

VIGO Photonics

Affordable detectors on the way

Following uninspiring performance in 2024, we expect VIGO to achieve a rebound this year, driven by new products, expansion in the US and strong demand from the Polish military sector. We note that in 2025E the company is set to deliver its first large-scale commercial sales of affordable detectors of 10k+ units to a single client. According to the management, the potential client's future demand might be several times larger and the company aims to expand deliveries to other entities in the same industry. We also point out the still strong demand from the US and expanding investments in the Polish military segment, which drives VIGO's sales volumes. Moreover, we expect the company to sign a contract with PCO for IR Arrays deliveries in coming months, which might be a game changer for the company (we estimate related sales of PLN 7.0m and PLN 22.4m in 2026E/27E). In total in 2025E/2026E we forecast PLN 95.2m/120.4m in revenues (up 21%/27% y/y) and PLN 1.0m/15.0m in norm. net income (vs. PLN 5.2m loss in 2024E). In the coming years we expect the company to sequentially improve its profitability due to decreasing inflationary pressure and stabilized availability of components. On our forecast, VIGO trades at 2025E/26E EV/EBITDA of 23.8x/12.4x, representing respectively an 87%/19% premium to photonic peers. We maintain our BUY recommendation and decrease our Fair Value to PLN 500.0 (17% upside), due to significantly lower performance in 2024E vs. our previous expectations.

New products, US expansion and strong military demand to drive 2025E growth. In 2025E we expect VIGO to deliver PLN 95m in revenues, up 21% y/y, driven primarily by the industrial and military segments. We note that the industry segment following years of solid performance (2017-23 CAGR of 19%) noted a substantial 24% drop in sales in 2024 to PLN 34m, due to weakness of the semiconductor market affecting companies' top clients. In 2025E we forecast a significant sales rebound in this segment to PLN 43m, up 27% y/y, driven primarily by contracts for sales of new products at an est. PLN 6m value (affordable detectors, liquid nitrogen cooled detectors), as well as further expansion on the US market. Alongside this, we expect further expansion of the military segment's sales to PLN 28m, up 20% y/y, driven primarily by military investments in Poland (up 35% y/y vs. an est. 67% y/y increase in 2024E). On the other hand, despite our expectations of a substantial improvement in sales, we forecast only slightly positive norm. net result in 2025E (PLN 1.0m) as we anticipate the cost base to be to some extent affected by expansion of IR Arrays' and HyperPIC projects.

IR Arrays' production contract to drive 2026-28E sales expansion. We believe that inking of the IR Arrays production agreement with PCO might take place within the coming months. We note that a letter of intent in this regard was signed already in 3Q23; however, the PCO board has been replaced in August 2024, which slowed down the negotiation process. We currently expect completion of an IR Arrays production line in mid-2026E with initial sales of 50+ units that year (PLN 7m in revenues). Subsequently in 2027E/28E we expect VIGO to increase production up to 174 and 263 units, becoming the major provider of this equipment for PCO, which translates to respectively PLN 22.4m/34.0m in sales for the company.

Figure 1. Summary of financial data (PLN m)

	2022	2023	2024E	2025E	2026E	2027E
Revenues	67.9	75.4	78.3	95.2	120.4	155.6
Norm. EBITDA	15.0	20.0	12.0	16.2	31.4	49.2
Norm. net profit	7.7	11.3	-5.2	1.0	15.0	30.7
EV/EBITDA (x)	24.6	19.7	33.8	23.8	12.4	7.6
P/E (x)	42.9	31.6	na	362.1	25.0	12.2

Source: Company, IPOPEMA Research

TMT | Technology

VIGO PHOTONICS

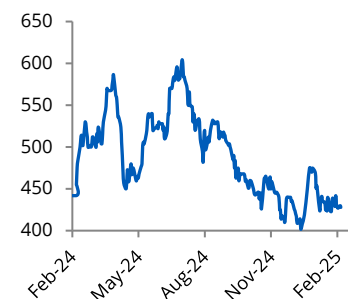
BUY

FV PLN 500.0 from PLN 600.0

17% upside

Price as of 11 February 2025 PLN 428.0

Maintained



Share data

Number of shares (m)	0.875
Market cap (EUR m)	89.8
12M avg daily volume (k)	0.4
12M avg daily turnover (EUR m)	0.1
12M high/low (PLN)	604 / 400
WIG weight (%)	0.1
Reuters	VGOP.WA
Bloomberg	VGO PW

Total performance

1M	-4.3%
3M	-3.8%
12M	-4.0%

Shareholders

Warsaw Equity Management	14.3%
Józef Piotrowski	9.8%
Allianz OFE	6.7%
Investors TFI	6.4%
Janusz Kubrak	5.5%
Others	75.8%

Analyst

Michał Wojciechowski
Michal.Wojciechowski@ipopema.pl
+ 48 22 236 92 69

VIGO Photonics*

BUY

FV PLN 500

Mkt Cap EUR 89.8m

upside +17%

Valuation multiples	2023	2024E	2025E	2026E	2027E
P/E (x)	31.6	na	362.1	25.0	12.2
EV/EBITDA (x)	19.7	33.8	23.8	12.4	7.6
EV/Sales (x)	5.2	5.2	4.0	3.2	2.4
P/BV (x)	1.8	2.2	2.0	1.8	1.6
FCF yield (%)	0.7%	-3.0%	-3.4%	1.5%	7.5%
DY (%)	0.0%	0.0%	0.0%	0.0%	0.0%

Per share	2023	2024E	2025E	2026E	2027E
No. of shares (m units)	0.7	0.9	0.9	0.9	0.9
norm. EPS (PLN)	15.5	-6.0	1.2	17.1	35.1
BVPS (PLN)	271.9	219.2	219.5	233.4	268.5
FCFPS (PLN)	3.8	-13.8	-15.0	6.7	31.9
DPS (PLN)	0.0	0.0	0.0	0.0	0.0

Change y/y (%)	2023	2024E	2025E	2026E	2027E
Revenues	11.1%	3.9%	21.5%	26.5%	29.2%
Norm. EBITDA	32.8%	-40.0%	34.9%	94.5%	56.4%
EBIT	29.6%	na	na	591.0%	102.0%
Norm. net profit	46.9%	na	na	1350.9%	104.6%

Leverage and return	2023	2024E	2025E	2026E	2027E
Gross margin (%)	49.0%	43.4%	40.8%	47.3%	52.3%
Norm. EBITDA mar. (%)	26.5%	15.3%	17.0%	26.1%	31.6%
EBIT margin (%)	15.2%	-2.7%	2.6%	14.1%	22.0%
Norm. net margin (%)	15.0%	-6.7%	1.1%	12.5%	19.7%
Net debt / EBITDA (x)	2.4	0.3	1.5	0.9	0.2
Net debt / Equity (x)	0.2	0.0	0.1	0.1	0.0
Net debt / Assets (x)	0.2	0.0	0.1	0.1	0.0
ROE (%)	6.7%	-2.7%	0.5%	7.6%	14.0%
ROA (%)	3.9%	-1.7%	0.4%	4.9%	9.3%
ROIC (%)	3.5%	-3.2%	-2.2%	4.1%	10.9%

IR detectors	2023	2024E	2025E	2026E	2027E
Revenues	72.2	69.6	84.2	106.2	137.5
Industry	45.0	34.0	43.1	54.0	62.7
Military	11.6	23.2	27.9	37.9	59.4
Transport	7.9	7.3	7.7	8.4	9.0
Medicine and Science	4.5	5.0	5.4	5.9	6.4
Others	3.2	0.0	0.0	0.0	0.0
EBIT	9.8	-1.8	0.8	13.8	28.9
EBITDA	20.6	15.6	19.2	33.6	49.6
norm. net profit	9.9	-3.9	-0.6	11.8	25.6
n. net profit marg.	13.7%	-5.7%	-1.0%	8.5%	18.6%

Semiconduct. mat.	2023	2024E	2025E	2026E	2027E
Revenues	3.2	8.8	10.9	14.2	18.1
EBIT	1.7	-0.3	1.7	3.2	5.3
EBITDA	3.2	1.6	4.0	5.5	7.6
norm. net profit	1.4	-1.1	1.7	3.2	5.1
n. net profit margin	36.7%	-10.3%	13.3%	19.7%	25.2%

Cost by type	2023	2024E	2025E	2026E	2027E
Salaries, other benefits	-31.8	-37.7	-40.1	-47.7	-56.8
Materials and energy	-17.1	-19.4	-22.8	-27.8	-35.3
D&A	-12.4	-19.1	-20.8	-22.1	-23.1
Services and other	-10.0	-13.2	-16.1	-18.5	-20.6

P&L (PLN m)	2022	2023	2024E	2025E	2026E	2027E
Revenues	67.9	75.4	78.3	95.2	120.4	155.6
COGS	-32.8	-38.5	-44.3	-56.3	-63.5	-74.2
Gross profit	35.1	36.9	34.0	38.9	56.9	81.4
Selling costs	-10.4	-9.4	-13.4	-15.4	-17.7	-23.1
G&A costs	-20.6	-18.5	-24.5	-30.2	-32.5	-34.8
Other operating income net	4.8	2.4	1.8	9.2	10.2	10.8
EBITDA	18.2	23.8	17.0	23.2	39.1	57.2
Norm. EBITDA **	15.0	20.0	12.0	16.2	31.4	49.2
EBIT	8.8	11.4	-2.1	2.5	16.9	34.2
Financial income (cost) net	-1.1	-0.1	-2.3	-1.4	-1.9	-1.9
Pre-tax profit	7.7	11.3	-5.2	1.0	15.0	32.3
Income tax	-0.5	-14.3	-0.4	-0.2	-2.9	-1.6
Net profit	7.2	-3.0	-5.6	0.8	12.2	30.7
Norm. net profit***	7.7	11.3	-5.2	1.0	15.0	30.7

BALANCE SHEET (PLN m)	2022	2023	2024E	2025E	2026E	2027E
Non-current assets	218.9	225.4	229.1	255.1	265.9	269.3
Goodwill and intangible assets	19.4	29.9	47.1	53.8	57.1	57.3
Expenditures on R&D	53.4	59.2	51.9	62.0	70.7	78.2
Investments in associates	6.7	12.6	14.6	14.6	14.6	14.6
tangible assets	113.5	111.9	104.1	113.5	113.4	109.2
Deferred tax assets	22.0	7.8	7.5	7.3	6.2	6.2
Other non-current assets	3.9	3.9	3.9	3.9	3.9	3.9
Current assets	35.1	96.9	53.5	36.9	48.7	75.8
Inventories	15.3	12.0	16.2	14.1	16.5	20.1
Trade receivables	14.3	15.9	16.7	17.5	21.1	26.9
Cash and equivalents	2.3	2.8	18.0	3.6	9.2	27.0
Other current assets	3.3	66.1	2.5	1.7	1.8	1.9
Total assets	254.0	322.3	282.6	292.0	314.6	345.1
Equity	138.5	198.2	191.7	192.0	204.1	234.8
Non-current liabilities	81.9	80.2	63.7	69.4	77.5	75.8
Loans and borrowings	28.9	19.7	12.3	19.3	29.3	29.3
Other non-current liabilities	53.0	60.5	51.3	50.0	48.2	46.4
Current liabilities	33.6	43.9	27.2	30.6	32.9	34.5
Trade payables	4.4	2.8	3.2	6.8	8.0	9.4
Loans and borrowings	21.4	32.5	9.5	9.0	9.5	9.0
Other current liabilities	7.8	8.6	14.5	14.7	15.4	16.1
Equity & liabilities	254.0	322.3	282.6	292.0	314.6	345.1
Cash conversion cycle (days)	67.0	105.0	91.0	77.0	68.0	64.0
Gross debt (PLN m)	49.4	51.3	21.9	28.4	38.9	38.4
Net debt (PLN m)	47.1	48.5	3.8	24.8	29.7	11.4

CASH FLOW (PLN m)	2022	2023	2024E	2025E	2026E	2027E
Operating cash flow	3.8	15.3	5.0	15.1	17.7	32.1
Pre-tax profit	7.7	11.3	-5.2	1.0	15.0	32.3
D&A	9.4	12.4	19.1	20.8	22.1	23.0
Change in WC	-4.3	0.1	-3.7	4.9	-4.9	-8.0
Other	-9.0	-7.9	-5.2	-11.5	-14.5	-15.2
Investment cash flow	-22.1	-17.4	-19.7	-34.2	-20.6	-11.9
Grants	25.5	14.7	4.1	12.9	13.5	14.4
CAPEX excl. R&D	-23.4	-22.5	-1.8	-19.0	-9.8	-5.8
CAPEX on R&D	-21.4	-4.2	-19.3	-28.0	-24.3	-20.6
Net investment in subsidiaries	-2.9	-5.3	-2.7	0.0	0.0	0.0
other	0.0	-0.1	0.0	0.0	0.0	0.0
Financial cash flow	14.1	2.6	30.0	4.5	8.6	-2.4
Change in equity	0.0	0.0	61.5	0.0	0.0	0.0
Change in debt	15.1	4.9	-29.8	5.9	10.5	-0.5
Interest paid	-1.0	-2.3	-1.8	-1.4	-1.9	-1.9
Dividend	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Change in cash	-4.2	0.5	15.3	-14.5	5.6	17.8
Cash as of eop	2.3	2.8	18.0	3.6	9.2	27.0

Source: Company (2021-23 data), IPOPEMA Research * The presented data does not consolidate HyperPIC project

EBITDA normalized by the non-cash settlement of grants and subsidies to tangible assets; *net profit normalized by non-cash change in deferred tax

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Valuation

Figure 2. VIGO Photonics – Valuation summary (PLN)

Valuation method	Weight (%)	FV (PLN/share)
DCF	100%	500.0
Peers comparison	0%	245.0
Fair value		500.0
Current price		428.0
Upside/downside		17%

Source: IPOPEMA Research

Figure 3. VIGO Photonics - DCF Valuation (PLN m)

	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	TV
Revenues	78.3	95.2	120.4	155.6	187.6	213.5	238.6	266.0	295.0	308.3
- change y/y	4%	21%	27%	29%	21%	14%	12%	12%	11%	
EBITDA	12.0	16.2	31.4	49.2	61.3	69.3	76.3	82.9	89.4	93.4
- EBITDA margin	15.3%	17.0%	26.1%	31.6%	32.7%	32.5%	32.0%	31.2%	30.3%	30.3%
- change y/y	-40%	35%	95%	56%	25%	13%	10%	9%	8%	
EBIT norm.*	-7.1	-4.6	9.3	26.1	38.1	45.8	52.4	58.2	63.8	66.6
Tax rate	-8%	0%	0%	5%	5%	5%	5%	5%	5%	9%
NOPAT	-7.7	-4.6	9.3	24.8	36.2	43.5	49.8	55.3	60.6	60.6
- change y/y				168%	46%	20%	14%	11%	10%	
D&A	19.1	20.8	22.1	23.0	23.2	23.5	24.0	24.7	25.7	25.7
Change in WC	-3.7	4.9	-4.9	-8.0	-6.2	-5.7	-5.3	-5.4	-5.5	-3.2
CAPEX (net, less grants)	-19.8	-34.2	-20.6	-11.9	-13.5	-14.3	-15.2	-16.1	-17.1	-25.7
FCF	-12.1	-13.1	5.9	27.9	39.6	47.0	53.3	58.5	63.6	57.4
Equity risk premium		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Risk free rate		5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
Levered beta		1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4
Cost of Equity		13.6%	14.0%	13.9%	13.7%	13.5%	13.4%	13.3%	13.2%	13.2%
After tax cost of debt		5.9%	5.5%	5.2%	5.2%	5.2%	5.2%	5.2%	5.2%	5.0%
WACC		12.6%	12.7%	12.7%	12.7%	12.7%	12.7%	12.7%	12.7%	12.7%
Discount factor (%)		90%	80%	71%	63%	56%	50%	44%	39%	
FCF PV (PLN m)		-11.8	4.7	19.8	24.9	26.2	26.4	25.7	24.9	
FCF PV 2025E-32E (PLN m)	140.8									
Residual growth rate (%)	4.5%									
Discounted residual value (PLN m)	287.2									
EV (PLN m)	428.0									
Investments in associates	14.6									
Others	0.0									
Net debt (PLN m, 4Q24E)	3.8									
Equity value (PLN m)	438.0									
Number of shares (diluted, m)	0.875									
FV (PLN)	500.0									
Current price	428.0									
Upside/downside potential	17%									

Source: IPOPEMA Research, valuation excluding HyperPIC project, *EBIT normalized by the non-cash settlement of grants and subsidies to tangible assets.

Figure 4. DCF valuation sensitivity analysis

Residual growth rate (%)	WACC (%)				
	11.7%	12.2%	12.7%	13.2%	13.7%
3.5%	494	475	459	444	430
4.0%	518	498	478	461	446
4.5%	546	522	500	482	465
5.0%	578	550	525	504	484
5.5%	616	582	554	529	507

Source: IPOPEMA Research

Figure 5. VIGO Photonics – Peers comparison

COMPANY	Market Cap USD m	P/E (x)			EV/EBITDA (x)			DY 2025E	Revenues CAGR 2023-26E	NI CAGR 2023-26E	ROE 2025E
		2024E	2025E	2026E	2024E	2025E	2026E				
HAMAMATSU PHOTONICS	3,858	18.6	25.9	22.5	9.8	11.6	10.5	2.2%	2.1%	-16.5%	6.3%
TELEDYNE TECHNOLOGIES	23,695	26.2	23.6	21.6	19.2	17.2	15.6	1.0%	3.5%	6.0%	10.1%
NIPPON CERAMIC	492	16.1	14.5	13.2	n.a.	n.a.	n.a.	4.2%	3.6%	5.2%	8.1%
OPTEX GROUP	407	11.7	9.7	7.9	5.9	4.6	3.9	2.7%	8.7%	17.7%	n.a.
VISUAL PHOTONICS	895	41.9	31.8	25.5	26.5	20.0	16.1	2.4%	20.6%	38.3%	26.5%
IPG PHOTONICS	2,697	n.a.	32.0	21.3	n.a.	12.8	9.7	n.a.	-3.7%	-18.7%	6.2%
MEDIAN		18.6	24.7	21.5	14.5	12.8	10.5	2.4%	3.5%	5.6%	8.1%
VIGO PHOTONICS	93	na	362.1	25.0	33.8	23.8	12.4	0.0%	16.9%	9.9%	0.5%
premium/discount to all peers (median)		0%	1364%	16%	134%	87%	19%				
Weight											
			25%	25%		25%	25%				
Implied Price (PLN)		245.0									

Source: IPOPEMA Research, Bloomberg, prices as of on 11.02.2025

Figure 6. VIGO Photonics – change in forecasts 2025E-27E

	2025E		Change (%)	2026E		Change (%)	2027E		Change (%)
	New	Previous		New	Previous		New	Previous	
Revenues	95.2	123.1	-23%	120.4	169.1	-29%	155.6	203.9	-24%
EBITDA	23.2	47.4	-51%	39.1	71.1	-45%	57.2	81.2	-29%
EBIT	2.5	29.6	-92%	16.9	51.5	-67%	34.2	60.7	-44%
Norm. net income	1.0	27.9	-96%	15.0	50.2	-70%	30.7	56.5	-46%

Source: IPOPEMA Research

HyperPIC project financial model

Below we present the simplified financial model for the HyperPIC project. **We highlight that the projections are showed only for presentation purposes** and are not included in our detailed forecasts for VIGO Photonics and are not included in our valuation of the company due to its initial stage and potential multiple factors affecting the final scope and profitability of the investment (however, we believe that considering substantial public aid of EUR 102.9m approved by the European Union, investors should consider the project as major upside potential to our valuation and forecasts).

Below we present our main assumptions in regard to the project:

- **R&D phase in 2023-28E** with total capex of EUR 32.7m; following that period, further R&D of EUR 8m annually.
- **PIC Factory construction in 2027E-2030E** with total capex of EUR 150m; after 2030E we expect maintenance capex of EUR 10m annually.
- **Public aid of EUR 102.9m** received by 2030E.
- **Factory production targeted capacity of ca. 40m PICs**, with PIC targeted unit price of EUR 10.
- **Total sales revenue capacity of up to EUR 400m**, with a capacity/capex to factory ratio of 3.0x, vs. the median for Hamamatsu analysed investments in new facilities at 3.6x.
- Initial price of PIC at EUR 15/unit, decreased to EUR 12/unit in the long term.
- **Start of PIC production in late 2028E at 5% of factory annual capacity** (due to mix of different products we estimate capacity utilization as % of max sales revenue capacity) and **reaching 54% capacity in the long term (2030E+)**.
- **40% of project total budget by 2030E financed by debt** (primarily raised for factory construction).
- Total required equity (not including grants) at nearly EUR 50m to be covered by VIGO or potential partners and clients (potential advance payments for securing dedicated capacity).
- We highlight that the strategic plan for VIGO is to **secure the initial contracts for PIC production already in the R&D phase**; therefore, utilization of production capacity should be already secured to some extent ahead of investment in the factory, which decreases the project risk.

Figure 7. HyperPIC project financial model (EUR m)

HyperPIC NPV (EUR m)	2023	2024E	2025E	2026E	2027E	2028E	2029E	2030E	LT
Sales revenues	0.0	0.0	0.0	0.0	0.0	22.5	97.5	147.0	216.0
Price (EUR/unit)						15.0	15.0	14.0	12.0
Volume (m units)	0.0	0.0	0.0	0.0	0.0	1.5	6.5	10.5	18.0
Capacity utilization						6%	24%	37%	54%
EBIT, norm.	0.0	0.0	0.0	0.0	0.0	-13.0	-20.2	11.1	33.0
EBIT margin						-58%	-21%	8%	15%
NOPLAT	0.0	0.0	0.0	0.0	0.0	-10.5	-16.4	9.0	26.7
D&A	0.0	0.0	0.0	0.0	0.0	10.6	12.2	13.8	18.0
CAPEX (net, incl. grants)	0.0	-1.3	-2.6	-4.3	-29.3	-43.7	-3.9	-12.2	-18.0
Capex gross	0.0	-2.3	-5.3	-8.6	-58.6	-83.2	-20.6	-20.6	-18.0
Grants	0.0	0.9	2.6	4.3	29.3	39.4	16.7	8.5	0.0
Change in NWC	0.0	0.0	0.0	0.0	0.0	-3.4	-11.3	-7.4	-1.5
Financial costs, net	0.0	0.0	0.0	0.0	-1.6	-4.1	-4.1	-4.1	-4.1
Total cash flow	0.0	-1.3	-2.6	-4.3	-30.9	-51.2	-23.4	-0.9	21.1
Discount rate		100%	88%	77%	68%	60%	53%	46%	
PV of CF	0.0	-1.3	-2.3	-3.3	-21.0	-30.5	-12.3	-0.4	
Residual growth rate	4.5%								
NPV (EUR m)	54.2								
NPV (PLN m)	226.1								

Source: IPOPEMA Research

4Q24E results preview

(We already published VIGO's 4Q24E results preview on 23 January 2025)

We forecast 4Q24E revenues at PLN 24.1m (up 54% q/q, in line with preliminary data), norm. EBITDA at PLN 3.3m (vs. immaterial level in 3Q24) and norm. net loss at PLN 0.8m (vs. PLN 4.1m loss quarter ago) to be driven by:

- **Revenues.** VIGO reported preliminary revenues of PLN 24.1m (up 9% y/y, up 54% q/q), including PLN 11.5m in revenues in the industry segment (down 18% y/y, up 53% q/q), PLN 6.9m in military (up 115% y/y, up 70% q/q) and PLN 1.3m in transport (down 10% y/y, up 85% q/q). Materials for the photonics segment generated PLN 2.9m in revenues during the quarter, up 64% y/y and up 55% q/q.
- **Gross margin.** We expect a gross margin of 39% in the quarter, flat q/q.
- **SG&A costs.** We forecast SG&A costs to arrive at PLN 10.1m, up 2% q/q.
- **EBITDA.** We estimate norm. EBITDA of PLN 3.3m (vs. immaterial level quarter ago) and EBIT of PLN 0.0m (vs. PLN -3.1m in 3Q24).
- **Net profit.** We forecast PLN -0.8m of norm. net loss (vs. PLN 3.9m income in 4Q23 and vs. PLN -4.1m loss in 3Q24). We expect a slight negative net financial result and immaterial level of cash income tax.

Figure 8. VIGO Photonics 4Q24E results preview

P&L (PLN m)	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24	2Q24	3Q24	4Q24E	y/y	q/q
Sales revenues	11.7	19.0	16.8	20.3	18.7	17.6	17.2	22.1	15.8	22.7	15.7	24.1	9%	54%
Industry	8.3	8.7	10.7	12.5	11.1	9.2	10.7	14.1	6.8	8.1	7.6	11.5	-18%	53%
Military	0.3	4.7	1.3	1.8	2.8	3.5	2.2	3.2	4.4	7.9	4.0	6.9	115%	70%
Transport	1.5	3.0	1.7	1.6	2.3	2.7	1.4	1.4	2.0	3.3	0.7	1.3	-10%	85%
Medicine and science	1.1	1.2	2.2	2.8	0.9	1.6	1.2	1.3	1.0	1.0	1.5	1.5	20%	0%
Other	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	na	na
Materials for photonics	0.5	1.3	0.8	1.5	1.6	1.2	1.7	1.8	1.6	2.4	1.9	2.9	64%	55%
COGS	-3.1	-9.0	-8.8	-11.9	-9.4	-9.2	-8.6	-11.3	-8.2	-11.8	-9.5	-14.7	30%	54%
gross profit/(loss) on sales	8.6	10.0	8.0	8.4	9.3	8.4	8.6	10.8	7.6	10.9	6.1	9.4	-13%	53%
Other operating revenues	1.8	2.3	2.2	2.1	2.2	1.7	1.7	2.7	2.4	2.4	2.7	2.7	1%	0%
Selling costs	-1.9	-3.4	-3.2	-1.9	-3.0	-1.7	-2.3	-2.4	-2.9	-3.3	-3.5	-3.7	53%	6%
G&A costs	-5.7	-6.5	-4.6	-3.8	-4.2	-4.8	-4.7	-4.7	-5.3	-6.5	-6.3	-6.3	34%	0%
Other operating costs	-1.2	-0.7	-0.8	-0.9	-0.6	-1.1	-0.8	-3.4	-2.4	-1.9	-2.1	-2.1	-39%	0%
EBITDA	3.3	5.0	3.3	6.6	6.5	5.5	5.8	6.3	3.9	6.0	2.0	5.1	-19%	152%
EBITDA znorm.	2.7	4.2	2.5	5.6	5.6	4.5	5.1	5.0	2.3	4.4	0.0	3.3	-34%	6976%
EBIT	1.6	1.7	1.6	3.9	3.7	2.5	2.5	3.0	-0.6	1.5	-3.1	0.0	-99%	na
Net financial revenues	-0.5	-0.1	-1.3	0.8	-0.7	1.7	-2.0	0.9	-0.2	-0.4	-0.9	-0.9	na	0%
Profit (loss) before tax	1.0	1.7	0.3	4.7	3.0	4.2	0.4	3.9	-0.8	0.6	-4.1	-0.8	na	-80%
income tax	2.6	0.9	2.8	-6.7	-0.5	-0.3	0.2	-13.7	0.0	-0.1	-0.3	0.0	-100%	-100%
Net profit	3.6	2.5	3.0	-2.0	2.5	3.9	0.7	-9.8	-0.9	0.5	-4.4	-0.8	-91%	-81%
Norm. net profit	1.0	1.7	0.3	4.7	3.0	4.2	0.4	3.9	-0.8	0.6	-4.1	-0.8	na	-80%

Source: Company, IPOPEMA Research

Appendix 1: Risks to our forecasts and valuation

Between critical in our opinion risks for operations and results of VIGO Photonics 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 2023 40% of revenues were generated from the contracts with 4 clients (vs. in 2022 39%). 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 there is 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).

Risk of key projects failure. We highlight that performance of main new projects like investment in semiconductor materials segment, IR Arrays of PIC technology may result in failure and therefore not generated expected profits for the company or generated higher than anticipated capital expenditures, which may negatively affect financial results and valuation.

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.

Risk of restricting access to materials as a result of legislation. According to EU ROHS directive some substances which are currently used for VIGO's detectors production will be no longer available for use in the future due to their hazardous nature.

Appendix 2: ESG

Below we present our ESG analysis of VIGO Photonics operations:

Environmental. VIGO's detectors are used for analysis and detection of harmful gases, and thus they are used in the 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's active participation (which are a part of the Horizon 2020 European program) are aimed at developing new technologies and devices for water quality control. VIGO is participating in project Waterspy, which targets the development of mobile devices for water quality control (analyzing for bacterial contamination) in important points of water distribution networks. The second project – AQUARIUS – aims to develop a device for spectroscopy for monitoring of oil pollution in transmission networks of drinkable and industrial water, especially in the petrochemical industry. In our opinion, both projects could help to reduce the level of pollution and decrease the number of diseases, especially in developing countries.

VIGO is also investing in the development of detector technology (investment in a new production hall and new clean room), which results in optimization of the production process and lower consumption of materials and energy (affordable detector) and higher yield (with the 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 the UE ROHS directive will be withdrawn from commercial applications in coming years). VIGO has not decided yet when HgCdTe detectors will be removed from its offer, but it is intensively working on substitutes without dangerous compounds (including an affordable detection module).

Water consumption for production is monitored on a daily basis. The company does not use any fossil fuels for heating. It does not have its own heating furnaces. Analyses are carried out once a quarter on the physical and chemical quality of wastewater. So far, no excesses have been recorded. The group generates municipal waste, hazardous waste and outside the installation, as well as other waste related to its activity. Records are kept for the waste specified in the Act.

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

Governance. From 21 November 2014 when VIGO Photonics shares were admitted to trading on the WSE, the company has accepted and complied with WSE governance policy rules. We have positive feedback about VIGO's corporate governance due to: 1) lack of transactions with related parties; 2) market-based salaries of the board; 3) a transparent dividend policy; 4) solid and clear accounting standards and policy, along with high quality presented financial data; and 5) reporting of sales data at the end of each quarter and respecting deadlines for financial reporting. Another 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 the long-term involvement of the board and its professional qualifications. The company also holds regular meetings with investors after the publication of quarterly earnings, when the board is ready to answer shareholders' questions.

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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.

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	Number	%
Buy	48	62%
Hold	20	25%
Sell	10	13%
Total	78	100%

Rating History – VIGO Photonics

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
08.12.2020	BUY	660.0	550.0	Michał Wojciechowski
19.05.2021	BUY	850.0	760.0	Michał Wojciechowski
13.12.2021	BUY	750.0	682.0	Michał Wojciechowski
24.08.2022	BUY	660.0	556.0	Michał Wojciechowski
28.03.2023	HOLD	600.0	566.0	Michał Wojciechowski
19.06.2023	UNDER REVIEW	-	652.0	Michał Wojciechowski
19.02.2024	BUY	600.0	484.0	Michał Wojciechowski
21.06.2024	BUY	600.0	540.0	Michał Wojciechowski
12.02.2025	BUY	500.0	428.0	Michał Wojciechowski