

## ON Semi: Driving the Future of Automotive Automation

Price \$75.05

Growth Holding

November 13, 2022

- Backlog grows \$5.3 billion in 3Q22 to hit over \$14 billion.
- Repositioning initiative to focus on free cash flow and margin growth, exiting inefficient product lines and focusing on long-term supply agreements with OEMs.
- Quickly growing total addressable market, particularly in automotive, where ON has swelled total value per vehicle to \$715
- 50% of FCF targeted at share repurchases, strong customer base and strong long-term outlook despite shorter-term softness.

### Investment Thesis

ON Semiconductor (ON) is an American semiconductor firm that began its life as a spin-off of Motorola and acquired Fairchild semiconductor to as it built itself into a leadership position in the industry. ON makes over 80,000 proprietary parts across hundreds of markets, including defense, industrial, IoT/cloud, and automotive. On average, the top 20 ON customers purchase an average of 24 product families.

ON is undergoing a mix shift, portfolio optimization, and manufacturing optimization. These changes will help bolster financial performance in the form of more stability and a targeted gross margin expansion to 45%. Cash flow growth will accelerate as ON targets 20-25% FCF (Free Cash Flow) conversion of revenue by 2025 with a target of approximately \$2 billion per year.

ON Semi beat its target for gross margin in 3Q22 at it passed 49%. Additionally, ON beat revenue targets by \$75 million in 3Q22 swelling normalized EPS to \$1.45. Despite certain macroeconomic concerns, we believe that prudent capital management as on moves towards fab-lite manufacturing will improve efficiency and drive better profitability.

### Estimated Fair Value = EFV

**EFV** = E2024 EPS times PE = \$5.30 X 17 = \$90.10 per ON share

ON Semi (ON)	E2022	E2023	E2024
Price-to-Sales	3.9	4.0	3.8
Price-to-Earnings	14.4	15.6	14.1

## Products

	Automotive	Industrial	Other
% of Total Revenue (2021)	34%	27%	39%
Applications	<ul style="list-style-type: none"> <li>• Power Management</li> <li>• Powertrain and Engine Management</li> <li>• Sensors and Safety</li> </ul>	<ul style="list-style-type: none"> <li>• EV Charging Infrastructure</li> <li>• Industrial Automation</li> <li>• Security</li> <li>• AR/VR</li> <li>• Health Diagnostics</li> <li>• Robotics</li> </ul>	<ul style="list-style-type: none"> <li>• Data Center Services</li> <li>• 5G Base Stations</li> <li>• Computer Components</li> <li>• Smartphone Components</li> </ul>

64% of total 2021 revenue comes from ON selling through distributors who resell to mid-sized and below OEMs. Distributor sales are generally long-term agreements. Direct-to-customer sales OEM manufacturers are 36% of 2021 revenue. Long-Term Supply Agreements (LTSAs) total \$14 billion as of end of 3Q22, up \$5.3 billion in the quarter. Factory automation is still trending but experienced some softness as consumers slow spending in anticipation of a recession. ON is confident that this is a macroeconomic condition and not a long-term trend. On is trimming weak parts of the portfolio and accelerated this process given the possible oncoming recession.

ON expects to undergo a mix shift and portfolio optimization as the economy enters a stagnant period. R&D will shift towards products with a more attractive margin.

Year over year, revenue has increased by 26% but more impressively gross profit increased by 47%. Automotive and Industrial are growing over 5x faster than other end markets and presently makeup 68% of revenues. By 2025 this is projected to grow to 75%.



## Fab-Lite

The semiconductor shortage has gone on longer than many analysts expected. The shift for major OEMs to go fabless has only exacerbated this problem. The traditional model for semiconductor manufacturing is manufacturing only (pure play), design only (fabless) or a mix.

While each of these has its own advantages and disadvantages, the FAB-LITE model has become the favorite of more niche OEMs as a way to compete for cheaper wafers with big computing giants. FAB-LITE is a method by which ON manufactures lower-cost and simpler components to reserve outsourced production for higher-end products that require significantly more capex for startup. This FAB-LITE approach will also give ON the room to manufacture common components for other manufacturers both to improve cost structure and to strengthen their competitive advantage.

ON is exiting the smaller more inefficient fabrication sites and consolidating them into larger fabrication centers that can drive down cost per unit through economy of scale. ON estimates that this reduction in size will decrease fixed costs by \$125-150 million by 2025 while also increasing capacity by 1.3 times.

This strategy will help stabilize their financial performance which in years past has been heavily influenced by volumes. ON will be able to leverage existing long-term supply agreements (LTSA's) with the hope of improving long-term projections and provide greater margin stability.

Utilization in the manufacturing area for ON sits at around 75% and is trending downward with the economic downturn. However, the underutilization is offset by pricing actions, and ON estimates negative 1-2% hit to gross margin as a result.

## EV Growth and Automotive

The real star of ON is its leverage within the auto manufacturing industry. Auto manufacturers are pushing hard for EV rollout, with many countries and several US states mandating limits to traditional combustion engines for consumer vehicles by 2030. By 2028, ON estimates that over 50% of new vehicle sales will be electric or hybrid. Current product development efforts are heavily focused on electric vehicles including improved sensory suits for automatized driving and better battery control mechanisms. More specifically, the total addressable market for sensing systems is expected to



grow at a 10% 5-year-CAGR with power systems trailing at 6% 5-year-CAGR.

Vehicles are split into categories based on how many automation features they have, with L1/2 being the standard for most modern vehicles with ABS (Antilock Braking Systems), lane warning, and auto braking features. L3 and higher not requiring the driver's full attention. As of 2022, ON has roughly \$715 per vehicle in components. Electrification and further automation of the driving experience is estimated to push ON to \$1,600 per vehicle.

ON expects that the CAGR for the automotive sector will be 7-9% over the next 5 years. While a weaker economy will be a drag on the auto industry over the near term, increases in total semiconductor value per vehicle will offset the reduction in deliveries of new vehicles.

### Capital Allocation Strategy

Tier	Item	Target
1	Investment and Growth Capex	Portfolio expansion
2	Mergers and Acquisitions	Core competency growth, accelerate development
3	Maintain Balance Sheet Flexibility	Net leverage of 1.5-2x
4	Shareholder Returns	50% of FCF toward share repurchases

### Risk

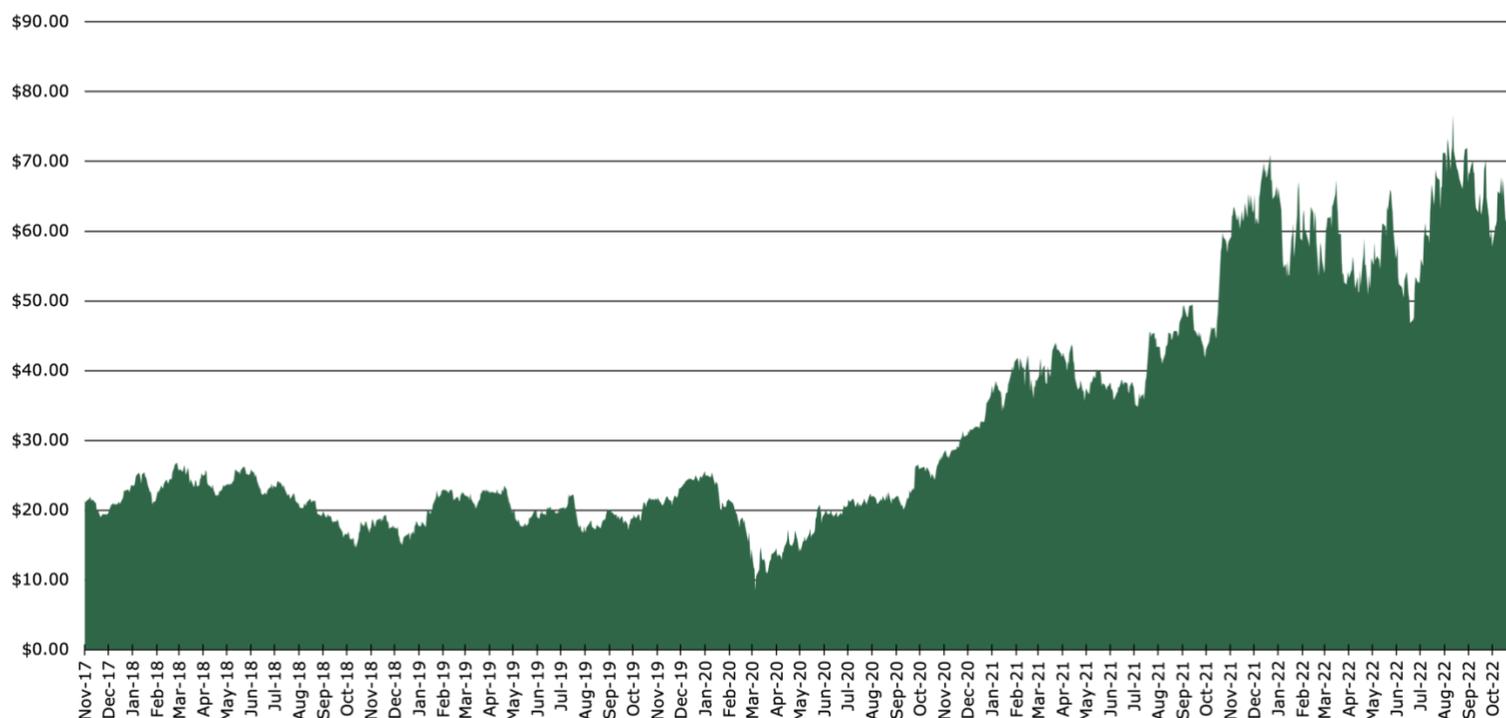
Semiconductors shortages created a spike in pricing, revenues and profits. This is over and the industry including ON is faced with destocking over the next few quarters. In the short term, ON could face demand destruction as inventories are adjusted to end demand. In the long term, the automation and electrification of the economy will continue to bolster the total addressable market growth for ON.

The ramping up of Fab-lite and the end of the Semiconductor industry storage will bring down the gross margins from the current 49.3% towards the 45% target. EPS will most likely be down into 2023.

## Peer Comparisons

Estimated Next 12 Months	EV-to-EBITDA	Price-to-Sales	Price-to-Earnings
<b>ON Semi (ON)</b>	9.9	4.0	17.8
<b>STMicroelectronics (STM)</b>	5.82	2.2	9.4
<b>Global Foundries (GFS)</b>	10.5	4.4	24.7
<b>Marvell Tech (MRVL)</b>	16.0	6.6	538.7
<b>Infineon Tech (IFNNY)</b>	8.7	2.3	18.5
<b>Microchip Tech (MCHP)</b>	11.4	5.5	18.7

## ON Semiconductor (ON)



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