

VIGO System

Affordable detection module on the way

We maintain our BUY recommendation and increase our FV to PLN 480.0 from PLN 380.0 on 1) updated forecasts for MID-IR detector segment due to positive impact of new factory and introduction of new products (primarily affordable detection modules); 2) increased forecasts for materials for photonics after the segment began operations. We estimate VIGO's revenues of PLN 53.2m (+24% y/y) and PLN 69.5m (+30% y/y) in 2020/21E, respectively, driven by diversified growth in MID-IR and expansion in the semiconductor materials area. Assuming a 29% net margin in 2020E (due to close to BEP result in semiconductors) and 33% in 2021E we forecast net income of PLN 15.2m (+10% y/y) and PLN 22.8m (+50% y/y) respectively in subsequent years. Based on our forecasts, the company is trading at a P/E of 18.4x and 12.3x in 2020/21E and EV/EBITDA of 13.3x and 9.1x in 2020/21E, which we see as an attractive level.

MID-IR detectors - Affordable detection module on the way for mass market

In 2020E we expect detectors segment revenues to reach PLN 49.3m (+15% y/y), driven mainly by an increase in military (+24% y/y), transport (+9% y/y) and science and medicine (+198% y/y) applications. After a slowdown in the industrial segment in 4Q19-1Q20, we expect moderate 11% y/y decline in this area this year. In 2016-19 VIGO's revenues grew at a CAGR of 19%. For 2019-22E we expect 18% revenue CAGR (excluding semiconductors segment), driven mainly by new products and applications, including multi-element detectors and an affordable detection module. In our base case scenario, we assume that the latter product could generate PLN 3m revenues in 2021E (from 5k units sold).

Materials for photonics - growth in new booming markets

VIGO's new semiconductor segment has already received EUR 0.5m orders for this year, securing our previous estimate for 2020E revenues (PLN 2m). As the segment successfully launched operations and contracted its first prominent clients, we upgrade our estimates to PLN 4.0m revenues in 2020E (vs. EUR 1m VIGO's expectations) and expect it to expand up to PLN 20.0m revenues in 2024E (2020-24E CAGR of 50%). We estimate that in 2024E the semiconductors segment would generate 12% of overall EBITDA for the company (PLN 6.2m).

COVID-19 impact likely to be limited

We believe that a material proportion of the company's sales will not be affected by the ongoing epidemic. We note that orders from military, transportation and medicine clients (48% of 2020E revenues in total) are mostly related to long-term projects with already secured financing. In our opinion, the most vulnerable sector could be industry (43% revenues expected in 2020E). As of now the factory is operating as usual with some staff working remotely. We see no risk to financial stability, estimating the company's net debt/EBITDA ratio at 0.9x at end-2020E.

Figure 1. Summary of financial data (PLN m)

	2017	2018	2019	2020E	2021E	2022E
Revenues	27.2	37.4	42.9	53.2	69.5	81.3
EBITDA	12.6	16.2	18.6	22.4	32.7	37.3
Net income	9.5	13.0	13.9	15.2	22.8	26.6
EV/EBITDA (x)	21.3	17.4	16.0	13.2	9.0	7.6
P/E (x)	29.3	21.5	20.2	18.4	12.3	10.5
DY	2.1%	0.0%	0.0%	0.0%	4.1%	4.8%

Source: Company, IPOPEMA Research

TMT

VIGO SYSTEM

BUY

FV PLN 480.0 from PLN 380.0

25% upside

Price as of 15 April 2020 PLN 384.0

Utrzymana



Share data

Number of shares (m)	0.7
Market cap (EUR m)	61.7
12M avg daily volume (k)	0.5
12M avg daily turnover (EUR m)	0.04
12M high/low (PLN)	496.0/262.0
WIG weight (%)	0.08
Reuters	VGOP.WA
Bloomberg	VGO.PW

Total performance

1M	+1.6%
3M	-12.3%
12M	+16.4%

Shareholders

Józef Piotrowski	11.9%
Xarus Holdings Limited	9.9%
TFI Investors SA	9.8%
Janusz Kubrak	6.6%
Mirosław Grudzień	5.1%
Pozostali	56.7%

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VIGO System

BUY

FV PLN 480

Mkt Cap EUR 61.7m

upside +25%

Valuation multiples	2018	2019	2020E	2021E	2022E
P/E (x)	21.5	20.2	18.4	12.3	10.5
EV/EBITDA (x)	17.4	16.0	13.2	9.0	7.6
EV/Sales (x)	7.6	7.0	5.5	4.2	3.5
P/BV (x)	5.2	4.1	3.4	3.0	2.6
FCF yield (%)	-5.7%	-5.4%	-0.5%	4.3%	7.8%
DY (%)	0.0%	0.0%	0.0%	4.1%	4.8%

Per share	2018	2019	2020E	2021E	2022E
No. of shares (m units)	0.7	0.7	0.7	0.7	0.7
EPS (PLN)	17.9	19.0	20.9	31.3	36.5
BVPS (PLN)	74.4	93.4	114.3	129.9	148.2
FCFPS (PLN)	-22.3	-22.0	-2.1	17.4	30.4
DPS (PLN)	0.0	0.0	0.0	15.6	18.2

Change y/y (%)	2018	2019	2020E	2021E	2022E
Revenues	37.7%	14.6%	24.1%	30.5%	17.0%
EBITDA	29.1%	14.6%	20.4%	46.1%	13.9%
EBIT	31.0%	9.8%	12.8%	49.1%	15.8%
Net profit	36.5%	6.6%	9.7%	49.7%	16.6%

Leverage and return	2018	2019	2020E	2021E	2022E
Gross margin (%)	54.7%	63.0%	63.8%	61.5%	59.1%
EBITDA margin (%)	43.4%	43.4%	42.1%	47.1%	45.9%
EBIT margin (%)	34.1%	32.7%	29.7%	33.9%	33.6%
Net margin (%)	34.8%	32.4%	28.6%	32.8%	32.7%
Net debt / EBITDA (x)	0.2	1.1	0.9	0.6	0.3
Net debt / Equity (x)	0.1	0.3	0.3	0.2	0.1
Net debt / Assets (x)	0.0	0.2	0.1	0.1	0.1
ROE (%)	27.3%	22.7%	20.1%	25.6%	26.2%
ROA (%)	17.8%	12.7%	11.2%	14.8%	15.8%
ROIC (%)	29.0%	19.1%	16.4%	21.5%	23.3%

IR detectors segment	2018	2019	2020E	2021E	2022E
Revenues	37.4	42.7	49.3	62.7	71.2
Industry	20.3	25.4	22.8	25.0	29.5
Military	8.1	8.1	10.0	17.4	14.8
Transport	5.8	5.8	6.3	7.1	7.9
Medicine and Science	2.8	3.1	9.2	9.2	9.9
Others	0.4	0.3	1.0	1.0	1.1
Affordable detection modu	0.0	0.0	0.0	3.0	8.0
EBIT	12.8	14.3	15.5	22.6	25.4
EBITDA	16.2	18.8	21.2	30.9	34.5
net profit	13.0	14.1	14.9	21.8	24.7
net profit margin	34.8%	33.1%	30.3%	34.8%	34.7%

Materials for photon.	2018	2019	2020E	2021E	2022E
Revenues		0.2	4.0	6.7	10.1
EBIT		-0.3	0.3	1.0	2.0
EBITDA		-0.3	1.2	1.8	2.8
net profit		-0.2	0.3	1.0	1.9
net profit margin		-153.5%	8.2%	14.9%	19.1%

Cost by type	2018	2019	2020E	2021E	2022E
Salaries, other benefits	-14.1	-15.8	-18.0	-23.0	-27.6
Materials and energy	-6.4	-8.5	-10.1	-13.2	-15.2
D&A	-3.5	-4.6	-6.6	-9.2	-10.0
Services and other	-2.8	-3.7	-4.5	-5.0	-5.5

P&L (PLN m)	2017	2018	2019	2020E	2021E	2022E
Revenues	27.2	37.4	42.9	53.2	69.5	81.3
COGS	-11.3	-16.9	-15.9	-19.3	-26.7	-33.2
Gross profit	15.9	20.5	27.0	34.0	42.7	48.1
Selling costs	-1.6	-2.2	-2.4	-2.6	-3.1	-3.5
G&A costs	-5.5	-7.7	-12.2	-16.9	-18.3	-20.1
Other operating income (cost) net	1.0	2.1	1.6	1.3	2.3	2.9
EBITDA	12.6	16.2	18.6	22.4	32.7	37.3
EBIT	9.8	12.8	14.0	15.8	23.6	27.3
Financial income (cost) net	-0.1	0.3	-0.1	-0.4	-0.5	-0.4
Pre-tax profit	9.6	13.0	13.9	15.4	23.0	26.9
Income tax	-0.1	0.0	0.0	-0.2	-0.2	-0.3
Net profit	9.5	13.0	13.9	15.2	22.8	26.6

BALANCE SHEET (PLN m)	2017	2018	2019	2020E	2021E	2022E
Non-current assets	38.0	67.4	98.8	120.1	135.6	141.0
Goodwill and intangible assets	6.3	6.8	12.4	17.2	19.8	22.6
Expenditures on R&D	11.1	14.4	16.7	20.0	24.0	28.8
Investments in associates	0.8	1.3	2.3	6.3	6.3	6.3
tangible assets	19.9	45.0	67.5	76.6	85.5	83.3
Other non-current assets	0.0	0.0	0.0	0.0	0.0	0.0
Current assets	18.4	22.8	28.9	25.4	26.5	32.9
Inventories	3.4	4.1	6.9	7.3	9.3	10.7
Trade receivables	2.4	5.6	7.1	7.0	9.1	10.7
Cash and equivalents	11.4	9.3	12.8	9.8	6.8	10.3
Other current assets	1.2	3.7	2.1	1.2	1.2	1.2
Total assets	56.4	90.2	127.7	145.5	162.1	173.9
Equity	41.2	54.2	68.1	83.3	94.7	108.0
Non-current liabilities	6.6	17.9	47.1	50.9	56.6	54.5
Loans and borrowings	0.0	5.5	26.8	26.8	24.8	20.8
Other non-current liabilities	6.6	12.4	20.3	24.2	31.8	33.7
Current liabilities	8.7	18.1	12.5	11.2	10.8	11.4
Trade payables	0.9	7.0	1.6	2.6	4.0	5.5
Loans and borrowings	0.0	7.9	6.5	4.0	2.0	1.0
Other current liabilities	7.8	3.3	4.5	4.6	4.8	5.0
Equity & liabilities	56.4	90.2	127.7	145.5	162.1	173.9
Cash conversion cycle (days)	60.7	-8.8	2.6	48.0	42.0	36.0
Gross debt (PLN m)	0.0	13.3	33.3	30.8	26.8	21.8
Net debt (PLN m)	-11.4	4.0	20.5	20.9	20.0	11.4

CASH FLOW (PLN m)	2017	2018	2019	2020E	2021E	2022E
Operating cash flow	12.3	9.1	15.4	21.2	26.4	31.5
Pretax income	9.6	13.0	13.9	15.4	23.0	26.9
D&A	2.8	3.5	4.6	6.6	9.2	10.0
Change in WC	0.6	-5.9	-1.6	0.3	-2.8	-1.5
Other	-0.7	-1.5	-1.5	-1.1	-3.0	-3.8
Investment cash flow	-5.0	-24.6	-31.1	-21.6	-13.5	-9.2
Grants	4.0	1.9	8.9	6.3	11.2	6.1
CAPEX excl. R&D	-2.4	-21.6	-32.0	-13.4	-14.3	-3.1
CAPEX on R&D	-5.9	-4.3	-7.4	-10.5	-10.4	-12.2
Net investment in subsidiaries	-0.8	-0.5	-0.6	-4.0	0.0	0.0
other	0.0	0.0	0.0	0.0	0.0	0.0
Financial cash flow	-6.4	13.3	19.2	-2.6	-15.9	-18.7
Change in equity	0.0	0.0	0.0	0.0	0.0	0.0
Change in debt	-0.4	13.3	19.7	-2.0	-4.0	-5.0
Interest paid	0.0	-0.1	-0.4	-0.6	-0.5	-0.4
Dividend	-6.0	0.0	0.0	0.0	-11.4	-13.3
Other	0.0	0.0	0.0	0.0	0.0	0.0
Change in cash	0.9	-2.2	3.5	-3.0	-3.1	3.6
Cash as of eop	11.4	9.3	12.8	9.8	6.8	10.3

Source: Company data, IPOPEMA Research,

Valuation

Figure 2. Valuation Snapshot

Valuation method	Weight (%) FV (PLN/share)					
DCF	100%					
Peers	0%					
Fair value	480.0					
Current price	384.0					
Upside/downside	25%					
DCF Valuation						
	2020E	2021E	2022E	2023E	2024E	TV
Revenues	53.2	69.5	81.3	96.7	113.7	113.7
- change y/y	24%	30%	17%	19%	18%	
EBITDA	22.4	32.7	37.3	44.1	51.4	51.4
- EBITDA margin	42.1%	47.1%	45.9%	45.6%	45.2%	45.2%
- change y/y	20%	46%	14%	18%	16%	
EBIT norm.*	13.3	20.0	23.1	28.3	33.8	33.8
Tax rate	1%	1%	1%	1%	1%	9%
NOPAT	13.2	19.8	22.9	28.1	33.4	30.7
- change y/y	9%	50%	15%	23%	19%	
D&A	6.6	9.2	10.0	10.9	11.9	11.9
Change in WC	0.3	-2.8	-1.5	-2.5	-2.6	-2.1
CAPEX	-21.6	-13.5	-9.2	-10.9	-12.3	-12.3
FCF	-1.5	12.7	22.1	25.6	30.5	28.3
RFR	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Beta	1.78	1.67	1.56	1.49	1.44	1.46
Risk premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Cost of Equity	11.4%	10.9%	10.3%	9.9%	9.7%	9.8%
After tax cost of debt	2.0%	2.0%	2.0%	2.0%	2.0%	1.8%
% D	27%	22%	17%	13%	9%	10%
% E	73%	78%	83%	87%	91%	90%
WACC	8.9%	8.9%	8.9%	8.9%	9.0%	9.0%
Discount factor (%)	94%	87%	80%	73%	68%	
FCF PV (PLN m)	-1.4	11.0	17.7	18.8	20.6	
FCF PV 2020-24E (PLN m)	66.6					
Residual growth rate (%)	2.5%					
Discounted residual value (PLN m)	302.0					
EV (PLN m)	368.6					
Investments in associates	2.3					
Dividend paid (PLN m)	0.0					
Net debt (PLN m, 4Q19)	20.5					
Equity value (PLN m)	350.4					
Number of shares (diluted, m)	0.7					
FV (PLN)	480.0					
Current price	384.0					
Upside/downside potential	25%					
DCF Sensitivity analysis						
	Residual growth rate (%)	WACC (%)				
		8.0%	8.5%	9.0%	9.5%	10.0%
	1.5%	476	447	422	399	380
	2.0%	513	478	449	423	401
	2.5%	556	515	480	451	425
	3.0%	608	558	517	482	453
	3.5%	671	610	561	519	484
	Affordable detection module volume (2024E)	EUR Net price per affordable detection module (2024E)				
		42	63	95	142	213
	10.0	348	356	369	387	415
	20.0	365	381	406	443	499
	40.0	398	431	480	554	666
	60.0	431	480	554	666	833
	90.0	480	554	666	833	1083
	Materials for photonics - cost of materials as % of revenues (2024E)	Materials for photonics segment 2024E revenues (PLNm)				
		5.0	10.0	20.0	40.0	79.9
	20.0%	465	478	504	556	661
	30.0%	462	472	492	533	614
	40.0%	457	466	480	509	567
	50.0%	452	460	468	485	519
	60.0%	446	453	457	462	472

Source: Company data, IPOPEMA Research, * EBIT normalized by non-cash other operating revenues - settlement of grants for R&D.

Figure 3. VIGO System – Peers comparison

COMPANY	Market Cap USD m	P/E (x)			EV/EBITDA (x)			DY 2020E	Revenues CAGR 2019-22E	NI CAGR 2019-22E	ROE 2020E
		2020E	2021E	2022E	2020E	2021E	2022E				
HAMAMATSU PHOTON	7,029	33.9	30.4	26.9	16.7	15.0	13.7	0.9%	5.0%	9.1%	10.2%
TELEDYNE TECH	11,754	31.5	27.6	26.7	19.7	16.9	15.5	n.a.	3.1%	4.8%	n.a.
NIPPON CERAMIC	483	21.2	18.6	16.2	n.a.	n.a.	n.a.	2.6%	4.5%	4.4%	5.5%
II-VI INC	2,621	20.3	10.8	7.8	10.2	7.5	8.0	n.a.	29.7%	50.4%	6.8%
OPTEX GROUP CO L	382	16.3	13.5	11.5	n.a.	n.a.	n.a.	2.8%	6.2%	15.7%	7.2%
VISUAL PHOTONICS	532	25.2	19.6	23.0	14.5	11.4	n.a.	3.0%	7.9%	10.6%	22.4%
IPG PHOTONICS	6,406	44.5	24.5	18.7	21.2	12.5	12.6	0.0%	5.0%	15.9%	3.2%
MEDIAN		25.2	19.6	18.7	16.7	12.5	13.1	2.6%	5.0%	10.6%	7.0%
VIGO System	62	18.4	12.3	10.5	13.2	9.0	7.6	0.0%	23.7%	24.2%	20.1%
premium/discount to all peers (median)		-27%	-37%	-44%	-21%	-28%	-42%				
Waga		25%	25%		25%	25%					

Implied Price (PLN)

473.9

Source: IPOPEMA Research, Bloomberg, data downloaded on 14.04.2020.

Figure 4. VIGO System – change in forecasts 2020-22E

	2020E		Change (%)	2021E		Change (%)	2022E		Change (%)
	New	Previous		New	Previous		New	Previous	
Revenues	53.2	57.6	-8%	69.5	70.8	-2%	81.3	82.0	-1%
EBITDA	22.4	27.4	-18%	32.7	35.5	-8%	37.3	39.9	-7%
EBIT	15.8	18.0	-12%	23.6	25.0	-6%	27.3	28.6	-5%
Net income	15.2	17.0	-10%	22.8	24.1	-5%	26.6	28.0	-5%
Capex net	(21.6)	(13.2)	64%	(13.5)	(3.9)	246%	(9.2)	(4.0)	131%

Source: IPOPEMA Research

Appendix 2 - Investment risks

Between critical in our opinion risks for operations and results of VIGO system we include:

The risk of decrease of demand for company's products. The market of MID-Infrared detectors on which VIGO operates is currently dynamically developing part of photonics. Nevertheless, there is a risk, that due to different factors (including macroeconomic, political or technological) the demand for detectors will drop significantly and the market would not grow with actual, high dynamic.

The risk of key client loss. In 2019 49% of revenues were generated from the contracts with 3 clients. The end of collaboration with each of these, or the decrease of contracts value could significantly affect the dynamic of VIGO revenues growth. However we note that the competition on the IR detectors market is low (high entry barriers) and high cost of technology replacement (which is also the barrier for VIGO and means that acquisition of new partners is harder).

The risk of competition. Due to high concentration on the market (only few producers) and high entry barriers (complicated technology) we assume that competition risk is quite low. Nonetheless with further dynamic growth of the market and popularization of applications of MID-infrared detectors there is a risk that leading technological companies will decide to enter the market. Another risk is the fast development of technology and short life cycle of the product (there is a risk of obtaining technological advantage by one of the competitors).

The risk of losing key employees. Production of infrared detectors is a process which requires highly specialized workers, which supply on the market is very limited. At the same time high qualifications of the staff is perceived by the board as one of the advantages of VIGO.

The risk of alternative technology. There is a risk that other alternative technology could appear on the market and replace VIGO products with better parameters and/or lower price.

The risk of equipment breakdown. The equipment used by VIGO is highly advanced and is not widely available on the market. In the case of breakdown, the company could have a problem with the production delays. The costs of replacement/repair of machines could be also significant.

Risk of lower subventions/grants in the future. To keep high level of subventions to expenditures on R&D the company needs to meet many criterions. The loss of subvention, or lower level of subvention in the future would result in the necessity of higher company's own spending on R&D or higher debt level.

The Currency risk. The most of the VIGO revenues is generated in EUR, while the cost (based on salaries and other employees' benefits) are mainly in PLN, which result in exposure for currency risk. VIGO is not using currency hedging instruments.

Appendix 3 - ESG

Below we present our ESG analysis of VIGO System operations:

Environmental. VIGO's detectors are used for analysis and detection of harmful gases, thus they are used in environment protection sector as well as in industrial applications, where they could materially contribute to the policy of reducing harmful gas emissions.

The R&D projects conducted by consortiums with VIGO active participation, (which are a part of Horizon 2020 European program) are aiming to develop new technologies and devices for water quality control. VIGO is participating in project Waterspy which targets to develop mobile device for water quality control (analyzing for bacterial contamination) in important points of water distribution network. The second project – AQUARIUS – aims to develop device for spectroscopy for monitoring of oil pollution in transmission networks of drinkable and industrial water, especially in petrochemical industry. In our opinion both projects could materially help to reduce level of pollution and decrease number of diseases especially in developing countries.

VIGO is also investing in development of detectors technology (investment in new production hall and new clean room), which results in optimization of production process and lower consumption of materials and energy (affordable detector) and higher yield (expected with new clean room). VIGO is currently developing detectors from A(III)B(V) materials, which are expected to replace products based on HgCdTe compounds (include mercury, which according to UE ROHS directive will be withdrawn from commercial applications till July 2024). VIGO has not decided yet when HgCdTe detectors will be removed from its offer, however it is intensively working on its substitutes without dangerous compounds (including affordable detector). Below we present data about waste generation in the company in years 2018 and 2019:

Figure 28. VIGO System –Waste generated by VIGO in years 2018 and 2019 (in tons)

Waste categories	2018	2019
Paper, cardboard	1.4	2.0
Plastics	0.9	1.4
Electro-waste	-	0.4
Wood	-	0.3
mixed	17.7	16.8
Total waste other than hazardous	20.0	20.9
Hazardous waste.*	2.4	2.0

Source: VIGO System, IPOPEMA Research *Hazardous waste is collected and utilized by specialized companies

Social responsibility. VIGO's detectors are used for military purposes, mainly in artillery applications (smart munitions, reduction of accidental victims number due to better aiming) and for tracking warning systems. Currently applications in drug and explosives detection are analyzed.

Governance. From 21 November 2014 when VIGO System shares were admitted to trading on WSE, the company is accepting and comply to WSE governance policy rules. We have positive opinion about VIGO's corporate governance due to: 1) lack of transactions with related parties; 2) market-based salaries of the board; 3) transparent dividend policy; 4) solid and clear accounting standards and policy, high quality of presented financial data; 5) reporting of sales data at the end of each quarter and respecting deadlines for financial reporting. The good practice of the company is also presenting the strategy with mid-term financial targets, though its realization was several times postponed in the past years. We like long-term involvement of the board and its professional qualifications. The company is also holding regular meeting with the investors after quarterly earnings publication, when the board is ready to answer shareholders questions.

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The definitions of terms used in the document include:

NII – Net interest income – interest income minus interest expense.

Net F&C – Net fee and commission income – fee and commission income minus fee and commission expense.

LLP – loan loss provisions – an expense set aside as an allowance for bad loans.

NPL – non-performing loan – loans that are in default or close to be in default.

Cost/Income – operating expenses divided by total banking revenue.

ROE – return on equity – net income (or adjusted net income) divided by the average shareholders' equity.

ROA – return on assets – net income (or adjusted net income) divided by the average assets.

EBIT – earnings before interests and tax.

EBITDA – earnings before interests, tax, depreciation and amortization.

EPS – earnings per share – the net income (or adjusted net income) divided by the number of shares outstanding.

P/E – price to earnings ratio – price divided by earnings per share.

PEG – P/E ratio divided by the annual EPS growth, usually over a certain period of time.

CAGR – compound annual growth rate.

BVPS – book value per share, the book value of the Company's equity divided by the number of shares outstanding.

P/BV – price to book value - price divided by the BVPS.

DPS – dividend per share – dividend of a given year divided by the number of shares outstanding.

DY – dividend yield – dividend of a given year divided by the current price.

DDM – dividend discount model – a fundamental method of valuation based on the assumption that the value of stock equals the sum of all discounted future dividends.

FV – Fair Value, calculated based on valuation methods outlined in the document.

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Rating	Difference between FV and price at recommendation
Buy	Above 10%
Hold	In between (and including) -10% and 10%
Sell	Below 0%

IPOPEMA Research - Distribution by rating category (Jan 1 – Mar 31, 2019)

	Number	%
Buy	2	29%
Hold	1	14%
Sell	4	57%
Total	7	100%

Rating History – LW Bogdanka

Date	Recommendation	Fair Value	Price at recommendation	Author
02.08.2019	BUY	380.0	330.0	Michał Wojciechowski
16.04.2020	BUY	480.0	384.0	Michał Wojciechowski