

MaxCyte

Gearing up the growth

MaxCyte's has started FY16 strongly with sales growth accelerating. It has also expanded its marketing activities, which, combined with the favourable market dynamics, should enable MaxCyte to sustain growth of over 20% for the foreseeable future. Alongside its product business, the first CAR-T product from its CARMA technology platform is advancing as expected towards the clinic and we expect a Phase I trial in ovarian cancer to be initiated in H117. After updating our model to reflect the H116 results, we are upgrading our estimates and increasing our valuation by £2m to £82m, equivalent to 189p per share.

Year-end: December	2014	2015	2016E	2017E
Sales (\$m)	7.2	9.3	11.9	14.7
Adj. PBT (\$m)	(1.7)	(1.4)	(4.3)	(5.9)
Net Income (\$m)	(3.8)	(3.5)	(5.0)	(6.0)
Adj. EPS (c)	(1,518.2)	(186.4)	(14.8)	(13.5)
Cash (\$m)	3.4	2.4	8.7	2.9
EBITDA (\$m)	(1.2)	(0.7)	(3.8)	(5.4)

Source: Trinity Delta Note: Adjusted numbers exclude share-based payments and exceptionals.

- Strong performance across all areas.** During H116, sales increased by 30.3% to \$5.5m, with consistent growth across both drug discovery and development, and cell therapy. This growth is a slight increase on the 29.7% achieved in FY15 and was achieved while maintaining a gross margin of 89.5%. This performance is particularly impressive given the inevitable distraction caused by the IPO.
- Developing sales capabilities across the globe.** The direct sales force in the US and Europe is on track to being nearly doubled by the end of 2016. It has also strengthened its distribution network in Asia with new distributors for Japan and Singapore. MaxCyte's cell transfection products are clear market leaders in the fast growing cellular engineering market, and the extra investment in marketing lays the basis for continued high levels of growth.
- CARMA to enter clinic in H117.** MaxCyte remains on schedule to file its IND for the first CARMA product in H117, and we expect this will lead to a Phase I study in ovarian cancer starting in H117. CARMA is MaxCyte's proprietary CAR-T therapy, and as MaxCyte's transfection products are already being used in seven CAR-T trials, we do not expect any regulatory issues.
- Raised estimates and valuation to reflect H116 results.** We increase our estimates for MaxCyte and valuation following the interim results. Our SOTP model now generates a valuation £2m higher at £82m (189p per share). We value MaxCyte's product business at £47m (108p per share), suggesting that there is 28% upside to the current share price from the product business alone and with additional upside from commercial deals in cell therapy and the CARMA platform.

Price (Sterling)	84.5p
Market Cap	£36.8m
Enterprise Value	£31.3m
Shares in issue	43.5m
12 month range	72.5p-86.0p
Free float	67%
Primary exchange	AIM London
Other exchanges	NA
Sector	Healthcare
Company Code	MXCT.L

Corporate client Yes



Company description:

MaxCyte uses its patented flow electroporation platform to transfect a wide array of cells. Revenues arise from sale and lease of equipment, disposables and licence fees; with an impressive client list. Additionally, a novel mRNA mediated CAR technology, known as CARMA, is being explored in various cancers, including solid tumours.

Analysts

Mick Cooper PhD

mcooper@trinitydelta.org
+44 (0) 20 3637 5042

Franc Gregori

fgregori@trinitydelta.org
+44 (0) 20 3637 5041

MaxCyte: Gearing up the growth

Revenue growth increased by 30.3% in H116

During H116, MaxCyte generated sales of \$5.5m, an increase of 30.3% on H115 revenues. Associated with this growth, there was also a rise in deferred revenues of 31.5% to \$2.6m, as the extra product sales were also linked to those for technology licenses. Gross margins were maintained at 89.5% (89% in H115), and operating costs rose by 35% to \$5.9m, because of extra investment in marketing, the costs associated with being a listed company and a \$0.5m investment in R&D to support the CARMA programme. Overall this resulted in the net loss increasing to \$1.3m from \$0.96m.

Over 35 high-value cell therapy programme licences, which could convert to lucrative commercial licences

MaxCyte sells and licenses its products for use in drug discovery & development and cell therapies. The latter licenses are the most valuable contracts; there are over 35 cell therapy programmes using MaxCyte's devices and over 10 of these have licenses for clinical use. As preparations begin for the commercialisation of these programmes, which can occur at the end of Phase II, companies are expected to convert licenses to cover commercial use, which would require new agreements from which MaxCyte could earn significant revenues from upfront fees, milestones and royalty payments.

MaxCyte's electroporation instruments have unmatched capabilities

The growth is based on its leading position in the field of flow electroporation. Its proprietary devices can transfect almost any living cell with a wide variety of molecules, ranging from antibodies through DNA to [mRNA](#) and [siRNA](#). The patented technology is both highly efficient, with 90% to 95% effective cell loading commonplace, and very scalable, up to 2×10^{11} cells can be processed in less than 30 minutes under sterile and clinical conditions. These are capabilities unmatched by competing electroporation devices, such as those produced by Lonza and Thermo Fisher Scientific. This has led to MaxCyte's instruments being used by over 50 companies, including nine of the top ten global players.

Favourable market conditions for MaxCyte...

Maxcyte is also benefiting from favourable market dynamics. Its instruments address a well defined need in a large market segment. The Markets and Markets report ([June 2015](#)) on Transfection Reagents and Equipment estimates this to be worth \$676.8m in 2015 and expects it to grow by 7.2% CAGR to \$957.9m in 2020. While the main method of transfecting cells is by using biochemical methods (largest market segment by both volume and value), but the market growth is primarily being driven by the increased use of viral (mainly lentiviral and AAV) and physical (principally electroporation) methods as use switches from biomedical research to therapeutic delivery.

... with the company at the forefront of innovation

An example of where biomedical research is advancing towards the clinic is where the promising fields of gene editing (eg CRISPR technology) and immunoncology are converging to produce therapies, such as allogeneic CAR-T treatments. This is an area in which MaxCyte is active, and its products are expected to be key to enabling the generation of these new therapies, given the ability of its devices to transfect cells in a scalable and consistent manner.

Marketing activities being expanded to drive sales growth

To ensure that it exploits the commercial potential of its transfection technology, MaxCyte is expanding its marketing activities, as it said it would at the time of its IPO. In the US and Europe, MaxCyte uses a direct sales force and is on track to nearly double the number of sales people and field scientists in the team to over twelve. In Asia, it uses a distributor model and already had established distributors in China, India and South Korea. This network was expanded in September with the appointment of Kiko Tech and Bio Laboratories to serve Japan and Singapore respectively as the authorized distributors, which are supported by staff including a senior manager.

The combination of the unique capabilities of MaxCyte's instruments and its greater marketing efforts should result in the company growing significantly ahead of the market and sustain growth of over 20% for the foreseeable future. It should be noted that MaxCyte is continually developing extra applications for its different instruments to maintain its competitive advantage and remain well placed to address new market demands.

CARMA progressing towards the clinic

First CARMA product should enter the clinic in H117

MaxCyte is advancing its CARMA programme as expected, with increased investment (\$0.5m in H116), and should file an IND with the FDA in H117. We do not expect any regulatory complications as MaxCyte's transfection technology is already being used in seven clinical trials with CAR-T ([Chimeric Antigen Receptor T-cell](#)) therapies, including in solid tumours, and is working in collaboration with the John Hopkins Kimmel Cancer Center. So, the first CARMA product remains on track to enter the clinic in H117.

CARMA has clear advantages over current CAR-T approaches

CARMA is MaxCyte's proprietary CAR-T technology platform, which it is developing in collaboration with the Kimmel Cancer Center at The John Hopkins University. The CARMA approach has many advantages over the current CAR-T therapies in clinical development. The clinical appeal is the potential to reduce toxicities (notably on-target, off-tumour effects) as well as addressing new indications (beyond the [CART-19](#) pathways), including solid tumours. From a production perspective, the principal attraction is the significantly faster and much less costly commercial manufacturing process (which could be orders of magnitude less expensive). Further details on the CARMA technology can be found in our [initiation note](#) on MaxCyte.

We expect the study will be a small-scale Phase I/IIa trial in ovarian cancer with about 30 patients and anti-mesothelin CAR-T therapy. It will be interesting to see the design of the trial, which we believe will follow a traditional dose-escalation design without the need of a preconditioning treatment (eg. cyclophosphamide or fludarabine) and the associated toxicities, unlike the leading CAR-T therapies in development. The reason for the different approach is that the activity of current CAR-T cells is dependent upon those cells being engrafted into the patient's immune system; in contrast, the CARMA cells are expected to act more like a monoclonal antibody attached to a cytotoxic T-cell, which survive transiently.

MaxCyte continues to develop the CARMA technology and to explore many new targets. Assuming the first clinical trial advances well, demonstrating promising anti-tumour activity with a favourable adverse event profile, we would expect MaxCyte to conduct additional Phase I/IIa trials or to partner the programmes.

Financials and Valuation

We have increased our estimates as indicated in Exhibit 1, after updating our model to reflect the H116 results.

Exhibit 1: Summary of changes to estimates

	Sales (\$m)			EBITDA (\$m)			Adj. EPS		
	Old	New	Change	Old	New	Change	Old	New	Change
FY16	11.6	11.9	2.6%	(4.1)	(3.8)	N/A	(15.1)	(14.8)	N/A
FY17	14.3	14.7	2.8%	(5.5)	(5.4)	N/A	(14.0)	(13.5)	N/A

Source: Trinity Delta

We are expecting operating costs to rise significantly in H216 to \$8.6m from \$5.9m in H116. The main reasons for the second half weighting is that MaxCyte only started expanding its marketing activities after its IPO in March, H216 is the first 6-month period to include the full costs of being a public company, and investment in the CARMA platform is expected to increase to \$1.5m from \$0.5m as the first product approaches the clinic.

MaxCyte remains well capitalised to expand its marketing, advance the CARMA platform and achieve profitability, with a cash position of \$12.2m at 30 June 2016. As well as raising \$11.9m (net of costs during its IPO), the company also managed to restructure its debt facility so that its interest-only period was extended two years to July 2018 and the debt does not mature until June 2021.

As a result of upgrading our estimates, we also increase our valuation by £2m to £82m, or by 5p to 189p per share. We are still adopting conservative assumptions in our modelling; for instance, we have not included any potential commercial licensing agreements for cell therapies, which could be worth about \$10m each, nor do we consider potential royalty revenues from the CARMA platform. We feel this is currently appropriate but as progress is achieved, we would expect to revisit the model and anticipate the valuation would reflect this.

Our valuation suggests that there is a 28% upside to the current market cap of £36.8, even if the potential of the CARMA platform is excluded, and that the upside increases to 124% including the value of CARMA.

Valuation using a sum-of-the-parts DCF model increased by £2m to £82m, or 189p per share

Exhibit 2: Summary of financials

Year-end: December 31	\$m	2014	2015	2016E	2017E	2018E
INCOME STATEMENT						
Revenues		7.2	9.3	11.9	14.7	17.9
Cost of goods sold		(1.0)	(1.0)	(1.3)	(1.8)	(2.2)
Gross Profit		6.2	8.3	10.6	13.0	15.8
R&D expenses (excluding CARMA)		(2.5)	(3.0)	(3.5)	(4.1)	(4.4)
R&D expenses (CARMA)		0.0	0.0	(2.0)	(4.0)	(2.0)
Sales and marketing expenses		(2.5)	(3.3)	(4.5)	(5.3)	(6.3)
General and administrative expenses		(2.4)	(2.7)	(4.4)	(4.9)	(5.2)
Underlying operating profit		(1.2)	(0.8)	(3.8)	(5.4)	(2.1)
Share based payments		(0.1)	(0.0)	(0.1)	(0.1)	(0.1)
Other revenue/expenses		0.0	0.0	0.0	0.0	0.0
EBITDA		(1.2)	(0.7)	(3.8)	(5.4)	(2.1)
Operating Profit		(1.3)	(0.8)	(3.9)	(5.5)	(2.3)
Interest income		0.0	0.0	0.0	0.0	0.0
Interest expense		(0.6)	(0.7)	(0.6)	(0.5)	(0.5)
Other financing costs/income		0.0	0.0	0.0	0.0	0.0
Profit Before Taxes		(1.8)	(1.4)	(4.5)	(6.0)	(2.8)
Adj. PBT		(1.7)	(1.4)	(4.3)	(5.9)	(2.6)
Current tax income		0.0	0.0	0.0	0.0	0.0
Cumulative preferred stock dividend		(1.9)	(2.1)	(0.5)	0.0	0.0
Net Income		(3.8)	(3.5)	(5.0)	(6.0)	(2.8)
EPS (c)		(1,518.2)	(186.4)	(14.9)	(13.8)	(6.3)
Adj. EPS (c)		(1,518.2)	(186.4)	(14.8)	(13.5)	(6.0)
DPS (c)		0.0	0.0	0.0	0.0	0.0
Average no. of shares		0.2	1.9	33.5	43.5	43.5
<i>Gross margin</i>		<i>87%</i>	<i>89%</i>	<i>89%</i>	<i>88%</i>	<i>88%</i>
BALANCE SHEET						
Current assets		5.9	6.2	13.2	8.5	7.0
Cash and cash equivalents		3.4	2.4	8.7	2.9	0.3
Accounts receivable		1.4	1.5	2.5	3.1	3.8
Inventories		0.9	1.1	1.5	1.9	2.3
Other current assets		0.2	1.2	0.5	0.5	0.5
Non-current assets		0.2	0.2	0.3	0.3	0.4
Property, plant & equipment		0.2	0.2	0.3	0.3	0.4
Intangible assets		0.0	0.0	0.0	0.0	0.0
Other non-current assets		0.0	0.0	0.0	0.0	0.0
Current liabilities		(4.2)	(5.1)	(4.4)	(5.6)	(6.8)
Short-term debt		(1.5)	(0.8)	(0.0)	(0.0)	(0.0)
Accounts payable		(1.4)	(2.3)	(1.9)	(2.5)	(3.0)
Other current liabilities		(1.4)	(2.0)	(2.5)	(3.1)	(3.8)
Non-current liabilities		(3.6)	(4.4)	(5.1)	(5.1)	(5.1)
Long-term debt		(3.4)	(4.2)	(5.0)	(5.0)	(5.0)
Other non-current liabilities		(0.2)	(0.2)	(0.1)	(0.1)	(0.1)
Equity		(1.6)	(3.1)	3.9	(1.9)	(4.5)
Share capital incl additional paid-in and treasury shares		43.8	45.3	56.7	56.7	56.7
Other		(45.4)	(48.4)	(52.8)	(58.7)	(61.3)
CASH FLOW STATEMENTS						
Operating cash flow		(1.9)	(0.2)	(5.5)	(5.7)	(2.4)
Profit before tax		(1.8)	(1.4)	(4.5)	(6.0)	(2.8)
Non-cash adjustments		0.3	0.2	0.2	0.7	0.8
Change in working capital		(0.4)	1.1	(1.3)	0.1	0.1
Interest paid		0.0	0.0	0.0	(0.5)	(0.5)
Taxes paid		0.0	0.0	0.0	0.0	0.0
Investing cash flow		(0.1)	(0.1)	(0.1)	(0.2)	(0.2)
CAPEX on tangible assets		(0.1)	(0.1)	(0.1)	(0.2)	(0.2)
Other investing cash flows		0.0	0.0	0.0	0.0	0.0
Financing cash flow		4.7	(0.7)	11.9	0.0	0.0
Proceeds from equity		1.7	0.0	11.9	0.0	0.0
Increase in loans		3.0	(0.1)	(0.1)	0.0	0.0
Other financing cash flow		0.0	(0.7)	0.0	0.0	0.0
Net increase in cash		2.6	(1.0)	6.3	(5.8)	(2.5)
Exchange rate effects		0.0	0.0	0.0	0.0	0.0
Cash at start of year		0.8	3.4	2.4	8.7	2.9
Cash at end of year		3.4	2.4	8.7	2.9	0.3
Net cash at end of year		(1.5)	(2.6)	3.7	(2.1)	(4.6)

Source: MaxCyte, Trinity Delta Note: Adjusted numbers exclude share-based payments and exceptionals.

Mick Cooper PhD CFA

mcooper@trinitydelta.org

+44 20 3637 5042

Franco Gregori

fgregori@trinitydelta.org

+44 20 3637 5041

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