

**2/2024/GPW (6)** February 6, 2024

This report is prepared for the Warsaw Stock Exchange SA within the framework of the Analytical Coverage Support Program 4.0.

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# Ferro

Recommended action .....	2
4Q23 financial results preview .....	2
Recent events .....	2
Upcoming events .....	2
Financial forecast .....	3
Valuation .....	3
Market environment .....	3
Strategy .....	3
Risk factors .....	4
Catalysts .....	4
Disclaimer .....	5

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**Analyst:** Sylwia Jaśkiewicz, CFA

# Ferro

**Sector:** Construction materials  
**Fundamental rating:** Buy (→)  
**Market relative:** Overweight (→)  
**Price:** PLN 32.30  
**12M EFV:** PLN 36.6 (↑)

**Market Cap:** US\$ 169.6 m  
**Bloomberg code:** FRO PW  
**Av. daily turnover:** US\$ 0.09 m  
**12M range:** PLN 23.00-33.30  
**Free float:** 100%

## Recommended action

We uphold our recommendations for Ferro: LT fundamental Buy and ST relative Overweight. Our 12M EFV rises by 6% to PLN 36.6 from PLN 34.7 per share.

In 4Q23 we expect flat EBIT and stronger NI vs 4Q22. We forecast 2023 EBITDA at PLN 112 million (down 7% yoy) which is an upgrade (by 1%) vs our earlier forecast.

## 4Q23 financial results preview

In 1Q23 and 2Q23 the Group's revenues in Poland/ Czechia/ Slovakia/ Romania/ Hungary/ other countries fell 30%/ 6%/ 7%/ 5%/ 31%/ 10% and 33%/ 5%/ 11%/ 5%/ 26%/ 2% yoy, respectively; in 3Q23 the Group's sales in Poland/ Czechia/ Slovakia/ Romania/ Hungary/ other countries changed -7%/ -5%/ -15%/ -6%/ +8%/ -2% yoy. In 4Q23 we expect these declines to decelerate slightly mainly due to 4Q22 low base. We assume the Group's sales in Poland/ Czechia/ Slovakia/ Romania/ Hungary/ other countries fell -5%/ -5%/ -15%/ -6%/ -2%/ -2% yoy to PLN 85/ 34/ 12/ 36/ 10/ 20 million.

In 1Q23, 2Q23 and 3Q23 the segments of batteries and accessories/ installation fittings/ heating systems registered a drop of quarterly sales at 16%/ 11%/ 36%, 11%/ 13%/ 51% and 9%/ 4%/ 4% yoy, respectively. We expect 4Q23 sales of the segments of batteries and accessories/ installation fittings/ heating systems to fall 9%/ 4%/ 0% yoy.

Ultimately, we expect a 5% yoy decline of the Group's sales in 4Q23. Based on the level of commodities prices and FX rates, we assume the EBIT margin growth from 9.2% in 4Q22 to 9.6% in 4Q23.

Given the FX rates level we forecast positive FX differences at c. PLN 1 million and net financial

## Guide to adjusted profits

Income tax.

## Key data

IFRS consolidated		2022	2023E	2024E	2025E
Sales	PLN m	914.9	800.3	892.3	1,008.3
EBITDA	PLN m	120.7	111.8	129.2	143.3
EBIT	PLN m	105.6	94.5	110.4	122.4
Net income	PLN m	65.4	64.5	75.5	87.7
EPS	PLN	3.08	3.03	3.56	4.13
Adj EPS yoy chg	%	-11	-1	17	16
Net debt	PLN m	181.6	142.5	130.7	130.1
P/E	x	10.5	10.6	9.1	7.8
EV/EBITDA	x	7.2	7.4	6.3	5.7
EV/EBIT	x	8.2	8.8	7.4	6.7
DPS	PLN	1.51	1.50	1.52	1.78
Gross dividend yield	%	4.7	4.6	4.7	5.5
Number of shares (eop)	m	21.2	21.2	21.2	21.2

Source: Company, DM BOŚ SA estimates

## Stock performance



Source: Bloomberg

## Recent events

1. Release of consolidated 1Q23 financial results: May 29
2. Logistic center launch in Romania: 1H23
3. Release of consolidated 1H23 financial results: September 27
4. Release of consolidated 3Q23 financial results: November 28

## Upcoming events

1. Release of FY23 consolidated financial results: March 27
2. Release of consolidated 1Q24 financial results: May 22
3. Release of consolidated 1H24 financial results: September 17
4. Release of consolidated 3Q24 financial results: November 13

costs at c. PLN 3 million vs c. PLN 6 million a year earlier. All in all, we expect the Company to report 4Q23 NP at PLN 13 million (up 11% yoy).

**Fig. 1. Ferro; 4Q23 financial results preview**

IFRS consolidated (PLN m)	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23E	yoy chg	2022	2023E	yoy chg
Sales	255.7	224.2	226.0	209.0	207.4	182.6	212.6	197.6	-5%	914.9	800.3	-13%
EBITDA	36.1	30.4	31.5	22.8	28.9	24.3	35.1	23.4	3%	120.7	111.8	-7%
EBITDA margin	14.1%	13.6%	13.9%	10.9%	13.9%	13.3%	16.5%	11.9%	-	13.2%	14.0%	-
EBIT	32.2	26.6	27.6	19.3	24.9	20.1	30.6	18.9	-2%	105.6	94.5	-11%
EBIT margin	12.6%	11.8%	12.2%	9.2%	12.0%	11.0%	14.4%	9.6%	-	11.5%	11.8%	-
Pre-tax profit	26.4	20.8	17.8	13.8	22.0	15.4	26.8	15.7	14%	78.8	79.9	1%
Pre-tax profit margin	10.3%	9.3%	7.9%	6.6%	10.6%	8.4%	12.6%	8.0%	-	8.6%	10.0%	-
Net profit	21.4	18.6	13.7	11.7	17.5	12.6	21.3	13.0	11%	65.4	64.5	-1%
Net profit margin	8.3%	8.3%	6.1%	5.6%	8.4%	6.9%	10.0%	6.6%	-	7.2%	8.1%	-

Source: Company, DM BOŚ SA estimates

## Financial forecast

We slightly modify our FY financial forecasts incorporating 4Q23 expectations. The economic situation seems to stabilize which bodes well for demand in the coming quarters. The raw material prices are relatively favorable for the Company's margins.

## Valuation

Our valuation for Ferro falls under the impact of (i) the risk free rate revision (down from 5.5% to 5.4% in the detailed forecasts), (ii) the risk premium lowering to 5.9% from 6.3%, (iii) valuation horizon forward shift in time, (iv) peer valuation update, and (v) slight modification of our financial forecasts. Our 12M EFV constituting a 50%–50% mix of DCF FCF method and peer-relative valuation, increases by 6% to PLN 36.6 from PLN 34.7 per share previously. The DCF FCF/peer-relative valuation yields PLN 42/ 31 per share (previously 40/ PLN 29 per share).

## Market environment

The housing market dynamic in the region remains mediocre, albeit some harbingers of improvement are visible.

According to the CSO,

- in 2022 (i) 200,000 dwellings were started, down 28% yoy, (ii) 239,000 dwellings were delivered, up 2% yoy, and (iii) 297,000 building permits were issued, down 13%,
- in 2023 (i) 189,000 dwellings were started, down 6% yoy, (ii) 220,000 dwellings were delivered,

down 8% yoy, and (iii) 241,000 building permits were issued, down 19%.

According to the Czech Statistical Office,

- in 2022 (i) 42,000 dwellings were started, down 6% yoy, (ii) 39,000 dwellings were delivered, up 14% yoy, and (iii) 86,000 building permits were issued, down 5%,
- in 2023 (from January to November) (i) 33,000 dwellings were started, down 15% yoy, (ii) 33,000 dwellings were delivered, down 4% yoy, and (iii) 71,000 building permits were issued, down 10%.

According to CEIC data, in Romania,

- 105,000 building permits were issued, down 7% yoy, in 2022;
- in 2023 (from January to November) 71,000 building permits were issued, down 27% yoy.

## Strategy

According to the Company's management estimations the implementation of the F1R2 strategy (without acquisitions) will allow Ferro's FY26 revenues and EBITDA to reach PLN 1,400 million and PLN 193 million, respectively, with annual capex not exceeding PLN 30 million. Our forecast for FY26 assume lower top line and EBITDA (at PLN 1,139 million and PLN 162 million, respectively). The Strategy F1R2 assumes a dividend payout in the amount not less than 50% of the Company's NI in the stable market and financial situation including, among other things, the consolidated ND/ EBITDA ratio staying  $\leq 2.5x$ .

**Risk factors**

1. Economic slowdown in Europe
2. Falling demand for new flats
3. Falling frequency of renovations
4. Qualified workforce shortage
5. Pressure on salaries
6. 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. Lack of stability in the region
9. Temporary higher inventories
10. High interest rates

**Catalysts**

1. Higher demand in Poland and neighboring countries
2. Expansion in European countries
3. Strengthening position on the existing markets
4. New logistic center in southern Europe
5. New products (expanding the product offer)
6. Favorable FX rates and raw materials prices
7. Acquisitions in attractive segments
8. Implementation of the adopted strategy F1R2

## 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 BOŚ 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 BOŚ 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 BOŚ's current recommendations

	Buy	Hold	Sell	Suspended	Under revision	Not rated
Numbers	46	22	9	9	1	4
Percentage	51%	24%	10%	10%	1%	4%

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

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	27	37	13	9	1	4
Percentage	30%	41%	14%	10%	1%	4%

## 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 BOŚ 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.

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

	Buy	Hold	Sell	Suspended	Under revision	Not rated
Numbers	8	4	1	1	0	3
Percentage	47%	24%	6%	6%	0%	18%

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

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	5	6	2	1	0	3
Percentage	29%	35%	12%	6%	0%	18%

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	16.04.2021	75%	51%	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 ↑
Sylwia Jaśkiewicz	-	-	28.02.2021	01.03.2021	-	-	-	26.10	30.80 →
Sylwia Jaśkiewicz	-	-	31.03.2021	01.04.2021	-	-	-	27.00	30.80 →
Sylwia Jaśkiewicz	Buy	16.04.2021	-	16.04.2021	14.04.2022	16%	9%	29.30	30.80 →
Sylwia Jaśkiewicz	-	-	10.05.2021	11.05.2021	-	-	-	29.80	34.10 ↑
Sylwia Jaśkiewicz	-	-	27.05.2021	28.05.2021	-	-	-	32.50	34.10 →
Sylwia Jaśkiewicz	-	-	30.05.2021	31.05.2021	-	-	-	33.00	34.10 →
Sylwia Jaśkiewicz	-	-	09.07.2021	09.07.2021	-	-	-	35.30	34.10 →
Sylwia Jaśkiewicz	-	-	12.08.2021	13.08.2021	-	-	-	38.00	41.70 ↑
Sylwia Jaśkiewicz	-	-	31.08.2021	31.08.2021	-	-	-	40.50	41.70 →
Sylwia Jaśkiewicz	-	-	30.09.2021	01.10.2021	-	-	-	35.60	41.70 →
Sylwia Jaśkiewicz	-	-	07.10.2021	07.10.2021	-	-	-	38.90	41.70 →
Sylwia Jaśkiewicz	-	-	02.11.2021	03.11.2021	-	-	-	37.50	41.70 →
Sylwia Jaśkiewicz	-	-	04.11.2021	04.11.2021	-	-	-	37.20	41.70 →
Sylwia Jaśkiewicz	-	-	29.11.2021	30.11.2021	-	-	-	34.60	41.70 →
Sylwia Jaśkiewicz	-	-	05.12.2021	06.12.2021	-	-	-	33.00	39.60 ↓
Sylwia Jaśkiewicz	-	-	16.01.2022	17.01.2022	-	-	-	34.80	39.60 →
Sylwia Jaśkiewicz	-	-	01.02.2022	02.02.2022	-	-	-	32.00	39.60 →
Sylwia Jaśkiewicz	-	-	07.02.2022	07.02.2022	-	-	-	32.50	39.60 →
Sylwia Jaśkiewicz	-	-	28.02.2022	28.02.2022	-	-	-	29.00	39.60 →
Sylwia Jaśkiewicz	-	-	30.03.2022	31.03.2022	-	-	-	30.90	39.60 →
Sylwia Jaśkiewicz	Buy	14.04.2022	-	14.04.2022	03.10.2022	-21%	9%	31.70	39.60 →
Sylwia Jaśkiewicz	-	-	20.04.2022	21.04.2022	-	-	-	31.30	37.10 ↓
Sylwia Jaśkiewicz	-	-	25.05.2022	26.05.2022	-	-	-	27.20	37.10 →
Sylwia Jaśkiewicz	-	-	26.05.2022	26.05.2022	-	-	-	28.20	37.10 →
Sylwia Jaśkiewicz	-	-	15.07.2022	15.07.2022	-	-	-	25.50	37.10 →
Sylwia Jaśkiewicz	-	-	24.07.2022	25.07.2022	-	-	-	24.30	37.10 →
Sylwia Jaśkiewicz	-	-	16.08.2022	16.08.2022	-	-	-	26.60	37.10 →
Sylwia Jaśkiewicz	-	-	02.09.2022	02.09.2022	-	-	-	25.20	37.10 →
Sylwia Jaśkiewicz	-	-	20.09.2022	21.09.2022	-	-	-	25.50	37.10 →
Sylwia Jaśkiewicz	-	-	26.09.2022	27.09.2022	-	-	-	23.10	37.10 →
Sylwia Jaśkiewicz	Hold	03.10.2022	-	04.10.2022	27.09.2023	25%	-11%	23.50	28.70 ↓
Sylwia Jaśkiewicz	-	-	07.10.2022	07.10.2022	-	-	-	23.30	28.70 →
Sylwia Jaśkiewicz	-	-	28.10.2022	28.10.2022	-	-	-	22.80	28.70 →
Sylwia Jaśkiewicz	-	-	20.11.2022	21.11.2022	-	-	-	24.00	28.70 →
Sylwia Jaśkiewicz	-	-	01.12.2022	02.12.2022	-	-	-	22.60	28.70 →
Sylwia Jaśkiewicz	-	-	04.12.2022	05.12.2022	-	-	-	23.00	28.70 →
Sylwia Jaśkiewicz	-	-	13.01.2023	13.01.2023	-	-	-	23.50	28.70 →
Sylwia Jaśkiewicz	-	-	03.02.2023	03.02.2023	-	-	-	25.00	28.70 →
Sylwia Jaśkiewicz	-	-	16.02.2023	17.02.2023	-	-	-	24.50	28.70 →
Sylwia Jaśkiewicz	-	-	10.03.2023	10.03.2023	-	-	-	24.10	28.70 →
Sylwia Jaśkiewicz	-	-	30.03.2023	31.03.2023	-	-	-	25.50	28.70 →
Sylwia Jaśkiewicz	-	-	13.04.2023	13.04.2023	-	-	-	26.70	28.70 →
Sylwia Jaśkiewicz	-	-	28.04.2023	28.04.2023	-	-	-	27.40	28.70 →
Sylwia Jaśkiewicz	-	-	29.05.2023	29.05.2023	-	-	-	30.50	28.70 →
Sylwia Jaśkiewicz	-	-	29.05.2023	29.05.2023	-	-	-	30.50	28.70 →
Sylwia Jaśkiewicz	-	-	14.07.2023	14.07.2023	-	-	-	30.90	28.70 →
Sylwia Jaśkiewicz	-	-	31.07.2023	01.08.2023	-	-	-	30.00	30.10 ↑
Sylwia Jaśkiewicz	-	-	02.08.2023	03.08.2023	-	-	-	30.70	30.10 →

**LT fundamental recommendation tracker**

Analyst	Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Performance	Relative performance	Price at issue/reiteration*	EFV (12 months)	
Sylwia Jaškiewicz	-	→	-	31.08.2023	31.08.2023	-	-	29.40	30.10 →	
Sylwia Jaškiewicz	-	→	-	12.09.2023	13.09.2023	-	-	28.60	30.10 →	
Sylwia Jaškiewicz	Hold	→	27.09.2023	-	28.09.2023	28.11.2023	-5%	-18%	27.90	30.10 →
Sylwia Jaškiewicz	-	→	-	12.10.2023	12.10.2023	-	-	28.80	30.10 →	
Sylwia Jaškiewicz	-	→	-	25.10.2023	25.10.2023	-	-	27.10	30.10 →	
Sylwia Jaškiewicz	-	→	-	06.11.2023	06.11.2023	-	-	27.40	30.10 →	
Sylwia Jaškiewicz	Buy	↑	28.11.2023	-	29.11.2023	Not later than 28.11.2024	21%	15%	26.60	33.30 ↑
Sylwia Jaškiewicz	-	→	-	10.12.2023	11.12.2023	-	-	31.60	34.70 ↑	
Sylwia Jaškiewicz	-	→	-	09.01.2024	09.01.2024	-	-	32.00	34.70 →	
Sylwia Jaškiewicz	-	→	-	01.02.2024	01.02.2024	-	-	32.40	34.70 →	
Sylwia Jaškiewicz	-	→	-	06.02.2024	07.02.2024	-	-	32.30	36.60 ↑	

\* 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	-	-	-	-	-	-
Sylwia Jaśkiewicz	-	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	16.04.2021	14.00	60%
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	-
Sylwia Jaśkiewicz	-	-	28.02.2021	01.03.2021	-	26.10	-
Sylwia Jaśkiewicz	-	-	31.03.2021	01.04.2021	-	27.00	-
Sylwia Jaśkiewicz	Overweight	16.04.2021	-	16.04.2021	05.12.2021	29.30	7%
Sylwia Jaśkiewicz	-	-	10.05.2021	11.05.2021	-	29.80	-
Sylwia Jaśkiewicz	-	-	27.05.2021	28.05.2021	-	32.50	-
Sylwia Jaśkiewicz	-	-	30.05.2021	31.05.2021	-	33.00	-
Sylwia Jaśkiewicz	-	-	09.07.2021	09.07.2021	-	35.30	-
Sylwia Jaśkiewicz	-	-	12.08.2021	13.08.2021	-	38.00	-
Sylwia Jaśkiewicz	-	-	31.08.2021	31.08.2021	-	40.50	-
Sylwia Jaśkiewicz	-	-	30.09.2021	01.10.2021	-	35.60	-
Sylwia Jaśkiewicz	-	-	07.10.2021	07.10.2021	-	38.90	-
Sylwia Jaśkiewicz	-	-	02.11.2021	03.11.2021	-	37.50	-
Sylwia Jaśkiewicz	-	-	04.11.2021	04.11.2021	-	37.20	-
Sylwia Jaśkiewicz	-	-	29.11.2021	30.11.2021	-	34.60	-
Sylwia Jaśkiewicz	Neutral	05.12.2021	-	06.12.2021	03.10.2022	33.00	11%
Sylwia Jaśkiewicz	-	-	16.01.2022	17.01.2022	-	34.80	-
Sylwia Jaśkiewicz	-	-	01.02.2022	02.02.2022	-	32.00	-
Sylwia Jaśkiewicz	-	-	07.02.2022	07.02.2022	-	32.50	-
Sylwia Jaśkiewicz	-	-	28.02.2022	28.02.2022	-	29.00	-
Sylwia Jaśkiewicz	-	-	30.03.2022	31.03.2022	-	30.90	-
Sylwia Jaśkiewicz	-	-	14.04.2022	14.04.2022	-	31.70	-
Sylwia Jaśkiewicz	-	-	20.04.2022	21.04.2022	-	31.30	-
Sylwia Jaśkiewicz	-	-	25.05.2022	26.05.2022	-	27.20	-
Sylwia Jaśkiewicz	-	-	26.05.2022	26.05.2022	-	28.20	-
Sylwia Jaśkiewicz	-	-	15.07.2022	15.07.2022	-	25.50	-
Sylwia Jaśkiewicz	-	-	24.07.2022	25.07.2022	-	24.30	-
Sylwia Jaśkiewicz	-	-	16.08.2022	16.08.2022	-	26.60	-
Sylwia Jaśkiewicz	-	-	02.09.2022	02.09.2022	-	25.20	-
Sylwia Jaśkiewicz	-	-	20.09.2022	21.09.2022	-	25.50	-
Sylwia Jaśkiewicz	-	-	26.09.2022	27.09.2022	-	23.10	-
Sylwia Jaśkiewicz	Underweight	03.10.2022	-	04.10.2022	20.11.2022	23.50	-14%
Sylwia Jaśkiewicz	-	-	07.10.2022	07.10.2022	-	23.30	-
Sylwia Jaśkiewicz	-	-	28.10.2022	28.10.2022	-	22.80	-
Sylwia Jaśkiewicz	Neutral	20.11.2022	-	21.11.2022	16.02.2023	24.00	-8%
Sylwia Jaśkiewicz	-	-	01.12.2022	02.12.2022	-	22.60	-
Sylwia Jaśkiewicz	-	-	04.12.2022	05.12.2022	-	23.00	-
Sylwia Jaśkiewicz	-	-	13.01.2023	13.01.2023	-	23.50	-
Sylwia Jaśkiewicz	-	-	03.02.2023	03.02.2023	-	25.00	-
Sylwia Jaśkiewicz	Underweight	16.02.2023	-	17.02.2023	25.10.2023	24.50	1%
Sylwia Jaśkiewicz	-	-	10.03.2023	10.03.2023	-	24.10	-
Sylwia Jaśkiewicz	-	-	30.03.2023	31.03.2023	-	25.50	-
Sylwia Jaśkiewicz	-	-	13.04.2023	13.04.2023	-	26.70	-
Sylwia Jaśkiewicz	-	-	28.04.2023	28.04.2023	-	27.40	-
Sylwia Jaśkiewicz	-	-	29.05.2023	29.05.2023	-	30.50	-
Sylwia Jaśkiewicz	-	-	29.05.2023	29.05.2023	-	30.50	-
Sylwia Jaśkiewicz	-	-	14.07.2023	14.07.2023	-	30.90	-
Sylwia Jaśkiewicz	-	-	31.07.2023	01.08.2023	-	30.00	-
Sylwia Jaśkiewicz	-	-	02.08.2023	03.08.2023	-	30.70	-



**Market-relative recommendation tracker**

Analyst	Relative Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Price at issue/ reiteration*	Relative performance	
Sylwia Jaškiewicz	-	→	-	31.08.2023	31.08.2023	-	29.40	-
Sylwia Jaškiewicz	-	→	-	12.09.2023	13.09.2023	-	28.60	-
Sylwia Jaškiewicz	-	→	-	27.09.2023	28.09.2023	-	27.90	-
Sylwia Jaškiewicz	-	→	-	12.10.2023	12.10.2023	-	28.80	-
Sylwia Jaškiewicz	Neutral	↑	25.10.2023	-	25.10.2023	28.11.2023	27.10	-8%
Sylwia Jaškiewicz	-	→	-	06.11.2023	06.11.2023	-	27.40	-
Sylwia Jaškiewicz	Overweight	↑	28.11.2023	-	29.11.2023	Not later than 28.11.2024	26.60	15%
Sylwia Jaškiewicz	-	→	-	10.12.2023	11.12.2023	-	31.60	-
Sylwia Jaškiewicz	-	→	-	09.01.2024	09.01.2024	-	32.00	-
Sylwia Jaškiewicz	-	→	-	01.02.2024	01.02.2024	-	32.40	-
Sylwia Jaškiewicz	-	→	-	06.02.2024	07.02.2024	-	32.30	-

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

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