

2/2023/GPW (7) February 16, 2023

This report is prepared for the Warsaw Stock Exchange SA within the framework of the Analytical Coverage Support Program 3.0.

Ferro

Recommended action	2
4Q22 financial results preview	2
Recent events	2
Upcoming events	2
Financial forecasts	3
Valuation	3
Risk factors	4
Catalysts	4
Disclaimer	5

2/2023/GPW (7) February 16, 2023

This report is prepared for the Warsaw Stock Exchange SA within the framework of the Analytical Coverage Support Program 3.0. This is an excerpt from the Polish version of DM BOŚ SA's research report.

Analyst: Sylwia Jaśkiewicz, CFA

Sector: Construction materials
Fundamental rating: Hold (→)
Market relative: Underweight (↓)
Price: PLN 24.5
12M EFV: PLN 28.7 (→)

Market Cap: US\$ 116.3 m
Bloomberg code: FRO PW
Av. daily turnover: US\$ 0.04 m
12M range: PLN 20.00-32.80
Free float: 100%

Ferro

Recommended action

We downgrade our ST relative recommendation to Underweight from Neutral while upholding LT fundamental rating at Hold. We expect 4Q22 operating results to be lower yoy with NP probably supported by positive FX differences. We expect 1Q23 financials to be weaker yoy as well.

We believe the market conditions have remained unfavorable and new housing investments continue to decline in the region which will undoubtedly affect the demand on the primary construction materials market. Moreover, the consumers' deteriorating condition hurts the secondary market. It seems that consumers look for cheaper goods and are not interested in novelties, which could be observed even a year before. A tad better situation is on the commodities market with raw materials prices falling in 2Q and 3Q22 followed by their slight rise in 4Q22 which was offset by PLN appreciation vs US\$.

The Group plans to launch a new logistic center in Romania in 1H23 which implies temporary higher OPEX and higher inventories. We remain convinced 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 (no transportation from Poland needed).

4Q22 financial results preview

We expect a 5% yoy decline of 4Q22 revenues and the EBIT margin fall to 8.0% vs 9.8% a year before. Given the FX rates level we forecast positive FX differences at PLN 2 million and expect lower financial costs than in 4Q21. Ultimately, we expect almost flat yoy NP. At the end of 3Q22 the Group's

Guide to adjusted profits

Income tax.

Key data

IFRS consolidated		2021	2022E	2023E	2024E
Sales	PLN m	830.5	915.8	925.0	1 036.0
EBITDA	PLN m	119.5	118.6	109.2	140.9
EBIT	PLN m	106.6	103.2	91.0	120.4
Net income	PLN m	107.8	64.4	58.8	85.8
Adj net income	PLN m	73.3	64.4	58.8	85.8
Adj EPS	PLN	3.5	3.0	2.8	4.0
Adj EPS yoy chg	%	18	-12	-9	46
Net debt	PLN m	103.7	181.0	186.8	182.5
P/E	x	4.8	8.1	8.8	6.1
Adj P/E	x	7.1	8.1	8.8	6.1
EV/EBITDA	x	5.2	5.9	6.5	5.0
EV/EBIT	x	5.9	6.8	7.8	5.8
DPS	PLN	2.20	1.51	1.52	1.38
Gross dividend yield	%	9.0	6.2	6.2	5.7
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 1H22 financial results: September 20, 2022
2. Release of consolidated 3Q22 financial results: November 18, 2022

Upcoming events

1. Release of FY22 consolidated financial results: March 30
2. Release of consolidated 1Q22 financial results: May 29
3. Release of consolidated 1H22 financial results: September 27
4. Release of consolidated 3Q22 financial results: November 28
5. Logistic center launch in Romania: 1H23

Fig. 1. Ferro; 4Q22 financial results preview

IFRS consolidated (PLN m)	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22E	yoy chg	2021	2022E	yoy chg
Sales	163.3	219.3	225.9	222.0	255.7	224.2	226.0	210.0	-5%	830.5	915.8	10%
EBITDA	26.1	34.6	33.5	25.3	36.1	30.4	31.5	20.7	-18%	119.5	118.6	-1%
EBITDA margin	16.0%	15.8%	14.8%	11.4%	14.1%	13.6%	13.9%	9.8%	-	14.4%	13.0%	-
EBIT	23.8	31.1	29.9	21.8	32.2	26.6	27.6	16.8	-23%	106.6	103.2	-3%
EBIT margin	14.5%	14.2%	13.3%	9.8%	12.6%	11.8%	12.2%	8.0%	-	12.8%	11.3%	-
Pre-tax profit	21.9	45.3	26.7	16.1	26.4	20.8	17.8	13.9	-13%	110.0	79.0	-28%
Pre-tax profit margin	13.4%	20.7%	11.8%	7.2%	10.3%	9.3%	7.9%	6.6%	-	13.2%	8.6%	-
Net profit	17.7	57.8	21.7	10.6	21.4	18.6	13.7	10.7	2%	107.8	64.4	-40%
Net profit margin	10.9%	26.4%	9.6%	4.8%	8.3%	8.3%	6.1%	5.1%	-	13.0%	7.0%	-

Source: Company, DM BOŚ SA estimates

inventories stood at PLN 363 million (up 11% qoq) and ND reached PLN 190 million. We cannot preclude a decrease in inventories due to lower raw materials prices and FX rates changes. We assume a slight qoq decline of ND at the year end.

We update our financial assumptions for FY22 incorporating our modified 4Q22 forecasts and, hence, our sales and EBITDA forecasts decrease by 1% and 2%, respectively.

Financial forecasts

The construction materials market's condition does not seem to improve at the beginning of 2023; on the one hand, the Group's revenues can experience a pressure stemming from the falling demand, consumers' shift to the lower-end segment, oversupply on the market (high stock at the

distributors' or in the sales networks), on the other, OPEX have been on the rise under the inflationary pressure. Besides, Ferro incurs additional costs such as ERP launching (4Q22/1Q23) and expands internally (a new warehouse in Romania). In consequence, despite lower prices of raw materials and lower freight costs we assume the profitability deterioration in 2023. We lower our EBIT forecasts for 2023 and 2024 by 3% and 5%, respectively.

Valuation

A risk free rate revision, peer comparison update, valuation horizon forward shift offset the lowering of our financial forecasts. Our 12M EFV constituting a 50%-50% mix of DCF FCFF method and peer-relative valuation, stays at PLN 28.7 per share. The DCF/peer-relative valuation yields PLN 32 (from PLN 35)/ PLN 25 (from PLN 22) per share.

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. Energy/ heat price increase
7. Volatile raw materials prices (of copper and zinc, in particular)
8. Unfavorable/ volatile FX rates (currency risk when PLN and CZK weaken against US\$ and EUR)
9. Lack of stability in the region
10. Temporary higher inventories
11. High interest rates

Catalysts

1. Expansion in European markets
2. Strengthening position on the existing markets
3. Launching a new logistic center in the southern Europe
4. New products (expanding the product offer)
5. Own brands repositioning
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	40	32	7	8	0	2
Percentage	45%	36%	8%	9%	0%	2%

Distribution of DM BOŚ's current market relative recommended weightings

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	30	36	13	8	0	2
Percentage	34%	40%	15%	9%	0%	2%

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	6	6	1	1	0	2
Percentage	38%	38%	6%	6%	0%	13%

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	4	4	1	0	2
Percentage	31%	25%	25%	6%	0%	13%

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	Not later than 03.10.2023	4%	-20%	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 →

* 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	-	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	Not later than 16.02.2024	24.50	-

* 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. 3.0 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 February 17, 2023 at 7.30 a.m.
The report was distributed on February 17, 2023 at 7.40 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.

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
(Chemicals, Mining, Oil & gas)

Michał Sobolewski, CFA, FRM
(Financials)

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

Maciej Wewiórski
(Residential construction,
Construction, Real estate)

Mikołaj Stępień
Junior Analyst

Michał Zamel
Associate

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