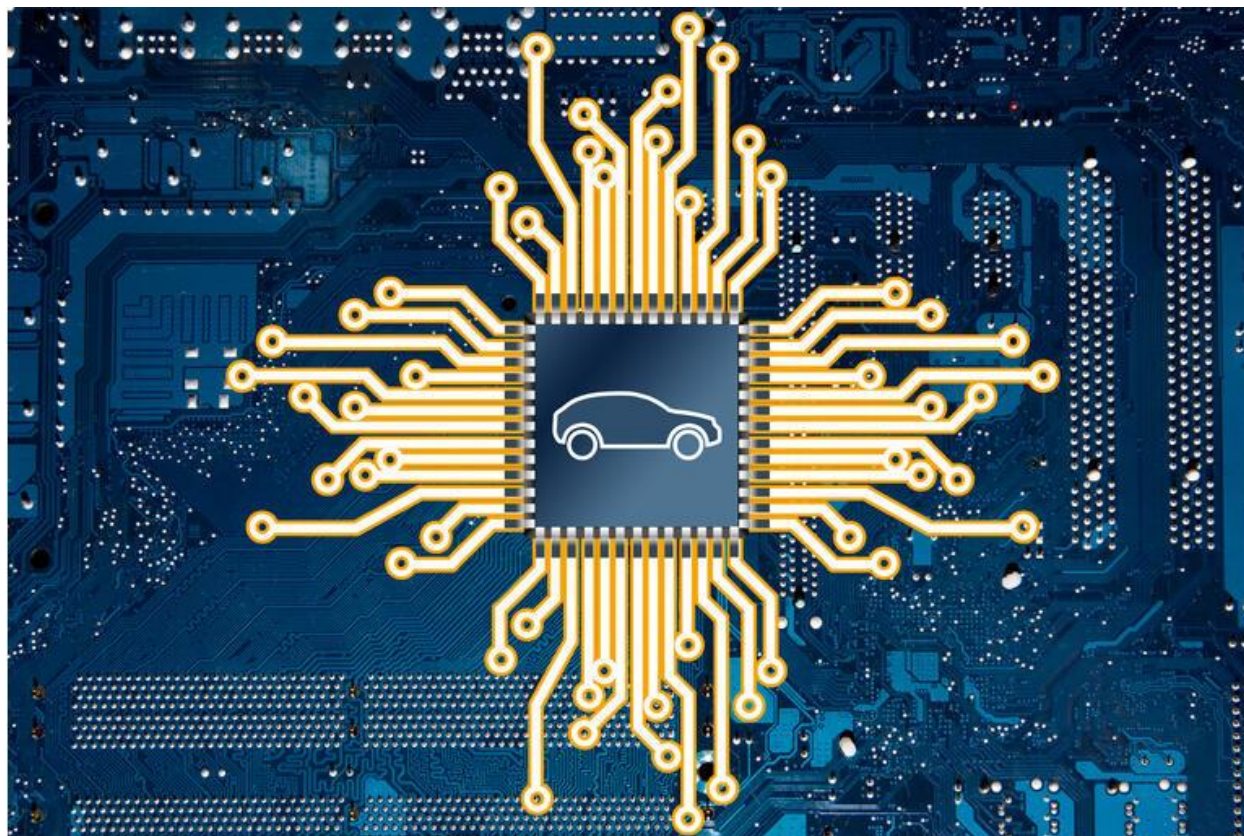


Onto Innovation: Significant Underperformance In Its Advanced Packaging Business – February 27, 2022



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Onto Innovation (NYSE:[ONTO](#)) reported Q3 2021 Non-GAAP EPS of \$0.98, beating by \$0.06. Revenue was \$200.6M, up 58.6% YoY, which beat by \$5.26M.

While the company had strong financials, it must be remembered that the entire semiconductor equipment market is up 48% through 1H 2021. Thus, a complete picture of ONTO can only be made by analyzing its performance compared to peers.

Packaging Segment

On June 6, 2016, I wrote a Seeking Alpha article entitled "[The Other Face Of Lithography - Ultratech And Rudolph Technologies](#)." In the article, I reported that while all eyes are on ASML (NASDAQ:[ASML](#)) and its EUV technology, lithography for advanced IC packaging has the potential to grow even stronger.

The semiconductor industry is moving toward advanced packaging, as new products from smartphones, mobile devices, and the IoT demand higher integration of features in an innovative form factor. Fan-out wafer level packaging (FOWLP), fan-in wafer level chip scale packaging (WLCSPP), flip-chip and 2.5D/3D packaging represent only some of the approaches used today.

According to The Information Network's report entitled "[Flip Chip/WLP Manufacturing and Market Analysis](#)," the dynamic growth of FOWLP will exhibit a CAGR of 25.8% between 2019 and 2025, compared to just 7.0% for the overall semiconductor industry. Chart 1 shows the growth of the FOWLP device market through 2025.

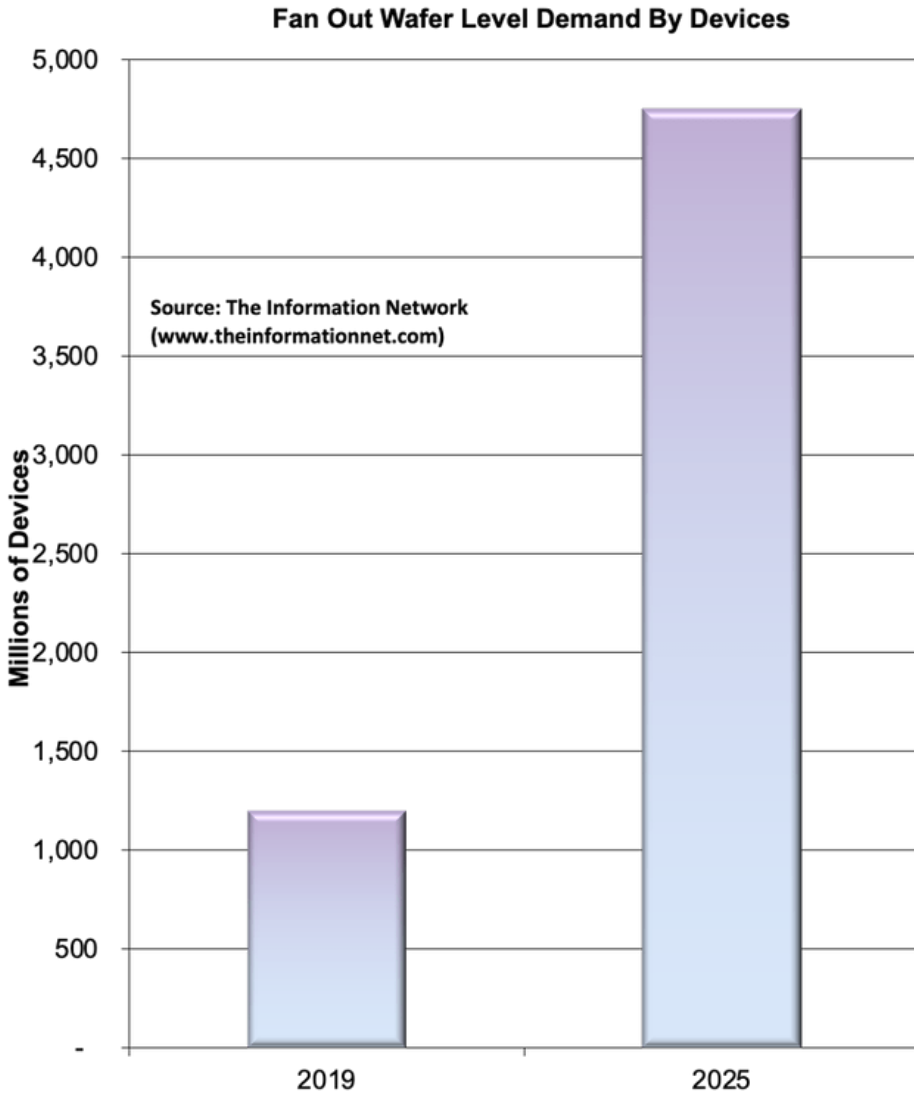


Chart 1

In 2016, I had based my favorable posturing on Rudolph Technology because of its strong YoY performance in the packaging lithography market for 2015, when Rudolph's revenues for the sector grew 287.7%.

Much has changed in the past five years since I wrote that article. In May 2017, Veeco Instruments (NASDAQ:[VECO](https://www.veeco.com)) acquired Ultratech and Rudolph Technologies merged with Nanometrics to form Onto Innovation. But the most significant thing that has happened is a 180-degree reversal in ONTO's packaging lithography revenues between 2015 and 2020, which decreased 80.0% compared to a mean INCREASE of 7.6% for six competitors, as shown in Chart 2.

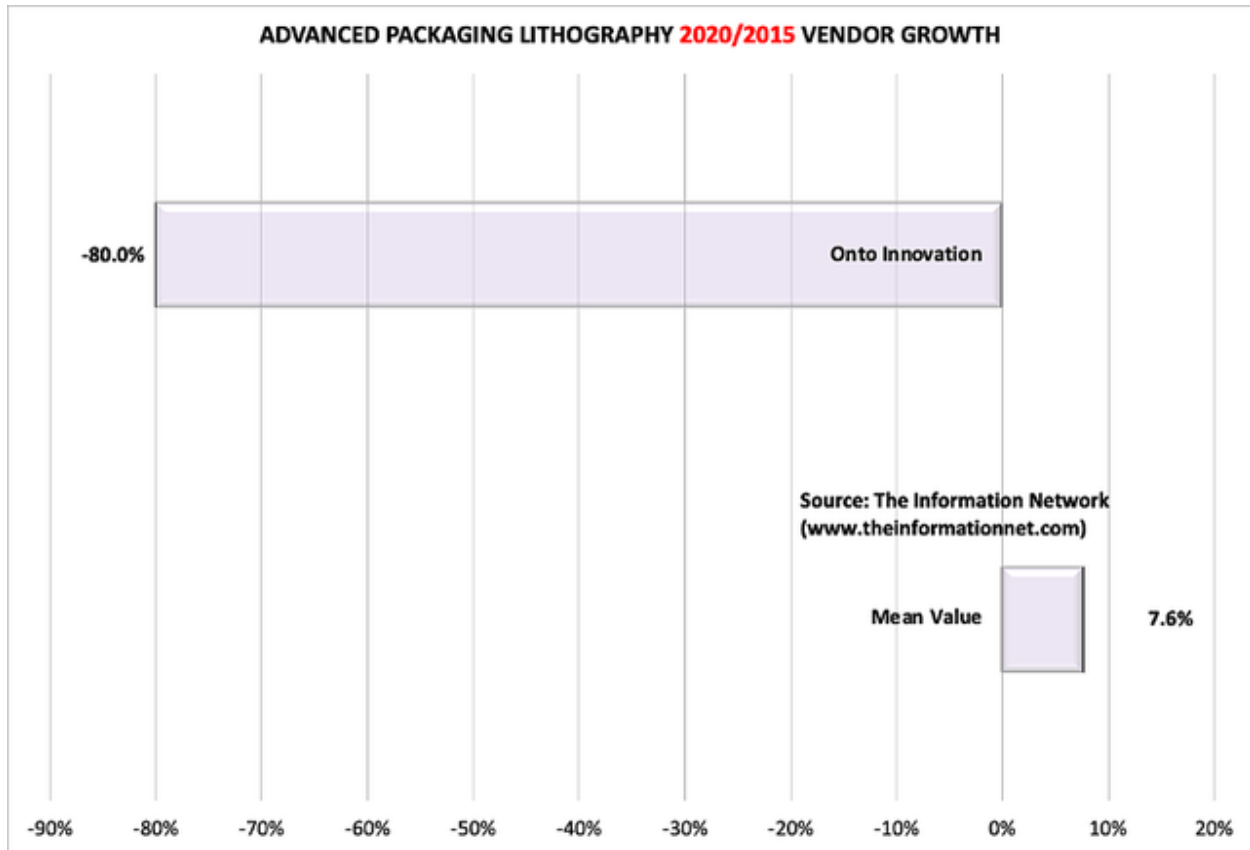


Chart 2

These six competitors to ONTO include Veeco Instruments, Canon (NYSE:[CAJ](#)), Screen, and privately held Ushio, Suss, and EV Group.

Semiconductor Metrology/Inspection Segment

In 2012, Rudolph was primarily a semiconductor metrology/inspection company competing against KLA (NASDAQ:[KLAC](#)), and held a 3.1% share of the sector in 2012, down from a 4.2% share in 2011. As far as the packaging sector is concerned, in 2012 Rudolph had \$79.9 million in sales, but for packaging inspection systems, not lithography packaging systems.

Prior to 2012, Rudolph was primarily a semiconductor metrology/inspection equipment supplier. In December 2012, with the acquisition of Massachusetts-based Azores Corporation, Rudolph entered the back-end advanced packaging lithography market with Azores new JetStep System featuring a 2X reduction stepper technology.

By recognizing the futility of competing in the metrology/inspection against KLAC, with a 50% share, and large companies such as Applied Materials (NASDAQ:[AMAT](#)) and Hitachi High-Technologies, Rudolph continued expanding its product lines into flat panel display lithography.

In 2019, Rudolph merged with metrology/inspection company Nanometrics and formed ONTO, attempting to support its faltering business. In fact, I discussed it in depth in a June 27, 2019 Seeking Alpha article entitled "[Nanometrics And Rudolph: A Merger For Survival.](#)"

According to The Information Network's report entitled "***Metrology, Inspection, and Process Control in VLSI Manufacturing***," ONTO ended 2020 with a 2.8% share of the segment, lower than the 4.1% share (for Rudolph) in 2011 without the merger.

Chart 3 shows that for the first three quarters of 2021 over the previous 2020 period, ONTO's sales increased 31.9%. But again, the company underperformed peers, which had a mean growth of 45.9%. The companies included in the mean growth were KLAC, Nova Measuring (NASDAQ:[NVMI](#)) and ASML (the inspection division of ASML, not the lithography division).

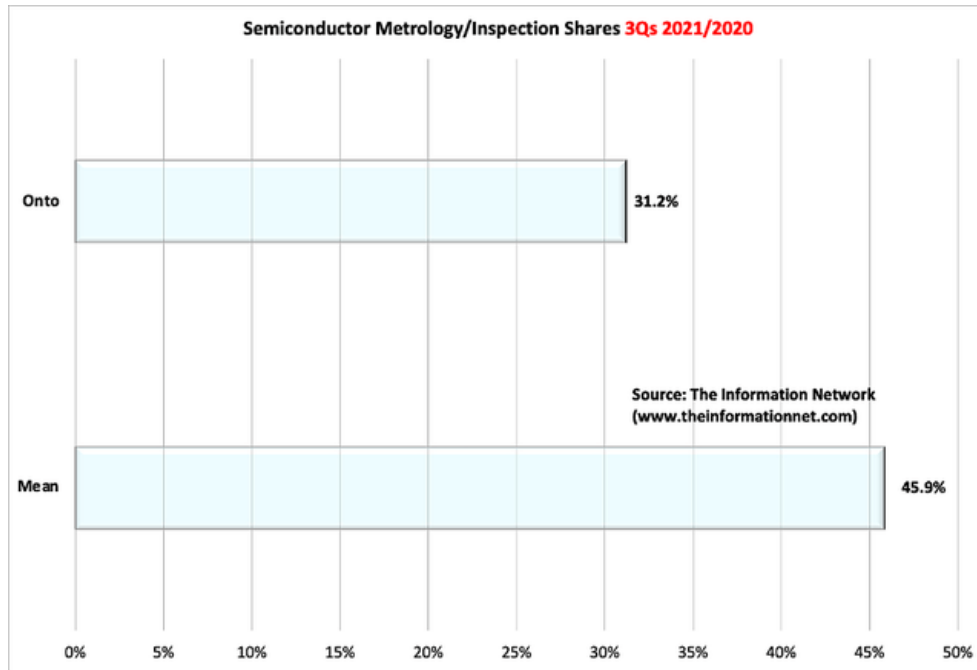


Chart 3

Investor Takeaway

Chart 4 shows the stock price for ONTO and metrology/inspection competitors KLAC and NVMI.

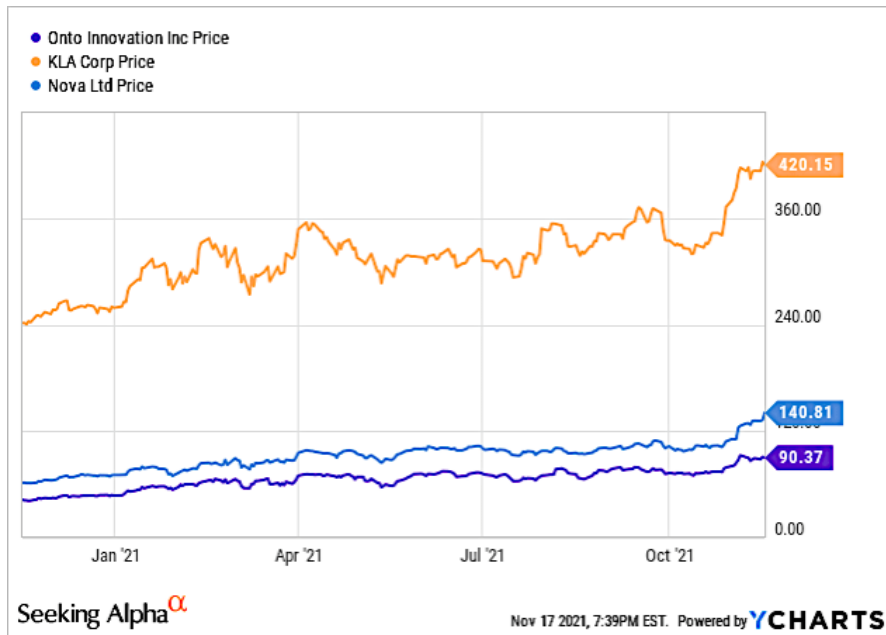


Chart 4

For the year, stock price change for the three companies is shown in Chart 5. Here we see significant growth for ONTO, despite the fact that it is underperforming its competitors in the two sectors it competes in, particularly with only a 3% share in the metrology/inspection sector compared to KLAC's 50% share.

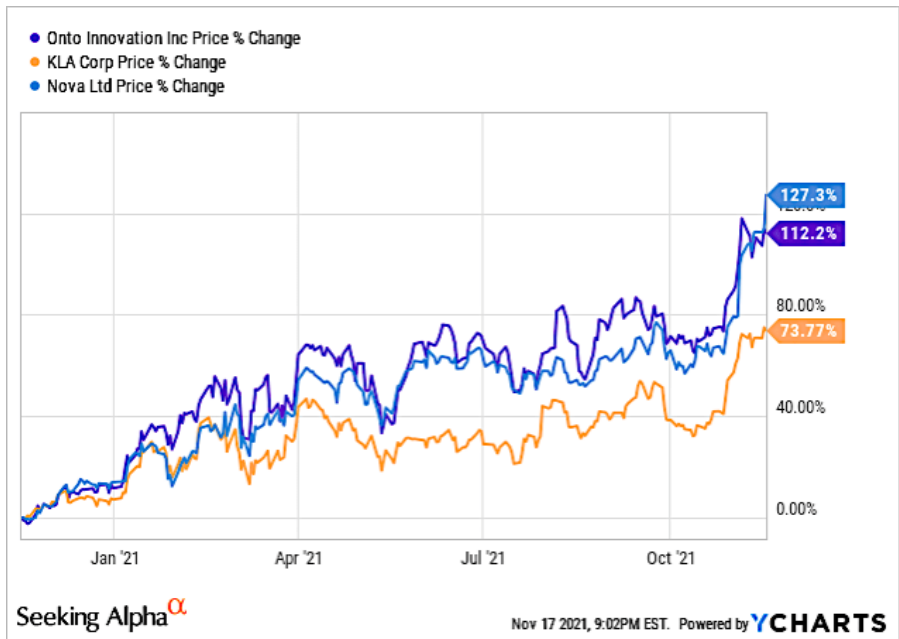


Chart 5

Chart 6 shows that ONTO's EPS is just 2.33 compared to 17.66% for KLAC.

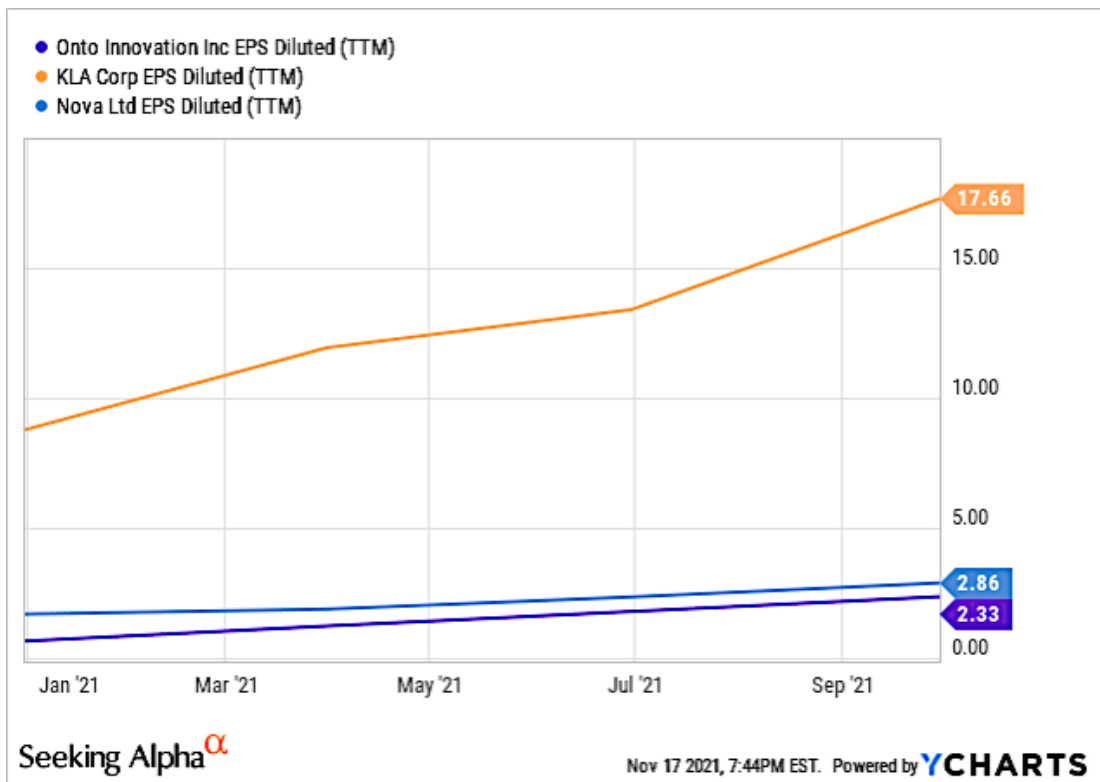


Chart 6

ONTO's reported growth in its earnings may sound impressive, but that growth is helped by acquisitions and new server markets. [According to](#) Michael Plisinski, chief executive officer for Onto Innovation:

The Onto team delivered another record quarter on the top line, while improving operating margins for the seventh straight quarter. New product adoption is not only supporting revenue growth but also

expanding our opportunities in both our served markets and new markets, including image sensors and heterogenous packaging, as well as RF and power devices.”

In my analysis, ONTO is a company that drills 12 one-inch holes instead of one 12-inch hole. In other words, it gains revenue from new acquisitions and products, but its share of each of these sectors is small.

Why is this important? Customers (semiconductor companies) buy equipment based on best-of-breed evaluation that could take up to nine months to complete. When a customer needs to add more capacity, it buys more of the same equipment it has installed. When a customer enters a new node and requests proposals, it begins the evaluation process again. And if a competitor introduces a system for evaluation that is then shown to be “best-of-breed”, the original supplier loses share.

And so, instead of being best-of-breed in one 12-inch hole (business focus), ONTO offers various and diverse products only 1-inch deep. The company registers revenue on initial evaluations, but eventually loses share in subsequent years.

For example, in January 2021, ONTO reported in a [press release](#):

The first Dragonfly G3 system was delivered to a leading OSAT partner in the fourth quarter of 2020. Orders received from a leading CMOS image sensor ("CIS") manufacturer will be shipped in the first quarter of 2021 along with additional evaluation units to logic and memory customers."

My analysis is that ONTO's focus is on the next acquisition, or the next product, instead of making sure that its current lineup of products is the best available to current and future customers. How else do you explain the continued loss of market share to competitors in both packaging and metrology/inspection sectors? This is particularly borne out in comparing Charts 2 and 3 - a big jump in market share growth in 2015 followed by a big drop in market share over the following five years.

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