HARDMAN & CO.

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CYANCONNODE

Smart meter breadth and depth

CyanConnode has steadily been making progress in India, where the national smart meter programme has been gathering pace. In July 2022, the company crossed the one million mark for meters connected to its RF network across nine Indian states. This is the aggregate RF device number in India connected since 2014 and represents market share of 22%. The latest update from the company states an order book of 2.6m RF nodes for India. Performance of smart meters is a critical aspect of the Indian programme and CyanConnode's uptime rates of over 99% are industry-leading metrics. There remain around 41m meter deployments to be awarded in India this financial year.

- **Maintaining strong contract win momentum:** An important aspect of the revenue growth going forward is the healthy regional balance, with a significant proportion of FY23 revenue expected to come from the Middle East region, where the company is establishing a strong presence with the major utilities.

- **FY22 was another strong year for shipments:** 612,000 modules were shipped during FY22, up 27% YoY versus c.481,000 shipped in FY21. We anticipate a further substantial uplift in shipments in FY23 to c.900,000, comprising gateways and end-point modules across India, Asia and the Middle East.

- **New contracting frameworks in India are in place:** Acceleration of tender awards is now expected following the adoption of opex-based pricing models. The distribution companies will pay on a recurring basis, creating improved revenue visibility for vendors and reducing unpredictability of the timing of cash receipts.

- **Financial estimates anticipate strong growth:** Our forecasts anticipate 26% revenue growth in FY23, having incorporated the greater element of revenue recognition in the Indian contracts post the implementation phase. We also assume pricing discounts as large contracts are becoming the norm.

- **Investment summary:** The flow of contracts from India is accelerating, as reflected in the backlog of 1.6m units. There is scope for significant news flow on this front over the coming months. These are complex contracts and require the company to scale rapidly, which it is doing seamlessly against a challenging supply chain backdrop. Our DCF-implied fair equity value for CyanConnode is £63.7m (£0.27 per share), vs. the current market capitalisation of £26.7m.

Financial summary and valuation

Year-end Mar (£m)	Mar'20*	2021	2022	2023E
Revenue	2.45	6.44	9.56	12.51
Reported EBITDA	-5.46	-2.18	-0.04	-0.17
EBITDA margin	-223%	-34%	0%	-1%
Adjusted EBIT	-5.69	-2.81	-0.29	-0.42
Adjusted pre-tax profit	-5.70	-2.73	-0.45	-0.60
Net income	-5.13	-2.06	-0.87	-0.32
EPS (p)	-2.96	-1.18	-0.42	-0.13
EV/revenue (x)	9.9	3.8	2.5	1.9
EV/EBITDA (x)	-4.5	-11.1	-639.6	-143.2

**15 months to Mar'20 (due to year-end change); Source: Hardman & Co Research*

Technology

Source: Refinitiv

Market data

EPIC/TKR	**CYAN.L**
Price (p)	**11.3**
12m high (p)	29.9
12m low (p)	1.55
Shares (m)	236.3
Mkt. cap (£m)	26.7
EV (£m)	24.3
Free float*	100%
Currency/Listing	GBP/UK
Market	AIM

**As defined by AIM Rule 26*

Description

CyanConnode is a leading global vendor of intelligent communications solutions, bringing together narrowband RF mesh and cellular technologies, and the Internet of Things (IoT), to create a highly scalable platform for transmission, collection and analysis of data. The company is headquartered in Cambridge, UK, with offices in India and Sweden. To date, it has spent in excess of $50m on developing its technology platform, on which more than 2.7m endpoints have been delivered globally. At the end of March 2022, total headcount stood at 60 employees, of which 11, or 18%, were women.

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Investment highlights

After a successful FY22, during which the company delivered organic revenue growth of 49% and a gross profit increase of 61%, our attention now turns to FY23 and beyond. The contract awards are continuing at a steady pace, not only from the Indian programme, but increasingly from the Middle East and Asia, which is creating a healthy balance in our expected geographical revenue split for FY23. Unsurprisingly, given the sheer scale of the Indian smart meter rollout, much investor focus remains on CyanConnode's share of new tenders in that country – as it happens, the company is maintaining strong market share and navigating its way through the multitude of concurrent tenders, the legal complexities of each contract and the pressure on corporate resources. It would be easy to take the consistent quality of execution for granted.

One of the major changes that has taken place in India is the wholesale shift towards the Build, Own, Operate, Transfer (BOOT) model, whereby the power distribution companies (Discoms) are not required to fund capex upfront, but rather pay for the smart meters that are installed on a recurring periodic basis. The intention is, of course, to accelerate the process, recognising that many of the Discoms are in a poor financial state due to high levels of inefficiency – an issue that the smart meter rollouts are intended to help to reduce. The Discoms will now pay based on time periods and specific dates, which will assist with predictability of cashflows, whereas previously, the milestone-based payment triggers had created some uncertainty of payment timing for CyanConnode. The new contractual framework results in a shift in the profile of Indian revenue recognition for the company, which is reflected in our estimates for FY23 and beyond.

Global recognition reflected in order flow and partnerships

The first order in the Middle East and North Africa (MENA) region was announced in April 2022, for the company's new generation of cellular products, which are being deployed for smart communications for smart electricity and water meters. Under the contract, CyanConnode is supplying cellular hubs, with a capacity to handle up to 1 million meters.

In August 2022, CyanConnode announced a new order for cellular gateways for smart communications for an Advanced Metering Infrastructure (AMI) project in the MENA region. The project involves retrofitting CyanConnode's new generation of cellular products into existing smart meters. The contract was quantified at $2.5m, with the installation scheduled to be completed within 18 months.

While the opportunity in Indian remains immense, it is worth remembering that the company is successfully cultivating significant partnerships and footprint in the Middle East. The MENA contracts signed to date are with some of the largest utilities in the region. Doing business in this region is relatively straightforward, particularly as the company's contracts tend to be via longstanding partners, which are procuring the hardware from CyanConnode and handling the implementation and ongoing service requirements.

As a consequence of these wins, we expect the MENA region to have the potential to contribute over £4.0m of revenue in FY23. The cashflow profile of these contracts is attractive as 100% of the cash is received by the time shipment of modules takes place.

In addition to the MENA deals, CyanConnode continues to expand its presence in Thailand, where further orders are expected in FY23.

MENA contracts provide validation of new cellular products

The new MENA deal is compelling from a technology perspective. The announcement notes that the data transmission technology being deployed is cellular. Traditional cellular options, such as 4G and LTE networks, consume too much power. They are also less suited to applications where only a small amount of data is transmitted infrequently; for example, meters for reading gas, electricity or water consumption. CyanConnode is an acknowledged leader in narrowband RF Mesh technologies and this contract is strong validation of the company's capabilities in narrowband cellular technologies. As we discussed in our previous research reports on CyanConnode, the long-term opportunity in Machine to Machine (M2M) communications and IoT is immense, as these technologies enable utilities, enterprises and entire cities to manage their assets, operations and environment more optimally.

Indian smart meter programme is accelerating

Some 40m meters are out for tender currently with further tenders pending. Among the cast list of suppliers, CyanConnode stands out as a vendor of intelligent connectivity modules that has a number of large-scale successful installations under its belt with a range of meter manufacturer partners. The partner roster continues to grow, as the EPCs join the fray as prime contractors.

Contract awards for the majority of the c.40m meters out for tender in India are expected within the next 12 months. As a vendor of end-to-end advanced metering infrastructure (AMI) solutions with proven efficacy and resilience, we continue to expect CyanConnode to fare well, despite the inevitable twists and turns associated with these types of immense procurement exercises. The largest constituent of the current tenders is Uttar Pradesh, the largest state in India, which we understand represents c.27m of the c.40m meters currently out for tender.

New RDSS

At the end of July 2022, the Indian Prime Minister, Narendra Modi, launched the flagship Revamped Distribution Sector Scheme (RDSS), which is aimed at improving the operational efficiencies and financial position of the Discoms, many of which are struggling to stay afloat. The scheme offers Discoms financial incentives linked directly to the achievement of RDSS milestones. These incentives include advance payments of tariff subsidies, reduction of sums owed to the government, and liquidation of regulatory assets.

Around 50% of the budget for the RDSS is allocated to improvement of feeder and transformer metering and pre-paid smart consumer metering. The remaining budget, the majority of which is expected to be funded by the award of grants from central government, is allocated to power loss reduction and the upgrade of power distribution networks. The scheme requires the projects to be executed on the basis of the "Totex" model, requiring execution through a combination of capex (upfront) and opex (deferred) payment models.

This is undoubtedly an ambitious project and marks yet another attempt to instil some momentum into the smart meter programme, which is significantly behind the original rollout targets. However, the pace of tender announcements is undoubtedly now accelerating, which bodes well for vendors such as CyanConnode.

BOOT model is central to new tenders

The contractual structure of the Indian smart meter programme has undergone substantial changes, which are inherently designed to accelerate progress. After some evolution in its approach, the programme is now being implemented under a BOOT model. This means that the Discoms are not required to fund substantial capex upfront, but rather pay for the smart meters that are installed on a recurring periodic basis.

External funding is a key element

The scale of the Indian programme is immense, and it is well understood that a significant portion of the funding will come from external pools of capital, the infrastructure funds in particular. This funding is starting to come through.

Revenue flows are less upfront-weighted

Alongside the growing involvement of infrastructure funds and other external sources of funding, the mandated contractual structure is now far more weighted towards payments over time rather than upfront payments. At the same time, the emphasis has shifted away from the relative unpredictability of payments triggered by implementation milestones being achieved by partners to regular periodic payments made on a contractual basis.

These newer contract terms do result in a shift in the profile of Indian revenue recognition for CyanConnode, which is reflected in our estimates for FY23 and beyond. The previous revenue forecast had a larger upfront recognition component, whereas the new Equal Monthly Instalments model spreads more revenue over the life of the contract; total contract values remain essentially intact. The benefit of the arrangements is greater predictability of payments and a higher proportion of recurring revenue associated with each contract.

CyanConnode is winning its fair share of Indian contracts

CyanConnode's successful deployments are becoming a reference for other Discoms – the state of Indore, in particular, has seen a quick payback of less than three years on its smart meter investment. Indore initially contracted for 75,000 smart meters, and has subsequently added a further 55,000 from CyanConnode. Further tranches of meter procurement are anticipated.

As a consequence of the successful Indore case study, many other states are adopting the same platform. The importance of platform resilience and delivering on stringent service level agreements (SLAs) should not be underestimated in a country such as India. The terrain in semi-urban and rural areas can be difficult for connectivity due to mountainous and dense terrain. The Omnimesh RF technology is highly resilient due to its use of mesh networks. If a single endpoint goes down, the remainder of the network can continue to function as normal.

The overall programme in India remains in its relative infancy with less than 10% of the overall target number of meters so far deployed. In that context, CyanConnode has fared well – we estimate that the company has installed around 25% of the total number of meters awarded, with c.1m deployed and a backlog of a further 1.6m meters. In late-August 2022, CyanConnode management disclosed that it was pursuing current tenders for the deployment of over 40m smart meters, while also indicating that this figure would grow.

Partner list continues to grow

The company continues to work with a range of partners in India, including some of the new EPC entrants into the market. In the case of larger tenders for multi-million numbers of units, CyanConnode is finding itself working with two to three partners. With the Discoms looking to contract with providers in blocks of say, 1m units, CyanConnode management is anticipating that it may supply more than one partner in a particular region as future tenders are awarded.

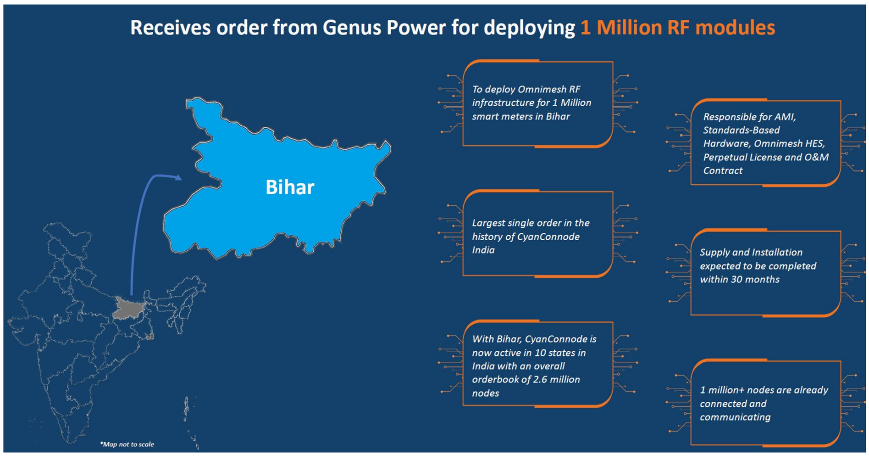
The company is currently integrating with nine new meter types, a process that is required as new suppliers enter the Indian market. This will further help to expand the company's coverage of the market.

Bihar contract is largest to date in India

In August 2022, CyanConnode announced its largest-ever order, which was for a broad platform deployment, comprising 1m Omnimesh smart meter modules, AMI, hardware, Omnimesh head-end software licences, and support and maintenance contracts. The order is for the Bihar region in India and is from Genus Power Infrastructures, one of CyanConnode's longstanding partners in India. Prior to this order, Genus had worked with CyanConnode on four projects, summing to a total of over 600,000 meters.

Under the terms of the contract, supply of the modules will commence in September 2022, and installation is expected to take up to two years. The support and maintenance contracts will commence upon completion of the smart meter installation, and will last for eight years.

CyanConnode's progress in the Indian state of Bihar



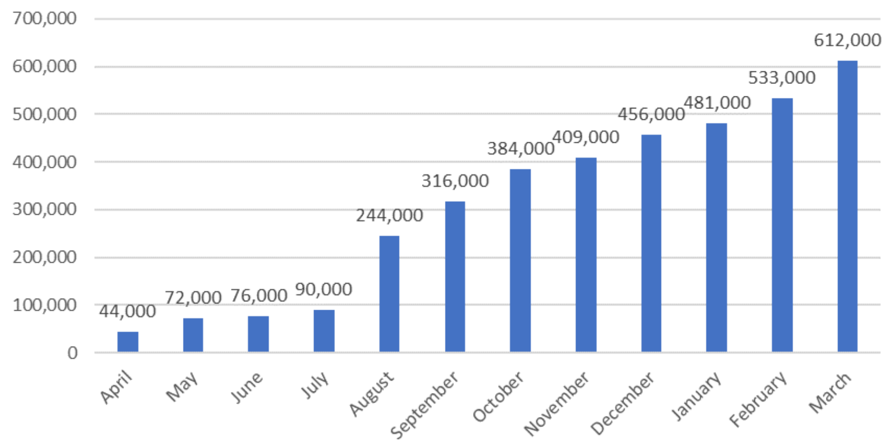
Source: Company data

Financials

Strong YoY growth in shipments

As set out in the charts below, the total number of modules delivered in FY22 was 612,000, which compares with 481,000 in FY21. Of this total, 562,000 related to the Indian programme.

CyanConnode: module shipments FY22



562,000Source: Company data

The monthly patterns in shipments have shown a degree of variability following the end of the second wave of COVID-19 in mid-2021, but overall demonstrate a remarkably consistent pattern, despite the extent of the moving parts in terms of both supply chains and partner readiness, given the implementation complexities of the Indian smart meter programme.

CyanConnode: module shipments FY22

FY22 Shipments		Cumulative	Monthly
April	44	44,000	44,000
May	72	72,000	28,000
June	76	76,000	4,000
July	90	90,000	14,000
August	244	244,000	154,000
September	316	316,000	72,000
October	384	384,000	68,000
November	409	409,000	25,000
December	456	456,000	47,000
January	481	481,000	25,000
February	533	533,000	52,000
March	612	612,000	79,000

Source: Hardman & Co Research

Revenue

As we have discussed earlier in this report, the contractual structure of the Indian smart meter programme has undergone substantial changes, which are inherently designed to accelerate progress. The primary outcome is a much greater degree of revenue being spread out over contract periods, which creates a high level of contracted revenue visibility for vendors across the smart meter supply chain.

The pricing for the current tenders of larger numbers of smart meters is in the range of 20% to 25% lower than for smaller deals. What CyanConnode has managed to do in general, at least for the recent contract wins, is to maintain the value of the upfront payment, so that the discount is almost entirely applied to the ongoing periodic payments.

Contemplating FY23 estimates

The table below sets out our updated revenue estimates for CyanConnode for the current financial year. We have incorporated into our updated forecasts each of the following elements, as discussed in the earlier sections of this report:

1. The growing focus on recurring revenue within the Indian contracts, significantly reducing the upfront element of revenue, but creating greater visibility from contracted recurring revenue.

2. Some unit pricing attrition as a consequence of larger deals. Inevitably, the unit price for an order of 1m units will be lower than for 100,000 units. That said, currency movements alleviate much of the impact in the context of our GBP-denominated financial forecasts.

3. The geographical revenue splits anticipate a strong contribution during the forecast period from each of the Middle East and North Africa (MENA) and Asian regions.

CyanConnode: Hardman & Co revenue model FY23E

Year-end March (£000s)	H1 2023E	H2 2023E	2023E
INDIA			
Modules shipped	**380,000**	**520,000**	**900,000**
Total contract value of shipped modules	**5,182**	**7,091**	**12,273**
Revenue Indian recognised in the period	**3,109**	**4,255**	**7,364**
% of total revenue	*66.8%*	*54.1%*	*58.8%*
MENA			
Total MENA Region revenue	**1,260**	**2,940**	**4,200**
ASIA			
Total Asian revenue	**285**	**665**	**950**
TOTAL REVENUE	**4,654**	**7,860**	**12,514**

Source: Hardman & Co Research

Overall estimates

From a profitability perspective, we conservatively expect the company to achieve breakeven at the net income level in 2024E. This is after taking into consideration an uplift in total opex of c.10% resulting from the scaling up of the business.

CyanConnode: financial summary

Year-end March (£m)	15M Mar 2020	2021	2022	2023E
Revenue	2.45	6.44	9.56	12.51
yoy growth	-	*163%*	*49%*	*31%*
EBITDA	-5.46	-2.18	-0.04	-0.17
EBITDA margin	*-223%*	*-34%*	*0%*	*-1%*
Adj. EBIT	-5.69	-2.81	-0.29	-0.42
Adj. EBIT margin	*-232%*	*-44%*	*-3%*	*-3%*
Adj. Pre-tax profit	-5.70	-2.73	-0.45	-0.60
Adj. Pre-tax margin	*-233%*	*-42%*	*-5%*	*-5%*
Net income	-5.13	-2.06	-0.87	-0.32
Net margin	*-209%*	*-32%*	*-9%*	*-3%*
EPS (p)	-2.96	-1.18	-0.42	-0.13

Source: Hardman & Co Research

Balance sheet and cashflow

As at end-March 2022, CyanConnode had aggregate cash reserves of £2.4m, up £0.9m versus the previous year. This was accompanied by gross trade receivables of £7.0m, representing 73% of revenue for the period. The net debtor figure, after taking off amounts received from invoice discounting, was £6m.

The mix of shipments is a relevant consideration here, as payments for gateways (typically one per 250 modules) have in the past typically been based on delivery and implementation milestones being achieved, whereas meter modules are invoiced as shipped. Gateways are a larger element towards the end of the implementation phase of a contract, and this was the case for much of 2H22.

Another factor within the £6.0m figure is the treatment of receivables that have been converted into cash using invoice discounting as the partner in India had provided letters of credit. Under IFRS, these the debtor sum is required to be stated on the balance sheet on a gross basis, with the funds received from invoice discounting treated as a debt liability. In practice, £1.0m of the £7.0m had already been received by CyanConnode by the end of March 2022.

£3.7m has been received since the year-end, relating to smart meter implementation milestones having been achieved, so the underlying trade receivables balance currently stands at around £3m. The FY22 results note that the detailed cashflow analysis presented to the CyanConnode board in the context of the 2023/24 budgetary process, confirms that the company has sufficient cash resources to reach profitability, based on its standard operating model.

Going forward, as discussed earlier, the revenue recognition profile of Indian contracts will typically be more deferred.

Rationale for future fundraising initiatives will remain growth-centric

The Indian programme, together with the additional contact wins that continue to come through in the Far East and MENA, is creating a step change in CyanConnode's production requirements. This is happening at a time when supply chain continuity is a major challenge in the face of global silicon shortages. New suppliers, in the absence of a longstanding customer relationship, will generally seek to protect themselves by requesting significant upfront payments in the early stages. This is in contrast to the 45- to 90-day payment terms that may be extended by existing suppliers. The need to create depth and breadth in the supply chain is a cash-consumptive process.

Profit and loss

CyanConnode: Hardman & Co profit and loss

Year-end March (£000)	12M Dec 2017	12M Dec 2018	15M Mar 2020	2021	2022	2023E
Revenue	**1,171**	**4,465**	**2,451**	**6,437**	**9,562**	**12,514**
Cost of sales	-674	-1,724	-1,081	-3,334	-4,554	-7,133
Gross profit	**497**	**2,741**	**1,370**	**3,103**	**5,008**	**5,381**
Gross margin	*42%*	*61%*	*56%*	*49%*	*45%*	*43%*
Operating expenses	-11,161	-8,589	-6,827	-5,284	-5,046	-5,551
EBITDA	**-10,664**	**-5,848**	**-5,457**	**-2,181**	**-38**	**-170**
Share-based payments	-689	-445	-267	-80	-363	-320
Stock impairment	-55	-578	-4	-108	0	0
Foreign exchange losses	-52	-16	-267	15	0	0
Adj. EBITDA	**-9,868**	**-4,809**	**-4,919**	**-2,008**	**325**	**150**
EBITDA margin (%)	*-911%*	*-131%*	*-223%*	*-34%*	*0%*	*-1%*
Depreciation & amortisation	-489	-472	-772	-627	-616	-570
Adj. EBIT	**-10,357**	**-5,281**	**-5,691**	**-2,808**	**-291**	**-420**
EBIT	**-11,153**	**-6,320**	**-6,229**	**-2,685**	**-1,017**	**-1,060**
Adj. EBIT margin (%)	*-884%*	*-118%*	*-232%*	*-42%*	*-3%*	*-3%*
Investment income	16	13	17	1	0	2
Net finance income	-6	-2	-30	-50	-161	-177
PBT	**-10,347**	**-5,270**	**-5,704**	**-2,734**	**-452**	**-595**
Taxation / tax credit	1,402	927	576	677	307	280
Effective tax rate (%)	-14%	-18%	-10%	-25%	-68%	-47%
Net income	**-8,945**	**-4,343**	**-5,128**	**-2,058**	**-871**	**-315**
EPS (basic, p)	-10.18	-3.71	-2.96	-1.18	-0.42	-0.13
EPS (diliuted, p)	-10.18	-3.71	-2.96	-1.18	-0.42	-0.13
Average shares in issue basic (m)	95.740	116.976	173.048	174.755	205.173	236.309
Average shares in issue dil. (m)	95.740	116.976	173.048	174.755	205.173	236.309

Source: Company data, Hardman & Co Research estimates

Valuation

Our approach to understanding the potential valuation of CyanConnode centres on a DCF analysis. Our assumptions are set out in their entirety in the table below, including a WACC of 10% and the medium-term revenue profile, which reflects the international pipeline of opportunities.

The analysis produces an implied fair enterprise value of £61.3m and an implied fair equity value of £63.7m (equating to £0.27per share). These valuation outcomes are materially higher than the current enterprise value of £24.3m and market capitalisation of £26.7m.

CyanConnode: Hardman & Co DCF analysis

Key inputs	
Terminal FCF growth rate	3.0%
Long-term sustainable EBIT margin	25.0%
Long-term tax rate on EBIT	18.0%
WACC	**10.0%**

Y/end March, £m	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	Terminal value
Revenue	**12.5**	**15.8**	**18.9**	**22.5**	**26.4**	**30.6**	**34.9**	**38.3**	**41.4**	
yoy growth	*30.9%*	*26.1%*	*20.0%*	*19.0%*	*17.0%*	*16.0%*	*14.0%*	*10.0%*	*8.0%*	
EBIT margin	-3.4%	2.0%	10.0%	15.0%	20.0%	22.0%	24.0%	25.0%	25.0%	
EBIT	**-0.4**	**0.3**	**1.9**	**3.4**	**5.3**	**6.7**	**8.4**	**9.6**	**10.4**	
Depreciation & amortisation	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	
Adj. EBITDA	**0.2**	**0.9**	**2.5**	**4.0**	**5.9**	**7.3**	**9.0**	**10.2**	**11.0**	
Tax rate	0.0%	0.0%	5.0%	10.0%	12.0%	14.0%	16.0%	18.0%	18.0%	
Tax on EBIT	0.0	0.0	-0.1	-0.3	-0.6	-0.9	-1.3	-1.7	-1.9	
Change in net working capital	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.4	-0.4	
Cashflow from operations	**0.1**	**0.8**	**2.2**	**3.5**	**5.0**	**6.2**	**7.4**	**8.2**	**8.7**	
Capex	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	
Unlevered free cashflow	**-0.2**	**0.4**	**1.9**	**3.1**	**4.6**	**5.7**	**6.8**	**7.6**	**8.1**	**97.6**
Year	1	2	3	4	5	6	7	8	9	10
Discount factor	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14	2.36	2.36
Present value	**-0.2**	**0.3**	**1.4**	**2.1**	**2.9**	**3.2**	**3.5**	**3.5**	**3.2**	**41.4**

Note: based on medium-term assumptions from 2025E

Implied valuation metrics	**£m**
Sum of nine-year cashflow	19.9
Terminal value	41.4
Value of the firm	61.3
Net funds	2.4
Total equity value	**63.7**
No.of shares in issue (m)	236.3
Fair value share price (£)	**0.27**

Source: Hardman & Co Research estimates

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