

# Nano Dimension

Q118 results

## Spreading the word

Nano Dimension commenced roll-out of its commercial-grade DragonFly Pro printers during H217. Since then it has sold 10 printers, some of which have been purchased by resellers for demonstration purposes. This is a key aspect of Nano Dimension's programme to educate potential customers about the novel applications for the technology. Noting that FY18 sales will be skewed to H2, we leave our estimates and indicative valuation broadly unchanged at US\$4.16/ADS (NIS2.98/ordinary share).

Year end	Revenue (US\$m)	EBITDA (US\$m)	PBT* (US\$m)	EPADS (US\$)	DPADS (US\$)	P/E (x)
12/16	0.0	(6.5)	(6.8)	(0.83)	0.0	N/A
12/17	0.9	(14.1)	(16.4)	(1.45)	0.0	N/A
12/18e	6.0	(10.8)	(12.3)	(0.68)	0.0	N/A
12/19e	11.7	(7.4)	(9.1)	(0.47)	0.0	N/A

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

## Strong growth in printer sales

Nano Dimension generated US\$635k revenues during Q118 (US\$118k in Q117, US\$440k in Q417), primarily from printer sales. Operating losses widened by \$0.2m y-o-y to \$4.1m. Although management raised \$13.8m in February through a public offer and over-allotment option at US\$2.00/ADS, it notes the need to raise further funds to reach cash break-even. Management estimates that cash burn remains at c \$1.3m/month.

## Educating the user base

As discussed in our March [update note](#), the current priority for Nano Dimension is educating potential customers on how the technology can replace conventional PCB prototyping, as well as being used for novel applications such as sensors, antennas and structural electronic elements. So far this year, it has launched an online print-on-demand service, opened a customer experience centre in Santa Clara, which is its third to date, and increased the number of resellers to 10. It is encouraging to note that resellers invest significant time and money in the DragonFly technology, indicating their confidence in its commercial prospects. We assume that these initiatives will result in stronger customer uptake during H218, with a total of 40 printer deliveries for the year as a whole.

## Valuation: Significant upside on volume roll-out

Our indicative DCF-based valuation is unchanged at US\$4.16/ADS, which represents NIS2.98/ordinary share at current FX rates (previously NIS2.88). This uses a discount rate of 12% to reflect the current uncertainty regarding the rate of commercial ramp-up. Delivery of meaningful volumes of the DragonFly Pro in H218 would improve visibility and remove some uncertainty, potentially justifying a lower-risk valuation (at a 10% discount rate) of up to US\$5.70/ADS or NIS4.08/share. Our estimates identify a c US\$1.5m funding gap in FY19. We model this as satisfied through debt, although it could potentially be dilutive if financed through the issue of new shares.

## Tech hardware & equipment

27 May 2018

Price\* NIS1.17

Market cap NIS113m

Priced at 21 May 2018

NIS3.58/US\$

Net cash (US\$m) at end March 2018 14.8

Shares in issue 96.54m

Number of ADRs in issue 19.3m

Free float 88%

Code NNDM

Primary exchange TASE

Secondary exchange NASDAQ

## Share price performance



% 1m 3m 12m

Abs (15.5) (53.2) (74.9)

Rel (local) (14.5) (52.3) (76.8)

52-week high/low NIS4.9 NIS1.2

## Business description

Nano Dimension focuses on the development of advanced 3D printed electronic systems and advanced additive manufacturing. The company's initial products include a 3D printer for rapid prototyping of multi-layer PCBs and associated nanotechnology conductive and dielectric inks.

## Next events

Q218 results August 2018

## Analysts

Anne Margaret Crow +44 (0)20 3077 5700

Dan Ridsdale +44 (0)20 3077 5729

[tech@edisongroup.com](mailto:tech@edisongroup.com)

[Edison profile page](#)

## Educating the user base

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Now that the commercial version of the printer has started to ship, Nano Dimension has switched focus from technology development to sales. Since the DragonFly printer is a highly innovative technology, it is important to educate potential users on what it can be used for. As for any potentially disruptive technology, this is somewhat challenging since, by definition, many of the use cases have yet to be discovered. Initial customer successes indicate that the DragonFly is being used for structural electronics applications such as antennas, sensors, RFID tags and angled connectors for smart cars, which conventional printed circuit board (PCB) manufacturing equipment cannot tackle, as well as in-house prototyping of multi-layer PCBs. Early adopters include one of the world's top 10 PCB manufacturers; global manufacturing giant Jabil; Harris Corporation, which is using the technology to develop lightweight, high-reliability circuitry for space applications; a research institute in Hong Kong; and the University of Technology in Sydney, Australia.

Two key ways of educating potential customers are opening customer experience centres and establishing a committed reseller network. Customer experience centres enable potential customers to pay to have circuits they have designed manufactured using the DragonFly additive process. They encourage potential customers to experiment using the technology for new applications. Nano Dimension recently opened its third customer experience centre, which is located at its US headquarters in Santa Clara. It already has a customer experience centre in the Los Angeles area, operated together with XponentialWorks, an expert in additive manufacturing advisory, and a customer experience centre in Israel. It intends to open another customer experience centre in Hong Kong later this year. This will serve the Greater China region.

Nano Dimension now has 10 resellers, the most recent additions being HDC in Korea, General Integration Technology in Taiwan and TriMech Solutions. TriMech is also a reseller for Stratasys and Desktop Metal 3D printers and SOLIDWORKS 3D CAD software, and has more than 16,000 customers in the Eastern US, including extensive military/defence relationships. Management prefers to work with third parties that are prepared to purchase their own DragonFly printers and have the expertise necessary to operate it so they can provide a complete advisory service to customers. Management aims to double the number of resellers by end FY18.

## Financial performance

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Nano Dimension generated US\$635k revenues during Q118 (US\$118k in Q117, US\$440k in Q417), primarily from printer sales. The company reported a positive result at the gross profit level for the first time. Operating losses widened by \$0.2m year-on-year to \$4.1m, reflecting a much larger salesforce. R&D costs and general and administrative expenses were at similar levels to the prior year period.

Net cash rose by \$8.7m during the quarter to \$14.8m. Inventory remained at the high level (\$2.3m) reported at the end of December 2017, as materials were purchased to make printers for sale later in the year. \$0.2m was invested in DragonFly printers used for in-house testing. Management estimates that cash burn remains at c \$1.3m/month. \$13.8m was raised through a public offer and exercise of over-allotment option at US\$2.00/ADS. Management has stated that it will need to raise further funds to reach cash break-even.

Noting that the company has sold eight printers so far this year and expects to deliver an increased number of printers each successive quarter, we leave our estimates unchanged. These model 40 printer deliveries in FY18, with sales skewed to the second half.

## Valuation

<b>Exhibit 1: Revenues from printer and ink sales</b>										
<b>US\$m unless stated</b>	<b>2018e</b>	<b>2019e</b>	<b>2020e</b>	<b>2021e</b>	<b>2022e</b>	<b>2023e</b>	<b>2024e</b>	<b>2025e</b>	<b>2026e</b>	<b>2027e</b>
Total units delivered	40	75	115	161	209	255	294	323	346	363
Price per unit (US\$k)*	175	180	175	172	163	155	147	140	133	126
Revenues from equipment sales and leasing	5.8	10.9	21.6	28.1	34.2	37.5	41.0	42.9	43.6	43.5
Revenues from ink sales	0.3	0.9	3.4	5.8	8.8	12.4	16.4	20.6	24.8	28.9
Total revenues	6.0	11.7	25.0	32.0	41.2	50.0	57.4	63.4	68.3	72.4
EBITDA	(10.8)	(7.4)	(0.1)	2.2	6.2	10.1	13.2	15.4	17.3	19.5
EBITDA margin (%)	N/A	N/A	N/A	7%	15%	20%	23%	24%	25%	27%

Source: Edison Investment Research. Note: \*After commissions to distributors.

Our valuation is unchanged from our March note at US\$4.16/ADS, although FX movements have resulted in a change from NIS2.88/ordinary share to NIS2.98/ordinary share. The valuation is based on a DCF calculation, which adopts the roll-out assumed in our estimates for the first two years, then ramps up revenues through to FY27, as shown in Exhibit 1. This sales progression is predicated on Nano Dimension making the step from initial commercial deliveries to meaningful volumes. As there remains significant execution risk with regard to the volume ramp-up, we keep our discount rate at 12% as well as holding the terminal growth rate at 2%.

<b>Exhibit 2: DCF valuation</b>								
<b>US\$/ADS</b>		<b>Base case</b>			<b>NIS/ordinary share</b>	<b>Base case</b>		
		<b>Discount rate</b>				<b>Discount rate</b>		
		<b>10.0%</b>	<b>12.0%</b>	<b>14.0%</b>		<b>10.0%</b>	<b>12.0%</b>	<b>14.0%</b>
<b>Term growth</b>	0.0%	4.82	3.66	2.88	0.0%	3.44	2.62	2.06
	1.0%	5.21	3.89	3.02	1.0%	3.73	2.78	2.16
	2.0%	5.70	4.16	3.19	2.0%	4.08	2.98	2.28
	3.0%	6.33	4.50	3.38	3.0%	4.53	3.22	2.42
	4.0%	7.18	4.92	3.61	4.0%	5.13	3.52	2.59

Source: Edison Investment Research

The share price has declined by over 30% since the FY17 results and is now substantially below our indicative valuation. In our opinion, this reflects investor concerns on how long it will take to win meaningful sales volumes following on from the 10 delivered so far. Once investors gain confidence that Nano Dimension is able to do this, we would expect a lower-risk discount (say, 10%) to be more appropriate. However, while the current share price appears to already factor in a somewhat slower roll-out, further delays in initial commercial sales present a risk to the share price and our valuation. We note also the potential share price dilution if the funding gap that we have identified is satisfied through the issue of new shares. This analysis excludes the earlier-stage development initiatives such as structural electronics and human tissue printing.

**Exhibit 3: Financial summary**

	US\$'000	2015	2016	2017	2018e	2019e
Year-end 31 December		IFRS	IFRS	IFRS	IFRS	IFRS
<b>PROFIT &amp; LOSS</b>						
Revenue		0	46	861	6,010	11,745
Cost of Sales (including amortisation of capitalised IP)		0	(193)	(1,196)	(3,547)	(5,843)
Gross Profit		0	(147)	(335)	2,463	5,903
EBITDA		(2,437)	(6,465)	(14,144)	(10,776)	(7,405)
Operating Profit (before amort. and except.)		(2,473)	(6,829)	(15,505)	(12,314)	(9,127)
Intangible Amortisation		0	0	0	0	0
Exceptionals		0	(149)	0	0	0
Other		(3,262)	(2,025)	(1,821)	(1,821)	(1,821)
Operating Profit		(5,735)	(9,003)	(17,326)	(14,135)	(10,948)
Net Interest		355	38	(847)	0	0
Profit Before Tax (norm)		(2,118)	(6,791)	(16,352)	(12,314)	(9,127)
Profit Before Tax (FRS 3)		(5,380)	(8,965)	(18,173)	(14,135)	(10,948)
Tax		0	0	0	0	0
Profit After Tax (norm)		(2,118)	(6,791)	(16,352)	(12,314)	(9,127)
Profit After Tax (FRS 3)		(5,380)	(8,965)	(18,173)	(14,135)	(10,948)
Average Number of Shares Outstanding (m)		5.4	8.2	11.3	18.2	19.3
EPADS -(normalised ) (c)		(39.49)	(83.30)	(144.61)	(67.76)	(47.27)
EPADS - (IFRS) (c)		(1.00)	(1.10)	(1.61)	(0.78)	(0.57)
Dividend per share (c)		0.0	0.0	0.0	0.0	0.0
Gross Margin (%)		N/A	N/A	N/A	41.0	50.3
EBITDA Margin (%)		N/A	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)		N/A	N/A	N/A	N/A	N/A
<b>BALANCE SHEET</b>						
Fixed Assets		4,151	8,903	12,273	12,035	12,463
Intangible Assets		2,910	6,787	6,755	5,983	5,211
Tangible Assets		1,131	2,006	5,172	5,706	6,906
Restricted deposits		110	110	346	346	346
Current Assets		9,057	13,323	9,223	11,997	6,942
Stocks		0	0	2,336	836	1,836
Debtors		264	814	677	1,727	4,727
Cash		8,665	12,379	6,103	9,327	272
Restricted deposits		128	130	107	107	107
Current Liabilities		(907)	(1,968)	(2,195)	(3,245)	(6,245)
Creditors		(907)	(1,968)	(2,195)	(3,245)	(6,245)
Short-term borrowings		0	0	0	0	0
Long-Term Liabilities		(254)	(956)	(1,135)	(1,135)	(2,635)
Long-term borrowings		0	0	0	0	(1,500)
Liability in respect of government grants		(254)	(956)	(1,135)	(1,135)	(1,135)
Net Assets		12,047	19,302	18,166	19,652	10,525
<b>CASH FLOW</b>						
Operating Cash Flow		(3,330)	(6,055)	(17,330)	(9,276)	(8,405)
Net Interest		0	141	922	0	0
Tax		0	0	0	0	0
Investment in intangible & tangible assets		(2,344)	(4,167)	(3,646)	(1,300)	(2,150)
Acquisitions/disposals		0	0	0	0	0
Financing		14,362	13,525	13,075	13,800	0
Dividends		0	0	0	0	0
Net Cash Flow		8,688	3,444	(6,979)	3,224	(10,555)
Opening net debt/(cash)		(207)	(8,665)	(12,379)	(6,103)	(9,327)
HP finance leases initiated		0	0	0	0	0
Other		(230)	270	703	0	0
Closing net debt/(cash)		(8,665)	(12,379)	(6,103)	(9,327)	1,228

Source: Company accounts, Edison Investment Research

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