

This is a selected fragment of DM BOŚ SA's research report.

531R/2024/AR/September 30, 2024

Company	LT fundamental recommendation	12M EFV (PLN)	ST market-relative bias	Analyst
<b>11 bit studios</b>	Hold (prev. Buy)	495.0 (prev. 730.0)	Neutral (prev. Overweight)	<a href="#">Tomasz Rodak, CFA</a> <a href="#">+48 797 487 381</a>

**Event: *Frostpunk 2* debut below our expectations -> downgrade to 12M EFV and recommendations.**

*Frostpunk 2* debuted on Friday (September 20) for PC:

- **Peak number of players reached 36k** on Saturday, which was 29% below the lower bracket of our expectations of 50k-70k.
- **71% (out of 4,962) Steam reviews are positive**, which is visibly below our expectations of 80%+. Complaints are mainly related to the fact that the game is too different from its predecessor. Although we expected discontent from some gamers, the scale of complaints is worrying. Lower reviews may negatively impact the LT sales, in our view.
- The game reached Top 1 spot in Steam sales ranking just for the short moment. **Majority of time the game ranked 2-4 position on the top sellers list.** It currently ranks 6<sup>th</sup>.
- **We suspect that the game sold c. 300k+ units so far** (as of Monday morning).
- **We suspect that the game may sell c. 480k units in 3Q24** which is 24% below our prev. expectations of 630k units. We downgrade our sales forecasts for *Frostpunk 2* adequately, by 16%-24%.
- We expect the **"cost return" ESPI** in the first week of October - **after 1-2 weeks from the release** (c. 500k unit sold).
- **In our view *Frostpunk 2* is a business success.** We estimate that the game will generate c. PLN 220 million sales in two years vs c. PLN 100 million generated by *Frostpunk 1* in the same time (incl. PC, consoles, DLCs, Game Pass payment).
- Due to lower-than-expected sales performance for *Frostpunk 2*, **we consider it prudent to lower our sales volume forecasts for all future games by 30%-38%.**

### 12M EFV assessment and recommendations

Due to lower sales assumptions, **our estimate of the Company's 12M EFV drops to PLN 495.0 per share (from PLN 730 per share); down 32%. We believe that currently, the Company is fairly valued, therefore we downgrade our LT/ST recommendations to Hold + Neutral (from Buy + Overweight).**

*Regarding the potential sources of conflict of interest, please refer to the disclaimer section of the attached research report.*

## 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** = 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** =  $(\text{net income} + \text{interest payable})/\text{average assets}$   
**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 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	42	27	9	5	0	4
Percentage	48%	31%	10%	6%	0%	5%

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

	Overweight	Neutral	Underweight	Suspended	Under revision	Not rated
Numbers	27	39	12	5	0	4
Percentage	31%	45%	14%	6%	0%	5%

## 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** =  $(\text{interest income}/\text{average interest earning assets})/(\text{interest cost}/\text{average interest bearing liabilities})$   
**Cost/Income** =  $(\text{general costs} + \text{depreciation})/(\text{profit on banking activity} + \text{other net operating income})$   
**ROE** = net profit/average equity  
**ROA** = net income/average assets  
**Non performing loans (NPL)** = loans in 'basket 3' category  
**NPL coverage 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.

### 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	6	0	1	0	3
Percentage	44%	33%	0%	6%	0%	17%

### 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	8	5	0	1	0	2
Percentage	44%	28%	0%	6%	0%	11%

LT fundamental recommendation tracker

Analyst	Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Performance	Relative performance	Price at issue/reiteration*	EFV (12 months)	
<b>11 bit studios</b>										
Tomasz Rodak	Buy	-	13.02.2017	-	14.02.2017	13.02.2018	28%	18%	164.50	220.00 →
Tomasz Rodak	-	→	-	07.03.2017	08.03.2017	-	-	-	182.15	220.00 →
Tomasz Rodak	-	→	-	11.04.2017	12.04.2017	-	-	-	192.00	220.00 →
Tomasz Rodak	-	→	-	30.05.2017	31.05.2017	-	-	-	184.50	220.00 →
Tomasz Rodak	-	→	-	12.07.2017	13.07.2017	-	-	-	174.40	220.00 →
Tomasz Rodak	-	→	-	20.08.2017	21.08.2017	-	-	-	189.00	261.00 ↑
Tomasz Rodak	-	→	-	29.08.2017	30.08.2017	-	-	-	196.75	261.00 →
Tomasz Rodak	-	→	-	03.09.2017	04.09.2017	-	-	-	205.00	261.00 →
Tomasz Rodak	-	→	-	15.10.2017	16.10.2017	-	-	-	188.00	261.00 →
Tomasz Rodak	-	→	-	13.11.2017	14.11.2017	-	-	-	168.60	231.00 ↓
Tomasz Rodak	-	→	-	15.11.2017	16.11.2017	-	-	-	164.25	231.00 →
Tomasz Rodak	-	→	-	10.12.2017	11.12.2017	-	-	-	175.00	231.00 →
Tomasz Rodak	-	→	-	10.01.2018	11.01.2018	-	-	-	201.00	231.00 →
Tomasz Rodak	Buy	→	13.02.2018	-	14.02.2018	16.07.2018	129%	156%	210.50	231.00 →
Tomasz Rodak	-	→	-	14.02.2018	15.02.2018	-	-	-	209.00	253.00 ↑
Tomasz Rodak	-	→	-	12.03.2018	13.03.2018	-	-	-	214.00	253.00 →
Tomasz Rodak	-	→	-	16.04.2018	17.04.2018	-	-	-	257.00	253.00 →
Tomasz Rodak	-	→	-	26.04.2018	27.04.2018	-	-	-	280.00	377.00 ↑
Tomasz Rodak	-	→	-	07.05.2018	08.05.2018	-	-	-	374.50	480.00 ↑
Tomasz Rodak	-	→	-	29.05.2018	30.05.2018	-	-	-	506.00	480.00 →
Tomasz Rodak	-	→	-	20.06.2018	21.06.2018	-	-	-	465.00	480.00 →
Tomasz Rodak	Hold	↓	16.07.2018	-	17.07.2018	15.10.2018	-31%	-31%	481.00	526.00 ↑
Tomasz Rodak	-	→	-	02.08.2018	03.08.2018	-	-	-	441.00	526.00 →
Tomasz Rodak	-	→	-	30.08.2018	31.08.2018	-	-	-	426.00	526.00 →
Tomasz Rodak	-	→	-	11.10.2018	12.10.2018	-	-	-	308.00	526.00 →
Tomasz Rodak	Buy	↑	15.10.2018	-	16.10.2018	13.10.2019	14%	13%	333.00	416.00 ↓
Tomasz Rodak	-	→	-	23.10.2018	24.10.2018	-	-	-	293.50	416.00 →
Tomasz Rodak	-	→	-	14.11.2018	15.11.2018	-	-	-	295.00	416.00 →
Tomasz Rodak	-	→	-	09.12.2018	10.12.2018	-	-	-	259.00	400.00 ↓
Tomasz Rodak	-	→	-	10.01.2019	11.01.2019	-	-	-	259.50	400.00 →
Tomasz Rodak	-	→	-	04.02.2019	05.02.2019	-	-	-	279.00	400.00 →
Tomasz Rodak	-	→	-	26.02.2019	27.02.2019	-	-	-	267.00	400.00 →
Tomasz Rodak	-	→	-	26.03.2019	27.03.2019	-	-	-	302.50	400.00 →
Tomasz Rodak	-	→	-	22.04.2019	23.04.2019	-	-	-	374.00	471.00 ↑
Tomasz Rodak	-	→	-	24.04.2019	25.04.2019	-	-	-	369.00	471.00 →
Tomasz Rodak	-	→	-	30.05.2019	31.05.2019	-	-	-	395.00	471.00 →
Tomasz Rodak	-	→	-	17.07.2019	18.07.2019	-	-	-	430.00	471.00 →
Tomasz Rodak	-	→	-	30.07.2019	31.07.2019	-	-	-	414.00	471.00 →
Tomasz Rodak	-	→	-	27.08.2019	28.08.2019	-	-	-	392.00	471.00 →
Tomasz Rodak	-	→	-	01.09.2019	02.09.2019	-	-	-	405.00	471.00 →
Tomasz Rodak	Buy	→	13.10.2019	-	14.10.2019	05.05.2020	9%	38%	380.00	471.00 →
Tomasz Rodak	-	→	-	21.10.2019	22.10.2019	-	-	-	352.00	481.00 ↑
Tomasz Rodak	-	→	-	24.10.2019	25.10.2019	-	-	-	343.50	481.00 →
Tomasz Rodak	-	→	-	17.11.2019	18.11.2019	-	-	-	345.00	481.00 →
Tomasz Rodak	-	→	-	08.12.2019	09.12.2019	-	-	-	374.50	506.00 ↑
Tomasz Rodak	-	→	-	09.01.2020	10.01.2020	-	-	-	408.50	506.00 →
Tomasz Rodak	-	→	-	04.02.2020	05.02.2020	-	-	-	440.00	506.00 →
Tomasz Rodak	-	→	-	06.02.2020	07.02.2020	-	-	-	444.00	506.00 →
Tomasz Rodak	-	→	-	03.03.2020	04.03.2020	-	-	-	431.00	506.00 →
Tomasz Rodak	-	→	-	30.03.2020	31.03.2020	-	-	-	350.00	506.00 →
Tomasz Rodak	-	→	-	22.04.2020	23.04.2020	-	-	-	406.00	506.00 →
Tomasz Rodak	Hold	↓	05.05.2020	-	06.05.2020	06.12.2020	15%	-7%	415.00	538.00 ↑
Tomasz Rodak	-	→	-	19.05.2020	20.05.2020	-	-	-	485.00	538.00 →
Tomasz Rodak	-	→	-	15.06.2020	16.06.2020	-	-	-	479.00	538.00 →
Tomasz Rodak	-	→	-	13.07.2020	14.07.2020	-	-	-	517.00	538.00 →
Tomasz Rodak	-	→	-	01.09.2020	02.09.2020	-	-	-	482.00	538.00 →
Tomasz Rodak	-	→	-	08.10.2020	09.10.2020	-	-	-	482.50	538.00 →
Tomasz Rodak	-	→	-	08.11.2020	09.11.2020	-	-	-	499.50	538.00 →
Tomasz Rodak	Buy	↑	06.12.2020	-	07.12.2020	16.04.2021	14%	5%	476.50	575.00 ↑
Tomasz Rodak	-	→	-	05.01.2021	05.01.2021	-	-	-	478.50	575.00 →
Tomasz Rodak	-	→	-	28.01.2021	29.01.2021	-	-	-	498.00	575.00 →
Tomasz Rodak	-	→	-	28.02.2021	01.03.2021	-	-	-	565.00	575.00 →
Tomasz Rodak	Buy	→	16.04.2021	-	16.04.2021	14.04.2022	3%	-3%	542.00	575.00 →
Tomasz Rodak	-	→	-	30.05.2021	31.05.2021	-	-	-	509.00	575.00 →
Tomasz Rodak	-	→	-	09.07.2021	09.07.2021	-	-	-	490.00	575.00 →
Tomasz Rodak	-	→	-	31.08.2021	31.08.2021	-	-	-	440.00	575.00 →
Tomasz Rodak	-	→	-	07.10.2021	07.10.2021	-	-	-	397.20	575.00 →
Tomasz Rodak	-	→	-	04.11.2021	04.11.2021	-	-	-	438.00	575.00 →
Tomasz Rodak	-	→	-	05.12.2021	06.12.2021	-	-	-	509.50	609.00 ↑
Tomasz Rodak	-	→	-	16.01.2022	17.01.2022	-	-	-	560.00	609.00 →
Tomasz Rodak	-	→	-	07.02.2022	07.02.2022	-	-	-	560.00	609.00 →
Tomasz Rodak	-	→	-	28.02.2022	28.02.2022	-	-	-	530.00	609.00 →
Tomasz Rodak	Buy	→	14.04.2022	-	14.04.2022	10.03.2023	19%	28%	557.00	609.00 →
Tomasz Rodak	-	→	-	26.05.2022	26.05.2022	-	-	-	480.00	609.00 →
Tomasz Rodak	-	→	-	15.07.2022	15.07.2022	-	-	-	482.00	609.00 →
Tomasz Rodak	-	→	-	16.08.2022	16.08.2022	-	-	-	527.00	609.00 →
Tomasz Rodak	-	→	-	02.09.2022	02.09.2022	-	-	-	511.00	609.00 →
Tomasz Rodak	-	→	-	07.10.2022	07.10.2022	-	-	-	538.00	609.00 →
Tomasz Rodak	-	→	-	28.10.2022	28.10.2022	-	-	-	531.00	609.00 →
Tomasz Rodak	-	→	-	04.12.2022	05.12.2022	-	-	-	560.00	600.00 ↓
Tomasz Rodak	-	→	-	13.01.2023	13.01.2023	-	-	-	570.00	600.00 →
Tomasz Rodak	-	→	-	03.02.2023	03.02.2023	-	-	-	593.00	600.00 →
Tomasz Rodak	Buy	→	10.03.2023	-	10.03.2023	29.02.2024	-15%	-38%	664.00	600.00 →

LT fundamental recommendation tracker (continued)

Analyst	Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Performance	Relative performance	Price at issue/reiteration*	EFV (12 months)		
Tomasz Rodak	-	→	-	13.04.2023	13.04.2023	-	-	629.00	600.00	→	
Tomasz Rodak	-	→	-	29.05.2023	29.05.2023	-	-	632.00	600.00	→	
Tomasz Rodak	-	→	-	14.07.2023	14.07.2023	-	-	725.00	600.00	→	
Tomasz Rodak	-	→	-	02.08.2023	03.08.2023	-	-	699.00	863.00	↑	
Tomasz Rodak	-	→	-	31.08.2023	31.08.2023	-	-	702.00	863.00	→	
Tomasz Rodak	-	→	-	12.10.2023	12.10.2023	-	-	675.00	863.00	→	
Tomasz Rodak	-	→	-	06.11.2023	06.11.2023	-	-	605.00	863.00	→	
Tomasz Rodak	-	→	-	10.12.2023	11.12.2023	-	-	579.00	800.00	↓	
Tomasz Rodak	-	→	-	09.01.2024	09.01.2024	-	-	543.00	800.00	→	
Tomasz Rodak	-	→	-	01.02.2024	01.02.2024	-	-	585.00	800.00	→	
Tomasz Rodak	Buy	→	29.02.2024	-	29.02.2024	23.09.2024	-5%	-5%	565.00	800.00	→
Tomasz Rodak	-	→	-	04.04.2024	04.04.2024	-	-	520.00	800.00	→	
Tomasz Rodak	-	→	-	11.04.2024	12.04.2024	-	-	517.00	730.00	↓	
Tomasz Rodak	-	→	-	06.05.2024	06.05.2024	-	-	577.00	730.00	→	
Tomasz Rodak	-	→	-	29.05.2024	29.05.2024	-	-	637.00	730.00	→	
Tomasz Rodak	-	→	-	12.07.2024	12.07.2024	-	-	636.00	730.00	→	
Tomasz Rodak	-	→	-	12.08.2024	12.08.2024	-	-	619.00	730.00	→	
Tomasz Rodak	Hold	↓	23.09.2024	-	23.09.2024	Not later than 23.09.2025	-	-	538.00	495.00	↓

\*prices at issue/reiteration are the closing prices at the report or reiteration date  
pre-June 2014 recommendations issued at DM IDMSA

## Market-relative recommendation tracker

Analyst	Relative Recommendation		Report date	Reiteration date	Distribution date	Expiry date	Price at issue/ reiteration*	Relative performance
<b>11 bit studios</b>								
Tomasz Rodak	Overweight	-	13.02.2017	-	14.02.2017	13.02.2018	164.50	18%
Tomasz Rodak	-	→	-	07.03.2017	08.03.2017	-	182.15	-
Tomasz Rodak	-	→	-	11.04.2017	12.04.2017	-	192.00	-
Tomasz Rodak	-	→	-	30.05.2017	31.05.2017	-	184.50	-
Tomasz Rodak	-	→	-	12.07.2017	13.07.2017	-	174.40	-
Tomasz Rodak	-	→	-	20.08.2017	21.08.2017	-	189.00	-
Tomasz Rodak	-	→	-	29.08.2017	30.08.2017	-	196.75	-
Tomasz Rodak	-	→	-	03.09.2017	04.09.2017	-	205.00	-
Tomasz Rodak	-	→	-	15.10.2017	16.10.2017	-	188.00	-
Tomasz Rodak	-	→	-	13.11.2017	14.11.2017	-	168.60	-
Tomasz Rodak	-	→	-	15.11.2017	16.11.2017	-	164.25	-
Tomasz Rodak	-	→	-	10.12.2017	11.12.2017	-	175.00	-
Tomasz Rodak	-	→	-	10.01.2018	11.01.2018	-	201.00	-
Tomasz Rodak	Overweight	→	13.02.2018	-	14.02.2018	16.07.2018	210.50	156%
Tomasz Rodak	-	→	-	14.02.2018	15.02.2018	-	209.00	-
Tomasz Rodak	-	→	-	12.03.2018	13.03.2018	-	214.00	-
Tomasz Rodak	-	→	-	16.04.2018	17.04.2018	-	257.00	-
Tomasz Rodak	-	→	-	26.04.2018	27.04.2018	-	280.00	-
Tomasz Rodak	-	→	-	07.05.2018	08.05.2018	-	374.50	-
Tomasz Rodak	-	→	-	29.05.2018	30.05.2018	-	506.00	-
Tomasz Rodak	-	→	-	20.06.2018	21.06.2018	-	465.00	-
Tomasz Rodak	Neutral	↓	16.07.2018	-	17.07.2018	11.10.2018	481.00	-37%
Tomasz Rodak	-	→	-	02.08.2018	03.08.2018	-	441.00	-
Tomasz Rodak	-	→	-	30.08.2018	31.08.2018	-	426.00	-
Tomasz Rodak	Overweight	↑	11.10.2018	-	12.10.2018	01.09.2019	308.00	32%
Tomasz Rodak	-	→	-	15.10.2018	16.10.2018	-	333.00	-
Tomasz Rodak	-	→	-	23.10.2018	24.10.2018	-	293.50	-
Tomasz Rodak	-	→	-	14.11.2018	15.11.2018	-	295.00	-
Tomasz Rodak	-	→	-	09.12.2018	10.12.2018	-	259.00	-
Tomasz Rodak	-	→	-	10.01.2019	11.01.2019	-	259.50	-
Tomasz Rodak	-	→	-	04.02.2019	05.02.2019	-	279.00	-
Tomasz Rodak	-	→	-	26.02.2019	27.02.2019	-	267.00	-
Tomasz Rodak	-	→	-	26.03.2019	27.03.2019	-	302.50	-
Tomasz Rodak	-	→	-	22.04.2019	23.04.2019	-	374.00	-
Tomasz Rodak	-	→	-	24.04.2019	25.04.2019	-	369.00	-
Tomasz Rodak	-	→	-	30.05.2019	31.05.2019	-	395.00	-
Tomasz Rodak	-	→	-	17.07.2019	18.07.2019	-	430.00	-
Tomasz Rodak	-	→	-	30.07.2019	31.07.2019	-	414.00	-
Tomasz Rodak	-	→	-	27.08.2019	28.08.2019	-	392.00	-
Tomasz Rodak	Overweight	→	01.09.2019	-	02.09.2019	21.10.2019	405.00	-14%
Tomasz Rodak	-	→	-	13.10.2019	14.10.2019	-	380.00	-
Tomasz Rodak	Neutral	↓	21.10.2019	-	22.10.2019	08.12.2019	352.00	9%
Tomasz Rodak	-	→	-	24.10.2019	25.10.2019	-	343.50	-
Tomasz Rodak	-	→	-	17.11.2019	18.11.2019	-	345.00	-
Tomasz Rodak	Overweight	↑	08.12.2019	-	09.12.2019	05.05.2020	374.50	38%
Tomasz Rodak	-	→	-	09.01.2020	10.01.2020	-	408.50	-
Tomasz Rodak	-	→	-	04.02.2020	05.02.2020	-	440.00	-
Tomasz Rodak	-	→	-	06.02.2020	07.02.2020	-	444.00	-
Tomasz Rodak	-	→	-	03.03.2020	04.03.2020	-	431.00	-
Tomasz Rodak	-	→	-	30.03.2020	31.03.2020	-	350.00	-
Tomasz Rodak	-	→	-	22.04.2020	23.04.2020	-	406.00	-
Tomasz Rodak	Neutral	↓	05.05.2020	-	06.05.2020	16.04.2021	415.00	-2%
Tomasz Rodak	-	→	-	19.05.2020	20.05.2020	-	485.00	-
Tomasz Rodak	-	→	-	15.06.2020	16.06.2020	-	479.00	-
Tomasz Rodak	-	→	-	13.07.2020	14.07.2020	-	517.00	-
Tomasz Rodak	-	→	-	01.09.2020	02.09.2020	-	482.00	-
Tomasz Rodak	-	→	-	08.10.2020	09.10.2020	-	482.50	-
Tomasz Rodak	-	→	-	08.11.2020	09.11.2020	-	499.50	-
Tomasz Rodak	-	→	-	06.12.2020	07.12.2020	-	476.50	-
Tomasz Rodak	-	→	-	05.01.2021	05.01.2021	-	478.50	-
Tomasz Rodak	-	→	-	28.01.2021	29.01.2021	-	498.00	-
Tomasz Rodak	-	→	-	28.02.2021	01.03.2021	-	565.00	-
Tomasz Rodak	Neutral	→	16.04.2021	-	16.04.2021	05.12.2021	542.00	-17%
Tomasz Rodak	-	→	-	30.05.2021	31.05.2021	-	509.00	-
Tomasz Rodak	-	→	-	09.07.2021	09.07.2021	-	490.00	-
Tomasz Rodak	-	→	-	31.08.2021	31.08.2021	-	440.00	-
Tomasz Rodak	-	→	-	07.10.2021	07.10.2021	-	397.20	-
Tomasz Rodak	-	→	-	04.11.2021	04.11.2021	-	438.00	-
Tomasz Rodak	Overweight	↑	05.12.2021	-	06.12.2021	28.10.2022	509.50	42%
Tomasz Rodak	-	→	-	16.01.2022	17.01.2022	-	560.00	-
Tomasz Rodak	-	→	-	07.02.2022	07.02.2022	-	560.00	-
Tomasz Rodak	-	→	-	28.02.2022	28.02.2022	-	530.00	-
Tomasz Rodak	-	→	-	14.04.2022	14.04.2022	-	557.00	-
Tomasz Rodak	-	→	-	26.05.2022	26.05.2022	-	480.00	-
Tomasz Rodak	-	→	-	15.07.2022	15.07.2022	-	482.00	-
Tomasz Rodak	-	→	-	16.08.2022	16.08.2022	-	527.00	-
Tomasz Rodak	-	→	-	02.09.2022	02.09.2022	-	511.00	-
Tomasz Rodak	-	→	-	07.10.2022	07.10.2022	-	538.00	-
Tomasz Rodak	Overweight	→	28.10.2022	-	28.10.2022	12.10.2023	531.00	-6%
Tomasz Rodak	-	→	-	04.12.2022	05.12.2022	-	560.00	-
Tomasz Rodak	-	→	-	13.01.2023	13.01.2023	-	570.00	-
Tomasz Rodak	-	→	-	03.02.2023	03.02.2023	-	593.00	-
Tomasz Rodak	-	→	-	10.03.2023	10.03.2023	-	664.00	-

Market-relative recommendation tracker (continued)

Analyst	Relative Recommendation	Report date	Reiteration date	Distribution date	Expiry date	Price at issue/reiteration*	Relative performance
Tomasz Rodak	- →	-	13.04.2023	13.04.2023	-	629.00	-
Tomasz Rodak	- →	-	29.05.2023	29.05.2023	-	632.00	-
Tomasz Rodak	- →	-	14.07.2023	14.07.2023	-	725.00	-
Tomasz Rodak	- →	-	02.08.2023	03.08.2023	-	699.00	-
Tomasz Rodak	- →	-	31.08.2023	31.08.2023	-	702.00	-
Tomasz Rodak	Overweight →	12.10.2023	-	12.10.2023	23.09.2024	675.00	-35%
Tomasz Rodak	- →	-	06.11.2023	06.11.2023	-	605.00	-
Tomasz Rodak	- →	-	10.12.2023	11.12.2023	-	579.00	-
Tomasz Rodak	- →	-	09.01.2024	09.01.2024	-	543.00	-
Tomasz Rodak	- →	-	01.02.2024	01.02.2024	-	585.00	-
Tomasz Rodak	- →	-	29.02.2024	29.02.2024	-	565.00	-
Tomasz Rodak	- →	-	04.04.2024	04.04.2024	-	520.00	-
Tomasz Rodak	- →	-	11.04.2024	12.04.2024	-	517.00	-
Tomasz Rodak	- →	-	06.05.2024	06.05.2024	-	577.00	-
Tomasz Rodak	- →	-	29.05.2024	29.05.2024	-	637.00	-
Tomasz Rodak	- →	-	12.07.2024	12.07.2024	-	636.00	-
Tomasz Rodak	- →	-	12.08.2024	12.08.2024	-	619.00	-
Tomasz Rodak	Neutral ↓	23.09.2024	-	23.09.2024	Not later than 23.09.2025	538.00	-

\*prices at issue/reiteration are the closing prices at the report or reiteration date  
pre-June 2014 recommendations issued at DM IDMSA

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