EDISON

IQE

Photonics the star of the show

Full-year results

Tech hardware & equipment

IQE's diversification strategy delivered a 17% jump in adjusted profit before tax during FY16. Strong growth in photonics revenues was a key element of this improvement. This was boosted by a return to growth, albeit modest, in the wireless sector and weak sterling. We revise our FY17 estimates upwards to reflect the progress made on customer qualifications for photonics applications, and we introduce FY18 estimates.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/15	114.0	17.6	2.60	0.0	21.1	N/A
12/16	132.7	20.6	3.00	0.0	18.3	N/A
12/17e	137.0	22.5	3.15	0.0	17.4	N/A
12/18e	140.2	24.0	3.37	0.0	16.2	N/A

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

FY16 benefited from photonics growth and forex

Group revenues grew by 16% y-o-y, to £132.7m, in line with our £129.0m estimate. Trading was strong in multiple markets throughout FY16, with wireless revenues returning to growth (15%) and photonics recording a 43% increase. The two key applications – vertical cavity surface emitting lasers (VCSELs), which are used in data communications, consumer and industrial applications; and indium phosphide (InP), which is used in fibre to the premises and other short-haul optical networks – are experiencing strong demand. Revenues also benefited from weakness in sterling throughout the year. Adjusted profit before tax rose by 17% to £20.6m, in line with our £20.3m estimate.

Photonics growth set to continue

Growth in photonics revenues is expected to continue. In February, industry commentator MarketsandMarkets.com noted that the global VCSEL market was worth $955m in 2015 and forecast a 17.3% CAGR between 2016 and 2022. For IQE, confidence in continued growth in photonics revenues is underpinned by the progress made on customer qualifications for photonics applications during FY16. We raise our FY17 estimates to reflect some photonics development projects converting to commercial programmes, noting potential for further upgrades depending on how quickly customers ramp up production volumes.

Valuation: Uplift as photonics programmes ramp up

IQE's share price has risen by over 40% since our update note in December. Our analysis, which is based on peer group multiples, indicates that the shares are fairly priced at current levels. However, we note the potential for further price movement upwards if greater clarity regarding the rate of volume ramp up of photonics programmes results in estimate upgrades.

21 March 2017

Price	**54.75p**
Market cap	**£370m**

Net debt (£m) at end December 2016	39.5
Shares in issue	675.7m
Free float	88%
Code	IQE
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	17.7	44.1	196.0
Rel (local)	15.6	36.1	149.0
52-week high/low		54.8p	16.2p

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, power electronics and CPV solar cells.

Next event

AGM	13 June 2017

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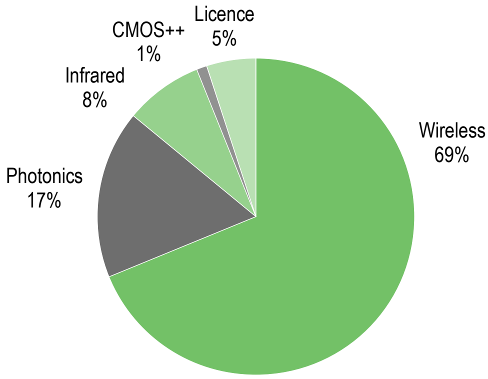
Segmental analysis

A key aspect of the FY16 results is the continued diversification of revenues. Although wireless revenues returned to growth, the strong performance of the photonics segment increased revenues from this segment from 14% of the total in FY15 to 17% in FY16. Non-wireless sales accounted for 31% of revenues (30% in FY15).

Exhibit 1: Segmental revenue split 2016



Source: IQE

Wireless

IQE's wireless revenues increased by 15% year-on-year during FY16 to £91.3m as the destocking that characterised H215 was absent. In addition, IQE won a higher proportion of clients' business and benefited from some new projects with existing clients, which may become volume business in the medium term. FY15 revenues were affected by supply chain destocking. Compared with the £89.1m recorded in FY14, the FY16 result is in line with management's estimates of mid-single-digit market growth.

Our estimates model a 6% revenue increase year-on-year during FY17 and a very modest 0.6% in FY18, based on IQE continuing to take market share. This is consistent with the Strategy Analytics report published in March 2017, which states that it expects GaAs to remain the dominant RF technology throughout the period 2016-21, but with device revenue from this application flattening. This report also notes that growth in demand for RF compound semiconductors in commercial wireless applications will be driven not by GaAs in handsets as in previous years, but by materials including InP (see section on photonics) and GaN, both of which represent potential upside for IQE. We note that MACOM is engaged in end-market qualification of IQE's GaN-on-Si material for deployment in wireless base stations, potentially moving to volume production over the next 12 months. We treat this as upside to our FY17 estimates. We also note engagement in development programmes for advanced RF filter applications based on the cREO technology, indicating potential for IQE to recapture share in this application in the medium term.

Photonics

IQE's photonics revenues grew by 43% year-on-year to £22.8m. Around half of the revenues were from VCSELs, the other half from InP epitaxy. Both technologies are currently showing strong growth. IQE's VCSELs are deployed in a wide range of high-speed communications and precision-sensing applications, including 3D scanning, gesture recognition and biometric sensing. This reduces the exposure to a single segment and to individual customers, which makes wireless revenues relatively volatile. In February 2017, MarketsandMarkets.com noted that the global

VCSEL market was worth $955m in 2015 and forecast a 17.3% CAGR between 2016 and 2022. InP lasers are an essential part of high-data rate FTTx (fibre to the home/fibre to the office) optical networks. Growth is being driven partly by an increase in underlying demand for both VCSEL and InP-based products, and partly by component vendors transitioning from a vertically integrated business model towards outsourcing wafer supply from IQE. This transition is related to IQE's development of a proprietary technology, which has enabled it to take on InP projects that previously customers had to manufacture themselves. Our estimates model sectoral sales rising by 5% during FY17 (we previously modelled 2%) and 10% in FY18. The upwards adjustment reflects the impact of some development programmes converting to volume deliveries. We see potential for stronger growth, depending on how quickly some customer programmes ramp up commercial volumes, but currently treat this as upside.

IQE is currently engaged directly with a number of OEMs (as opposed to the more common chip/component vendor relationship) on projects relating to high-volume end-markets. Wafer prices for photonic applications are an order of magnitude higher than for wireless applications, giving a highly beneficial impact on margins.

Infrared

IQE's infrared revenues rose by 19% year-on-year to £10.6m as IQE maintained its dominant share of the market. The segmental result benefited from a number of significant contracts, including one for $3.7m announced in January 2016. Our estimates model 2% revenue growth for this segment in both FY17 and FY18. We believe faster growth may be achievable because of advances in technology enabling IQE to produce the industry's first 150mm indium antimonide wafers. This move to larger diameter wafers improves the economics of production, encouraging the deployment of infrared chips in high-volume applications such as gesture recognition. Historically infrared sensing technology has been confined to price-insensitive applications such as night-vision systems for military personnel.

Licence income

Licence income, which totalled £6.7m in FY16, is a relatively new income stream for IQE. At present it is generated from two JVs. The one in Wales was formed in July 2015 with Cardiff University. The one in Singapore is with WIN Semiconductors and Nanyang Technological University. Revenues are expected to be relatively lumpy. FY16 licence revenues included more recurring elements, and were therefore lower than FY15 revenues (£8.0m), which were primarily upfront elements. We model FY17 and FY18 licence income at £4.0m in both years. This revenue stream is likely to become more significant in the longer term if IQE's technology is deployed in volume applications such as general-purpose LED lighting and solar power.

Power

The GaN market is very attractive for IQE as it represents one of the largest growth opportunities for compound semiconductors. GaN may be used in a number of large end-markets, including LED lighting, next-generation wireless RF and power semiconductors. It is also a potential route to recapture share in the handset diversity switch market, which has transitioned largely to silicon on insulator technology over the past few years. The power switching market is three to four times the size of the current market for wireless power amplifier chips.

Revenues attributable to the power semiconductor market are not material at present. Until IQE begins to ship meaningful volumes of the material, we will continue to treat revenues from this sector as upside to our estimates. However, IQE made a couple of significant steps during the year towards commercialising the gallium nitride fabrication technology that was licenced on an exclusive basis from Translucent in H215. Translucent's patented cREO (rare earth oxide) technology combines the benefits of GaN (ability to operate with high power densities, efficient heat dissipation, blue light emission) with the very significant scale benefits of the silicon chip manufacturing supply chain. In May 2016 IQE announced that it had successfully transferred the cREO technology to its facility in North Carolina. In November 2016 IQE entered into a 15-month joint R&D agreement with ASX-listed BluGlass to develop technology for deploying BluGlass's remote plasma chemical vapour deposition technique to deposit high-quality nitride films on both silicon and cREO-on-silicon substrates. Since BluGlass's technique operates at a lower temperature than other chemical vapour deposition equipment, it has the potential to output much higher quality epitaxy without the distortion caused by subjecting materials with different rates of expansion to very high temperatures. We also note the activity in the advance RF filter segment mentioned earlier.

Solar

Revenues from solar-related activity are currently included within photonics revenues as they are not sufficiently high yet to justify being reported separately. While CPV (Concentrated Photo Voltaic) technology still has the potential to grow into a significant market for IQE, the timing of this remains uncertain. Solar Junction is making good progress identifying opportunities in the satellite market, where the lower weight offered by CPV systems overrides the higher cost. Our estimates assume minimal contribution from CPV to photonics revenues during the forecast period.

Financials

FY16 earnings performance

Revenues increased by 16% year-on-year (£18.7m) during FY16 to £132.7m, in line with our £129.0m estimate. This resulted from strong growth in the wireless, photonics and infrared segments, most notably photonics, and weak sterling following the Brexit referendum. Adjusted gross margins excluding licence revenues rose from 23% to 24%, reflecting higher efficiencies. This rise would have been greater had it not been for the work on early-stage projects for customers, which result in low utilisation rates because the equipment is used for very low volume runs, as well as the addition of production personnel who need to be trained ahead of the anticipated ramp up in demand for photonics work. Including licence revenues, gross margin fell slightly from 28% to 27% as a result of the smaller proportion of licence revenues. The 5% increase in adjusted sales, general and administrative expenses reflects the impact of currency movements. Adjusted profit before tax rose by 17% (£3.0m) to £20.6m, in line with our £20.3m estimate.

Exceptional pre-tax items in FY16 totalled a loss of £1.6m compared with a £1.8m profit in FY15. Key elements comprised share-based payments of £2.0m, £1.3m amortisation of acquired intangibles offset against a £2.3m gain on release of contingent deferred consideration in respect of a previous acquisition.

Cash flow and balance sheet

Improved profitability combined with a further reduction in the ongoing wafer discounts given to Qorvo (the merged RFMD/TriQuint entity), as deferred consideration for the RFMD epitaxy business, resulted in stronger adjusted cash generation at the operating level before changes in working capital (£27.4m vs £23.3m in FY15). However, IQE still consumed cash. Net debt increased by £16.3m to £39.5m (20% gearing). The main causes of this were: a £4.9m increase in working capital relating to the intensification in photonics activity and weak sterling; £11.3m final tranche of deferred consideration for Kopin; £6.3m in capitalised development expenditure (higher than £5.0m in FY15 because of the levels of photonic and other development activity); and £11.0m capex (£3.8m in FY15) as IQE invested in equipment ahead of the anticipated ramp-up in photonics volumes.

Estimate changes

We raise our FY17 revenue and profit estimates to reflect some photonics development projects converting to commercial programmes, noting potential for further upgrades depending on how quickly customers ramp up production volumes. We understand that there are no more wafer discounts or deferred consideration to be paid in FY17. The cash generated by operations therefore makes a significant dent in the net debt figure. We have also introduced FY18 estimates.

Exhibit 2: Changes to estimates

	FY16			FY17e			FY18e
	Edison	Actual	% change	Old	New	% change	New
Revenue (£m)	129.0	132.7	2.9%	130.0	137.0	5.4%	140.2
EBITDA (£m)	32.1	31.7	-1.1%	33.7	34.5	2.4%	35.0
Adjusted PBT (£m)	20.3	20.6	1.5%	21.9	22.5	2.8%	24.0
Adjusted EPS (p)	2.88	3.00	4.0%	3.11	3.15	1.2%	3.37
Net debt (£m)	39.1	39.5	1.2%	19.1	24.2	26.5%	5.4

Source: IQE accounts, Edison Investment Research

Valuation

Exhibit 3: Peer multiples

Name	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							
VISUAL PHOTONICS EPITAXY CO	333	4.0	3.7	11.5	9.4	18.7	16.3
INTELLIEPI INC	110	3.4	3.0	15.6	12.9	27.6	23.5
LAND MARK OPTOELECTRONICS	871	11.1	8.2	18.0	12.9	30.7	20.8
S.O.I.T.E.C.	1,344	5.1	4.3	29.5	22.4	117.6	54.2
Wireless							
BROADCOM LTD	90,680	6.1	5.8	12.3	11.4	15.2	14.2
QORVO INC	8,719	3.0	2.8	9.1	8.0	15.4	12.1
SKYWORKS SOLUTIONS INC	18,327	4.7	4.3	11.0	9.7	16.1	14.0
Opto-electronics							
II-VI INC	2,105	2.3	2.1	11.8	10.5	24.9	19.5
EMCORE CORP	239	1.5	1.4	10.8	8.9	18.0	15.3
Mean		**4.6**	**3.9**	**11.1**	**9.3**	**18.8**	**15.2**
IQE PLC	443	3.1	2.9	11.9	11.8	17.4	16.2

Source: Bloomberg, Edison Investment Research. Note: Prices at 16 March 2017. Grey shading indicates exclusion from mean.

IQE's share price has risen by over 40% since our December update note, in which we proposed an indicative value of 45-49p/share based on slightly lower FY17 estimates. We continue to use a peer group analysis to value the company. IQE's FY17 EV/EBITDA multiple is now 7% higher than the mean for our peer sample, while the FY17 P/E multiple is 9% lower. In turn, FY18 EV/EBITDA and P/E multiples are both higher than the peer group averages. This suggests that the shares look fairly priced at current levels. However, given the potential for upward earnings revisions based on commercial ramp-up of photonics projects, this higher than average rating does not seem totally unreasonable to us. We see the scope for upward price movement if greater clarity regarding the rate of volume ramp-up of photonics programmes results in estimate upgrades.

Exhibit 4: Financial summary

Year end 31 December	£000s	2015	2016	2017e	2018e
		IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue		114,024	132,707	137,008	140,241
Cost of Sales (inc D&A + SBP)		(81,585)	(96,292)	(99,091)	(100,818)
Gross Profit		32,439	36,415	37,917	39,423
EBITDA		29,001	31,730	34,481	35,045
Depreciation and Amortisation		(10,024)	(9,611)	(10,000)	(10,000)
Operating Profit (before amort. and except.)		18,977	22,119	24,481	25,045
Acquired Intangible Amortisation		(1,208)	(1,327)	(1,327)	(1,327)
Exceptionals		5,398	1,915	0	0
Share based payments		(2,001)	(2,042)	(2,042)	(2,042)
Operating Profit		21,166	20,665	21,112	21,676
Underlying interest		(1,403)	(1,489)	(2,000)	(1,000)
Exceptionals		(387)	(144)	0	0
Profit Before Tax (norm)		17,574	20,630	22,481	24,045
Profit Before Tax (FRS 3)		19,376	19,032	19,112	20,676
Tax		773	408	500	500
Profit After Tax (norm)		18,066	21,440	22,481	24,045
Profit After Tax (FRS 3)		20,149	19,440	19,612	21,176
Average Number of Shares Outstanding (m)		662.6	671.5	675.7	675.7
EPS - normalised fully diluted (p)		2.60	3.00	3.15	3.37
EPS - (IFRS) (p)		3.00	2.87	2.90	3.13
Dividend per share (p)		0.0	0.0	0.0	0.0
Gross Margin (%)		28.4	27.4	27.7	28.1
EBITDA Margin (%)		25.4	23.9	25.2	25.0
Operating Margin (before GW and except.) (%)		16.6	16.7	17.9	17.9
BALANCE SHEET					
Fixed Assets		174,207	215,154	215,827	214,500
Intangible Assets		86,843	103,972	104,145	104,318
Tangible Assets		65,154	85,001	85,501	84,001
Other		22,210	26,181	26,181	26,181
Current Assets		48,909	64,323	82,437	106,165
Stocks		21,215	28,498	29,871	32,879
Debtors		23,050	30,868	32,256	34,137
Cash		4,644	4,957	20,310	39,149
Current Liabilities		(48,050)	(46,012)	(44,484)	(45,006)
Creditors		(44,809)	(38,360)	(36,832)	(37,354)
Short term borrowings		(3,241)	(7,652)	(7,652)	(7,652)
Long Term Liabilities		(28,032)	(39,021)	(39,021)	(39,021)
Long term borrowings		(24,626)	(36,854)	(36,854)	(36,854)
Other long term liabilities		(3,406)	(2,167)	(2,167)	(2,167)
Net Assets		147,034	194,444	214,759	236,638
CASH FLOW					
Operating Cash Flow		20,971	22,463	30,192	30,678
Net Interest		(1,403)	(1,489)	(2,000)	(1,000)
Tax		(459)	(839)	(839)	(839)
Purchase of property, plant and equipment, capitalised development expenditure and investment in other intangible fixed assets		(10,002)	(19,060)	(12,000)	(10,000)
Acquisitions/disposals		0	(11,250)	0	0
Financing		544	578	0	0
Dividends		0	0	0	0
Net Cash Flow		9,651	(9,597)	15,353	18,839
Opening net debt/(cash)		31,251	23,223	39,549	24,196
HP finance leases initiated		0	0	0	0
Other		(1,623)	(6,729)	0	0
Closing net debt/(cash)		23,223	39,549	24,196	5,357

Source: Edison Investment Research, IQE accounts

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