

onsemi

Resilient at trough, well-positioned for recovery

Reiterate Rating: BUY | PO: 90.00 USD | Price: 77.99 USD

1H trough, 2H recovery, GM resilient, SiC on track

Reiterate Buy, tweak up CY24/25E pf-EPS by 5%/2% to \$4.36/\$5.51 and raise PO to \$90 from \$85 on unch. 16x CY25E PE in line with ON's historical trading range. Q4 results in line, and while Q1 was below consensus, it was somewhat better than feared (ahead of results we cut Q1 to \$1.8bn, ON guided it to \$1.8-\$1.9bn vs. likely stale consensus at \$1.93bn). Importantly, GM are holding up well, likely to remain >45% for the year. As expected ON lowered industry Silicon Carbide growth to 20-30% YoY (\$4bn TAM for CY24E) from 30-40% YoY prior, though expects its SiC to grow 2x the industry, around 50% YoY to \$1.2bn (implies 30% share vs. 25% YoY). We expect broad weakness to persist for another Q (model Q2 down slightly QoQ), but 2H to start recovery. Overall, we model CY24E sales -8.6% YoY to \$7.55bn, down from \$7/7bn/-6.5% YoY prior. Stronger GM suggests pf-EPS could be \$4.36 or -15.4% YoY vs our \$4.14 or -19% YoY prior. In keeping GM in the mid-40s with fab utilization at near historical trough mid-60s levels, we believe ON is well-positioned for recovery and operating leverage that could drive CY25/26E pf-EPS towards \$5.51/\$6.39. NT visibility low, but valuation at 18x/14x/12x CY24/25/26E appears compelling esp given ON's attractive SiC, power, sensing, energy infrastructure assets, strong balance sheet, and limited Al correlation.

Likes: Trough execution, LT GM levers

ON's SiC growth could still be enough to limit sales declines to 8-9% YoY in CY24E vs mid-teens or worse declines for peers. Second, ON's ability to control its fab utilization is also helping keep "trough" GM above 45% that includes ~200bps of headwind from EFK When sales recovery starts ON could head towards LT 53% GM target on improving utilization, removal of EFK headwinds and mix (higher SiC using insourced materials, industrial). Pricing stable. GM recovery further drive FCF margins towards the LT 20-25% target from 3% in CY23E. Meanwhile, balance sheet remains relatively underlevered (<0.5x net debt/TTM EBITDA) and could enhance buybacks.

Risks: Slowing EV market sustains doubts re-SiC TAM

There appears to be a disconnect between ON's contention that SiC TAM will grow only 20-30% YoY in CY24E, with the 30-50% growth rate expected across the top SiC device makers (STM, ON, IFX, Wolfspeed). EV demand and frequent price cuts at Tesla could restrain investor interest bin EV exposed semis. Second, near-term visibility is limited, and ON's 1H "trough" (peak-trigh sales down -17%) is still more optimistic than the 30-40% comparable declines from peers (though they don't have SiC benefits).

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	5.33	5.16	4.36	5.51	6.39
GAAP EPS	4.24	4.89	4.50	5.72	6.67
EPS Change (YoY)	80.7%	-3.2%	-15.5%	26.4%	16.0%
Consensus EPS (Bloomberg)			4.75	5.58	6.95
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	14.6x	15.1x	17.9x	14.2x	12.2x
GAAP P/E	18.4x	15.9x	17.3x	13.6x	11.7x
EV / EBITDA*	10.0x	10.6x	12.4x	10.0x	8.7x
Free Cash Flow Yield*	4.8%	0.8%	5.0%	5.9%	6.9%
* For full definitions of <i>IQ</i> method SM measures, see page 13.					

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Refer to important disclosures on page 13 to 16. Analyst Certification on page 12. Price
Objective Basis/Risk on page 12.

05 February 2024

Equity

Key Changes		
(US\$)	Previous	Current
Price Obj.	85.00	90.00
2024E Rev (m)	7,697.4	7,545.7
2025E Rev (m)	8,639.6	8,576.9
2026E Rev (m)	NA	9,349.9
2024E EPS	4.14	4.36
2025E EPS	5.36	5.51
2026E EPS	NA	6.39

Vivek Arya Research Analyst BofAS

vivek.arya@bofa.com

Blake Friedman

Research Analyst BofAS blake.friedman@bofa.com

Duksan Jang

Research Analyst BofAS

duksan.jang@bofa.com

Lauren Guy

Research Analyst BofAS lauren.guy2@bofa.com

Stock Data

Price	77.99 USD
Price Objective	90.00 USD
Date Established	5-Feb-2024
Investment Opinion	C-1-9
52-Week Range	61.47 USD - 111.35 USD
Mrkt Val (mn) / Shares Out	33,590 USD / 430.7
(mn)	
Free Float	99.6%
Average Daily Value (mn)	591.04 USD
BofA Ticker / Exchange	ON / NAS
Bloomberg / Reuters	ON US / ON.OQ
ROE (2024E)	22.0%
Net Dbt to Eqty (Dec-2023A)	11.1%
ESGMeter™	High

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Q method SM − Bus Performance*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Return on Capital Employed	25.4%	21.7%	16.6%	17.9%	18.29
Return on Equity	43.6%	32.3%	22.0%	22.8%	22.29
Operating Margin	34.3%	32.3%	29.4%	31.9%	33.89
Free Cash Flow	1,628	275	1,674	1,965	2,31
iQmethod SM – Quality of Earnings*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash Realization Ratio	1.1x	0.8x	1.4x	1.4x	1.3
Asset Replacement Ratio	1.8x	2.6x	1.7x	1.6x	1.6
Tax Rate	19.4%	13.8%	7.8%	7.8%	7.89
Net Debt-to-Equity Ratio	4.4%	11.1%	-2.8%	-13.6%	-24.09
Interest Cover	30.3x	35.6x	34.7x	42.6x	49.2
Income Statement Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Sales	8,326	8,253	7,546	8,577	9,35
% Change	23.5%	-0.9%	-8.6%	13.7%	9.09
Gross Profit	4,079	3,889	3,427	4,017	4,51
% Change	50.3%	-4.6%	-11.9%	17.2%	12.39
EBITDA	3,418	3,202	2,748	3,397	3,92
% Change	74.2%	-6.3%	-14.2%	23.6%	15.59
Net Interest & Other Income	(80)	14	19	22	2
Net Income (Adjusted)	2,349	2,257	1,879	2,332	2,68
% Change	82.8%	-3.9%	-16.8%	24.1%	15.29
Free Cash Flow Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Net Income from Cont Operations (GAAP)	1,904	2,186	1,957	2,446	2,83
Depreciation & Amortization	552	610	614	735	84
Change in Working Capital	(250)	(982)	26	(149)	(202
Deferred Taxation Charge	74	(128)	0	0	
Other Adjustments, Net	354	164	120	135	14
Capital Expenditure	(1,005)	(1,576)	(1,043)	(1,201)	(1,309
Free Cash Flow	1,628	275	1,674	1,965	2,31
% Change	21.7%	-83.1%	509.4%	17.4%	17.69
Share / Issue Repurchase	(237)	(539)	(550)	(700)	(700
Cost of Dividends Paid	0	0	0	0	
Change in Debt	(530)	(1,723)	(20)	(20)	(20
Balance Sheet Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash & Equivalents	2,919	2,473	3,577	4,823	6,41
Trade Receivables	842	935	1,027	1,156	1,27
Other Current Assets	1,968	2,504	2,374	2,454	2,59
Property, Plant & Equipment	3,451	4,402	4,831	5,297	5,29
Other Non-Current Assets	2,798	2,901	2,901	2,901	2,90
Total Assets	11,979	13,215	14,710	16,630	18,47
Short-Term Debt	148	794	794	794	79
Othor Correct Lightlities	1,914	1,390	1,378	1,437	1,49
Other Current Liabilities	3,046	2,543	2,523	2,503	2,50
Long-Term Debt	3,040				
	664	688	688	688	00
Long-Term Debt		688 5,415	688 5,383	688 5,422	
Long-Term Debt Other Non-Current Liabilities	664				5,47 13,00

Company Sector

Semiconductors

Company Description

ON Semiconductor is a vendor of analog power management, analog signal conditioning, standard logic ICs and discrete chips into the automotive, communications, computing, consumer, industrial, and medical applications. The company is in the midst of a transformation from a seller of commodity discrete chips into higher value added analog ICs both through organic growth and acquisitions.

Investment Rationale

We rate ON a Buy. We believe ON will utilize multiple levers (fab sales, 300mm manufacturing) and improve product mix to significantly enhance its margin profile, driving material EPS and free cash flow upside.

Stock Data

Average Daily Volume 7,578,445

Quarterly Earnings Estimates

	2023	2024
Q1	1.19A	1.05E
Q2	1.33A	1.01E
Q3	1.39A	1.11E
Q4	1.25A	1.19E



Summary of Model Changes

Exhibit 1: Summary of model changes

We slightly lower CY24E sales estimates by 2% versus prior

		Sales (\$mn)		EPS (N	Non-GAAP, incl. o	ptions)
	OLD	NEW	delta	OLD	NEW	delta
Mar-24E	\$1,807	\$1,850	\$43	\$0.90	\$1.05	\$0.15
Jun-24E	\$1,898	\$1,808	(\$89)	\$0.99	\$1.01	\$0.02
Sep-24E	\$1,992	\$1,899	(\$94)	\$1.11	\$1.11	(\$0.01)
Dec-24E	\$2,000	\$1,989	(\$11)	\$1.13	\$1.19	\$0.05
Dec-24E	\$7,697	\$7,546	(\$152)	\$4.14	\$4.36	\$0.22
YoY%	-6.5%	-8.6%	-2.0%	-18.9%	-15.4%	5.3%
Mar-25E	\$2,055	\$2,043	(\$13)	\$1.22	\$1.25	\$0.04
Jun-25E	\$2,118	\$2,104	(\$15)	\$1.29	\$1.33	\$0.04
Sep-25E	\$2,209	\$2,192	(\$17)	\$1.41	\$1.44	\$0.04
Dec-25E	\$2,257	\$2,238	(\$19)	\$1.45	\$1.48	\$0.04
Dec-25E	\$8,640	\$8,577	(\$63)	\$5.36	\$5.51	\$0.15
YoY%	12.2%	13.7%	-0.7%	29.4%	26.3%	2.7%
Dec-26E	\$9,428	\$9,350	(\$78)	\$6.24	\$6.39	\$0.15
YoY%	9.1%	9.0%	-0.8%	16.4%	16.0%	2.3%

Source: BofA Global Research estimates, company report

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Q4 reported vs. expectations

Exhibit 2: 4Q23E reported vs expectations summary

ON reported Q4 sales/EPS 1%/3% above Street

	Dec-22	Sep-23		I	Dec-23				
			Guidance	Consensus	BofA	Reported	Delta	QoQ	YoY
Sales (\$mn)	\$2,104	\$2,181	\$2,000 (\$1,950-\$2,050)	\$2,004	\$2,000	\$2,018	0.7%	-7.5%	-4.1%
QoQ%	-4.1%	4.1%		-8.1%	-8.3%	-7.5%			
Automotive	989	1158		1091	1100	1114	2.1%	-3.8%	12.7%
Industrial (incl. med, mil & aero)	552	616		563	534	497	-11.7%	-19.3%	-10.0%
Other	563	407		354	366	407	14.9%	-0.1%	-27.7%
Gross Margin (Non-GAAP) %	48.4%	47.3%	46.5% (45.5%-47.5%)	46.5%	46.5%	46.7%	22	(58)	(167)
Gross Profit (Non-GAAP)	1,019	1,032			931	943		-8.6%	-7.4%
R&D	136	143			143	150		4.7%	10.1%
SG&A	171	179			164	156		-12.7%	-8.9%
Operating expenses (Non-GAAP)	300	322	\$308 (\$300-\$315)		307	306		-4.9%	2.0%
Operating Income (Non-GAAP)	718	710		624	624	637		-10.3%	-11.3%
Operating Margin (Non-GAAP) %	34.1%	32.6%		31.1%	31.2%	31.6%	42	(99)	(257)
Interest expense (GAAP)	59	11	(4)		(4)	(1)			
Net Income (GAAP)	604	583	, ,		513	563			
Non-GAAP tax expense (cash taxes)	(110)	(112)			(93)	(98)			
Non-GAAP tax rate (cash tax rate)	15.9%	15.5%			15.0%	15.3%	1535		
Net Income (Non-GAAP)	580	609			527	541			
Diluted EPS (GAAP)	\$1.35	\$1.29		\$1.14	\$1.16	\$1.28	12.7%	-1.0%	-5.1%
Diluted EPS (Non GAAP, incl. SBC)	\$1.32	\$1.39	\$1.20 (\$1.13-\$1.27)	\$1.21	\$1.20	\$1.25	3.3%	-10.0%	-5.5%
Diluted Shares (Non GAAP)	440	439	438		438	434		-1.2%	-1.4%

Source: BofA Global Research estimates, company report, Bloomberg



Q1 guidance vs. expectations

Exhibit 3: 1Q24E guidance vs expectations summary ON guided Q1 sales below Street expectations

	Dec-23			Mar-24E	
	Reported	Consensus	Expected BofA	Guidance	New Outlook
Sales (\$mn)	\$2,018	\$1,926	\$1,807	\$1,850 (\$1,800 - \$1,900)	\$1,850
QoQ%	-7.5%	-3.9%	-9.7%		-8.3%
Automotive	1114	1074	1045		1029
Industrial (incl. med, mil & aero)	497	548	432		452
Other	407	324	330		369
Gross Margin (Non-GAAP) %	46.7%	45.6%	43.3%	45.5% (44.5%-46.5%)	45.5%
Gross Profit (Non-GAAP)	943		782		843
R&D	150		145		146
SG&A	156		167		156
Operating expenses (Non-GAAP)	306		312	\$312.5 (\$305-\$320)	301
Operating Income (Non-GAAP)	637	571	470		541
Operating Margin (Non-GAAP) %	31.6%	29.6%	26.0%		29.3%
Interest expense (GAAP)	(1)		1	(8)	(8)
Net Income (GAAP)	563		388		470
Non-GAAP tax expense (cash taxes)	(98)		(75)		(87)
Non-GAAP tax rate (cash tax rate)	15.3%		16.0%	16% (15.5% - 16.5%)	16.0%
Net Income (Non-GAAP)	541		395		456
Diluted EPS (GAAP)	\$1.28	\$1.03	\$0.88		\$1.08
Diluted EPS (Non GAAP, incl. SBC)	\$1.25	\$1.10	\$0.90	\$1.04 (\$0.98-\$1.10)	\$1.05
Diluted Shares (Non GAAP)	434		437	433	433

Source: BofA Global Research estimates, company report

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Balance Sheet

Exhibit 4: ON Q4 balance sheet summary

Net cash per share decreased QoQ

Balance Sheet

	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	QoQ	YoY
Total Cash	\$2,919	\$2,702	\$2,622	\$2,679	\$2,483	-7.3%	-14.9%
ST Debt	\$148	\$926	\$912	\$913	\$794	-13.0%	437.2%
LT Debt	\$3,046	\$2,538	\$2,540	\$2,541	\$2,543	0.1%	-16.5%
Total Debt	\$3,194	\$3,464	\$3,452	\$3,454	\$3,337	-3.4%	4.5%
Net Cash	(\$275)	(\$762)	(\$830)	(\$775)	(\$854)	10.2%	211.0%
Net Cash/Share	(\$0.62)	(\$1.73)	(\$1.89)	(\$1.76)	(\$1.97)	11.5%	215.3%
DSO	36.4	40.9	41.0	40.0	42.2		
DPO	71.6	85.2	75.0	72.1	61.4		
Inventory \$	\$1,617	\$1,815	\$1,964	\$2,085	\$2,112	1.3%	30.6%
Inventory Turns	2.7	2.3	2.2	2.2	2.0		
Inventory Days	135.8	158.5	162.4	165.0	178.6	13.6	42.7
Cash Conversion days	100.7	114.1	128.4	132.8	159.4		
Cash Flow from Ops	731.3	408.9	390.8	566.6	611.2	7.9%	-16.4%
Capex	(342.0)	(321.5)	(445.5)	(341.8)	(340.3)		
Free cash flow	\$389	\$87	\$202	`\$416	\$363	-12.6%	-6.7%
Free cash flow to sales %	18.5%	4.5%	10.0%	20.1%	17.1%		
Trailing 4Q FCF to sales %	19.6%	16.9%	17.0%	13.4%	13.1%		
Adjusted EBITDA	\$905	\$751	\$802	\$814	\$828	1.8%	-8.5%
Net debt to Adj. TTM EBITDA	0.1x	0.2x	0.2x	0.1x	0.0x		

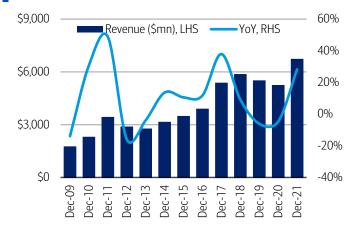
Source: BofA Global Research estimates, company report



Key Charts

Chart 1: ON annual revenue and YoY growth

ON YoY revenue to normalize in CY24E

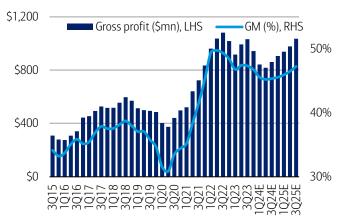


Source: BofA Global Research estimates, company report

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Chart 3: ON quarterly gross profit and gross margin

Quarterly gross margins can remain >45%

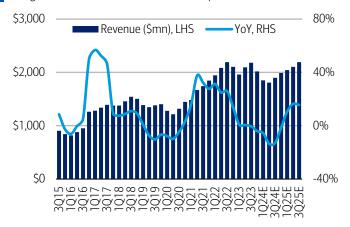


Source: Company report, BofA Global Research estimates

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Chart 2: ON quarterly revenue and YoY growth

YoY growth to decelerate for the next few quarters

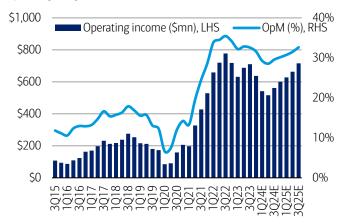


Source: Company report, BofA Global Research estimates

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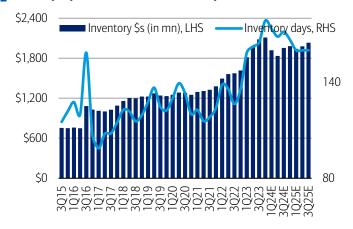
Chart 4: ON quarterly operating income and operating margin

Operating margins to stabilize in the 30s



Source: Company report, BofA Global Research estimates

Chart 5: ON quarterly inventory dollars and inventory days trends Inventory days remain between 100-140 days

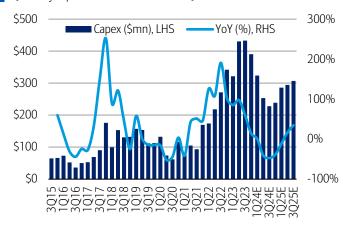


Source: Company report, BofA Global Research estimates

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Chart 7: ON quarterly capex and YoY growth

Quarterly capex at 19% of sales in DecQ

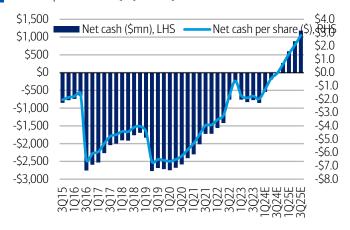


Source: Company report, BofA Global Research estimates

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Chart 6: ON quarterly net cash and net cash per share

Net cash per share fell QoQ in DecQ

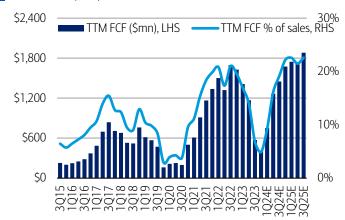


Source: Company report, BofA Global Research estimates

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Chart 8: ON TTM FCF and FCF as a % of sales

FCF has risen post pandemic



Source: Company report, BofA Global Research estimates



Glossary

ON: onsemi

GM: Gross Margin

EV: Electric Vehicle

SiC: Silicon Carbide

ADAS: Advanced Driver Assist System

EFK: East Fishkill

WOLF: Wolfspeed

STM: STMicro

IFX: Infineon

LTSA: Long-term Service Agreement

TXN: Texas Instruments

NXP: NXP Semiconductors

mgmt: management

Q: Quarter

Unch.: Unchanged

Esp.: Especially



FY ends Dec	1Q22 Mar-22	2Q22 Jun-22	3Q22 Sep-22	4Q22 Dec-22	1Q23 Mar-23	2Q23 Jun-23	3Q23 Sep-23	4Q23 Dec-23	1Q24E Mar-24E	2Q24E Jun-24E	3Q24E Sep-24E	4Q24E Dec-24E	FY21 Dec-21	FY22 Dec-22	FY23 Dec-23	FY24E Dec-24E
Revenues (Non-GAAP)	\$1,945.0	\$2,085.0	\$2,192.6	\$2,103.6	\$1,959.7	\$2,094.4	\$2,180.8	\$2,018.1	\$1,850.0	\$1,808.2	\$1,898.6	\$1,988.9	\$6,739.7	\$8,326.2	\$8,253.0	\$7,545.7
QoQ%	5.4%	7.2%	5.2%	-4.1%	-6.8%	6.9%	4.1%	-7.5%	-8.3%	-2.3%	5.0%	4.8%				
YoY%	31.3%	24.9%	25.9%	14.0%	0.8%	0.4%	-0.5%	-4.1%	-5.6%	-13.7%	-12.9%	-1.4%	28.3%	23.5%	-0.9%	-8.6%
Cost of sales (GAAP)	983.7	1047.9	1134.3	1083.1	1042.2	1101.0	1150.1	1076.2	1007.4	990.7	1037.8	1082.9	4025.5	4249.0	4369.5	4118.8
Gross Profit (GAAP)	961.3	1037.1	1058.3	1020.5	917.5	993.4	1030.7	941.9	842.5	817.5	860.9	906.0	2714.3	4077.2	3883.5	3426.8
Inventory adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortization of intangibles	0.0	0.0	0.0	1.6	1.4	1.4	1.4	1.5	0.0	0.0	0.0	0.0	0.0	1.6	5.7	0.0
Gross Profit (Non-GAAP)	961.3	1037.1	1081.4	1018.5	916.8	993.0	1032.1	943.4	842.5	817.5	860.9	906.0	2719.8	4098.3	3885.3	3426.8
Research & dev expenses	156.8	161.6	145.4	136.4	138.4	145.3	143.4	150.2	145.7	145.7	147.2	148.6	655.0	600.2	577.3	587.2
Sales & marketing expenses	71.1	73.1	69.5	74.2	71.8	71.6	68.2	67.5	66.2	65.5	64.8	67.4	293.6	287.9	279.1	263.9
Gen & admin expenses	77.9	83.2	84.9	97.2	75.9	87.2	110.7	88.6	89.5	90.4	87.7	90.3	304.8	343.2	362.4	357.8
Amortization of intangibles	21.3	21.9	21.9	16.1	15.0	12.0	12.0	12.1	12.1	12.1	12.1	12.1	99.0	81.2	51.1	48.4
Restructuring, impairment, other	(13.0)	113.3	312.1	(7.7)	51.5	2.6	9.4	11.4	11.4	11.4	11.4	11.4	74.3	404.7	74.9	45.6
Operating Income (GAAP) Operating expenses (Non-GAAP)	647.2 302.8	584.0 317.7	424.5 304.3	704.3 300.4	564.9 286.0	674.7 305.5	687.0 322.2	612.1 306.4	517.7 301.3	492.4 301.6	537.7 299.7	576.1 306.3	1287.6 1241.5	2360.0 1225.2	2538.7 1220.1	2124.0 1208.9
Operating income (Non-GAAP)	658.5	719.4	777.1	718.1	630.8	687.5	709.9	637.0	541.2	515.9	561.2	599.6	1478.3	2873.1	2665.2	2218.0
Operating income (Non-GAAP)	050.5	719.4	777.1	/ 10.1	030.6	007.5	709.9	637.0	541.2	313.9	301.2	399.0	1476.3	20/3.1	2005.2	2210.0
Other Income (expense), net	(19.1)	(20.0)	(17.7)	59.0	(19.0)	6.8	10.5	(1.2)	(8.0)	2.0	2.0	2.0	(129.8)	2.2	(2.9)	(2.0)
Income taxes paid	(97.1)	(107.4)	(94.9)	(159.0)	(83.7)	(104.4)	(114.6)	(47.5)	(39.6)	(38.4)	(42.0)	(45.0)	(146.6)	(458.4)	(350.2)	(165.0)
Net Income (GAAP)	530.2	455.8	311.9	604.3	461.7	576.6	582.7	562.7	470.0	456.0	497.8	533.2	1009.6	1902.2	2183.7	1957.0
Non-cash interest expense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7	0.0	0.0	0.0
Non-cash taxes	(3.0)	(7.3)	(24.9)	49.4	(18.3)	(5.6)	2.7	(50.7)	(47.3)	(45.0)	(48.7)	(51.9)	58.3	14.2	(71.9)	(192.8)
Net Income (Non-GAAP)	539.0	589.8	639.9	580.4	523.7	583.3	608.8	540.9	456.3	438.0	476.1	508.3	1285.4	2349.1	2256.7	1878.6
EPS (GAAP, basic)	\$1.22	\$1.05	\$0.72	\$1.40	\$1.07	\$1.34	\$1.35	\$1.31	\$1.10	\$1.07	\$1.18	\$1.27	\$2.37	\$4.39	\$5.07	\$4.62
EPS (GAAP, diluted)	\$1.18	\$1.02	\$0.70	\$1.35	\$1.03	\$1.29	\$1.29	\$1.28	\$1.08	\$1.05	\$1.15	\$1.23	\$2.28	\$4.24	\$4.89	\$4.50
EPS (Non-GAAP, with options, diluted)	\$1.22	\$1.34	\$1.45	\$1.32	\$1.19	\$1.33	\$1.39	\$1.25	\$1.05	\$1.01	\$1.11	\$1.19	\$2.95	\$5.33	\$5.16	\$4.36
Shares (basic)	433.3	434.2	432.9	432.2	431.9	431.7	431.2	428.1	425.6	424.3	422.6	421.0	425.7	433.2	430.7	423.4
Shares (diluted)	442.0	441.6	440.8	439.9	439.1	438.7	439.3	433.9	433.0	431.6	430.0	428.3	435.4	441.1	437.8	430.7
Margins % (pf, with options)																
Gross margin	49.4%	49.7%	49.3%	48.4%	46.8%	47.4%	47.3%	46.7%	45.5%	45.2%	45.3%	45.6%	40.4%	49.2%	47.1%	45.4%
R&D expense	8.1%	7.8%	6.6%	6.5%	7.1%	6.9%	6.6%	7.4%	7.9%	8.1%	7.8%	7.5%	9.7%	7.2%	7.0%	7.8%
SG&A expense	7.7%	7.5%	7.0%	8.1%	7.5%	7.6%	8.2%	7.7%	8.4%	8.6%	8.0%	7.9%	8.9%	7.6%	7.8%	8.2%
Operating margin	33.9%	34.5%	35.4%	34.1%	32.2%	32.8%	32.6%	31.6%	29.3%	28.5%	29.6%	30.1%	21.9%	34.5%	32.3%	29.4%
Tax rate Net income	15.6% 27.7%	16.3% 28.3%	15.8% 29.2%	15.9% 27.6%	16.3% 26.7%	15.9% 27.9%	15.5% 27.9%	15.3% 26.8%	16.0% 24.7%	16.0% 24.2%	16.0% 25.1%	16.0% 25.6%	6.4% 19.1%	15.9% 28.2%	15.8% 27.3%	16.0% 24.9%
Net Debt/TTM EBITDA (Adj)	0.6x	28.5% 0.5x	29.2% 0.2x	27.5% 0.1x	26.7% 0.2 x	27.9% 0.2 x	27.9% 0.2x	26.8% 0.3x	0.2x	24.2% 0.1x	25.1% 0.0x	-0.1x	0.9x	28.2% 0.1x	27.3% 0.3x	24.9% -0.1x
Net Deut/ I IM EDITDA (AUJ)	U.OX	U.3X	U.ZX	U. IX	U.ZX	U.ZX	U.ZX	U.3X	U.ZX	U. IX	U.UX	-U. IX	U.9X	U. IX	U.3X	-U. I X





Exhibit 6: ON Segment Model (\$mn)
Autos offers the strongest growth prospects for ON

	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24E	2Q24E	3Q24E	4Q24E	FY21	FY22	FY23	FY24E
FY ends Dec	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Dec-21	Dec-22	Dec-23	Dec-24E
Automotive	714.5	784.0	873.6	988.7	986.0	1061.8	1157.8	1114.3	1028.7	1013.3	1064.0	1127.8	2288.9	3360.8	4319.9	4233.8
Other	687.3	719.2	705.8	562.5	417.5	423.2	407.1	406.8	368.9	365.2	383.5	387.3	2648.6	2674.8	1654.6	1505.0
Industrial (incl. med, mil & aero)	543.2	581.8	613.2	552.4	556.2	609.3	615.8	497.1	452.3	429.7	451.2	473.7	1802.2	2290.6	2278.4	1806.9
QoQ%																
Automotive	11.5%	9.7%	11.4%	13.2%	-0.3%	7.7%	9.0%	-3.8%	-7.7%	-1.5%	5.0%	6.0%				
Other	0.6%	4.6%	-1.9%	-20.3%	-25.8%	1.4%	-3.8%	-0.1%	-9.3%	-1.0%	5.0%	1.0%				
Industrial (incl. med, mil & aero)	4.1%	7.1%	5.4%	-9.9%	0.7%	9.6%	1.1%	-19.3%	-9.0%	-5.0%	5.0%	5.0%				
YoY%																
Automotive	38.4%	41.0%	51.8%	54.2%	38.0%	35.4%	32.5%	12.7%	4.3%	-4.6%	-8.1%	1.2%	35.7%	46.8%	28.5%	-2.0%
Other	15.0%	5.6%	2.8%	-17.6%	-39.3%	-41.2%	-42.3%	-27.7%	-11.6%	-13.7%	-5.8%	-4.8%	19.6%	1.0%	-38.1%	-9.0%
Industrial (incl. med, mil & aero)	47.9%	34.3%	27.8%	5.8%	2.4%	4.7%	0.4%	-10.0%	-18.7%	-29.5%	-26.7%	-4.7%	33.0%	27.1%	-0.5%	-20.7%
% of sales																
Automotive	36.7%	37.6%	39.8%	47.0%	50.3%	50.7%	53.1%	55.2%	55.6%	56.0%	56.0%	56.7%	34.0%	40.4%	52.3%	56.1%
Consumer electronics	35.3%	34.5%	32.2%	26.7%	21.3%	20.2%	18.7%	20.2%	19.9%	20.2%	20.2%	19.5%	39.3%	32.1%	20.0%	19.9%
Industrial (incl. med, mil & aero)	27.9%	27.9%	28.0%	26.3%	28.4%	29.1%	28.2%	24.6%	24.5%	23.8%	23.8%	23.8%	26.7%	27.5%	27.6%	23.9%

Source: BofA Global Research estimates, company reports

Exhibit 7: ON Balance Sheet (\$mn)
ON's cash position will improve over time, benefitting from strong profitability

5V . I. D.	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24E	2Q24E	3Q24E	4Q24E	FY21	FY22	FY23	FY24E
FY ends Dec	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Dec-21	Dec-22	Dec-23	Dec-24E
Cash and cash equivalents	\$1,645.1 0.0	\$1,791.6 0.0	\$2,450.2 0.0	\$2,919.0 0.0	\$2,702.4 0.0	\$2,622.2	\$2,679.2 0.0	\$2,473.4 9.6	\$2,778.8 9.6	\$3,125.0 9.6	\$3,287.6 9.6	\$3,577.4 9.6	\$1,352.6	\$2,919.0 0.0	\$2,473.4 9.6	\$3,577.4 9.6
Short-term investments	910.7	1138.1	857.3	842.3	880.9	944.4	958.2	935.4	9.6	9.6	9.6	1027.2	0.0 809.4	842.3	9.6	1027.2
Account receivable, net							2084.8					1982.1				1027.2
Inventories	1496.0	1563.2 292.4	1575.4	1616.8 351.3	1814.9 318.1	1964.4 399.2	363.2	2111.8 382.1	1921.5 382.1	1835.2 382.1	1956.5 382.1	382.1	1379.5 240.1	1616.8	2111.8 382.1	382.1
Other current assets	315.6 4367.4	4785.3	426.5 5309.4	5729.4	5716.3	5930.2	6085.4	5912.3	6047.5	6285.9	6616.4	6978.4	2 4 0.1 3781.6	351.3 5729.4	5912.3	6978.4
Total current assets	4307.4	4/85.3	5509.4	5/29.4	5/10.5	5930.2	0005.4	3912.3	0047.5	0205.9	0010.4	09/8.4	3/81.0	5/29.4	5912.5	09/8.4
Property, plant and equipment, net	2559.4	2709.8	2762.1	3450.7	3692.9	3991.4	4314.5	4401.5	4574.4	4679.8	4753.2	4830.6	2524.3	3450.7	4401.5	4830.6
Goodwill	1936.7	1815.4	1600.4	1577.6	1577.6	1577.6	1577.6	1577.6	1577.6	1577.6	1577.6	1577.6	1937.5	1577.6	1577.6	1577.6
Intangible assets, net	474.5	452.6	373.8	359.7	339.8	326.3	312.8	299.3	299.3	299.3	299.3	299.3	495.7	359.7	299.3	299.3
Other assets	525.1	649.9	645.1	484.4	474.6	434.8	411.7	423.7	423.7	423.7	423.7	423.7	520.6	484.4	423.7	423.7
Total assets	10212.4	10788.7	11100.7	11978.5	12274.3	12762.7	13281.3	13215.2	13523.3	13867.1	14271.0	14710.4	9626.0	11978.5	13215.2	14710.4
Accounts payable	725.3	793.8	791.7	852.1	976.2	907.5	911.3	725.6	664.2	653.2	684.2	714.0	635.1	852.1	725.6	714.0
Accrued expenses	670.4	754.3	766.7	1047.3	666.0	654.1	665.4	663.2	663.2	663.2	663.2	663.2	747.6	1047.3	663.2	663.2
Deferred income on sales to distributors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current portion of long-term debt	170.4	165.2	165.3	147.8	926.2	912.1	912.9	794.0	794.0	794.0	794.0	794.0	160.7	147.8	794.0	794.0
Total current liabilities	1566.1	1713.3	1761.0	2061.4	2580.0	2480.7	2494.8	2183.6	2122.2	2111.2	2142.2	2172.0	1543.4	2061.4	2183.6	2172.0
Long-term debt	3035.4	3047.4	3046.5	3045.7	2538.0	2539.6	2541.1	2542.6	2537.6	2532.6	2527.6	2522.6	2913.9	3045.7	2542.6	2522.6
Other long-term liabilities	552.0	581.1	586.1	630.3	652.7	701.1	684.7	627.3	627.3	627.3	627.3	627.3	521.1	630.3	627.3	627.3
Total liabilities	5194.4	5378.6	5424.1	5771.5	5807.3	5759.1	5777.3	5414.6	5348.2	5332.2	5358.2	5383.0	5021.6	5771.5	5414.6	5383.0
Total natinces	313	337 0.0	3.2	3771.3	5007.5	5755.1	3777.3	311110	33 10.2	3332.2	3330.2	3303.0	3021.0	377 1.3	5111.0	3303.0
Stockholders' equity	4998.2	5389.5	5656.0	6188.5	6448.0	6984.1	7484.3	7782.6	8157.1	8516.9	8894.8	9309.4	4585.4	6188.5	7782.6	9309.4
Minority interest in subsidiaries	19.8	20.6	20.6	18.5	19.0	19.5	19.7	18.0	18.0	18.0	18.0	18.0	19.0	18.5	18.0	18.0
Total equity	5018.0	5410.1	5676.6	6207.0	6467.0	7003.6	7504.0	7800.6	8175.1	8534.9	8912.8	9327.4	4604.4	6207.0	7800.6	9327.4
Total liabilities and equity	10212.4	10788.7	11100.7	11978.5	12274.3	12762.7	13281.3	13215.2	13523.3	13867.1	14271.0	14710.4	9626.0	11978.5	13215.2	14710.4
Cash and Liquidity Ratios																
Total cash incl. equivalents	\$1,645.1	\$1,791.6	\$2,450.2	\$2,919.0	\$2,702.4	\$2,622.2	\$2,679.2	\$2,483.0	\$2,788.4	\$3,134.6	\$3,297.2	\$3,587.0	\$1,352.6	\$2,919.0	\$2,483.0	\$3,587.0
Total debt	\$3,205.8	\$3,212.6	\$3,211.8	\$3,193.5	\$3,464.2	\$3,451.7	\$3,454.0	\$3,336.6	\$3,331.6	\$3,326.6	\$3,321.6	\$3,316.6	\$3,074.6	\$3,193.5	\$3,336.6	\$3,316.6
Net Cash	(\$1,560.7)	(\$1,421.0)	(\$761.6)	(\$274.5)	(\$761.8)	(\$829.5)	(\$774.8)	(\$853.6)	(\$543.2)	(\$192.0)	(\$24.4)	\$270.4	(\$1,722.0)	(\$274.5)	(\$853.6)	\$270.4
Net Cash per share	(\$3.53)	(\$3.22)	(\$1.73)	(\$0.62)	(\$1.73)	(\$1.89)	(\$1.76)	(\$1.97)	(\$1.25)	(\$0.44)	(\$0.06)	\$0.63	(\$3.95)	(\$0.62)	(\$1.95)	\$0.63
Book value per share	\$11.35	\$12.25	\$12.88	\$14.11	\$14.73	\$15.96	\$17.08	\$17.98	\$18.88	\$19.77	\$20.73	\$21.78	\$10.57	\$14.07	\$17.82	\$21.66
Tangible book value per share	\$5.90	\$7.12	\$8.40	\$9.71	\$10.36	\$11.62	\$12.78	\$13.65	\$14.55	\$15.43	\$16.36	\$17.40	\$4.99	\$9.68	\$13.53	\$17.30
Cash conversion vatios																
Cash conversion ratios	42.6	49.7	35.6	36.4	40.9	41.0	40.0	42.2	47.0	47.0	47.0	47.0				
Days Sales Outstanding (DSO)	42.6 67.1							61.4		47.0 60.0	60.0	47.0 60.0				
Days Payables Outstanding (DPO)		68.9	63.5	71.6	85.2	75.0	72.1		60.0							
Days of Inventory (DIO)	138.4	135.7	126.4	135.8	158.5	162.4	165.0	178.6	173.6	168.6	171.6	166.6				
Inventory Turns	2.6	2.7	2.9	2.7	2.3	2.2	2.2	2.0	2.1	2.2	2.1	2.2				
Cash conversion days	113.9	116.5	98.5	100.7	114.1	128.4	132.8	159.4	160.6	155.6	158.6	153.6				
Source: BofA Global Research estimates, company	/ reports															

Source: BofA Global Research estimates, company reports



Exhibit 8: ON Cash Flow Statement (\$mn)
We model ON's FCF margins approaching high-teens %

	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24E	2Q24E	3Q24E	4Q24E	FY21	FY22	FY23	FY24E
FY ends Dec	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24E	Jun-24E	Sep-24E	Dec-24E	Dec-21	Dec-22	Dec-23	Dec-24E
Net income (loss)	531.0	456.6	311.9	604.3	462.2	577.1	582.9	563.4	470.0	456.0	497.8	533.2	1011.2	1903.8	2185.6	1957.0
Depreciation & amortization	140.6	138.4	139.6	133.2	145.0	148.8	155.4	160.3	150.8	147.7	154.5	161.3	596.7	551.8	609.5	614.3
Gain on fixed asset sales	(16.6)	0.0	(16.5)	0.5	1.2	3.6	2.5	4.3	0.0	0.0	0.0	0.0	(7.9)	(32.6)	11.6	0.0
Amortization of debt costs & discount	3.2	2.8	2.6	2.4	2.9	2.9	2.9	2.6	2.6	2.6	2.6	2.6	10.7	11.0	11.3	10.4
Provision for excess inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-cash stock comp expense	22.5	27.1	26.9	24.3	27.7	31.6	31.1	30.7	26.8	26.2	27.5	28.8	101.3	100.8	121.1	109.4
Non-cash interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7	0.0	0.0	0.0
Deferred income taxes	38.3	(31.6)	0.0	67.7	(1.5)	(28.1)	(79.4)	(18.7)	0.0	0.0	0.0	0.0	62.4	74.4	(127.7)	0.0
Loss on debt repurchase, other	0.5	121.2	211.5	(65.6)	20.1	(2.8)	2.5	0.6	0.0	0.0	0.0	0.0	31.0	267.6	20.4	0.0
Operating assets & liabilities changes																
Accounts receivable	(107.2)	(227.4)	280.8	15.0	(38.6)	(63.5)	(13.8)	22.8	(20.1)	21.6	(46.7)	(46.6)	(127.5)	(38.8)	(93.1)	(91.8)
Inventories	(116.7)	(67.2)	(12.2)	(41.4)	(198.1)	(149.5)	(120.4)	(27.0)	190.3	86.3	(121.3)	(25.6)	(123.4)	(237.5)	(495.0)	129.7
Other assets	(0.8)	23.2	(134.1)	75.2	33.2	(81.1)	36.0	(18.9)	0.0	0.0	0.0	0.0	(67.1)	(36.5)	(30.8)	0.0
Accounts payable	35.7	68.5	(2.1)	60.4	124.1	(68.7)	3.8	(185.7)	(61.4)	(11.0)	31.0	29.7	61.4	162.5	(126.5)	(11.6)
Accrued expenses	(83.2)	83.9	12.4	280.6	(381.3)	(11.9)	11.3	(2.2)	0.0	0.0	0.0	0.0	161.4	293.7	(384.1)	0.0
Income taxes payable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accrued interest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income on disti sales	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long-term liabilities	24.6	(174.7)	181.6	(425.3)	212.0	32.4	(48.2)	(48.2)	0.0	0.0	0.0	0.0	36.3	(393.8)	148.0	0.0
Net cash from operating activities	478.6	420.8	1002.4	731.3	408.9	390.8	566.6	611.2	759.2	729.3	545.4	683.5	1782.0	2633.1	1850.3	2717.4
Purchases of PP&E	(173.8)	(218.1)	(271.1)	(342.0)	(321.5)	(430.6)	(433.0)	(390.5)	(323.7)	(253.2)	(227.8)	(238.7)	(444.6)	(1005.0)	(1575.6)	(1043.4)
Purchase of businesses, other	(0.8)	(33.0)	(22.3)	22.8	(253.0)	36.2	12.9	5.3	0.0	0.0	0.0	0.0	(446.8)	(33.3)	(198.6)	0.0
Sales of property, plant and equipment	36.7	1.5	20.8	172.6	1.7	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	231.6	2.8	0.0
Proceeds from held-to-maturity securities	3.4	10.4	10.2	4.8	10.8	10.0	12.7	0.0	0.0	0.0	0.0	0.0	1.4	28.8	33.5	0.0
Purchase of held-to-maturity securities	(7.8)	(8.5)	(1.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(49.9)	(18.0)	0.0	0.0
Net cash from investing activities	(129.4)	(170.1)	(264.1)	(133.6)	(562.0)	(383.5)	(407.8)	(385.2)	(323.7)	(253.2)	(227.8)	(238.7)	(938.8)	(697.2)	(1738.5)	(1043.4)
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Proceeds from common stock issuance	7.8	4.7	5.7	4.7	7.3	5.9	6.7	5.9	0.0	0.0	0.0	0.0	23.5	22.9	25.8	0.0
Proceeds from debt issuance	0.0	500.0	0.0	0.0	1470.0	375.0	0.0	0.0	0.0	0.0	0.0	0.0	787.3	500.0	1845.0	0.0
Proceeds from exercise of stk options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Payment of capital lease obligation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Share repurchases	0.0	(89.7)	(77.2)	(92.9)	(104.0)	(60.1)	(100.0)	(300.2)	(125.0)	(125.0)	(150.0)	(150.0)	0.0	(259.8)	(564.3)	(550.0)
Repayment of long-term debt	(4.1)	(502.7)	(2.7)	(20.5)	(1213.7)	(390.0)	0.0	(119.6)	(5.0)	(5.0)	(5.0)	(5.0)	(1270.5)	(530.0)	(1723.3)	(20.0)
Net cash from financing activities	(56.0)	(102.3)	(79.1)	(129.7)	(63.4)	(89.6)	(101.3)	(432.2)	(130.0)	(130.0)	(155.0)	(155.0)	(569.4)	(367.1)	(686.5)	(570.0)
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Effect of interest rate changes	(0.7)	(1.9)	(0.6)	0.8	(0.1)	2.1	(0.5)	0.4	0.0	0.0	0.0	0.0	(1.9)	(2.4)	1.9	0.0
Net increase (decrease) in cash	292.5	146.5	658.6	468.8	(216.6)	(80.2)	57.0	(205.8)	305.4	346.2	162.6	289.8	271.9	1566.4	(445.6)	1104.0
Cash & equivalents at beginning of period	1353	1645	1792	2450	2919	2702	2622	2679	2473	2779	3125	3288	1080.7	1352.6	2919.0	2473.4
Cash & equivalents at end of period	1645	1792	2450	2919	2702	2622	2679	2473	2779	3125	3288	3577	1352.6	2919.0	2473.4	3577.4
Free Cash Flow	305	203	731	389	87	(40)	134	221	435	476	318	445	1337.4	1628.1	274.7	1674.0
FCF as % of sales	15.7%	9.7%	33.4%	18.5%	4.5%	-1.9%	6.1%	10.9%	23.5%	26.3%	16.7%	22.4%	19.8%	19.6%	3.3%	22.2%
Trailing 4Q FCF to sales%	20.8%	17.3%	21.0%	19.6%	16.9%	14.0%	6.8%	4.9%	9.2%	16.1%	19.1%	22.2%				
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Source: BofA Global Research estimates, company reports

Price objective basis & risk

onsemi (ON)

Our PO of \$90 PO is based on 16x 2025E P/E, in line with ON's 7x-27x trading range, in our view justified given improving profitability, though partially offset by the heavier capex required for SiC ramp.

Downside risks to our PO are: 1) Macro/cyclical risks, given high exposure to automotive and industrial markets, make ON susceptible to any potential global trade tensions/tariffs, 2) Prolonged COVID-19 headwinds limiting pace of automotive/industrial recovery, impacting utilization levels, 3) Difficulty in ramping 300mm fabrication facility limiting gross margin improvement, 4) sustained elevated capex levels relative to peers.

Analyst Certification

I, Vivek Arya, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Semiconductors and Semiconductor Capital Equipment Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Advanced Micro Devices, Inc	AMD	AMD US	Vivek Arya
	Analog Devices Inc.	ADI	ADI US	Vivek Arya
	Applied Materials, Inc.	AMAT	AMAT US	Vivek Arya
	Arm Holdings	ARM	ARM US	Vivek Arya
	Broadcom Inc	AVGO	AVGO US	Vivek Arya
	Cadence	CDNS	CDNS US	Vivek Arya
	Camtek	CAMT	CAMT US	Vivek Arya
	KLA Corporation	KLAC	KLAC US	Vivek Arya
	Lam Research Corp.	LRCX	LRCX US	Vivek Arya
	M/A-Com	MTSI	MTSI US	Vivek Arya
	Marvell Technology Group Ltd.	MRVL	MRVL US	Vivek Arya
	Microchip	MCHP	MCHP US	Vivek Arya
	Micron Technology, Inc	MU	MU US	Vivek Arya
	Nova	NVMI	NVMI US	Vivek Arya
	NVIDIA Corporation	NVDA	NVDA US	Vivek Arya
	NXP Semiconductors NV	NXPI	NXPI US	Vivek Arya
	onsemi	ON	ON US	Vivek Arya
	Synopsys	SNPS	SNPS US	Vivek Arya
NEUTRAL				
	Advanced Energy Industries	AEIS	AEIS US	Duksan Jang
	Allegro MicroSystems	ALGM	ALGM US	Blake Friedman
	Axcelis Technologies	ACLS	ACLS US	Duksan Jang
	Coherent Corp	COHR	COHR US	Vivek Arya
	GlobalFoundries	GFS	GFS US	Vivek Arya
	Intel	INTC	INTC US	Vivek Arya
	Lattice Semiconductor	LSCC	LSCC US	Blake Friedman
	Texas Instruments Inc.	TXN	TXN US	Vivek Arya
UNDERPERFORM				
	Ambarella	AMBA	AMBA US	Vivek Arya
	Credo Technology	CRDO	CRDO US	Vivek Arya
	Lumentum Holdings	LITE	LITE US	Vivek Arya
	Qorvo Inc.	QRVO	QRVO US	Vivek Arya
	Skyworks Solutions, Inc.	SWKS	SWKS US	Vivek Arya
	Teradyne	TER	TER US	Vivek Arya
	Wolfspeed Inc	WOLF	WOLF US	Vivek Arya



US - Semiconductors and Semiconductor Capital Equipment Coverage Cluster

Investment rating Company BofA Ticker Bloomberg symbol Analyst

IQmethod[™] Measures Definitions

Business Performance	Numerator	Denominator
Return On Capital Employed	NOPAT = (EBIT + Interest Income) \times (1 $-$ Tax Rate) + Goodwill Amortization	Total Assets — Current Liabilities + ST Debt + Accumulated Goodwill Amortization
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5 Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations — Total Capex	N/A
Quality of Earnings	Numerator	Denominator
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt — Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit	Numerator	Denominator
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations – Total Capex	Market Cap = Current Share Price × Current Basic Shares
Enterprise Value / Sales	EV = Current Share Price × Current Shares + Minority Equity + Net Debt +	Sales
•	Other LT Liabilities	
EV / EBITDA	Enterprise Value	Basic EBIT + Depreciation + Amortization

Momethod Suis the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

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Disclosures

Important Disclosures

ON Semiconductor (ON) Price Chart



 $B: Buy, N: Neutral, U: Underperform, PO: Price \ Objective, NA: No \ longer \ valid, NR: No \ Rating$

The Investment Opinion System is contained at the end of the report under the heading 'Fundamental Equity Opinion Key'. Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.



Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

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Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster^{R2}

Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at BofA ESGMeter methodology. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

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