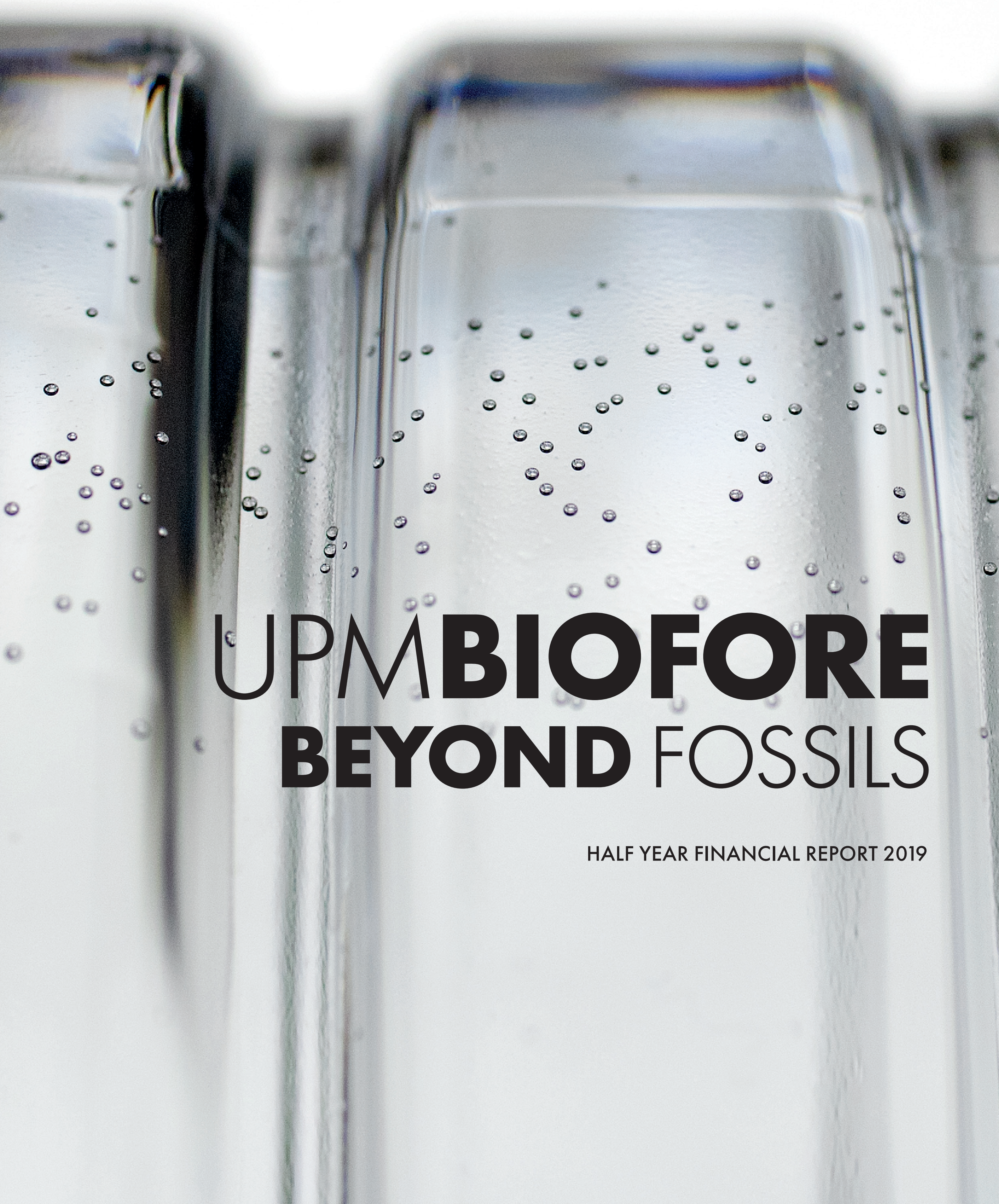
UPM



UPMBIOFORE BEYOND FOSSILS

HALF YEAR FINANCIAL REPORT 2019

UPM Half Year Financial Report 2019:

Margin management delivered continued earnings growth

Q2 2019 highlights

- Sales grew by 1% to EUR 2,605 million (2,589 million in Q2 2018)
- Comparable EBIT increased by 3% to EUR 345 million (334 million)
- Cost environment started to moderate, fixed costs decreased mainly due to lower maintenance activity
- Operating cash flow increased to EUR 436 million (328 million)
- Net debt decreased to EUR 366 million (401 million)

H1 2019 highlights

- Sales grew by 4% to EUR 5,298 million (5,102 million in H1 2018)
- Comparable EBIT increased by 4% to EUR 719 million (689 million)
- Sales prices were higher, outweighing the impact of increased variable costs
- Operating cash flow increased to EUR 756 million (542 million).
- UPM decided to close Paper Machine 10 at UPM Plattling, Germany

Key figures

	Q2/2019	Q2/2018	Q1/2019	Q1–Q2/2019	Q1–Q2/2018	Q1–Q4/2018
Sales, EURm	2,605	2,589	2,693	5,298	5,102	10,483
Comparable EBITDA, EURm [1]	466	442	488	954	898	1,868
% of sales [1]	17.9	17.1	18.1	18.0	17.6	17.8
Operating profit, EURm	319	349	373	692	734	1,895
Comparable EBIT, EURm	345	334	374	719	689	1,513
% of sales	13.2	12.9	13.9	13.6	13.5	14.4
Profit before tax, EURm	300	337	364	664	708	1,839
Comparable profit before tax, EURm	325	322	366	691	663	1,457
Profit for the period, EURm	245	269	304	549	577	1,496
Comparable profit for the period, EURm	271	258	305	576	545	1,194
Earnings per share (EPS), EUR	0.46	0.50	0.57	1.03	1.08	2.80
Comparable EPS, EUR	0.51	0.48	0.57	1.08	1.02	2.24
Return on equity (ROE), %	10.0	12.1	12.3	11.4	13.3	16.2
Comparable ROE, %	11.1	11.6	12.3	11.9	12.5	12.9
Return on capital employed (ROCE), %	11.2	14.2	13.6	12.8	14.9	18.4
Comparable ROCE, %	12.2	13.6	13.7	13.3	14.0	14.6
Operating cash flow, EURm [1]	436	328	320	756	542	1,330
Operating cash flow per share, EUR [1]	0.82	0.61	0.60	1.42	1.02	2.49
Equity per share at the end of period, EUR	17.91	16.37	18.84	17.91	16.37	18.36
Capital employed at the end of period, EURm	10,820	9,691	11,318	10,820	9,691	10,575
Net debt at the end of period, EURm	366	401	–5	366	401	–311
Net debt to EBITDA (last 12 months) [1]	0.19	0.22	–0.00	0.19	0.22	–0.17
Personnel at the end of period	19,760	19,836	19,008	19,760	19,836	18,978

[1] The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs. Refer to ***» Basis of preparation and accounting policies.***

UPM presents certain 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 2018***.

Jussi Pesonen, President and CEO, comments on Q2 2019 results:

"The second quarter of the year marked the 25th consecutive quarter of increased earnings for UPM. This is a remarkable achievement, all the more so as economic growth remains modest, particularly in Europe. UPM has the tools to drive results in changing market conditions. Our operating model has enabled us to maintain good margins, which has had a favourable impact on our earnings. During the quarter, the cost environment started to moderate, too.

Our sales grew by 1% and comparable EBIT increased by 3% to EUR 345 million. Operating cash flow was strong, at EUR 436 million. Our balance sheet is truly industry leading. In the second quarter, we paid a dividend of EUR 693 million, and net debt at the end of the quarter was EUR 366 million.

UPM Biorefining reported a stronger second quarter than last year despite lower pulp prices. There was a consistent customer demand for pulp and our deliveries increased compared with the same quarter last year. Biofuels saw strong customer demand and performed very well. Maintenance activity was significantly lower than last year.

UPM Communication Papers reported a solid result. Prices remained at a good level, but the second quarter result was held back by the impact of reducing inventories. The development of paper demand in Europe has been somewhat weaker than last year. To ensure competitiveness, UPM Communication Papers is maintaining stringent cost control and asset optimisation. The closing of PM10 at UPM Plattling, Germany, was finalised in July, and the conversion of PM2 at UPM Nordland, Germany, continues.

UPM Raflatac reported stable earnings. Sales growth continued, although the slow economic environment, particularly in Europe, is impacting the demand for labels. Raflatac is continuing the fixed-cost reduction programme it started earlier in the year.

UPM Specialty Papers was able to recover earnings due to lower pulp costs, solid customer demand and slightly improved prices in the Asian fine paper markets. To stay on this track, Specialty Papers is continuing its cost management and product development initiatives. In addition, the ongoing investments at UPM Nordland and UPM Changshu are progressing well and will support our growth in a highly competitive way as of next year.

UPM Energy had an excellent quarter with a perfect combination of higher hydropower and nuclear power generation volumes, higher electricity sales prices and lower costs.

UPM Plywood maintained its profitability. Production at the UPM Chudovo, Russia, plywood mill expansion will commence during the third quarter, further improving the competitiveness of the business.

UPM is in great shape, competitive and financially strong. Our strategic spearheads for growth and transformative projects provide us with significant long-term opportunities for value creation and earnings growth.

Preparations for the new world-class pulp mill in Uruguay are progressing towards a potential investment decision. Initial works on the central railway have been started and financing of the railway construction consortium is proceeding but is yet to be finalised. In UPM Biochemicals and in UPM Biofuels our work on preparing growth initiatives continues.

UPM is ready to seize the opportunities offered by bioeconomy. We firmly believe in growing sustainable businesses that offer solutions to global challenges. Our innovations create value and business opportunities for an era in which the world is no longer dependent on fossils."

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.

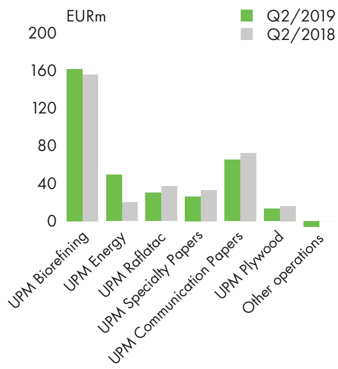
UPM reached record earnings in 2018. UPM's business performance is expected to continue at a good level in 2019.

In 2019, demand growth is expected to continue for most UPM businesses, albeit at a modest pace. Demand decline is expected to continue for UPM Communication Papers.

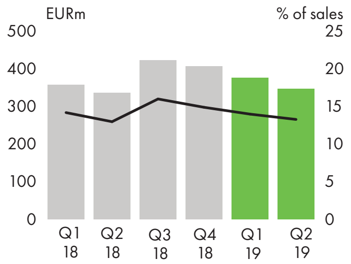
In H2 2019, pulp prices globally are expected to be lower than in H1 2019. Paper prices in Europe and North America are expected to be moderately lower. Also input costs are expected to decrease in H2 2019 compared with H1 2019. UPM will continue measures to reduce both variable and fixed costs.

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

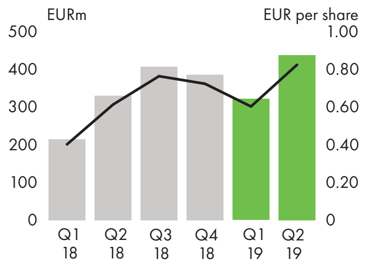
Comparable EBIT



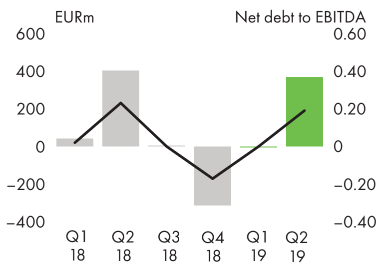
Comparable EBIT



Operating cash flow



Net debt
and net debt to EBITDA



Adoption of IFRS 16 Leases

UPM has adopted IFRS 16 Leases standard on 1 of January 2019 without restating prior years. The change in lease accounting has resulted in a reduction in operating costs (and therefore an increase in EBITDA), higher depreciation expenses and positive impact on operating profit. In addition, interest expenses have increased slightly. Cash generation was not impacted by the adoption of the standard, however operating cash flow is positively impacted by it, given that a large part of the payments in relation to leases is now reported as financing cash flow (lease liability repayments). The group has estimated that as a consequence of the adoption of IFRS 16, the operating costs in 2019 would be approximately EUR 80 million lower (driving the increase in EBITDA by the same amount), depreciation expenses would be approximately EUR 60 million higher and interest expenses would be approximately EUR 10 million higher. The increase in leased assets on 1 of January 2019 amounted to EUR 489 million and the increase in financial debt amounted to EUR 488 million. Leased assets are not included in the measure of Capital expenditure.

Results

Q2 2019 compared with Q2 2018

Q2 2019 sales were EUR 2,605 million, 1% higher than the EUR 2,589 million for Q2 2018. Sales grew in UPM Biorefining, UPM Raflatac and UPM Energy, and decreased in UPM Communication Papers, UPM Specialty Papers and UPM Plywood.

Comparable EBIT increased by 3% to EUR 345 million, 13.2% of sales (334 million, 12.9%).

Fixed costs decreased by EUR 33 million, mainly due to less maintenance activity being conducted than in the comparison period. Without the adoption of the IFRS 16 Leases standard, fixed costs would have been EUR 14 million higher than now reported. Delivery volumes decreased slightly from last year.

Development in sales prices and variable costs differed between businesses. At the group level, changes in sales prices contributed positively to comparable EBIT and this positive impact was larger than the negative impact of increased variable costs and changes in currency exchange rates.

Depreciation, excluding items affecting comparability, totalled EUR 118 million (106 million), including depreciation of leased assets totalling EUR 18 million (2 million). The change in the fair value of forest assets net of wood harvested was EUR −3 million (−3 million).

Operating profit totalled EUR 319 million (349 million). Items affecting comparability in operating profit totalled EUR −26 million in the period (15 million). This included EUR 29 million of restructuring charges in UPM Communication Papers.

Net interest and other finance costs were EUR 19 million (14 million). The exchange rate and fair value gains and losses were EUR −1 million (2 million). Income taxes totalled EUR 55 million (68 million).

Profit for Q2 2019 was EUR 245 million (269 million), and comparable profit was EUR 271 million (258 million).

Q2 2019 compared with Q1 2019

Comparable EBIT decreased by 8% to EUR 345 million, 13.2% of sales (374 million, 13.9%).

Fixed costs increased by EUR 21 million due to seasonal factors and the scheduled maintenance shutdown at the UPM Kymi pulp mill. Delivery volumes decreased, partly due to seasonal factors.

Sales prices decreased, mainly for pulp. However, variable costs decreased as well, which had a larger positive impact on comparable EBIT than the adverse changes in sales prices.

Depreciation, excluding items affecting comparability, totalled EUR 118 million (120 million). The change in the fair value of forest assets net of wood harvested was EUR −3 million (5 million).

Operating profit totalled EUR 319 million (373 million).

January–June 2019 compared with January–June 2018

H1 2019 sales were EUR 5,298 million, 4% higher than the EUR 5,102 million for H1 2018. Sales grew in UPM Biorefining, UPM Raflatac, UPM Communication Papers, UPM Energy and UPM Specialty Papers, and decreased slightly in UPM Plywood.

Comparable EBIT increased by 4% to EUR 719 million, 13.6% of sales (689 million, 13.5%).

Development in sales prices and variable costs differed between businesses. At the group level, changes in sales prices had a significant positive impact on comparable EBIT and this positive impact was larger than the negative impact of increased variable costs and changes in currency exchange rates.

Fixed costs decreased by EUR 25 million, partly due to less maintenance activity being conducted than in the comparison period. Without the adoption of the IFRS 16 Leases standard, fixed costs would have been EUR 27 million higher than now reported. Delivery volumes were at the same level as last year.

Depreciation, excluding items affecting comparability, totalled EUR 238 million (212 million) including depreciation of leased assets totalling EUR 35 million (4 million). The change in the fair value of forest assets net of wood harvested was EUR 2 million (0 million).

Operating profit totalled EUR 692 million (734 million). Items affecting comparability in operating profit totalled EUR –27 million in the period (44 million). This included EUR 29 million of restructuring charges in UPM Communication Papers and EUR 5 million in UPM Raflatac.

Net interest and other finance costs were EUR 28 million (28 million). The exchange rate and fair value gains and losses were EUR –1 million (2 million). Income taxes totalled EUR 115 million (130 million).

Profit for H1 2019 was EUR 549 million (577 million), and comparable profit was EUR 576 million (545 million).

Financing and cash flow

In H1 2019 cash flow from operating activities before capital expenditure and financing totalled EUR 756 million (542 million). Working capital increased by EUR 64 million during the period (162 million).

A dividend of EUR 1.30 per share (totalling EUR 693 million) was paid on 17 April 2019 in respect of the 2018 financial year.

Net debt decreased to EUR 366 million at the end of Q2 2019 (401 million). The gearing ratio as of 30 June 2019 was 4% (5%). The net debt to EBITDA ratio, based on the latest 12 months' EBITDA, was 0.19 at the end of the period (0.22).

On 30 June 2019 UPM's cash funds and unused committed credit facilities totalled EUR 0.7 billion.

Capital expenditure

In H1 2019 capital expenditure totalled EUR 133 million, 2.5% of sales (119 million, 2.3% of sales). Capital expenditure does not include additions to leased assets.

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 production runs. In addition, internal logistics have been strengthened. The new product line was completed in January 2019.

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 growth in production capacity, 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 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 per year, as of Q1 2020. The total investment in Changshu is EUR 34 million.

Personnel

In H1 2019 UPM had an average of 19,262 employees (19,297). At the beginning of the year, the number of employees was 18,978, while at the end of Q2 2019 it was 19,760.

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 will 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 phase is ongoing. The Montevideo port concession has been awarded to UPM. The mill engineering, design and tendering processes are all proceeding. The free-trade zone for the mill has been granted. Environmental permitting processes for the port and mill have been completed. Initial works on the central railway have been started.

Several important conditions agreed upon in the investment agreement had not been satisfied by the end of the reporting period. Achieving progress in the implementation of the infrastructure initiatives, most importantly the Central Railway PPP project, the labour protocols and conflict mitigation regulation, as well as certain material outstanding items as specified in the investment agreement, are all necessary before the second preparation phase can be concluded.

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. This second phase is expected to last 1.5 to 2 years, starting from the signing of the investment agreement in November 2017.

The investment agreement in short

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. Basic engineering of the potential biorefinery has been completed. Currently the company is assessing two alternative industrial parks in Germany – in Frankfurt and in Leuna – to select the optimal set-up for the potential facility. The commercial studies also need to be concluded before starting UPM'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, regular electricity generation at OL3 would commence in January 2020.

After the reporting period TVO has announced to have received an updated schedule for the commissioning of the OL3 plant unit from the plant Supplier. According to the received information, the regular electricity generation at the OL3 plant unit will start in July 2020. According to Supplier, nuclear fuel will be loaded into the reactor in January 2020 and the first connection to the grid will take place in April 2020. According to the commissioning program, the unit will produce 1-3 terawatt hours with varying power levels during the test program, which will begin from the connection to the grid and will end to the beginning of regular electricity production.

When completed, OL3 will supply electricity to its shareholders on a cost-price principle (Mankala-principle) which is widely applied in the Finnish energy industry. Under the Mankala-principle electricity and/or heat is supplied to the shareholders in proportion to their ownership and each shareholder is, pursuant to the specific stipulations of the respective articles of association, severally responsible for its respective share of the production costs of the energy company concerned. 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 CO_2-free and Olkiluoto will have a secure solution for the deposit of used fuel.

Events during H1 2019

On 9 January UPM announced its participation in the international public tendering process in the port of Montevideo organised by the National Ports Administration (ANP) of Uruguay.

In March, ANP awarded UPM the concession in the port. The scope of the concession is the construction and operation of a port terminal specialised in the storage and shipping of pulp, chemicals and other inputs related to pulp production with a capacity to handle approximately 2 million tonnes of pulp annually. The tenure of the concession is to be 50 years.

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 that 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.

On 24 June UPM announced the decision to permanently close paper machine 10 at UPM Plattling, Germany, reducing the annual capacity of coated mechanical paper in Europe by approximately 155,000 tonnes. The paper machine was permanently closed in July 2019 and the number of persons affected is 155. UPM recognised restructuring charges of EUR 29 million as items affecting comparability in its Q2 2019 results. The expected annual cost savings total approximately EUR 17 million.

Events after the balance sheet date

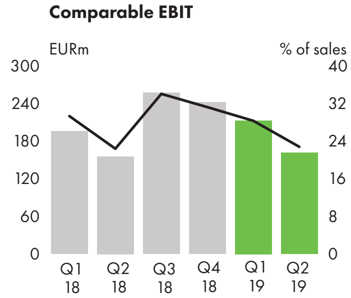
On 17 July 2019 TVO announced to have received an updated schedule for the commissioning of the OL3 EPR plant unit from the Supplier. According to the received information, the regular electricity generation at the OL3 plant unit will start in July 2020.

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 Pulp offers a versatile range of responsibly-produced pulp grades suitable for a wide range of end-uses such as tissue, specialty paper, graphic papers and board. UPM Timber offers certified sawn timber for construction, joinery and furniture. UPM Biofuels produces wood-based renewable diesel for all diesel engines and renewable naphtha that can be used as a biocomponent for gasoline or for replacing fossil raw materials in petrochemical industry, for example. UPM has three pulp mills in Finland and one mill and plantation operations in Uruguay. UPM operates four sawmills and one biorefinery in Finland.



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	708	753	775	754	694	668	1,461	1,363	2,892
Comparable EBITDA, EURm [1]	203	254	282	297	199	233	457	432	1,011
% of sales [1]	28.6	33.8	36.4	39.3	28.6	34.9	31.3	31.7	35.0
Change in fair value of forest assets and wood harvested, EURm [1]	–1	–1	–3	–3	–6	–	–1	–6	–12
Share of results of associated companies and joint ventures, EURm	1	1	–	1	–	–	1	1	2
Depreciation, amortisation and impairment charges, EURm	–42	–42	–39	–39	–39	–38	–84	–77	–155
Operating profit, EURm	161	212	241	256	155	195	373	350	847
% of sales	22.7	28.2	31.1	33.9	22.3	29.2	25.5	25.7	29.3
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	161	212	241	256	155	195	373	350	847
% of sales	22.7	28.2	31.1	33.9	22.3	29.2	25.5	25.7	29.3
Capital employed (average), EURm	3,491	3,481	3,267	3,224	3,153	3,074	3,486	3,114	3,180
Comparable ROCE, %	18.4	24.4	29.5	31.7	19.7	25.4	21.4	22.5	26.6
Pulp deliveries, 1,000 t	877	915	912	870	835	850	1,793	1,685	3,468

Pulp mill maintenance shutdowns: Q2 2019 Kymi, Q4 2018 Pietarsaari, Q2 2018 UPM Fray Bentos and UPM Kaukas.

[1] The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs. Refer to » ***Basis of preparation and accounting policies.***

- Maintenance shutdown at UPM Kymi pulp mill in Finland
- Strong performance for UPM Biofuels

Results

Q2 2019 compared with Q2 2018

Comparable EBIT for UPM Biorefining increased due to higher pulp delivery volumes. Fixed costs were lower due to lower maintenance. Wood costs were higher in Finland.

The average price in euro for UPM's pulp deliveries decreased by 6%.

Q2 2019 compared with Q1 2019

Comparable EBIT decreased due to lower pulp sales prices. Fixed costs were higher due to scheduled maintenance activity.

The average price in euro for UPM's pulp deliveries decreased by 5%.

January–June 2019 compared with January–June 2018

Comparable EBIT for UPM Biorefining increased due to higher pulp delivery volumes and lower fixed costs. Variable costs increased due to higher wood costs in Finland.

The average price in euro for UPM's pulp deliveries remained unchanged.

Market environment

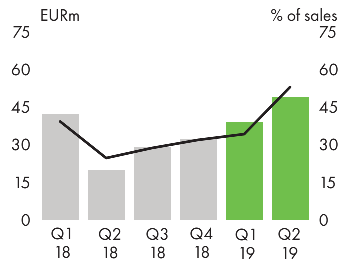
- Global chemical pulp demand growth slowed down in the first half of 2019. Uncertainties in the global economy and destocking in the value chain continued to impact somewhat upon global market pulp shipments.
- In Europe and China, the market price of both northern bleached softwood kraft (NBSK) pulp and bleached hardwood kraft pulp (BHKP) decreased in the second quarter of 2019 compared to the previous quarter.
- In the first half of 2019 the average European market price in euro was 6% higher for NBSK and 1% higher for BHKP compared to the previous year. In China the average market price in US dollars was 23% lower for NBSK and 14% lower for BHKP compared to the previous year.
- Demand for advanced renewable diesel and naphtha continued to be strong.
- Demand growth for sawn timber continued albeit at lower level. Uncertainties in the global economy and destocking in the value chain continued to impact market prices.

Source: FOEX

UPM Energy

UPM Energy creates value through cost competitive, low-emission electricity generation and through physical and financial electricity trading as well as energy optimisation services for industrial consumers.
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



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	93	113	100	101	83	107	206	191	391
Comparable EBITDA, EURm	51	41	34	31	23	44	92	67	132
% of sales	55.1	36.0	34.1	30.8	27.2	41.1	44.7	35.0	33.7
Depreciation, amortisation and impairment charges, EURm	–2	–2	–2	–2	–2	–2	–4	–4	–9
Operating profit, EURm	49	39	23	29	20	42	87	63	114
% of sales	52.2	34.2	22.9	28.7	24.7	39.2	42.3	32.8	29.2
Items affecting comparability in operating profit, EURm [1]	–1	–	–9	–	–	–	–1	–	–9
Comparable EBIT, EURm	49	39	32	29	20	42	88	63	123
% of sales	52.9	34.2	31.9	28.7	24.7	39.2	42.6	32.8	31.5
Capital employed (average), EURm	2,460	2,463	2,419	2,343	2,321	2,301	2,462	2,311	2,346
Comparable ROCE, %	8.0	6.3	5.3	4.9	3.5	7.3	7.1	5.4	5.3
Electricity deliveries, GWh	2,121	2,173	2,103	2,128	2,004	2,373	4,294	4,377	8,608

[1] In Q2 2019 and Q4 2018, items affecting comparability relate to restructuring of ownership in Meri-Pori power plant.

- Maintenance shutdown at Olkiluoto nuclear power plant
- Improving hydro generation volumes

Results

Q2 2019 compared with Q2 2018

Comparable EBIT for UPM Energy increased due to materially higher electricity sales prices and higher nuclear and hydropower generation. Fixed costs for nuclear were lower.

UPM's average electricity sales price increased by 11% to EUR 38.9/MWh (34.9/MWh).

Q2 2019 compared with Q1 2019

Comparable EBIT increased due to higher hydropower generation. Sales prices were lower. Fixed costs for nuclear were lower offsetting the negative impact of the maintenance shutdown at the Olkiluoto nuclear power plant.

UPM's average electricity sales price decreased by 11% to EUR 38.9/MWh (43.7/MWh).

January–June 2019 compared with January–June 2018

Comparable EBIT for UPM Energy increased due to higher electricity sales prices and higher nuclear generation. Fixed costs for nuclear were lower.

UPM's average electricity sales price increased by 13% to EUR 41.3/MWh (36.4/MWh).

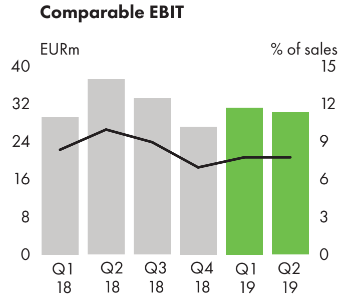
Market environment

- The Nordic hydrological balance improved in the second quarter of 2019 and was close to normal at the end of June.
- Coal prices in Q2 2019 decreased compared to the same period in the previous year. The CO_2 emission allowance price of EUR 26.3/tonne at the end of Q2 2019 was higher than a year ago (EUR 15.0/tonne).
- The average Finnish area spot price on the Nordic electricity exchange for the first half of 2019 was EUR 42.4/MWh, 1% higher than in the same period last year (42.0/MWh).
- The front-year forward electricity price for the Finnish area closed at EUR 40.0/MWh in June, 4% higher than at the end of Q1 2019 (38.4/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 in the food, beverage, personal care, pharmaceutical and retail segments, for example. UPM Raflatac is the second-largest producer of self-adhesive label materials worldwide.



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	385	398	397	374	371	345	783	717	1,488
Comparable EBITDA, EURm	40	40	35	41	44	36	80	80	156
% of sales	10.3	10.1	8.8	11.0	11.9	10.4	10.2	11.2	10.5
Depreciation, amortisation and impairment charges, EURm	–10	–10	–7	–8	–7	–7	–20	–15	–30
Operating profit, EURm	30	26	27	33	37	29	56	65	126
% of sales	7.8	6.5	6.9	8.9	9.9	8.3	7.1	9.1	8.5
Items affecting comparability in operating profit, EURm [1]	–	–5	–	–	–	–	–5	–	–
Comparable EBIT, EURm	30	31	27	33	37	29	60	65	126
% of sales	7.7	7.7	6.9	8.9	9.9	8.3	7.7	9.1	8.5
Capital employed (average), EURm	590	586	543	538	540	519	588	530	535
Comparable ROCE, %	20.1	20.9	20.2	24.8	27.3	22.0	20.5	24.7	23.6

[1] In Q1 2019, items affecting comparability relate to restructuring charges.

- New service terminal was opened in Chelyabinsk in Russia
- Sales growth in Q2 was mainly driven by higher sales prices and mix

Results

Q2 2019 compared with Q2 2018
Comparable EBIT for UPM Raflatac decreased due to higher variable costs and unfavourable changes in currencies more than offsetting the positive impact of higher sales prices.

Q2 2019 compared with Q1 2019
Comparable EBIT decreased slightly due to lower delivery volumes offsetting the positive impact of higher sales margin.

January–June 2019 compared with January–June 2018
Comparable EBIT for UPM Raflatac decreased due to higher variable costs and unfavourable changes in currencies more than offsetting the positive impact of higher sales prices and delivery volumes. Fixed costs were lower.

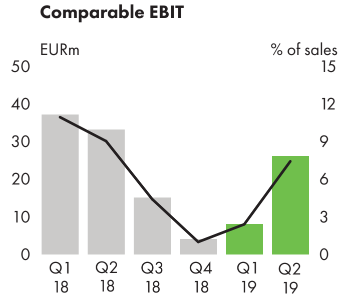
Market environment

- Demand growth for self-adhesive label materials continued stable in North America and in Asia. European demand has slowed down and in Q2 the market declined slightly.

Sources: FINAT, TLMI

UPM Specialty Papers

UPM Specialty Papers serves growing global markets with labelling materials and release liners, office and graphic papers as well as packaging papers for labelling, commercial siliconising, flexible packaging, wrapping and printing. 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 label stock manufacturers, paper converters, merchants and distributors and packaging customers.



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	359	357	364	354	368	343	716	710	1,429
Comparable EBITDA, EURm	45	29	23	34	53	56	74	109	167
% of sales	12.5	8.2	6.4	9.7	14.4	16.4	10.4	15.4	11.7
Depreciation, amortisation and impairment charges, EURm	–19	–21	–19	–19	–20	–19	–39	–39	–77
Operating profit, EURm	26	8	4	15	33	37	35	70	90
% of sales	7.4	2.4	1.0	4.4	9.0	10.9	4.9	9.9	6.3
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	26	8	4	15	33	37	35	70	90
% of sales	7.4	2.4	1.0	4.4	9.0	10.9	4.9	9.9	6.3
Capital employed (average), EURm	892	908	901	896	887	874	900	880	889
Comparable ROCE, %	11.8	3.7	1.7	6.9	15.0	17.1	7.7	16.0	10.1
Paper deliveries, 1,000 t	390	386	393	389	393	379	776	772	1,554

- Profitability recovered mainly due to lower pulp costs
- Cost reduction measures resulted in lower fixed costs
- Ongoing investments in Germany and China

Results

Q2 2019 compared with Q2 2018
Comparable EBIT for UPM Specialty Papers decreased due to impact of reducing stocks. Fine paper sales prices were lower and offset the positive impact of lower pulp costs. Changes in currencies were unfavourable. Fixed costs decreased.

Q2 2019 compared with Q1 2019
Comparable EBIT increased mainly due to lower pulp costs. Sales prices were higher.

January–June 2019 compared with January–June 2018
Comparable EBIT for UPM Specialty Papers decreased due to impact of reducing stocks, lower fine paper sales prices and unfavourable changes in currencies. Fixed costs were lower.

Market environment

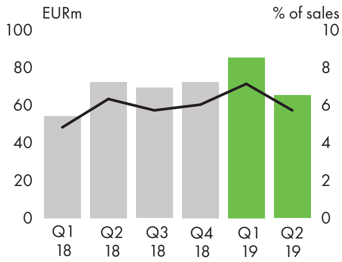
- In the Asia-Pacific region, fine paper demand was solid especially during Q2 2019. China fine paper market prices increased in the first half of 2019.
- Label, release and packaging paper demand was solid in the first half of 2019 and sales prices were stable.

Sources: UPM, RISI, Pöyry, AWA

UPM Communication Papers

UPM Communication Papers offers an extensive product range of graphic papers for advertising and publishing as well as home and office uses. 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



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	1,138	1,200	1,206	1,209	1,149	1,126	2,338	2,275	4,690
Comparable EBITDA, EURm	98	118	99	97	101	84	215	185	381
% of sales	8.6	9.8	8.2	8.0	8.8	7.5	9.2	8.1	8.1
Share of results of associated companies and joint ventures, EURm	–	–	1	1	–	–	–	–	2
Depreciation, amortisation and impairment charges, EURm	–34	–33	–28	–28	–29	–30	–67	–59	–116
Operating profit, EURm	36	85	71	69	88	85	121	173	312
% of sales	3.2	7.1	5.9	5.7	7.7	7.5	5.2	7.6	6.7
Items affecting comparability in operating profit, EURm [1]	–29	–	–1	–	17	30	–29	47	46
Comparable EBIT, EURm	65	85	72	69	72	54	150	126	267
% of sales	5.7	7.1	6.0	5.7	6.3	4.8	6.4	5.5	5.7
Capital employed (average), EURm	1,663	1,759	1,631	1,605	1,591	1,580	1,711	1,585	1,602
Comparable ROCE, %	15.6	19.3	17.7	17.1	18.1	13.7	17.5	15.9	16.7
Paper deliveries, 1,000 t	1,666	1,746	1,865	1,879	1,842	1,855	3,412	3,697	7,442

[1] In Q2 2019, items affecting comparability relate to closure of paper machine 10 at UPM Plattling mill, Germany. 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.

- UPM decided to permanently close paper machine 10 at UPM Plattling, Germany

Results

Q2 2019 compared with Q2 2018

Comparable EBIT for UPM Communication Papers decreased due to lower deliveries and the impact of reducing stocks more than offsetting the positive impact of higher sales prices.

The average price in euro for UPM's paper deliveries increased by 9%.

Q2 2019 compared with Q1 2019

Comparable EBIT decreased due to impact of reducing stocks, lower delivery volumes and seasonally higher fixed costs. Variable costs were lower, especially for pulp and energy.

The average price in euro for UPM's paper deliveries remained unchanged.

January–June 2019 compared with January–June 2018

Comparable EBIT for UPM Communication Papers increased due to higher sales prices. Delivery volumes were lower. Variable costs were higher.

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

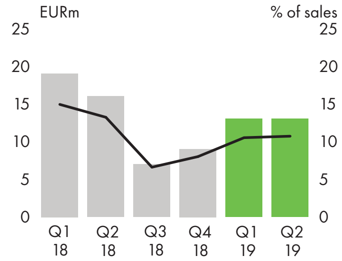
Market environment

- In the first half of 2019 demand for graphic papers in Europe was 9% lower than last year. Newsprint demand decreased by 8%, magazine paper by 11% and fine paper by 8% compared with the first half of 2018.
- In Q2 2019 publication paper prices in Europe were at the same level as the first quarter of 2019. Compared to Q2 2018 publication paper prices were on average 11% higher. In Q2 2019 fine paper prices in Europe were on average 1% lower than in the previous quarter. Compared to Q2 2018 fine paper prices were on average 5% higher.
- In the first half of 2019 demand for magazine papers in North America decreased by 13% compared to the same period last year. The average price in US dollars for magazine papers in Q2 2019 decreased by 1% compared to Q1 2019 and increased by 7% compared to Q2 2018.

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 industrial applications. Production facilities are located in Finland, Estonia and Russia.



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	120	123	119	112	125	125	243	250	480
Comparable EBITDA, EURm	19	19	15	13	22	24	38	47	75
% of sales	15.6	15.3	13.0	11.7	17.8	19.5	15.5	18.7	15.6
Depreciation, amortisation and impairment charges, EURm	–6	–6	–6	–6	–6	–6	–12	–12	–23
Operating profit, EURm	13	13	9	7	16	19	26	35	52
% of sales	10.7	10.5	8.0	6.6	13.2	14.9	10.6	14.0	10.8
Items affecting comparability in operating profit, EURm	–	–	–	–	–	–	–	–	–
Comparable EBIT, EURm	13	13	9	7	16	19	26	35	52
% of sales	10.7	10.5	8.0	6.6	13.2	14.9	10.6	14.0	10.8
Capital employed (average), EURm	336	321	301	282	280	269	328	274	283
Comparable ROCE, %	15.2	16.1	12.6	10.5	23.6	27.6	15.6	25.6	18.4
Plywood deliveries, 1,000 m^3	193	196	189	188	206	209	389	414	791

- UPM Chudovo plywood mill expansion investment in Russia is proceeding in schedule
- UPM Plywood published Environmental Product Declarations (EPD) for the WISA products

Results

Q2 2019 compared with Q2 2018

Comparable EBIT for UPM Plywood decreased due to lower delivery volumes and higher variable costs.

Q2 2019 compared with Q1 2019

Comparable EBIT remained at the same level.

January–June 2019 compared with January–June 2018

Comparable EBIT for UPM Plywood decreased due to lower delivery volumes and higher costs. Sales prices were higher.

Market environment

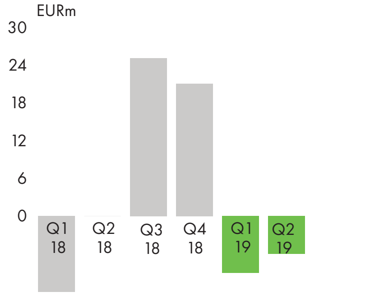
- Market demand in Europe was stable in the first half of 2019. Demand for spruce plywood was stable, driven by the building and construction industry. Demand for birch plywood-related industrial applications was stable. However, competition remained intense in the birch-trading business.

Source: UPM

Other operations

Wood Sourcing and Forestry secures competitive wood and biomass for UPM businesses and manages UPM-owned and privately-owned forests in North Europe. In addition, UPM offers forestry services to forest owners and forest investors. UPM Biochemicals and UPM Biocomposites business units as well as group services are also included in Other operations.

Comparable EBIT



	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	72	68	87	80	83	76	140	159	326
Comparable EBITDA, EURm [1]	3	−8	−14	−2	1	−13	−5	−12	−28
Change in fair value of forest assets and wood harvested, EURm [1]	−3	6	383	30	3	3	3	6	419
Share of results of associated companies and joint ventures, EURm	–	–	–	–	–	1	–	2	2
Depreciation, amortisation and impairment charges, EURm	−7	−6	−3	−3	−3	−3	−13	−7	−13
Operating profit, EURm	−9	−9	365	25	0	−12	−18	−11	380
Items affecting comparability in operating profit, EURm [2]	−2	–	345	–	–	–	−2	–	345
Comparable EBIT, EURm	−6	−9	21	25	0	−12	−15	−11	35
Capital employed (average), EURm	1,807	1,801	1,447	1,360	1,378	1,384	1,804	1,381	1,392
Comparable ROCE, %	−1.4	−2.0	5.8	7.5	0.1	−3.4	−1.7	−1.6	2.5

1) The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs. Refer to **» Basis of preparation and accounting policies.**

2) In Q2 2019, items affecting comparability relate to sale of Voikkaa mill site in Finland. In Q4 2018, items affecting comparability of EUR 345 million relate to increase in the fair value of the forest assets in Finland, mainly due to higher forest growth estimates.

Results

Q2 2019 compared with Q2 2018

Comparable EBIT for other operations decreased. The change in the fair value of forest assets net of wood harvested was EUR −3 million (3 million). The increase in the fair value of forest assets was EUR 13 million (23 million). The cost of wood harvested from UPM forests was EUR 15 million (20 million).

Q2 2019 compared with Q1 2019

Comparable EBIT increased. The change in the fair value of forest assets net of wood harvested was EUR −3 million (6 million). The increase in the fair value of forest assets was EUR 13 million (15 million). The cost of wood harvested from UPM forests was EUR 15 million (9 million).

January–June 2019 compared with January–June 2018

Comparable EBIT for other operations decreased. The change in the fair value of forest assets net of wood harvested was EUR 3 million (6 million). The increase in the fair value of forest assets was EUR 28 million (37 million). The cost of wood harvested from UPM forests was EUR 25 million (31 million).

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 global economic growth in 2019. Economists continue to expect 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 was scheduled to take place at the end of March 2019. However, the nature of the exit remains 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.

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.

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.

After the reporting period TVO has announced to have received an updated schedule for the commissioning of the OL3 plant unit from the Supplier. According to the received information, the regular electricity generation at the OL3 plant unit will start in July 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 pages 135–136 of the Annual Report 2018. Risks and opportunities are discussed on pages 30–31, and risks and risk management are presented on pages 106–109.

Shares

In H1 2019 UPM shares worth a total of EUR 4,828 million (4,825 million) were traded on the NASDAQ Helsinki stock exchange. This is estimated to represent more than 50% of all trading volume in UPM shares. The highest listing was EUR 28.48 in April and the lowest was EUR 21.60 in January.

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 4 April 2019 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 4 April 2019 authorised the Board of Directors to decide on the issuance of new shares, transfer of treasury shares and issuance of special rights entitling to shares in proportion to the shareholders' existing holdings in the Company, or in a directed share issue, deviating from the shareholder's pre-emptive subscription right. 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, including the number of shares that can be received on the basis of the special rights. The authorisation will be valid for 18 months 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 30 June 2019 was 533,735,699. Through the issuance authorisation, the number of shares may increase to a maximum of 558,735,699.

On 30 June 2019 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

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 filed a request for leave of appeal with the Supreme Court. In March 2019 the Supreme Court rendered its decision denying Metsäliitto and Metsä Board leave to appeal as a result of which the judgement of the Court of Appeal remains final.

Helsinki, 23 July 2019

UPM-Kymmene Corporation
Board of Directors

Financial information

Consolidated income statement

EURm	Q2/2019	RESTATED *) Q2/2018	Q1–Q2/2019	RESTATED *) Q1–Q2/2018	RESTATED *) Q1–Q4/2018
Sales	2,605	2,589	5,298	5,102	10,483
Other operating income	33	13	52	56	87
Costs and expenses *)	−2,196	−2,146	−4,421	−4,215	−8,665
Change in fair value of forest assets and wood harvested *)	−3	−3	2	–	407
Share of results of associated companies and joint ventures	1	1	1	3	6
Depreciation, amortisation and impairment charges	−120	−106	−239	−212	−422
Operating profit	319	349	692	734	1,895
Exchange rate and fair value gains and losses	−1	2	−1	2	3
Interest and other finance costs, net	−19	−14	−28	−28	−60
Profit before tax	300	337	664	708	1,839
Income taxes	−55	−68	−115	−130	−342
Profit for the period	245	269	549	577	1,496
Attributable to:					
Owners of the parent company	245	269	549	577	1,495
Non-controlling interests	–	–	–	1	1
	245	269	549	577	1,496
Earnings per share for profit attributable to owners of the parent company					
Basic earnings per share, EUR	0.46	0.50	1.03	1.08	2.80
Diluted earnings per share, EUR	0.46	0.50	1.03	1.08	2.80

*) Accounting policy change of forest renewal costs.

Consolidated statement of comprehensive income

EURm	Q2/2019	Q2/2018	Q1–Q2/2019	Q1–Q2/2018	Q1–Q4/2018
Profit for the period	245	269	549	577	1,496
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	−3	35	−71	54	–
Changes in fair value of energy shareholdings	−18	–	−17	38	183
Items that may be reclassified subsequently to income statement:					
Translation differences	−46	89	36	47	62
Net investment hedge	4	−14	−3	−8	−14
Cash flow hedges	16	−13	−17	−24	13
Other comprehensive income for the period, net of tax	−48	98	−73	106	243
Total comprehensive income for the period	197	366	477	684	1,739
Total comprehensive income attributable to:					
Owners of the parent company	197	366	476	683	1,738
Non-controlling interests	–	–	–	1	1
	197	366	477	684	1,739

Consolidated balance sheet

EURm	30 JUN 2019	30 JUN 2018	31 DEC 2018
ASSETS			
Goodwill	236	234	236
Other intangible assets	326	311	295
Property, plant and equipment	4,033	4,213	4,186
Leased assets	580	–	–
Forest assets	1,972	1,614	1,945
Energy shareholdings	2,139	2,011	2,159
Other non-current financial assets	186	182	178
Deferred tax assets	404	396	397
Net retirement benefit assets	11	100	38
Investments in associates and joint ventures	33	30	32
Other non-current assets	23	37	34
Non-current assets	9,942	9,127	9,501
Inventories	1,542	1,471	1,642
Trade and other receivables	1,798	1,800	1,833
Other current financial assets	91	95	107
Income tax receivables	48	19	24
Cash and cash equivalents	678	369	888
Current assets	4,156	3,753	4,496
Assets	14,098	12,881	13,996
EQUITY AND LIABILITIES			
Share capital	890	890	890
Treasury shares	–2	–2	–2
Translation reserve	265	222	232
Other reserves	1,733	1,588	1,778
Reserve for invested non-restricted equity	1,273	1,273	1,273
Retained earnings	5,394	4,759	5,623
Equity attributable to owners of the parent company	9,552	8,729	9,792
Non-controlling interests	5	4	5
Equity	9,556	8,734	9,797
Deferred tax liabilities	543	461	535
Net retirement benefit liabilities	739	675	679
Provisions	141	132	126
Non-current debt	1,126	750	753
Other non-current financial liabilities	74	87	101
Non-current liabilities	2,623	2,104	2,194
Current debt	138	207	25
Trade and other payables	1,721	1,722	1,881
Other current financial liabilities	31	91	78
Income tax payables	30	23	22
Current liabilities	1,919	2,043	2,005
Liabilities	4,542	4,147	4,199
Equity and liabilities	14,098	12,881	13,996

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-CONTROLLING INTERESTRS	TOTAL EQUITY
Value at 31 December 2018	890	–2	232	1,778	1,273	5,623	9,792	5	9,797
Impact of adoption of IFRS 16 [1]	–	–	–	–	–	–6	–6	–	–6
Value at 1 January 2019	890	–2	232	1,778	1,273	5,617	9,786	5	9,791
Profit for the period	–	–	–	–	–	549	549	–	549
Translation differences	–	–	36	–	–	–	36	–	36
Cash flow hedges – reclassified to income statement, net of tax	–	–	–	3	–	–	3	–	3
Cash flow hedges – changes in fair value, net of tax	–	–	–	–20	–	–	–20	–	–20
Net investment hedge, net of tax	–	–	–3	–	–	–	–3	–	–3
Energy shareholdings – changes in fair value, net of tax	–	–	–	–18	–	1	–17	–	–17
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	–71	–71	–	–71
Total comprehensive income for the period	–	–	33	–35	–	479	476	–	477
Share-based payments, net of tax	–	–	–	–10	–	–8	–18	–	–18
Dividend distribution	–	–	–	–	–	–693	–693	–	–693
Total transactions with owners for the period	–	–	–	–10	–	–702	–711	–	–711
Value at 30 June 2019	890	–2	265	1,733	1,273	5,394	9,552	5	9,556
Value at 1 January 2018	890	–2	184	1,590	1,273	4,750	8,684	4	8,687
Profit for the period	–	–	–	–	–	577	577	1	577
Translation differences	–	–	47	–	–	–	47	–	47
Cash flow hedges – reclassified to income statement, net of tax	–	–	–	–20	–	–	–20	–	–20
Cash flow hedges – changes in fair value, net of tax	–	–	–	–4	–	–	–4	–	–4
Net investment hedge, net of tax	–	–	–8	–	–	–	–8	–	–8
Energy shareholdings – changes in fair value, net of tax	–	–	–	38	–	–	38	–	38
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	54	54	–	54
Total comprehensive income for the period	–	–	38	14	–	630	683	1	684
Share-based payments, net of tax	–	–	–	–16	–	–8	–24	–	–24
Dividend distribution	–	–	–	–	–	–613	–613	–	–613
Total transactions with owners for the period	–	–	–	–16	–	–621	–637	–	–637
Value at 30 June 2018	890	–2	222	1,588	1,273	4,759	8,729	4	8,734

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

Condensed consolidated cash flow statement

EURm	Q1–Q2/2019	RESTATED *) Q1–Q2/2018	RESTATED *) Q1–Q4/2018
Cash flows from operating activities			
Profit for the period	549	577	1,496
Adjustments	387	249	301
Change in working capital	–64	–162	–209
Finance costs, net	–24	–19	–31
Income taxes paid	–92	–103	–228
Operating cash flow	756	542	1,330
Cash flows from investing activities			
Capital expenditure	–143	–139	–303
Additions to forest assets	–24	–25	–49
Asset sales and other investing cash flow	–26	43	153
Investing cash flow	–193	–120	–199
Cash flows from financing activities			
Change in loans and other financial items **)	–40	–152	–338
Lease repayments **)	–41	–3	–7
Dividends paid	–693	–613	–613
Financing cash flow	–774	–768	–959
Change in cash and cash equivalents	–211	–347	172
Cash and cash equivalents at beginning of period	888	716	716
Exchange rate effect on cash and cash equivalents	–	–1	–
Change in cash and cash equivalents	–211	–347	172
Cash and cash equivalents at end of period	678	369	888

*) Accounting policy change of forest renewal costs.
**) Repayments of finance leases under IAS 17 have been reclassified from Change in loans and other financial items to Lease repayments.

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.

	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales, EURm	2,605	2,693	2,731	2,650	2,589	2,512	5,298	5,102	10,483
Comparable EBITDA, EURm [1]	466	488	473	497	442	456	954	898	1,868
% of sales [1]	17.9	18.1	17.3	18.7	17.1	18.2	18.0	17.6	17.8
Comparable EBIT, EURm	345	374	404	420	334	355	719	689	1,513
% of sales	13.2	13.9	14.8	15.9	12.9	14.1	13.6	13.5	14.4
Comparable profit before tax, EURm	325	366	390	404	322	341	691	663	1,457
Capital employed (average), EURm	11,069	10,946	10,259	9,817	9,712	9,755	10,698	9,734	10,176
Comparable ROCE, %	12.2	13.7	15.5	16.8	13.6	14.3	13.3	14.0	14.6
Comparable profit for the period, EURm	271	305	319	330	258	288	576	545	1,194
Total equity, average, EURm	9,804	9,924	9,491	8,959	8,856	8,821	9,677	8,699	9,230
Comparable ROE, %	11.1	12.3	13.4	14.6	11.6	13.0	11.9	12.5	12.9
Average number of shares basic (1,000)	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324
Comparable EPS, EUR	0.51	0.57	0.60	0.61	0.48	0.54	1.08	1.02	2.24
Items affecting comparability in operating profit, EURm	−26	−1	340	−3	15	30	−27	44	382
Items affecting comparability in financial items, EURm	–	–	–	–	–	–	–	–	–
Items affecting comparability in taxes, EURm	−1	–	−68	1	−3	−9	–	−12	−80
Operating cash flow, EURm [1]	436	320	384	405	328	214	756	542	1,330
Operating cash flow per share, EUR [1]	0.82	0.60	0.72	0.76	0.61	0.40	1.42	1.02	2.49
Net debt at the end of period, EURm	366	−5	−311	4	401	41	366	401	−311
Net debt to EBITDA (last 12 m.) [1]	0.19	−0.00	−0.17	0.00	0.22	0.02	0.19	0.22	−0.17
Gearing ratio, %	4	0	−3	0	5	0	4	5	−3
Equity per share at the end of period, EUR	17.91	18.84	18.36	17.21	16.37	16.83	17.91	16.37	18.36
Capital expenditure, EURm	71	62	109	76	76	43	133	119	303
Capital expenditure excluding acquisitions, EURm	71	62	109	76	76	43	133	119	303
Personnel at the end of period	19,760	19,008	18,978	19,076	19,836	19,027	19,760	19,836	18,978

[1] The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs.
Refer to ***» Basis of preparation and accounting policies.***

The definitions of alternative performance measures are presented in other financial information in ***» UPM Annual Report 2018***.

Reconciliation of key figures to IFRS

EURm, OR AS INDICATED	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Items affecting comparability									
Impairment charges	–1	–	–	–	–	–	–1	–	–
Restructuring charges	–28	–5	–10	–	18	–	–33	19	9
Change in fair value of unrealised cash flow and commodity hedges	6	4	6	–3	–2	–	10	–3	–
Capital gains and losses on sale of non-current assets	–2	–	–	–	–2	30	–2	28	29
Fair value changes of forest assets resulting from changes in estimates	–	–	345	–	–	–	–	–	345
Total items affecting comparability in operating profit	–26	–1	340	–3	15	30	–27	44	382
Items affecting comparability in financial items	–	–	–	–	–	–	–	–	–
Items affecting comparability in taxes	–1	–	–68	1	–3	–9	–	–12	–80
Items affecting comparability, total	–26	–1	272	–2	11	21	–27	32	302
Comparable EBITDA									
Operating profit	319	373	744	417	349	385	692	734	1,895
Depreciation, amortisation and impairment charges excluding items affecting comparability	118	120	105	105	106	106	238	212	422
Change in fair value of forest assets and wood harvested excluding items affecting comparability [1]	3	–5	–35	–27	3	–3	–2	–	–63
Share of result of associates and joint ventures	–1	–1	–1	–2	–1	–2	–1	–3	–6
Items affecting comparability in operating profit	26	1	–340	3	–15	–30	27	–44	–382
Comparable EBITDA [1]	466	488	473	497	442	456	954	898	1,868
% of sales [1]	17.9	18.1	17.3	18.7	17.1	18.2	18.0	17.6	17.8
Comparable EBIT									
Operating profit	319	373	744	417	349	385	692	734	1,895
Items affecting comparability in operating profit	26	1	–340	3	–15	–30	27	–44	–382
Comparable EBIT	345	374	404	420	334	355	719	689	1,513
% of sales	13.2	13.9	14.8	15.9	12.9	14.1	13.6	13.5	14.4
Comparable profit before tax									
Profit before tax	300	364	731	401	337	371	664	708	1,839
Items affecting comparability in operating profit	26	1	–340	3	–15	–30	27	–44	–382
Items affecting comparability in financial items	–	–	–	–	–	–	–	–	–
Comparable profit before tax	325	366	390	404	322	341	691	663	1,457
Comparable ROCE, %									
Comparable profit before tax	325	366	390	404	322	341	691	663	1,457
Interest expenses and other financial expenses	11	8	7	9	8	9	20	17	33
	337	374	397	413	330	350	711	680	1,490
Capital employed, average	11,069	10,946	10,259	9,817	9,712	9,755	10,698	9,734	10,176
Comparable ROCE, %	12.2	13.7	15.5	16.8	13.6	14.3	13.3	14.0	14.6
Comparable profit for the period									
Profit for the period	245	304	591	328	269	309	549	577	1,496
Items affecting comparability, total	26	1	–272	2	–11	–21	27	–32	–302
Comparable profit for the period	271	305	319	330	258	288	576	545	1,194
Comparable EPS, EUR									
Comparable profit for the period	271	305	319	330	258	288	576	545	1,194
Profit attributable to non-controlling interest	–	–	2	–2	–	–1	–	–1	–1
	271	305	321	328	258	287	576	545	1,193
Average number of shares basic (1,000)	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324
Comparable EPS, EUR	0.51	0.57	0.60	0.61	0.48	0.54	1.08	1.02	2.24

[1] The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs.
Refer to *» Basis of preparation and accounting policies.*

Reconciliation of key figures to IFRS

EURm, OR AS INDICATED	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Comparable ROE, %									
Comparable profit for the period	271	305	319	330	258	288	576	545	1,194
Total equity, average	9,804	9,924	9,491	8,959	8,856	8,821	9,677	8,699	9,230
Comparable ROE, %	11.1	12.3	13.4	14.6	11.6	13.0	11.9	12.5	12.9
Net debt									
Non-current debt	1,126	1,139	753	732	750	720	1,126	750	753
Current debt	138	127	25	25	207	34	138	207	25
Total debt [1]	1,264	1,267	778	757	957	755	1,264	957	778
Non-current interest-bearing assets	184	177	171	158	167	165	184	167	171
Cash and cash equivalents	678	1,064	888	549	369	528	678	369	888
Other current interest-bearing assets	36	31	30	46	20	20	36	20	30
Total interest-bearing assets	898	1,272	1,089	753	556	714	898	556	1,089
Net debt	366	−5	−311	4	401	41	366	401	−311

[1] Total debt increased in 2019 as a result of the adoption of IFRS 16 Leases 1 January 2019.
Refer to ***» Basis of preparation and accounting policies.***

Quarterly information by business area

EURm, OR AS INDICATED	Q2/19	Q1/19	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q2/19	Q1–Q2/18	Q1–Q4/18
Sales									
UPM Biorefining	708	753	775	754	694	668	1,461	1,363	2,892
UPM Energy	93	113	100	101	83	107	206	191	391
UPM Raflatac	385	398	397	374	371	345	783	717	1,488
UPM Specialty Papers	359	357	364	354	368	343	716	710	1,429
UPM Communication Papers	1,138	1,200	1,206	1,209	1,149	1,126	2,338	2,275	4,690
UPM Plywood	120	123	119	112	125	125	243	250	480
Other operations	72	68	87	80	83	76	140	159	326
Internal sales	–269	–320	–318	–334	–289	–279	–590	–568	–1,220
Eliminations and reconciliations	1	2	1	–	4	1	2	5	7
Sales, total	2,605	2,693	2,731	2,650	2,589	2,512	5,298	5,102	10,483
Comparable EBITDA									
UPM Biorefining [1]	203	254	282	297	199	233	457	432	1,011
UPM Energy	51	41	34	31	23	44	92	67	132
UPM Raflatac	40	40	35	41	44	36	80	80	156
UPM Specialty Papers	45	29	23	34	53	56	74	109	167
UPM Communication Papers	98	118	99	97	101	84	215	185	381
UPM Plywood	19	19	15	13	22	24	38	47	75
Other operations [1]	3	–8	–14	–2	1	–13	–5	–12	–28
Eliminations and reconciliations	8	–4	–2	–15	–	–9	4	–9	–26
Comparable EBITDA, total [1]	466	488	473	497	442	456	954	898	1,868
Operating profit									
UPM Biorefining	161	212	241	256	155	195	373	350	847
UPM Energy	49	39	23	29	20	42	87	63	114
UPM Raflatac	30	26	27	33	37	29	56	65	126
UPM Specialty Papers	26	8	4	15	33	37	35	70	90
UPM Communication Papers	36	85	71	69	88	85	121	173	312
UPM Plywood	13	13	9	7	16	19	26	35	52
Other operations	–9	–9	365	25	0	–12	–18	–11	380
Eliminations and reconciliations	14	–	4	–18	–2	–9	14	–12	–25
Operating profit, total	319	373	744	417	349	385	692	734	1,895
% of sales	12.3	13.9	27.3	15.7	13.5	15.3	13.1	14.4	18.1
Items affecting comparability in operating profit									
UPM Biorefining	–	–	–	–	–	–	–	–	–
UPM Energy	–1	–	–9	–	–	–	–1	–	–9
UPM Raflatac	–	–5	–	–	–	–	–5	–	–
UPM Specialty Papers	–	–	–	–	–	–	–	–	–
UPM Communication Papers	–29	–	–1	–	17	30	–29	47	46
UPM Plywood	–	–	–	–	–	–	–	–	–
Other operations	–2	–	345	–	–	–	–2	–	345
Eliminations and reconciliations [2]	6	4	6	–3	–2	–	10	–3	1
Items affecting comparability in operating profit, total	–26	–1	340	–3	15	30	–27	44	382
Comparable EBIT									
UPM Biorefining	161	212	241	256	155	195	373	350	847
UPM Energy	49	39	32	29	20	42	88	63	123
UPM Raflatac	30	31	27	33	37	29	60	65	126
UPM Specialty Papers	26	8	4	15	33	37	35	70	90
UPM Communication Papers	65	85	72	69	72	54	150	126	267
UPM Plywood	13	13	9	7	16	19	26	35	52
Other operations	–6	–9	21	25	0	–12	–15	–11	35
Eliminations and reconciliations	8	–4	–2	–15	–	–9	4	–9	–26
Comparable EBIT, total	345	374	404	420	334	355	719	689	1,513
% of sales	13.2	13.9	14.8	15.9	12.9	14.1	13.6	13.5	14.4

[1] The 2018 comparative figures have been restated due to accounting policy change of forest renewal costs. Refer to » *Basis of preparation and accounting policies.*

[2] Eliminations and reconciliations includes changes in fair value of unrealised cash flow and commodity hedges.

External sales by major products

BUSINESS AREA	BUSINESS	Q2/2019	Q2/2018	Q1–Q2/2019	Q1–Q2/2018	Q1–Q4/2018
EUR million						
UPM Biorefining	UPM Pulp UPM Biofuels UPM Timber	554	536	1,135	1,053	2,223
UPM Energy	UPM Energy	45	20	89	66	109
UPM Raflatac	UPM Raflatac	385	371	783	717	1,488
UPM Specialty Papers	UPM Specialty Papers	309	313	605	605	1,213
UPM Communication Papers	UPM Communication Papers	1,128	1,143	2,318	2,261	4,664
UPM Plywood	UPM Plywood	113	119	230	239	458
Other operations	Wood Sourcing and Forestry UPM Biochemicals UPM Biocomposites	70	82	136	156	321
Eliminations and reconciliations		1	4	2	5	7
Total		2,605	2,589	5,298	5,102	10,483

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 materials, release base papers, flexible packaging materials, office papers, graphic papers
UPM Communication Papers	Graphic 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, nanocellulose-based products for biomedical applications
UPM Biocomposites	UPM ProFi decking products and UPM Formi granules

Changes in property, plant and equipment

EURm	Q1–Q2/2019	Q1–Q2/2018	Q1–Q4/2018
Book value at beginning of period	4,186	4,281	4,281
Reclassification to leased assets (IFRS 16)	–91	–	–
Capital expenditure	121	113	286
Decreases	–3	–8	–15
Depreciation	–197	–205	–408
Impairment charges	–1	–	–
Translation difference and other changes	19	32	41
Book value at end of period	**4,033**	**4,213**	**4,186**

Financial assets and liabilities measured at fair value

EURm	30 JUN 2019				30 JUN 2018				31 DEC 2018			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets												
Derivatives non-qualifying hedges	–	28	–	28	–	12	–	12	–	16	–	16
Derivatives under hedge accounting	46	174	–	220	104	139	–	243	106	140	–	246
Energy shareholdings	–	–	2,139	2,139	–	–	2,011	2,011	–	–	2,159	2,159
Total	46	201	2,139	2,387	104	151	2,011	2,266	106	156	2,159	2,421
Financial liabilities												
Derivatives non-qualifying hedges	–	8	–	8	–	15	–	15	–	10	–	10
Derivatives under hedge accounting	4	21	–	25	43	40	–	83	15	56	–	71
Total	4	28	–	33	43	55	–	98	15	66	–	81

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–Q2/2019	Q1–Q2/2018	Q1–Q4/2018
Opening balance	2,159	1,974	1,974
Disposals	–1	–	–1
Fair value changes recognised in other comprehensive income	–19	37	185
Closing balance	**2,139**	**2,011**	**2,159**

Fair valuation of energy shareholdings in the UPM Energy (Pohjolan Voima Oyj'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 approximately 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 280 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	30 JUN 2019	30 JUN 2018	31 DEC 2018
Non-current debt, excl. derivative financial instruments and lease liabilities	676	665	659

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

Commitments and contingencies

EURm	30 JUN 2019	30 JUN 2018	31 DEC 2018
Own commitments			
Mortgages	1	12	1
On behalf of others			
Guarantees	2	2	2
Other own commitments			
Leasing commitments for the next 12 months [1]	5	80	90
Leasing commitments for subsequent periods [1]	–	382	464
Other commitments	73	93	92
Total	81	569	649

[1] Leasing commitments have decreased as a result of the adoption of IFRS 16 Leases 1 January 2019. Refer to *» Basis of preparation and accounting policies.*

Capital commitments

EURm	COMPLETION	TOTAL COST	BY 31 DEC 2018	Q1–Q2/2019	AFTER 30 JUN 2019
Renovation and modernisation / Kuusankoski hydro power plant	Q4 2022	22	–	1	21
Paper machine conversion / Nordland paper mill	Q4 2019	116	35	20	61
Capacity increase / Changshu paper mill	Q4 2019	34	9	5	20
Capacity increase / Chudovo plywood mill	Q3 2019	50	42	5	3

Notional amounts of derivative financial instruments

EURm	30 JUN 2019	30 JUN 2018	31 DEC 2018
Interest rate forward contracts	1,623	2,033	1,129
Interest rate swaps	330	750	753
Forward foreign exchange contracts	2,684	2,403	2,524
Currency options, bought	3	18	21
Currency options, written	6	25	31
Cross currency swaps	171	163	167
Commodity contracts	921	705	1,189

Basis of preparation and accounting policies

This unaudited interim report 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 2018.

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.

On 1 January 2019, UPM has adopted IFRS 16 Leases standard and changed accounting policy of forest renewal costs. Description of effects of implementation and changes in accounting policies are presented below.

IFRS 16 Leases

The group as a lessee

On 1 January 2019, UPM has changed its accounting policy regarding recognition, measurement, presentation and disclosure of leases. As a result, UPM as a lessee has recognised most of leases on the balance sheet and there is no distinction between operating and finance leases anymore.

Leases of property, plant and equipment where UPM, as a lessee, obtains substantially all of the economic benefits from the use of the identified asset and where UPM has the right to direct the use of the identified asset, are classified as leases.

The group recognises a leased asset and a lease liability at the lease commencement date, except for short-term leases. Short-term leases are leases where the duration of the lease term is 12 months or less. In case the contract includes a purchase option, it is not a short-term lease. UPM recognises lease payments of short-term leases as an expense on straight-line basis over the lease term.

The lease term of the different contracts is determined as the non-cancellable period taking into consideration the options to extend and terminate if it is reasonably certain that the group will exercise the extension option or will not exercise the termination option. If the contract is for an indefinite period of time and the group and the lessor both have a right to terminate the contract within a short notice period (12 months or less) without a significant penalty, the contract is considered to be a short-term and the lease payments are expensed in the income statement on a straight-line basis over the lease term.

Leased asset comprises the initial lease liability, initial direct costs and the obligations to refurbish the asset, less any incentives granted by the lessors. The leased asset is subsequently valued at cost less accumulated depreciation and impairment losses. Remeasurement takes place in case lease liability is remeasured and change in cash flows is based on contract terms that have been included in the original contract. The leased asset is depreciated over the shorter of the asset's useful life and the lease term.

The lease liability is recognised at the commencement date and measured at the present value of the lease payments to be paid during the lease term. The group uses, as a basis, discount rate implicit in the lease and if that rate cannot be readily determined, UPM uses incremental borrowing rate which comprises of currency and lease period based reference rate and specific credit spread. Lease payments can include fixed payments, variable payments that depend on an index or rate and extension option payments or purchase options if it is reasonably certain that the group will exercise them. The lease liability is subsequently measured at amortised cost using the effective interest rate method and remeasured (with corresponding adjustment to the related leased asset) when there is a change in future lease payments due to renegotiation, changes of an index or rate or reassessment of options.

The group has elected to separate non-lease components such as service components and other variable components and account them for as expenses, if they can be separated from the leased asset. However, the group does not separate non-lease components from the lease contracts of company cars.

The group does not apply portfolio approach of leases with similar characteristics.

The group as a lessor

At inception of a lease contract, the group makes an assessment whether the lease is a finance lease or an operating lease. If the lease transfers substantially all of the risks and rewards incidental to ownership of the asset, it is considered to be a finance lease; if not, the lease is considered to be an operating lease. The group has only a minor amount of operating lease contracts, whereby the lease payments are recognised on a straight-line basis over the term of the lease.

Implementation of IFRS 16

The group has adopted the IFRS 16 standard using modified retrospective application method without restatement of comparatives. Under IFRS 16, a right-of-use asset (i.e. leased assets), representing right to use the underlying asset, and a lease liability, representing the obligation to make lease payments, is recognised on the balance sheet.

As part of the transition, leased assets of EUR 489 million and lease liabilities of EUR 488 million were recognised at the date of initial application on 1 January 2019. The most significant lease contracts recognised on the balance sheet consists of land areas, power plants and real estate. UPM estimated the remaining lease term as of 1 January 2019 and measured 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 were included only if it was reasonably certain that the group will exercise that option. The group applied IAS 36 Impairment of Assets to assess the leased assets for impairment at the date of initial application and consequently recognised an adjustment, net of tax, to the opening balance of retained earnings.

UPM applied short-term leases exemption consistently upon transition and subsequently for all asset classes.

For transition purposes UPM did not reassess previous decisions about existing contracts whether they are or contain a lease. Additionally, the group did not identify initial direct costs of leases previously classified as operating leases. At the date of initial application, the group did not apply practical exemption to account leases with the remaining term less than 12 months as short-term leases.

The Group has elected to separate lease and non-lease components for all asset classes except for company cars.

Upon transition, UPM did not make any adjustments to existing finance lease balances which have been accounted for in accordance with IAS 17. Subsequently, the group accounts for the leased asset and lease liability in accordance with the general requirements of IFRS 16.

The impact of the initial application of IFRS 16 by each balance sheet line item is described below. The balance sheet impact includes also the reclassification of finance leases recognised in accordance with IAS 17 at 31 December 2018 to leased assets and lease liability. In addition, certain long-term land use contracts were reclassified from intangible rights to leased assets. The corresponding lease liabilities have been settled in previous periods. Operating lease prepayments reported in trade and other receivables at 31.12.2018 were reclassified to leased assets.

Adjustments of opening balances

EURm	31 DEC 2018	IMPACT OF IFRS 16	1 JAN 2019
ASSETS			
Goodwill	236	–	236
Other intangible assets	295	–16	279
Property, plant and equipment	4,186	–92	4,094
Leased assets	–	598	598
Forest assets	1,945	–	1,945
Energy shareholdings	2,159	–	2,159
Other non-current financial assets	178	–	178
Deferred tax assets	397	–	397
Net retirement benefit assets	38	–	38
Investments in associates and joint ventures	32	–	32
Other non-current assets	34	–	34
Non-current assets	9,501	489	9,991
Inventories	1,642	–	1,642
Trade and other receivables	1,833	–8	1,825
Other current financial assets	107	–	107
Income tax receivables	24	–	24
Cash and cash equivalents	888	–	888
Current assets	4,496	–8	4,488
Assets	13,996	482	14,479
EQUITY AND LIABILITIES			
Share capital	890	–	890
Treasury shares	–2	–	–2
Translation reserve	232	–	232
Other reserves	1,778	–	1,778
Reserve for invested non-restricted equity	1,273	–	1,273
Retained earnings	5,623	–6	5,617
Equity attributable to owners of the parent company	9,792	–6	9,786
Non-controlling interests	5	–	5
Equity	9,797	–6	9,791
Deferred tax liabilities	535	–	535
Net retirement benefit liabilities	679	–	679
Provisions	126	–	126
Non-current debt	753	420	1,173
Other non-current financial liabilities	101	–	101
Non-current liabilities	2,194	420	2,614
Current debt	25	68	93
Trade and other payables	1,881	–	1,881
Other current financial liabilities	78	–	78
Income tax payables	22	–	22
Current liabilities	2,005	68	2,073
Liabilities	4,199	488	4,687
Equity and liabilities	13,996	482	14,479

The following reconciliation to opening balance for the lease liabilities as of 1 January 2019 is based upon the operating lease commitments as of 31 December 2018:

EURm	
Operating lease commitments 31.12.2018	554
Recognition exemption for short-term leases	–7
Reasonably certain extension or termination options	53
Non-lease components (service components)	–27
Other	–1
Gross lease liabilities at 1.1.2019	572
Discounting [1]	–84
Lease liability 1.1.2019	488
Present value of finance lease liabilities 31.12.2018	98
Total lease liabilities 1.1.2019	586

[1] The lease liabilities were discounted at incremental borrowing date as of 1.1.2019. The weighted-average incremental borrowing rate was 1.4%.

Accounting policy change of forest renewal costs

On 1 January 2019, UPM has changed 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. Previously UPM has recognised forestry renewal costs in income statement and reported 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 change has an impact on the following key figures in UPM group, UPM Biorefining and Other operations: EBITDA, EBITDA margin, operating and investing cash flows, operating cash flow per share and net debt to EBITDA ratio. Operating profit, comparable EBIT and balance sheet are not affected. The comparative years have been restated according to the new reporting principles.

UPM group

AS PUBLISHED	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q4/18
Comparable EBITDA, EURm	461	487	425	449	1,823
% of sales	16.9	18.4	16.4	17.9	17.4
Operating cash flow, EURm	420	434	329	208	1,391
Operating cash flow per share, EUR	0.79	0.81	0.62	0.39	2.61
Investing cash flow, EURm	–83	–61	–62	–54	–260
Net debt to EBITDA (last 12 m.)	–0.17	0.00	0.23	0.02	–0.17

RESTATED	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q4/18
Comparable EBITDA, EURm	473	497	442	456	1,868
% of sales	17.3	18.7	17.1	18.2	17.8
Operating cash flow, EURm	384	405	328	214	1,330
Operating cash flow per share, EUR	0.72	0.76	0.61	0.40	2.49
Investing cash flow, EURm	–46	–33	–61	–59	–199
Net debt to EBITDA (last 12 m.)	–0.17	0.00	0.22	0.02	–0.17

Comparable EBITDA by business area

AS PUBLISHED	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q4/18
EUR million					
UPM Biorefining	271	288	185	227	970
UPM Energy	34	31	23	44	132
UPM Raflatac	35	41	44	36	156
UPM Specialty Papers	23	34	53	56	167
UPM Communication Papers	99	97	101	84	381
UPM Plywood	15	13	22	24	75
Other operations	–14	–2	–2	–13	–31
Eliminations and reconciliations	–2	–15	–	–9	–26
Total	461	487	425	449	1,823

RESTATED	Q4/18	Q3/18	Q2/18	Q1/18	Q1–Q4/18
EUR million					
UPM Biorefining	282	297	199	233	1,011
UPM Energy	34	31	23	44	132
UPM Raflatac	35	41	44	36	156
UPM Specialty Papers	23	34	53	56	167
UPM Communication Papers	99	97	101	84	381
UPM Plywood	15	13	22	24	75
Other operations	–14	–2	1	–13	–28
Eliminations and reconciliations	–2	–15	–	–9	–26
Total	473	497	442	456	1,868

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 pages 135–136 of the 2018 Annual Report. Risks and opportunities are discussed on pages 30–31 and risks and risk management are presented on pages 106–109 of the report.

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