



23/2023/GPW (53) May 29, 2023

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

# **Ferro**

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This is an excerpt from the Polish version of DM BOŚ SA's research report.

**Ferro** 

# 23/2023/GPW (53) May 29, 2023

Analyst: Sylwia Jaśkiewicz, CFA

Sector: Construction materials Fundamental rating: Hold (→) Market relative: Underweight (→) Price: PLN 30.50 12M EFV: PLN 28.7 (→) Market Cap: US\$ 154 m
Bloomberg code: FRO PW
Av. daily turnover: US\$ 0.05 m
12M range: PLN 20.00-31.00

Free float: 100%

## **Recommended action**

We uphold our recommendations for the Company: LT fundamental Hold and ST relative Underweight. Our expectations of a yoy and qoq deterioration of 1Q23 operating results materialized, though the results are a tad better than we assumed.

The market conditions remained unfavorable which was reflected in the Group's 1Q23 falling revenues (down 19% yoy) with the deepest slump in Poland and Hungary (down >30% yoy). The heating systems segment witnessed the weakest performance while the segment of batteries and accessories fared slightly better and the installation fittings segment experienced the smallest revenue yoy decline. In 1Q23 the Company's profits were supported by favorable conditions on the commodities market and a significant drop of freight prices.

We expect some pressure on sales in a few upcoming quarters, albeit we hope for the cost side to support margins. The management believes that in the coming months the Group's financial results will be affected by (i) weak consumer sentiment, (ii) worsening performance of the construction and assembly sector, (iii) uncertainty related to heating systems, especially gas boilers, (iv) high stocks in some distribution channels (high costs), (v) launch of the logistic center in Romania and ERP system implementation (temporary impact on revenues, occasional lower working capital turnover), (vi) high interest rates, (vii) FX rates fluctuations (negative impact of PLN weakening vs US\$ and EUR on margins), (viii) social programs (Bezpieczny Kredyt 2%, Mój Prąd 5.0, Czyste Powietrze) likely to trigger the demand for construction materials and heating systems.

#### Guide to adjusted profits

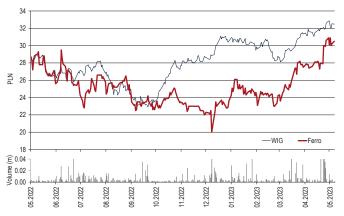
Income tax.

#### Key data

IFRS consolidated		2022	2023E	2024E	2025E
Sales	PLN m	914.9	924.0	1,034.9	1,169.5
EBITDA	PLN m	120.7	109.0	140.3	156.2
EBIT	PLN m	105.6	91.6	120.8	133.8
Net income	PLN m	65.4	58.8	86.1	99.0
Adj net income	PLN m	65.4	58.8	86.1	99.0
Adj EPS	PLN	3.08	2.77	4.05	4.66
Adj EPS yoy chg	%	-11	-10	46	15
Net debt	PLN m	181.6	179.4	179.0	181.4
P/E	X	9.9	11.0	7.5	6.5
Adj P/E	X	9.9	11.0	7.5	6.5
EV/EBITDA	X	6.9	7.6	5.9	5.3
EV/EBIT	X	7.9	9.0	6.8	6.2
DPS	PLN	1.51	1.50	1.39	2.03
Gross dividend yield	%	5.0	5.0	4.5	6.6
Number of shares (eop)	т	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 report: September 20, 2022
- 2. Release of consolidated 3Q22 report: November 18, 2022
- 3. Release of FY22 consolidated financial results: March 30, 2023
- 4. Release of consolidated 1Q23 financial results: May 29, 2023

#### **Upcoming events**

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



Fig. 1. Ferro; 1Q23 financial results

IFRS consolidated (PLN m)	1Q22	2Q22	3Q22	4Q22	1Q23	1Q23E	yoy chg
Sales	255.7	224.2	226.0	209.0	207.4	211.7	-19%
EBITDA	36.1	30.4	31.5	22.8	28.9	26.8	-20%
EBITDA margin	14.1%	13.6%	13.9%	10.9%	13.9%	12.6%	-
EBIT	32.2	26.6	27.6	19.3	24.9	22.9	-22%
EBIT margin	12.6%	11.8%	12.2%	9.2%	12.0%	10.8%	-
Pre-tax profit	26.4	20.8	17.8	13.8	22.0	18.6	-17%
Pre-tax profit margin	10.3%	9.3%	7.9%	6.6%	10.6%	8.8%	-
Net profit	21.4	18.6	13.7	11.7	17.5	15.1	-18%
Net profit margin	8.3%	8.3%	6.1%	5.6%	8.4%	7.1%	_

Source: Company, DM BOŚ SA estimates

# 1Q23 financial results summary

1Q23 revenues reached PLN 207 million (down 19% yoy) including PLN 99/70/35 million generated by the segment of batteries and accessories/ installation fittings/ heating systems (down 16%/ 11%/ 36% yoy). The Group's sales in Poland/ Czechia/ Slovakia/ Romania/ Hungary/ other countries fell 30%/ 6%/ 7%/ 5%/ 31%/ 10% yoy. We expected the trends (like the domestic market as the weakest link) observed in the 2022-end to prevail in 1Q23 and forecast sales of the segment of batteries and accessories/ installation fittings/ heating systems to slide by 18%/ 5%/ 26% you with a 17% decline of the Group's revenues in total.

The segment of batteries and accessories/installation fittings/ heating systems generated profits at PLN 34/22/14 million (-11%/ +8%/-32% yoy) with a 2pp/ 6pp/ 2pp increase in the profitability. The EBIT margin at 12% exceeded our expectations, as we assumed a profitability decline to 11% vs 13% in 1Q22. Costs of salaries, materials and energy were higher than we expected while own costs of goods sold and materials and other costs turned lower, both in absolute terms and in relation to revenues.

The Group's EBIT at PLN 25 million was down 22% yoy, but still above our expectations. The Company's net financial costs were below our expectations: PLN -3 million vs PLN -4 million. Given the FX rates level we assumed positive FX differences at PLN 1 million vs PLN 1 million loss in 1Q22.

Ultimately, the Group's 1Q23 PBT hit PLN 22 million (down 17% yoy) and NI arrived at c. PLN 18 million (down 18% yoy).

At the end of 1Q23 the inventories stood at PLN 306 million (up 4% qoq and almost flat yoy). Net debt reached PLN 188 million vs PLN 182 million at the end of 2022. The Group's operating/ investing cash flows reached PLN +4/ -5 million in 1Q23 vs PLN -52/ -5 million in 1Q22.

#### **Dividend**

The Company's management recommends to allocate PLN 32 million of last year's profits for a dividend payout (DPS at PLN 1.5). The ex-dividend day is set at September 14 with the payment date at October 12.

## **Financial forecasts**

We keep our financial forecasts intact.



#### **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/(sales/average A/R))

Inventory turnover (in days) = 365/(COGS/average inventory))

A/P turnover (in days) = 365/(COGS/average A/P))

Current ratio = ((current assets – ST deferred assets)/current liabilities)

Quick ratio = ((current assets - ST deferred assets - inventory)/current liabilities)

Interest coverage = (pre-tax profit before extraordinary items + interest payable/interest payable)

Gross margin = gross profit on sales/sales

**EBITDA** margin = EBITDA/sales **EBIT** margin = EBIT/sales

Pre-tax margin = pre-tax profit/sales

Net margin = net profit/sales

ROE = net profit/average equity

ROA = (net income + interest payable)/average assets

EV = market capitalization + interest bearing debt - cash and equivalents

EPS = net profit/ no. of shares outstanding

**CE** = net profit + depreciation

Dividend yield (gross) = pre-tax DPS/stock market price

Cash sales = accrual sales corrected for the change in A/R

Cash operating expenses = accrual operating expenses corrected for the changes in inventories and A/P, depreciation, cash taxes and changes in the deferred taxes

DM BOS 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.

#### Banks

Net Interest Margin (NIM) = net interest income/average assets

Non interest income = fees&commissions + result on financial operations (trading gains) + FX gains Interest Spread = (interest income/average interest earning assets)/ (interest cost/average interest bearing liabilities)

Cost/Income = (general costs + depreciation)/ (profit on banking activity + other net operating income)

ROE = net profit/average equity

ROA = net income/average assets

Non performing loans (NPL) = loans in 'basket 3' category

NPL coverrage ratio = loan loss provisions/NPL

Net provision charge = provisions created – 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.

#### **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 average of time, the ending 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 BOS's current recommendations

	Buy	Hold	Sell	Suspended	Under revision	Not rated
Numbers	38	33	8	9	0	2
Percentage	42%	37%	9%	10%	0%	2%

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 BOS's current market relative recommended weightings

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	33	32	14	9	0	2
Percentage	37%	36%	16%	10%	0%	2%

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	6	3	4	1	0	2
Percentage	38%	19%	25%	6%	0%	13%

Analyst	Recommendatio	n	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	-	$\rightarrow$	-	30.07.2019	31.07.2019	-	-	-	13.50	17.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	01.09.2019	02.09.2019	-	-	-	12.05	17.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	10.09.2019	11.09.2019	-	-	-	12.10	17.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	15.09.2019	16.09.2019	-	-	-	12.65	17.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	13.10.2019	14.10.2019	-	-	-	13.40	17.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	24.10.2019	25.10.2019	_	-	-	13.00	17.10	_
Sylwia Jaśkiewicz	_	$\rightarrow$	-	17.11.2019	18.11.2019	_	_	_	13.00	17.10	_
Sylwia Jaśkiewicz	_	$\rightarrow$	_	18.11.2019	19.11.2019	_	_	_	13.00	17.10	_
•	Ding	$\uparrow$	04 10 2010	10.11.2013	05.12.2019	28.01.2020	17%	15%	15.20	17.80	7
Sylwia Jaśkiewicz	Buy		04.12.2019	- 00 10 0010		20.01.2020	11 70	1376			
Sylwia Jaśkiewicz	-	$\rightarrow$	-	08.12.2019	09.12.2019	-	-	-	15.00	17.80	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	09.01.2020	10.01.2020	-	-	-	16.30	17.80	-
Sylwia Jaśkiewicz	Hold	$\downarrow$	28.01.2020	-	29.01.2020	22.07.2020	-4%	5%	17.80	18.50	
Sylwia Jaśkiewicz	-	$\rightarrow$	-	04.02.2020	05.02.2020	-	-	-	17.90	18.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	06.02.2020	07.02.2020	-	-	-	17.50	18.50	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	03.03.2020	04.03.2020	-	-	-	15.20	18.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	30.03.2020	31.03.2020	-	_	-	12.25	18.50	_
Sylwia Jaśkiewicz	_	$\rightarrow$	-	22.04.2020	23.04.2020	_	_	_	14.00	18.50	_
ylwia Jaśkiewicz		$\rightarrow$		23.04.2020	24.04.2020				14.00	18.50	_
•											
ylwia Jaśkiewicz	-	$\rightarrow$	-	19.05.2020	20.05.2020	-	-	-	13.65	18.50	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	15.06.2020	16.06.2020	-	-	-	16.60	18.50	-
ylwia Jaśkiewicz	-	$\rightarrow$		13.07.2020	14.07.2020	-			17.90	18.50	-
ylwia Jaśkiewicz	Buy	<b>↑</b>	22.07.2020	-	23.07.2020	16.04.2021	75%	51%	17.00	20.30	
ylwia Jaśkiewicz	-	$\rightarrow$	-	01.09.2020	02.09.2020	-	-	-	18.60	20.30	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	17.09.2020	18.09.2020	-	-	-	18.90	20.30	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	29.09.2020	30.09.2020	-	-	-	18.70	19.90	,
ylwia Jaśkiewicz	-	$\rightarrow$	-	08.10.2020	09.10.2020	_	_	-	19.00	19.90	_
ylwia Jaśkiewicz	-	$\stackrel{\checkmark}{ o}$	_	03.11.2020	04.11.2020	-	_	-	17.30	22.00	,
ylwia Jaśkiewicz	_	$\rightarrow$	-	08.11.2020	09.11.2020	-	-	-	17.25	22.00	_
•	•		-			-	-	-			-
ylwia Jaśkiewicz	-	$\rightarrow$	-	19.11.2020	20.11.2020	-	-	-	18.40	23.40	
ylwia Jaśkiewicz	-	$\rightarrow$	-	26.11.2020	27.11.2020	-	-	-	20.00	23.40	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	06.12.2020	07.12.2020	-	-	-	24.80	25.70	
ylwia Jaśkiewicz	-	$\rightarrow$	-	05.01.2021	05.01.2021	-	-	-	25.50	25.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	28.01.2021	29.01.2021	-	-	-	26.50	25.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	09.02.2021	10.02.2021	-	-	-	25.70	30.80	•
ylwia Jaśkiewicz	-	$\rightarrow$	-	28.02.2021	01.03.2021	_	-	-	26.10	30.80	_
ylwia Jaśkiewicz	-	$\rightarrow$	_	31.03.2021	01.04.2021	_	_	_	27.00	30.80	_
ylwia Jaśkiewicz	Buy	$\rightarrow$	16.04.2021	-	16.04.2021	14.04.2022	16%	9%	29.30	30.80	_
ylwia Jaśkiewicz	Duy	$\stackrel{\checkmark}{ o}$	10.04.2021	10.05.2021	11.05.2021	14.04.2022	1070	0,0	29.80	34.10	,
•	-		-			-	-	-			
ylwia Jaśkiewicz	-	$\rightarrow$	-	27.05.2021	28.05.2021	-	-	-	32.50	34.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	30.05.2021	31.05.2021	-	-	-	33.00	34.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	09.07.2021	09.07.2021	-	-	-	35.30	34.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	12.08.2021	13.08.2021	-	-	-	38.00	41.70	
ylwia Jaśkiewicz	-	$\rightarrow$	-	31.08.2021	31.08.2021	-	-	-	40.50	41.70	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	30.09.2021	01.10.2021	-	-	-	35.60	41.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	07.10.2021	07.10.2021	-	-	-	38.90	41.70	_
ylwia Jaśkiewicz	_	$\rightarrow$	-	02.11.2021	03.11.2021	_	_	-	37.50	41.70	_
ylwia Jaśkiewicz	_	$\rightarrow$	_	04.11.2021	04.11.2021	_	_	_	37.20	41.70	_
ylwia Jaśkiewicz				29.11.2021	30.11.2021				34.60	41.70	
,	-	$\rightarrow$	-			-	-	-			-
ylwia Jaśkiewicz	-	$\rightarrow$	-	05.12.2021	06.12.2021	-	-	-	33.00	39.60	
ylwia Jaśkiewicz	-	$\rightarrow$	-	16.01.2022	17.01.2022	-	-	-	34.80	39.60	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	01.02.2022	02.02.2022	-	-	-	32.00	39.60	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	07.02.2022	07.02.2022	-	-	-	32.50	39.60	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	28.02.2022	28.02.2022	-	-	-	29.00	39.60	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	30.03.2022	31.03.2022	-	-	-	30.90	39.60	-
ylwia Jaśkiewicz	Buy	$\rightarrow$	14.04.2022	-	14.04.2022	03.10.2022	-21%	9%	31.70	39.60	_
ylwia Jaśkiewicz	-	$\rightarrow$	-	20.04.2022	21.04.2022	-	-	-	31.30	37.10	,
ylwia Jaśkiewicz	-	$\rightarrow$	_	25.05.2022	26.05.2022	_	_	_	27.20	37.10	_
ylwia Jaśkiewicz	_	$\rightarrow$	_	26.05.2022	26.05.2022	-		-	28.20	37.10	_
•			-			-	-	-			
ylwia Jaśkiewicz	-	$\rightarrow$	-	15.07.2022	15.07.2022	-	-	-	25.50	37.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	24.07.2022	25.07.2022	-	-	-	24.30	37.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	16.08.2022	16.08.2022	-	-	-	26.60	37.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	02.09.2022	02.09.2022	-	-	-	25.20	37.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	20.09.2022	21.09.2022	-	-	-	25.50	37.10	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	26.09.2022	27.09.2022	-	-	-	23.10	37.10	-
ylwia Jaśkiewicz	Hold	$\downarrow$	03.10.2022	-	04.10.2022	Not later than	30%	-7%	23.50	28.70	,
						03.10.2023					
ylwia Jaśkiewicz	-	$\rightarrow$	-	07.10.2022	07.10.2022	-	-	-	23.30	28.70	_
ylwia Jaśkiewicz	-	$\rightarrow$	-	28.10.2022	28.10.2022	_	_	-	22.80	28.70	_
ylwia Jaśkiewicz	_	$\rightarrow$		20.11.2022	21.11.2022		_	_	24.00	28.70	_
•	•		-			-	-	-			
ylwia Jaśkiewicz	-	$\rightarrow$	-	01.12.2022	02.12.2022	-	-	-	22.60	28.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	04.12.2022	05.12.2022	-	-	-	23.00	28.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	13.01.2023	13.01.2023	-	-	-	23.50	28.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	03.02.2023	03.02.2023	-	-	-	25.00	28.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	16.02.2023	17.02.2023	-	-	-	24.50	28.70	_
ylwia Jaśkiewicz	-	$\rightarrow$	_	10.03.2023	10.03.2023	-	_	_	24.10	28.70	-
•	-		-			-	-	-			
ylwia Jaśkiewicz	-	$\rightarrow$	-	30.03.2023	31.03.2023	-	-	-	25.50	28.70	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	13.04.2023	13.04.2023	-	-	-	26.70	28.70	-
ylwia Jaśkiewicz	-	$\rightarrow$	-	28.04.2023	28.04.2023	-	-	-	27.40	28.70	-
Sylwia Jaśkiewicz		$\rightarrow$		29.05.2023	29.05.2023				30.50	28.70	-

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

Analyst	Relative Recommendation	1	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	-	$\rightarrow$	-	30.07.2019	31.07.2019	-	13.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	01.09.2019	02.09.2019	-	12.05	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	10.09.2019	11.09.2019	-	12.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	15.09.2019	16.09.2019	-	12.65	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	13.10.2019	14.10.2019	-	13.40	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	24.10.2019	25.10.2019	-	13.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	17.11.2019	18.11.2019	-	13.00	-
Sylwia Jaśkiewicz	Overweight	$\uparrow$	18.11.2019	-	19.11.2019	28.01.2020	13.00	41%
Sylwia Jaśkiewicz		$\rightarrow$	-	04.12.2019	05.12.2019	-	15.20	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	08.12.2019	09.12.2019	-	15.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	_	09.01.2020	10.01.2020	-	16.30	_
Sylwia Jaśkiewicz	Neutral	<b>\</b>	28.01.2020	-	29.01.2020	23.04.2020	17.80	-1%
Sylwia Jaśkiewicz	-	$\rightarrow$		04.02.2020	05.02.2020		17.90	-
Sylwia Jaśkiewicz	_	$\rightarrow$	_	06.02.2020	07.02.2020	_	17.50	_
Sylwia Jaśkiewicz	_	$\stackrel{'}{ ightarrow}$		03.03.2020	04.03.2020		15.20	
Sylwia Jaśkiewicz		$\rightarrow$		30.03.2020	31.03.2020		12.25	
•	-		-			-		-
Sylwia Jaśkiewicz	- -	$\rightarrow$	-	22.04.2020	23.04.2020	40.04.0004	14.00	- 000/
Sylwia Jaśkiewicz	Overweight	$\uparrow$	23.04.2020	-	24.04.2020	16.04.2021	14.00	60%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	19.05.2020	20.05.2020	-	13.65	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	15.06.2020	16.06.2020	-	16.60	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	13.07.2020	14.07.2020	-	17.90	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	22.07.2020	23.07.2020	-	17.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	01.09.2020	02.09.2020	-	18.60	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	17.09.2020	18.09.2020	-	18.90	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	29.09.2020	30.09.2020	-	18.70	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	08.10.2020	09.10.2020	-	19.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	_	03.11.2020	04.11.2020	-	17.30	_
Sylwia Jaśkiewicz	_	$\rightarrow$		08.11.2020	09.11.2020	_	17.25	_
Sylwia Jaśkiewicz	_	$\rightarrow$	_	19.11.2020	20.11.2020	_	18.40	_
Sylwia Jaśkiewicz				26.11.2020	27.11.2020		20.00	
•	-	$\rightarrow$	-			-		-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	06.12.2020	07.12.2020	-	24.80	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	05.01.2021	05.01.2021	-	25.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	28.01.2021	29.01.2021	-	26.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	09.02.2021	10.02.2021	-	25.70	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	28.02.2021	01.03.2021	-	26.10	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	31.03.2021	01.04.2021	-	27.00	-
Sylwia Jaśkiewicz	Overweight	$\rightarrow$	16.04.2021	-	16.04.2021	05.12.2021	29.30	7%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	10.05.2021	11.05.2021	-	29.80	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	27.05.2021	28.05.2021	-	32.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	30.05.2021	31.05.2021	-	33.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	09.07.2021	09.07.2021	-	35.30	-
Sylwia Jaśkiewicz	-	$\rightarrow$	_	12.08.2021	13.08.2021	-	38.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	_	31.08.2021	31.08.2021	-	40.50	_
Sylwia Jaśkiewicz	_	$\rightarrow$	_	30.09.2021	01.10.2021	_	35.60	_
Sylwia Jaśkiewicz	_	$\rightarrow$		07.10.2021	07.10.2021	_	38.90	_
Sylwia Jaśkiewicz	_	$\rightarrow$	_	02.11.2021	03.11.2021	_	37.50	_
Sylwia Jaśkiewicz		$\stackrel{'}{\rightarrow}$		04.11.2021	04.11.2021		37.20	
Sylwia Jaśkiewicz				29.11.2021	30.11.2021		34.60	
•	Mandad	$\stackrel{ ightarrow}{\downarrow}$	05.40.0004	29.11.2021		00.40.0000		440/
Sylwia Jaśkiewicz	Neutral		05.12.2021	-	06.12.2021	03.10.2022	33.00	11%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	16.01.2022	17.01.2022	-	34.80	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	01.02.2022	02.02.2022	-	32.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	07.02.2022	07.02.2022	-	32.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	28.02.2022	28.02.2022	-	29.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	30.03.2022	31.03.2022	-	30.90	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	14.04.2022	14.04.2022	-	31.70	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	20.04.2022	21.04.2022	-	31.30	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	25.05.2022	26.05.2022	-	27.20	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	26.05.2022	26.05.2022	-	28.20	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	15.07.2022	15.07.2022	-	25.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	24.07.2022	25.07.2022	-	24.30	_
Sylwia Jaśkiewicz	-	$\rightarrow$	_	16.08.2022	16.08.2022	_	26.60	_
Sylwia Jaśkiewicz	_	$\rightarrow$		02.09.2022	02.09.2022	_	25.20	_
Sylwia Jaśkiewicz				20.09.2022	21.09.2022		25.50	
Sylwia Jaśkiewicz		$\rightarrow$		26.09.2022			23.10	
•	- Hadamialahi	$\rightarrow$	00 10 0000	20.09.2022	27.09.2022	00.11.0000		140/
Sylwia Jaśkiewicz	Underweight	$\rightarrow$	03.10.2022	07.40.0000	04.10.2022	20.11.2022	23.50	-14%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	07.10.2022	07.10.2022	-	23.30	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	28.10.2022	28.10.2022	-	22.80	-
Sylwia Jaśkiewicz	Neutral	$\uparrow$	20.11.2022	-	21.11.2022	16.02.2023	24.00	-8%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	01.12.2022	02.12.2022	-	22.60	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	04.12.2022	05.12.2022	-	23.00	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	13.01.2023	13.01.2023	-	23.50	-
Sylwia Jaśkiewicz	-	$\rightarrow$	-	03.02.2023	03.02.2023	-	25.00	-
Sylwia Jaśkiewicz	Underweight	$\downarrow$	16.02.2023	-	17.02.2023	Not later than 16.02.2024	24.50	17%
Sylwia Jaśkiewicz	-	$\rightarrow$	-	10.03.2023	10.03.2023	-	24.10	-
	-	$\rightarrow$	-	30.03.2023	31.03.2023	-	25.50	-
Sylwia Jaśkiewicz								
•	-	$\rightarrow$	-	13.04.2023	13.04.2023	-	26.70	-
Sylwia Jaśkiewicz Sylwia Jaśkiewicz Sylwia Jaśkiewicz	- -	$\begin{array}{c} \rightarrow \\ \rightarrow \end{array}$	-	13.04.2023 28.04.2023	13.04.2023 28.04.2023	-	26.70 27.40	-

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

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