

METSÄ BOARD

HALF YEAR FINANCIAL REPORT

JANUARY–JUNE 2017



MetsäBoard

METSÄ BOARD'S COMPARABLE OPERATING RESULT IN JANUARY–JUNE 2017 WAS EUR 89 MILLION

JANUARY–JUNE 2017 (1–6/2016)

- Sales were EUR 918.7 million (858.5).
- Comparable operating result was EUR 88.7 million (70.8), or 9.7 per cent (8.2) of sales. Operating result was EUR 92.1 million (67.2).
- Comparable earnings per share were EUR 0.19 (0.14), and earnings per share were EUR 0.19 (0.13).
- Comparable return on capital employed was 10.3 per cent (8.4).

APRIL–JUNE 2017 (1–3/2017)

- Sales were EUR 474.2 million (444.5).
- Comparable operating result was EUR 43.5 million (45.2), or 9.2 per cent (10.2) of sales. Operating result was EUR 46.9 million (45.2).
- Comparable earnings per share were EUR 0.09 (0.10), and earnings per share were EUR 0.09 (0.10).
- Comparable return on capital employed was 10.3 per cent (10.6).

EVENTS IN APRIL–JUNE 2017

- Total paperboard deliveries grew by 11 per cent from the previous quarter. The average price of folding boxboard was burdened by the geographic sales mix of the Husum mill.
- The new extrusion coating line at Husum, Sweden, started up in April. The line serves the global food service markets, and its annual capacity is 100,000 tonnes.
- In May, Metsä Board renewed its key marketing messages, launched its new product and service portfolio, and harmonised the product names of paperboards.
- The company updated its long-term financial targets and decided on a new dividend policy, effective as of 1 June 2017.

- Metsä Board announced changes to its Corporate Management Team. As of 6 June 2017, Metsä Board's Corporate Management Team consists of Miika Joukio (CEO), Jussi Noponen (CFO), Sari Paajari (SVP, Marketing and Sales), Harri Pihlajaniemi (SVP, Production, as of 6 September 2017 at the latest), Ari Kiviranta (SVP, Development) and Susanna Tainio (SVP, Human Resources).

RESULT GUIDANCE FOR JULY–SEPTEMBER 2017

Metsä Board's comparable operating result in the third quarter of 2017 is expected to improve slightly compared to the second quarter of 2017.

Metsä Board's CEO Miika Joukio:

"Our paperboard deliveries were once again at a record high, and our market pulp operations developed positively in the second quarter of the year. We had several planned maintenance shutdowns in April–June at the Finnish mills, which we didn't have during the first quarter. The market situation of fresh fibre linerboards was good, and the price level remained stable. The average price of our folding boxboard declined due to the geographic sales mix of the Husum mill. Global demand for high-quality fresh fibre paperboard is strong, particularly in the Americas, which is an important market area for us. I believe that North America's share of our paperboard sales will grow clearly during the second half of the year.

At the beginning of June, we updated our long-term financial targets. One of these targets is to grow profitably, exceeding the market growth rate. In the first half of the year, Metsä Board's paperboard deliveries grew by 18 per cent compared to the corresponding period last year. In addition to growth, we are focusing on improving profitability, more efficient use of capital, and growing shareholder value. We still have a lot of potential at Husum to improve the profitability of our paperboards by optimising the product and sales mix.

As part of our business development efforts, we renewed our key marketing messages, and unified our product and service portfolio. This strengthens Metsä Board's market position as a company focused on premium paperboards. The 'Better with Less' concept reflects our desire to promote packaging solutions that create better consumer experiences with less environmental impact."

FINANCIAL KEY FIGURES

	2017	2017	2016	2016	2017	2016	2016
	Q2	Q1	Q2	Q1	Q1–Q2	Q1–Q2	Q1–Q4
Sales, EUR million	474.2	444.5	422.9	435.6	918.7	858.5	1,720.3
EBITDA, EUR million	67.0	68.8	59.6	55.5	135.7	115.2	234.6
comparable, EUR million	67.5	68.8	60.7	57.8	136.2	118.6	231.1
EBITDA, % of sales	14.1	15.5	14.1	12.7	14.8	13.4	13.6
comparable, % of sales	14.2	15.5	14.4	13.3	14.8	13.8	13.4
Operating result, EUR million	46.9	45.2	34.5	32.7	92.1	67.2	132.3
comparable, EUR million	43.5	45.2	35.8	35.0	88.7	70.8	137.5
Operating result, % of sales	9.9	10.2	8.2	7.5	10.0	7.8	7.7
comparable, % of sales	9.2	10.2	8.5	8.0	9.7	8.2	8.0
Result before taxes, EUR million	40.3	39.9	25.5	27.7	80.2	53.3	101.6
comparable, EUR million	36.9	39.9	26.8	30.0	76.8	56.8	106.8
Result for the period, EUR million	35.0	34.2	23.2	23.9	69.1	47.1	90.4
comparable, EUR million	32.2	34.2	24.6	25.7	66.4	50.3	93.6
Result per share, EUR	0.09	0.10	0.06	0.07	0.19	0.13	0.25
comparable, EUR	0.09	0.10	0.07	0.07	0.19	0.14	0.26
Return on equity, %	13.2	13.1	9.4	9.5	12.9	9.3	8.7
comparable, %	12.2	13.1	9.9	10.2	12.4	9.9	9.0
Return on capital employed, %	11.1	10.6	8.2	7.8	10.7	8.0	7.8
comparable, %	10.3	10.6	8.5	8.3	10.3	8.4	8.1
Equity ratio at end of period, %	51	47	47	44	51	47	48
Net gearing ratio at end of period, %	45	44	54	42	45	54	44
Interest-bearing net liabilities/EBITDA ¹⁾	2.0	1.9	2.1	1.5	2.0	2.1	2.0
Shareholders' equity per share at end of period, EUR	3.06	2.90	2.81	2.77	3.06	2.81	2.96
Interest-bearing net liabilities, EUR million	495.2	457.8	541.4	412.3	495.2	541.4	463.8
Gross investments, EUR million	12.4	19.0	48.3	54.3	31.4	102.6	162.4
Net cash flow from operating activities, EUR million	37.1	25.6	-22.2	-22.3	62.7	-44.5	77.0
Personnel at the end of period	2,581	2,450	2,762	2,573	2,581	2,762	2,466

DELIVERY AND PRODUCTION VOLUMES

	2017	2017	2016	2016	2016	2017	2016	2016
1000 t	Q2	Q1	Q4	Q3	Q2	Q1–Q2	Q1–Q2	Q1–Q4
Deliveries								
Paperboard ¹⁾	477	428	399	422	408	906	786	1,607
Paper	0	0	2	7	11	0	26	35
Market Pulp	134	138	116	128	113	272	257	500
Production								
Paperboard ¹⁾	444	456	418	456	428	900	834	1,708
Paper	0	0	0	2	9	0	21	23
Metsä Fibre pulp ²⁾	140	147	149	144	139	287	284	577
Metsä Board pulp	344	328	306	314	307	672	616	1,236

¹⁾ Includes wallpaper base deliveries and production, which was discontinued in Q3 2016.

²⁾ Equal to Metsä Board's 24.9 per cent holding in Metsä Fibre.

HALF YEAR FINANCIAL REPORT 1 JANUARY – 30 JUNE 2017

APRIL–JUNE 2017 (1–3/2017)

SALES AND RESULT

Metsä Board's sales amounted to EUR 474.2 million (444.5). The operating result was EUR 46.9 million (45.2), and the comparable operating result was EUR 43.5 million (45.2). Items affecting comparability during the review period consisted mainly of a reversal of previously recognized impairment loss on the closed and sold paper machine at Kyro mill.

The comparable operating result for April–June improved due to growth in paperboard deliveries and the market pulp operations. However, the second quarter included several planned maintenance shutdowns that didn't take place in the first quarter. Exchange rate fluctuations including hedging had a slightly negative effect on the result for April–June.

The market prices of folding boxboard remained stable. The average price of Metsä Board's folding boxboard was burdened by the geographic sales mix of the Husum mill. The prices of coated white-top fresh fibre linerboard rose, particularly in North America, but the weaker dollar diluted its positive effect on results. Husum's increased linerboard deliveries consisted primarily of uncoated grades, which are less profitable than coated grades.

There were no significant changes in the paperboard production costs. The production costs per tonne of folding boxboard at Husum continue to be higher than the production costs at other mills. This is due to the lower capacity utilisation rate.

In April–June, deliveries of Metsä Board's folding boxboard and white fresh fibre linerboards increased by 15 per cent and 6 per cent, respectively, in comparison to the previous quarter. Correspondingly, deliveries by European folding boxboard producers increased by 4 per cent. Deliveries by producers of white fresh fibre linerboard remained unchanged.

The euro-denominated market price of long-fibre pulp increased by 2 per cent, while its dollar-denominated market price increased by 5 per cent compared to the previous quarter. The euro-denominated market price of short-fibre pulp increased by 11 per cent, while its dollar-denominated market price increased by 15 per cent.

Net cash flow from operations in April–June was EUR 37.1 million (25.6). Working capital remained stable despite the strong growth of business operations.

Financial income and expenses totalled EUR -6.7 million (-5.3), including foreign exchange rate differences from trade receivables, trade payables, financial items

and the valuation of currency hedging instruments, totalling EUR -1.0 million (0.4).

The result before taxes for April–June was EUR 40.3 million (39.9). The comparable result before taxes was EUR 36.9 million (39.9). Income taxes amounted to EUR -5.3 million (-5.7).

Earnings per share were EUR 0.09 (0.10). The return on equity was 13.2 per cent (13.1), and the comparable return on equity was 12.2 per cent (13.1). The return on capital employed was 11.1 per cent (10.6), and the comparable return on capital employed was 10.3 per cent (10.6).

JANUARY–JUNE 2017 (1–6/2016)

SALES AND RESULT

Metsä Board's sales amounted to EUR 918.7 million (858.5). The operating result was EUR 92.1 million (67.2), and the comparable operating result was EUR 88.7 million (70.8). Items affecting comparability during the review period consisted mainly of a reversal of previously recognized impairment loss on the closed and sold paper machine at Kyro mill.

The comparable operating result improved due to positive developments in the paperboard business in Finland and the market pulp operations. Exchange rate fluctuations including hedging had a positive impact on the operating result of the review period.

The average prices of Metsä Board's paperboards produced in Finland remained roughly at the level of the comparison period.

A steep, temporary increase in the price of latex increased the production costs of paperboards. By the end of the review period, the price of latex had already clearly declined from its peak. In other respects, there were no significant changes in production costs.

During the review period, deliveries of Metsä Board's folding boxboard and white fresh fibre linerboards increased by 19 per cent and 16 per cent, respectively, from the corresponding period last year. Correspondingly, deliveries by European folding boxboard producers increased by 8 per cent, and deliveries by producers of white fresh fibre linerboard by 7 per cent. Metsä Board's share of the total deliveries of European folding boxboard producers was 39 per cent, and 70 per cent of exports beyond Europe.

The euro-denominated market price of long-fibre pulp increased by 9 per cent, while its dollar-denominated market price increased by 6 per cent from the corresponding period last year. The euro-denominated market price of short-fibre pulp increased by 4 per cent, while its dollar-denominated market price increased by 1 per cent.

Net cash flow from operations was EUR 62.7 million (-44.5). The cash flow of the comparison period was

weakened by the strong increase in working capital resulting from the investment programme at Husum.

Financial income and expenses totalled EUR -12.0 million (-14.0), including foreign exchange rate differences from trade receivables, trade payables, financial items and the valuation of currency hedging instruments, totalling EUR -0.6 million (-0.3).

The result before taxes for the review period was EUR 80.2 million (53.3). The comparable result before taxes was EUR 76.8 million (56.8). Income taxes amounted to EUR -11.0 million (-6.2).

Earnings per share were EUR 0.19 (0.13). Comparable earnings per share were EUR 0.19 (0.14). The return on equity was 12.9 per cent (9.3), and the comparable return on equity was 12.4 per cent (9.9). The return on capital employed was 10.7 per cent (8.0), and the comparable return on capital employed was 10.3 per cent (8.4).

FINANCING

Metsä Board's equity ratio at the end of June was 51 per cent (30 June 2016: 47) and its net gearing ratio was 45 per cent (30 June 2016: 54). The ratio of interest-bearing net liabilities to comparable EBITDA in the previous 12 months was 2.0 at the end of the review period (30 June 2016: 2.1).

The fair value of investments available for sale was EUR 216.4 million at the end of the review period (30 June 2016: 191.5). The change in fair value from the beginning of the review period, EUR 20.4 million, related to the increase in the fair value of the shares in Pohjolan Voima Oy.

At the end of June, interest-bearing net liabilities totalled EUR 495.2 million (30 June 2016: 541.4). Foreign currency-denominated loans accounted for 1.1 per cent of loans and floating-rate loans for 36 per cent, with the rest being fixed-rate loans. At the end of June, the average interest rate on loans was 3.3 per cent (30 June 2016: 3.5), and the average maturity of long-term loans was 2.0 years (30 June 2016: 2.7). The average interest rate duration of loans at the end of June was 33.2 months (30 June 2016: 19.3).

Net cash flow from operations in January–June was EUR 62.7 million (1–6/2016: -44.5). Working capital increased by EUR 48.9 million in January–June (1–6/2016: 119.7). The working capital of the comparison period increased due to the Husum investment programme.

At the end of the review period, an average of 7.4 months of the net foreign currency exposure was hedged, including the hedging of the balance sheet position. The degree of hedging during the period varied between six and eight months, on average. Half of the projected annual net foreign currency exposure is hedged, in addition to the entire balance sheet position. The amount of hedging may deviate from the norm by 40 per cent in either direction. When hedging is at the

norm, the aim is to allocate it primarily to the following two quarters.

The financing agreements include financial covenants concerning the Group's financial performance and capital structure. The company has considerable headroom in relation to covenants set in the credit agreements.

Metsä Board's liquidity has remained strong. At the end of the review period, the available liquidity was EUR 343.1 million (30 June 2016: 322.0), consisting of the following items: liquid assets and investments of EUR 141.1 million, a syndicated credit facility of EUR 100.0 million, and undrawn pension premium (TyEL) funds of EUR 102.0 million. Of the liquid assets, EUR 134.8 million consisted of short-term deposits with Metsä Group Treasury, and EUR 6.3 million were cash funds and investments. Other interest-bearing receivables amounted to EUR 3.6 million. In addition, Metsä Board's liquidity reserve is complemented by Metsä Group's internal undrawn short-term credit facility of EUR 150.0 million.

In 2017, Metsä Board plans to lower the amount of interest-bearing liabilities by at least EUR 100 million, to improve the effectiveness of the balance sheet.

PERSONNEL

At the end of June, the number of personnel was 2,581 (30 June 2016: 2,762), of whom 1,565 (1,724) were based in Finland. In January–June, Metsä Board employed 2,494 people on average (1–6/2016: 2,632). Personnel expenses in January–June totalled EUR 99.1 million (1–6/2016: 109.3).

INVESTMENTS

Gross investments in January–June totalled EUR 31.4 million (1–6/2016: 102.6). The difference in relation to the comparison period is primarily due to the investment programme at Husum. In 2016, investments totalled EUR 162.4 million, the most significant investments being the Husum investment programme and the extrusion coating line, as well as the equity investment in Metsä Fibre's new bioproduct mill.

BUSINESS DEVELOPMENT

Demand for Metsä Board's fresh fibre paperboards remained good in all of the company's main market areas during the first half of the year. Total deliveries of Metsä Board's paperboards in January–June grew by 18 per cent from the corresponding period last year.

In May, Metsä Board launched its renewed product and service portfolio. The product names of all paperboards were brought under the Metsä Board product family. The "Better with Less" concept promotes packaging solutions that create better consumer experiences with less environmental impact.

Trial deliveries concerning Metsä Board's own PE-coated paperboards have begun, and the quality feedback from customers has been good. The annual capacity of Husum's new extrusion coating line is approximately 100,000 tonnes targeted at food and food service packaging. Metsä Board is also continuously monitoring the commercial potential of other barrier solutions. The company is in a position to provide new barrier solutions, provided that there is a profitable market for them.

The capacity utilisation rate of Husum's new folding boxboard machine was approximately 70 per cent in January–June. A rate of more than 85 per cent was achieved in production and sales in June. Metsä Board aims to reach a capacity utilisation rate of 75 per cent in Husum's folding boxboard during 2017, corresponding to a production and delivery volume of approximately 300,000 tonnes.

In 2017, the company will focus on increasing the sales of folding boxboard in all market areas. In addition to existing customer accounts, the company is strongly focused on acquiring new customer accounts.

Metsä Board has estimated the profit improvement potential of the Husum integrated mill to be approximately EUR 100 million between 2016 and 2019. The most significant part of this improvement will be achieved if the capacity utilisation rate of folding boxboard is at least 95 per cent and if the sales price is at a normal level.

In June 2016, Metsä Board invested EUR 24.9 million in the new bioproduct mill of its associated company, Metsä Fibre. The bioproduct mill's start-up will begin in August, and pulp deliveries from the new mill to customers will begin in early September. The new bioproduct mill will increase Metsä Board's annual pulp capacity by approximately 200,000 tonnes as of 2018. The company has no other financial commitments in the project.

FINANCIAL TARGETS

Metsä Board's Board of Directors updated the company's long-term financial targets and decided on a new dividend policy, effective as of 1 June 2017.

Metsä Board's target for the comparable return on capital employed is at least 12 per cent. According to the company's new target, the ratio of interest-bearing net liabilities to comparable EBITDA is a maximum of 2.5. This target level gives the company enough flexibility for potential growth investments in the future. The previous target for net gearing (less than 70 per cent) has been abandoned.

Metsä Board is a growth company. This is why the company's goal is that the deliveries of its paperboard products grow faster than the average market growth. Global demand for high-quality paperboard made from fresh fibre is expected to grow by approximately 3–4 per cent a year.

According to the new dividend policy, Metsä Board aims to distribute as dividend at least 50 per cent of the result for the financial period.

CHANGES IN THE CORPORATE MANAGEMENT TEAM

On 6 June 2017, Metsä Board announced changes to its Corporate Management Team. Sari Pajari, M.Sc. (Eng.), was appointed Metsä Board's SVP, Marketing and Sales. Her previous area of responsibility in the Corporate Management Team was business development. Seppo Puotinen, the Corporate Management Team member previously in charge of marketing and sales, has left the company.

Harri Pihlajaniemi, M.Sc. (Eng.), was appointed Metsä Board's SVP, Production and a member of the Corporate Management Team by 6 September 2017.

Ari Kiviranta, D.Sc. (Tech.), who has been in charge for Metsä Board's production and technology, will become responsible for research, product development, technology and business development. Kiviranta is in charge of Metsä Board's production until Pihlajaniemi takes up his new position.

LEGAL PROCEEDINGS

In May 2014, Metsä Board petitioned the District Court of Helsinki to revoke the judgment issued by the Arbitral Tribunal on 11 February 2014 that orders Metsä Board to pay EUR 19.7 million in damages to UPM Kymmene Corporation. In a judgment issued in June 2015, the District Court rejected Metsä Board's petition. Metsä Board appealed the decision of the District Court to the Court of Appeal. The Court of Appeal dismissed Metsä Board's appeal on 21 October 2016. Metsä Board has applied for leave to appeal the matter to the Supreme Court.

In the autumn of 2015, the Finnish Tax Administration gave an opinion against the deductibility of certain losses in Metsä Board's 2014 taxation. Metsä Board has appealed against the decision issued by the Tax Administration, as the company believes the losses are deductible.

SHARES

At the end of the review period, the price for Metsä Board's B share on the Nasdaq Helsinki was EUR 6.36. The share's highest and lowest prices in January–June were EUR 7.05 and EUR 5.62, respectively. At the end of the review period, the price for Metsä Board's A share on the Nasdaq Helsinki was EUR 6.24. The share's highest and lowest prices in January–June were EUR 6.85 and EUR 5.62, respectively.

In January–June, the average daily trading volumes of the B and A shares on the Nasdaq Helsinki were

717,975 shares and 6,134 shares, respectively. The total trading volumes of the B and A shares were EUR 578.1 million and EUR 4.8 million, respectively.

In addition to the Nasdaq Helsinki, Metsä Board's shares are traded on other marketplaces, such as Chi-X and BATS. The Nasdaq Helsinki's share of total trading during the review period was 72 per cent.

A total of 8,969 A shares were converted into B shares during the second quarter of the year. Following the conversion, there were 35,886,682 A shares and 319,626,064 B shares.

At the end of the review period, the market value of all Metsä Board's shares was EUR 2,255 million, of which the market value of the B shares and the A shares accounted for EUR 2,031 million and EUR 224 million, respectively.

At the end of the review period, Metsäliitto Cooperative owned 42 per cent of the shares, and the voting rights conferred by these shares amounted to 61 per cent. At the end of the review period, international and nominee-registered investors held 18 per cent of all the shares (30 June 2016: 17%).

The company does not hold any treasury shares.

NEAR-TERM RISKS AND UNCERTAINTIES

Considerable uncertainties still exist in the global and, particularly, European economies. If realised, they may result in weakened demand and reduced prices for paperboard and pulp products. The imbalance in supply and demand may impact the prices of end products and Metsä Board's profitability.

Metsä Board is focusing on the active development and growth of its paperboard business. Growing the paperboard business and introducing new production to the market are dependent on the successful growth of sales in Europe, and particularly in the Americas. Increasing sales at the global level also involves cost and exchange rate risks.

There are several geopolitical risk concentrations around the world, and forecasting developments in them is difficult. Changes in these areas may be very sudden and unpredictable. There have been, and will continue to be, international sanctions related to these crises, and they may also have a direct or indirect impact on the demand for paperboards and, therefore, on Metsä Board's result. Negative developments in international free trade would, if realised, weaken Metsä Board's result.

The forward-looking estimates and statements in this half year financial report are based on current plans and estimates. For this reason, they contain risks and other uncertainties that may cause the results to differ from the statements concerning them. In the short term, Metsä Board's result will be particularly affected by the

price of and demand for finished products, raw material costs, the price of energy, and the exchange rate development of the euro compared to the company's other main currencies.

The US dollar strengthening by 10 per cent against the euro would have a positive impact of approximately EUR 70 million on Metsä Board's annual operating result. Correspondingly, the Swedish krona strengthening by 10 per cent would have a negative impact of approximately EUR 40 million. The British pound strengthening by 10 per cent would have a positive impact of approximately EUR 7 million. The impact of weakened exchange rates would be the opposite. These sensitivities do not include the impact of hedging.

More information about longer-term risk factors can also be found on pages 24–25 of Metsä Board's 2016 Annual Report.

NEAR-TERM OUTLOOK

Demand for high-quality consumer packaging paperboard made from fresh fibre is expected to continue to grow in market areas important for Metsä Board. The increases in capacity by European producers of folding boxboard have not had a negative effect on price development. Several producers of white fresh fibre linerboards have announced price increases in Europe and North America during the current year. Global demand and supply for long-fibre and short-fibre pulp is expected to remain stable.

Metsä Board's paperboard deliveries grew strongly during the first half of the year. Delivery volumes in July–September are expected to remain roughly at the level of the second quarter. The company aims to improve the geographic sales mix of Husum's folding boxboard and to increase the share of North American sales, in particular.

The shutdown of the Kemi integrated mill will take place in the third quarter of the year. The production costs of paperboards in July–September are expected to remain at the level of the previous quarter.

The start-up phase of Metsä Fibre's new bioproduct mill is expected to have only a slight negative effect on Metsä Board's result for July–September.

RESULT GUIDANCE FOR JULY–SEPTEMBER 2017

Metsä Board's comparable operating result in the third quarter of 2017 is expected to improve slightly compared to the second quarter of 2017.

METSÄ BOARD CORPORATION

Espoo, Finland, 3 August 2017
BOARD OF DIRECTORS

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More information will be available as of 1 p.m. on 3 August 2017. A conference call held for investors and analysts in English will begin at 3 p.m. Conference call participants are requested to dial in and register a few minutes earlier on the following numbers:

Finland +358 9 7479 0404
Sweden +46 8 5065 3942
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The conference ID is 8596772.

The next financial report to be published:

1 November 2017, Interim Report for January–September 2017

CALCULATION OF KEY RATIOS

Return on equity (%)	=	(Result before tax - direct taxes) per (Shareholders' equity (average))
Return on capital employed (%)	=	(Result before tax + interest expenses, net exchange gains/losses and other financial expenses) per (Shareholders' equity + interest-bearing borrowings (average))
Equity ratio (%)	=	(Shareholders' equity) per (Total assets - advance payments re- ceived)
Net gearing ratio (%)	=	(Interest-bearing borrowings - liquid funds - interest-bearing receivables) per (Shareholders' equity)
Earnings per share	=	(Profit attributable to shareholders of parent company) per (Adjusted number of shares (average))
Shareholders' equity per share	=	(Equity attributable to shareholders of parent company) per (Adjusted number of shares at the end of period)

COMPARABLE OPERATING RESULT AND COMPARABLE RETURN ON CAPITAL EMPLOYED

New European Securities and Markets Authority (ESMA) guidelines on Alternative Performance Measures are effective for the financial year 2016. From Q3 2016 Metsä Board has relabeled the previously referenced "excluding non-recurring items" non-IFRS financial measures with "comparable" performance measures. Exceptional and material items outside the ordinary course of business have been eliminated from the comparable operating result, and they have been allocated to the operating segments. The change in terminology does not affect the definition of items affecting comparability and therefore no restatement of historical data is necessary.

Reconciliation of operating result under IFRS and comparable operating result is presented in this half year financial report. Comparable return on capital employed

has been calculated using the same adjustments as the comparable operating result, and it has been further adjusted with financial items affecting comparability when applicable. Metsä Board considers that key figures derived in this manner improve comparability between reporting periods.

None of these key figures with items affecting comparability eliminated are key figures used in IFRS reporting, and they cannot be compared with other companies' key figures identified with the same names. Typical items affecting comparability include material gains and losses on disposals of assets, impairments and impairment reversals in accordance with IAS 36 Impairment of Assets, restructuring costs and their adjustments as well as items arising from legal proceedings.

FINANCIAL STATEMENTS
UNAUDITED INTERIM CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

EUR million	Note	Q2 2017	Q2 2016	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Sales	2, 6	474.2	422.9	918.7	858.5	1,720.3
Change in stocks of finished goods and work in progress		-19.8	24.4	-10.4	40.7	38.5
Other operating income	2, 6	5.4	8.3	8.6	14.3	40.2
Material and services	6	-318.7	-316.1	-632.7	-637.8	-1,249.5
Employee costs		-51.7	-52.2	-99.1	-109.3	-211.0
Share of result of associated company		13.2	11.6	23.8	23.8	45.0
Depreciation, amortisation and impairment losses		-20.0	-25.1	-43.6	-48.0	-102.3
Other operating expenses		-35.6	-39.4	-73.1	-75.1	-148.9
Operating result	2	46.9	34.5	92.1	67.2	132.3
Share of results of associated companies and joint ventures		0.1	0.0	0.1	0.0	0.1
Net exchange gains and losses		-1.0	-1.9	-0.6	-0.3	-4.9
Other net financial items	2, 6	-5.7	-7.1	-11.4	-13.6	-25.8
Result before income tax		40.3	25.5	80.2	53.3	101.6
Income taxes	3	-5.3	-2.3	-11.0	-6.2	-11.3
Result for the period		35.0	23.2	69.1	47.1	90.4

EUR million	Note	Q2 2017	Q2 2016	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Other comprehensive income						
Items that will not be reclassified to profit or loss						
Actuarial gains/losses on defined pension plans		0.3	0.3	0.8	-2.1	1.3
Income tax relating to items that will not be reclassified		-0.1	-0.1	-0.2	0.5	0.3
Total		0.3	0.2	0.6	-1.6	1.6
Items that may be reclassified to profit or loss						
Cash flow hedges		21.5	7.5	20.4	18.0	27.0
Available for sale financial assets	8	7.0	-7.9	20.4	-18.6	-14.2
Translation differences		-4.3	-6.1	-3.4	-8.4	-12.3
Share of other comprehensive income of associated company		3.4	-3.9	5.9	-5.9	-5.6
Income tax relating to components of other comprehensive income		-5.7	0.0	-8.1	0.0	-2.8
Total		21.9	-10.5	35.2	-14.8	-7.9
Other comprehensive income, net of tax		22.2	-10.3	35.8	-16.4	-6.4
Total comprehensive income for the period		57.1	13.0	105.0	30.7	84.0
Result for the period attributable to						
Shareholders of parent company		35.0	23.2	69.1	47.1	90.4
Non-controlling interests		0.0	0.0	0.0	0.0	0.0
Total comprehensive income for the period attributable to						
Shareholders of parent company		57.1	13.0	105.0	30.7	84.0
Non-controlling interests		0.0	0.0	0.0	0.0	0.0
Total		57.1	13.0	105.0	30.7	84.0
Earnings per share for result attributable to shareholders of parent company (EUR/share)		0.09	0.06	0.19	0.13	0.25

UNAUDITED CONDENSED CONSOLIDATED BALANCE SHEET

EUR million	Note	As of 30 Jun 2017	As of 30 Jun 2016	As of 31 Dec 2016
ASSETS				
Non-current assets				
Goodwill		12.4	12.4	12.4
Other intangible assets		15.2	12.3	14.6
Tangible assets	4	809.3	834.8	829.8
Investments in associated companies and joint ventures		290.2	270.1	291.6
Available for sale investments	8	216.4	191.5	195.9
Other non-current financial assets	6, 8	18.3	13.1	19.0
Deferred tax receivables	2	4.3	4.4	4.3
		1,366.1	1,338.5	1,367.7
Current assets				
Inventories		328.1	335.2	332.5
Accounts receivables and other receivables	6, 8	324.2	292.3	273.4
Cash and cash equivalents	6, 8	141.1	157.3	220.6
		793.4	784.8	826.5
Total assets		2,159.5	2,123.3	2,194.2
SHAREHOLDERS' EQUITY AND LIABILITIES				
Shareholders' equity				
Equity attributable to shareholders of parent company		1,089.6	999.1	1,052.5
Non-controlling interests		0.0	0.0	0.0
Total equity		1,089.6	999.1	1,052.5
Non-current liabilities				
Deferred tax liabilities		81.9	73.7	74.7
Post-employment benefit obligations	2	14.8	15.5	15.1
Provisions	5	7.0	6.8	6.9
Borrowings	8	452.8	544.6	469.0
Other liabilities	8	0.1	7.3	1.7
		556.6	648.0	567.5
Current liabilities				
Provisions	5	1.7	6.4	3.0
Current borrowings	6, 8	187.1	157.7	219.1
Accounts payable and other liabilities	6, 8	324.5	312.1	352.1
		513.3	476.2	574.2
Total liabilities		1,069.9	1,124.2	1,141.7
Total shareholders' equity and liabilities		2,159.5	2,123.3	2,194.2

UNAUDITED CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

EUR million	Note	Share capital	Translation differences	Fair value and other reserves	Reserve for invested unrestricted equity	Retained earnings	Total	Non-controlling interests	Total
Shareholders' equity, 1 January 2016		557.9	14.2	111.7	383.1	-38.0	1,028.9	0.0	1,028.9
Comprehensive income for the period									
Result for the period						47.1	47.1	0.0	47.1
Other comprehensive income net of tax total			-7.5	-7.3		-1.6	-16.4		-16.4
Comprehensive income total			-7.5	-7.3		45.5	30.7	0.0	30.7
Share based payments						-0.1	-0.1		-0.1
Related party transactions									
Dividends paid						-60.4	-60.4		-60.4
Shareholders' equity, 30 June 2016		557.9	6.7	104.4	383.1	-53.0	999.1	0.0	999.1

EUR million	Note	Share capital	Translation differences	Fair value and other reserves	Reserve for invested unrestricted equity	Retained earnings	Total	Non-controlling interests	Total
Shareholders' equity, 1 January 2017		557.9	3.2	114.7	383.1	-6.4	1,052.5	0.0	1,052.5
Comprehensive income for the period									
Result for the period						69.1	69.1		69.1
Other comprehensive income net of tax total			-3.8	39.0		0.6	35.8		35.8
Comprehensive income total			-3.8	39.0		69.7	105.0	0.0	105.0
Share based payments						-0.3	-0.3		-0.3
Related party transactions									
Dividends paid						-67.5	-67.5		-67.5
Shareholders' equity, 30 June 2017		557.9	-0.6	153.7	383.1	-4.6	1,089.6	0.0	1,089.6

The accompanying notes are an integral part of these unaudited condensed financial statements.

UNAUDITED CONDENSED CONSOLIDATED CASH FLOW STATEMENT

		Q1–Q2	Q1–Q2	Q1–Q4	Q2
		2017	2016	2016	2017
EUR million	Note				
Result for the period		69.1	47.1	90.4	35.0
Total adjustments	7	41.1	35.5	73.4	17.8
Change in working capital		-48.9	-119.7	-74.5	-2.7
Cash flow from operations		61.3	-37.1	89.3	50.1
Net financial items	7	9.1	18.8	13.6	-6.4
Income taxes paid		-7.7	-26.2	-25.8	-6.6
Net cash flow from operating activities		62.7	-44.5	77.0	37.1
Investments in intangible and tangible assets		-30.3	-103.5	-158.4	-12.2
Disposals and other items	6,7	5.3	-0.9	15.3	5.4
Net cash flow from investing activities		-25.1	-104.4	-143.2	-6.8
Changes in non-current loans and in other financial items	6	-49.2	45.8	24.7	-20.2
Dividends paid		-67.5	-60.4	-60.4	-67.5
Net cash flow from financing activities		-116.8	-14.7	-35.7	-87.7
Changes in cash and cash equivalents		-79.1	-163.6	-101.9	-57.4
Cash and cash equivalents at beginning of period	6	220.6	321.8	321.8	198.9
Translation difference in cash and cash equivalents		-0.4	-0.9	0.7	-0.4
Changes in cash and cash equivalents		-79.1	-163.6	-101.9	-57.4
Cash and cash equivalents at end of period	6	141.1	157.3	220.6	141.1

NOTES TO THE UNAUDITED HALF YEAR FINANCIAL REPORT

NOTE 1 – BACKGROUND AND BASIS OF PREPARATION

Metsä Board Corporation and its subsidiaries comprise a forest industry group whose main product areas are fresh fibre cartonboards and linerboards. Metsä Board Corporation, the parent company, is domiciled in Helsinki and the registered address of the company is Revontulenpuisto 2, 02100 Espoo, Finland. Metsä Board's ultimate parent company is Metsäliitto Cooperative.

This unaudited half year financial report has been prepared in accordance with IAS 34, Interim Financial Reporting, and it should be read in conjunction with the 2016 IFRS financial statements. The same accounting policies have been applied as in the 2016 IFRS financial statements with the following exception:

Depreciation of machinery and equipment during the financial year has been adjusted between the quarters when applicable in order to correspond with the use of the economic benefit of the asset.

The Group has adopted the following new standards and amendments to existing standards on 1 January 2017:

Amendments to IAS 7 *Statement of Cash Flows – Disclosure Initiative*. The changes were made to enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flow and non-cash changes. The amendments have an impact on the disclosures in consolidated financial statements.

Amendments to IAS 12 *Income Taxes - Recognition of Deferred Tax Assets for Unrealised Losses*. The amendments clarify that the existence of a deductible temporary difference depends solely on a comparison of the carrying amount of an asset and its tax base at

the end of the reporting period, and is not affected by possible future changes in the carrying amount or expected manner of recovery of the asset. The amendments have no significant impact on Group's consolidated financial statements.

Annual Improvements to IFRSs (2014–2016 cycle): The annual improvements process provides a mechanism for minor and non-urgent amendments to IFRSs to be grouped together and issued in one package annually. In 2017, the amendments apply to one standard, and they do not have a significant impact on Group's consolidated financial statements.

All amounts are presented in millions of euros, unless otherwise stated.

This half year financial report was authorised for issue by the Board of Directors of Metsä Board on 3 August 2017.

NOTE 2 – SEGMENT INFORMATION

The Corporate Management Team is the chief operational decision-maker monitoring business operations performance based on the operating segments.

After Metsä Board's uncoated paper production ended in July 2016, the remaining business operations of the Group consist solely of folding boxboard, fresh fibre linerboard and market pulp businesses previously reported under Paperboard segment and complemented by the discontinued wallpaper base production at Kyro mill. As the paper business previously reported under Non-core operations segment has been fully discontinued, Metsä Board will report on its financial performance using only one reporting segment starting from third quarter of 2016.

Reconciliation of operating result

EUR million	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Operating result (IFRS)	92.1	67.2	132.3
Items affecting comparability:			
Gains and losses on disposal in other operating income and expenses	-	1.1	-9.8
Employee costs	-	2.1	5.2
Share of result of associated company	-	-	-1.8
Impairment charges and reversals of impairments	-3.9	0.1	8.7
Other operating expenses	0.5	0.2	2.8
Total	-3.4	3.6	5.2
Comparable operating result	88.7	70.8	137.5

“+” sign items = expense affecting comparability

“-” sign items = income affecting comparability

Items affecting comparability during the review period consisted mainly of a reversal of previously recognized impairment loss on the closed and sold paper machine at Kyro mill.

Items affecting comparability of EUR 3.6 million in January–June 2016 consisted of personnel restructuring costs of EUR 2.1 million at Simpele board mill and Belgian sales office, disposal loss of EUR 1.1 million arising from sale of Alrec Boiler Oy, a structured entity previously owning the combustion facility in operation at Kaskinen pulp mill and consolidated to group accounts as a subsidiary, as well as other minor impairments and expenses in the Belgian sales office.

Comparable operating result for the financial year 2016 included a net disposal gain of EUR 9.8 million. Among other things, it consisted of disposals of assets related to wallpaper base business and the sale of Alrec Boiler Oy, a structured entity previously owning the combustion facility in operation at Kaskinen pulp mill and con-

solidated to group accounts as a subsidiary. Furthermore, the net gain included an earn-out received from the sale of subsidiary receivables in connection with a subsidiary disposal carried out in 2011 and treated as a reversal of previously recognized disposal loss.

Employee costs of EUR 5.2 million affecting comparability consisted of restructuring costs arising from Simpele mill, Belgian sales office and Kyro board and paper mills. Furthermore, a disposal gain of EUR 1.8 million realized by associated company Metsä Fibre was deducted from operating result as an item affecting comparability. Impairment charges of EUR 8.7 million affecting comparability arose from the remaining carrying values of tangible assets related to the discontinued wallpaper base production at Kyro mill and the closed Belgian sales office while other operating expenses of EUR 2.8 million mainly comprised other expenses arising from wallpaper production discontinuation and the related expense of writing wallpaper base inventories to their net realizable value.

NOTE 3 – INCOME TAXES

EUR million	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Taxes for the current period	11.5	10.1	17.0
Taxes for the prior periods	-0.1	0.0	-0.6
Change in deferred taxes	-0.4	-4.0	-5.1
Total income taxes	11.0	6.2	11.3

NOTE 4 – CHANGES IN PROPERTY, PLANT AND EQUIPMENT

EUR million	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Carrying value at beginning of period	829.8	812.3	812.3
Capital expenditure	28.9	77.5	133.3
Decreases	-3.7	0.0	-3.1
Depreciation, amortization and impairment losses	-42.0	-46.3	-99.2
Translation difference	-3.7	-8.7	-13.5
Carrying value at end of period	809.3	834.8	829.8

A reversal of EUR 3.9 million of previously recognized impairment loss on the closed and sold paper machine at Kyro mill was recognized in the review period. Impairments in the financial year 2016 included an impair-

ment of EUR 8.5 million at Kyro mill related to the discontinued wallpaper base operations and an impairment reversal of EUR 2.0 million for a sold paper machine at Husum mill.

NOTE 5 – PROVISIONS

EUR million	Restructuring	Environmental obligations	Other provisions	Total
1 Jan 2017	1.3	6.2	2.5	10.0
Translation differences	-	-	0.0	0.0
Increases	0.0	-	0.1	0.2
Utilised during the year	-0.8	-0.0	-0.2	-1.1
Unused amounts reversed	-	-0.3	-	-0.3
30 Jun 2017	0.4	5.9	2.4	8.8

The non-current part of provisions was EUR 7.0 million and the current part EUR 1.7 million, total provisions

amount to EUR 8.8 million. Non-current provisions are estimated to be utilised mainly by the end of 2025.

NOTE 6 – RELATED PARTY TRANSACTIONS

Related parties include Metsä Board's ultimate parent company Finnish Metsäliitto Cooperative, other subsidiaries of Metsäliitto, associated companies and joint ventures as well as Metsäliitto Employees' Pension Foundation. The members of The Board of Directors and Metsä Group's Executive Management Team and Metsä Board's Corporate Management Team as well as their close family members are also included in related parties.

Metsä Board enters into a significant number of transactions with related parties for the purchases of inventories, sale of goods, corporate services as well as financial transactions. Arm's length pricing has been followed in product and service transactions undertaken and interest rates set between Metsä Board and the related parties.

Transactions with parent and sister companies

EUR million	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Sales	30.6	35.7	68.6
Other operating income	2.3	6.6	13.6
Purchases	306.5	318.3	597.8
Share of result from associated company	23.8	23.8	45.0
Interest income	0.0	0.1	0.1
Interest expenses	1.1	4.0	2.9
Accounts receivables and other receivables	33.1	15.9	21.4
Cash and cash equivalents	134.8	146.8	215.5
Accounts payable and other liabilities	140.9	124.8	131.2

Metsä Fibre's net result is included within operating result line item "Share of result from associated company" and transactions with Metsä Fibre are included in transactions with sister companies.

Metsä Fibre paid a dividend of EUR 31.1 million to Metsä Board in the review period. Cash and cash equivalents include interest-bearing receivables comparable to cash funds and available from Metsä Group's internal bank Metsä Group Treasury Oy.

Transactions with associated companies and joint ventures

EUR million	Q1–Q2 2017	Q1–Q2 2016	Q1–Q4 2016
Sales	0.3	0.3	0.7
Purchases	2.4	3.0	6.1
Other non-current financial assets	0.3	0.3	0.3
Accounts receivables and other receivables	0.2	0.1	0.3
Accounts payable and other liabilities	1.1	1.1	1.2

NOTE 7 – NOTES TO CONSOLIDATED CASH FLOW STATEMENT
Adjustments to the result for the period

	Q1–Q2	Q1–Q2	Q1–Q4	Q2
EUR million	2017	2016	2016	2017
Taxes	11.0	6.2	11.3	5.3
Depreciation, amortization and impairment charges	43.6	48.0	102.3	20.0
Share of result from associated companies and joint ventures	-23.9	-23.8	-45.1	-13.2
Gains and losses on sale of fixed assets	-0.3	-0.0	-14.4	-0.4
Finance costs, net	12.0	14.0	30.7	6.7
Provisions	-1.3	-8.7	-11.5	-0.6
Total	41.1	35.5	73.4	17.8

Net financial items

Net financial items in consolidated cash flow statement for the review period include a dividend of EUR 31.1 million paid by Metsä Fibre (1–6/2016: EUR 32.9 million).

Disposals and other items

Disposals and other items of EUR 5.3 million for the six months ended 30 June 2017 (1–6/2016: -0.9 million) consisted mostly of the disposal of the closed paper machine at Kyro mill (EUR 3.9 million) and sale of electricity certificates in Sweden (EUR 1.3 million).

Disposals and other items of EUR -0.9 million for the six months ended 30 June 2016 included EUR -2.8 million cash flow effect from disposal of structured entity Alrec Boiler Oy consolidated to group accounts as a subsidiary as well as cash inflow arising from sale of emission rights.

Disposals and other items of EUR 15.3 million for the financial year 2016 included a EUR -2.8 million cash flow effect from disposal of structured entity Alrec Boiler Oy consolidated to group accounts as a subsidiary and an earn-out of EUR 4.4 million received from sale of subsidiary receivables in connection with a subsidiary disposal in 2011. Disposals also included cash inflow arising from sale of emission rights and electricity certificates as well as amounts received for sale of assets mostly related to discontinued paper production in Kyro and Husum.

NOTE 8 – FINANCIAL INSTRUMENTS

Financial assets and liabilities and their fair values classified according to IAS 39 as of 30 June 2017:

Financial assets 30 June 2017

EUR million	Fair value through profit & loss	Available for sale financial assets	Loans and other receivables	Derivatives at hedge accounting	Amortised cost	Total carrying amount	Fair value
Available for sale financial assets		216.4				216.4	216.4
Other non-current financial assets			16.9			16.9	16.9
Accounts receivables and other receivables			299.5			299.5	299.5
Cash and cash equivalent			141.1			141.1	141.1
Derivative financial instruments	0.4			19.9		20.3	20.3
Total financial assets	0.4	216.4	457.6	19.9	-	694.3	694.3

Financial liabilities 30 June 2017

EUR million	Fair value through profit & loss	Derivatives at hedge accounting	Amortised cost	Total carrying amount	Fair value
Non-current interest-bearing financial liabilities			452.8	452.8	468.6
Other non-current financial liabilities			0.1	0.1	0.1
Current interest-bearing financial liabilities			187.1	187.1	188.8
Accounts payable and other financial liabilities			284.3	284.3	284.3
Derivative financial instruments		2.0		2.0	2.0
Total financial liabilities	-	2.0	924.3	926.3	943.7

Financial assets and liabilities and their fair values classified according to IAS 39 as of 30 June 2016:

Financial assets 30 June 2016

EUR million	Fair value through profit & loss	Available for sale financial assets	Loans and other receivables	Derivatives at hedge accounting	Amortised cost	Total carrying amount	Fair value
Available for sale financial assets		191.5				191.5	191.5
Other non-current financial assets			13.1			13.1	13.1
Accounts receivables and other receivables			280.6			280.6	280.6
Cash and cash equivalent			157.3			157.3	157.3
Derivative financial instruments	0.3			2.2		2.5	2.5
Total financial assets	0.3	191.5	450.9	2.2	-	644.9	644.9

Financial liabilities 30 June 2016

EUR million	Fair value through profit & loss	Derivatives at hedge accounting	Amortised cost	Total carrying amount	Fair value
Non-current interest-bearing financial liabilities			544.6	544.6	566.9
Other non-current financial liabilities			0.1	0.1	0.1
Current interest-bearing financial liabilities			157.7	157.7	159.8
Accounts payable and other financial liabilities			266.0	266.0	266.0
Derivative financial instruments		13.6		13.6	13.6
Total financial liabilities		13.6	968.4	982.0	1,006.4

Accounts receivables and other receivables do not include advance payments, accrued tax receivables and periodisations of employee costs.

Accounts payable and other financial liabilities do not include advance payments, accrued tax liabilities and periodisations of employee costs.

In Metsä Board all interest-bearing liabilities are valued in the balance sheet at amortised cost based on effective interest method. Interest bearing receivables are classified according to the IAS standards. Fair values in the table are based on present value of cash flow of each liability or assets calculated by market rate. The discount rates applied are between 0.3–2.3 per cent (30 June 2016: 0.3–2.8).

Fair value hierarchy of financial assets and liabilities as of 30 June 2017

EUR million	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Financial assets at fair value through profit or loss, non-current				-
Available for sale financial assets	0.0		216.4	216.4
Financial assets at fair value through profit or loss, current				-
Derivative financial assets	2.3	18.0		20.3
Financial liabilities measured at fair value				
Derivative financial liabilities	1.3	0.8		2.0
Financial assets not measured at fair value				
Cash and cash equivalent		141.1		141.1
Financial liabilities not measured at fair value				
Non-current interest-bearing financial liabilities		468.6		468.6
Current interest-bearing financial liabilities		188.8		188.8

Fair value hierarchy of financial assets and liabilities as of 30 June 2016

EUR million	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Financial assets at fair value through profit or loss, non-current				-
Available for sale financial assets	0.0		191.5	191.5
Financial assets at fair value through profit or loss, current				
Derivative financial assets		2.5		2.5
Financial liabilities measured at fair value				
Derivative financial liabilities	11.1	2.5		13.6
Financial assets not measured at fair value				
Cash and cash equivalent		157.3		157.3
Financial liabilities not measured at fair value				
Non-current interest-bearing financial liabilities		566.9		566.9
Current interest-bearing financial liabilities		159.8		159.8

Financial assets and liabilities measured at fair value based on Level 3

	2017	2016
EUR million	30.6.	30.6.
Opening balance 1.1.	195.9	210.1
Total gains and losses in profit or loss	-	0.1
Total gains and losses in other comprehensive income	20.4	-18.6
Purchases	-	-
Disposals	-	-0.1
Closing balance 30.6.	216.4	191.5

Financial assets and liabilities measured at fair value have been categorised according to IFRS 7

Level 1 Fair value is based on quoted prices in active markets.

Level 2 Fair value is determined by using valuation techniques that use observable price information from market.

Level 3 Fair value are not based on observable market data, but company's own assumptions.

The fair values of electricity and natural gas derivatives are determined by using public price quotations in an active market (Level 1).

The fair values of currency forwards and options are determined by using the market prices of the closing date of the reporting period The fair values of interest rate swaps are determined by using the present value of expected payments, discounted using a risk adjusted discount rate, supported by market interest rates and other market data of the closing date of the reporting period (Level 2).

For financial instruments not traded on an open market, the fair value is determined by valuation techniques. Judgment is used when choosing the different techniques and making assumptions, which are mainly

based on circumstances prevailing in the markets on each closing date of the reporting period (Level 3).

The valuation techniques are described in more detail in the Annual report.

The most significant item at fair value not traded on an open market is the investment in Pohjolan Voima shares, reported under available-for-sale financial assets. The valuation technique applied to Pohjolan Voima shares is described in more detail in the 2016 Annual report.

The WACC used in Pohjolan Voima share valuation on 30 June 2017 was 2.38 percent (30.6.2016: 1.46) and 4.38 percent (4.46) for the Olkiluoto 3 under construction. The acquisition cost of shares in Pohjolan Voima Oy is EUR 39.1 million (39.1) and the fair value EUR 212.2 million (187.4).

The carrying amount of available-for-sale financial assets as of 30.6.2017 is estimated to change by EUR 2.1 million should the rate used for discounting the cash flows change by 10 percent from the rate estimated by management. The carrying amount of available-for-sale financial assets is estimated to change by EUR 33.2 million should the energy prices used for calculating the fair value differ by 10 percent from the prices estimated by management.

Derivatives 30 June 2017

EUR million	Nominal value	Fair value			Fair value	
		Derivative Assets	Liab.	Fair value Net	Fair value hedges	Derivatives with no hedge accounting
Interest forward agreements						
Interest rate options						
Interest rate swaps	300.0		0.8	-0.8	-0.8	
Interest rate derivatives	300.0		0.8	-0.8	-0.8	
Currency forward agreements	845.9	18.0		18.0	17.6	0.4
Currency option agreements						
Currency swap agreements						
Currency derivatives	845.9	18.0		18.0	17.6	0.4
Electricity derivatives	64.0	2.3		2.3	2.3	
Pulp derivatives						
Oil derivatives	9.5		1.2	-1.2	-1.2	
Other commodity derivatives	3.5	0.0	0.1	-0.1	-0.1	
Commodity derivatives	77.0	2.3	1.3	1.0	1.0	
Derivatives total	1,222.9	20.3	2.0	18.3	17.9	0.4

Derivatives 30 June 2016

EUR million	Nominal value	Fair value			Fair value	
		Derivative Assets	Liab.	Fair value Net	Fair value hedges	Derivatives with no hedge accounting
Interest forward agreements						
Interest rate options						
Interest rate swaps	150.0		2.5	-2.5	-2.5	
Interest rate derivatives	150.0		2.5	-2.5	-2.5	
Currency forward agreements	552.7	2.5		2.5	2.2	0.4
Currency option agreements	27.0	0.0		0.0		0.0
Currency swap agreements						
Currency derivatives	579.8	2.5		2.5	2.2	0.3
Electricity derivatives	65.8		8.1	-8.1	-8.1	
Pulp derivatives						
Oil derivatives	11.0		2.6	-2.6	-2.6	
Other commodity derivatives	3.9		0.4	-0.4	-0.4	
Commodity derivatives	80.7		11.1	-11.1	-11.1	
Derivatives total	810.5	2.5	13.6	-11.1	-11.4	0.3

NOTE 9 – COMMITMENTS AND GUARANTEES

EUR million	30.6.2017	30.6.2016	31.12.2016
Liabilities secured by pledges, real estate mortgages and floating charges	105.4	138.0	121.7
Pledges granted	102.5	95.4	103.0
Floating charges	-	-	-
Real estate mortgages	232.8	232.8	232.8
Total pledges and mortgages	335.3	328.2	335.8
As security for other own commitments	15.0	7.9	16.1
On behalf of associated companies and joint ventures	0.1	0.1	0.1
On behalf of others	0.1	0.1	0.1
Total	350.5	336.3	352.1

Securities and guarantees include pledges, real estate mortgages, floating charges and guarantee liabilities. Metsä Board has entered into operating lease agreements for rental premises, machinery and equipment. The rent and lease commitments arising from these agreements are included in the table above. The non-cancellable minimum lease payments arising from such agreements amounted to EUR 11.9 million (EUR 12.2 million 31 December 2016).

Open derivative contracts

EUR million	30.6.2017	30.6.2016	31.12.2016
Interest rate derivatives	300.0	150.0	100.0
Currency derivatives	845.9	579.8	754.6
Other derivatives	77.0	80.7	97.9
Total	1,222.9	810.5	952.5

The fair value of open derivative contracts calculated at market value at the end of the review period was EUR 18.3 million (EUR -11.1 million 30 June 2016).

Commitments related to property, plant and equipment

EUR million	30.6.2017	30.6.2016	31.12.2016
Payments due in following 12 months	3.6	19.3	11.2
Payments due later	-	1.6	-
Total	3.6	20.9	11.2