

VIGO System

Detectors are immune to the virus

2Q20 preliminary revenues showed that VIGO is not vulnerable to the COVID-19 pandemic. With the main contracts secured, we now look forward to 2021, which could become revolutionary for both MID-IR detectors and materials for semiconductor segments. We raise our forecast for 2020E to reflect lower risk related to the pandemic, and maintain the assumptions regarding introduction of affordable detectors and material for photonics. We estimate VIGO's revenues at PLN 58.5m (+36% y/y, +10% vs. our previous forecast) and PLN 73.6m (+26% y/y, +6% vs. our previous forecast) in 2020/21E, respectively. We also believe that reaching a higher scale should help the company return to former profitability, with net income of PLN 20.3m (+46% y/y, +34% vs the previous forecast) and PLN 26.6m (+31% y/y, +16% vs the previous forecast) in 2020/21E (net margin of 35/36%, vs. 32% in 2019 and in average 36% in 2016-18). Based on our forecasts, the company is trading at a P/E of 19.7x and 15.1x in 2020/21E and EV/EBITDA of 14.5x and 11.2x in 2020/21E, which we see as an attractive level. We maintain our BUY recommendation and increase our FV to PLN 650.0 from PLN 480.0.

COVID-19 impact on the business likely to be limited

2Q20 preliminary revenues reported by the company reached PLN 13.9m, representing 65% y/y and 12% q/q growth. We highlight that the industry segment, which seems to us to be the most exposed to economic slowdown, became one of the main drivers of growth with a 44% increase q/q after 2 quarters of underperformance. No less important is the positive outlook from the board which during its June conference confirmed that no material negative effects of COVID-19 on VIGO's business are expected. The board maintained a target of at least 10% y/y growth in the industry segment, which according to the CFO is rather conservative. In effect, we increase our forecast of 2020E revenues from industry to PLN 28.8m, up 13% y/y from previously expected PLN 22.8m (decline of 11% y/y, which now seems to us as a very pessimistic scenario).

Strong 2020 pipeline confirmed ahead of potentially revolutionary 2021

With the recent confirmation of contracts with Safran Aerotechnics (EUR 5.4m) and a contract announced in May with Caterpillar (EUR 3.0m), both record high for VIGO, the company firmly secured its pipeline for 2020E. Now we look forward to 2021E, when the first contracts for affordable detectors should become visible in VIGO's results (we maintain our forecast of 5k volume and PLN 3m revenues). Besides new lines of detectors, 2021E should also bring a material increase in the semiconductor segment. Recent 2Q flat q/q results from this segment represent, in our opinion, a risk to reaching the EUR 1m revenue target this year. On the other hand, the construction of the first Polish VCSEL laser was a substantial step forward, we think, and opening an office in Asia could result in a speed-up of technology commercialization. We maintain our forecast of segment revenues of PLN 4m in 2020E and PLN 20m in 2024E, estimating that in 2024E the semiconductor segment will constitute 11% of VIGO's EBITDA (PLN 6m).

Figure 1. Summary of financial data (PLN m)

	2017	2018	2019	2020E	2021E	2022E
Revenues	27.2	37.4	42.9	58.5	73.6	83.5
EBITDA	12.6	16.2	18.6	27.9	36.3	39.1
Net income	9.5	13.0	13.9	20.3	26.6	28.3
EV/EBITDA (x)	17.4	12.5	15.6	14.5	11.2	10.3
P/E (x)	24.2	15.4	19.6	19.7	15.1	14.2
DY	2.6%	0.0%	0.0%	0.0%	2.5%	5.0%

Source: Company, IPOPEMA Research

TMT

VIGO SYSTEM

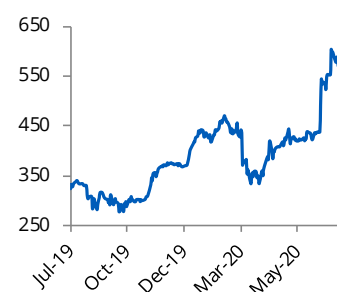
BUY

FV PLN 650.0 from PLN 480.0

18% upside

Price as of 28 July 2020 PLN 550.0

maintained



Share data

Number of shares (m)	0.7
Market cap (EUR m)	91.2
12M avg daily volume (k)	0.6
12M avg daily turnover (EUR m)	0.06
12M high/low (PLN)	630.0/262.0
WIG weight (%)	0.1
Reuters	VGOP.WA
Bloomberg	VGO PW

Total performance

1M	+1.9%
3M	+34.1%
12M	+62.7%

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 650

Mkt Cap EUR 91.2m

upside +18%

Valuation multiples	2018	2019	2020E	2021E	2022E
P/E (x)	15.4	19.6	19.7	15.1	14.2
EV/EBITDA (x)	12.5	15.6	14.5	11.2	10.3
EV/Sales (x)	5.4	6.8	6.9	5.5	4.8
P/BV (x)	3.7	4.0	4.5	3.8	3.5
FCF yield (%)	-8.0%	-5.5%	2.0%	2.7%	6.1%
DY (%)	0.0%	0.0%	0.0%	2.5%	5.0%

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	27.9	36.4	38.9
BVPS (PLN)	74.4	93.4	121.2	143.7	155.3
FCFPS (PLN)	-22.3	-22.0	11.3	14.9	33.3
DPS (PLN)	0.0	0.0	0.0	13.9	27.3

Change y/y (%)	2018	2019	2020E	2021E	2022E
Revenues	37.7%	14.6%	36.4%	25.9%	13.5%
EBITDA	29.1%	14.6%	50.2%	30.0%	7.8%
EBIT	31.0%	9.8%	54.5%	25.6%	6.4%
Net profit	36.5%	6.6%	46.2%	30.8%	6.7%

Leverage and return	2018	2019	2020E	2021E	2022E
Gross margin (%)	54.7%	63.0%	67.1%	63.3%	59.7%
EBITDA margin (%)	43.4%	43.4%	47.8%	49.3%	46.8%
EBIT margin (%)	34.1%	32.7%	37.0%	36.9%	34.6%
Net margin (%)	34.8%	32.4%	34.7%	36.1%	33.9%
Net debt / EBITDA (x)	0.2	1.1	0.4	0.3	0.2
Net debt / Equity (x)	0.1	0.3	0.1	0.1	0.1
Net debt / Assets (x)	0.0	0.2	0.1	0.1	0.0
ROE (%)	27.3%	22.7%	26.0%	27.5%	26.0%
ROA (%)	17.8%	12.7%	14.4%	15.7%	15.1%
ROIC (%)	29.0%	19.1%	23.0%	25.2%	24.5%

IR detectors	2018	2019	2020E	2021E	2022E
Revenues	37.4	42.7	54.5	66.9	73.4
Industry	20.3	25.4	28.8	33.1	37.7
Military	8.1	8.1	11.2	18.1	12.7
Transport	5.8	5.8	8.0	8.1	9.0
Medicine and Science	2.8	3.1	6.0	4.2	5.8
Others	0.4	0.4	0.5	0.5	0.5
Affordable d. module	0.0	0.0	0.0	2.9	7.7
EBIT	12.8	14.3	21.3	26.2	27.0
EBITDA	16.2	18.8	26.8	34.5	36.4
net profit	13.0	14.1	20.0	25.5	26.4
net profit margin	34.8%	33.1%	36.6%	38.2%	35.9%

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	-19.1	-23.6	-27.9
Materials and energy	-6.4	-8.5	-9.5	-12.9	-15.2
D&A	-3.5	-4.6	-6.3	-9.1	-10.2
Services and other	-2.8	-3.7	-4.5	-4.9	-5.4

P&L (PLN m)	2017	2018	2019	2020E	2021E	2022E
Revenues	27.2	37.4	42.9	58.5	73.6	83.5
COGS	-11.3	-16.9	-15.9	-19.3	-27.0	-33.6
Gross profit	15.9	20.5	27.0	39.2	46.6	49.9
Selling costs	-1.6	-2.2	-2.4	-2.6	-3.3	-3.6
G&A costs	-5.5	-7.7	-12.2	-16.2	-18.3	-20.3
Other operating income (cost) net	1.0	2.1	1.6	1.3	2.2	3.0
EBITDA	12.6	16.2	18.6	27.9	36.3	39.1
EBIT	9.8	12.8	14.0	21.7	27.2	28.9
Financial income (cost) net	-0.1	0.3	-0.1	-1.1	-0.4	-0.3
Pre-tax profit	9.6	13.0	13.9	20.5	26.8	28.6
Income tax	-0.1	0.0	0.0	-0.2	-0.3	-0.3
Net profit	9.5	13.0	13.9	20.3	26.6	28.3

BALANCE SHEET (PLN m)	2017	2018	2019	2020E	2021E	2022E
Non-current assets	38.0	67.4	98.8	114.8	136.6	142.1
Goodwill and intangible assets	6.3	6.8	12.4	17.3	20.6	23.7
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	71.2	85.7	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	39.4	46.8	48.5
Inventories	3.4	4.1	6.9	8.0	9.9	11.0
Trade receivables	2.4	5.6	7.1	7.7	9.7	11.0
Cash and equivalents	11.4	9.3	12.8	22.5	26.0	25.3
Other current assets	1.2	3.7	2.1	1.2	1.2	1.2
Total assets	56.4	90.2	127.7	154.2	183.4	190.6
Equity	41.2	54.2	68.1	88.4	104.8	113.2
Non-current liabilities	6.6	17.9	47.1	52.1	65.1	63.2
Loans and borrowings	0.0	5.5	26.8	27.8	32.8	28.8
Other non-current liabilities	6.6	12.4	20.3	24.2	32.3	34.3
Current liabilities	8.7	18.1	12.5	13.7	13.5	14.3
Trade payables	0.9	7.0	1.6	2.6	4.1	5.6
Loans and borrowings	0.0	7.9	6.5	6.4	4.4	3.4
Other current liabilities	7.8	3.3	4.5	4.7	5.0	5.3
Equity & liabilities	56.4	90.2	127.7	154.2	183.4	190.6
Cash conversion cycle (days)	60.7	-8.8	2.6	48.0	41.0	35.0
Gross debt (PLN m)	0.0	13.3	33.3	34.2	37.2	32.2
Net debt (PLN m)	-11.4	4.0	20.5	11.8	11.2	6.9

CASH FLOW (PLN m)	2017	2018	2019	2020E	2021E	2022E
Operating cash flow	12.3	9.1	15.4	24.5	30.5	33.9
Pre-tax profit	9.6	13.0	13.9	20.5	26.8	28.6
D&A	2.8	3.5	4.6	6.3	9.1	10.2
Change in WC	0.6	-5.9	-1.6	-1.1	-2.4	-0.9
Other	-0.7	-1.5	-1.5	-1.2	-3.1	-3.9
Investment cash flow	-5.0	-24.6	-31.1	-16.0	-19.4	-9.4
Grants	4.0	1.9	8.9	6.3	11.5	6.3
CAPEX excl. R&D	-2.4	-21.6	-32.0	-7.8	-19.9	-3.1
CAPEX on R&D	-5.9	-4.3	-7.4	-10.5	-11.0	-12.5
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	1.2	-7.5	-25.2
Change in equity	0.0	0.0	0.0	0.0	0.0	0.0
Change in debt	-0.4	13.3	19.7	1.5	3.0	-5.0
Interest paid	0.0	-0.1	-0.4	-0.3	-0.4	-0.3
Dividend	-6.0	0.0	0.0	0.0	-10.2	-19.9
Other	0.0	0.0	0.0	0.0	0.0	0.0
Change in cash	0.9	-2.2	3.5	9.7	3.6	-0.7
Cash as of eop	11.4	9.3	12.8	22.5	26.0	25.3

Source: Company data, IPOPEMA Research,

Valuation

Figure 2. Valuation Snapshot

Valuation method	Weight (%) FV (PLN/share)					
DCF	100%					
Peers	0%					
Fair value	650.0					
Current price	550.0					
Upside/downside	18%					
DCF Valuation						
	2020E	2021E	2022E	2023E	2024E	TV
Revenues	58.5	73.6	83.5	101.1	121.2	121.2
- change y/y	36%	26%	13%	21%	20%	
EBITDA	27.9	36.3	39.1	47.5	56.5	56.5
- EBITDA margin	47.8%	49.3%	46.8%	47.0%	46.6%	46.6%
- change y/y	50%	30%	8%	21%	19%	
EBIT norm.*	19.3	23.7	24.7	31.4	38.3	38.3
Tax rate	1%	1%	1%	1%	1%	9%
NOPAT	19.1	23.5	24.4	31.1	37.9	34.8
- change y/y	58%	23%	4%	27%	22%	
D&A	6.3	9.1	10.2	11.2	12.3	12.3
Change in WC	-1.1	-2.4	-0.9	-2.8	-3.1	-2.5
CAPEX	-16.0	-19.4	-9.4	-11.3	-12.8	-12.3
FCF	8.2	10.9	24.3	28.2	34.3	32.4
RFR	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
Beta	1.81	1.77	1.67	1.59	1.52	1.59
Risk premium	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Cost of Equity	10.8%	10.6%	10.2%	9.8%	9.4%	9.7%
After tax cost of debt	1.0%	1.0%	1.0%	1.0%	1.0%	0.9%
% D	28%	26%	22%	18%	14%	17%
% E	72%	74%	78%	82%	86%	83%
WACC	8.1%	8.1%	8.1%	8.2%	8.2%	8.2%
Discount factor (%)	97%	89%	83%	76%	71%	
FCF PV (PLN m)	8.0	9.7	20.1	21.5	24.3	
FCF PV 2020-24E (PLN m)	83.6					
Residual growth rate (%)	2.5%					
Discounted residual value (PLN m)	407.8					
EV (PLN m)	491.4					
Investments in associates	3.0					
Dividend paid (PLN m)	0.0					
Net debt (PLN m, 4Q19)	20.5					
Equity value (PLN m)	473.9					
Number of shares (diluted, m)	0.7					
FV (PLN)	650.0					
Current price	550.0					
Upside/downside potential	18%					
DCF Sensitivity analysis						
	Residual growth rate (%)	WACC (%)				
		7.2%	7.7%	8.2%	8.7%	9.2%
	1.5%	644	600	562	529	501
	2.0%	700	647	602	564	532
	2.5%	767	703	650	605	567
	3.0%	851	771	706	652	607
	3.5%	956	854	774	709	655
	Affordable detection module volume (2024E)	EUR Net price per affordable detection module (2024E)				
		42	63	95	142	213
	10.0	501	510	524	545	576
	20.0	519	538	566	608	670
	40.0	556	594	650	733	859
	60.0	594	650	733	859	1047
	90.0	650	733	859	1047	1329
	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%	631	646	677	738	860
	30.0%	628	639	663	711	805
	40.0%	622	633	650	683	751
	50.0%	616	626	636	656	696
	60.0%	610	618	622	629	642

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	7 574	39.6	33.3	29.2	19.3	16.4	14.7	0.9%	5.0%	8.5%	9.0%
TELEDYNE TECH	11 334	31.8	28.2	25.8	19.7	17.2	15.3	n.a.	3.1%	4.6%	n.a.
NIPPON CERAMIC	554	33.2	27.2	22.6	n.a.	n.a.	n.a.	2.1%	-0.2%	-3.3%	3.6%
II-VI INC	4 848	21.9	16.6	13.5	14.4	9.8	8.5	n.a.	33.4%	52.9%	11.8%
OPTEX GROUP CO L	443	29.7	18.6	14.9	n.a.	n.a.	n.a.	2.4%	3.8%	10.9%	4.6%
VISUAL PHOTONICS	538	27.0	21.6	16.6	15.1	11.9	10.0	2.8%	16.3%	22.7%	19.4%
IPG PHOTONICS	9 665	60.6	38.7	27.1	28.1	19.5	14.1	0.0%	7.3%	25.9%	6.9%
MEDIAN		31.8	27.2	22.6	19.3	16.4	14.1	2.1%	5.0%	10.9%	8.0%
VIGO System	107	19.7	15.1	14.2	14.5	11.2	10.3	0.0%	24.9%	26.8%	26.0%
premium/discount to all peers (median)		-38%	-45%	-37%	-25%	-32%	-27%				
Waga		25%	25%		25%	25%					

Implied Price (PLN)

850.2

Source: IPOPEMA Research, Bloomberg, data downloaded on 28.07.2020.

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

	2020E		Change (%)	2021E		Change (%)	2022E		Change (%)
	New	Previous		New	Previous		New	Previous	
Revenues	58.5	53.2	10%	73.6	69.5	6%	83.5	81.3	3%
EBITDA	27.9	22.4	25%	36.3	32.7	11%	39.1	37.3	5%
EBIT	21.7	15.8	37%	27.2	23.6	15%	28.9	27.3	6%
Net income	20.3	15.2	34%	26.6	22.8	16%	28.3	26.6	6%
Capex net	(16.0)	(21.6)	-26%	(19.4)	(13.5)	44%	(9.4)	(9.2)	2%

Source: IPOPEMA Research

Financial Forecasts 2020-22E

Figure 5. VIGO System – financial forecasts 2020-22E

PLNm	2017	2018	2019	2020E	2021E	2022E
Revenues	27.2	37.4	42.9	58.5	73.6	83.5
Industry	15.6	20.3	25.4	28.8	33.1	37.7
Military	4.8	8.1	8.1	11.2	18.1	12.7
Transport	3.5	5.8	5.8	8.0	8.1	9.0
Other	3.2	3.2	3.5	6.5	4.7	6.3
Affordable detection module	0.0	0.0	0.0	0.0	2.9	7.7
Materials for photonics	0.0	0.0	0.2	4.0	6.7	10.1
EBIT	9.8	12.8	14.0	21.7	27.2	28.9
Detection modules	9.8	12.8	14.3	21.3	26.2	27.0
Materials for photonics	0.0	0.0	-0.3	0.3	1.0	2.0
EBITDA	12.6	16.2	18.6	27.9	36.3	39.1
Net profit	9.5	13.0	13.9	20.3	26.6	28.3
Gross margin on sales (%)	58%	55%	63%	67%	63%	60%
EBITDA margin (%)	46%	43%	43%	48%	49%	47%
Net margin (%)	35%	35%	32%	35%	36%	34%
Operating Cash Flow	12.3	9.1	15.4	24.5	30.5	33.9
CAPEX (before grants)	-9.1	-26.5	-40.0	-22.3	-30.9	-15.7
Grants*	4.0	1.9	8.9	6.3	11.5	6.3
Net debt/ (Net cash)	-11.4	4.0	20.5	11.8	11.2	6.9

Source: Company, IPOPEMA Research

We increase forecasted 2019-22E CAGR for the IR detector segment to 20% (from 18% previously) due to expected solid 2020E performance. After publication of firm preliminary 1H20 revenues of PLN 26.3m (up 32% y/y), signing a new contract with Caterpillar and confirming the contract with Safran, the current year's situation for the company seems much clearer with no material impact of the pandemic on sales revenues. We forecast VIGO to reach PLN 58.5m in revenues this year, up 36% y/y including PLN 28.8m from the industry segment (up 13% y/y), PLN 11.2m from military (up 39% y/y, of which PLN 7.8m will be assigned to the contract with Safran), PLN 8.0m in revenues from transport and PLN 6.0m from medicine and science. We maintain our forecast for the semiconductor segment of PLN 4m in revenues this year, expecting that most of this amount will arrive in 4Q20E. In 2021E we estimate revenues of PLN 73.6m (up 26% y/y), driven primarily by industry and military segments. In the long run we see a potential surprise in affordable detectors and semiconductor materials, though in our forecast we assume a rather evolutionary scenario with the affordable detectors reaching PLN 8m in revenues and material for semiconductors another PLN 10m in 2022E.

We forecast EBITDA at PLN 27.9m (up 50% y/y) in 2020E and PLN 36.3m (up 30% y/y) in 2021E. The main operating costs of the company are salaries, which we estimate to reach PLN 15.7m in 2020E (up 19% y/y) and PLN 19.4m in 2021E (up 24% y/y), driven by growth of the new business segment. The cost of materials and energy, which we estimate respectively at PLN 9.5m in 2020E and PLN 12.9m in 2021E, should increase more rapidly from 2021E due to both expansion in materials for photonics and the start of production of affordable detectors. We expect that with declining unit fixed costs, the company will decrease detector prices, which should result in an increase in material costs' share in the overall structure.

We estimate EBIT to reach PLN 21.7m (up 54% y/y) in 2020E and PLN 27.2m (up 26% y/y) in 2021E. We estimate D&A at PLN 6.3m in 2020E and PLN 9.1m in 2021E, when it is likely to increase due to completion of construction of the new clean room.

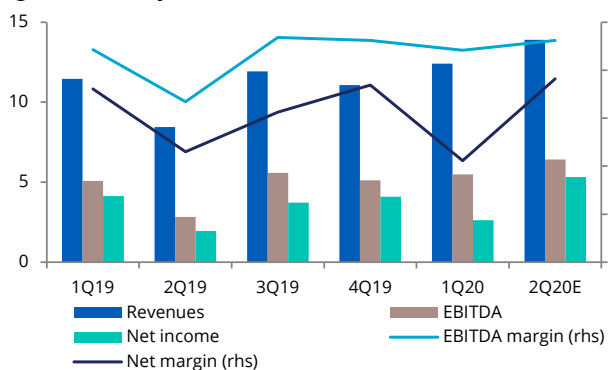
We forecast net income at PLN 20.3m (up 46% y/y) in 2020E and PLN 26.6m (up 31% y/y) in 2021E. We estimate the detector segment's net margin at 37% and 38% in 2020-21E (vs 33% in 2019) and materials for photonics' margin at 8% and 15% in 2020-21E (vs the board's expectation of ca. 30% net margin to be achieved in the mid-term). We expect VIGO to maintain a favourable effective tax rate of ca. 1% in the period of our detailed forecast.

We forecast net CAPEX, post-grants, at PLN 16.0m and PLN 19.4m in 2020-21E, respectively. We estimate that in 2020E the main drivers for CAPEX will be R&D spending of PLN 10.5m, clean room construction (which we expect to commence in 4Q20E, with PLN 6m in expenses for this year), and a new technology incubator (PLN 4m budget for 2020, of which to date PLN

1.2m was spent). In 2021E we expect the company to finish its clean room construction (expenses of PLN 17.2m), and increase R&D spending to PLN 11.0m. We also expect that VIGO will receive PLN 6.3m and PLN 11.5m in grants in 2020/21E (including an already-confirmed PLN 6m grant for the clean room construction).

Dividends. We expect the company to return to dividend payments from 2021E, with 50% of 2020E's net income to be allocated to this end (DPS PLN 13.9, DY 2.5%). We believe that this scenario is especially likely as the board was considering a dividend payout even in 2020E, though it was not carried out due to uncertainty during the pandemic. Looking forward, we even see potential for an increase of the Dividend Payout Ratio to 75%, as the company will complete its investment program and does not plan to materially reduce its debt level.

Figure 6. VIGO System results in 1Q19-2Q20E (PLN m)



Source: Company, IPOPEMA Research

Figure 7. VIGO System – Structure of sales in 2017-2022E

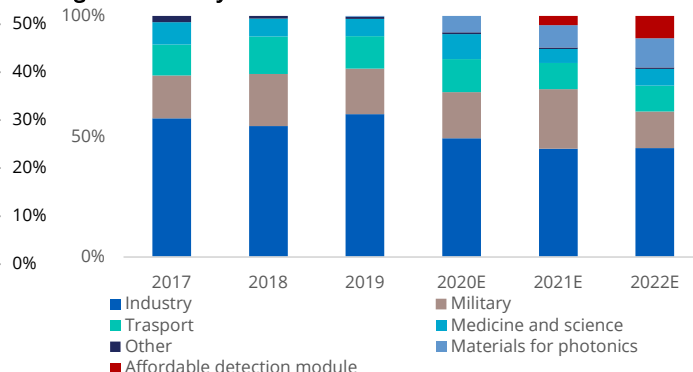
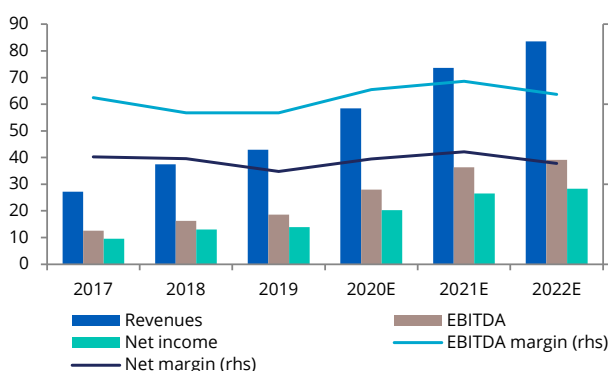
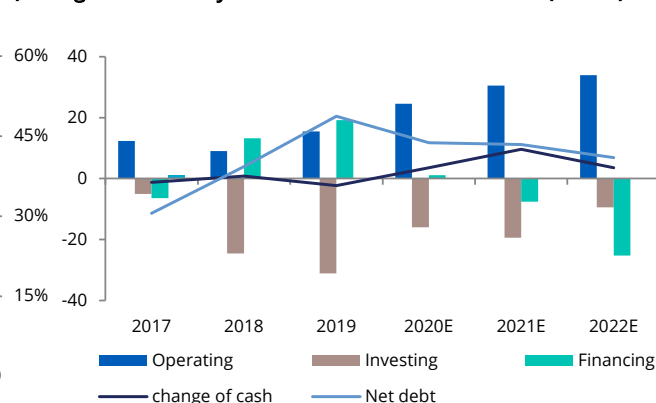


Figure 8. VIGO System – Revenues, EBITDA, Net income (PLN m) in 2017-2022E



Source: Company, IPOPEMA Research

Figure 9. VIGO System - Cash Flow in 2017-2022E (PLN m)



2Q20E Results Preview

Figure 10. VIGO System 2Q20E results preview

P&L (PLN m)	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20E	y/y	q/q
Sales revenues	11.5	8.4	11.9	11.1	12.4	13.9	65%	12%
Industry	7.8	6.1	6.7	4.8	5.3	7.5	24%	44%
Military	0.2	0.5	3.5	3.9	0.9	3.0	540%	234%
Transport	2.9	1.3	0.9	0.7	2.3	1.9	42%	-19%
Medicine and science	0.5	0.4	0.7	1.4	3.5	1.0	115%	-72%
Other	0.1	0.1	0.1	0.1	0.1	0.1	15%	46%
Materials for photonics	0.0	0.0	0.0	0.2	0.4	0.4	na	3%
EBITDA	5.1	2.8	5.6	5.1	5.5	6.4	126%	16%
EBIT	4.2	1.8	4.4	3.6	4.0	4.8	161%	20%
Net profit	4.1	1.9	3.7	4.1	2.6	5.3	171%	100%
Profitability ratios	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	y/y	q/q
Gross margin on sales	64.0%	58.3%	63.8%	64.7%	61.4%	63.4%	5.2 pp	2 pp
EBITDA margin	44.3%	33.4%	46.8%	46.2%	44.2%	45.8%	12.4 pp	-0.4 pp
EBIT margin	36.4%	21.8%	36.7%	32.9%	32.1%	34.5%	12.7 pp	1.6 pp
Net profit margin	36.1%	23.0%	31.3%	36.9%	21.2%	37.9%	14.9 pp	1 pp
Cash Flow Statement (PLN m)	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	y/y	q/q
Net CAPEX (after grants)	-9.8	-13.3	-9.4	1.4	-4.4	-2.9	-78.1%	-33.1%
Net Debt/ (Net cash)	13.2	20.4	27.2	20.5	19.6	18.0	-12%	-8%

Source: Company, IPOPEMA Research

VIGO System is due to publish its 2Q20E results on 28 August 2020.

We expect 2Q20E revenues at PLN 13.9m (+65% y/y, in line with preliminary numbers), EBITDA at PLN 6.4m (+126% y/y) and net profit at PLN 5.3m (171% y/y) to be driven by:

Revenues. The company already published preliminary revenues of PLN 13.9m (+65% y/y, +12% q/q), which includes PLN 7.5m from Industry segment (+24% y/y, +44% q/q), PLN 3.0m from Military segment (+540% y/y), PLN 1.9m from Transport segment (+42% y/y) and PLN 1.0m from Medicine and Science (+115% y/y). The new materials for semiconductors segment generated PLN 0.4m revenues, flat q/q.

Gross margin. We expect the company's gross margin to arrive at 63% vs 61% in 1Q20 due to increasing revenues and rather fixed level of production costs (mainly flat salaries cost).

SG&A costs. We expect PLN 5.1m of SG&A cost (+8% q/q), assuming higher costs of bonuses based on financial results in 2Q.

EBITDA. We forecast EBITDA of PLN 6.4m (+126% y/y) and EBIT of PLN 4.8m (+161% y/y).

Net profit. We forecast PLN 5.3m net profit (+171% y/y), driven by positive changes in foreign exchange rates and immaterial level of income tax.

CAPEX. In 2Q20E we expect VIGO to spend PLN 3.3m, including PLN 2.3m on R&D, PLN 1.0m on ongoing investment program. We forecast the company to receive PLN 0.4m in grants.

Net Debt. We forecasts PLN 18.0m of net debt level at the quarter's end, driven by PLN 32.1m of gross debt and PLN 14.1m of cash.

Opinion. Positive. 2Q20E seems to be a strong quarter with no visible negative impact of COVID-19 pandemic on VIGO's results. We do not expect substantial surprises and big announcements from the board in the report or during 2Q20E conference. More insights are likely to be provided at the year's end, when VIGO should achieve the first sales of affordable detectors and the material increase in semiconductors segment.

Appendix 1 - 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 growth 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 require 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 vastly 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 2 - 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 11. 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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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.

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Buy	23	55%
Hold	11	26%
Sell	8	19%
Total	42	100%

Rating History - VIGO System

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
29.07.2020	BUY	650.0	550.0	Michał Wojciechowski