

56/2023/GPW (122) December 10, 2023

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

Ferro

Recent events	2
Upcoming events	2
Risk factors	4
Catalysts	4
Disclaimer	5

56/2023/GPW (122) December 10, 2023

This report is prepared for the Warsaw Stock Exchange SA within the framework of the Analytical Coverage Support Program 4.0. This is an excerpt from the Polish version of DM BOŚ SA's research report.

Analyst: Sylwia Jaśkiewicz, CFA

Sector: Construction materials
Fundamental rating: Buy (→)
Market relative: Overweight (→)
Price: PLN 31.60
12M EFV: PLN 34.7 (↑)

Market Cap: US\$ 167 m
Bloomberg code: FRO PW
Av. daily turnover: US\$ 0.06 m
12M range: PLN 20.00-32.30
Free float: 100%

Ferro

Key points

- **Business model.** The Group owns 4 logistic centers and distribution companies in 7 countries, it operates in over 50 countries and has c. 840 employees (900 a year ago). Ferro's business is highly diversified, both geographically and in terms of the product offer.

In 1-3Q23 (i) products and goods constituted 33% and 67% of the Group's sales, respectively, (ii) the contribution of the segment of batteries and accessories/ the installation fittings segment/ the heating systems segment to sales stood at 48%/ 35%/ 15%, (iii) 73%/ 27% of sales were realized in the traditional/modern channel, (iv) 40%/ 21%/ 18%/ 6%/ 4%/ 1%/ 10% of the Group's sales came from Poland/ Romania/ Czechia/ Slovakia/ Hungary/ Lithuania/ other countries.

- **Drivers.** The demand for the Company's goods and products is driven by the development of the housing market in the region. In the installation fittings segment, the replacement demand constitutes c. 55% with c. 45% stemming from new investments. In the segment of batteries and accessories, 80% of demand results from renovations and 20% from new housing investments. The acquisition of heating business increased the Group's dependence on the primary market.

- **The strategy.** According to the Company's management estimations, the implementation of the F1R2 strategy (without acquisitions) will allow Ferro to generate PLN 1,400 million and PLN 193 million of FY26 revenues and EBITDA, respectively, with annual capex not exceeding PLN 30 million. Our FY26 forecast assumes lower top line and EBITDA (at PLN 1,137 million and PLN 161 million, respectively). The Strategy F1R2 assumes a dividend payout in the amount not less than 50% of the Company's NP in the

Guide to adjusted profits

Income tax.

Key data

IFRS consolidated		2022	2023E	2024E	2025E
Sales	PLN m	914.9	798.5	890.3	1,006.1
EBITDA	PLN m	120.7	111.0	128.7	142.8
EBIT	PLN m	105.6	93.7	109.9	121.8
Net income	PLN m	65.4	62.1	75.2	87.4
EPS	PLN	3.08	2.92	3.54	4.11
Adj EPS yoy chg	%	-11	-5	21	16
Net debt	PLN m	181.6	144.3	130.7	130.1
P/E	x	10.3	10.8	8.9	7.7
EV/EBITDA	x	7.1	7.3	6.2	5.6
EV/EBIT	x	8.1	8.7	7.3	6.6
DPS	PLN	1.51	1.50	1.46	1.77
Gross dividend yield	%	4.8	4.7	4.6	5.6
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 FY22 consolidated financial results: March 30
2. Release of consolidated 1Q23 financial results: May 29
3. Logistic center launch in Romania: 1H23
4. Release of consolidated 1H23 financial results: September 27
5. Release of consolidated 3Q23 financial results: November 28

Upcoming events

1. Release of consolidated 4Q23 financials: 1Q24

stable market and financial situation including, among other things, the consolidated ND/EBITDA ratio staying $\leq 2.5x$.

Fig. 1. Ferro; Changes in DM BOŚ SA forecast

IFRS consolidated (PLN m)	2023E			2024E			2025E		
	current	previous	change	current	previous	change	bieżące	poprzednie	zmiana
Sales	798.5	796.9	0%	890.3	888.6	0%	1,006.1	1,004.1	0%
EBITDA	111.0	111.0	0%	128.7	129.1	0%	142.8	143.7	-1%
EBIT	93.7	93.7	0%	109.9	109.7	0%	121.8	121.3	0%
NP	62.1	62.1	0%	75.2	75.0	0%	87.4	86.9	1%
Net debt	144.3	143.7	0%	130.7	143.5	-9%	130.1	144.7	-10%

Source: DM BOŚ SA estimates

- **4Q23E.** We expect slightly lower revenues and net profit than in 4Q22 with somewhat higher EBIT margin. The results under the impact of the weak demand should be positively affected by low prices of freight, raw materials, and more favorable FX rates (3M aluminum/zinc/copper prices in PLN were by 3%/ 7%/ 9% lower yoy at the end of 3Q23).

At the end of 3Q23 the Group's inventories stood at PLN 283 million (down 22% yoy) and the net debt totaled PLN 133 million (down 30% yoy). It seems that the inventories can be further optimized. ND may grow due to a dividend payout in October (PLN 32 million).

- **FY financial forecasts.** We update financial forecasts for the Company, mainly with respect to capex and inventories. Ferro revised capex to PLN 25 million this year and below this level for 2024 (continued ERP implementation, development of technology and assembly facilities). The product offer optimization should help optimize the inventories.
- **2024 outlook.** Though the situation on most markets, including Poland, is gradually stabilizing with the demand declines flattening, it is still difficult and we assume no quick improvement next year. The competition is strong. The stock levels in the sector are high. Due to uncertainty the order periods are materially shortened. The consumers are cautious, especially in the selection of heat sources. The demand for gas-fired boilers is still lower than in 2021 or 1Q22, albeit it rose in the previous quarter. High investment costs coupled with high energy prices are causing the stagnation of the heat pump business. A potential inflow of funds from the EU Recovery and Resilience Plan and support schemes for thermo-modernization may exert some positive impact on the market, albeit it is limited at the moment.

Against this backdrop Ferro focuses on active price management, offer simplification, inventories optimization, and the EBIT margin improvement. Next year the pressure on wages growth and other costs (of marketing, services creation, exports development, etc.) may materialize, but further optimization of assets and employment (in logistics, for example) is expected. All in all, we hope for the results improvement next year.

- **Risk to financial forecasts.** High both ways.
- **Valuation.** Our valuation for Ferro increases under the impact of (i) the risk free rate revision (at 5.5%, previously 5.6%) in the definite forecast period, (ii) peer forward multiples update, and (iii) modification of our financial forecasts. Our 12M EFV constituting a 50%-50% mix of the DCF FCFF method and peer-relative valuation, increases by 4% to PLN 34.7 per share from PLN 33.3 previously. The DCF FCFF/peer-relative valuation yields PLN 40/ 29 per share (previously PLN 38/ 29 per share).
- **Recommended action.** In spite of difficult market conditions and recent launch of a warehouse (disruption of sales and costs in ST) the Group is doing well which, to a great extent, is helped by lower raw material prices and FX rates. We believe that from the strategic viewpoint launching the new warehouse is favorable for the Group as not only will this enable a revenues growth and faster penetration of South European markets, but also will curb costs streamlining logistic processes. We like the efforts to optimize the offer, inventories, and employment in the Company.

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 markets
3. Strengthening position on the existing markets
4. Launch of a 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 = EBIT/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	23	9	9	0	4
Percentage	51%	25%	10%	10%	0%	4%

Distribution of DM BOŚ's current market relative recommended weightings

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	26	39	13	9	0	4
Percentage	29%	43%	14%	10%	0%	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)	
Ferro										
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	19%	16%	26.60	33.30 ↑
Sylwia Jaškiewicz	-	→	-	10.12.2023	11.12.2023	-	-	31.60	34.70 ↑	

* 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
Ferro							
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	16%
Sylwia Jaškiewicz	-	→	-	10.12.2023	11.12.2023	-	31.60	-

* 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 Program. 4.0 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.

The production of the report was completed on December 11, 2023 at 7:15 a.m.

The report was distributed on December 11, 2023 at 7.25 a.m.

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.

This report constitutes neither investment advice nor provides investment service as referred to in Article 76 of the Act on Financial Instruments Trading as of 29 July 2005 (Journal of Laws, 2018, Item 2286 as amended), hereinafter referred to as the Act on Trading; it does not constitute any legal or tax advice, neither does it constitute an indication whether an investment is suitable or appropriate in an individual situation of an investor. In particular this report is not a personal recommendation based on any individual needs or situation of any investor. DM BOŚ SA informs that the investment advice services exclusively consist in the preparation of a personal recommendation based on individual needs and situation of a given client and transferring it to them. To receive this type of a recommendation an agreement on providing investment advice services must be signed with an investments company offering these services.

Neither the information nor the opinions expressed in the report constitute a solicitation or an offer to buy or sell any securities referred herein. The opinions expressed in the report reflect independent, current judgment of DM BOŚ SA.

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.

DM BOŚ SA is an investment firm within the meaning of the Act on Financial Instruments Trading. The legal entity supervising DM BOŚ SA is Polish Financial Supervision Authority in Warsaw (Komisja Nadzoru Finansowego, KNF in Polish abbreviation).

DM BOŚ SA, its management and supervisory bodies and employees do not take any responsibility for decisions taken on the basis of this report and opinions stated herein. Investors bear all responsibility for investment decisions taken on the basis of the contents of this report. The report is intended solely for private use of investors.

Copyrights to this report belong to the WSE. The rules for use of this report have been specified in the Agreement. This report mustn't be redistributed, reproduced or conveyed in any manner or form conflicting with the rules defined in the Agreement.

This report is made available on the day of its issue in the public domain on the website <https://bossa.pl/analizy-i-informacje/wsparcie-pokrycia-analitycznego-gpw#ferro>

DM BOŚ SA is entitled to conveying or translation of the report into foreign languages on behalf of their clients and this shall not be sooner than making the report available on its website <https://bossa.pl/analizy-i-informacje/wsparcie-pokrycia-analitycznego-gpw#ferro>.

DM BOŚ SA follows internal regulations for handling of conflicts of interest which include in particular internal organizational and administration arrangements as well as information barriers established for prevention and avoidance of conflicts of interest related to recommendations. A special organizational arrangement that constitutes an information barrier is so called Chinese walls prohibiting an uncontrolled flow of information among particular organizational units or employees of DM BOŚ SA. Where justified, DM BOŚ SA can create Chinese walls upon the realization of a particular project. Potential conflicts of interests referring to a specific recommendation which is made available to the public or to a wide range of persons are disclosed either in the recommendation or in the document attached.

The person(s) preparing this report receive(s) variable compensation indirectly based upon the financial results of DM BOŚ SA which in turn depend – among other factors – on the result on the brokerage activity.

DM BOŚ SA has not held any long or short position net exceeding 0.5% of the issuer's basic capital in total with respect to the company/companies indicated.

Apart from the mentioned above cases, there are neither ties of any kind between DM BOŚ SA, the analyst/ analysts involved in the preparation of the report and the issuer(s) of securities as referred to in the report nor circumstances that can justifiably be expected to have a negative impact on objectivity of the recommendation with regard to interests or conflicts of interests on their part or on the part of any natural person or legal entity which pertains to the financial instrument or the issuer.

The report was not shown to the analyzed company before the distribution of the report.

The history of all recommendations issued by DM BOŚ in the last 12 months can be found at the following link: <https://bossa.pl/analizy/rekomendacje>

Stockbrokers

Piotr Kalbarczyk
tel.: +48 (22) 504 32 43
p.kalbarczyk@bossa.pl

Research

Sobiesław Pająk, CFA
(Equity strategy, TMT)

Sylwia Jaśkiewicz, CFA
(Construction materials,
Consumer discretionary,
Health care & biotechnology)

Tomasz Rodak, CFA
(Consumer discretionary, Video games)

Łukasz Prokopiuk, CFA
(Commodities (Chemicals, Energy, Mining))

Michał Sobolewski, CFA, FRM
(Financials)

Jakub Viscardi
(Telco, Consumer staples & discretionary,
IT – hardware distribution, Utilities)

Maciej Wewiórski
(Residential construction,
Construction, Real estate)

Mikołaj Stepien
Junior Analyst

Michał Zamel
Junior Analyst

Copyright © 2023 by DM BOŚ S.A.

**Dom Maklerski Banku Ochrony
Środowiska Spółka Akcyjna**
ul. Marszałkowska 78/80
00-517 Warszawa
www.bossa.pl
Information: (+48) 0 801 104 104