# EDISON

# IQE

FY19 trading update

## Well positioned to withstand near-term uncertainty

Tech hardware & equipment

**Yesterday's trading update confirms that IQE's FY19 results will be in line with the revised guidance it provided in November when the full extent of the impact of the US-China trade war became visible. We have cut our FY20 revenue estimate by 6%. 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. However, the full effect of the pandemic on the global economy and IQE's business remains to be seen.**

| Year end | Revenue (£m) | EBITDA* (£m) | EBIT* (£m) | DPS (p) | P/E (x) | Yield (%) |
|---|---|---|---|---|---|---|
| 12/18 | 156.3 | 26.4 | 16.0 | 0.0 | 19.9 | N/A |
| 12/19** | 140.0 | 16.2 | (4.7) | 0.0 | N/A | N/A |
| 12/20e | 143.7 | 19.4 | (5.1) | 0.0 | N/A | N/A |
| 12/21e | 164.9 | 38.7 | 12.7 | 0.0 | 24.3 | N/A |

Note: *EBITDA and EBIT are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. EBITDA includes losses from JVs. **Unaudited results.

## FY19 performance in line with revised guidance

Group revenues decreased by 10% year-on-year during FY19 to £140.0m, in line with management's reduced guidance published in November. Wireless revenues decreased by 23% because of destocking related to the US-China trade war, which has since reversed. Photonics revenues increased by 4% as strong growth in revenues from the major VCSEL customer were in part offset by reduced demand from a US customer for indium phosphide epitaxy. 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. After investing in the new South Wales facility making VCSELs, and increasing capacity in Taiwan to serve wireless customers in Asia, the group moved from £20.8m net cash at end FY18 to £16.0m net debt (excluding finance leases) at end FY19.

## New business potentially mitigates FY20 weakness

Given the uncertainty presented by the COVID-19 pandemic, management is not providing any guidance at present, though the business has traded in line with management expectations for Q120. Our estimates, which we have revised downwards, provisionally 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 VSCEL epitaxy for multiple Android-related supply chains will support photonics growth during FY20.

## Valuation: Clarity required on COVID-19 impact

The share price has fallen by 43% so far this year. At current levels and on our updated estimates, IQE is trading at a substantial discount on a prospective EV/sales basis to the sample of companies engaged in manufacturing VCSEL epitaxy (year one 1.6x vs 4.2x). We see potential for the share price to recover once the impact of COVID-19 on global handset sales and the route to sustainable profitability is clearer.

**25 March 2020**

| | |
|---|---|
| **Price** | **27.5p** |
| **Market cap** | **£219m** |

| | |
|---|---|
| Net debt (£m) at end December 2019 excluding IFRS 16 lease liabilities | 16.0 |
| Shares in issue | 796.4m |
| Free float | 86.5% |
| Code | IQE |
| Primary exchange | AIM |
| Secondary exchange | N/A |

### Share price performance


| % | 1m | 3m | 12m |
|---|---|---|---|
| Abs | (46.2) | (42.6) | (59.7) |
| Rel (local) | (27.6) | (18.1) | (46.5) |
| 52-week high/low | | 94.2p | 20.0p |

### 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 event

| | |
|---|---|
| Publication of FY19 results | TBA |

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***IQE is a research client of Edison Investment Research Limited***

# FY19 performance

Although IQE and its auditor had not encountered any practical challenges in preparing for the FY19 results announcement, on 23 March the Financial Reporting Council advised not to sign any opinions for a short period or for two weeks. IQE has therefore delayed publishing its full FY19 results as intended on 24 March and instead issued a comprehensive trading update based on summary unaudited financial accounts covering FY19 financial performance and an update on Q120 trading. Since this research note has been prepared using the information from the trading update, which does not contain full details of the FY19 results, the financial table on the front page and commentary in the note refers to the released summary of the FY19 performance, while the financial summary table on page 6 still refers to our full FY19 estimates, which were last updated in November.

## Weak photonics growth insufficient to counteract wireless destocking

During FY19, group revenues decreased by 10% year-on-year to £140.0m, in line with the reduced guidance of £136–142m provided by management in November. Wireless revenues decreased by 23% 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 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 meant that many of IQE's customers were affected indirectly by this situation. 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 calendar 2019 to 1.5bn units. Photonics revenues increased by 4%. Sectoral growth was lower than our estimates because demand for indium phosphide lasers for the datacom/telecom market, which we estimate were c 35% of FY18 photonics revenues, particularly from a single US customer, was weak. Encouragingly, 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.

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.

## 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). Capex totalled £31.9m (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, towards the lower bound of management's £15–20m guidance. 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.

**Exhibit 1: Revenue analysis and updated top line estimates**

| | 2018 | 2019e | 2019 actual | 2020e old | 2020e new | 2021e new |
|---|---|---|---|---|---|---|
| Wireless (£m) | 87.9 | 61.5 | | 60.9 | 61.3 | 68.1 |
| Photonics (£m) | 66.8 | 75.9 | | 89.2 | 80.2 | 94.7 |
| CMOS++ (£m) | 1.6 | 1.9 | | 2.0 | 2.1 | 2.1 |
| Total (£m) | 156.3 | 139.4 | 140.0 | 152.1 | 143.7 | 164.9 |
| **Growth** | | | | | | |
| Wireless | | -30% | -23% | -1% | -10% | 11% |
| Photonics | | 14% | 4% | 18% | 15% | 18% |
| CMOS++ | | 20% | | 5% | 0% | 0% |
| Total | | -11% | -10% | 9% | 3% | 15% |

Source: IQE data, Edison Investment Research estimates

# Outlook and changes to estimates

Given the uncertainty presented by the COVID-19 pandemic, management is not providing any guidance at present. IQE's production has not been affected either by any disruption or by a material reduction in demand so far and the business has traded in line with management expectations for Q120. However, there remains some risk that production may be affected, though 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. The key risk is a reduction in demand for smartphones, the level of which will depend on the severity of the economic downturn caused by the COVID-19 virus. Given the unusual levels of uncertainty, we are adjusting our estimates as follows:

- **Wireless revenues**: Our November estimates assumed a 1% year-on-year reduction in wireless revenues during FY20. On 20 February 2020 Strategy Analytics predicted a strong bounce-back in calendar H220 driven by 5G smartphone shipments if the coronavirus spread was brought under control, resulting in a 3.5% reduction in total smartphone shipments in CY20 to 1,364m units. By 2 March it was predicting a very soft H1 and modest recovery in H220 resulting in a 10% reduction compared with its previous estimates if the crisis was contained by April/May, with a sharper reduction if the crisis extended beyond that.

  If we assume that the overall smartphone market contraction will be about 15% in FY20, IQE should experience a somewhat lower rate of decline 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 provisionally model a 10% reduction in wireless revenues for FY20 followed by 11% growth in FY21, supported by the roll-out of 5G networks.

- **Photonics revenues**: Our November estimates assumed an 18% increase in photonics revenues during FY20. This was based on IQE continuing 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 discussed in previous notes, customers are unlikely to risk changing compound semiconductor epitaxy suppliers because of the cost and effort involved qualifying new vendors. The assumption also recognised that 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 that was also engaged in multiple Android handset supply chains on device and module qualifications and was manufacturing 10G and 25G lasers for data-comms applications for several Asian customers. Although all of the positive factors underpinning our estimates in November still apply, we are adopting a more cautious stance to reflect the current economic turmoil and look for 15% sectoral growth this year (previously 18%) from a lower starting point followed by 18% growth in FY21.

Earlier this month, 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 surrounding for augmented reality applications. This has 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 around 1.5x 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.

- **Capex:** As the big expansion programmes are now complete, we continue to model FY19 capex at £9.0m for FY20, which is in line with management guidance, and maintain it at this level for FY21. If revenues fall more sharply than shown in our estimates, we believe management could cut this back to c £5m/annum.
- **Capitalised R&D:** We model this at £10.0m for both FY20, which is in line with management guidance, and FY21.
- **Legal dispute:** IQE's FY18 report referred to the exceptional costs associated with a legal dispute, which we believe relates to protection of a non-core patent. IQE was recently advised of the decision made by an arbitration hearing relating to this matter, which was held in September 2019. While the specific findings of the Arbitral Tribunal remain confidential, we understand that the Tribunal's award was entirely in IQE's favour. The counterparty has stated that it is considering appealing the award so although management maintains its position that the eventual outcome will not be adverse, we exclude any potential positive impact from our estimates.

**Exhibit 2: Changes to estimates**

| | FY19 | | | FY20e | | | FY21e |
|---|---|---|---|---|---|---|---|
| (£m) | Estimate | Actual | % change | Old | New | % change | New |
| Revenue | 139.4 | 140.0 | 0.5% | 152.1 | 143.7 | -5.6% | 164.9 |
| Adjusted PBT | | | | 3.0 | (6.2) | N/A | 11.6 |
| Adjusted EPS (p) | | | | 0.28 | (0.83) | N/A | 1.13 |
| Capitalised R&D | | | | 13.0 | 10.0 | -23.1% | 10.0 |
| Property, plant and equipment | 31.0 | 31.9 | 2.8% | 9.0 | 9.0 | 0.0% | 9.0 |
| Net (cash)/debt excluding finance leases at year end | 17.6 | 16.0 | -9.0% | 21.6 | 22.7 | 5.1% | 6.5 |

Source: Edison Investment Research

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 decline | | |
|---|---|---|---|---|
| | | -5% | -10% | -15% |
| FY20 photonics 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: Recovery not priced in

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 have collapsed since the beginning of calendar 2020. 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 prospective year 1 and year 2 EV/EBITDA multiples of its peers manufacturing VCSEL epitaxy, IQE is trading at a discount to the mean. It is trading at the upper bound of the sample of VCSEL peers with regards to year two P/E multiples.

Given the volatility in the stock market at present and the 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 sites, 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.

Re-establishing investor confidence will be key to a share price recovery for both IQE and for its peers. For IQE this will require further evidence that it is ramping up volume deliveries in the Asian/Android supply chain, thus helping return the group to profitability and reducing the dependence on the Apple supply chain. For the sector more generally, investors will probably require evidence 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 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 | (43.8) | 116 | 1.0 | 0.9 | 3.9 | 3.5 | 14.9 | 12.8 |
| IntelliEPI Inc (Cayman) | (49.6) | 39 | 1.4 | 1.2 | 5.9 | 4.8 | 15.1 | 11.4 |
| LandMark Optoelectronics | (33.0) | 620 | 6.7 | 5.6 | 13.7 | 11.3 | 26.1 | 19.8 |
| Soitec SA | (35.3) | 2,189 | 3.5 | 3.0 | 11.7 | 10.0 | 18.3 | 15.5 |
| Visual Photonics Epitaxy Co | (48.1) | 373 | 4.6 | 3.7 | 12.5 | 10.1 | 20.7 | 15.9 |
| WIN Semiconductors | (33.5) | 2,732 | 3.3 | 2.9 | 7.5 | 6.7 | 13.1 | 11.6 |
| **Opto-electronics** | | | | | | | | |
| II-VI Inc | (27.8) | 2,213 | 1.9 | 1.5 | 10.0 | 7.0 | 16.3 | 8.5 |
| EMCORE Corp | (45.1) | 49 | 0.4 | 0.3 | 21.4 | 4.1 | (7.4) | 37.1 |
| Lumentum Holdings | (20.0) | 4,739 | 2.6 | 2.3 | 8.0 | 7.0 | 12.1 | 10.6 |
| Mean – Epitaxy and Opto-electronics | | | 2.8 | 2.4 | 9.1 | 7.1 | 17.1 | 13.3 |
| **VCSELs** | | | | | | | | |
| IntelliEPI Inc (Cayman) | (49.6) | 39 | 1.4 | 1.2 | 5.9 | 4.8 | 15.1 | 11.4 |
| LandMark Optoelectronics Corp | (33.0) | 620 | 6.7 | 5.6 | 13.7 | 11.3 | 26.1 | 19.8 |
| Visual Photonics Epitaxy Co | (48.1) | 373 | 4.6 | 3.7 | 12.5 | 10.1 | 20.7 | 15.9 |
| Mean – VCSELs | | | 4.2 | 3.5 | 10.7 | 8.7 | 20.6 | 15.7 |
| IQE | (43.9) | 261 | 1.6 | 1.4 | 12.1* | 6.1* | N/A | 24.3 |

Source: Refinitiv, Edison Investment Research. Note: Prices at 19 March 2020. Grey shading means exclusion from mean. *EBITDA includes losses from JV.

By way of comparison, the last time IQE's share price was at around the current level was August 2016 when it sank to 16.5p with a year 1 EV/sales multiple of 1.2x following a period of weakness in the global handset market as smartphone penetration peaked, which resulted in a drop in IQE's wireless revenues. IQE's year 1 EV/sales multiple was close to that level earlier in the week but has picked up since the trading update.

**Exhibit 5: Financial summary**

| £'000s | 2018 | 2019e | 2020e | 2021e |
|---|---|---|---|---|
| Year end 31 December | IFRS | IFRS | IFRS | IFRS |
| **PROFIT & LOSS** | | | | |
| Revenue | 156,291 | 139,361 | 143,662 | 164,850 |
| Cost of Sales | (111,748) | (117,063) | (120,955) | (122,739) |
| Gross Profit | 44,543 | 22,298 | 22,707 | 42,111 |
| EBITDA excluding losses from JVs | 28,404 | 9,081 | 19,743 | 39,039 |
| Depreciation and Amortisation | (12,364) | (15,081) | (24,879) | (26,329) |
| Operating Profit (before amort. and except.) | 16,040 | (6,000) | (5,136) | 12,709 |
| Acquired Intangible Amortisation | (518) | (518) | 0 | 0 |
| Exceptionals | (7,906) | 0 | 0 | 0 |
| Share based payments | 1,044 | 0 | 0 | 0 |
| Operating Profit | 8,660 | (6,518) | (5,136) | 12,709 |
| Underlying interest | (66) | 0 | (800) | (800) |
| Exceptionals and losses from JVs | (1,847) | (2,000) | (300) | (300) |
| Profit Before Tax (norm) | 13,974 | (8,000) | (6,236) | 11,609 |
| Profit Before Tax (FRS 3) | 6,747 | (8,518) | (6,236) | 11,609 |
| Reported tax | (5,558) | 1,533 | 0 | (2,144) |
| Profit After Tax (norm) | 11,229 | (6,467) | (6,236) | 9,466 |
| Profit After Tax (FRS 3) | 1,189 | (6,985) | (6,236) | 9,466 |
| Average Number of Shares Outstanding (m) | 761.8 | 787.3 | 796.3 | 796.4 |
| EPS - normalised (p) | 1.38 | (0.82) | (0.83) | 1.13 |
| EPS - (IFRS) (p) | 0.13 | (0.92) | (0.83) | 1.15 |
| Dividend per share (p) | 0.0 | 0.0 | 0.0 | 0.0 |
| **BALANCE SHEET** | | | | |
| Fixed Assets | 267,476 | 295,877 | 289,997 | 282,668 |
| Intangible Assets | 121,775 | 127,467 | 128,248 | 128,029 |
| Tangible Assets | 124,520 | 147,228 | 140,568 | 133,458 |
| Other | 21,181 | 21,181 | 21,181 | 21,181 |
| Current Assets | 94,531 | 79,067 | 76,503 | 101,524 |
| Stocks | 35,709 | 32,187 | 33,456 | 37,487 |
| Debtors | 38,015 | 34,439 | 35,424 | 40,196 |
| Cash | 20,807 | 12,441 | 7,624 | 23,841 |
| Other | 0 | 0 | 0 | 0 |
| Current Liabilities | (48,893) | (71,548) | (41,341) | (47,423) |
| Creditors | (48,893) | (41,548) | (39,341) | (45,423) |
| Short term borrowings* | 0 | (30,000) | (2,000) | (2,000) |
| Long Term Liabilities | (3,836) | (3,836) | (31,836) | (31,836) |
| Long term borrowings* | 0 | 0 | (28,000) | (28,000) |
| Other long term liabilities | (3,836) | (3,836) | (3,836) | (3,836) |
| Net Assets | 309,278 | 299,560 | 293,324 | 304,933 |
| **CASH FLOW** | | | | |
| Operating Cash Flow | 16,988 | 6,834 | 14,983 | 36,017 |
| Net Interest | (66) | 0 | (800) | (800) |
| Tax | (665) | (1,200) | 0 | 0 |
| Capital expenditure and capitalised R&D | (42,362) | (44,000) | (19,000) | (19,000) |
| Acquisitions/disposals | 0 | 0 | 0 | 0 |
| Financing | 813 | 0 | 0 | 0 |
| Dividends | 0 | 0 | 0 | 0 |
| Net Cash Flow | (25,292) | (38,366) | (4,817) | 16,217 |
| Opening net debt/(cash)* | (45,612) | (20,807) | 17,559 | 22,376 |
| HP finance leases initiated | 0 | 0 | 0 | 0 |
| Other | 487 | 0 | 0 | 0 |
| Closing net debt/(cash)* | (20,807) | 17,559 | 22,376 | 6,159 |

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

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