

**1/2021/GPW (19) February 9, 2021**

This report is prepared for the Warsaw Stock Exchange SA within the framework of the Analytical Coverage Support Pilot Program. This is a translation of the Polish analytical report.

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# Ferro

**Sector:** Construction materials  
**Fundamental rating:** Buy (→)  
**Market relative:** Overweight (→)  
**Price:** PLN 25.70  
**12M EFV:** PLN 30.8 (↑)

**Market Cap:** US\$ 147.7 m  
**Bloomberg code:** FRO PW  
**Av. daily turnover:** US\$ 0.06 m  
**12M range:** PLN 10.30-27.50  
**Free float:** 67%

## Recommended action

We uphold our ST market relative Overweight bias and LT fundamental Buy rating for the Company. It seems that Ferro has not said its last word with regard to acquisitions though we do not expect more of them this year. The acquisitions completed should support the Group's development expanding both, the clients' base and offer. We expect good 4Q20 financial results and hope for this trend to prevail in 1H21. Given the high steady demand we assume the Company is able to adjust its product prices to raw materials costs. The results should be positively affected due to the offer expansion into the higher-end market segments.

## 4Q20 financial results preview

We expect the Group to post good 4Q20 financial results in spite of pandemic restrictions and sales bonuses payments.

We forecast 4Q20 revenues at PLN 123 million (+8% yoy) and continue assuming there were no intensified marketing campaigns. We expect travel and sale costs to decline yoy though the cost of wages might have risen in connection with the strategy implementation we deem (in 1H20 numerous projects were suspended due to big uncertainty on the market). We forecast 4Q20 EBIT to reach PLN 13 million (+22% yoy) and assume net financial costs at PLN 1.5 million vs PLN 2 million a year before and 3Q20 financial gain at PLN 1.5 million. The Group's 4Q20 NI should hit PLN 8 million vs PLN 3 million in 4Q19 when the effective tax rate stood at 65% (a PLN 5.5 million CIT lowered the result).

## Guide to adjusted profits

Income tax.

## Key data

IFRS consolidated		2020E	2021E	2022E	2023E
Sales	PLN m	507.5	665.3	705.2	740.4
EBITDA	PLN m	83.1	90.8	95.6	101.8
EBIT	PLN m	76.0	80.8	83.9	88.9
Net income	PLN m	60.7	60.5	62.3	66.6
Adj EPS	PLN	2.9	2.8	2.9	3.1
Adj EPS yoy chg	%	41	-0	3	7
Net debt	PLN m	51.4	88.2	72.5	52.4
P/E	x	9.0	9.0	8.8	8.2
EV/EBITDA	x	7.2	7.2	6.8	6.2
EV/EBIT	x	7.9	8.1	7.7	7.0
DPS	PLN	0.40	1.71	1.71	1.76
Gross dividend yield	%	1.6	6.7	6.7	6.8
Number of shares (eop)	m	21.2	21.2	21.2	21.2

\* excl. minority stake in Termet  
 Source: DM BOŚ SA estimates

## Stock performance



Source: Bloomberg

## Upcoming events

1. Release of FY20 consolidated results: March 31
2. Release of 1Q21 consolidated results: May 27
3. Release of 1H21 consolidated results: September 30
4. Release of 3Q21 consolidated results: November 29

## Risk factors

1. Economic slowdown in Europe
2. Falling demand for new flats
3. Falling frequency of renovations
4. Workforce shortage
5. Wage pressure
6. High/volatile raw materials prices (of copper and zinc, in particular)
7. Unfavorable/volatile FX rates (currency risk when PLN and CZK weaken against US\$ and EUR)
8. Own brands developed by shopping chains

## Catalysts

1. Continuous demand for new apartment flats
2. Development of the market for renovations (new design elements, increasing frequency of renovations)
3. Expansion in European markets
4. Strengthening position on the existing markets
5. New products (expanding the product offer)
6. Repositioning of the Company's own brands (new upper segment brands)
7. Favorable/stable FX rates and raw materials prices
8. Brand promotion (intensifying online activities)
9. Acquisitions

Fig. 1. Ferro; 4Q20 financials' forecasts

IFRS consolidated (PLN m)	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20E	yoy chg	2019	2020E	yoy chg
Sales	109.4	105.8	122.1	113.9	124.8	112.0	147.7	123.0	8%	451.3	507.5	12%
EBITDA	18.7	14.4	21.5	12.3	21.8	17.3	29.4	14.6	19%	66.9	83.1	24%
EBITDA margin	17.1%	13.6%	17.6%	10.8%	17.5%	15.4%	19.9%	11.9%	-	14.8%	16.4%	-
EBIT	17.5	12.7	19.8	10.6	20.0	15.4	27.6	12.9	22%	60.6	76.0	25%
EBIT margin	16.0%	12.0%	16.2%	9.3%	16.1%	13.8%	18.7%	10.5%	-	13.4%	15.0%	-
Pre-tax profit	16.1	11.7	17.7	8.5	20.2	14.5	29.1	11.4	35%	54.0	75.2	39%
Pre-tax profit margin	14.7%	11.1%	14.5%	7.4%	16.2%	12.9%	19.7%	9.3%	-	12.0%	14.8%	-
Net profit	13.0	9.5	14.5	2.9	16.5	12.3	23.6	8.2	180%	40.0	60.7	52%
Net profit margin	11.9%	9.0%	11.9%	2.6%	13.2%	11.0%	16.0%	6.7%	-	8.9%	12.0%	-

Source: The Company, DM BOŚ SA

## Valuation

On the back of our financial forecasts update and valuation horizon forward shift coupled with the consolidation of newly acquired companies Termet and Tester, our 12M EFV for the Company

– representing a 50%-50% mix of the outcome of the DCF FCFF and peer-relative valuations – increases by 20% to PLN 30.8 from PLN 25.7 per share. The DCF/peer-relative valuation yields PLN 31.8 (from PLN 27.7)/ PLN 29.9 (from PLN 23.6) per share.

Fig. 2. Ferro; Peer-relative comparison

Company	P/E			EV/EBITDA			EV/EBIT		
	2021E	2022E	2023E	2021E	2022E	2023E	2021E	2022E	2023E
Villeroy & Boch Ag-Pref	15.0	13.3	n.a.	5.5	5.1	n.a.	10.3	9.0	n.a.
Fortune Brands Home & Securi	18.3	16.8	15.5	12.1	10.9	10.2	14.2	12.7	11.7
Nilfisk Holding	15.4	12.1	n.a.	7.3	6.4	n.a.	17.2	13.3	n.a.
Tarkett	15.9	12.8	11.2	5.3	4.6	4.3	11.3	9.5	9.6
Nichiha	18.3	13.8	12.9	9.7	6.0	5.4	11.5	8.5	7.4
Norcros	9.9	8.1	6.8	5.5	4.7	3.8	7.6	6.3	5.0
Vestel Beyaz Esya Sanayi	9.3	5.7	n.a.	6.3	4.8	n.a.	10.2	n.a.	n.a.
Mercor	10.0	9.3	8.6	6.9	6.5	6.0	9.0	8.4	7.6
Lena Lighting	12.2	11.8	11.5	6.7	6.5	6.3	9.6	9.2	8.9
<b>Median</b>	<b>13.2</b>	<b>12.0</b>	<b>11.2</b>	<b>6.7</b>	<b>6.0</b>	<b>5.6</b>	<b>10.3</b>	<b>9.1</b>	<b>7.5</b>
Ferro*	9.0	8.8	8.2	7.2	6.8	6.2	8.1	7.7	7.0
Implied Ferro's price based on foreign peers* (PLN)	37.5	35.1	35.1	23.4	22.3	23.2	33.8	30.9	27.5
<b>Implied Ferro's price* (PLN)</b>	<b>29.9</b>								

\*excl. minority stake in Termet

Source: Bloomberg, DM BOŚ SA

Fig. 3. Ferro; Profitability comparison

Company	EBITDA margin			EBIT margin			NP margin		
	2021E	2022E	2023E	2021E	2022E	2023E	2021E	2022E	2023E
Villeroy & Boch Ag-Pref	10.8%	10.9%	n.a.	5.8%	6.1%	n.a.	3.5%	3.7%	n.a.
Fortune Brands Home & Securi	17.2%	17.6%	17.7%	14.7%	15.1%	15.4%	10.0%	10.4%	10.7%
Masco Corp	19.7%	19.7%	19.4%	17.8%	18.3%	n.a.	11.2%	11.4%	11.3%
Nilfisk Holding	13.3%	14.0%	n.a.	5.6%	6.7%	n.a.	3.8%	4.5%	n.a.
Tarkett	10.3%	10.8%	11.2%	4.8%	5.3%	5.0%	2.3%	2.8%	3.2%
Vatti Corporation	15.7%	24.2%	n.a.	14.7%	15.0%	n.a.	12.5%	12.7%	n.a.
Nichiha	9.9%	14.3%	14.6%	8.4%	10.2%	10.6%	5.9%	7.4%	7.7%
Norcros	11.9%	12.2%	12.6%	8.6%	9.1%	9.6%	5.8%	6.5%	7.1%
Vestel Beyaz Esya Sanayi	17.1%	15.4%	n.a.	10.5%	n.a.	n.a.	10.7%	11.5%	n.a.
Śnieżka	17.1%	17.3%	n.a.	12.7%	12.7%	n.a.	9.3%	9.2%	n.a.
Mercor	11.3%	11.2%	11.5%	8.7%	8.7%	9.1%	5.4%	5.5%	5.9%
Lena Lighting	13.6%	13.4%	13.4%	9.5%	9.5%	9.5%	7.8%	7.8%	7.8%
Toya	15.9%	15.9%	15.9%	14.3%	14.3%	14.4%	11.4%	11.5%	11.5%
Decora	17.0%	17.6%	18.1%	14.0%	14.0%	14.0%	11.1%	11.1%	11.1%
<b>Median</b>	<b>14.6%</b>	<b>14.9%</b>	<b>14.6%</b>	<b>10.0%</b>	<b>10.2%</b>	<b>10.1%</b>	<b>8.5%</b>	<b>8.5%</b>	<b>7.8%</b>
Ferro	16.4%	13.7%	13.6%	15.0%	12.1%	11.9%	12.0%	9.1%	8.8%

Source: Bloomberg, DM BOŚ SA

**Fig. 4. Ferro; DCF model**

	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
<b>Cost of equity</b>									
Risk free	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Equity market premium	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%
Unlevered beta	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Leveraged beta	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2
<b>Required rate of return</b>	<b>11.5%</b>	<b>11.2%</b>	<b>10.9%</b>	<b>10.5%</b>	<b>10.5%</b>	<b>10.5%</b>	<b>10.5%</b>	<b>10.5%</b>	<b>10.5%</b>
<b>Cost of debt</b>									
Pre-tax cost of debt	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%
Effective tax rate	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%	19.0%
<b>After-tax cost of debt</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>3.8%</b>
<b>WACC</b>									
Equity share	78%	78%	78%	84%	87%	90%	92%	93%	94%
Debt share	22%	22%	22%	16%	13%	10%	8%	7%	6%
Cost of equity	11.5%	11.2%	10.9%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%
After tax cost of debt	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%	3.8%
<b>WACC</b>	<b>9.8%</b>	<b>9.6%</b>	<b>9.3%</b>	<b>9.4%</b>	<b>9.7%</b>	<b>9.8%</b>	<b>10.0%</b>	<b>10.1%</b>	<b>10.1%</b>
<b>Financial forecasts (PLN m)</b>									
Sales	705.2	740.4	777.5	800.8	824.8	849.6	875.0	901.3	928.3
EBIT	83.9	88.9	96.3	98.0	99.7	101.2	102.6	103.9	105.0
NOPLAT	67.9	72.0	78.0	79.4	80.7	82.0	83.1	84.2	85.1
Depreciation	11.7	13.0	14.4	16.0	17.8	19.8	22.0	24.5	27.2
NWC change	-13.4	-11.9	-12.5	-7.9	-8.1	-8.3	-8.6	-8.8	-9.1
Capex	-12.2	-14.2	-15.7	-17.4	-19.3	-21.5	-23.8	-26.5	-29.4
<b>FCFF</b>	<b>54.0</b>	<b>58.9</b>	<b>64.2</b>	<b>70.2</b>	<b>71.1</b>	<b>72.0</b>	<b>72.7</b>	<b>73.3</b>	<b>73.7</b>

Source: DM BOŚ SA estimates

**Fig. 5. Ferro; DCF Valuation (PLN m)**

FCFF terminal growth	1.0%
WACC in residual period	10.1%
Residual value	818.4
PV of residual value	359.8
PV of FCFF	393.3
<b>Enterprise value</b>	<b>753.1</b>
Net debt	88.2
Dividends (2021E)	36.4
Minorities	26.2
<b>Equity value</b>	<b>675.1</b>
Number of shares (million)	21.2
<b>12M EFV (PLN)</b>	<b>31.8</b>

Source: DM BOŚ SA estimates

## The Group's Strategy

The strategy includes (i) consolidated revenues and EBITDA targets at PLN 700 million and PLN 90 million, respectively, in 2023, (ii) investment expenditures below PLN 10 million till 2023, and (iii) the Group's ND/EBITDA multiple below 2.5x in 2018-23. These assumptions do not cover acquisition plans.

## Acquisitions

Ferro has acquired 71% of Termet and 100% of Tester; the former is a manufacturer of heating devices such as boilers, water heaters and solutions based on RES and the latter is involved in designing, manufacturing and sale of electronic control and automation systems for gas appliances. In total they employ 300 people, their joint revenues and

EBITDA in FY19 amounted to PLN 126 million and PLN 10 million, respectively. The transaction value stands at PLN 51 million (+ PLN 10 million of conditional payment tied to FY20 financial results).

We assume the revenues and EBITDA of the acquired entities to improve to PLN 144 million and PLN 12 million, respectively, in FY20 and expect Ferro to start consolidating them from March. We believe these acquisitions should deliver cost and revenue synergies (expanding offer and export sales). The acquired companies with significantly lower exports (below 10% of revenues) than Ferro (65% in 1-3Q20) will be able to gradually expand abroad after receiving certifications for their products.

### Financial forecasts

We forecast the Company's FY21 sales at PLN 665 million (+31% yoy) with a 6% organic growth assumed and PLN 127 million of revenues added by Termet/Tester. We expect the Group's FY21 EBITDA to reach PLN 91 million with PLN 11 million of EBITDA added by Termet/Tester for 10M in FY21. Our financial projections are encumbered with high risk as FY20 results of the acquired companies are not known to us.

We believe the good market situation will be beneficial for the Group, especially in 1H21. Demand for the Company's goods and products is driven by the development of the residential market in the region (foreign markets contributed 65% of the Company's 1-3Q20 revenues; up 18% yoy). In the installation fittings segment, the replacement demand constitutes 55% with 45% coming from new investments. In the section of batteries and accessories, 80% of demand results from renovations and 20% from new residential investments. The Company distributes its goods and products through traditional (66%) and modern (34%) channels. The Company benefits from a one-to-two year shift

in demand with respect to the construction of apartments. Besides, the renovation and product life cycles are shortened.

According to CSO, in 2020 in Poland (i) 224,000 dwellings were started, down 6% yoy, (ii) 222,000 dwellings were delivered, up 7% yoy, and (iii) 276,000 building permits were issued, up 3% yoy. In 4Q20 in Poland (i) 56,000 dwellings were started, down 4% yoy, (ii) 65,000 dwellings were delivered, up 6% yoy, and (iii) 84,000 building permits were issued, up 24% yoy. Besides, high demand prevails on the secondary market.

Thanks to the good market situation it is possible to introduce price hikes offsetting raw materials prices growth (copper/zinc/aluminum prices growth by 26%/20%/10% yoy translating into a 25%/18%/9% price growth in PLN at the 2020-end). Moreover, clients are willing to buy high-end products which should also support Ferro's sales as the Group expands its offer to move upmarket.

Given the acceleration of the strategy implementation and recent acquisitions we assume the Company will revise its strategy in mid-year, after experiencing the first months with the acquired companies on board.

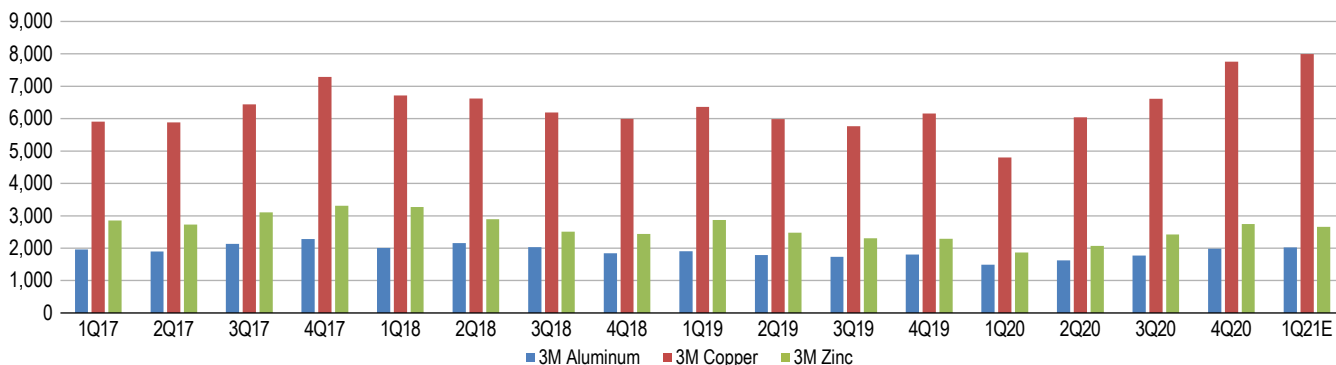
It is worth mentioning that the Group's profitability is determined by (i) pricing, (ii) goods purchase prices/ production costs (pricing formulas for the merchandise from China are linked to copper and zinc quotations in Shanghai), and (iii) HR costs. Costs of commodities and goods purchase as well as transport prices are mainly denominated in US\$ (90%) and in EUR (10%) while revenues are mostly generated in PLN and CZK which ties the realized margins to FX rates. Ferro has the flexibility to adjust final prices to FX rates by the fine-tuning of discounts. The FX differences booked in financial costs arise from a time delay between the order placement and payment day.

Fig. 6. Ferro; Changes in DM BOŚ SA forecasts

IFRS consolidated (PLN m)	2020E			2021E			2022E		
	current	previous	change	current	previous	change	current	previous	change
Sales	507.5	504.1	1%	665.3	534.3	25%	705.2	566.4	25%
EBITDA	83.1	82.0	1%	90.8	72.8	25%	95.6	76.6	25%
EBIT	76.0	74.9	2%	80.8	64.2	26%	83.9	67.9	24%
NP	60.7	59.1	3%	60.5	49.4	23%	62.3	52.7	18%
Net debt	51.4	55.8	-8%	88.2	62.7	41%	72.5	53.4	36%

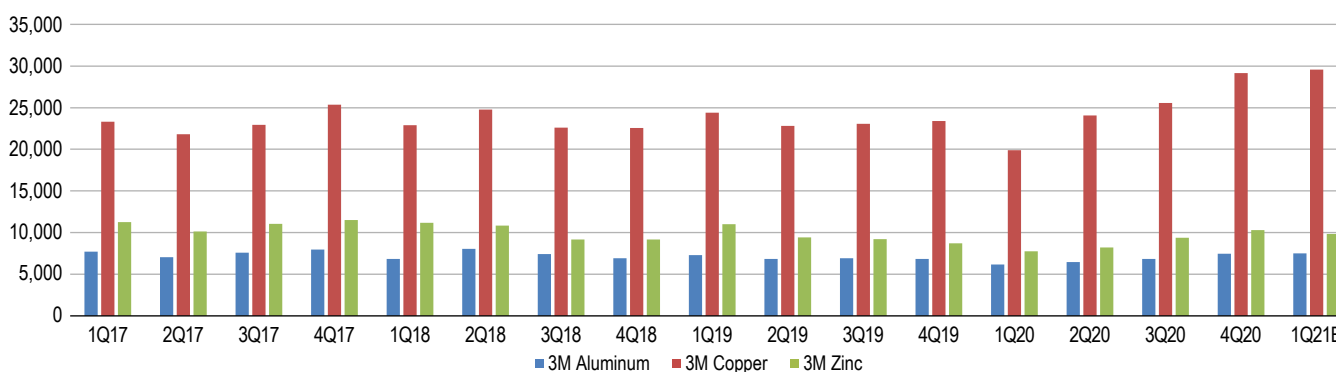
Source: DM BOŚ SA

**Fig. 7. Commodities prices (eop, US\$)**



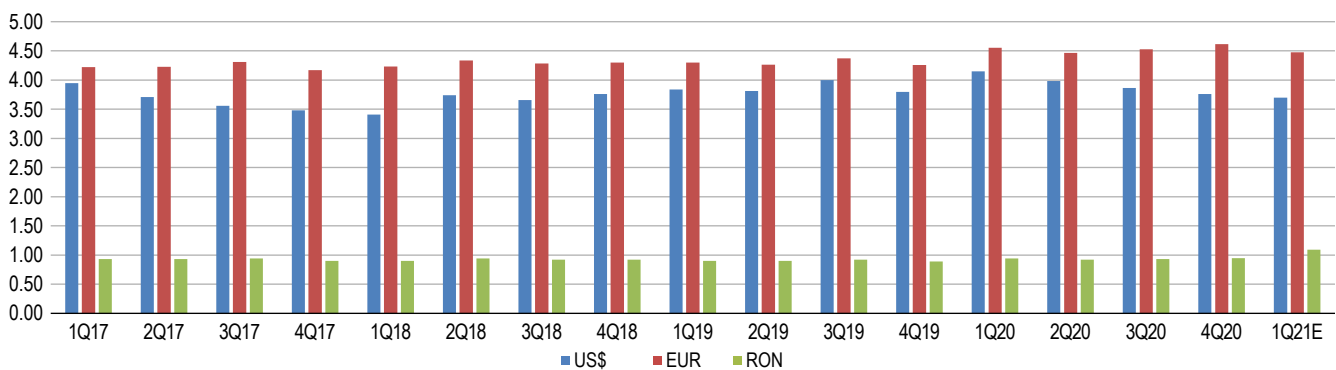
Source: Bloomberg, DM BOŚ SA

**Fig. 8. Commodities prices (eop, PLN)**



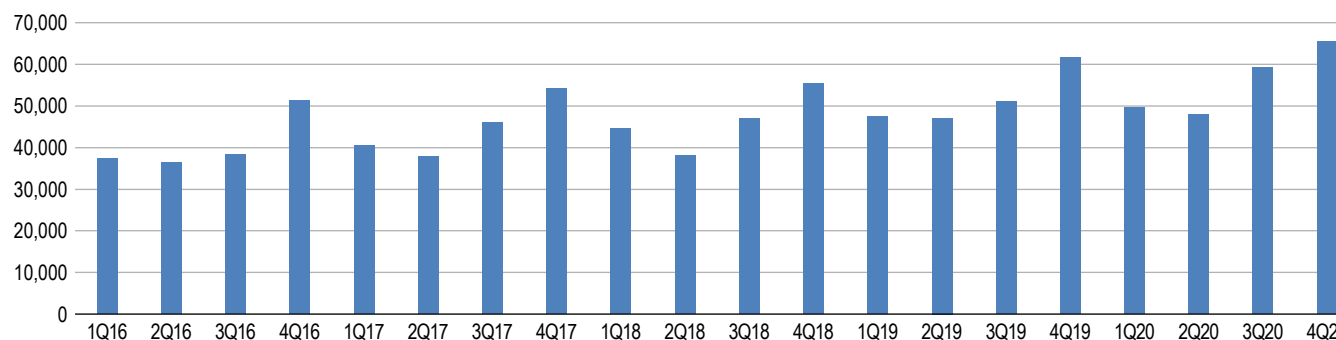
Source: Bloomberg, DM BOŚ SA

**Fig. 9. FX rates (eop, PLN)**

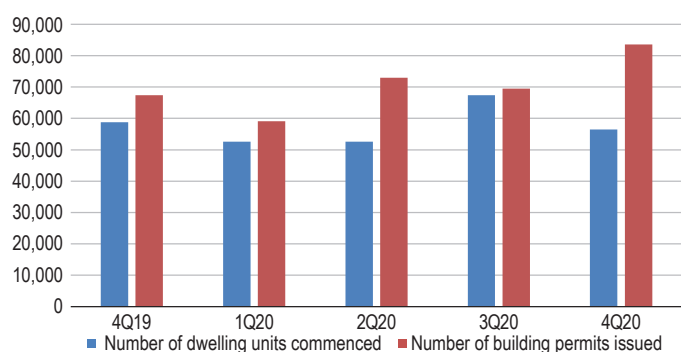


Source: Bloomberg, DM BOŚ SA

**Fig. 10. Poland; Dwellings delivered to clients**



Source: CSO

**Fig. 11. Poland; Housing market**


Source: CSO

## Financial statements (IFRS consolidated)

**Fig. 12. Ferro; Balance sheet**

(PLN m)	2017	2018	2019	2020E	2021E	2022E	2023E
<b>Fixed assets</b>	<b>69.5</b>	<b>75.9</b>	<b>82.9</b>	<b>82.6</b>	<b>96.1</b>	<b>96.4</b>	<b>97.5</b>
Other fixed assets	118.3	121.3	122.1	122.3	137.1	137.2	137.4
Current trade assets	177.4	193.7	206.7	282.8	319.9	353.1	388.7
- inventory	106.7	119.0	125.5	151.0	203.9	216.1	226.9
- net trade receivables	51.8	57.1	60.7	67.3	88.2	93.5	98.2
Accruals	18.9	17.6	20.5	64.4	27.7	43.4	63.5
<b>Assets</b>	<b>365.2</b>	<b>390.9</b>	<b>411.6</b>	<b>487.7</b>	<b>553.0</b>	<b>586.7</b>	<b>623.5</b>
Shareholders' funds	198.3	233.2	250.3	299.9	346.9	375.9	408.2
Reserves	35.1	8.1	8.1	8.1	8.1	8.1	8.1
Liabilities	131.8	149.6	153.2	179.6	197.9	202.7	207.1
- interest bearing debt	65.6	109.1	89.2	108.8	108.8	108.8	108.8
- trading liabilities	59.7	34.7	47.2	53.0	69.1	73.2	76.8
- other	5.6	5.8	9.7	10.8	13.0	13.7	14.5
<b>Shareholders equity and liabilities</b>	<b>365.2</b>	<b>390.9</b>	<b>411.6</b>	<b>487.7</b>	<b>553.0</b>	<b>586.7</b>	<b>623.5</b>
<b>Ratios:</b>							
Debt/Equity	0.3	0.5	0.4	0.4	0.3	0.3	0.3
Net WC / Total assets	0.3	0.4	0.3	0.3	0.4	0.4	0.4
Current ratio	1.5	1.6	1.7	2.2	2.2	2.3	2.5
Quick ratio	0.6	0.6	0.7	1.0	0.8	0.9	1.0
Sales / Total assets	1.0	1.1	1.1	1.1	1.3	1.2	1.2
Sales / Net WC	3.5	3.4	3.2	3.3	3.4	3.1	3.1
Inventory turnover (days)*	104	102	99	99	97	109	109
Average receivable turnover (days)*	48	49	48	46	43	47	47
Average accounts payable period (days)*	49	42	33	36	33	37	37
Cash conversion cycle (days)	103	108	113	109	107	119	120
ROA	11.2%	10.2%	10.7%	13.5%	11.6%	10.9%	11.0%
ROE	19.2%	17.9%	17.7%	22.1%	18.7%	17.2%	17.0%

\*in relation to revenues

Source: Company, DM BOS SA estimates

**Fig. 13. Ferro; Income statement**

(PLN m)	2017	2018	2019	2020E	2021E	2022E	2023E
<b>Net sales</b>	<b>364.7</b>	<b>405.6</b>	<b>451.3</b>	<b>507.5</b>	<b>665.3</b>	<b>705.2</b>	<b>740.4</b>
Costs of operating activities	-319.3	-353.9	-392.9	-433.3	-586.9	-623.9	-654.3
<b>EBITDA</b>	<b>51.6</b>	<b>57.3</b>	<b>66.9</b>	<b>83.1</b>	<b>90.8</b>	<b>95.6</b>	<b>101.8</b>
<b>EBIT</b>	<b>47.7</b>	<b>53.6</b>	<b>60.6</b>	<b>76.0</b>	<b>80.8</b>	<b>83.9</b>	<b>88.9</b>
Financial income	2.9	0.0	0.0	2.9	0.8	0.6	0.9
Financial costs	-10.1	-6.7	-6.6	-3.7	-4.3	-3.9	-3.7
<b>Pre-tax profit</b>	<b>40.5</b>	<b>46.8</b>	<b>54.0</b>	<b>75.2</b>	<b>77.3</b>	<b>80.5</b>	<b>86.1</b>
Income tax	-29.5	-9.1	-14.0	-14.5	-14.7	-15.3	-16.4
Minorities	0.0	0.0	0.0	0.0	-2.1	-3.0	-3.2
<b>NP</b>	<b>11.1</b>	<b>37.7</b>	<b>40.0</b>	<b>60.7</b>	<b>60.5</b>	<b>62.3</b>	<b>66.6</b>
<b>Adj NP</b>	<b>39.6</b>	<b>38.6</b>	<b>42.9</b>	<b>60.7</b>	<b>60.5</b>	<b>62.3</b>	<b>66.6</b>
<b>Margins:</b>							
EBITDA	14.2%	14.1%	14.8%	16.4%	13.7%	13.6%	13.8%
EBIT	13.1%	13.2%	13.4%	15.0%	12.1%	11.9%	12.0%
Pre-tax profit	11.1%	11.5%	12.0%	14.8%	11.6%	11.4%	11.6%
NP	3.0%	9.3%	8.9%	12.0%	9.1%	8.8%	9.0%
Adj NP	10.9%	9.5%	9.5%	12.0%	9.1%	8.8%	9.0%
<b>Nominal growth:</b>							
Sales	9.7%	11.2%	11.3%	12.5%	31.1%	6.0%	5.0%
EBITDA	12.4%	11.0%	16.7%	24.4%	9.3%	5.2%	6.5%
EBIT	16.1%	12.2%	13.2%	25.4%	6.3%	3.8%	5.9%
Pre-tax profit	11.1%	15.5%	15.4%	39.2%	2.8%	4.2%	6.9%
NP	-62.0%	240.8%	6.1%	51.7%	-0.3%	2.9%	6.9%
Adj NP	36.2%	-2.6%	11.2%	41.5%	-0.3%	2.9%	6.9%

Source: The Company, DM BOS SA estimates

**Fig. 14. Ferro; Cash flow**

(PLN m)	2017	2018	2019	2020E	2021E	2022E	2023E
<b>Operating cash flow</b>	<b>61.4</b>	<b>-25.1</b>	<b>54.6</b>	<b>45.0</b>	<b>69.6</b>	<b>67.1</b>	<b>74.5</b>
Pre-tax profit	48.7	46.8	54.0	75.2	77.3	80.5	86.1
Depreciation	3.9	3.7	6.3	7.1	10.0	11.7	13.0
Change in working capital	8.2	-44.7	0.8	-27.2	-15.1	-13.4	-11.9
Other	0.7	-31.0	-6.5	-10.1	-2.6	-11.7	-12.7
<b>Net funds from investing activities</b>	<b>-4.3</b>	<b>-7.1</b>	<b>-4.4</b>	<b>-7.0</b>	<b>-67.1</b>	<b>-12.2</b>	<b>-14.2</b>
Capital expenditures	-4.4	-7.2	-4.6	-7.0	-67.1	-12.2	-14.2
Other	0.1	0.2	0.2	0.0	0.0	0.0	0.0
<b>Net funds from financial activities</b>	<b>-39.6</b>	<b>5.3</b>	<b>-51.9</b>	<b>6.0</b>	<b>-39.3</b>	<b>-39.2</b>	<b>-40.2</b>
Income from shares issue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net change in debt	-12.4	15.0	-25.2	19.6	0.0	0.0	0.0
Dividends paid	-25.5	-7.4	-23.8	-11.1	-36.4	-36.3	-37.4
Other	-1.7	-2.3	-3.0	-2.5	-2.9	-2.9	-2.9
<b>Change in cash</b>	<b>17.6</b>	<b>-26.9</b>	<b>-1.8</b>	<b>44.0</b>	<b>-36.7</b>	<b>15.7</b>	<b>20.1</b>

Source: The Company, DM BOS SA estimates

## BASIC DEFINITIONS

**A/R turnover** (in days) =  $365/(\text{sales}/\text{average A/R})$   
**Inventory turnover** (in days) =  $365/(\text{COGS}/\text{average inventory})$   
**A/P turnover** (in days) =  $365/(\text{COGS}/\text{average A/P})$   
**Current ratio** =  $(\text{current assets} - \text{ST deferred assets})/\text{current liabilities}$   
**Quick ratio** =  $(\text{current assets} - \text{ST deferred assets} - \text{inventory})/\text{current liabilities}$   
**Interest coverage** =  $(\text{pre-tax profit before extraordinary items} + \text{interest payable})/\text{interest payable}$   
**Gross margin** =  $\text{gross profit on sales}/\text{sales}$   
**EBITDA margin** =  $\text{EBITDA}/\text{sales}$   
**EBIT margin** =  $\text{EBIT}/\text{sales}$   
**Pre-tax margin** =  $\text{pre-tax profit}/\text{sales}$   
**Net margin** =  $\text{net profit}/\text{sales}$   
**ROE** =  $\text{net profit}/\text{average equity}$   
**ROA** =  $(\text{net income} + \text{interest payable})/\text{average assets}$   
**EV** =  $\text{market capitalization} + \text{interest bearing debt} - \text{cash and equivalents}$   
**EPS** =  $\text{net profit}/\text{no. of shares outstanding}$   
**CE** =  $\text{net profit} + \text{depreciation}$   
**Dividend yield** (gross) =  $\text{pre-tax DPS}/\text{stock market price}$   
**Cash sales** =  $\text{accrual sales corrected for the change in A/R}$   
**Cash operating expenses** =  $\text{accrual operating expenses corrected for the changes in inventories and A/P, depreciation, cash taxes and changes in the deferred taxes}$

DM BOŠ S.A. generally values the covered non bank companies via two methods: comparative method and DCF method (discounted cash flows). The advantage of the former is the fact that it incorporates the current market assessment of the value of the company's peers. The weakness of the comparative method is the risk that the valuation benchmark may be mispriced. The advantage of the DCF method is its independence from the current market valuation of the comparable companies. The weakness of this method is its high sensitivity to undertaken assumptions, especially those related to the residual value calculation. Please note that we also resort to other valuation techniques (e.g. NAV-, DDM- or SOTP-based), should it prove appropriate in a given case.

## KEY TO INVESTMENT RANKINGS

This is a guide to expected price performance in absolute terms over the next 12 months:

**Buy** – fundamentally undervalued (upside to 12M EFV in excess of the cost of equity) + catalysts which should close the valuation gap identified;  
**Hold** – either (i) fairly priced, or (ii) fundamentally undervalued/overvalued but lacks catalysts which could close the valuation gap;  
**Sell** – fundamentally overvalued (12M EFV < current share price + 1-year cost of equity) + catalysts which should close the valuation gap identified.

This is a guide to expected relative price performance:

**Overweight** – expected to perform better than the benchmark (WIG) over the next quarter in relative terms  
**Neutral** – expected to perform in line with the benchmark (WIG) over the next quarter in relative terms  
**Underweight** – expected to perform worse than the benchmark (WIG) over the next quarter in relative terms

The recommendation tracker presents the performance of DM BOŠ S.A.'s recommendations. A recommendation expires on the day it is altered or on the day 12 months after its issuance, whichever comes first.

Relative performance compares the rate of return on a given recommended stock in the period of the recommendation's validity (i.e. from the date of issuance to the date of alteration or – in case of maintained recommendations – from the date of issuance to the current date) in a relation to the rate of return on the benchmark in this time period. The WIG index constitutes the benchmark. For recommendations that expire by an alteration or are maintained, the ending values used to calculate their absolute and relative performance are: the stock closing price on the day the recommendation expires/ is maintained and the closing value of the benchmark on that date. For recommendations that expire via a passage of time, the ending values used to calculate their absolute and relative performance are: the average of the stock closing prices for the day the recommendation elapses and four directly preceding sessions and the average of the benchmark's closing values for the day the recommendation expires and four directly preceding sessions.

### Distribution of DM BOŠ's current recommendations

	Buy	Hold	Sell	Suspended	Under revision
Numbers	41	27	6	9	0
Percentage	49%	33%	7%	11%	0%

### Distribution of DM BOŠ's current recommendations for the companies which DM BOŠ has supplied with material investment services within the last 12 months

	Buy	Hold	Sell	Suspended	Under revision
Numbers	4	6	0	2	0
Percentage	33%	50%	0%	17%	0%

### Distribution of DM BOŠ's current market relative recommended weightings

	Overweight	Neutral	Underweight	Suspended	Under revision
Numbers	34	29	11	9	0
Percentage	41%	35%	13%	11%	0%

### Distribution of DM BOŠ's current market relative recommended weightings for the companies which DM BOŠ has supplied with material investment services within the last 12 months

	Overweight	Neutral	Underweight	Suspended	Under revision
Numbers	3	5	2	2	0
Percentage	25%	42%	17%	17%	0%

## Banks

**Net Interest Margin (NIM)** =  $\text{net interest income}/\text{average assets}$   
**Non interest income** =  $\text{fees\&commissions} + \text{result on financial operations (trading gains)} + \text{FX gains}$   
**Interest Spread** =  $(\text{interest income}/\text{average interest earning assets})/(\text{interest cost}/\text{average interest bearing liabilities})$   
**Cost/Income** =  $(\text{general costs} + \text{depreciation})/(\text{profit on banking activity} + \text{other net operating income})$   
**ROE** =  $\text{net profit}/\text{average equity}$   
**ROA** =  $\text{net income}/\text{average assets}$   
**Non performing loans (NPL)** = loans in 'basket 3' category  
**NPL coverage ratio** =  $\text{loan loss provisions}/\text{NPL}$   
**Net provision charge** =  $\text{provisions created} - \text{provisions released}$

DM BOŠ S.A. generally values the covered banks via two methods: comparative method and fundamental target fair P/E and target fair P/BV multiples method. The advantage of the former is the fact that it incorporates the current market assessment of the value of the company's peers. The weakness of the comparative method is the risk that the valuation benchmark may be mispriced. The advantage of the fundamental target fair P/E and target fair P/BV multiples method is its independence of the current market valuation of the comparable companies. The weakness of this method is its high sensitivity to undertaken assumptions, especially those related to the residual value calculation. Assumptions used in valuation can change, influencing thereby the level of the valuation. Among the most important assumptions are: GDP growth, forecasted level of inflation, changes in interest rates and currency prices, employment level and change in wages, demand on the analysed company products, raw material prices, competition, standing of the main customers and suppliers, legislation changes, etc. Changes in the environment of the analysed company are monitored by analysts involved in the preparation of the recommendation, estimated, incorporated in valuation and published in the recommendation whenever needed.



**LT fundamental recommendation tracker**

Analyst	Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Performance	Relative performance	Price at issue/reiteration*	EFV (12 months)	
<b>Ferro</b>										
Sylwia Jaśkiewicz	Hold	-	21.07.2019	-	22.07.2019	04.12.2019	11%	20%	13.70	17.10 -
Sylwia Jaśkiewicz	-	→	-	30.07.2019	31.07.2019	-	-	-	13.50	17.10 →
Sylwia Jaśkiewicz	-	→	-	01.09.2019	02.09.2019	-	-	-	12.05	17.10 →
Sylwia Jaśkiewicz	-	→	-	10.09.2019	11.09.2019	-	-	-	12.10	17.10 →
Sylwia Jaśkiewicz	-	→	-	15.09.2019	16.09.2019	-	-	-	12.65	17.10 →
Sylwia Jaśkiewicz	-	→	-	13.10.2019	14.10.2019	-	-	-	13.40	17.10 →
Sylwia Jaśkiewicz	-	→	-	24.10.2019	25.10.2019	-	-	-	13.00	17.10 →
Sylwia Jaśkiewicz	-	→	-	17.11.2019	18.11.2019	-	-	-	13.00	17.10 →
Sylwia Jaśkiewicz	-	→	-	18.11.2019	19.11.2019	-	-	-	13.00	17.10 →
Sylwia Jaśkiewicz	Buy	↑	04.12.2019	-	05.12.2019	28.01.2020	17%	15%	15.20	17.80 ↑
Sylwia Jaśkiewicz	-	→	-	08.12.2019	09.12.2019	-	-	-	15.00	17.80 →
Sylwia Jaśkiewicz	-	→	-	09.01.2020	10.01.2020	-	-	-	16.30	17.80 →
Sylwia Jaśkiewicz	Hold	↓	28.01.2020	-	29.01.2020	22.07.2020	-4%	5%	17.80	18.50 ↑
Sylwia Jaśkiewicz	-	→	-	04.02.2020	05.02.2020	-	-	-	17.90	18.50 →
Sylwia Jaśkiewicz	-	→	-	06.02.2020	07.02.2020	-	-	-	17.50	18.50 →
Sylwia Jaśkiewicz	-	→	-	03.03.2020	04.03.2020	-	-	-	15.20	18.50 →
Sylwia Jaśkiewicz	-	→	-	30.03.2020	31.03.2020	-	-	-	12.25	18.50 →
Sylwia Jaśkiewicz	-	→	-	22.04.2020	23.04.2020	-	-	-	14.00	18.50 →
Sylwia Jaśkiewicz	-	→	-	23.04.2020	24.04.2020	-	-	-	14.00	18.50 →
Sylwia Jaśkiewicz	-	→	-	19.05.2020	20.05.2020	-	-	-	13.65	18.50 →
Sylwia Jaśkiewicz	-	→	-	15.06.2020	16.06.2020	-	-	-	16.60	18.50 →
Sylwia Jaśkiewicz	-	→	-	13.07.2020	14.07.2020	-	-	-	17.90	18.50 →
Sylwia Jaśkiewicz	Buy	↑	22.07.2020	-	23.07.2020	Not later than 22.07.2021	54%	40%	17.00	20.30 ↑
Sylwia Jaśkiewicz	-	→	-	01.09.2020	02.09.2020	-	-	-	18.60	20.30 →
Sylwia Jaśkiewicz	-	→	-	17.09.2020	18.09.2020	-	-	-	18.90	20.30 →
Sylwia Jaśkiewicz	-	→	-	29.09.2020	30.09.2020	-	-	-	18.70	19.90 ↓
Sylwia Jaśkiewicz	-	→	-	08.10.2020	09.10.2020	-	-	-	19.00	19.90 →
Sylwia Jaśkiewicz	-	→	-	03.11.2020	04.11.2020	-	-	-	17.30	22.00 ↑
Sylwia Jaśkiewicz	-	→	-	08.11.2020	09.11.2020	-	-	-	17.25	22.00 →
Sylwia Jaśkiewicz	-	→	-	19.11.2020	20.11.2020	-	-	-	18.40	23.40 ↑
Sylwia Jaśkiewicz	-	→	-	26.11.2020	27.11.2020	-	-	-	20.00	23.40 →
Sylwia Jaśkiewicz	-	→	-	06.12.2020	07.12.2020	-	-	-	24.80	25.70 ↑
Sylwia Jaśkiewicz	-	→	-	05.01.2021	05.01.2021	-	-	-	25.50	25.70 →
Sylwia Jaśkiewicz	-	→	-	28.01.2021	29.01.2021	-	-	-	26.50	25.70 →
Sylwia Jaśkiewicz	-	→	-	09.02.2021	10.02.2021	-	-	-	25.70	30.80 ↑

\* prices at issue/reiteration are the closing prices at the report or reiteration date

**Market-relative recommendation tracker**

Analyst	Relative Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Price at issue/reiteration*	Relative performance
<b>Ferro</b>							
Sylwia Jaśkiewicz	Neutral	-	21.07.2019	-	22.07.2019	18.11.2019	13.70 -2%
Sylwia Jaśkiewicz	-	→	-	30.07.2019	31.07.2019	-	13.50 -
Sylwia Jaśkiewicz	-	→	-	01.09.2019	02.09.2019	-	12.05 -
Sylwia Jaśkiewicz	-	→	-	10.09.2019	11.09.2019	-	12.10 -
Sylwia Jaśkiewicz	-	→	-	15.09.2019	16.09.2019	-	12.65 -
Sylwia Jaśkiewicz	-	→	-	13.10.2019	14.10.2019	-	13.40 -
Sylwia Jaśkiewicz	-	→	-	24.10.2019	25.10.2019	-	13.00 -
Sylwia Jaśkiewicz	-	→	-	17.11.2019	18.11.2019	-	13.00 -
Sylwia Jaśkiewicz	Overweight	↑	18.11.2019	-	19.11.2019	28.01.2020	13.00 41%
Sylwia Jaśkiewicz	-	→	-	04.12.2019	05.12.2019	-	15.20 -
Sylwia Jaśkiewicz	-	→	-	08.12.2019	09.12.2019	-	15.00 -
Sylwia Jaśkiewicz	-	→	-	09.01.2020	10.01.2020	-	16.30 -
Sylwia Jaśkiewicz	Neutral	↓	28.01.2020	-	29.01.2020	23.04.2020	17.80 -1%
Sylwia Jaśkiewicz	-	→	-	04.02.2020	05.02.2020	-	17.90 -
Sylwia Jaśkiewicz	-	→	-	06.02.2020	07.02.2020	-	17.50 -
Sylwia Jaśkiewicz	-	→	-	03.03.2020	04.03.2020	-	15.20 -
Sylwia Jaśkiewicz	-	→	-	30.03.2020	31.03.2020	-	12.25 -
Sylwia Jaśkiewicz	-	→	-	22.04.2020	23.04.2020	-	14.00 -
Sylwia Jaśkiewicz	Overweight	↑	23.04.2020	-	24.04.2020	Not later than 23.04.2021	14.00 48%
Sylwia Jaśkiewicz	-	→	-	19.05.2020	20.05.2020	-	13.65 -
Sylwia Jaśkiewicz	-	→	-	15.06.2020	16.06.2020	-	16.60 -
Sylwia Jaśkiewicz	-	→	-	13.07.2020	14.07.2020	-	17.90 -
Sylwia Jaśkiewicz	-	→	-	22.07.2020	23.07.2020	-	17.00 -
Sylwia Jaśkiewicz	-	→	-	01.09.2020	02.09.2020	-	18.60 -
Sylwia Jaśkiewicz	-	→	-	17.09.2020	18.09.2020	-	18.90 -
Sylwia Jaśkiewicz	-	→	-	29.09.2020	30.09.2020	-	18.70 -
Sylwia Jaśkiewicz	-	→	-	08.10.2020	09.10.2020	-	19.00 -
Sylwia Jaśkiewicz	-	→	-	03.11.2020	04.11.2020	-	17.30 -
Sylwia Jaśkiewicz	-	→	-	08.11.2020	09.11.2020	-	17.25 -
Sylwia Jaśkiewicz	-	→	-	19.11.2020	20.11.2020	-	18.40 -
Sylwia Jaśkiewicz	-	→	-	26.11.2020	27.11.2020	-	20.00 -
Sylwia Jaśkiewicz	-	→	-	06.12.2020	07.12.2020	-	24.80 -
Sylwia Jaśkiewicz	-	→	-	05.01.2021	05.01.2021	-	25.50 -
Sylwia Jaśkiewicz	-	→	-	28.01.2021	29.01.2021	-	26.50 -
Sylwia Jaśkiewicz	-	→	-	09.02.2021	10.02.2021	-	25.70 -

\* prices at issue/reiteration are the closing prices at the report or reiteration date

This report has been prepared by Dom Maklerski Banku Ochrony Środowiska SA registered in Warsaw (hereinafter referred to as DM BOŚ SA) and commissioned by the Warsaw Stock Exchange SA (hereinafter referred to as WSE SA) pursuant to the agreement on the research report preparation between DM BOŚ SA and WSE SA within the framework of the Analytical Coverage Support Pilot Program described on the WSE SA website: <https://www.gpw.pl/gpwpa> (hereinafter referred to as the Agreement). DM BOŚ SA will receive a remuneration for the research report in accordance with the Agreement.

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The report is an investment research within the meaning of Commission Delegated Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organizational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive. This report constitutes a recommendation within the meaning of Commission Delegated Regulation (EU) 2016/958 of 9 March 2016 supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest. This report is for information purposes only.

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This report was prepared with due diligence and scrutiny. The information used in the report is based on all public sources such as press and branch publications, company's financial statements, current and periodic reports, as well as meetings and telephone conversations with company's representatives prior to the date of report's release. We believe the above mentioned sources of information to be reliable, however we do not guarantee their accuracy and completeness. All estimates and opinions included herein represent our judgment as of the date of the issue. All opinions, forecasts, calculations and estimates herein constitute the author's subjective assessment as of the date of the issue and can be modified at any time without prior notice. DM BOŚ SA informs that this report will be updated in the manner as referred to in the Agreement, at least once a year.

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