installing a second supercalender on paper machine 3 will create an additional capacity of more than 40,000 tonnes of glassine paper a year, as of Q1 2020. The total investment in Changshu is EUR 34 million.

Personnel

In 2018, UPM had an average of 19,271 employees (19,489). At the beginning of the year the number of employees was 19,111 and at the end of 2018 it was 18,978.

Uruguay platform development

UPM is studying the potential of building a new world-class pulp mill in Uruguay. The possible pulp mill would have an annual capacity of approximately 2 million tonnes of eucalyptus market pulp. The preliminary estimate for a pulp mill investment on site is approximately EUR 2 billion. The site of the potential mill would be close to the city of Paso de los Toros, located in the department of Durazno in central Uruguay. Two preparation phases need to be successfully completed before UPM would be in a position to make an investment decision.

Phase 1

The first preparation phase started in July 2016, when UPM commenced discussions with the Government of Uruguay regarding the prerequisites for long-term industrial development, as well as initiatives for infrastructure development in Uruguay. The investment agreement was signed on 7 November 2017, completing the first phase.

Phase 2

The second preparation phase is proceeding. The rail tendering process is in its final stages and the port concession tendering has started. UPM is taking part in the port concession tendering process and has submitted the Environmental and Social Impact Study of the mill to the authorities. To keep local communities, media and other stakeholders updated on the progress, the company has organised several public information sessions. The next main items are related to tangible progress in infrastructure construction, and labour protocols.

Achieving significant progress in the implementation of the agreed infrastructure initiatives by the State and any relevant items are to be agreed prior to the possible final investment decision. This second phase is expected to last 1.5 to 2 years.

If the second preparation phase is concluded successfully, UPM will initiate the company's regular process of analysing and preparing an investment decision about the potential pulp mill.

The investment agreement

The investment agreement outlines the local prerequisites for a potential pulp mill investment. It details the roles, commitments and timeline for both parties, as well as the relevant items to be agreed prior to the final investment decision.

A long-term industrial operation requires a stable and predictable operational environment. This will be supported by several measures in the areas of regional development, environment, forestry and land planning, as well as labour and energy conditions.

The Government will develop the rail and road network by tendering the construction and long-term maintenance of the network. The Government will also promote concession for a terminal specialising in pulp in the Montevideo port with rail access, ensuring a reliable and competitive outlet to export markets.

Once the permitting requirements are fulfilled, the Government will grant the mill the status of a free-trade zone to ensure competitiveness in international markets.

UPM will carry out an engineering study and permitting process for a new world-class pulp mill with an annual capacity of about 2 million tonnes of eucalyptus market pulp. The preliminary estimate for a pulp mill investment on site is approximately EUR 2 billion.

In addition, a successful project requires off-site investments in plantation land and forestry, road network and nursery capacity, harvesting and transport equipment, rolling stock for the rail, port and export facilities and human development.

Biochemicals business development

UPM formed UPM Biochemicals in 2013 by combining its biochemical-related business initiatives. UPM Biochemicals offers and develops innovative, sustainable and competitive wood-based biochemicals. The product segments are biochemicals, lignin products and biomedical products. Development is at the pre-commercial phase, with UPM actively developing and testing industrial applications to create industrial-scale mill concepts.

In October 2017, UPM announced that it was evaluating the potential of building a biorefinery in Germany. UPM is proceeding with detailed commercial and basic engineering studies to confirm the attractiveness of the business opportunity. The estimated duration of this phase is about 1 to 1.5 years. If all preparation phases are concluded successfully, UPM would initiate the company's regular process of analysing and preparing an investment decision.

OL3 power plant project

Teollisuuden Voima Oyj (TVO) is in the process of constructing a third nuclear power plant unit, OL3 EPR, at the Olkiluoto site (OL3). UPM participates in OL3 through its shareholding in Pohjolan Voima Oyj (PVO), which is the majority shareholder in TVO. UPM's indirect share of OL3 is approximately 31%. The OL3 plant supplier, a consortium consisting of AREVA GmbH, AREVA NP SAS and Siemens AG (the Supplier), is constructing OL3 as a turnkey project.

The start of regular electricity production, originally scheduled for April 2009, has been revised several times by the Supplier. As announced by TVO in November 2018, TVO received from the Supplier an updated schedule for the commissioning of OL3 and, in accordance with the Supplier's updated schedule, the regular electricity generation at OL3 will commence in January 2020. As disclosed by TVO, fuel will be loaded into the reactor in June 2019, and the first connection to the grid will take place in October 2019. According to TVO, OL3 will produce 2–4 TWh of electricity, at varying power levels, during the period of time between the first connection to the grid and the start of regular electricity production in accordance with the Supplier's plant ramp-up programme.

When completed, OL3 will increase UPM Energy's electricity generation capacity significantly. The new power plant unit is expected to be highly efficient and meet the highest safety standards. Its power generation will be CO2-free and Olkiluoto will have a secure solution for the deposit of used fuel.

Events during the year 2018

On 1 January, UPM completed the sale of UPM Communication Papers' hydropower facilities in Schongau and Ettringen, Germany, to erdgas schwaben GmbH. The cash flow impact was booked in Q4 2017, and the sales gain of EUR 30 million was booked in Q1 2018 as an item affecting comparability.

On 5 February, UPM announced that it was studying biofuels development opportunities by conducting an environmental impact assessment (EIA) for a possible biorefinery in Mussalo, Kotka, in south-eastern Finland. The UPM Kotka Biorefinery would produce approximately 500,000 tonnes of advanced biofuels made from sustainable raw materials for use in the road transport, marine and aviation sectors. The biorefinery's products could also be used for replacing fossil raw materials in the chemical industry. The EIA was completed and given to the authorities for their final conclusions on 4 October. The consideration of the possible Kotka Biorefinery is in the early stages.

On 11 March, Teollisuuden Voima Oyj (TVO) announced that it had signed a comprehensive settlement agreement concerning the completion of the OL3 EPR project and related disputes with OL 3 EPR (OL3) plant supplier consortium companies Areva NP, Areva GmbH and Siemens AG, as well as with Areva Group parent company Areva SA, a company wholly owned by the French State.

On 29 November, TVO published a stock exchange release announcing that it had received an updated schedule from the Supplier for the commissioning of the OL3 EPR plant unit. According to the received information, the first connection to the grid will take place in October 2019 and the regular electricity production will start in January 2020.

On November 26, Executive Vice President of UPM Biorefining Business Area, Heikki Vappula, was confirmed to have died in a plane crash while on a private trip in Zimbabwe. Jussi Pesonen, President and CEO, assumed, on top of his regular duties, temporary responsibility as Head of UPM Biorefining. A process for permanent management arrangements was initiated.

On 18 December, UPM announced it had signed a contract on a forest estate transaction and long-term partnership with United Bankers. UPM sold over 21,000 hectares of land, located mainly in Kainuu region, to United Bankers forest funds. As part of the long-term partnership, UPM committed to manage United Bankers forest property and United Bankers committed to sell a significant amount of wood to UPM annually.

Events after the balance sheet date

On 9 January, UPM announced it is taking part in the international public tendering process in the port of Montevideo organised by the National Ports Administration (ANP) of Uruguay. The scope of the concession tender is the building and operation of a port terminal specialising in the storage and shipping of pulp, chemicals and other inputs related to pulp production, with the capacity to handle approximately 2 million tonnes of pulp annually. The tender includes the design, financing, engineering, construction, operation and maintenance of the pulp terminal. The tenure of the concession would be for 50 years.

If awarded a concession in the Montevideo port, UPM's financial commitment in the form of a performance bond would be USD 20 million at this stage. At the time of the potential investment decision on the pulp mill project described earlier in this report, UPM would proceed with the port investment decision and start of the construction of the port facilities. The preliminary UPM investment estimate for the port facilities would be approximately USD 260 million.

On 31 January, UPM announced it will invest in the refurbishment of Kuusankoski hydropower plant in Finland. The average annual production of the Kuusankoski plant is expected to increase from the current 180 GWh to 195 GWh. The investment will be completed by the end of 2022.

Dividend proposal for 2018

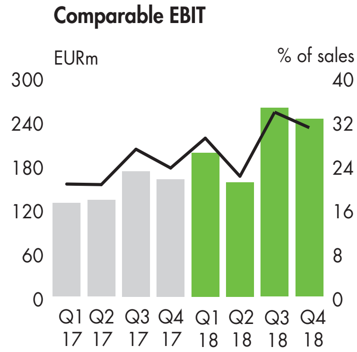
The Board of Directors proposes to the Annual General Meeting convening on 4 April 2019 that a dividend of EUR 1.30 per share be paid in respect of the 2018 financial year (1.15). The proposed dividend represents 50% of UPM's operating cash flow per share for the year 2018. It is proposed that the dividend be paid on 17 April 2019. On 31 December 2018, the distributable funds of the parent company were EUR 3,906.3 million.

Timing of significant maintenance shutdowns in 2018 and 2019

TIMING	UNIT
Q2/2018	Fray Bentos pulp mill Kaukas pulp mill Lappeenranta biorefinery turnaround Olkiluoto nuclear power plant
Q4/2018	Pietarsaari pulp mill
Q2/2019	Kymi pulp mill Olkiluoto nuclear power plant
Q4/2019	Fray Bentos pulp mill

UPM Biorefining

UPM Biorefining consists of pulp, timber and biofuels businesses. UPM has three pulp mills in Finland and one mill and plantation operation in Uruguay. UPM operates four sawmills and one biorefinery in Finland. The main customers of UPM Biorefining are tissue, specialty paper and board producers in the pulp industry, fuel distributors in the biofuel industry and construction and joinery industries in the timber sector.



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	775	754	694	668	669	624	630	607	2,892	2,531
Comparable EBITDA, EURm	271	288	185	227	194	203	157	160	970	714
% of sales	34.9	38.1	26.6	33.9	28.9	32.4	25.0	26.4	33.5	28.2
Change in fair value of forest assets and wood harvested, EURm	9	6	8	7	6	7	14	8	30	33
Share of results of associated companies and joint ventures, EURm	–	1	–	–	1	–	1	1	2	2
Depreciation, amortisation and impairment charges, EURm	–39	–39	–39	–38	–41	–39	–41	–42	–155	–162
Operating profit, EURm	241	256	155	195	130	170	131	127	847	557
% of sales	31.1	33.9	22.3	29.2	19.4	27.2	20.8	20.9	29.3	22.0
Items affecting comparability in operating profit, EURm [1]	–	–	–	–	–30	–	–	–	–	–30
Comparable EBIT, EURm	241	256	155	195	159	170	131	127	847	587
% of sales	31.1	33.9	22.3	29.2	23.8	27.2	20.8	20.9	29.3	23.2
Capital employed (average), EURm	3,267	3,224	3,153	3,074	3,134	3,155	3,263	3,347	3,180	3,225
Comparable ROCE, %	29.5	31.7	19.7	25.4	20.3	21.5	16.1	15.1	26.6	18.2
Pulp deliveries, 1,000 t	912	870	835	850	880	890	907	918	3,468	3,595

Pulp mill maintenance shutdowns: Q4 2018 UPM Pietarsaari, Q2 2018 UPM Fray Bentos and UPM Kaukas. Q4 2017 UPM Kymi and Q2 2017 UPM Pietarsaari.

[1] In Q4 2017, items affecting comparability relate to the reorganisation of pension schemes.

- Scheduled maintenance shutdown in UPM Pietarsaari pulp mill, operationally positive quarter for the other pulp mills
- Strong performance for UPM Biofuels in the new production level

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Biorefining increased due to significantly higher pulp sales prices. Pulp delivery volumes grew. Variable costs increased due to higher pulpwood and log prices.

The average price for UPM's pulp deliveries in euros increased by 18%.

Q4 2018 compared with Q3 2018

Comparable EBIT decreased. Fixed costs were higher due to scheduled maintenance shutdown in UPM Pietarsaari pulp mill in Finland. Variable costs increased slightly. Delivery volumes increased for pulp and biofuels.

The average price for UPM's pulp deliveries in euros decreased by 1%.

Full year 2018 compared with 2017

Comparable EBIT increased due to significantly higher pulp sales prices. Variable costs increased and delivery volumes were lower. Fixed costs increased, partly due to several large scheduled maintenance shutdowns in Q2 and Q4 2018.

The average price for UPM's pulp deliveries in euros increased by 22%.

Market environment

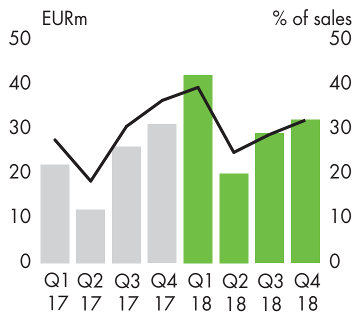
- Global chemical pulp demand was strong in H1 2018. Market balance was further tightened as supply was restricted due to production outages in the industry. In H2 2018, uncertainties in global economy, gradually slowing growth in China and destocking in the value chain reduced growth in market pulp shipments somewhat.
- In Europe, the market price of both northern bleached softwood kraft (NBSK) pulp and bleached hardwood kraft pulp (BHKP) remained nearly unchanged in the fourth quarter compared to the previous quarter. In China, the market price of northern bleached softwood kraft (NBSK) and northern bleached hardwood kraft pulp (BHKP) decreased during the fourth quarter.
- In 2018, the average European market price in euros was 27% higher for NBSK and 21% higher for BHKP compared to the previous year. In China, the average market price in US dollars was 19% higher for NBSK and 26% higher for BHKP compared to the previous year.
- Demand for advanced renewable diesel and naphtha remained strong.
- In sawn timber, demand slowed down seasonally, and the market prices remained stable in the fourth quarter.

Sources: PPPC, FOEX

UPM Energy

UPM Energy creates value through cost competitive, low-emission electricity generation and through physical electricity and financial trading. UPM Energy is the second largest electricity producer in Finland. UPM's power generation capacity consists of hydropower, nuclear power and condensing power.

Comparable EBIT



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	100	101	83	107	86	86	65	80	391	317
Comparable EBITDA, EURm	34	31	23	44	33	28	14	24	132	100
% of sales	34.1	30.8	27.2	41.1	38.8	33.0	21.8	30.3	33.7	31.6
Depreciation, amortisation and impairment charges, EURm	−2	−2	−2	−2	−2	−2	−2	−2	−9	−9
Operating profit, EURm	23	29	20	42	31	26	12	22	114	91
% of sales	22.9	28.7	24.7	39.2	36.3	30.5	18.3	27.5	29.2	28.8
Items affecting comparability in operating profit, EURm [1]	−9	–	–	–	–	–	–	–	−9	–
Comparable EBIT, EURm	32	29	20	42	31	26	12	22	123	91
% of sales	31.9	28.7	24.7	39.2	36.3	30.5	18.3	27.5	31.5	28.8
Capital employed (average), EURm	2,419	2,343	2,321	2,301	2,274	2,279	2,261	2,256	2,346	2,267
Comparable ROCE, %	5.3	4.9	3.5	7.3	5.5	4.6	2.1	3.9	5.3	4.0
Electricity deliveries, GWh	2,103	2,128	2,004	2,373	2,231	2,093	1,744	2,059	8,608	8,127

[1] In Q4 2018, items affecting comparability of EUR 9 million relate to restructuring of ownership in Meri-Pori power plant.

- Investment decision for the refurbishment of Kuusankoski hydropower plant in Finland
- Takeover of PVO's hydro planning, regulation and power plant dispatching operations

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Energy increased due to significantly higher electricity sales prices, which more than offset the negative impact of lower hydropower generation due to materially weaker hydrology.

UPM's average electricity sales price increased by 20% to EUR 39.4/MWh (32.9/MWh).

Q4 2018 compared with Q3 2018

Comparable EBIT increased due to higher hydropower generation volume. The electricity sales prices were slightly lower.

UPM's average electricity sales price decreased by 2% to EUR 39.4/MWh (40.3/MWh).

Full year 2018 compared with 2017

Comparable EBIT increased due to higher electricity sales prices. Hydropower generation was lower due to weaker hydrology.

UPM's average electricity sales price increased by 17% to EUR 38.1/MWh (32.6/MWh).

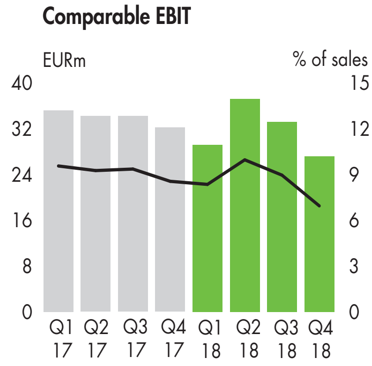
Market environment

- The Nordic hydrological balance has been below the long-term average since March 2018. The hydrological balance improved temporarily at beginning of Q4, but the year ended significantly below the long-term average level.
- Coal prices in Q4 2018 increased compared to the same period in the previous year. The CO_2 emission allowance price of EUR 25.0/tonne at the end of Q4 2018 was higher than in Q4 2017 (EUR 8.2/tonne).
- The average Finnish area spot price on the Nordic electricity exchange in 2018 was EUR 46.8/MWh, 41% higher than in 2017 (33.2/MWh).
- The front-year forward electricity price for the Finnish area closed at EUR 52.5/MWh in December, 21% higher than at the end of Q3 2018 (43.5/MWh).

Sources: The Norwegian Water Resources and Energy Directorate, Svensk Energi, Finnish Environment Institute, Nord Pool, Nasdaq OMX, Bloomberg, UPM

UPM Raflatac

UPM Raflatac manufactures self-adhesive label materials for product and information labelling for label printers and brand owners in the food, personal care, pharmaceutical and retail segments, for example. UPM Raflatac is the second-largest producer of self-adhesive label materials worldwide.



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	397	374	371	345	379	369	375	371	1,488	1,495
Comparable EBITDA, EURm	35	41	44	36	40	42	42	43	156	168
% of sales	8.8	11.0	11.9	10.4	10.6	11.4	11.3	11.7	10.5	11.2
Depreciation, amortisation and impairment charges, EURm	–7	–8	–7	–7	–8	–8	–8	–8	–30	–32
Operating profit, EURm	27	33	37	29	32	34	34	35	126	136
% of sales	6.9	8.9	9.9	8.3	8.5	9.3	9.2	9.5	8.5	9.1
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	27	33	37	29	32	34	34	35	126	136
% of sales	6.9	8.9	9.9	8.3	8.5	9.3	9.2	9.5	8.5	9.1
Capital employed (average), EURm	543	538	540	519	518	498	488	503	535	502
Comparable ROCE, %	20.2	24.8	27.3	22.0	24.8	27.7	28.2	28.1	23.6	27.2

- Sales growth continued, mainly due to price increases
- Higher sales prices more than offset the negative impact of higher variable costs

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Raflatac decreased. Higher variable costs and the negative impact of exchange rates more than offset the positive impact of higher sales prices. Fixed costs were slightly higher.

Q4 2018 compared with Q3 2018

Comparable EBIT decreased. Higher sales prices and delivery volumes offset the negative impact of higher variable costs. Fixed costs were seasonally higher.

Full year 2018 compared with 2017

Comparable EBIT decreased. Higher sales prices more than offset the negative effects of higher raw material costs and lower delivery volumes. Fixed costs were higher and changes in currency exchange rates were unfavourable.

Market environment

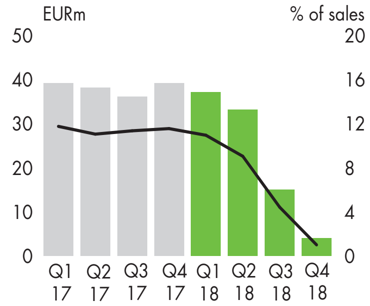
- Global demand for self-adhesive label materials continued to grow, although at a lower pace in H2 2018 than H1 2018.

Sources: FINAT, TLMI

UPM Specialty Papers

UPM Specialty Papers serves growing global markets with label papers and release liners, fine papers in Asia and flexible packaging in Europe. The operations consist of the UPM Changshu and UPM Tervasaari mills in China and Finland, as well as label and packaging papers production lines at the UPM Jämsänkoski mill in Finland. The main customers are retailers, printers, publishers, distributors and paper converters.

Comparable EBIT



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	364	354	368	343	344	320	342	330	1,429	1,336
Comparable EBITDA, EURm	23	34	53	56	59	55	58	60	167	232
% of sales	6.4	9.7	14.4	16.4	17.1	17.2	16.9	18.1	11.7	17.3
Depreciation, amortisation and impairment charges, EURm	–19	–19	–20	–19	–19	–19	–20	–21	–77	–80
Operating profit, EURm	4	15	33	37	39	36	38	39	90	152
% of sales	1.0	4.4	9.0	10.9	11.5	11.3	11.0	11.7	6.3	11.4
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	4	15	33	37	39	36	38	39	90	152
% of sales	1.0	4.4	9.0	10.9	11.5	11.3	11.0	11.7	6.3	11.4
Capital employed (average), EURm	901	896	887	874	870	858	879	931	889	885
Comparable ROCE, %	1.7	6.9	15.0	17.1	18.1	16.9	17.1	16.7	10.1	17.2
Paper deliveries, 1,000 t	393	389	393	379	396	384	404	390	1,554	1,573

- The cost environment remained unfavourable
- Growth continued in glassine business in line with market development
- Fine papers market in Asia challenged by increased competition and destocking in the value chain

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Specialty Papers decreased due to significantly higher pulp costs more than offsetting the positive impact of higher sales prices.

Q4 2018 compared with Q3 2018

Comparable EBIT decreased due to lower average sales price, higher pulp costs and seasonally higher fixed costs.

Full year 2018 compared with 2017

Comparable EBIT decreased due to higher pulp costs more than offsetting the positive impact of higher sales prices.

Market environment

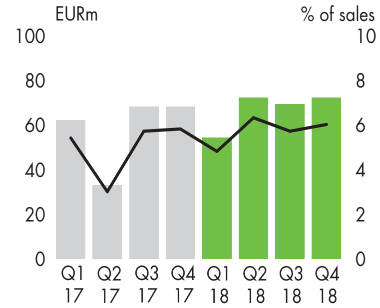
- In the Asia-Pacific region, office paper demand was solid. Market prices increased during H1 2018, but decreased during H2 2018 due to capacity additions in the market and destocking in the value chain. The cost environment remained unfavourable due to higher pulp costs.
- Label and release paper demand was good in 2018 and sales prices increased.

Sources: UPM, RISI, Pöyry, AWA

UPM Communication Papers

UPM Communication Papers offers graphic papers for advertising, magazines, newspapers and home and office. The business has extensive low-cost operations consisting of 15 efficient paper mills in Europe and the United States, a global sales network and an efficient logistic system. The main customers are publishers, cataloguers, retailers, printers and merchants.

Comparable EBIT



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	1,206	1,209	1,149	1,126	1,166	1,189	1,112	1,148	4,690	4,615
Comparable EBITDA, EURm	99	97	101	84	100	94	64	98	381	356
% of sales	8.2	8.0	8.8	7.5	8.6	7.9	5.7	8.6	8.1	7.7
Share of results of associated companies and joint ventures, EURm	1	1	–	–	–	–	–	1	2	1
Depreciation, amortisation and impairment charges, EURm	–28	–28	–29	–30	–37	–26	–31	–35	–116	–130
Operating profit, EURm	71	69	88	85	32	123	31	61	312	247
% of sales	5.9	5.7	7.7	7.5	2.7	10.3	2.8	5.3	6.7	5.4
Items affecting comparability in operating profit, EURm [1]	–1	–	17	30	–36	55	–2	–1	46	16
Comparable EBIT, EURm	72	69	72	54	68	68	33	62	267	231
% of sales	6.0	5.7	6.3	4.8	5.8	5.7	3.0	5.4	5.7	5.0
Capital employed (average), EURm	1,631	1,605	1,591	1,580	1,630	1,678	1,698	1,801	1,602	1,702
Comparable ROCE, %	17.7	17.1	18.1	13.7	16.6	16.2	7.7	13.9	16.7	13.6
Paper deliveries, 1,000 t	1,865	1,879	1,842	1,855	1,988	2,040	1,893	1,934	7,442	7,856

[1] In Q4 2018, items affecting comparability relate to prior capacity closures. In Q2 2018, items affecting comparability include EUR 18 million income relating to reversal of unused restructuring provisions in Finland and Germany and EUR 1 million loss relating to sale of Myllykoski mill site in Finland. In Q1 2018, items affecting comparability relate to sale of hydropower assets located in Schongau and Ettringen mill sites in Germany. In Q4 2017, items affecting comparability include EUR 13 million restructuring charges and EUR 4 million impairment charges relating to Blandin paper machine 5 closure. EUR 21 million restructuring charges relate to optimisation of operations in Germany and EUR 2 million income relates to prior capacity closures. In Q3 2017, items affecting comparability include gain amounting to EUR 43 million and EUR 11 million relating to sale of hydro power assets located at the mill sites in Madison and Steyrermühl, correspondingly. In addition, EUR 1 million income relates to prior capacity closures. In Q2 2017, items affecting comparability include restructuring charges. In Q1 2017, items affecting comparability include restructuring charges of EUR 2 million and reversals of impairment charges of EUR 1 million.

As of 26 April 2018, UPM Paper ENA is renamed as UPM Communication Papers. The change has no impact on reported figures.

- Price actions to mitigate increase in input costs
- The turbine in UPM Plattling back in full operation

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Communication Papers increased slightly due to higher sales prices more than offsetting the negative impact of higher pulp and energy costs. Fixed costs decreased, which offset the impact of lower delivery volumes.

The average price in euros for UPM's paper deliveries increased by 11%.

Q4 2018 compared with Q3 2018

Comparable EBIT increased slightly. Sales prices increased slightly. Energy costs were seasonally lower, partly due to energy related refunds in Europe. Fixed costs were seasonally higher.

The average price in euros for UPM's paper deliveries increased by 1%.

Full year 2018 compared with 2017

Comparable EBIT increased. Higher sales prices and improved product mix more than offset the negative impact of higher pulp and energy costs and lower delivery volumes. Fixed costs were lower.

The average price in euros for UPM's paper deliveries increased by 7%.

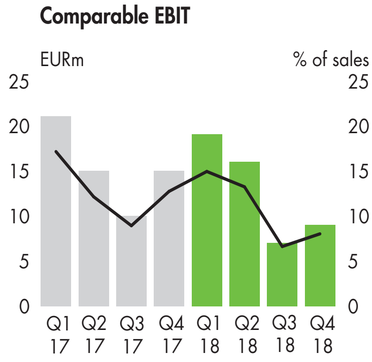
Market environment

- In 2018, demand for graphic papers in Europe was 6% lower than the previous year. Newsprint demand decreased by 6%, magazine paper by 4% and fine paper by 7% compared with 2017.
- In Q4, publication paper prices in Europe remained unchanged in comparison with Q3 2018. Compared to Q4 2017, publication paper prices were on average 13% higher. In Q4, fine paper prices in Europe were on average 2% higher than in the previous quarter. Compared to Q4 2017, fine paper prices were on average 10% higher.
- In 2018, demand for magazine papers in North America decreased by 5% compared to previous year. The average price in US dollars for magazine papers in Q4 2018 increased by 4% compared to Q3 2018 and 17% compared to Q4 2017.

Sources: PPI/RISI, Euro-Graph, PPPC

UPM Plywood

UPM Plywood offers plywood and veneer products, mainly for construction, vehicle flooring and LNG shipbuilding, as well as other manufacturing industries. Production facilities are located in Finland, Estonia and Russia.



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	119	112	125	125	120	112	128	124	480	484
Comparable EBITDA, EURm	15	13	22	24	21	16	21	27	75	85
% of sales	13.0	11.7	17.8	19.5	17.4	14.0	16.6	21.9	15.6	17.6
Depreciation, amortisation and impairment charges, EURm	–6	–6	–6	–6	–6	–6	–6	–6	–23	–23
Operating profit, EURm	9	7	16	19	15	10	15	21	52	62
% of sales	8.0	6.6	13.2	14.9	12.7	8.9	12.1	17.1	10.8	12.8
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	9	7	16	19	15	10	15	21	52	62
% of sales	8.0	6.6	13.2	14.9	12.7	8.9	12.1	17.1	10.8	12.8
Capital employed (average), EURm	301	282	280	269	263	263	276	268	283	267
Comparable ROCE, %	12.6	10.5	23.6	27.6	23.1	15.1	22.4	31.7	18.4	23.1
Plywood deliveries, 1,000 m^3	189	188	206	209	205	192	214	201	791	811

- Lower deliveries impacted by strikes in Finland
- Price actions to mitigate increase in input costs

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for UPM Plywood decreased. Deliveries were lower mainly due to strikes in Finland. Fixed costs increased, mainly in maintenance, and changes in currencies were unfavourable. Higher average sales prices more than offset the negative impact of higher variable costs.

Q4 2018 compared with Q3 2018

Comparable EBIT increased due to higher average sales prices and delivery volumes.

Full year 2018 compared with 2017

Comparable EBIT decreased, due to unfavourable changes in currencies and lower deliveries, mainly due to strikes in Finland. Higher average sales prices more than offset the negative impact of higher variable costs.

Market environment

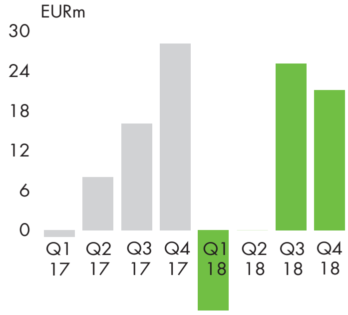
- The market demand in Europe continued to be good. Demand growth for spruce plywood was good, driven by the building and construction industry. Demand in birch plywood-related industrial applications was solid.

Source: UPM

Other operations

Other operations include wood sourcing and forestry, UPM Biochemicals and UPM Biocomposites business units and group services.

Comparable EBIT



	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	87	80	83	76	69	69	70	72	326	281
Comparable EBITDA, EURm	–14	–2	–2	–13	11	–2	–6	–7	–31	–5
Change in fair value of forest assets and wood harvested, EURm	383	31	6	3	20	22	18	9	422	69
Share of results of associated companies and joint ventures, EURm	–	–	–	1	–	1	–	–	2	2
Depreciation, amortisation and impairment charges, EURm	–3	–3	–3	–3	–4	–4	–3	–3	–13	–15
Operating profit, EURm	365	25	0	–12	28	16	8	–2	380	51
Items affecting comparability in operating profit, EURm [1]	345	–	–	–	–	–	–	–	345	–
Comparable EBIT, EURm	21	25	0	–12	28	16	8	–1	35	51
Capital employed (average), EURm	1,447	1,360	1,378	1,384	1,406	1,455	1,489	1,508	1,392	1,465
Comparable ROCE, %	5.8	7.5	0.1	–3.4	7.9	4.5	2.1	–0.4	2.5	3.5

[1] In Q4 2018, items affecting comparability relate to fair value changes of forest assets resulting from changes in forest growth estimates.

- Increase in the fair value of UPM's forest assets in Finland by EUR 345 million, mainly due to higher forest growth estimates
- 21,000 hectares of forest land was sold to United Bankers forest funds UB Timberland and UB Nordic Forest Fund III

Results

Q4 2018 compared with Q4 2017

Comparable EBIT for other operations decreased. The increase in the fair value of forest assets net of wood harvested was EUR 383 million (20 million). The increase in the fair value of forest assets was EUR 394 million (45 million), including gains on forest sales. The cost of wood harvested from UPM forests was EUR 12 million (25 million).

Q4 2018 compared with Q3 2018

Comparable EBIT decreased. The increase in the fair value of forest assets net of wood harvested was EUR 383 million (31 million). The increase in the fair value of forest assets was EUR 394 million (40 million), including gains on forest sales. The cost of wood harvested from UPM forests was EUR 12 million (10 million).

Full year 2018 compared with 2017

Comparable EBIT decreased. The increase in the fair value of forest assets net of wood harvested was EUR 422 million (69 million). The increase in the fair value of forest assets was EUR 474 million (132 million), including gains on forest sales. The cost of wood harvested from UPM forests was EUR 52 million (63 million).

In 2018, UPM sold a total of 55,880 (73,000) hectares of forests.

Risks and near-term uncertainties

The main uncertainties in UPM's earnings relate to the sales prices and delivery volumes of the group's products, as well as to changes to the main input cost items and currency exchange rates. Most of these items depend on general economic developments.

There are significant uncertainties related to the global economic growth in 2019. Economists continue to expect solid GDP growth in 2019 but have in recent months gradually revised down their estimates for many regions. Trade negotiations between China and the US, the undefined nature of Brexit and political uncertainties in several other countries add to the uncertainty.

There are uncertainties regarding the growth outlook in developing economies, including China, which may significantly influence the overall global economy and many of UPM's product markets in particular. Uncertainties related to trade tariffs and other possible protectionist policies add to the risks. China accounted for 11.3% of UPM's sales in 2018.

The UK has decided to leave the EU, and this is scheduled to take place at the end of March 2019. However, the nature of the exit is yet unknown. This represents increased uncertainty and risks related to economic growth, especially in the UK and the EU. The EU is the most significant market for UPM, representing 57.6% of the company's sales in 2018. The UK accounted for 6.3% of UPM's sales.

Changes to the monetary policies of major central banks may significantly impact various currencies that directly or indirectly affect UPM.

TVO announced in March 2018 that the business restructuring plan announced by Areva in 2016 was implemented at the beginning of 2018. The majority of Areva NP's business was transferred to a company named Framatome, of which 75.5% is owned by Electricité de France (EDF). The OL3 project and the means required to complete the project, as well as certain other liabilities, remained within Areva NP SAS and Areva GmbH, within the scope of Areva SA.

Furthermore, TVO announced that a comprehensive settlement agreement between TVO, the Supplier, and Areva Group parent company Areva SA (a company wholly owned by the French State) was signed and came into force in March 2018. The settlement agreement concerns the completion of the OL3 project and related disputes. The agreement also noted the Supplier's schedule at the time the agreement was signed, according to which the regular electricity production in the unit would have commenced in May 2019. As announced by TVO in November 2018, TVO received from the Supplier an updated schedule for the commissioning of OL3 and, in accordance with the Supplier's updated schedule, the regular electricity generation at OL3 will commence in January 2020.

Further delays to the OL3 project could have an adverse impact on PVO's business and financial position, the fair value of UPM's energy shareholdings in PVO and/or the cost of energy sourced from OL3 when completed. It is possible that the cost of energy sourced from OL3 at the time when it starts regular electricity production will be higher than the market price of electricity at that time.

The main earnings sensitivities and the group's cost structure are presented on page 123 of the Annual Report 2017. Risks and opportunities are discussed on pages 22–23 and risks and risk management are presented on pages 102–104.

Shares

In 2018, UPM shares worth a total of EUR 9,980 million (8,460 million) were traded on the NASDAQ Helsinki stock exchange. This is estimated to represent approximately two thirds of all trading volumes in UPM shares. The highest listing was EUR 34.70 in September and the lowest was EUR 21.69 in December.

The company's ADSs are traded on the US over-the-counter (OTC) market under a Level 1-sponsored American Depositary Receipt programme.

The Annual General Meeting held on 5 April 2018 authorised the Board of Directors to decide on the repurchase of a maximum of 50,000,000 of the Company's own shares. The authorisation will be valid for 18 months from the date of the AGM resolution.

The Annual General Meeting held on 7 April 2016 authorised the Board of Directors to decide on the issuance of new shares, the transfer of treasury shares and the issuance of special rights entitling to shares in proportion to shareholders' existing holdings in the company, or in a directed share issue, deviating from shareholders' pre-emptive subscription rights. The Board of Directors may also decide on a share issue without payment to the company itself. The aggregate maximum number of new shares that may be issued and treasury shares that may be transferred is 25,000,000, which also includes the number of shares that can be received on the basis of the special rights. The authorisation is valid for three years from the date of the AGM resolution.

Aside from the above, the Board of Directors has no current authorisation to issue shares, convertible bonds or share options.

The number of shares entered in the Trade Register on 31 December 2018 was 533,735,699. Through the issuance authorisation, the number of shares may increase to a maximum of 558,735,699.

On 31 December 2018, the company held 411,653 of its own shares, representing approximately 0.08% of the total number of company shares and voting rights. The Board of Directors may decide to retain, transfer or cancel the treasury shares.

Litigation

Group companies

In 2011, Metsähallitus (a Finnish state enterprise, which administers state-owned land) filed a claim for damages against UPM and two other Finnish forest companies. The claim relates to the decision of December 2009 in which the Finnish Market Court held that the defendants had breached competition rules in the Finnish roundwood market. In addition to Metsähallitus, private forest owners, and companies, as well as municipalities and parishes, filed claims relating to the Market Court decision. In addition to the claims on capital amounts, the claimants are also requesting compensation relating to value added tax and interests. Private forest owners, companies, municipalities and parishes have waived their claims against UPM. Metsähallitus has requested for leave of appeal with the Supreme Court in relation to judgement passed by the Court of Appeal of Helsinki in May 2018. Court of Appeal had rejected the damages claim of Metsähallitus and ordered Metsähallitus to pay compensation for legal expenses. The principal amount of Metsähallitus claim is currently in total EUR 61.8 million, of which EUR 3 million is based on agreements between UPM and Metsähallitus. No provision has been made in UPM's accounts for the claim. In January 2019 the Supreme Court rendered its decision denying Metsähallitus leave to appeal as a result of which the judgement of the Court of Appeal remains final.

In 2012, UPM commenced arbitration proceedings against Metsäliitto Cooperative and Metsä Board Corporation due to their breaches of UPM's tag-along right under the shareholders' agreement concerning Metsä Fibre Oy in connection with the sale of shares in Metsä Fibre to Itochu Corporation. UPM claimed jointly from Metsäliitto and Metsä Board a capital amount of EUR 58.5 million. Metsäliitto and Metsä Board had sold a 24.9% holding in Metsä Fibre to Itochu Corporation for EUR 472 million. In connection with the transaction with Itochu, Metsäliitto had exercised a call option to purchase UPM's remaining 11% shareholding in Metsä Fibre for EUR 150 million. The arbitral tribunal rendered its final decision (arbitral award) in February 2014 and ordered Metsäliitto and Metsä Board to pay UPM the capital amount of EUR 58.5 million and penalty interest and compensate UPM for its legal fees. As a result, UPM recorded an income of EUR 67 million as item affecting comparability in Q1 2014. In May 2014 Metsäliitto and Metsä Board commenced litigation proceedings in the Helsinki District Court challenging the arbitral award and requesting the District Court to set aside the arbitral award or to declare it null and void. In June 2015 the District Court rejected the actions by Metsäliitto and Metsä Board and following an appeal the Helsinki Court of Appeal rejected the actions by Metsäliitto and Metsä Board in October 2016. Metsäliitto and Metsä Board have filed a request for leave of appeal with the Supreme Court.

Other shareholdings

In Finland, UPM is participating in a project to construct a new nuclear power plant unit Olkiluoto 3 EPR (OL3) through its shareholdings in Pohjolan Voima Oyj. Pohjolan Voima Oyj is a majority shareholder of Teollisuuden Voima Oyj (TVO), holding 58.5% of its shares. UPM's indirect share of OL3 is approximately 31%.

According to TVO OL3 was procured as a fixed price turnkey project from a consortium formed by Areva GmbH, Areva NP SAS and Siemens AG (the Supplier). The consortium companies have under the plant contract joint and several liability for the contractual obligations.

Originally the commercial electricity production of the OL3 was scheduled to start in April 2009. The completion of the project, however, has been delayed. As announced by TVO, in accordance with the schedule updated by the Supplier in November 2018, the regular electricity generation at the plant unit will commence in January 2020.

According to TVO, the business restructuring plan announced by Areva Group in 2016 was implemented at the beginning of 2018. The restructuring involved a transfer of the majority of business of Areva NP to a company named Framatome of which 75.5% is owned by Electricité de France (EDF). According to TVO, the OL3 project and the means required to complete it, as well as certain other liabilities remained within Areva NP SAS and Areva GmbH, within the scope of Areva SA.

In March 2018 TVO announced it had signed a comprehensive settlement agreement with the Supplier and Areva Group parent company, Areva SA, a company wholly owned by the French State. The settlement agreement concerns the completion of the OL3 project and related disputes and entered into force in late March. According to TVO, pursuant to the settlement agreement TVO and the Supplier jointly withdrew the pending arbitration proceedings under the International Chamber of Commerce (ICC) rules with respect to costs and losses incurred in relation to delays in the construction of the OL3 project.

In July 2018 TVO announced that in June 2018 the ICC tribunal had confirmed the arbitration settlement by a consent award, and the arbitration proceedings had been terminated. The parties also withdrew the pending appeals in the General Court of the European Union.

According to TVO the settlement agreement stipulates as follows: To provide and maintain adequate and competent technical and human resources for the completion of the OL3 project, Areva will source the necessary additional resources from Framatome S.A.S., whose majority owner is EDF.

The supplier consortium companies undertake that the funds dedicated to the completion of the OL3 project will be adequate and will cover all applicable guarantee periods, including setting up a trust mechanism funded by Areva companies to secure the financing of the costs of completion of the OL3 project.

The turnkey principle of the OL3 plant contract and the joint and several liability of the supplier consortium companies remain in full force.

The agreement also noted the plant Supplier's schedule at the time the agreement was signed, according to which regular electricity production in the unit would have commenced in May 2019.

The ICC arbitration concerning the costs and losses caused by the delay of the OL3 project is settled by financial compensation of EUR 450 million to be paid to TVO in two installments by the Supplier.

The parties withdraw all on-going legal actions related to OL3, including the ICC Arbitration and appeals in the General Court of the European Union.

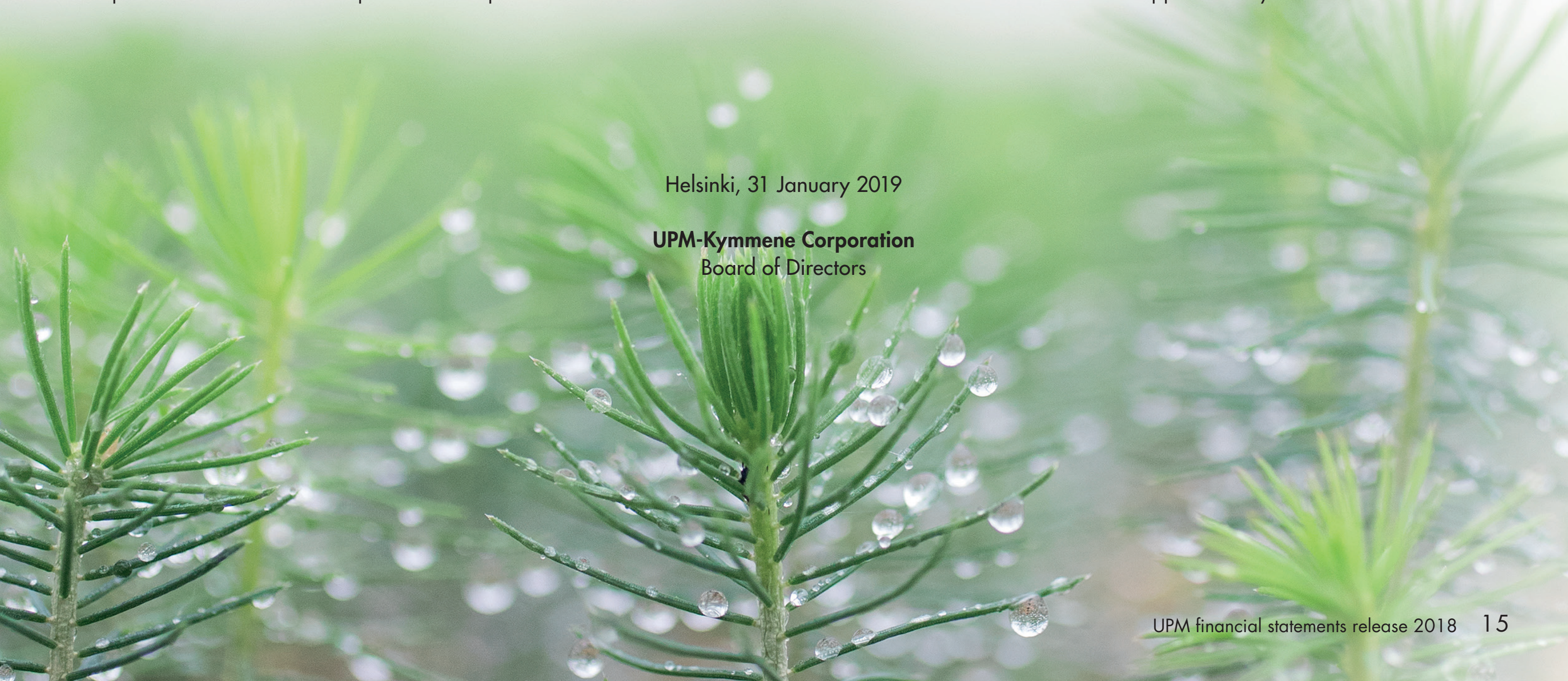
The supplier consortium companies are entitled to receive an incentive payment, in a maximum amount of EUR 150 million, upon timely completion of the OL3 project. In the event that the supplier consortium companies fail to complete the OL3 project by the end of 2019, the supplier consortium companies will pay a penalty to TVO for such delay in an amount which will depend on the actual time of completion of the OL3 project and may not exceed EUR 400 million.

According to TVO, TVO received the first payment of EUR 328 million of the settlement amount in March at the entry into force of the settlement agreement. The second payment of EUR 122 million is payable upon completion of the OL3 project or, in any event, on 31 December 2019 at the latest. TVO had made in the first quarter of 2018, a provision of EUR 150 million reflecting the maximum amount of the incentive payment payable to the Supplier for timely completion of the OL3 project. According to the updated schedule for the commissioning of OL3 received by TVO from the Supplier in June 2018, the regular electricity generation at OL3 will start in September 2019, so in the second quarter of 2018, the provision was withdrawn by EUR 50 million. According to the announcement by TVO in accordance with the updated schedule for the commissioning of OL3 received in November 2018 the regular electricity generation at OL3 will start in January 2020. These settlement payments to TVO, any incentive payment by TVO and any penalty payable to TVO due to any additional project delay have all been taken into account by TVO in calculating the final cost of the OL3 project.

TVO announced that based on the current OL3 project schedule provided by the Supplier, TVO's current capital expenditure assumptions and the effect of the settlement agreement, TVO estimates its total investment in OL3 EPR to be approximately EUR 5.5 billion.

Helsinki, 31 January 2019

UPM-Kymmene Corporation
Board of Directors



Financial information

Consolidated income statement

EURm	Q4/2018	Q4/2017	Q1–Q4/2018	Q1–Q4/2017
Sales	2,731	2,571	10,483	10,010
Other operating income	19	8	87	83
Costs and expenses	–2,292	–2,192	–8,710	–8,492
Change in fair value of forest assets and wood harvested	391	26	452	103
Share of results of associated companies and joint ventures	1	1	6	5
Depreciation, amortisation and impairment charges	–105	–116	–422	–450
Operating profit	744	299	1,895	1,259
Gains on sale of energy shareholdings, net	–	–3	–	–3
Exchange rate and fair value gains and losses	1	–1	3	–12
Interest and other finance costs, net	–15	–22	–60	–57
Profit before tax	731	273	1,839	1,186
Income taxes	–139	–29	–342	–212
Profit for the period	591	244	1,496	974
Attributable to:				
Owners of the parent company	593	243	1,495	973
Non-controlling interests	–2	1	1	1
	591	244	1,496	974
Earnings per share for profit attributable to owners of the parent company				
Basic earnings per share, EUR	1.11	0.46	2.80	1.82
Diluted earnings per share, EUR	1.11	0.46	2.80	1.82

Consolidated statement of comprehensive income

EURm	Q4/2018	Q4/2017	Q1–Q4/2018	Q1–Q4/2017
Profit for the period	591	244	1,496	974
Other comprehensive income for the period, net of tax:				
Items that will not be reclassified to income statement:				
Actuarial gains and losses on defined benefit obligations	–61	28	–	66
Changes in fair value of energy shareholdings	60	–	183	–
Items that may be reclassified subsequently to income statement:				
Translation differences	23	–19	62	–270
Net investment hedge	–4	3	–14	20
Cash flow hedges	–1	43	13	122
Changes in fair value of energy shareholdings	–	33	–	24
Other comprehensive income for the period, net of tax	17	89	243	–37
Total comprehensive income for the period	608	333	1,739	937
Total comprehensive income attributable to:				
Owners of the parent company	610	332	1,738	937
Non-controlling interests	–2	1	1	1
	608	333	1,739	937

Consolidated balance sheet

EURm	31 DEC 2018	31 DEC 2017
ASSETS		
Goodwill	236	231
Other intangible assets	295	294
Property, plant and equipment	4,186	4,281
Forest assets	1,945	1,600
Energy shareholdings	2,159	1,974
Other non-current financial assets	178	192
Deferred tax assets	397	423
Net retirement benefit assets	38	84
Investments in associates and joint ventures	32	29
Other non-current assets	34	37
Non-current assets	9,501	9,144
Inventories	1,642	1,311
Trade and other receivables	1,833	1,783
Other current financial assets	107	92
Income tax receivables	24	20
Cash and cash equivalents	888	716
Current assets	4,496	3,922
Assets classified as held for sale	–	1
Assets	13,996	13,067
EQUITY AND LIABILITIES		
Share capital	890	890
Treasury shares	−2	−2
Translation reserve	232	184
Other reserves	1,778	1,564
Reserve for invested non-restricted equity	1,273	1,273
Retained earnings	5,623	4,752
Equity attributable to owners of the parent company	9,792	8,660
Non-controlling interests	5	4
Equity	9,797	8,663
Deferred tax liabilities	535	458
Net retirement benefit liabilities	679	736
Provisions	126	177
Non-current debt	753	789
Other non-current financial liabilities	101	94
Non-current liabilities	2,194	2,254
Current debt	25	324
Trade and other payables	1,881	1,765
Other current financial liabilities	78	34
Income tax payables	22	26
Current liabilities	2,005	2,150
Liabilities	4,199	4,404
Equity and liabilities	13,996	13,067

Consolidated statement of changes in equity

EURm	SHARE CAPITAL	TREASURY SHARES	TRANSLATION RESERVE	OTHER RESERVES	RESERVE FOR INVESTED NON-RESTRICTED EQUITY	RETAINED EARNINGS	EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT COMPANY	NON-CONTROL-LING INTERESTS	TOTAL EQUITY
Balance at 31 December 2017	890	−2	184	1,564	1,273	4,752	8,660	4	8,663
Impact of adoption of IFRS 15 [1]	–	–	–	–	–	−3	−3	–	−3
Impact of adoption of IFRS 2 amendment [1]	–	–	–	26	–	–	26	–	26
Balance at 1 January 2018	890	−2	184	1,590	1,273	4,750	8,684	4	8,687
Profit for the period	–	–	–	–	–	1,495	1,495	1	1,496
Translation differences	–	–	61	–	–	–	61	–	62
Cash flow hedges – reclassified to income statement, net of tax	–	–	–	−13	–	–	−13	–	−13
Cash flow hedges – changes in fair value, net of tax	–	–	–	26	–	–	26	–	26
Net investment hedge, net of tax	–	–	−14	–	–	–	−14	–	−14
Energy shareholdings – changes in fair value, net of tax	–	–	–	183	–	–	183	–	183
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	–	–	–	–
Total comprehensive income for the period	–	–	48	196	–	1,494	1,738	1	1,739
Share-based payments, net of tax	–	–	–	−8	–	−7	−16	–	−16
Dividend distribution	–	–	–	–	–	−613	−613	–	−613
Total transactions with owners for the period	–	–	–	−8	–	−621	−629	–	−629
Balance at 31 December 2018	890	−2	232	1,778	1,273	5,623	9,792	5	9,797
Balance at 1 January 2017	890	−2	433	1,416	1,273	4,225	8,234	3	8,237
Profit for the period	–	–	–		–	973	973	1	974
Translation differences	–	–	−269	–	–	–	−269	–	−270
Cash flow hedges – reclassified to income statement, net of tax	–	–	–	28	–	–	28	–	28
Cash flow hedges – changes in fair value, net of tax	–	–	–	95	–	–	95	–	95
Net investment hedge, net of tax	–	–	20	–	–	–	20	–	20
Energy shareholdings – changes in fair value, net of tax	–	–	–	24	–	–	24	–	24
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	66	66	–	66
Total comprehensive income for the period	–	–	−249	147	–	1,039	937	–	937
Share-based payments, net of tax	–	–	–	1	–	−5	−4	–	−4
Dividend distribution	–	–	–	–	–	−507	−507	–	−507
Total transactions with owners for the period	–	–	–	1	–	−512	−511	–	−511
Balance at 31 December 2017	890	−2	184	1,564	1,273	4,752	8,660	4	8,663

[1] More information on changes in group's accounting policies is presented under *» Basis of preparation and accounting policies*.

Consolidated cash flow statement

EURm	Q1–Q4/2018	Q1–Q4/2017
Cash flows from operating activities		
Profit for the period	1,496	974
Adjustments [1]	386	779
Interest received	2	2
Interest paid	–15	–32
Dividends received	2	10
Other financial items, net	–20	–51
Income taxes paid	–252	–216
Change in working capital [2]	–209	91
Operating cash flow	1,391	1,558
Cash flows from investing activities		
Capital expenditure	–303	–305
Acquisition of businesses and subsidiaries, net of cash acquired	–	–1
Acquisition of energy shareholdings	–	–25
Proceeds from sale of property, plant and equipment and intangible assets	32	106
Proceeds from disposal of shares in associates and joint ventures	–	3
Proceeds from disposal of energy shareholdings	1	1
Net cash flows from net investment hedges	16	–3
Change in other non-current assets	–4	3
Investing cash flow	–260	–222
Cash flows from financing activities		
Proceeds from non-current debt	–	1
Payments of non-current debt	–331	–964
Change in current liabilities	4	–21
Net cash flows from derivatives	–	–97
Dividends paid	–613	–507
Other financing cash flow	–19	–17
Financing cash flow	–959	–1,604
Change in cash and cash equivalents	172	–268
Cash and cash equivalents at beginning of period	716	992
Exchange rate effect on cash and cash equivalents	–	–7
Change in cash and cash equivalents	172	–268
Cash and cash equivalents at end of period	888	716

[1] **Adjustments**

EURm	Q1–Q4/2018	Q1–Q4/2017
Change in fair value of forest assets and wood harvested	–452	–103
Share of results of associates and joint ventures	–6	–5
Depreciation, amortisation and impairment charges	422	450
Capital gains and losses on sale of non-current assets	–47	–53
Financial income and expenses	56	70
Income taxes	342	212
Utilised provisions	–35	–45
Non-cash changes in provisions	–21	37
Other adjustments	125	216
Total	386	779

[2] **Change in working capital**

EURm	Q1–Q4/2018	Q1–Q4/2017
Inventories	–317	–26
Receivables included in working capital	–50	–68
Liabilities included in working capital	158	184
Total	–209	91

Quarterly key figures

In addition to the conventional financial performance measures established by the IFRS, certain key figures (alternative performance measures) are presented to reflect the underlying business performance and enhance comparability from period to period.

	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales, EURm	2,731	2,650	2,589	2,512	2,571	2,493	2,464	2,482	10,483	10,010
Comparable EBITDA, EURm	461	487	425	449	451	425	349	405	1,823	1,631
% of sales	16.9	18.4	16.4	17.9	17.5	17.1	14.2	16.3	17.4	16.3
Comparable EBIT, EURm	404	420	334	355	366	351	270	305	1,513	1,292
% of sales	14.8	15.9	12.9	14.1	14.2	14.1	11.0	12.3	14.4	12.9
Comparable profit before tax, EURm	390	404	322	341	340	328	258	291	1,457	1,218
Capital employed (average), EURm	10,259	9,817	9,712	9,755	9,938	10,032	9,942	10,288	10,176	10,217
Comparable ROCE, %	15.5	16.8	13.6	14,3	15.9	13.6	10.8	11.7	14.6	12.8
Comparable profit for the period, EURm	319	330	258	288	297	267	205	234	1,194	1,004
Total equity, average, EURm	9,491	8,959	8,856	8,821	8,497	8,204	8,020	8,100	9,230	8,450
Comparable ROE, %	13.4	14.6	11.6	13.0	14.0	13.0	10.2	11.6	12.9	11.9
Average number of shares basic (1,000)	533,324	533,324	533,324	533,324	533,323	533,328	533,505	533,505	533,324	533,415
Comparable EPS, EUR	0.60	0.61	0.48	0.54	0.56	0.50	0.39	0.44	2.24	1.88
Items affecting comparability in operating profit, EURm	340	−3	15	30	−67	28	−1	7	382	−33
Items affecting comparability in financial items, EURm	–	–	–	–	–	1	–	–	–	1
Items affecting comparability in taxes, EURm	−68	1	−3	−9	14	−10	–	−2	−80	2
Operating cash flow, EURm	420	434	329	208	407	486	269	396	1,391	1,558
Operating cash flow per share, EUR	0.79	0.81	0.62	0.39	0.76	0.91	0.50	0.74	2.61	2.92
Net debt at the end of period, EURm	−311	4	401	41	174	623	1,046	807	−311	174
Gearing ratio, %	−3	0	5	0	2	7	13	10	−3	2
Net debt to EBITDA (last 12 m.)	−0.17	0.00	0.23	0.02	0.11	0.41	0.68	0.52	−0.17	0.11
Capital expenditure, EURm	109	76	76	43	120	99	64	46	303	329
Capital expenditure excluding acquisitions, EURm	109	76	76	43	120	72	64	46	303	303
Equity per share at the end of period, EUR	18.36	17.21	16.37	16.83	16.24	15.61	15.14	14.92	18.36	16.24
Personnel at the end of period	18,978	19,076	19,836	19,027	19,111	19,335	20,096	19,301	18,978	19,111

The definitions of alternative performance measures are presented in notes to the consolidated financial statements in *» UPM Annual Report 2017*.

Reconciliation of key figures to IFRS

EURm, OR AS INDICATED	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Items affecting comparability										
Impairment charges	–	–	–	–	–4	–	–	1	–	–3
Restructuring charges	–10	–	18	–	–61	–2	–2	–3	9	–67
Change in fair value of unrealised cash flow and commodity hedges	6	–3	–2	–	–2	–6	1	9	–	2
Capital gains and losses on sale of non-current assets	–	–	–2	30	1	35	–	–	29	35
Fair value changes of forest assets resulting from changes in estimates	345	–	–	–	–	–	–	–	345	–
Total items affecting comparability in operating profit	340	–3	15	30	–67	28	–1	7	382	–33
Items affecting comparability in financial items	–	–	–	–	–	1	–	–	–	1
Changes in tax rates	–	–	–	–	–5	–	–	–	–	–5
Taxes relating to items affecting comparability	–68	1	–3	–9	19	–10	–	–2	–80	7
Items affecting comparability in taxes	–68	1	–3	–9	14	–10	–	–2	–80	2
Items affecting comparability, total	272	–2	11	21	–53	19	–1	6	302	–30
Comparable EBITDA										
Operating profit	744	417	349	385	299	379	269	312	1,895	1,259
Depreciation, amortisation and impairment charges [1]	105	105	106	106	112	104	112	119	422	447
Change in fair value of forest assets and wood harvested [1]	–47	–37	–14	–10	–26	–29	–32	–16	–107	–103
Share of result of associates and joint ventures	–1	–2	–1	–2	–1	–1	–1	–2	–6	–5
Items affecting comparability in operating profit	–340	3	–15	–30	67	–28	1	–7	–382	33
Comparable EBITDA	461	487	425	449	451	425	349	405	1,823	1,631
% of sales	16.9	18.4	16.4	17.9	17.5	17.1	14.2	16.3	17.4	16.3
[1] excluding items affecting comparability										
Comparable EBIT										
Operating profit	744	417	349	385	299	379	269	312	1,895	1,259
Items affecting comparability in operating profit	–340	3	–15	–30	67	–28	1	–7	–382	33
Comparable EBIT	404	420	334	355	366	351	270	305	1,513	1,292
% of sales	14.8	15.9	12.9	14.1	14.2	14.1	11.0	12.3	14.4	12.9
Comparable profit before tax										
Profit before tax	731	401	337	371	273	357	258	299	1,839	1,186
Items affecting comparability in operating profit	–340	3	–15	–30	67	–28	1	–7	–382	33
Items affecting comparability in financial items	–	–	–	–	–	–1	–	–	–	–1
Comparable profit before tax	390	404	322	341	340	328	258	291	1,457	1,218
Comparable ROCE, %										
Comparable profit before tax	390	404	322	341	340	328	258	291	1,457	1,218
Interest expenses and other financial expenses	7	9	8	9	55	13	10	10	33	89
	397	413	330	350	395	341	268	302	1,490	1,307
Capital employed, average	10,259	9,817	9,712	9,755	9,938	10,032	9,942	10,288	10,176	10,217
Comparable ROCE, %	15.5	16.8	13.6	14.3	15.9	13.6	10.8	11.7	14.6	12.8
Comparable profit for the period										
Profit for the period	591	328	269	309	244	286	205	240	1,496	974
Items affecting comparability, total	–272	2	–11	–21	53	–19	1	–6	–302	30
Comparable profit for the period	319	330	258	288	297	267	205	234	1,194	1,004
Comparable EPS, EUR										
Comparable profit for the period	319	330	258	288	297	267	205	234	1,194	1,004
Profit attributable to non-controlling interest	2	–2	–	–1	–1	–	–	–	–1	–1
	321	328	258	287	296	267	205	234	1,193	1,003
Average number of shares basic (1,000)	533,324	533,324	533,324	533,324	533,323	533,328	533,505	533,505	533,324	533,415
Comparable EPS, EUR	0.60	0.61	0.48	0.54	0.56	0.50	0.39	0.44	2.24	1.88

Reconciliation of key figures to IFRS

EURm, OR AS INDICATED	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Comparable ROE, %										
Comparable profit for the period	319	330	258	288	297	267	205	234	1,194	1,004
Total equity, average	9,491	8,959	8,856	8,821	8,497	8,204	8,020	8,100	9,230	8,450
Comparable ROE, %	13.4	14.6	11.6	13.0	14.0	13.0	10.2	11.6	12.9	11.9
Net debt										
Non-current debt	753	732	750	720	789	1,161	1,436	1,531	753	789
Current debt	25	25	207	34	324	607	451	426	25	324
Total debt	778	757	957	755	1,114	1,769	1,887	1,956	778	1,114
Non-current interest-bearing assets	171	158	167	165	189	198	210	222	171	189
Cash and cash equivalents	888	549	369	528	716	896	563	866	888	716
Other current interest-bearing assets	30	46	20	20	35	52	69	62	30	35
Total interest-bearing assets	1,089	753	556	714	940	1,146	841	1,149	1,089	940
Net debt	–311	4	401	41	174	623	1,046	807	–311	174

Quarterly segment information

EURm	Q4/18	Q3/18	Q2/18	Q1/18	Q4/17	Q3/17	Q2/17	Q1/17	Q1–Q4/18	Q1–Q4/17
Sales										
UPM Biorefining	775	754	694	668	669	624	630	607	2,892	2,531
UPM Energy	100	101	83	107	86	86	65	80	391	317
UPM Raflatac	397	374	371	345	379	369	375	371	1,488	1,495
UPM Specialty Papers	364	354	368	343	344	320	342	330	1,429	1,336
UPM Communication Papers	1,206	1,209	1,149	1,126	1,166	1,189	1,112	1,148	4,690	4,615
UPM Plywood	119	112	125	125	120	112	128	124	480	484
Other operations	87	80	83	76	69	69	70	72	326	281
Internal sales	–318	–334	–289	–279	–263	–274	–258	–252	–1,220	–1,046
Eliminations and reconciliations	1	–	4	1	1	–3	–	1	7	–2
Sales, total	2,731	2,650	2,589	2,512	2,571	2,493	2,464	2,482	10,483	10,010
Comparable EBITDA										
UPM Biorefining	271	288	185	227	194	203	157	160	970	714
UPM Energy	34	31	23	44	33	28	14	24	132	100
UPM Raflatac	35	41	44	36	40	42	42	43	156	168
UPM Specialty Papers	23	34	53	56	59	55	58	60	167	232
UPM Communication Papers	99	97	101	84	100	94	64	98	381	356
UPM Plywood	15	13	22	24	21	16	21	27	75	85
Other operations	–14	–2	–2	–13	11	–2	–6	–7	–31	–5
Eliminations and reconciliations	–2	–15	–	–9	–7	–10	–1	–	–26	–18
Comparable EBITDA, total	461	487	425	449	451	425	349	405	1,823	1,631
Operating profit										
UPM Biorefining	241	256	155	195	130	170	131	127	847	557
UPM Energy	23	29	20	42	31	26	12	22	114	91
UPM Raflatac	27	33	37	29	32	34	34	35	126	136
UPM Specialty Papers	4	15	33	37	39	36	38	39	90	152
UPM Communication Papers	71	69	88	85	32	123	31	61	312	247
UPM Plywood	9	7	16	19	15	10	15	21	52	62
Other operations	365	25	0	–12	28	16	8	–2	380	51
Eliminations and reconciliations	4	–18	–2	–9	–9	–37	–	9	–25	–38
Operating profit, total	744	417	349	385	299	379	269	312	1,895	1,259
% of sales	27.3	15.7	13.5	15.3	11.6	15.2	10.9	12.6	18.1	12.6
Items affecting comparability in operating profit										
UPM Biorefining	–	–	–	–	–30	–	–	–	–	–30
UPM Energy	–9	–	–	–	–	–	–	–	–9	–
UPM Raflatac	–	–	–	–	–	–	–	–	–	–
UPM Specialty Papers	–	–	–	–	–	–	–	–	–	–
UPM Communication Papers	–1	–	17	30	–36	55	–2	–1	46	16
UPM Plywood	–	–	–	–	–	–	–	–	–	–
Other operations	345	–	–	–	–	–	–	–	345	–
Eliminations and reconciliations [1)]	6	–3	–2	–	–2	–28	1	9	1	–19
Items affecting comparability in operating profit, total	340	–3	15	30	–67	28	–1	7	382	–33
Comparable EBIT										
UPM Biorefining	241	256	155	195	159	170	131	127	847	587
UPM Energy	32	29	20	42	31	26	12	22	123	91
UPM Raflatac	27	33	37	29	32	34	34	35	126	136
UPM Specialty Papers	4	15	33	37	39	36	38	39	90	152
UPM Communication Papers	72	69	72	54	68	68	33	62	267	231
UPM Plywood	9	7	16	19	15	10	15	21	52	62
Other operations	21	25	0	–12	28	16	8	–1	35	51
Eliminations and reconciliations	–2	–15	–	–9	–7	–10	–1	–	–26	–18
Comparable EBIT, total	404	420	334	355	366	351	270	305	1,513	1,292
% of sales	14.8	15.9	12.9	14.1	14.2	14.1	11.0	12.3	14.4	12.9

1) In Q4, Q3 and Q2 2018, eliminations and reconciliations includes changes in fair value of unrealised cash flow and commodity hedges. Q4 2017, eliminations and reconciliations includes EUR –2 million of changes in fair value of unrealised cash flow and commodity hedges. In Q3 2017, eliminations and reconciliations includes EUR –22 million elimination adjustments of the joint operation Madison Paper Industries and EUR –6 million of changes in fair value of unrealised cash flow and commodity hedges. In Q1 and Q2 2017, eliminations and reconciliations includes changes in fair value of unrealised cash flow and commodity hedges.

External sales by major products

BUSINESS AREA	BUSINESS	Q4/2018	Q4/2017	Q1–Q4/2018	Q1–Q4/2017
EUR million					
UPM Biorefining	UPM Pulp, UPM Biofuels, UPM Timber	599	524	2,223	1,958
UPM Energy	UPM Energy	29	38	109	120
UPM Raflatac	UPM Raflatac	397	379	1,488	1,495
UPM Specialty Papers	UPM Specialty Papers	306	287	1,213	1,111
UPM Communication Papers	UPM Communication Papers	1,200	1,159	4,664	4,592
UPM Plywood	UPM Plywood	112	115	458	463
Other operations	Wood Sourcing and Forestry, UPM Biochemicals, UPM Biocomposites	86	68	321	274
Eliminations and reconciliations		1	1	7	−2
Total		2,731	2,571	10,483	10,010

BUSINESS	PRODUCT RANGE
UPM Pulp	Softwood, birch and eucalyptus pulp
UPM Biofuels	Wood-based renewable diesel for transport and renewable naphtha for transport and for bioplastics
UPM Timber	Standard and special sawn timber
UPM Energy	Electricity and related services
UPM Raflatac	Self-adhesive paper and film label stock
UPM Specialty Papers	Labelling and packaging materials, office papers, graphic papers
UPM Communication Papers	Magazine papers, newsprint and fine papers for various end uses
UPM Plywood	Plywood and veneer products, thermoformable wood material
Wood Sourcing and Forestry	Wood and wood-based biomass (logs, pulpwood, chips, forest residues etc.), full forestry service offering
UPM Biochemicals	Lignin products for industrial use. Cell culture hydrogel products for biomedical applications.
UPM Biocomposites	UPM ProFi decking products and UPM Formi granules

Changes in property, plant and equipment

EURm	Q1–Q4/2018	Q1–Q4/2017
Book value at beginning of period	4,281	4,657
Capital expenditure	286	289
Decreases	–15	–24
Depreciation	–408	–434
Impairment charges	–	–5
Impairment reversals	–	2
Translation difference and other changes	41	–204
Book value at end of period	4,186	4,281

Financial assets and liabilities measured at fair value

EURm	31 DEC 2018				31 DEC 2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets								
Derivatives non-qualifying hedges	–	16	–	16	4	19	–	23
Derivatives under hedge accounting	106	140	–	246	42	198	–	240
Energy shareholdings	–	–	2,159	2,159	–	–	1,974	1,974
Total	106	156	2,159	2,421	46	217	1,974	2,237
Financial liabilities								
Derivatives non-qualifying hedges	–	10	–	10	17	19	–	36
Derivatives under hedge accounting	15	56	–	71	12	8	–	20
Total	15	66	–	81	29	27	–	56

There have been no transfers between Levels.

Specific valuation techniques used to value financial instruments at level 2 include the following methods:

Interest forward rate agreements (FRA) are fair valued based on quoted market rates on the balance sheet date. Forward foreign exchange contracts are fair valued based on the contract forward rates at the balance sheet date. Foreign currency options are fair valued based on quoted market rates and market volatility rates on the balance sheet date by using the Black&Scholes option valuation model. Interest and currency swap instruments are fair valued as present value of the estimated future cash flows based on observable yield curves. Commodity swaps are fair valued based on forward curve quotations received from service providers.

Fair value measurements using significant unobservable inputs, Level 3

	ENERGY SHAREHOLDINGS	
EURm	Q1–Q4/2018	Q1–Q4/2017
Opening balance	1,974	1,932
Additions	–	25
Impairment charges	–	–3
Disposals	–1	–
Fair value changes recognised in other comprehensive income	185	20
Closing balance	2,159	1,974

Fair valuation of energy shareholdings in the UPM Energy (Pohjolan Voima Oy's A, B, B2, C, C2, M and V-shares, Kemijoki Oy shares, and Länsi-Suomen Voima Oy shares) is based on discounted cash flows model. The electricity price estimate is based on fundamental simulation of the Finnish area electricity price. A change of 5% in the electricity price used in the model would change the total value of the assets by EUR 350 million. The discount rate of 5.49% used in the valuation model is determined using the weighted average cost of capital method. A change of 0.5% in the discount rate would change the total value of the assets by approximately EUR 300 million. Other uncertainties and risk factors in the value of the assets relate to start-up schedule of the fixed price turn-key Olkiluoto 3 EPR nuclear power plant project. UPM's indirect share of the capacity of Olkiluoto 3 EPR is approximately 31%, through its PVO B2 shares. Changes in regulatory environment or taxation could also have an impact on the value of the energy generating assets.

Fair value of financial assets and liabilities measured at carrying amount

EURm	31 DEC 2018	31 DEC 2017
Non-current debt, excl. derivative financial instruments	750	801

The fair values of all other financial assets and liabilities approximate their carrying amount.

Commitments and contingencies

EURm	31 DEC 2018	31 DEC 2017
Own commitments		
Mortgages	1	76
On behalf of others		
Guarantees	2	2
Other own commitments		
Leasing commitments for the next 12 months	90	77
Leasing commitments for subsequent periods	464	386
Other commitments	92	95
	649	636

Capital commitments

EURm	COMPLETION	TOTAL COST	BY 31 DEC 2017	Q1–Q4/2018	AFTER 31 DEC 2018
Paper machine conversion / Nordland paper mill	Q4 2019	116	–	35	81
Capacity increase / Changshu paper mill	Q4 2019	34	–	9	25
Capacity increase / Chudovo plywood mill	Q3 2019	50	8	34	8

Notional amounts of derivative financial instruments

EURm	31 DEC 2018	31 DEC 2017
Interest rate forward contracts	1,129	1,223
Interest rate swaps	753	1,056
Forward foreign exchange contracts	2,524	2,298
Currency options, bought	21	25
Currency options, written	31	23
Cross currency swaps	167	239
Commodity contracts	1,189	436

Basis of preparation and accounting policies

This financial statatement release has been prepared in accordance with the accounting policies set out in International Accounting Standard 34 on Interim Financial Reporting and group's consolidated statements for 2017.

Alternative performance measures presented in this report should not be considered as a substitute for measures of performance in accordance with the IFRS and may not be comparable to similarly titled amounts used by other companies.

Figures presented in this report have been rounded and therefore the sum of individual figures might deviate from the presented total figure. Key figures have been calculated using exact figures.

UPM has adopted two new IFRS standards on 1 January 2018, IFRS 15 Revenue from contracts with customers and IFRS 9 Financial instruments as well as the amendment to IFRS 2 Share-based payments. IFRS 16 Leases will be adopted in 2019. In addition, the group will change accounting policy of forest renewal costs. Description of effects of implementation is presented below.

IFRS 15 Revenue from contracts with Customers

The group has adopted IFRS 15 using modified retrospective transition approach upon initial application, applying the standard only to contracts that are not completed as of 1 January 2018. The cumulative effect of the adoption amounting to EUR 3 million net of tax is shown as a decrease of retained earnings on 1 January 2018 and relates mainly to variable consideration. Comparative information is not restated. The amount by which each financial statement line item is affected in the current reporting period by the application of IFRS 15 is not material for group financial statements. The changes that have been made to group's accounting policies are described below.

Variable consideration

The group gives the customers the right for purchase price refund in case the products do not meet the quality as specified in the agreement. The group has not previously made an estimate of expected claims relating to sales of paper products. Instead, the revenue has been adjusted when the group has processed and accepted the claims. Under changed accounting policy, the group estimates and updates the amount of expected claims at each reporting date, and adjusts the sales revenue accordingly.

Consignment stock agreements

According to new requirements, revenue is recognised when the customer obtains control of the good or service. The group has some sales agreements labelled as consignment stock agreements, that under new more specific requirements do not qualify as consignment stock agreements. Consequently, the revenue is recognised in these cases earlier than under old accounting policy.

Delivery terms

The group has some sales over long distances using CIP and CPT delivery terms whereby UPM is responsible for organising the delivery. In these cases, there are separate performance obligations for goods and delivery services. Consequently, the portion of revenue relating to goods has to be recognised when the goods pass the ship's rail and the part of delivery services over time when the service has been performed. Under old accounting policy, full revenue was recognised when the goods passed the ship's rail. The accounting policy change did not have any effect of UPM retained earnings at the transition because the group recognises delivery costs at the same time with revenue.

Presentation and disclosure

IFRS 15 requires disaggregation of revenue by categories that depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

The group disaggregates its external sales by business areas, because UPM business areas are reported consistently with the internal reporting provided to UPM's President and CEO who is responsible for allocating resources and assessing performance of the business areas. The additional disclosures of goods and services included in sales revenue of each business area are presented earlier in this publication.

Amendment to IFRS 2 Share-based Payments

Amendment to IFRS 2 clarifies the accounting for equity-settled share-based payments with net settlement features for withholding tax obligations. UPM has share-based arrangements with net settlement features in several countries. Tax laws and regulations oblige UPM to withhold an amount for an employee's obligation in respect of taxes associated with share-based payments and to pay this amount to tax authorities in cash on behalf of employee. The obligation to settle in cash has resulted in such transactions being classified previously as cash-settled. According to new requirements, the group classifies the transactions with net settlement features as equity-settled in its entirety.

The change will reduce profit and loss volatility and was implemented prospectively without restatement of comparatives. At the transition date 1 January 2018, the group has transferred the liability amounting to EUR 26 million relating to unvested plans to share-based payments reserve in equity.

IFRS 9 Financial instruments

The group has adopted IFRS 9, which has replaced IAS 39 and addresses the classification, measurement and recognition of financial assets and financial liabilities, introduces new rules for hedge accounting and a new impairment model for financial assets. The adoption of IFRS 9 did not have any effect on UPM retained earnings at the transition date. The changes that have been made to group's accounting policies are described below.

Classification of financial assets and liabilities

UPM has classified its financial assets and liabilities based on group's business model using categories stated in IFRS 9.

On the date of initial application, 1 January 2018, UPM financial instruments were as follows, with any reclassifications noted:

EURm	ORIGINAL CLASSIFICATION IAS 39	NEW CLASSIFICATION IFRS 9	ORIGINAL CARRYING AMOUNT IAS 39	NEW CARRYING AMOUNT IFRS 9
Financial assets				
Energy shareholdings	Available-for-sale	Equity investments at FVOCI	1,974	1,974
Loans and receivables	Loans and receivables	Financial assets at amortised costs	21	21
Trade and other receivables	Loans and receivables	Financial assets at amortised costs	1,783	1,783
Derivatives used for hedging	Derivatives used for hedging	Derivatives under hedge accounting	240	240
Derivatives, non-qualifying hedges	Fair value through profit and loss	Fair value through profit and loss	23	23
Financial liabilities				
Loans	Financial liabilities at amortised costs	Financial liabilities at amortised costs	1,185	1,185
Trade and other payables	Financial liabilities at amortised costs	Financial liabilities at amortised costs	1,765	1,765
Derivatives, qualifying hedges	Derivatives used for hedging	Derivatives under hedge accounting	20	20
Derivatives, non-qualifying hedges	Fair value through profit and loss	Fair value through profit and loss	36	36

The group has classified its energy shareholdings categorised as available-for-sale under IAS 39 at the date of initial application 1 January 2018 as measured at fair value through other comprehensive income (FVOCI). Energy shareholdings are unlisted equity investments that group intends to hold for the long term. Under this new FVOCI category, fair value changes are recognised in fair value reserve in OCI while dividends are recognised in profit or loss. Gains or losses, including any gains or losses on sale, are never reclassified from equity to the income statement. Despite the fact that the election had to be adopted retrospectively, comparatives were not restated on initial application. These changes did not have any impact on UPM's financial statements in the period of the initial application, 1 January 2018.

Loans and receivables including trade receivables continue to be measured in the balance sheet at amortised costs as the purpose of holding these financial assets is to obtain contractual cash flows.

IFRS 9 did not bring any changes to group's previous classification and measurement of financial liabilities.

Impairment of trade receivables

Under IAS 39, impairment was recognised when there was objective evidence that the group is not able to collect the amounts due. Under IFRS 9, the group has developed a simplified expected credit loss model for trade receivables, whereby expected credit losses that are expected to occur during the full lifetime of the assets are recognised as provisions. New impairment model is based on forward-looking information as well as past experience and current expectations. UPM has historically low levels of realised bad debts in trade receivables due to strict policies and use of trade credit insurance. The new expected loss model did not materially change the amount of credit loss provision at the transition date.

Cost of hedging

In cash flow hedge accounting, the group designates only the spot element in the foreign exchange forward contract to offset the changes in the spot foreign exchange prices. Under IAS 39, the changes in the fair value of the forward points were recognised directly in profit or loss. Under IFRS 9, when only designating the spot element in a cash flow hedge, the change in the fair value of the forward element may be recognised in OCI and accumulated in a separate component of equity. Group applies this in transaction related cash flow hedges. Forward element that is accumulated in OCI is recognised in profit or loss when the hedged transaction affects profit or loss. This change in accounting policy will reduce the group's profit and loss volatility, but the anticipated effect is relatively small. The change has been implemented prospectively without restatement of comparatives.

Commodity hedges

UPM is hedging both sales of power production and power purchases consumed at daily business. The group's sensitivity to electricity market price is dependent on the electricity production and consumption levels and the hedging levels. In the Nordic and Central European market areas the operative risk management is done by entering into electricity derivatives contracts.

Under IFRS 9, more group's risk management strategies qualify for hedge accounting. UPM's electricity price hedging benefits from the possibility to apply hedge accounting for one or several risk components separately or in aggregation. UPM considers system (SYS) and electricity price area differential (EPAD) products perfect hedges for corresponding electricity price risk components in Finland. Thus, a vast majority of the previously non-hedge accounted electricity derivatives qualify for hedge accounting under IFRS 9 as of 1 January 2018. This change will reduce the UPM's profit and loss volatility as the fair value changes of unrealized derivatives are recognised in OCI hedging reserve instead of income statement. The effective portion of designated risk component is recognised in OCI. Ineffectiveness is recognised in income statement. However, it may arise in rare cases only.

UPM has updated its risk management strategies, hedging documentation and hedge effectiveness testing principles.

UPM applies the hedge accounting of IFRS 9 on a prospective basis for all hedging relationships without restating comparative information. Thus, these changes in accounting principles did not have any impact on the figures of UPM's financial statements in the period of the initial application, 1 January 2018.

IFRS 16 Leases

The new leasing standard IFRS 16 Leases is effective for annual reporting periods beginning on or after 1 January 2019 and it replaces the current IAS 17 standard. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. As a result, lessees will recognise most of leases on the balance sheet and there will be no distinction between operating and finance leases anymore. Under IFRS 16, a lease asset (i.e. right-of-use asset), representing right to use the underlying item, and a lease liability, representing obligation to make lease payments, will be recognised. The new standard introduces certain exemptions what comes to the short-term and low-value leases. and leases of low-value items. Lessor accounting remains similar compared to the current IAS 17 standard.

IFRS 16 implementation project

The group is about to finalise the IFRS 16 implementation project and related documentation. The project was carried out in several streams including determination of accounting policies, collecting and assessing lease contract data, selecting and implementing of lease software, determining lease process related workflows and controls, and calculating quantitative impact analyses. Representatives from several departments have been involved in the project including Finance, Sourcing, Real Estate, Production units, Treasury, Tax, IT, Investment Management and Investor Relations. Several trainings and communication sessions were arranged for end-users and all stakeholders.

Impact analysis

As described above, the adoption of the new standard will have an impact on the group's financial statements as most of the future operating lease payments will be recognised as right-of-use assets and interest-bearing liabilities in the balance sheet.

On adoption of IFRS 16 as of 1 January 2019, UPM expects to recognise right-of-use assets of approximately EUR 490 million and lease liabilities approximately EUR 490 million from current operating leases.

The most significant lease agreements that will be capitalised consist of the following leased assets:

- Land areas (~32%)
- Power plants (~30%)
- Real estate (~27%)

Real estate contracts include offices, factories, terminals and warehouses. In addition, the group has a significant number of company cars.

The disclosed non-cancellable operating lease commitments under IAS 17 cover for the big part the lease agreements that will be recognised as right-of-use asset and lease liability going forward. The reported undiscounted lease commitments amounted to EUR 554 million as of 31 December 2018.

The new standard will also influence the group's income statement as operating lease expense will be replaced by anticipated similar levels of depreciation and interest expense. For lease contracts that will be recognised on the balance sheet as of 1 January 2019, the annual operating lease expense, which would have been recognised under IAS 17, approximates to EUR 80 million.

Additionally, IFRS 16 will influence cash flow statement. The principal payment will be recognised under financing activities and interest portion of lease payments will be recognised under operating activities. As a result, the operating cash flow will increase, and financing cash flow will correspondingly decrease by approximately EUR 70 million.

Transition policy

UPM will apply IFRS 16 using modified retrospective application method without restatement of comparatives. Under modified retrospective approach, UPM measures right-of-use assets and lease liabilities at the application date as of 1 January 2019 and respectively recognises an adjustment to the opening balance of retained earnings. UPM estimates the remaining lease term as of 1 January 2019 and measures the remaining lease payments accordingly. The group measures its lease liability at the present value of the remaining lease payments discounted using incremental borrowing rate at the date of application 1 January 2019. Lease payments relating to an optional renewal period in the lease liability are included only if it is reasonably certain that the group will exercise that option.

UPM applies short-term leases exemption consistently on transition and subsequently for all asset classes. The lease contracts with a duration of less than 12 months are considered short-term and will not be capitalised. As a practical expedient UPM will not reassess previous decisions about existing contracts whether they are or contain a lease. Additionally, the group will not identify initial direct costs of leases previously classified as operating leases.

What comes to the leases previously classified as finance leases, UPM is not making any adjustments to its IAS 17 balances on transition. Subsequently, the group accounts for the right-of-use asset and lease liability in accordance with the general requirements of IFRS 16.

UPM has not identified any significant lease agreement where it is a lessor.

Accounting policy change of forest renewal costs

From 1 January 2019, UPM will change its accounting policy relating to forest assets by capitalising forestry renewal costs on the balance sheet during the growth cycle and reclassifying forest assets-related cash flows from operating cash flow to investing cash flow. Currently UPM recognises forestry renewal costs in income statement and reports forest assets-related cash flows, including forest renewal costs, forest asset purchases and sales, in operating cash flow. UPM has consistently increased the weight of the Southern hemisphere plantations in its forest asset portfolio, where the growth cycle is significantly shorter and significance of forestry renewal cost substantially higher compared to the Northern hemisphere. Majority of UPM's forest renewal costs are related to Southern hemisphere plantations. Thus, the change of accounting policy results in more relevant information on group's financial performance and cash flows. The comparative years will be restated according to the new reporting principles.

It should be noted that certain statements herein, which are not historical facts, including, without limitation, those regarding expectations for market growth and developments; expectations for growth and profitability; and statements preceded by "believes", "expects", "anticipates", "foresees", or similar expressions, are forward-looking statements. Since these statements are based on current plans, estimates and projections, they involve risks and uncertainties which may cause actual results to materially differ from those expressed in such forward-looking statements. Such factors include, but are not limited to: (1) **operating factors** such as continued success of manufacturing activities and the achievement of efficiencies therein including the availability and cost of production inputs, continued success of product development, acceptance of new products or services by the Group's targeted customers, success of the existing and future collaboration arrangements, changes in business strategy or development plans or targets, changes in the degree of protection created by the Group's patents and other intellectual property rights, the availability of capital on acceptable terms; (2) **industry conditions**, such as strength of product demand, intensity of competition, prevailing and future global market prices for the Group's products and the pricing pressures thereto, financial condition of the customers and the competitors of the Group, the potential introduction of competing products and technologies by competitors; and (3) **general economic conditions**, such as rates of economic growth in the Group's principal geographic markets or fluctuations in exchange and interest rates. The main earnings sensitivities and the group's cost structure are presented on page 123 of the 2017 Annual Report. Risks and opportunities are discussed on pages 22–23 and risks and risk management are presented on pages 102–104 of the report.

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