EDISON

IQE

FY19 results

Short-term resilience, long-term growth

Tech hardware & equipment

IQE has released its audited FY19 results following the comprehensive trading update in March. We leave our estimates unchanged after the 6% revenue downgrade in March since in IQE's case the impact of COVID-19 on global handset demand is likely to be softened by gaining share in both the wireless and photonics markets. While the full effect of the coronavirus on the global economy and thus on demand for IQE's epitaxy remains to be seen, management notes that Q120 was slightly ahead of internal expectations and the outlook for Q220 remains positive.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/18	156.3	14.0	1.38	0.0	27.4	N/A
12/19	140.0	(7.0)	(2.46)	0.0	N/A	N/A
12/20e	143.7	(6.2)	(0.83)	0.0	N/A	N/A
12/21e	164.9	11.6	1.13	0.0	33.6	N/A

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

FY19 performance in line with revised guidance

As noted in March, group revenues decreased by 10% year-on-year during FY19 to £140.0m. Wireless revenues decreased by 23% because of destocking related to the US-China trade war. Photonics revenues increased by 4% supported by strong growth in revenues from the major VCSEL customer. Since the business is highly operationally geared, the revenue drop caused the group to move from £16.0m adjusted operating profit in FY18 to a £4.7m adjusted operating loss in FY19.

New business potentially mitigates FY20 weakness

IQE's production facilities in the UK, the US, Taiwan and Singapore remain operational. The company is regarded as a critical supplier in the US and there has not been any significant issues with supplies of materials. While economists predict that the COVID-19 pandemic is likely to cause a global recession, we understand that this has not had an impact on demand for IQE's epitaxy so far. However, the company continues not to provide specific guidance. Our estimates, which we revised downwards in March, assume that IQE's wireless revenues will not reduce by as much as the global handset market in FY20 because new business for a major Taiwanese foundry will help IQE increase its market share. In addition, we expect that the commencement of volume deliveries of VCSEL epitaxy for multiple Android related supply chains will support growth in photonics revenues in FY20.

Valuation: Rebound from March low

Although the share price has recovered from the 20p low immediately prior to the March trading update, it is still trading at a substantial discount on a prospective EV/sales basis to the sample of companies engaged in manufacturing VCSEL epitaxy (year 1 2.2x vs 5.3x). We see potential for further share price recovery once the route to sustainable profitability is clearer.

29 April 2020

Price	**37.88p**
Market cap	**£302m**

Net debt (£m) at end December 2019 including £48.0m finance leases	63.9
Shares in issue	796.5m
Free float	86.6%
Code	IQE
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	67.6	(21.5)	(46.8)
Rel (local)	49.8	4.0	(31.5)
52-week high/low		94.15p	20.00p

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

AGM	June 2020

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Edison profile page

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FY19 performance

Weak photonics growth insufficient to counteract wireless destocking

Group revenues decreased by 10% year-on-year during FY19 to £140.0m. Wireless revenues decreased by 23% to £68.2m as wireless customers cut back on inventory levels in response to the uncertainty regarding future demand caused by lengthening mobile phone replacement cycles and the US-China trade war. The total percentage reduction in wireless revenues was substantially greater than the decline in handset volumes, which industry analyst Gartner notes fell by 1% during 2019 to 1.5bn units. Photonics revenues increased by 4% to £69.8m. Demand for indium phosphide lasers for the datacom/telecom market, which we estimate was c 35% of FY18 photonics revenues, particularly from a single US customer, was weak. However, orders from IQE's major vertical cavity surface emitting laser (VCSEL) customer, which we have previously inferred is engaged in the Apple supply chain, were consistently strong throughout FY19.

Exhibit 1: P&L breakdown of exceptional items

Category	Value* (£m)	Details
Impairment of financial assets	4.1	Write-down of the value ascribed to the Compound Semiconductor Centre JV between IQE and Cardiff University based on a cautious view of future business taking into account likely funding post-Brexit.
Impairment of financial asset	4.0	Write-down of value of CSDC joint venture in Singapore
Impairment of intangible assets	2.0	Impairment of some smaller technology programmes and associated patents.
Impairment of intangible assets	1.1	Write-down of IT development costs relating to legacy systems that have been replaced.
Exceptional legal fees	3.5	Fees incurred defending a non-core patent. The arbitration hearing in September determined entirely in IQE's favour.
Impairment of right of use assets	1.6	Write-down of sub-lease relating to CSDC joint venture in Singapore relating to local acquisition accounting.
Restructuring and site closure costs	0.6	Minor restructuring to adjust cost base in recognition of reduction in demand.

Source: IQE. Note: *After adjustment for tax.

As the business is highly operationally geared, the drop in revenue caused the group to move from £16.0m adjusted operating profit in FY18 to a £4.7m adjusted operating loss in FY19. 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 24.5% to £5.1m, £2.1m of which relates to an increase in amortisation, the remainder to ramping up production in the Newport facility and taking on all of the costs of Singapore JV when the group increased its ownership of the JV to 100% in October 2019. The group incurred £16.1m exceptional costs, which are described in Exhibit 1. £11.9m of these exceptionals were non-cash items. The total tax charge for the year was £10.2m, £9.6m of which was a non-cash charge relating to a reduction in deferred US tax losses given the expected shift in manufacturing from the US to the UK and Asia. Adjusted diluted EPS moved from 1.38p/share in FY18 to a loss of 2.46p/share in FY19.

Investment in R&D and capacity sustained

Operating cash flow adjusted for exceptional items was similar to the previous year (£16.5m in FY19 vs £17.0m in FY18) reflecting good working capital management. Capitalised development expenditure totalled £8.4m (£10.4m in FY18) as the group continued work on multiple innovative technologies and capex totalled £32.9m (FY18: £30.3m). This included completing the infrastructure phase at the Mega Foundry in Newport, South Wales, as well as capacity expansion in Taiwan and Massachusetts. Excluding finance leases associated with the introduction of IFRS 16, the group moved from £20.8m net cash at end December 2018 to £16.0m net debt at end December 2019 (excluding £48.0m IFRS16 finance leases) of which £8.8m was cash. Net debt reduced during Q120. During H219 management agreed a £30m asset financing facility, increasing total available facilities to around £57m, providing support if the economic impact of the COVID-19 pandemic is prolonged. The Newport Mega Foundry already has bays for an additional 10 reactors, so future investment will be primarily only in reactors rather than the supporting infrastructure and thus proportional to incremental revenue development.

In the last month management has negotiated an agreement with HSBC to relax debt covenants in December 2020 and June 2021. This is a precautionary measure to ensure continued access to debt facilities in severe downside scenarios.

Exhibit 2: Revenue analysis and top-line estimates

	2018 actual	2019 actual	2020e unchanged	2021e unchanged
Wireless (£m)	87.9	68.2	61.3	68.1
Photonics (£m)	66.8	69.8	80.2	94.7
CMOS++ (£m)	1.6	2.1	2.1	2.1
Total (£m)	156.3	140.0	143.7	164.9
Growth				
Wireless		-22%	-10%	11%
Photonics		4%	15%	18%
CMOS++		29%	0%	0%
Total		-10%	3%	15%

Source: IQE data, Edison Investment Research estimates

Outlook and estimates

We provided a detailed review of the key underlying assumptions underpinning our estimates in our March update, when we revised our FY20 revenue downwards by 6%. Our forecasts have not been changed since then, so we are summarising below our main assumptions in the context of recent market developments.

- **Production**: IQE's production has not been disrupted so far. Its manufacturing facilities in the US, the UK, Singapore and Taiwan remain open and there has not been any significant impact on the supply of materials. While there remains some risk that production may be affected, we note that production has continued at IQE's facilities in Massachusetts and Pennsylvania, where the US Department of Homeland Security deems IQE to have a 'special responsibility to maintain (its) normal work schedule'. We note that IQE is more resilient than peers such as VPEC, whose facilities are all located in Taiwan, because it has facilities in the US, the UK, Taiwan and Singapore. IQE is also relatively resilient with regards to materials because it sources the substrates used from multiple suppliers.
- **Wireless segment demand:** Management notes that Q120 trading was slightly ahead of internal expectations, and the outlook for Q2 remains positive. However, IQE is exposed to a global reduction in demand for smartphones during FY20, the level of which will depend on the severity of the economic downturn caused by the COVID-19 virus. On 22 April Strategy Analytics forecast a 21% drop in global wholesale smartphone revenues during FY20, with average selling prices flat year-on-year. The research house expects the negative impact of the COVID-19 pandemic on consumer spending to be mitigated by 5G roll-out in major markets such as China, Japan, South Korea and the US, and the availability of lower priced iPhone SEs. It expects the market to begin to rebound in 2021 onwards, taking three or four years to return to the pre-COVID-19 level. We note that IQE also supplies epitaxy for wireless infrastructure and is therefore likely to be a beneficiary if individual governments opt to invest in 5G infrastructure as part of post-pandemic stimulus packages. There is already some evidence of this in Asia.

  In our opinion IQE should experience a somewhat lower rate of decline than the global smartphone market for two reasons. Firstly, as discussed above, IQE suffered from severe inventory destocking during FY19, which has reversed in Q120. Secondly, five new production tools at IQE's facility in Taiwan have been qualified by a major Taiwanese foundry, four of which are already in production. This customer will be supplying semiconductor chains in China and elsewhere in Asia, in effect increasing the number of smartphone models that IQE has epitaxy in. As a result, we model a 10% reduction in wireless revenues for FY20 followed by 11% growth in FY21, supported by the roll-out of 5G networks.

- **Photonics segment demand**: We assume that IQE will continue to be the major supplier of epitaxy for the original VCSEL customer, which we have previously assumed is part of the Apple supply chain. As is discussed in previous notes, customers are unlikely to risk changing compound semiconductor epitaxy suppliers because of the cost and effort involved qualifying new vendors. In addition, in H219 IQE commenced volume production for a second VCSEL customer, this one supplying multiple Android handset supply chains, was working with a third major VCSEL customer, who was also engaged in multiple Android hand-set supply chains on device and module qualifications, and was manufacturing 10G and 25G lasers for data-comms applications for several Asian customers. Our estimates look for 15% sectoral growth this year followed by 18% growth in FY21.

  In March Apple announced that it would be incorporating a LiDAR (light detection and ranging) system in the rear camera of the new iPad Pro to give more accurate readings of the surrounding for augmented reality applications. This led to renewed press speculation that the as yet unannounced iPhone12 will also contain a LiDAR system. If so, this would be a significant development for IQE, because the number of VCSEL per phone increases by 1.5 times if a LiDAR system is included. If the rumour is founded and the launch this autumn is not delayed by the COVID-19 virus, this could represent upside or additional support to our estimates.

- **Cost-base:** Our cost of sales and indirect costs take into consideration a full year of higher costs related to operating volume production at the Newport facility and a full year in which the Singapore operation is a wholly owned subsidiary of the group.

Given that future demand for both wireless and photonics epitaxy will be determined by the length of the COVID-19 outbreak, which is not known at present, we have prepared a sensitivity analysis showing the impact on FY20 adjusted operating loss of alternative year-on-year changes in wireless and photonics revenues. This is shown in Exhibit 3.

Exhibit 3: Scenario analysis – FY20 adjusting operating profit (loss), £000s

		FY20 wireless revenue decline		
		-5%	-10%	-15%
FY20 photonics revenue growth (%)	5%	(8,400)	(11,518)	(14,637)
	10%	(5,209)	(8,327)	(11,446)
	15%	(2,018)	**(5,136)**	(8,255)
	20%	1,173	(1,945)	(5,063)
	25%	4,364	1,246	(1,872)

Source: Edison Investment Research

Valuation: Share price has rebounded from March low

We include a comparative valuation of IQE versus its broader (if imperfect) peer group below. In common with all of its peers, IQE's shares collapsed at the onset of the COVID-19 pandemic and have partially recovered since. At current levels IQE is trading at a substantial discount on an EV/sales basis with regards to the year 1 and year 2 means for both the broader sample and the sample of companies engaged in manufacturing VCSEL epitaxy. Looking at the EV/EBITDA multiples of its peers manufacturing VCSEL epitaxy, IQE is trading at a premium to the mean for year 1 and a discount to the mean for year 2. It is trading above the upper bound of the sample of VCSEL peers with regards to year 2 P/E multiples.

Exhibit 4: Peer valuation

Name	Ytd performance (%)	Market cap ($m)	EV/sales 1FY (x)	EV/sales 2FY (x)	EV/EBITDA 1FY (x)	EV/EBITDA 2FY (x)	P/E 1FY (x)	P/E 2FY (x)
Epitaxy								
GCS Holdings	(21.9)	163	1.7	N/A!	6.5	N/A!	17.8	N/A
IntelliEPI (Cayman)	(20.3)	62	2.2	1.9	9.9	7.5	23.8	17.1
LandMark Optoelectronics Corp	(16.0)	784	8.4	7.0	16.9	14.0	32.7	24.9
Soitec SA	(11.4)	2,968	4.8	4.5	16.3	15.8	25.4	25.7
Visual Photonics Epitaxy Co	(26.2)	535	5.3	4.6	15.4	12.3	24.3	19.7
WIN Semiconductors Corp	(14.5)	3,546	4.2	3.8	9.9	8.8	17.9	16.1
Opto-electronics								
II-VI	(8.0)	2,820	2.2	1.8	10.9	8.3	22.0	11.7
EMCORE Corp	(14.1)	76	0.6	0.5	71.3	7.1	(10.7)	65.3
Lumentum Holdings	(0.8)	5,877	3.3	3.0	10.2	9.1	15.5	13.8
Mean - Epitaxy and Opto-electronics			3.6	3.4	12.0	10.4	22.4	18.4
VCSELs								
IntelliEPI (Cayman)	(20.3)	62	2.2	1.9	9.9	7.5	23.8	17.1
LandMark Optoelectronics Corp	(16.0)	784	8.4	7.0	16.9	14.0	32.7	24.9
Visual Photonics Epitaxy Co	(26.2)	535	5.3	4.6	15.4	12.3	24.3	19.7
Mean - VCSELs			5.3	4.5	14.1	11.3	26.9	20.6
IQE	(24.3)	$374m	2.2	1.9	16.3	8.2	(45.8)	33.6

Source: Refinitiv, Edison Investment Research. Note: Prices at 27 April 2020. Grey shading means exclusion from mean. EBITDA includes losses from JV.

Given the volatility in the stock market at present and the continued possibility of guidance and earnings downgrades across the peer group in the near future, it is difficult to draw any precise conclusions from this comparison. That being said, given IQE's broader product portfolio than its VCSEL peers, as well as its ability to manufacture VCSELs on 6" rather than 3" wafers, which confers cost-competitive advantages, and its ability to manufacture on multiple site, which gives some relative resilience to both COVID-19 shutdowns and US-China trade disputes, we believe it is reasonable for IQE to trade on multiples that are at the upper bound of the VCSEL sample.

The share price has almost doubled since the 20p low immediately prior to the March trading update. We believe that further share price improvement will require IQE to demonstrate that it has the potential to achieve the improvement in profitability shown in our FY20 estimates. Given the level of operational gearing, this will involve further evidence that it is ramping up volume deliveries in the Asian/Android supply chain. It will require visibility that handset demand is recovering as economies recover from the COVID-19 pandemic, with the switch to 5G providing the motivation for cash-strapped consumers to justify upgrading their handsets.

Exhibit 5: Financial summary

£'000s	2018	2019	2020e	2021e
Year end 31 December	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS	**Restated**			
Revenue	156,291	140,015	143,662	164,850
Adjusted Cost of Sales	(119,536)	(119,145)	(120,955)	(122,739)
Adjusted Gross Profit	36,755	20,870	22,707	42,111
Adjusted EBITDA including losses from JVs	26,404	16,246	19,443	38,739
Depreciation and Amortisation	(12,882)	(22,289)	(24,879)	(26,329)
Operating Profit (before amort. and except.)	16,040	(4,676)	(5,136)	12,709
Acquired Intangible Amortisation	0	0	0	0
Exceptionals	(8,424)	(14,897)	0	0
Share based payments	1,044	771	0	0
Operating Profit	8,660	(18,802)	(5,136)	12,709
Underlying interest	(66)	(1,606)	(800)	(800)
Exceptionals and losses from JVs	(1,847)	(4,540)	(300)	(300)
Profit Before Tax (norm)	13,974	(7,019)	(6,236)	11,609
Profit Before Tax (FRS 3)	6,747	(24,948)	(6,236)	11,609
Reported tax	(5,558)	(10,180)	0	(2,144)
Profit After Tax (norm)	11,229	(19,010)	(6,236)	9,466
Profit After Tax (FRS 3)	1,189	(35,128)	(6,236)	9,466
Average Number of Shares Outstanding (m)	761.8	787.2	796.4	796.5
EPS - normalised (p)	1.38	(2.46)	(0.83)	1.13
EPS - (IFRS) (p)	0.13	(4.51)	(0.83)	1.15
Dividend per share (p)	0.0	0.0	0.0	0.0
BALANCE SHEET				
Fixed Assets	267,476	300,047	294,168	286,839
Intangible Assets	121,775	118,456	119,237	119,018
Tangible Assets	124,520	136,557	129,897	122,787
Other	21,181	45,034	45,034	45,034
Current Assets	94,531	72,533	70,999	95,911
Stocks	35,709	30,668	33,456	37,487
Debtors	38,015	33,065	35,424	40,196
Cash	20,807	8,800	2,120	18,228
Other	0	0	0	0
Current Liabilities	(48,893)	(32,646)	(31,469)	(37,443)
Creditors	(48,893)	(27,529)	(26,352)	(32,326)
Short term borrowings	0	(5,117)*	(5,117)*	(5,117)*
Long Term Liabilities	(3,836)	(69,491)	(69,491)	(69,491)
Long term borrowings	0	(67,631)*	(67,631)*	(67,631)*
Other long term liabilities	(3,836)	(1,860)	(1,860)	(1,860)
Net Assets	309,278	270,443	264,207	275,816
CASH FLOW				
Operating Cash Flow	16,988	8,948	13,120	35,908
Net Interest	(66)	(671)	(800)	(800)
Tax	(665)	(151)	0	0
Capital expenditure and capitalised R&D	(42,362)	(41,834)	(19,000)	(19,000)
Acquisitions/disposals	0	10	0	0
Financing	813	712	0	0
Dividends	0	0	0	0
Net Cash Flow	(25,292)	(32,986)	(6,680)	16,108
Opening net debt/(cash)	(45,612)	(20,807)	63,948*	70,628*
HP finance leases initiated	0	0	0	0
Other	487	(51,769)	0	0
Closing net debt/(cash)	(20,807)	63,948*	70,628*	54,520*

Source: Company accounts, Edison Investment Research. Note: *Including IFRS 16 finance lease liabilities.

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