



Dom Maklerski BDM S.A.

## ARTIFEX MUNDI

### ANALYTICAL REPORT - SUMMARY

The company entered 2024 by significantly increasing its marketing budgets, which allowed "Unsolved" to return to a dynamic growth path again and throughout Q1'24 achieve a record result at the adjusted EBIT level equal to 8,3 million PLN (+84% y/y). However, the latest data on the monetization of this application cools our optimism regarding its result path in 2024. Since April, we have observed a significant anomaly regarding user acquisition costs, the notable increase of which we believe could be a result of intensified competition (more releases, increased UA costs), as well as aggressive marketing from the new sales platform Temu. Increased CPIs forced the company to reduce acquisition expenses, which translated into a decline in revenues from "Unsolved". Observing the current data, we expect this trend to continue throughout May. Taking into account the seasonality and assuming the normalization of the market situation, we expect that the fight for a return to growth will probably only be possible around September-October. At the same time, we would like to emphasize that the current situation does not mean that the potential for further growth of "Unsolved" is exhausted. The most important change planned to be implemented at the end of 2024 is the metagame, which will play a key role in the monetization of this product in the following years. The implication of this solution should provide an increase in application LTV of over 100%. We would like to note that the improvement in LTV in 2023 by approximately 80% allowed "Unsolved" to increase revenues by more than 3x y/y. Throughout 2024, we assume that Artifex will be able to generate PLN 39,2 million adj. EBITDA (+34% y/y) and PLN 30,3 million adj. net profit (+19% y/y). We hope that 2025 thanks to metagame will bring significant progression of adj. EBITDA and adj. net profit to PLN 49,6 million/PLN 33,9 million (+27%/+12%), respectively. Considering the recent increase in the stock prices of the Katowice-based mobile game developer and a deterioration in the outlook for „Unsolved” in 2024, we downgrade our recommendation from BUY to HOLD, while simultaneously raising the target price to 26,0 PLN per share, which is 2% below the current market price.

After a seasonally difficult Q4'23 in terms of acquiring new users (high CPI), the company entered 2024 by significantly increasing its marketing budgets, which once again allowed to release the potential for improving KPIs and put "Unsolved" back on a dynamic growth path, as well as in the entire Q1'24 achieve a record result at the adj. EBIT equal to PLN 8,3 million (+84% y/y).

The latest data regarding the monetization of this application cools our optimism regarding its result path in 2024. Since April, we have observed a significant anomaly regarding user acquisition costs, the notable increase of which we believe could be a result of intensified competition (more releases, increased UA costs), as well as aggressive marketing from the new sales platform Temu. Increased CPIs forced the company to reduce acquisition expenses, which translated into a decline in revenues from "Unsolved". Observing the current data, we expect this trend to continue throughout May. Taking into account the seasonality and assuming the normalization of the market situation, we expect that the fight for a return to growth will probably only be possible around September-October.

We would like to emphasize that the current situation does not mean that the potential for further growth of "Unsolved" is exhausted. The most important change planned to be implemented at the end of 2024 is the metagame, which will play a key role in the monetization of this product in the following years. The implication of this solution should provide an increase in application LTV of over 100%. We would like to note that the improvement in LTV in 2023 by approximately 80% allowed "Unsolved" to increase revenues by more than 3x y/y.

Throughout 2024, we assume that Artifex will be able to generate PLN 39,2 million adj. EBITDA (+34% y/y) and PLN 30,3 million adj. net profit (+19% y/y). We hope that 2025 thanks to metagame will bring significant progression of adj. EBITDA and adj. net profit to PLN 49,6 million/PLN 33,9 million (+27%/+12%), respectively.

We would like to point out that an area still undeveloped by the company is its own sales platform which could reduce commission costs. For comparison, in the case of HUG and TEN, their own stores account for 9%/10% of payments for these entities. Currently, we do not include this solution in our assumptions. However, we want to emphasize that the potential creation of such a platform may have a significant impact on our future updates.

The launch of a new RPG game remains both a potential risk area and a potential source of new revenue streams. At the end of Q4'23, the company had PLN 18,9m of costs capitalised on the balance sheet related to this project. The current game schedule assumes another round of tests with players around mid-year. Assuming positive verification of the project, the game reveal and the start of marketing activities are planned for H2'24. In our model, we maintain the launch in 2025.

	2020	2021	2022	2023	2024F	2025F	2026F	2027F
Revenues [mln PLN]	25,7	39,1	38,5	82,5	101,9	124,5	164,2	179,6
EBITDA [mln PLN]	17,0	20,3	14,9	28,8	38,4	48,9	64,8	72,7
EBITDA adj. [mln PLN]	19,5	21,5	16,4	29,3	39,2	49,6	65,5	72,7
EBIT [mln PLN]	10,0	15,3	9,9	24,0	31,6	34,8	46,3	51,5
Net income [mln PLN]	8,2	13,0	12,1	24,9	29,6	33,1	43,9	49,1
Net income adj. [mln PLN]	10,8	14,2	13,6	25,4	30,3	33,9	44,6	49,1
P/E	38,2	26,5	28,6	13,8	11,7	10,4	7,9	7,0
P/E adj.*	29,2	24,2	25,4	13,5	11,4	10,2	7,7	7,0
EV/EBITDA	15,7	16,2	21,8	10,9	8,1	6,3	4,5	3,7
EV/EBITDA adj.*	16,6	15,3	19,8	10,7	8,0	6,2	4,4	3,7
DPS	0,0	0,0	0,0	0,0	0,6	0,9	1,0	1,3
DY	0,0%	0,0%	0,0%	0,0%	2,2%	3,4%	3,8%	5,1%

\*- adj. for cost of the incentive program

This report has been prepared in compliance with Regulation (EU) No. 596/2014 of the European Parliament and of the Council of 16 April 2014 (on market abuse), Commission Delegated Regulation (EU) 2016/958 and Commission Delegated Regulation (EU) 2017/565. Detailed contents of legal notes is located on the last page of this report. The report has been prepared and made available for distribution by BDM. GPW shall be a copyright holder to this report from the date of its publication. The report can be published and made available without limitation by GPW through any mass communication media as decided by GPW.

This document is a summary of a full version of the report prepared in Polish. In case of any disputes the Polish version shall prevail.

# HOLD

(PREVIOUS: BUY)

## TARGET PRICE 26,0 PLN

08 MAY 2024, 08:20 CEST

Target price [PLN]	26,0
Price upside/downside	-2%
Cost of capital	15,8%
Price [PLN]	26,5
Market cap [mln PLN]	320,0
Shares mln. szt.]	11,9
Max. price 6M [PLN]	29,6
Min. price 6m [PLN]	15,8
Rate of return 3M	23%
Rate of return 6M	66%
Rate of return 9M	63%
Shareholders (% of votes):	
Shareholders' agreement	21,6%
Warsaw Equity ASI	14,7%
Nationale-Nederlanden OFE	9,9%
G5 Entertainment AB	5,2%
Others	48,5%

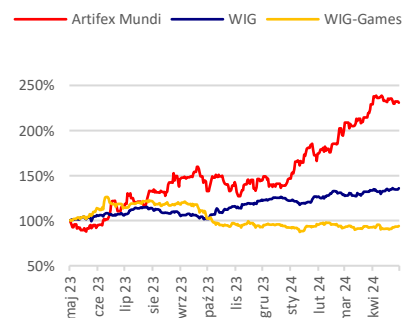
Krzysztof Tkocz

krzysztof.tkocz@bdm.com.pl

tel. (+48) 516 086 705

Dom Maklerski BDM S.A.

ul. 3-go Maja 23, 40-096 Katowice



**Valuation summary**

	Share	Valuation
DCF valuation	70%	21,7
Peer valuation	30%	36,0
<b>Target price [PLN]</b>		<b>26,0</b>

Source: BDM S.A.

**DCF valuation**

	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F
Revenues [mln PLN]	101,9	124,5	164,2	179,6	192,1	202,6	213,3	224,6	236,0	247,2
EBIT [mln PLN]	31,6	34,8	46,3	51,5	55,1	56,8	58,6	60,6	62,4	64,2
Tax rate	9,5%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%
Tax on EBIT [mln PLN]	3,0	3,3	4,4	4,9	5,3	5,5	5,6	5,8	6,0	6,2
NOPLAT [mln PLN]	28,6	31,5	41,9	46,6	49,8	51,4	53,0	54,8	56,4	58,0
Amortization [mln PLN]	1,0	1,1	1,1	1,1	1,2	1,2	1,3	1,3	1,3	1,4
CAPEX [mln PLN]	-1,3	-1,4	-1,4	-1,4	-1,5	-1,5	-1,6	-1,6	-1,6	-1,7
Purchase of investment [mln PLN]	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Working capital movement [mln PLN]	-19,7	-17,0	-13,2	-11,5	-9,9	-8,3	-7,3	-7,2	-7,5	-7,7
FCF [mln PLN]	8,7	14,1	28,4	34,8	39,6	42,8	45,4	47,2	48,7	50,0
DFCF [mln PLN]	8,2	11,6	20,2	21,4	21,0	19,6	18,0	16,1	14,4	12,8
Total DFCF [mln PLN]	163,3									
Terminal value [mln PLN]	347,9									
Discounted terminal value [mln PLN]	88,8									
Enterprise value [mln PLN]	252,1									
Net debt 2023 [mln PLN]	-30,4									
<b>Equity value [mln PLN]</b>	<b>282,5</b>									
Number of shares [mln]	13,0									
<b>Value per share [PLN]</b>	<b>21,7</b>									

Terminal growth rate: 3,0%

**WACC calculation**

	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F
Risk-free rate	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%	5,6%
Risk premium	6,5%	6,5%	6,5%	6,5%	6,5%	6,5%	6,5%	6,5%	6,5%	6,5%
Beta	1,10	1,10	1,10	1,10	1,10	1,10	1,10	1,10	1,10	1,10
Credit premium	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%	1,5%
Cost of equity	15,8%	15,8%	15,8%	15,8%	15,8%	15,8%	15,8%	15,8%	15,8%	15,8%
Contribution of equity	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
Cost of debt after tax	6,4%	6,4%	6,4%	6,4%	6,4%	6,4%	6,4%	6,4%	6,4%	6,4%
Contribution of debt	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
<b>WACC</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>	<b>15,8%</b>

Source: BDM S.A.

**Sensitivity analysis**

beta	Terminal growth rate			Risk premium	Terminal growth rate			Risk premium	Beta		
	2,5%	3,0%	3,5%		2,5%	3,0%	3,5%		1,0	1,1	1,2
1,0	22,5	22,8	23,2	5,5%	23,3	23,7	24,1	5,5%	24,1	23,7	23,3
1,1	21,4	21,7	22,0	6,5%	21,4	21,7	22,0	6,5%	22,1	21,7	21,4
1,2	20,5	20,7	21,0	7,5%	19,9	20,1	20,3	7,5%	20,4	20,1	19,8

Source: BDM S.A.

**Peer valuation – Polish game developers**

	P/E			EV/EBITDA		
	2024F	2025F	2026F	2024F	2025F	2026F
11 BIT STUDIOS	7,8	8,5	10,1	5,4	5,4	9,3
BIG CHEESE STUDIO	35,4	3,8	-	24,2	2,1	-
CD PROJEKT SA	57,2	75,7	45,3	35,2	57,1	13,4
CI GAMES	13,7	11,3	4,6	3,8	3,2	-
CREEPY JAR	23,0	9,4	15,0	21,5	6,4	9,6
HUUUGE GAMES	5,6	6,0	6,7	2,6	2,9	3,1
PCF GROUP	94,0	6,8	9,5	17,6	5,2	2,6
PLAYWAY	13,8	13,2	13,2	9,1	8,9	9,1
TEN SQUARE GAMES	8,7	9,9	11,6	5,3	6,0	6,5
<b>Median</b>	<b>13,8</b>	<b>9,4</b>	<b>10,9</b>	<b>9,1</b>	<b>5,4</b>	<b>9,1</b>
Artifex Mundi*	11,4	10,2	7,7	8,0	6,2	4,4
Premium/discount	-17,3%	8,7%	-29,1%	-12,4%	14,1%	-51,5%
<b>Valuation [PLN/share]</b>	<b>32,1</b>	<b>24,4</b>	<b>37,4</b>	<b>28,0</b>	<b>21,7</b>	<b>48,4</b>
Year's contribution	33%	33%	33%	33%	33%	33%
<b>Average valuation [PLN/share]</b>	<b>31,3</b>			<b>32,7</b>		
Multiple's contribution		50%			50%	
<b>Value per share [PLN]</b>	<b>32,0</b>					

Source: BDM S.A., Bloomberg; \*-adj. for cost of the incentive program

**Peer valuation – global game developers**

	P/E			EV/EBITDA		
	2024F	2025F	2026F	2024F	2025F	2026F
PLAYTIKA HOLDING CORP	11,7	10,6	10,2	5,4	4,8	3,8
GS ENTERTAINMENT AB	9,5	8,9	8,4	3,0	2,7	2,5
TENCENT HOLDINGS LTD	18,6	16,3	14,7	14,5	12,6	11,3
NETMARBLE CORP	73,9	43,4	29,4	24,4	18,2	15,4
STILLFRONT GROUP AB	7,9	6,0	5,0	4,1	3,4	3,0
ROBLOX	-	-	-	43,0	29,4	20,8
NEXON	22,1	18,3	17,2	13,2	9,8	9,0
<b>Median</b>	<b>15,1</b>	<b>13,4</b>	<b>12,4</b>	<b>13,2</b>	<b>9,8</b>	<b>9,0</b>
Artifex Mundi*	11,4	10,2	7,7	8,0	6,2	4,4
Premium/discount	-24,8%	-24,3%	-37,8%	-39,7%	-36,9%	-50,8%
<b>Valuation [PLN/share]</b>	<b>35,3</b>	<b>35,0</b>	<b>42,6</b>	<b>40,4</b>	<b>38,5</b>	<b>47,7</b>
Year's contribution	33%	33%	33%	33%	33%	33%
<b>Average valuation [PLN/share]</b>	<b>37,6</b>			<b>42,2</b>		
Multiple's contribution		50%			50%	
<b>Value per share [PLN]</b>	<b>39,9</b>					

Source: BDM S.A., Bloomberg; \*-adj. for cost of the incentive program

**Main risks:** 1) Risk associated with Apple's new privacy policy and planned changes in Google's policy; 2) Risk of diverse and unpredictable demand for the company's individual products; 3) The risk related to possible delays in game production; 4) Risk related to the loss of key employees; 5) Risk related to difficulties in acquiring experienced employees; 6) Risk related to the possible failure of IT systems, telecommunications infrastructure and servers; 7) Risk related to the competitive environment; 8) Risk related to the development of new technologies and industry 9) Risk of volatility of foreign exchange rates; 10) Risks of Unity's new charging policy

**RESEARCH DEPARTMENT:**

**Maciej Bobrowski**  
 Director  
 tel. (032) 208 14 12  
 e-mail: maciej.bobrowski@bdm.pl  
[strategy, industry, media/entertainment, TMT](#)

**Krzysztof Pado**  
 Deputy Director  
 Investment Adviser  
 tel. (032) 208 14 32  
 e-mail: krzysztof.pado@bdm.pl  
[oil&gas, construction, building materials, real estate](#)

**Krzysztof Tkocz**  
 Analyst  
 tel. (032) 208 14 38  
 e-mail: krzysztof.tkocz@bdm.pl  
[gaming](#)

**Anna Tobiasz**  
 Junior analyst  
 Investment Adviser  
 tel. (032) 208 14 35  
 e-mail: anna.tobiasz@bdm.pl

**INSTITUTIONAL SALES DEPARTMENT:**

**Leszek Mackiewicz**  
 Director  
 tel. (022) 62-20-848  
 e-mail: leszek.mackiewicz@bdm.pl

**Piotr Dedecjus**  
 tel. (022) 62-20-100  
 e-mail: piotr.dedecjus@bdm.pl

**Maciej Fink-Finowicki**  
 tel. (022) 62-20-855  
 e-mail: maciej.fink-finowicki@bdm.pl

**Piotr Komorowski**  
 tel. (022) 62-20-851  
 e-mail: piotr.komorowski@bdm.pl

**Tomasz Grzeszczyk**  
 tel. (022) 62-20-854  
 e-mail: tomasz.grzeszczyk@bdm.pl

**Ratings and price targets history:**

rating	price target	previous rating	previous target price	report date	report date (hour)	price	WIG
hold *	26,0	buy*	24,8	08.05.2024	08:20 CEST	26,5	86 484
buy *	24,8	buy*	22,8	01.12.2023	11:40 CET	16,7	75 195
buy *	22,8	buy	14,1	30.08.2023	08:50 CEST	17,6	68 795
buy	14,1	buy	18,0	13.03.2023	12:40 CET	10,4	58 050
buy	18,0	buy	22,5	18.01.2022	07:00 CEST	9,94	72 250
Buy*	22,5	buy	13,9	16.04.2021	07:00 CEST	17,8	60 280
Buy*	13,9	buy	13,6	19.10.2021	07:00 CEST	9,00	48 210
Buy*	13,6	-	-	10.08.2021	07:00 CEST	9,12	51 732

\* The report was prepared by Dom Maklerski BDM at the request of the WSE as part of the Exchange's Analytical Coverage Support Programme

**Explanations of terminology:**

EBIT - earnings before interest and tax  
 EBITDA — earnings before interest, taxes, depreciation, and amortization  
 Net debt – interest bearing debt minus cash and equivalents  
 WACC - weighted average cost of capital  
 CAGR - cumulative average annual growth  
 EPS - earnings per share  
 DPS - dividend per share  
 CEPS - net profit plus depreciation per share  
 EV – market capitalization plus interest bearing debt minus cash and equivalents  
 EV/S – market capitalization / sales  
 EV/EBITDA – EV / sales  
 P/EBIT – market capitalization / EBIT  
 MC/S – market capitalization / sales  
 P/E – market capitalization / net profit  
 P/BV – market capitalization / book value  
 P/CE - market capitalization / net profit plus depreciation  
 ROE – net profit / equity  
 ROA - net income / assets  
 Gross margin - gross profit on sales / sales  
 EBITDA margin – EBITDA / sales  
 EBIT margin – EBIT / sales  
 Net margin – net profit / sales

**Explanation of ratings:**

Buy – we believe that the security will reach the target price in the recommended period, which significantly exceeds the current market price (at least + 15%);  
 Accumulate – we believe that the security will reach the target price in the recommended period, which exceeds the current market price (in the range of +5 to + 14.99%);  
 Hold – we believe that a security in the recommended period will fluctuate around the target price, which is close to the current market price (in the range from -4.99% to + 4.99%);  
 Reduce – we believe that the security will reach the target price in the recommended period, which is lower than the market price (range of decline from 5% to 14.99%);  
 Sell – we believe that a security in the recommended period will reach the target price, which is significantly lower than the market price (suggested erosion of the value exceeds 15%).  
 Target price – the theoretical price which, in our opinion, should reach a security in the recommended period; This price is the result of the company's value (eg based on DCF, comparative and other valuations), market conditions and the industry as well as other factors subjectively considered by the analyst.  
 Recommendations made by BDM are binding for 12 months from the issue date or until the target level is reached, unless they are updated during this period of time.

**The strengths and weaknesses of the valuation methods used in the report:**

DCF – the most popular and the most effective of the valuation methods - it is based on the discounting of future cash flows generated by the company. The disadvantage is the high sensitivity to changes in the basic financial parameters forecast in the model (interest rates, exchange rates, profits, residual value).  
 DDM – the method is based on discounting future cash flows from dividends. The advantage of the valuation is the inclusion of future financial results and cash flows from dividends. The main disadvantages are the high sensitivity to changes in the basic financial parameters forecasted in the model (capital cost, profits, residual value) and the risk of changing the dividend payment policy.  
 Comparative – the method is based on current and forecasted market multipliers of companies from the industry or related industries, which better than DCF shows the current market situation. The main disadvantages are the difficulty in choosing the right companies for comparison, the risk of ineffective valuation of companies compared at a given moment, as well as high volatility (along with price fluctuations).

Distribution of BDM's recommendations in 2Q'24*:		, distribution of BDM's recommendations for the companies which BDM has supplied with investment banking services within the last 12 months	
numbers	%	numbers	%
Buy	2 33%	0	0%
Accumulate	2 33%	0	0%
Hold	2 33%	0	0%
Reduce	0 0%	0	0%
Sell	0 0%	0	0%

\* detailed list of all analytical reports (recommendations) published by BDM during the last 12 months is included at <https://www.bdm.pl/analizy-i-informacje/analizy/historia-rekomendacji>

**A Legal note:**

This report (hereinafter also referred to as an analysis, a document) has been prepared in compliance with Regulation (EU) No. 596/2014 of the European Parliament and of the Council of 16 April 2014 (on market abuse), Commission Delegated Regulation (EU) 2016/958 and Commission Delegated Regulation (EU) 2017/565.

The report constitutes an investment research within the meaning of art. 36 §1 of Commission Delegated Regulation (EU) 2017/565.

The report has been prepared by Dom Maklerski BDM S.A. (hereinafter BDM S.A.) within the Exchange Analytical Coverage Support Programme (<https://www.gpw.pl/gpwpa>). BDM S.A. is a party to the „Agreement on the provision of analytical report services” concluded with the Warsaw Stock Exchange Company („GPW”), on the basis of which BDM provides services of analytical coverage of the Issuer for the term of the Agreement. Under the agreement BDM obtains remuneration from GPW. All materials prepared by BDM within the framework of co-operation are available at <https://www.bdm.pl/program-wsparcia-pokrycia-analitycznego-gpw>.

The report has been prepared and made available for distribution by BDM.

GPW shall be a copyright holder to this report from the date of its publication. The report can be published and made available without limitation by GPW through any mass communication media as decided by GPW.

This report does not constitute an investment, legal, accounting advice or any other, and BDM shall not be responsible for damages arising from or connected with the use of the data presented in the report or the use of any elements of the report by recipients. The report or any copy of it cannot be disseminated, directly or indirectly, in the United States, Canada, Australia or Japan, or transmitted to citizens or residents of a state where its distribution can be restricted by law, which does not limit the possibility of publishing the report on internet websites of the Issuer, BDM or GPW. Persons who disseminate this document should be aware of the necessity to comply with such restrictions.

The document can be intended for professional or institutional customers of BDM as well as for other BDM qualified customers entitled to receive general recommendations based on agreements for brokerage services. This report can also reach other entities through media distribution channels based on a decision of the manager of the analysis department. The fact that a recipient has obtained this report does not mean that he shall be treated as a BDM customer. The compilation cannot be published or copied without a prior written consent of BDM.

Persons who will receive this report and who are not professional customers or qualified investors should consult an independent financial advisor before making any investment decision based on this analysis in order to obtain any necessary and crucial explanations concerning the contents of this analysis.

To prepare this analytical report BDM has not considered individual needs or situations of customers. BDM is not obliged to guarantee that a financial instrument or financial instruments covered by this report are appropriate for a given investor.

Opinions of an analyst and any recommendations included in this report neither constitute an investment, legal, accounting or tax advice or a statement that any investment strategy is adequate or appropriate because of individual circumstances concerning the customer, nor constitute personal recommendation.

The analysis is for information purposes only and does not constitute an advertisement or an offer or an invitation to subscribe or purchase financial instruments.

An investor should be aware that each investment decision in the capital market is subject to numerous risks that finally can result in a financial loss suffered by him. The return rate on individual investments can fluctuate depending on various factors beyond the control of the investor. Therefore, a customer who makes a single investment decision should not only check currency and correctness of individual assumptions made by the analyst in the report but also to have an independent assessment and own analysis (also based on scenarios other than the ones presented in the report) taking into consideration the level of acceptable risk. When deciding on activity on the capital market the Investor should take into consideration the fact that the investment portfolio structure (diversification of investment through possessing more than one financial instrument) can reduce risk exposure to an individual instrument bringing a negative rate of return in a given period. At the same time, however, it can lead to limitation of a positive rate of return the investor could achieve in the case of a single financial instrument in a given time period. The investor should be aware that the investment portfolio structure and any investment strategy for the stock market do not guarantee the achievement of a positive rate of return and do not protect him against final loss.

For the first time this report has been made available to the public on 08.05.2024 (08:20 CEST). Date of preparing the report is the date of making it accessible. Before the recommendation was made accessible, information included in it had been confidential.

The prices of the financial instruments listed in the document have been taken from the real-time pricing as provided by Bloomberg. Data concerning financial instrument prices used in the report could be loaded to 24 hours before the moment of completing the report.

Detailed list of all analytical reports (recommendations) published by BDM during the last 12 months is included in a cyclical “Monthly Report”.

In the opinion of BDM this report has been prepared observing principles of methodological correctness and objectivity on the basis of sources available to the public which BDM considers reliable. The sources of information used in recommendation are all data related to financial instruments concerned and available to an analyst, including current and periodic reports of the company, current and periodic reports of entities used for comparative valuation, business reports, press releases and other. However, BDM S.A., in no case, guarantees the accuracy and completeness of this report, in particular should sources on the basis of which the report was prepared prove to be inaccurate, incomplete or not fully consistent with the facts. The forecasts presented in the report are solely based on the analysis made by BDM without consultations with companies or other entities and are based on a number of assumptions which could prove to be wrong in the future. BDM does not guarantee that the presented forecasts will prove right.

Recommendations made by BDM are binding for 12 months from the issue date or until the target level is reached, unless they are updated during this period of time.

Any opinions, forecasts or estimates made in the report are merely an expression of analyst assessment as of the day of preparation of the report and at any moment they can be changed without notice. BDM does not guarantee that the opinions or assumptions made by an analyst/analysts and included in this report are compatible with other analysis prepared by BDM. BDM updates issued recommendations depending on the market situation and analyst assessment, and the frequency of such updates is not defined.

According to BDM this report has been made with due diligence and reliability. However, BDM shall not be held liable for any damages incurred as a result of decisions made on the basis of information included in this report.

The report was not transferred to the issuer prior to its publication.

An analyst (analysts) preparing this document receives a fixed remuneration and the BDM Management Board has the right to grant them additional remuneration. Additional remuneration may indirectly depend on the results of other services offered by BDM, including investment banking services, but it shall not depend directly on financial results resulting from other services, including financial banking, which have been or could have been reached by BDM.

The investor should assume that BDM employees or proxies or shareholders may hold long or short positions in the issuer’s shares or other financial instruments related to the issuer’s shares; this particularly concerns the situation of holding not more than 5% of the capital, and they may also carry out transactions on them as proxies.

Each of the above-mentioned persons could carry out transaction relating to the financial instruments concerned prior to this publication. At the same time, however, the instruments concerned are entered in the restrictive list for employees of the Analysis Department immediately at the start of work on the report.

We have not identified significant conflicts of interest between BDM and persons associated with BDM and the financial instrument issuer. If a conflict of interest arises BDM shall manage it by applying the principles defined in the “Policy of management of conflicts of interest at the BDM S.A.”. We point out that as for 08.05.2024:

- BDM states and assures that BDM is not involved financially in financial instruments of the issuer.
- BDM is not a holder of net long or short positions exceeding the threshold of 0,5 % of the total issued share capital of the issuer,
- The person that participated in preparing recommendation is not a holder of net long or short positions exceeding the threshold of 0,5 % of the total issued share capital of the issuer,
- The issuer does not hold shares exceeding 5 % of the BDM issued share capital,
- BDM is not a market maker or liquidity provider in the financial instruments of the issuer,
- BDM has not been lead manager or co-lead manager over the previous 12 months of any publicly disclosed offer of financial instruments of the issuer;
- BDM is not a party to an agreement with the issuer relating to the provision of investment banking services pursuant to art. 69 §2 and 4 of the Act on Trading in Financial Instruments dated 25<sup>th</sup> July 2005,
- BDM is not a party to an agreement with the issuer relating to the provision of investment banking services pursuant to section A and B od Annex I to the Directive 2014/65/EU of the European Parliament and of the Council (hereinafter the Directive 2014/65/EU),
- BDM is not a party to an agreement with the issuer relating to the production of the recommendation,
- There is other significant financial interest that BDM or its related affiliates have in relation to the issuer of financial instruments\*
- There are no significant connections between BDM or its related affiliates and the issuer of financial instruments,
- The person affiliated with BDM who was involved in the preparation of recommendations did not receive or purchase the shares of the issuer, to whom the recommendation relates directly or indirectly, prior to public offering of such shares,
- The person affiliated with BDM who was involved in the preparation of recommendations declares that they respect internal regulations and are subject to organizational and technical solutions and information barriers established by BDM to eliminate any conflicts of interest concerning recommendations and to avoid them,
- The person affiliated with BDM who was involved in the preparation of recommendations was not rewarded in any form by the issuer, to whom the recommendation relates directly or indirectly, or was not directly connected with any possible transactions concerning services defined in art. 69 §2 and 4 of the Act on Trading in Financial Instruments dated 25<sup>th</sup> July 2005.

\*BDM is a party to the “ANALYTICAL REPORT PREPARATION AGREEMENT” concluded with the WSE.

According to the best knowledge of the party recommending upon the publication of the report there are no other connections between BDM and the company described in this report that the party preparing this report would know of. However, the investor should be aware that the list disclosing conflicts of interest is long and that in the future there may occur situations leading to conflicts of interest which have not been identified or disclosed at the moment of publication of the report concerned. Especially, the investor should assume that BDM may submit an offer for services to a company or other companies mentioned in this report.

BDM is subject to supervision by the Polish Financial Supervision Commission.

**This document is a summary of a full version of the report prepared in Polish. In case of any disputes the Polish version shall prevail.**