

IQE

H119 results update

Adjusting to supply chain shifts

As flagged in the June trading update, IQE's H119 performance was affected by wireless customers cutting back inventory levels in response to lengthening mobile phone replacement cycles and the ongoing trade war between the US and China. Encouraged by the successful qualification, commencement of initial production and receipt of additional orders of wireless products destined for Asian supply chains, as well as the commencement of initial vertical cavity surface emitting laser (VCSEL) production for a second major customer at its new foundry in Newport, Wales, management has reiterated its FY19 guidance. We therefore leave our estimates unchanged.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/17**	154.5	24.5	3.38	0.0	15.6	N/A
12/18	156.3	14.0	1.38	0.0	38.3	N/A
12/19e	147.2	5.4	0.52	0.0	100.9	N/A
12/20e	179.0	24.5	2.40	0.0	22.0	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. **Restated.

H119 results in line with June trading update

Wireless revenues fell by 29% y-o-y during H119 to £30.1m. Although Photonics revenues (which include those previously categorised as attributable to infrared products) grew by 18% to £35.5m, reflecting multiple VCSEL ramp-ups, this was not sufficient to offset the wireless slowdown. Group revenues decreased by 9% y-o-y to £66.7m. As most of the costs are fixed, the drop in revenue resulted in an adjusted operating loss of £1.9m vs an adjusted operating profit of £7.6m in H118. The group moved from £20.8m net cash at end December 2018 to £0.8m net debt at the end of June 2019 as management continued to invest for future growth. Capitalised development expenditure totalled £4.8m and capex £19.0m. This included completing the infrastructure phase at the Newport Mega Foundry in Wales as well as capacity expansion in Taiwan and Massachusetts.

Management reiterates revised FY19 guidance

Management has reiterated the revised FY19 guidance issued in the trading update in June. This is for revenue in the £140–160m range at an adjusted operating margin significantly below the original guidance of 10%.

Valuation: Waiting for recovery in FY20

If we restrict our peer-based comparison to the three listed companies (IntelliEPI, LandMark Optoelectronics and Visual Photonics) offering epitaxy for VCSELs, then IQE is trading below the range for these three stocks with respect to the year 2 EV/EBITDA ratio and below the mean with respect to the year 2 P/E ratio. Taking this approach, we see scope for share price recovery once semiconductor supply chains have stabilised and the current period of destocking is over, supporting revenue growth during FY20 accompanied by improved capacity utilisation and a substantially higher operating profit margin.

Tech hardware & equipment

3 September 2019

Price **52.9p**
Market cap **£419m**

Net debt (£m) at 30 June 2019 0.8

Shares in issue 792.8m

Free float 87.6%

Code IQE

Primary exchange AIM

Secondary exchange N/A

Share price performance



%	1m	3m	12m
Abs	(18.0)	(29.0)	(43.4)
Rel (local)	(7.1)	(30.0)	(41.3)
52-week high/low		98.7p	51.5p

Business description

IQE is the leading supplier of epitaxial compound semiconductor wafers globally. The principal applications include radio frequency semiconductors, devices for optical networks, vertical cavity lasers, infrared semiconductors and power electronics.

Next events

FY19 results March 2020

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H119 performance in line with guidance

Photonics growth insufficient to counteract weak wireless market

As flagged in the June trading update, wireless customers cut back on inventory levels in response to the uncertainty regarding future demand caused by lengthening mobile phone replacement cycles and the potential impact of Huawei's addition to the US Bureau of Industry and Security's Entity List. The interconnected nature of the semiconductor supply chain means many of IQE's customers have been affected indirectly by this situation. Wireless revenues fell by 29% year-on-year to £30.1m, 45% of the group total. Although Photonics revenues (which include those previously categorised as attributable to infrared products) grew by 18% to £35.5m (53% of the total) reflecting multiple VCSEL ramp-ups, this was not sufficient to offset the wireless slowdown. Group revenues decreased by 9% to £66.7m, in line with management guidance of £65–£68m.

The drop in revenue caused the group to move from £7.6m adjusted operating profit in H118 to a £1.9m adjusted operating loss in H119. The adjusted cost of sales was similar to the prior year period because most of these costs are fixed and cannot be reduced significantly without affecting future capacity. Adjusted indirect costs rose by £3.0m, £2.4m of which relates to an increase in depreciation and amortisation resulting from investment in capacity. The group incurred a c £8m non-cash tax charge relating to a reduction in deferred US tax losses given the expected shift in manufacturing from the US to the UK and Asia. This is the result of the change to supply chains in response to the Huawei issue, with IQE experiencing reduced demand from certain US chip manufacturers but gaining new work with Asian customers. Adjusted diluted EPS moved from 0.76p/share profit in H118 to 1.29p/share loss in H119.

Investment in R&D and capacity sustained

Operating cash flow halved to £4.0m as a result of lower revenues, an increase in inventories at the period end reflecting the multiple VCSEL ramp-ups, a decrease in payables corresponding to capex payments, restructuring costs associated with closure of the New Jersey facility and transfer of trade and assets to Massachusetts and legal fees incurred in respect of a patent dispute defence. Capitalised development expenditure totalled £4.8m (£6.4m in H118) as the group continued work on multiple innovative technologies and capex totalled £19.0m (£6.3m H118). This included completing the infrastructure phase at the Mega Foundry in Newport, South Wales as well as capacity expansion in Taiwan and Massachusetts (see below). The group moved from £20.8m net cash at end December 2018 to £0.8m net debt at end June 2019. Post the period end, management agreed a £30m asset financing facility, increasing total available facilities to around £57m, supporting further investment if required. The Newport Mega Foundry already has bays for an additional ten reactors (see below), so future investment will be primarily only in reactors rather than the supporting infrastructure and thus proportional to incremental revenue development.

Management reiterates FY19 guidance

Management has reiterated the revised FY19 guidance issued in the trading update in June. This is for revenue in the £140–£160m range at an adjusted operating margin significantly below the previously guided 10%. This assumes that revenues will be higher in H219 than H119, enabling a return to adjusted operating profitability given the largely fixed cost base as well as a cost reduction programme. The news in July that IQE was engaged in initial production activities with two Asian customers who stand to benefit from wireless supply chain shifts, had commenced VCSEL production at Newport for a second major customer, this one serving the Android supply chain, and

has extensive product qualification ongoing for several other VCSEL projects (currently 12 other chip customers) supports the assumption of H2 revenue growth. IQE had previously announced that it had received its first mass production order for the Newport facility from its leading VCSEL customer, who we have previously inferred is engaged in the Apple supply chain, in May. In addition, IQE is engaging with multiple Asian chip companies on 10G and 25G lasers for data comms and the chip customer behind the 2017 VCSEL production ramp-up has extended its current contract until the end of 2021. Two other existing contracts have also been extended, with several other new contracts in final negotiation.

The group has sufficient installed capacity to meet expected demand levels for H219, and initial forecasts for FY20, but may need to place orders for additional reactors in Q419 or Q120 if these forecasts are raised. Management has reiterated its full-year capex guidance of £30–40m, with the upper level including the purchase of additional reactors.

Management has not updated its guidance for FY20 or mid-term growth, as this would be premature before the wireless market has stabilised and there is better visibility of the number and scale of new VCSEL ramp-ups. VCSEL-driven photonics growth should help offset the impact of reduced mobile phone shipments on wireless revenues, as will the transition to 5G, with greater wireless content per device. We continue to model 10% year-on-year growth in FY20 wireless revenues, which assumes the period of destocking is over and the market has stabilised by the end of FY19. This gives FY20 segmental revenues of £83.4m, which is slightly higher than the FY15 level (£79.5m) when demand was also affected by de-stocking and substantially lower than FY16, FY17 or FY18, all of which recorded revenues above £90m. We model 35% year-on-year growth in photonics (including IR), partly because of the number of VCSEL projects where customers are evaluating samples and partly because IQE is likely to win some new business with alternative suppliers of indium phosphide lasers because of its technical expertise, for example in distributed feedback lasers (see below).

We note that IQE's dominant position in the outsourced compound semiconductor epitaxy market means it has supply relationships with multiple non-US (and US) customers. As a result, although the current period of supply chain adjustment is hitting profits hard, IQE should be able to gain replacement business with the Asian chip manufacturers who are picking up work from US chip manufacturers caught up in the US-China trade war. This makes it relatively agnostic to any mid- to long-term shifts in market share at either component or OEM level.

Progress against strategy

Major investment programme substantially completed

The construction and fit-out of the new foundry in Newport, UK, is now complete with 10 tools installed and space to add another 90. The factory already has dedicated bays for 20 reactors, enabling IQE to double capacity if required to meet demand. The additional capacity is critical for IQE to maintain its dominant position in the VCSEL market as it grows. Capacity in Taiwan has been increased by 40%. This was initially authorised to reduce the need to re-qualify reactors for different technologies in the future as reactor conversions had cost c £3m over an 18-month period. Its availability is very timely now that wireless chip production is shifting to Asia in response to the US-China trade issues. There has also been investment in GaN capacity in Massachusetts to support 5G infrastructure deployments (see below).

5G product development

IQE has introduced a full service distributed feedback laser package based on nano-imprint lithography. This is targeted at customers manufacturing high-speed datacomm chips for use in

data centres. Management expects this to result in volume sales during FY20. Customer engagement on projects using IQE's patented cREO technology to develop filters and switches for 5G handsets is progressing well, potentially progressing to volume sales in FY21.

Board changes

In March, Phil Smith was appointed non-executive chairman. He was previously chairman of Cisco UK and Ireland and joined the IQE board in December 2016. He took over his current role from Dr Godfrey Ainsworth, who stepped down as executive chairman at the AGM. Tim Pullen, who was previously chief financial officer of ARM, took up his role as chief financial officer in February. Carol Chesney was appointed as a non-executive director in May. Carol is also a non-executive director of Renishaw, Hunting and Biffa. She has also served as the company secretary and group financial controller of Halma.

Valuation

We moved from a peer-based multiple approach to a DCF analysis in November 2018 because of the volatility of stocks in the sector. Although DCF remains our preferred approach, this was based on the three- to five-year guidance management provided, which will not be updated until the current supply chain turmoil has abated, so we revert for now to using peer-based multiples.

The share price dropped to 53.85p following the June trading update when we cut our adjusted FY19 EPS estimate by 74% and is now back at that level following a period of fluctuation. The shares are currently trading on year 1 and year 2 EV/sales ratios and a year 2 EV/EBITDA ratio that are at a discount to the mean for its epitaxy and opto-electronics peers, but on year 1 and year 2 P/E ratios and a year 1 EV/EBITDA ratio that are at a premium to the mean. If we restrict the comparison to the three listed companies offering epitaxy for VCSELs: IntelliEPI, LandMark Optoelectronics and Visual Photonics, then IQE is trading below the range for these three stocks with respect to year 1 and year 2 EV/sales ratios and year 2 EV/EBITDA ratio and below the mean for these three stocks with respect to the year 2 P/E ratio. We believe that IQE has a much stronger market position than the other three, so trading towards the upper end of this smaller sample seems reasonable. Taking this approach, we see scope for share price recovery once semiconductor supply chains have stabilised and the current period of destocking is over, supporting revenue growth during FY20 accompanied by improved capacity utilisation and substantially higher operating profit margin.

Exhibit 1: Peer multiple analysis

(x)	Market cap (\$m)	EV/sales 1FY	EV/sales 2FY	EV/EBITDA 1FY	EV/EBITDA 2FY	P/E 1FY	P/E 2FY
Epitaxy							
GCS Holdings	185	2.2	2.0	-	-	21.7	16.0
IntelliEPI Inc (Cayman)	75	2.9	2.5	15.3	10.3	28.1	19.8
LandMark Optoelectronics Corp	720	8.5	6.6	17.1	12.5	35.1	24.1
Soitec SA	3,185	4.9	3.9	16.6	12.9	25.8	20.1
Visual Photonics Epitaxy Co	541	6.9	5.6	18.9	14.8	32.1	24.4
WIN Semiconductors Corp	3,416	5.6	4.7	14.4	11.2	33.1	22.4
Opto-electronics							
II-VI	2,326	1.8	1.6	9.6	7.0	13.2	10.9
EMCORE Corp	77	0.7	0.5	(7.5)	217.0	(5.4)	(14.2)
Finisar Corp	2,685	1.7	1.6	9.2	8.5	18.5	16.0
Lumentum Holdings	4,209	2.4	2.2	7.6	6.6	12.0	10.2
Mean - Epitaxy and Opto-electronics		3.8	3.1	13.6	10.5	24.4	18.2
Mean - VCSELs*		6.1	4.9	17.1	12.5	31.8	22.8
IQE Plc	\$511m	2.7	2.2	17.7	9.3	100.9	22.0

Source: Refinitiv, Edison Investment Research. Note: *Mean is based on IntelliEPI, LandMark Optoelectronics and Visual Photonics. Prices at 29 August 2019. Grey shading indicates exclusion from mean.

Exhibit 2: Financial summary

	£'000s	2017	2018	2019e	2020e
Year End 31 December		IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS		restated			
Revenue		154,553	156,291	147,213	178,957
Cost of Sales (including depreciation, amortisation and share-based payments)		(115,857)	(111,748)	(103,785)	(126,165)
Gross Profit		38,696	44,543	43,428	52,792
EBITDA		37,130	28,404	22,510	42,868
Depreciation and Amortisation		(10,596)	(12,364)	(15,081)	(18,381)
Operating Profit (before amort. and except.)		26,534	16,040	7,429	24,487
Acquired Intangible Amortisation		(1,429)	(518)	(518)	(518)
Exceptionals		(385)	(7,906)	0	0
Share based payments		(7,526)	1,044	0	0
Operating Profit		17,194	8,660	6,911	23,969
Underlying interest		(2,019)	(66)	0	0
Exceptionals and losses from JVs		80	(1,847)	(2,000)	0
Profit Before Tax (norm)		24,515	13,974	5,429	24,487
Profit Before Tax (FRS 3)		15,095	6,747	4,911	23,969
Reported tax		(435)	(5,558)	(884)	(4,314)
Profit After Tax (norm)		24,998	11,229	4,545	20,172
Profit After Tax (FRS 3)		14,660	1,189	4,027	19,654
Average Number of Shares Outstanding (m)		689.5	761.8	788.3	792.8
EPS - normalised (p)		3.38	1.38	0.52	2.40
EPS - (IFRS) (p)		2.11	0.13	0.48	2.45
Dividend per share (p)		0.0	0.0	0.0	0.0
EBITDA margin (%)		24.0	18.2	15.3	24.0
Operating margin – before goodwill and exceptionals (%)		17.2	10.3	5.0	13.7
BALANCE SHEET					
Fixed Assets		224,836	267,476	304,877	313,977
Intangible Assets		108,513	121,775	127,467	131,860
Tangible Assets		90,875	124,520	156,228	160,937
Other		25,448	21,181	21,181	21,181
Current Assets		111,925	94,531	55,668	75,600
Stocks		33,044	35,709	34,000	40,694
Debtors		33,269	38,015	36,380	43,636
Cash		45,612	20,807	(14,711)	(8,731)
Other		0	0	0	0
Current Liabilities		(44,916)	(48,893)	(43,721)	(50,184)
Creditors		(44,916)	(48,893)	(43,721)	(50,184)
Short term borrowings		0	0	0	0
Long Term Liabilities		(666)	(3,836)	(3,836)	(3,836)
Long term borrowings		0	0	0	0
Other long term liabilities		(666)	(3,836)	(3,836)	(3,836)
Net Assets		291,179	309,278	312,989	335,557
CASH FLOW					
Operating Cash Flow		29,717	16,988	18,682	35,380
Net Interest		(2,125)	(66)	0	0
Tax		(5,844)	(665)	(1,200)	(1,400)
Capex		(28,190)	(42,362)	(53,000)	(28,000)
Acquisitions/disposals		0	0	0	0
Financing		94,912	813	0	0
Dividends		0	0	0	0
Net Cash Flow		88,470	(25,292)	(35,518)	5,980
Opening net debt/(cash)		39,549	(45,612)	(20,807)	14,711
HP finance leases initiated		0	0	0	0
Other		(3,309)	487	0	0
Closing net debt/(cash)		(45,612)	(20,807)	14,711	8,731

Source: Company accounts, Edison Investment Research

Note: FY17 restated following introduction of IFRS15 "Revenues from contracts with customers"

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