

## ASML

Price EUR96.24

## CMD feedback: an interesting view on 2020 opportunities but what is not priced in yet?

Fair Value EUR83 vs. EUR81 (-14%)

SELL

Bloomberg	ASML.NA
Reuters	ASML.AS
12-month High / Low (EUR)	99.4 / 71.8
Market Cap (EURm)	41,704
Ev (BG Estimates) (EURm)	39,003
Avg. 6m daily volume (000)	1,084
3y EPS CAGR	21.0%

	1 M	3 M	6 M	31/12/15
Absolute perf.	-1.1%	-2.6%	9.7%	16.6%
Semiconductors	1.7%	4.2%	28.4%	25.3%
DJ Stoxx 600	-0.5%	0.4%	-2.3%	-6.8%

YEnd Dec. (EURm)	2015	2016e	2017e	2018e
Sales	6,287	6,664	7,772	8,866
% change		6.0%	16.6%	14.1%
EBITDA	1,864	1,995	2,489	3,099
EBIT	1,565	1,640	2,114	2,704
% change		4.8%	28.9%	27.9%
Net income	1,387	1,377	1,819	2,330
% change		-0.7%	32.1%	28.1%

	2015	2016e	2017e	2018e
Operating margin	24.9	24.6	27.2	30.5
Net margin	22.1	20.7	23.4	26.3
ROE	16.5	15.6	19.8	22.8
ROCE	22.9	23.2	29.0	36.0
Gearing	-27.2	-30.5	-30.7	-36.1

(EUR)	2015	2016e	2017e	2018e
EPS	3.21	3.22	4.36	5.68
% change	-	0.4%	35.4%	30.3%
P/E	30.0x	29.9x	22.1x	16.9x
FCF yield (%)	3.6%	3.2%	4.0%	5.4%
Dividends (EUR)	0.70	1.05	1.21	1.39
Div yield (%)	0.7%	1.1%	1.3%	1.4%
EV/Sales	6.3x	5.9x	5.0x	4.3x
EV/EBITDA	21.1x	19.5x	15.6x	12.3x
EV/EBIT	25.2x	23.8x	18.4x	14.1x



Yesterday, ASML held its 2016 capital market day. Three main topics came out 1/ the DUV market, 2/ the development of EUV and 3/ incremental opportunities. Overall, the group confirmed its 2020 target of EUR10bn and EPS of EUR8 (whereas with lower expectations regarding EUV), but also shared its view regarding the positive impacts of HMI acquisition on this 2020 target, i.e. about EUR1bn of sales by 2020 and EPS of about EUR1. As the acquisition is now very close to be cleared, we include all the positive impacts in our model and increase our FV to EUR83 from EUR81. Nevertheless, we continue to see unattractive valuation metrics (2017e P/E ratio of 22x vs. peers 16x) and reiterate our Sell recommendation.

## ANALYSIS

- Semiconductor market demand is said to remain strong through 2025, lithography intensity is said to increase, as such DUV demand will not be hit by EUV...** Yesterday, ASML took the opportunity to comment on its view of the evolution of the industry and the needs for lithography. The group reminds that “bit demand” will remain strong worldwide through 2025 and said that the node shrink was the only path to innovation and industry growth while lithography enables affordable shrink. Nevertheless, ASML now sees a **3y cadence** for Moore’s Law. In details, the group expects a 9% CAGR in logic fab capacity (wafers per month) from 2015 to 2025, 2% in performance memory and 5% in storage memory. In this context, DUV technology will remain competitive and therefore, not disappear after EUV introduction. We remind that, even with EUV, the less critical layers will be produced with DUV tools (using Argon Fluoride immersion or ArFi, Argon Fluoride dry or Arf, and Krypton Fluoride or KrF lasers) as they will continue to offer a cost advantage. Here, ASML continues to invest massively (above 50% of R&D expenses) and focus on improving overlay and critical dimension uniformity which is, in our view, a smart strategy. As such, ASML says EUV will not impact DUV. We agree with this statement and we continue to believe that there will be needs for both EUV and DUV.
- EUV is expected to be used for mass production in 2018-2019 timeframe.** Finally, here we are! The focus on EUV was an interesting summary of improvements done over the last few months. To sum up: the development of a 13nm wavelength source of 210W (demo, not running), a record throughput of 1500 wafers per day over 3 days and, on a different system, a 90% availability (sept. 2016). This is an improvement from the 135W and 70% availability achieved a year ago and 1250 wafer per day achieved in December 2015. The group also set targets for 2017 and 2018 which include droplet generator (used to generate a 13nm light) improvement. Nevertheless, EUV technology is now qualified as “viable for 7nm node” while improvement are required for 5nm especially in mark inspection and blank deposition. Overall, 2018-2019 timeframe is seen as the real entry point which confirms our view that the 2017 target set earlier by some optimistic market observers was unachievable. Recent comments from TSMC, Intel, GlobalFoundries and Samsung also confirms this entry point. On a financial point of view, this should result in a demand of about 12 new systems by 2017e and about 21-22 systems by 2018e. Note that the current gross margin on EUV systems is currently at about -75% (nothing to worry about, this is due to the unfavourable revenue recognition mechanism) but it is expected to be break-even from next year on (LT target at >40% from about 40 tools per year) thanks to higher fab utilisation and service margin optimisations. One last thing about EUV, we understand that the next generation NXE:3400B will partially if not totally clear the lag due to revenue recognition mechanism.
- ASML updates its LT view: Less EUV tools, (far) more ArFi and Dry but the EUR10bn target remains.** Commenting on 2020 targets and based on current market visibility, the group presented two scenarios 1/ high EUV insertion including sales of 45 EUV systems, 50 ArFi and 115 ArF (dry) tools, or 2/ low EUV insertion including sales of 25 EUV systems, 75 ArFi tools and 115 ArF systems. The first one leads to a top-line of EUR11bn whereas the second one leads to 2020e revenue of EUR9.5bn. This is very different from the scenarios presented two years ago which, implying EUV success (>80W source) and 3y cadence (see the 1<sup>st</sup> bullet point above) were for 50 EUV tools, 40 ArFi and 39 ArF systems. Overall, this was a pessimistic update except that, in the end, ASML’s revenue target remains at EUR10bn by 2020.
- The only real news was the details regarding opportunities created by HMI acquisition.** We already shared our positive view regarding the acquisition of HMI. Yesterday, ASML gave us more detail regarding the possible opportunities. HMI’s e-beam technology will be integrated in ASML’s

Holistic Lithography package and will allow customers to improve significantly yields at production sites. ASML found the way to combine all metrology technologies, plus computational lithography data series and models to resolve the weakness of e-beam, namely speed. In addition, these technologies can be used to improve EUV efficiency (for mask inspection). As such, the group sees an incremental opportunity of about EUR1bn by 2020 thanks to HMI technologies or about EUR1 increment at EPS level.

#### VALUATION

- **We update our model to include HMI opportunities.** Following yesterday CMD, we update our model to include HMI positive impacts. As such, our FY17 and FY18 EPS are up to EUR4.36 and EUR5.68 respectively (from EUR4.21 and EUR5.57) and our FV is up to EUR83 from EUR81.
- Nevertheless, we continue to believe that all of the positive newsflow to come regarding the introduction of EUV is priced in while the current valuation level give no room for disappointment. Based on our estimates, ASML's shares are trading on 2017e P/E ratios of 22.1x respectively, i.e. a premium vs. peers at average 2017e P/E ratios of 16.2x. **We reiterate our Sell recommendation.**

#### NEXT CATALYSTS

- 17 January 2016: Q4 and FY16 results

#### Our new P&L

[EURm]	1Q16	2Q16	3Q16	4Q16e	FY16e	FY17e	FY18e
<b>Total Group</b>	<b>1333</b>	<b>1740</b>	<b>1815</b>	<b>1777</b>	<b>6664</b>	<b>7772</b>	<b>8866</b>
Q/Q growth	-7.0%	30.5%	4.3%	-2.1%	6.0%	16.6%	14.1%
Y/Y growth	-19.2%	5.2%	17.1%	23.9%	6.0%	16.6%	14.1%
Cost of goods sold	-765	-998	-980	-922	-3665	-4197	-4681
<b>Gross margin</b>	<b>42.6%</b>	<b>42.6%</b>	<b>46.0%</b>	<b>48.1%</b>	<b>45.0%</b>	<b>46.0%</b>	<b>47.2%</b>
R&D	-275	-270	-273	-268	-1086	-1150	-1179
SG&A	-89	-90	-89	-99	-367	-389	-381
Other operating income	23	24	23	24	94	78	80
<b>Adj. EBIT</b>	<b>228</b>	<b>404</b>	<b>496</b>	<b>512</b>	<b>1640</b>	<b>2114</b>	<b>2704</b>
adj. operating margin	17.1%	23.2%	27.3%	28.8%	24.6%	27.2%	30.5%
Net financial result	-4	-4	-34	-19	-60	-23	-27
Income tax	-26	-47	-66	-64	-203	-272	-348
tax rate	-11.8%	-11.7%	-14.3%	-13.0%	-12.9%	-13.0%	-13.0%
<b>Adj. Net income</b>	<b>198</b>	<b>354</b>	<b>396</b>	<b>429</b>	<b>1377</b>	<b>1819</b>	<b>2330</b>
<b>Adj. diluted EPS (in EUR)</b>	<b>0.46</b>	<b>0.83</b>	<b>0.93</b>	<b>1.00</b>	<b>3.22</b>	<b>4.36</b>	<b>5.68</b>

Source: Bryan, Garnier & Co. ests.

#### Our new P&L

[EURm]	Old			New			Old vs. New
	2016e	2017e	2018e	2016e	2017e	2018e	avg. Δ%
<b>Net revenue</b>	<b>6664</b>	<b>7416</b>	<b>8494</b>	<b>6664</b>	<b>7772</b>	<b>8866</b>	<b>3.1%</b>
% change	6.0%	11.3%	14.5%	6.0%	16.6%	14.1%	
Adj. EBIT	1625	2017	2591	1640	2114	2704	3.4%
Adj. operating margin	24.4%	27.2%	30.5%	24.6%	27.2%	30.5%	
<b>Adj. EPS (in EUR)</b>	<b>3.2</b>	<b>4.2</b>	<b>5.6</b>	<b>3.2</b>	<b>4.4</b>	<b>5.7</b>	<b>2.2%</b>

Source: Bryan, Garnier & Co. ests.

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