KASASV

KOREAN AMERICAN SEMICONDUCTOR ASSOCIATION IN SILICON VALLEY

Nov 2025

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FormFactor Q3 2025 Earnings Call Summary (Oct 29 2025)

Oct 29, 2025 SL

Executive Summary

- Mike Slessor (CEO) reported that Q3 revenue, gross margin, and EPS exceeded guidance, driven by DRAM growth—especially HBM—and early benefits from margin-improvement initiatives.
- Aric McKinnis (CFO) highlighted operational cost discipline and a clear path back to the 47% non-GAAP gross margin target by 2026, supported by short-term labor and manufacturing savings and long-term structural changes.

Financial Highlights (CFO Aric McKinnis)

Metric	Q3 2025	Q2 2025	Q/Q Change
Revenue	$202.7 M	≈ $194 M	+4.4 %
Non-GAAP Gross Margin	41 %	38.5 %	+250 bps
GAAP Gross Margin	39.8 %	37.3 %	+250 bps
Non-GAAP EPS	$0.33	$0.27	+ $0.06
GAAP EPS	$0.20	$0.12	+ $0.08
Free Cash Flow	+$19.7 M	–$47.1 M	Swing Positive
Cash & Investments	$266 M	$249 M	+ $17 M

Q4 2025 Outlook (McKinnis):

- Revenue ≈ $210 M ± $5 M
- Gross Margin ≈ 42 % ± 1.5 pts
- EPS ≈ $0.35 ± $0.04
- Opex ≈ $58 M, Tax 17–21 %

Operational & Strategic Highlights

1 Gross Margin & Profitability (Aric McKinnis)

- Implemented headcount reduction and stricter overtime management.
- Cut manufacturing spend (precious-metal recovery program expanded).
- Targeting yield and cycle-time improvements, automation, and better defect analytics.
- Tariffs continue to weigh (-150 to -200 bps), but internal cost actions offset.
- Structural savings expected to deliver steady improvement through 2026.

2 Farmers Branch Facility (TX) (CFO Aric McKinnis)

- $140–$170 M investment over 2026.
- Initial capacity late 2026; majority online 2027.

- Flexible fab to support HBM and logic probe cards and other products.
- Expected to enhance gross margins beyond the 47 % model long-term.

3 Business Segments (Mike Slessor)

➤ Probe Cards

- Record DRAM revenue, driven by HBM growth; HBM ≈ $40 M in Q3.
- HBM4 ramp underway as HBM3E winds down; Q4 flat vs Q3.
- Non-HBM DRAM (DDR5, LPDDR4) to lead Q4 growth amid pricing rebound.
- HBM4 test complexity ↑ (16-high stacks, 10 Gb/s I/O) → advantage for FormFactor's SmartMatrix architecture.
- Customer base diversifying beyond one large HBM customer.
- Foundry & Logic: Sequential decline; CPU probe card demand muted until new node ramps.
- CPU qualification: Apollo MEMS probe tech qualified for mainstream CPU → volume 2026.
- GPU qualification: Pilot production underway; volume orders expected 1H 2026.

➤ Systems Business

- Sequential growth; expect further Q4 increase.
- Strength from co-packaged optics (CPO) and quantum computing test.
- Triton silicon-photonics test system (with Advantest and TEL) now installed at multiple foundries.
- Moving from pilot to volume production in 2026 as CPO adoption accelerates.

Key Q&A Themes

Topic	Speaker	Summary
HBM Outlook (2026)	**Slessor**	HBM4 ramp linked to HPC launch in 2026; higher layer counts and speeds drive probe-card intensity; HBM4E and HBM5 extend tailwinds.
Gross Margin Bridge	**McKinnis**	Mix and volume helped slightly, but majority of improvement from structural cost actions (~$1 M benefit in Q4, $1.5 M run-rate after).
CPU/GPU Opportunities	**Slessor**	Meaningful impact in 2026; addressable market = tens of millions per quarter if wins secured.
Networking Chips	**Slessor**	Becoming larger part of foundry/logic business; advanced MEMS tech positions FormFactor for growth as performance requirements rise.
Custom ASICs	**Slessor**	Active with hyperscalers; small today but strategic; GPU and ASIC requirements converging.
Farmers Branch ROI	**McKinnis**	CapEx mostly facility and equipment; margins expected to improve beyond current model post-2027.

🚀 Outlook & Takeaways

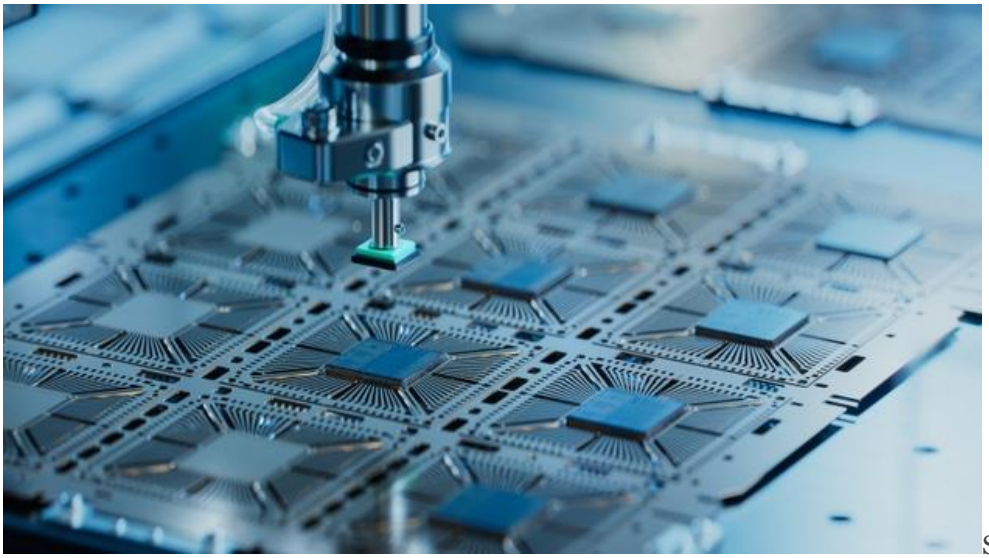
- Mike Slessor: FormFactor is on track to restore model profitability and extend leadership in HBM and advanced packaging test.
- Aric McKinnis: Near-term cost actions already visible in results; structural efficiencies and Farmers Branch expansion support sustainable margin growth through 2026-27.
- 2026 expected to mark the return to target margins with multi-year growth from HBM4, GPU probe cards, and CPO systems.

Applied Materials Vs Lam Research: Battle Of Semicon Equipment Leaders

Oct 22, 2025 Khaveen investments

Summary

- Applied Materials and Lam Research are top players in semiconductor deposition and etch equipment, with AMAT leading in deposition and LRCX in etch.
- AMAT holds a broader product portfolio and stronger overall market position in combined deposition and etch, while LRCX benefits from early mover advantage in etch.
- Both companies face significant China concentration risks due to geopolitical tensions and growing domestic competition from Chinese equipment makers.

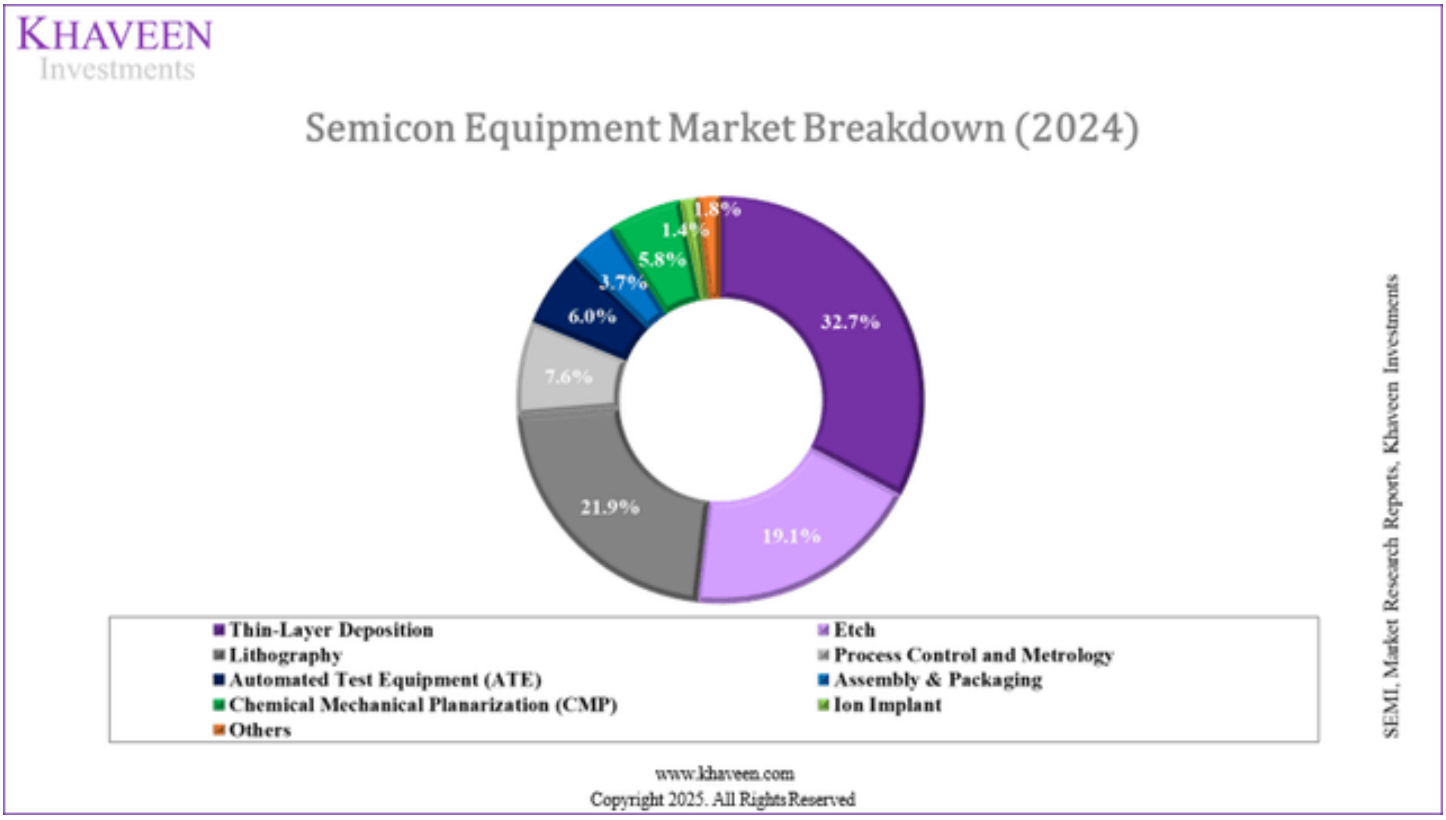


SweetBunFactory/iStock via Getty Images

Both Applied Materials, Inc. (NASDAQ:AMAT) and Lam Research Corporation (NASDAQ:LRCX) are among the top players in the semicon equipment subindustry. They operate in very similar niches, as both companies target the deposition and etch equipment categories. We compare both companies to determine whether either one stands out in comparison with the other by looking into their market positioning in the semicon equipment market, as well as specifically within deposition and etch. We also identify the competitive advantages that each company has in this area. We conclude with a valuation comparison based on our DCF analysis of both companies.

Deposition and Etch Market

We first examine the semicon equipment market size and the breakdown into the equipment type by updating our compiled breakdown of the semicon equipment market in 2024 with the market forecast CAGR from market research reports.



SEMI, Market Research Reports, KI

Market Segment	Market Size 2024 ($ mln)	Breakdown	Forecast CAGR
Thin-Layer Deposition	39,650	32.70%	6.90%
Etch	23,190	19.10%	7.50%
Lithography	26,480	21.90%	7.40%
Process Control and Metrology	9,200	7.60%	5.00%
Automated Test Equipment (ATE)	7,290	6.00%	4.70%
Assembly & Packaging	4,430	3.70%	9.00%
Chemical Mechanical Planarization (CMP)	7,030	5.80%	12.40%
Ion Implant	1,681	1.40%	5.00%

SEMI, Market Research Reports, KI

The semicon equipment market is split into several categories of various equipment types. Deposition is the largest segment ($39.7 bln), making up around 33% of the total market, followed by lithography as the second largest (22% of total), and etch equipment (19% of market). These three make up the bulk of the semicon equipment market, accounting for 74% of the total. The remainder of the market consists of smaller equipment types such as CMP, ion implant, process control, ATE, and assembly & packaging equipment.

The focus is on deposition and etch, which both Applied Materials and Lam Research specialize in, whereas ASML (ASML) dominates the lithography market. Deposition equipment is used in the deposition step of the semicon manufacturing process, where thin films of materials like metals are added to wafers using various methods such as Chemical Vapor Deposition (CVD), which forms the base layers of the chip structures that are

important in determining chip performance. Etch equipment is used following the deposition and lithography stages, where the layers of the wafers are removed using these tools according to patterns and are fundamental in forming chip architectures.

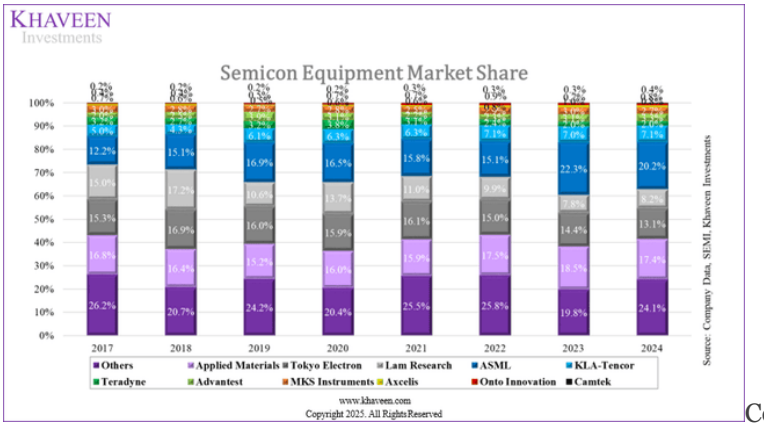
In terms of market growth, the forecasts are quite similar between these three segments, at around 7% according to market research reports, and the weighted average of these market forecast CAGRs based on the equipment types is 7.1%. We believe the key driver for deposition market growth is the shift toward advanced semicon chips in terms of architecture and process nodes. As architectures move from FinFETs to GAA in logic and from 2D NAND to high-layer 3D NAND in memory, the number of thin-film layers required per chip increases. According to Semiconductor Engineering, a 14 nm chip requires around 60 layers while a 5 nm chip requires close to 100 layers, increasing the number of deposition steps needed as process nodes scale down. Techniques like ALD, CVD, and PVD enabled by different deposition equipment allow precise uniform films that enable higher transistor density and better performance.

For the etch equipment market, the growth drivers here are related to the advancement of chip architecture too. As memory chips like NAND which features 3D NAND architectures that are seeing increasing memory density from 128 layers in 2020 to 232 currently in products by Micron (MU) and SK Hynix (OTCPK:HXSCF) to over 500 layers in the future, this requires more capable etch tools to support the growth. This trend of increasing intensity to support 3D scaling in both deposition and etch was highlighted by Lam Research's management in its previous earnings call too. Logic chips are also shifting towards gate-all-around ('GAA') architectures from FinFET architecture in foundries like TSMC (TSM) which will also require new etch processes for precision patterning, thus supporting etch market demand growth.

We believe deposition and etch are key parts of the semicon equipment market, accounting for 42% of the combined market with similar forecast CAGR of 7.5% and 6.9% respectively, growing in line with the semicon equipment market (7.1%) and similar drivers with the shift to advanced chips where newer architectures like GAA, memory, and process nodes are more complex and require more deposition and etch processes which support the demand for both categories. We expect deposition and etch to remain as one of the top equipment market types going forward due to this market growth driver, and these equipments are fundamental to semicon manufacturing processes with their market forecast growth in line with the overall semicon equipment market.

Market Shares Comparison in Deposition and Etch

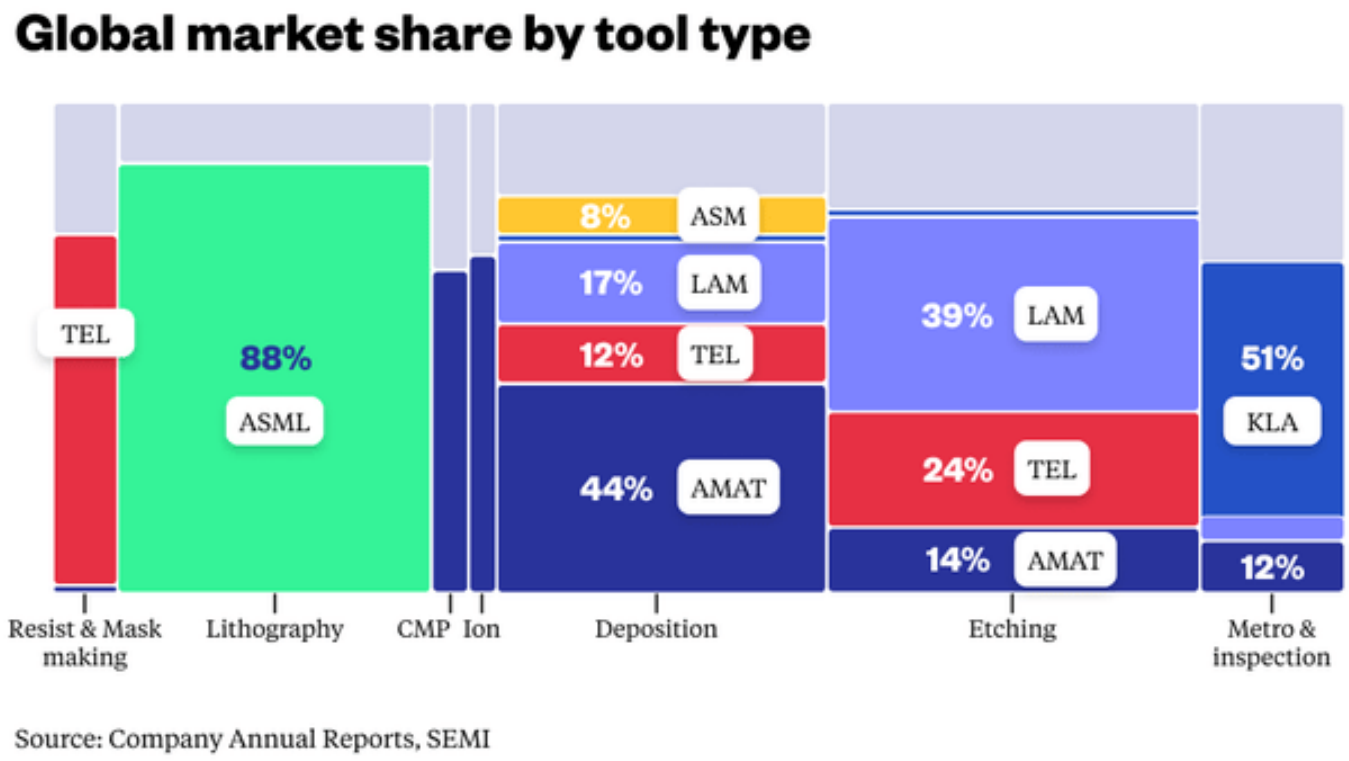
In the next section, we compare the companies in terms of their market positioning in the semicon equipment market and their market shares in deposition and etch respectively.



Company data, SEMI, KI

Based on our semicon equipment market share chart, the market is concentrated among the top equipment markets, with ASML leading the market in 2024. Applied Materials' market share has remained stable while Tokyo Electron, another key competitor to both companies, (OTCPK:TOELY) declined steadily to about 13% in 2024 whereas Lam Research dropped more sharply over the period to just above 8%.

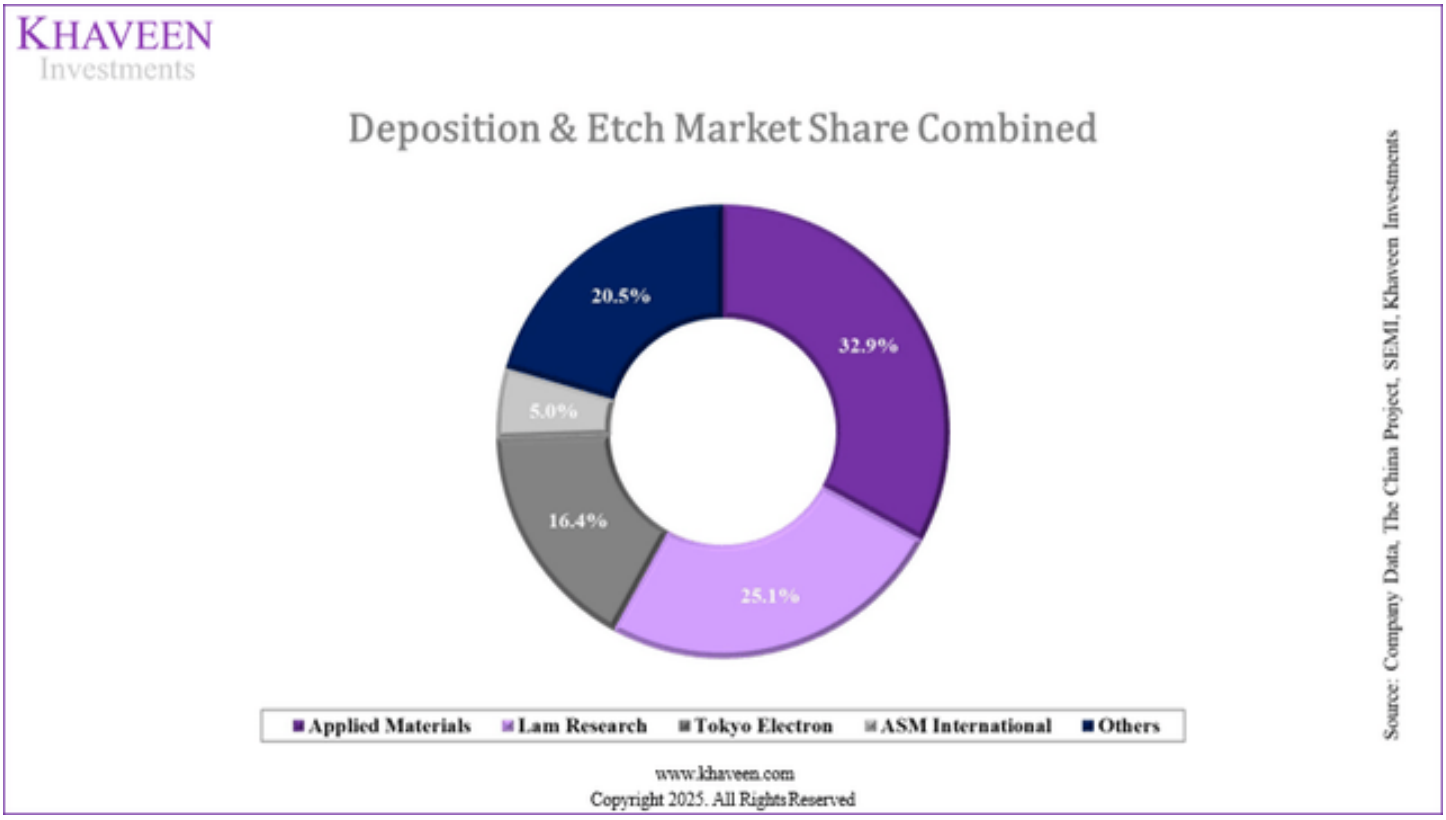
We also note that Applied Materials' market share has been more stable and stronger market share than Lam Research's. Its share has stayed between the 15% and 18% range since 2017, which we believe could be due to the company's wider product mix strengths and also more balanced exposure across logic, foundry, and memory segments. In comparison, Lam Research's market share shows an overall decline and we see a pattern where its market share dropped sharply as the years where the memory market weakened, implying it is quite dependent on the memory market trends. In 2019, its share dropped as the memory market weakened with DRAM and NAND pricing falling amid market oversupply. The decline accelerated in 2022 and 2023 as memory chipmakers such as Micron, SK Hynix, and Samsung cut capex and reduced supply to manage the market balance as we covered in our previous analyses on Micron, which would impact the company as, on average, almost 50% of its revenue is from memory chipmakers, compared to 34% only for Applied Materials.



The China Project, Company Data, SEMI

The chart above by The China Project shows the market share breakdown of each major equipment segment type. Applied Materials leads in deposition with a 44% market share, followed by Lam Research as the second-largest player here with a 17% share. In etch equipment, on the other hand, Lam Research leads with a strong advantage at a 39% market share compared to only 14% for Applied Materials, while Tokyo Electron is actually the second-largest player here. That said, Applied Materials is broader, as it has a presence not just in deposition and etch but also in smaller categories which it dominates, such as CMP and ion equipment. It also

has some presence in metrology and inspection equipment, though that segment is led by KLA instead due to its competitive advantage in process control equipment, which we previously looked into.



Market Research Reports, The China Project, Company Data, SEMI

We also then calculate the combined market share of just deposition and etch equipment, since both categories are the main focus equipment types of both companies, to provide an overall comparison. Applied Materials has the highest share overall (32.9%), but Lam Research is close behind in second position (25.1% market share). Tokyo Electron is another key player as the third largest in the combined market share.

We believe this shows that both companies are strong players in the semicon equipment market, supported by their strong positions in the deposition and etch markets, which we highlighted in the previous point as being among the largest semicon equipment categories. The main difference is that Applied Materials has a very comfortable position in the deposition market share, while Lam Research is more dominant in the etch market type. Applied Materials is larger than Lam Research in terms of combined deposition and etch market share, which shows it is the overall strongest player in the market, followed closely by Lam Research. Applied Materials is relatively more diverse too, as it operates in different market segments. We believe this shows both companies have strong competitive advantages that allow them to maintain strong positions in each market. We further examine their competitive edges in the next section below.

Competitive Advantage Comparison in Deposition and Etch

In the final section, we examine the competitive advantages of Lam Research and Applied Materials in deposition and etch by comparing the number of products listed on both companies' websites for each equipment type to determine whether either holds superior product breadth over the other, allowing the company to cater to customer demands and wider ranges of applications within deposition and etch stages of the manufacturing process.

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Applied Materials vs Lam Research Deposition Product Portfolio

Deposition Comparison	Applied Materials (AMAT)	Number of Products	Lam Research (LRCX)	Number of Products
Atomic Layer Deposition (ALD)	Morpher Batch ALD, Picosun Morpher P, Picosun Morpher T, Picosun Sprinter, Centura iSprint SSW ALD/CVD	5	Striker Product Family	1
Dielectrics / CVD (PECVD, HDP-CVD, etc.)	Centura DXZ CVD, Centura Ultima HDP CVD, Producer Avila PECVD, Producer BLOk PECVD	4	ALTUS (CVD+ALD Tungsten), Reliant CVD/HDP-CVD/PECVD/PLD, SPEED (HDP-CVD), VECTOR (PECVD)	4
Epitaxy (Epi)	Centura Epi 200mm, Centura Prime Epi	2	N/A	0
PVD (Physical Vapor Deposition)	Axcela PVD, Charger UBM PVD, Cobalt Product Suite, Endura ALPS PVD	4	N/A	0
Selective Deposition / Advanced Metallization	Centura Prime Epi (Selective Epi), Endura Volta Cobalt CVD, Endura Volta Selective W CVD	3	N/A	0
Electrochemical Deposition (ECD) / Metal Plating	N/A	0	Kallisto, Phoenix, SABRE 3D, SABRE, Triton	5
Pulsed Laser Deposition (PLD)	N/A	0	Prestis (PLD), Reliant PLD	2
UV Thermal Processing (UVTP)	N/A	0	SOLA Product Family (UVTP)	1
Total Deposition		**18**		**13**

Company Data, KI

Beginning with our analysis for deposition equipment, we find that Applied Materials has a wider breadth of deposition product families (18) that is higher than Lam Research (13), which is unsurprising given Applied Materials' lead in this market segment by market share as mentioned earlier. Applied Materials' portfolio also spans a broad range of deposition categories and has a specialty in various advanced deposition technologies like epitaxy and selective metallization, over Lam Research, which is more focused on CVD, ALD, and electrochemical deposition (ECD/metal plating). Despite a narrower range, Lam Research's deposition products have been cited by management to be doing well, as management highlighted its ALD Moly deposition tools are "driving a roughly 3x increase in Lam metal deposition SAM per wafer when transitioning to advanced gate-all-around nodes" from its previous earnings call, but Applied Materials is also making strong progress in moly CVD as they highlighted they had "secured our first wins in moly deposition for the most critical device performance applications".

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Applied Materials vs Lam Research Etch Product Portfolio

Etch Comparison	Applied Materials (AMAT)	Number of Products	Lam Research (LRCX)	Number of Products
CMP	Mirra CMP, Opta CMP, Reflexion LK CMP, Reflexion LK Prime CMP	4	N/A	0
Etch (General Conductor / Dielectric / RIE / TSV)	Centris SYM3 Y Etch, Centura Etch, Centura Silvia Etch	3	Akara Conductor Etch, Kiyo Product Family (RIE), Sense.i Product Family (RIE), Versys Metal Etch, Flex Product Family (ALE/RIE/Cryo), Reliant Etch Products (RIE/DRIE)	6
High Aspect Ratio Etch (DRIE / Cryo / TSV / EUV)	Centura Tetra EUV Advanced Reticle Etch	1	Syndion Product Family (DRIE/RIE), Vantex Product Family (Cryo/RIE)	2
Pattern Shaping	Centura Sculpta Pattern-Shaping System	1	N/A	0
Selective Etch	Producer Selectra Etch	1	Selective Etch Product Family	1
Photomask (Inspection, Writing, Cleaning, Etch)	Aera 6 Mask Inspection, Alta 4700DP Mask Writer, Sigmameltec CTS Mask Coat Series, Sigmameltec MRC Mask Clean Series, Sigmameltec SFB Mask Bake Series, Sigmameltec SFD Mask Develop Series, Centura Tetra EUV Advanced Reticle Etch, Centura Tetra Z Photomask Etch	8	N/A	0
Bevel / Edge Processing	N/A	0	Coronus Product Family (Bevel Etch & Deposition)	1
Total Etch / Patterning		**18**		**10**

Company Data, KI

Moving on to the etch equipment analysis, Applied Materials also has a larger product breadth compared to Lam Research with 8 more product families, and is present in categories such as CMP and Photomask that Lam Research is not in, further showing Applied Materials' impressive product diversification. Despite Applied Materials having a wider breadth, we noted Lam Research leading this market segment by market share earlier, and we believe this is primarily attributed to the company having an early mover advantage in this etch, as it entered the market in 2004 with its Kiyo conductor etch system adopted earlier than Applied Materials which only expanded into etch in 2015 with Centris SYM3. We believe this explains Lam Research's stronger market presence in etch, and its investor presentation also highlighted its strong track record, stating "Building on more than 20 years of conductor etch leadership, with billions of wafers etched with Kiyo®".

In terms of product breadth overall, Applied Materials holds the advantage in both deposition and etch equipment. While we note Lam Research's advantage built in etch due to its earlier entry in the segment compared to Applied Materials, Applied Materials has the stronger overall portfolio across both segments and is also continuously expanding its product breadth with new offerings especially in deposition such as the Producer XP Pioneer CVD patterning film and the Endura Copper Barrier Seed IMS with Volta Ruthenium CVD, expanding the portfolio to support advanced logic and memory chips. We also note Lam Research continuing to develop advancements in its core etch equipment offerings to maintain competitiveness, as it introduced its most advanced conductor etch system called Akara in early 2025, which builds on the long-running Kiyo platform but adds greater precision and speed with DirectDrive plasma control that responds up to 100 times faster and is suited for the most advanced 3D memory and logic devices, according to the company.

Risk: China Concentration Risks

Both Applied Materials (37%) and Lam Research (34%) derive about one-third of their revenue from China and represent their largest geographic markets which is not very surprising as China is the largest semicon equipment market globally and is expected to continue growing amid the push for domestic semicon landscape growth to reduce reliance on foreign chipmakers. We believe geopolitical tensions and regulatory developments on export restrictions to China are the biggest risks for the company. Applied Materials' management had previously warned about license delays and restricted sales to China in its earnings call. At the same time, Chinese equipment makers such as Naura Technology, AMEC, and ACM are expanding in deposition and etch and benefit from strong state support.

Verdict

Criteria	Winner
Deposition Equipment Market Share	Applied Materials
Etch Equipment Market Share	Lam Research
Deposition & Etch Product Breadth	Applied Materials
Overall	**Applied Materials**

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To conclude, both Applied Materials and Lam Research are very strong and formidable players in the deposition and etch market segment of the semicon equipment subindustry. Applied Materials, in particular, stands out in the deposition market as it leads this category by market share, supported by a robust product breadth of deposition offerings in its portfolio. Lam Research, despite having fewer product families in the etch market, is the stronger player in etch equipment due to its early entry in etch tools, which we believe contributed to its long-standing relationships with customers. While we expect Lam Research to continue maintaining a strong presence in etch tools, we believe Applied Materials is the overall superior company due to its higher overall market positioning in deposition and etch combined, a wide product breadth that it continues to expand, and a strong presence in other niche areas of the semicon equipment market such as CMP and ion as well.

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Applied Materials Valuation

Discounted Cash Flow Model

Calendar Year	Entry	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034 Terminal	
Financial Year	*18/10/2025*	*31/10/2025*	*31/10/2026*	*31/10/2027*	*31/10/2028*	*31/10/2029*	*31/10/2030*	*31/10/2031*	*31/10/2032*	*31/10/2033*	*31/10/2034*	*31/10/2034*
Revenue Growth		*4.92%*	*7.03%*	*11.87%*	*9.50%*	*8.55%*	*7.69%*	*6.92%*	*6.23%*	*5.61%*	*5.05%*	
Revenue		**28,514**	**30,518**	**34,141**	**37,383**	**40,578**	**43,699**	**46,725**	**49,636**	**52,419**	**55,065**	
EBIT		8,697	9,786	11,105	12,338	13,580	14,642	15,668	16,653	17,591	18,479	
Less: Cash Taxes		1,070	1,208	1,375	1,532	1,689	1,824	1,954	2,079	2,198	2,311	
Plus: D&A		413	552	602	633	665	699	734	771	810	852	
Less: Capex		(1,511)	(1,342)	(1,412)	(1,483)	(1,558)	(1,637)	(1,720)	(1,807)	(1,899)	(1,995)	
Less: Changes in NWC		304	900	1,182	1,047	1,024	1,042	1,010	972	929	883	
Plus: Other Cash Transactions		511	547	612	670	728	784	838	890	940	987	
Unlevered FCF		6,737	7,436	8,350	9,580	10,701	11,621	12,557	13,457	14,316	15,130	
Year Fractions		0.04	1	1	1	1	1	1	1	1	1	
Net FCF	-	**240**	**7,436**	**8,350**	**9,580**	**10,701**	**11,621**	**12,557**	**13,457**	**14,316**	**15,130**	**418,081**
											EV/EBITDA	21.63

WACC	Cost	Value ($M)	Weight	Intrinsic Value			
Risk Free Rate	4.45%			Enterprise Value	205,632	Equity Value/Share	$ 258.30
Equity Risk Premium	5.4%			Plus: Cash	6,747	Current Price	$ 224.99
Beta	1.48			Less: Debt	6,605	Upside/Downside	14.81%
Equity	12.4%	179,237	96.4%	Less: Minority Interest	-	Rating	Buy
Yield on Debt	4.0%			Equity Value	205,774		
Tax Rate	21.0%					**Average Revenue Growth %**	
Debt	3.1%	6,605	3.6%	**Assumptions**		Past 5-years	13.8%
Discount Rate	**12.1%**	**185,842**	**100.0%**	Depreciation (% of PPE)	3.8%	Forward 5-years	8.9%
				Capex (% of Fixed Assets)	9.4%		

KI

For our valuation of Applied Materials, we updated our revenue projections from our previous analysis based on prorated Q3 YTD FY2025 performance, which is lower compared to our earlier analysis due to weakness in its China segment (down 18% YoY), though offset by stronger growth in other regions, especially Taiwan (up 84% YoY) as we believe it benefitted from TSMC raising capex. Our projections show a 5-year forward average of 8.9% for the company, a discount rate of 12.1% (company's WACC), and a terminal value based on the 5-year average of top equipment makers of 21.63x, indicating an upside of 21%. This represents a 35% increase to our price target since our last coverage and thus we upgrade it to a Buy rating.

KHAVEEN Investments

Lam Research Valuation

Discounted Cash Flow Model

Calendar Year	Entry	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034 Terminal	
Financial Year	18/10/2025	30/6/2026	30/6/2027	30/6/2028	30/6/2029	30/6/2030	30/6/2031	30/6/2032	30/6/2033	30/6/2034	30/6/2035	30/6/2035
Revenue Growth		8.45%	12.75%	11.57%	10.41%	9.37%	8.43%	7.59%	6.83%	6.15%	5.53%	
Revenue		**19,993**	**22,542**	**25,150**	**27,768**	**30,370**	**32,932**	**35,431**	**37,852**	**40,179**	**42,402**	
EBIT		6,512	7,499	8,517	9,559	10,615	11,543	12,449	13,325	14,166	14,970	
Less: Cash Taxes		730	841	955	1,071	1,189	1,293	1,394	1,492	1,586	1,676	
Plus: D&A		494	494	504	515	526	538	549	561	574	586	
Less: Capex		(632)	(645)	(659)	(673)	(687)	(702)	(718)	(733)	(749)	(765)	
Less: Changes in NWC		160	866	544	478	16	750	732	709	682	651	
Plus: Other Cash Transactions		353	399	445	491	537	582	626	669	710	750	
Unlevered FCF		5,837	6,040	7,309	8,343	9,786	9,918	10,781	11,621	12,434	13,213	
Year Fractions		0.70	1	1	1	1	1	1	1	1	1	
Net FCF	-	**4,078**	**6,040**	**7,309**	**8,343**	**9,786**	**9,918**	**10,781**	**11,621**	**12,434**	**13,213**	**336,437**
											EV/EBITDA	21.63

WACC	Cost	Value ($M)	Weight
Risk Free Rate	4.45%		
Equity Risk Premium	5.4%		
Beta	1.48		
Equity	12.4%	178,449	97.4%
Yield on Debt	3.7%		
Tax Rate	21.0%		
Debt	3.0%	4,757	2.6%
Discount Rate	**12.2%**	**183,205**	**100.0%**

Intrinsic Value			
Enterprise Value	159,180	Equity Value/Share	$ 127.53
Plus: Cash	6,391	Current Price	$ 141.51
Less: Debt	4,757	Upside/Downside	-9.88%
Less: Minority Interest	-	Rating	Hold
Equity Value	160,814		
		Average Revenue Growth %	
Assumptions		Past 5-years	14.8%
Depreciation (% of PPE)	7.2%	Forward 5-years	10.5%
Capex (% of Fixed Assets)	9.3%		

www.khaveen.com

KI

For our valuation of Lam Research, we updated our revenue growth forecasts with a 5-year forward average of 10.5% and apply a discount rate of 12.2% (company's WACC) and a terminal value based on the 5-year average of top equipment makers of 21.63x, our model indicates the shares are fairly valued, and we therefore maintain the company as a Hold as the company's stock has also risen by 95.92% in YTD.

Semiconductor sales could approach $1T by 2027, BofA says

Oct 20, 2025 Chris Ciaccia, SA News Editor

Amid surging demand related to all things artificial intelligence, semiconductor sales could reach roughly $1T by 2027, Bank of America said, up from its prior view of $860B.

"We flag materially higher growth outlook in memory (across HBM, commodity DRAM, and NAND), as well as in data center/AI-related components, modestly offset by consumer/auto," analysts at the firm wrote in a note to clients.

The analysts continued: *"... [We] continue to believe the current AI [infrastructure] build out is structurally more durable than prior large cycles and remain bullish on AI capex."*

Breaking it down, the firm sees industry sales of $745B, $870B and $971B in 2025, 2026 and 2027, respectively, up roughly between 3% and 6% than it previously forecast. Excluding memory, sales are expected to be around $538B, $621B, and $706B, respectively.

The firm reiterated its top five stock picks in the space: Nvidia (NASDAQ:NVDA), Broadcom (NASDAQ:AVGO), AMD (NASDAQ:AMD), Lam Research (NASDAQ:LRCX) and KLA Corp. (NASDAQ:KLAC), citing their respective leverage towards “the strong data center and memory spend outlook.”

In addition to strong chip sales, Bank of America's analysts updated their views on semiconductor equipment spending as well, as the firm now sees $118B, $128B and $138B in spending between 2025 and 2027. While 2026 and 2027 could see a lower intensity outlook, that's in line with the firm's view that there will be “sustainable” chip equipment spending growth over the next few years.

“Longer-term, we believe capital intensity could settle at 14-17% range, 100-400 [basis points] above historical 13% average as manufacturing complexity for semis has increased. Data center/AI up, consumer/auto down vs. [the prior view],” the analysts added.

The analysts continued : “*Our new industry model highlights much faster growth in memory and data center/AI, modestly offset by slower recovery in consumer, PC, smartphone, and auto end markets. Notably, we now see data center-related components such as servers (silicon only) and wired infrastructure to grow +55%/+28% [year-over-year], respectively in CY25E, with YoY growth broadening out to all end markets in CY26/27E on broader cyclical recovery.”*

Micron projects record $12.5B Q1 2026 revenue as AI demand tightens DRAM supply

Sept 24, 2025 AI generated earnings call insights

Earnings Call Insights: Micron Technology, Inc. (MU) Q4 2025

Management View

- CEO Sanjay Mehrotra highlighted a strong finish to fiscal 2025, stating, "Micron had an outstanding finish to fiscal 2025, delivering fiscal Q4 revenue, gross margin and EPS all above the high end of our updated guidance ranges." Mehrotra reported record annual revenue of $37.4 billion, driven by pricing execution and performance across end markets, with gross margin expanding by 17 percentage points to 41%.
- Mehrotra explained that the company achieved more than a fivefold increase in revenue from HBM, high-capacity DIMMs, and LP server DRAM, reaching $10 billion, and emphasized that "data center SSD business leased record revenue and market share in fiscal 2025."
- On technology leadership, Mehrotra announced, "our 1-gamma DRAM node reached mature yields in record time, 50% faster than in the prior generation," and that the company is the first in the industry to ship 1-gamma DRAM. He also noted the ramp of G9 NAND for enterprise storage and the installation of the first EUV tool in the Japan fab.
- Expansion plans included a CHIPS grant disbursement for the new Idaho manufacturing fab, initial design work for a second Idaho fab, and ongoing environmental studies in New York. HBM assembly and test investments in Singapore are on track to contribute in 2027.

- Mehrotra outlined robust AI-driven demand, stating, "AI-driven demand is accelerating, and industry DRAM supply is tight," and emphasized Micron's competitive positioning: "Our HBM performance has been strong and robust demand, tight DRAM supply and disciplined execution has significantly strengthened the profitability of the rest of our DRAM portfolio."
- CFO Mark Murphy reported, "Micron delivered strong results to close out the fiscal year with Q4 revenue, gross margin and EPS, all exceeding our updated guidance. For the full year, we achieved record revenue of $37.4 billion, up 49% year-over-year. Gross margins expanded to 41%, a 17-percentage point improvement from fiscal 2024. EPS reached $8.29, reflecting a 538% increase compared to the prior year."

Outlook

- The company guided for fiscal Q1 2026 revenue to be a record $12.5 billion, plus or minus $300 million. Gross margin is expected to be 51.5%, plus or minus 100 basis points, and operating expenses around $1.34 billion, plus or minus $20 million. Non-GAAP EPS guidance is $3.75 per share, plus or minus $0.15.
- Murphy stated, "We expect price, cost and mix to all contribute to strengthening gross margins in Q1." He projected free cash flow to strengthen and "significantly higher annual free cash flow year-over-year in fiscal 2026."
- CapEx is expected to increase in fiscal 2026, with the majority directed to DRAM front-end equipment and fab construction, mainly supporting 1-gamma node migration and HBM growth.

Financial Results

- Total fiscal Q4 revenue was $11.3 billion, up 22% sequentially and up 46% year-over-year. DRAM revenue reached $9 billion, up 69% year-over-year and represented 79% of total revenue; sequential DRAM revenue increased 27%. DRAM bit shipments increased in the low-teens percent, with prices up in the low double-digit percentage range.
- Fiscal Q4 NAND revenue was $2.3 billion, down 5% year-over-year but up 5% sequentially. NAND bit shipments declined in the mid-single-digit percentage range, while prices increased in the high single-digit percentage range.
- Murphy noted, "The consolidated gross margin for fiscal Q4 was 45.7%, up 670 basis points sequentially." Operating income for the quarter was $4 billion (operating margin 35%). Non-GAAP diluted EPS for Q4 was $3.03, up 59% sequentially and 157% year-over-year.
- Operating cash flows in Q4 were $5.7 billion, with capital expenditures of $4.9 billion and free cash flows of $803 million. Ending inventory for Q4 was $8.4 billion or 124 days, down $372 million sequentially.

Q&A

- Timothy Arcuri, UBS: Asked about revenue split between DRAM and NAND for Q1 and gross margin factors. Murphy responded that "in the first quarter, will be heavier DRAM mix than NAND in that growth" and expects "price, mix and strong execution to drive that 580 basis point margin expansion."
- Arcuri inquired about updated HBM TAM and milestones. Mehrotra stated, "by 2030, we expect HBM TAM to reach $100 billion," and reaffirmed strong positioning and growth prospects for HBM and overall memory in the AI cycle.

- Vivek Arya, BofA Securities: Asked about HBM3E to HBM4 transition timing, pricing, and share. Mehrotra indicated HBM4 production shipments begin in CQ2 2026, with ramps through the second half of 2026, and noted pricing agreements for HBM3E in 2026 are largely completed, while supply remains tight.
- Arya asked about gross margin sustainability. Murphy stated, "we expect gross margin to improve sequentially versus the second quarter" on tight DRAM supply and durable supply-demand factors.
- Christopher Muse, Cantor Fitzgerald: Asked about sustainability of DRAM demand and seasonality. Mehrotra emphasized broadening AI trends and tight supply, stating, "AI trends are strong, and this is across data centers, across AI-enabled smartphones and AI-enabled PCs."
- Muse followed up on CapEx allocation. Murphy said majority of fiscal 2026 spend will be for DRAM, including construction and tools for node transitions, with a net CapEx framework of around $18 billion.
- Harlan Sur, JPMorgan: Asked about inventory trends and supply tightness. Murphy said, "We do expect inventories to remain at or better on DIO than we've seen in the fourth quarter. DRAM will remain very tight..."
- Sur inquired about HBM4 design and performance. Mehrotra credited Micron's advanced design and CMOS base die as key to exceeding customer requirements for bandwidth and pin speed.
- Sreekrishnan Sankarnarayanan, TD Cowen: Asked about HBM supply opportunity and flexibility. Mehrotra said Micron has "flexibility to opportunistically manage share here for HBM" and is well positioned for both HBM and non-HBM margins.
- Sankarnarayanan asked about HBM4E customization mix. Mehrotra noted HBM4 uses in-house base die, while HBM4E, coming in 2027, will offer both standard and customized products in partnership with TSMC.

Sentiment Analysis

- Analysts pressed on details of DRAM/NAND revenue breakdown, HBM TAM, and gross margin sustainability, reflecting optimism but also a focus on sustainability and visibility. The tone was slightly positive but probing for more specifics on supply constraints and future mix.
- Management maintained a confident tone throughout, emphasizing strong execution, robust demand, and industry leadership. Direct quotes such as "we feel very good about HBM longer-term opportunities" and "we are very well positioned with these products" reflect high conviction. During Q&A, management continued to provide detailed, positive responses, reinforcing confidence in tight supply and future growth.
- Compared to the previous quarter, both management and analysts expressed higher confidence and less concern regarding supply/demand dynamics, with management notably more assertive in discussing positioning and growth outlook.

Quarter-over-Quarter Comparison

- Guidance for Q1 2026 revenue and gross margin is higher than previous quarter, reflecting increased confidence.
- Strategic focus has shifted to scaling advanced nodes (1-gamma DRAM, G9 NAND) and expanding HBM leadership, whereas prior quarter focused more on market normalization and inventory recovery.
- Analysts' questions moved from concerns about inventory and pricing normalization to deeper inquiries about capacity, supply flexibility, and the competitive landscape in HBM.

- Key metrics such as gross margin, operating income, and free cash flow all showed strong sequential improvement.
- Management's tone was more assertive and forward-looking, emphasizing readiness for AI-driven demand and new product ramps.

Risks and Concerns

- Management noted potential impacts from "potential new tariffs" are not included in guidance.
- Supply tightness in DRAM and constraints due to node migration and global capacity expansion timing were highlighted.
- Analysts raised questions about seasonality, supply flexibility, and ability to meet unexpected surges in HBM demand.

Final Takeaway

Micron closed fiscal 2025 with record revenue, gross margin, and EPS, supported by robust AI-driven demand and tight DRAM supply. The company projects a strong start to fiscal 2026 with new revenue and EPS records, continued investments in advanced nodes, and a focus on maintaining leadership in HBM and data center memory. Management emphasized confidence in the sustainability of demand trends and supply discipline, positioning Micron to capitalize on the expanding AI opportunity in memory markets.

TSMC's Q3 Triumph: The Wall Street Underestimated The Chip King

Oct 1, 2025 Oakoff Investments

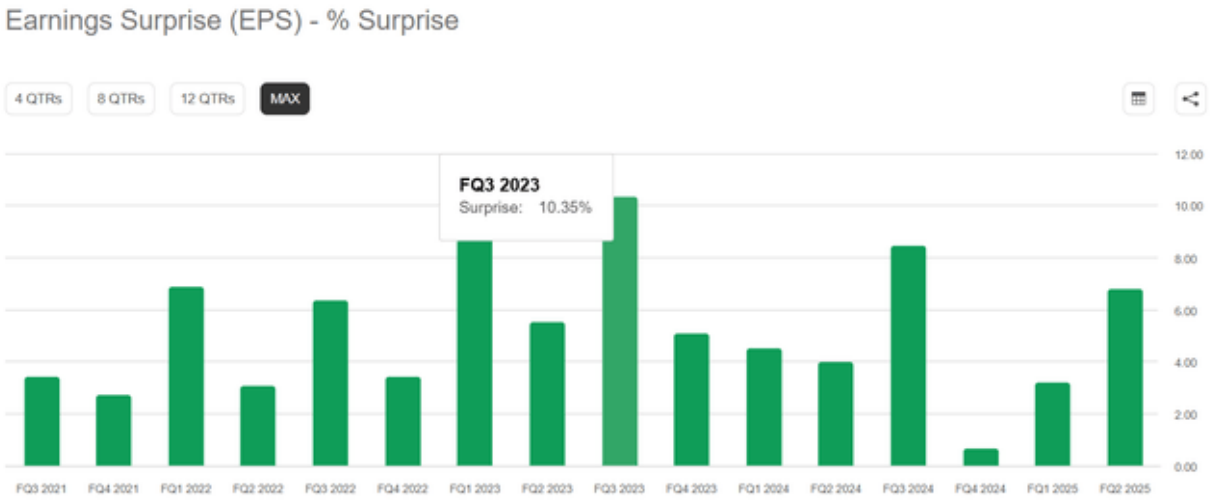
Summary

- Taiwan Semiconductor's Q3 results significantly surpassed expectations, with top-line revenue beating by nearly 5% and net income by 12.3%, marking its strongest performance since late 2021.
- Despite a 54% YTD stock price surge, Wall Street held a pessimistic view, enabling TSMC to massively beat consensus and validate my previous optimistic thesis.
- Product mix shifts towards higher-margin 3nm and 5nm process technologies, now comprising 60% of wafer revenue, are driving gross profit margin expansion and increased profitability.
- TSM raised its FY2025 revenue growth guidance to the mid-30% range, with Q4 projections also exceeding consensus, suggesting continued strong demand from the AI megatrend.


BING JHEN HONG

My Thesis Update On Taiwan Semiconductor Stock

I see that Taiwan Semiconductor Manufacturing Company Limited (NYSE:TSM) has just reported for its Q3, beating on the top line by almost 5%. The bottom line beat was even more impressive, about 12.3%. If I'm seeing it correctly, TSM has just delivered the strongest double-beating since at least late 2021, and it followed after some negative quarterly EPS and revenue revisions made by Wall Street analysts ahead of the Q3 print.



SA, TSM's past rev beats

All this tells me that despite the rise in TSM stock price by over 54% on a YTD basis, the Street held a relatively pessimistic view on its prospects initially, and this pessimism helped the firm beat the consensus massively. My very first assumption about TSM's prosperity in 2025/2026 is playing out even better than I had expected.

With likely more positive revisions now being around the corner, TSM should adjust higher on this Q3 catalyst as its forward valuation multiples allow it to do so, still. TSM is priced for ~1.3x FWD PEG, while most peers trade above 1.5-1.7x, giving a nice repricing opportunity for TSM, in my opinion. I keep my "Buy" on TSM in place now after the Q3 release, expecting a 23% upside based on the FWD PEG ratio.

Reviewing TSMC's Q3 Earnings Release

As I noted above in the "My Thesis Update" part, TSM easily beat on both top and bottom lines for its Q3, delivering the strongest earnings surprise momentum in years with its consolidated sales of $33.1 billion (+41% YoY and +10% QoQ in USD) and adjusted EPADR of $2.92 - all thanks to the continued GP margin expansion and resulting increase in their ROE:

Statements of Comprehensive Income

Selected Items from Statements of Comprehensive Income

(In NT$ billions unless otherwise noted)	3Q25	3Q25 Guidance	2Q25	3Q24	3Q25 Over 2Q25	3Q25 Over 3Q24
Net Revenue (US$ billions)	33.10	31.8-33.0	30.07	23.50	+10.1%	+40.8%
Net Revenue	989.92		933.79	759.69	+6.0%	+30.3%
Gross Margin	**59.5%**	**55.5%-57.5%**	**58.6%**	**57.8%**	**+0.9 ppts**	**+1.7 ppts**
Operating Expenses	(87.76)		(84.51)	(79.08)	+3.9%	+11.0%
Operating Margin	**50.6%**	**45.5%-47.5%**	**49.6%**	**47.5%**	**+1.0 ppt**	**+3.1 ppts**
Non-Operating Items	24.68		29.61	23.42	-16.6%	+5.4%
Net Income Attributable to Shareholders of the Parent Company	452.30		398.27	325.26	+13.6%	+39.1%
Net Profit Margin	**45.7%**		**42.7%**	**42.8%**	**+3.0 ppts**	**+2.9 ppts**
EPS (NT Dollar)	17.44		15.36	12.54	+13.6%	+39.0%
ROE	37.8%		34.8%	33.4%	+3.0 ppts	+4.4 ppts
Shipment (Kpcs, 12"-equiv. Wafer)	4,085		3,718	3,338	+9.9%	+22.4%
Average Exchange Rate--USD/NTD	29.91	29.0	31.05	32.32	-3.7%	-7.5%

* Diluted weighted average outstanding shares were 25,930mn units in 3Q25

** ROE figures are annualized based on average equity attributable to shareholders of the parent company

TSMC IR materials

TSM's shipments keep growing, and the product mix shifts further to the higher-margin sub-segments. For example, in Q3, we saw their 3nm process technology contributing ~23% of total wafer revenue (vs. 6% exactly 2 years ago), while 5nm process tech still accounted for the same 37% we saw in 2023. The regional breakdown in sales tells me that those 76% of the North American sales market, which is a major uptick from the 69% we saw 2 years ago, is a clear indicator of reduced country risk for the company. And again, it also brings in further marginality growth to the firm.

Revenue by Technology (% of total wafer revenue)	3nm	5nm	7nm	16nm	20nm	28nm	40/45nm	65nm	90nm	0.11/0.13um	0.15/0.18um	0.25um+
Q3 '25	23%	37%	14%	7%	0%	7%	3%	4%	1%	1%	3%	0%
Q2 '25	24%	36%	14%	7%	0%	7%	3%	3%	1%	2%	3%	0%
Q1 '25	22%	36%	15%	7%	0%	7%	3%	4%	1%	2%	3%	0%
Q4 '24	26%	34%	14%	7%	0%	6%	3%	4%	1%	2%	3%	0%
Q3 '24	20%	32%	17%	8%	0%	7%	4%	4%	1%	2%	4%	1%
Q2 '24	15%	35%	17%	9%	0%	8%	5%	3%	1%	2%	4%	1%
Q1 '24	9%	37%	19%	9%	0%	8%	5%	4%	1%	3%	4%	1%
Q4 '23	15%	35%	17%	8%	0%	7%	4%	5%	1%	3%	4%	1%
Q3 '23	6%	37%	16%	9%	1%	10%	6%	6%	1%	3%	4%	1%
Q2 '23		30%	23%	11%	1%	11%	7%	7%	2%	2%	5%	1%
Q1 '23		31%	20%	13%	1%	12%	7%	6%	2%	2%	5%	1%
Q4 '22		32%	22%	12%		11%	7%	5%	2%	3%	5%	1%
Q3 '22		28%	26%	12%		10%	7%	5%	2%	3%	6%	1%
Q2 '22		21%	30%	14%		10%	8%	5%	2%	3%	6%	1%
Q1 '22		20%	30%	14%		11%	8%	5%	2%	3%	6%	1%
Q4 '21		23%	27%	13%		11%	8%	5%	2%	3%	6%	2%
Q3 '21		18%	34%	13%		10%	8%	4%	2%	3%	6%	2%

SA, TSM

This shift helps to lift the key consolidated margin metric - their gross profit margin - to new highs, providing a lot of operating leverage to the net earnings item. The CEO noted that the AI demand turned out to be "very strong, stronger than they thought three months ago", and it's not showing any signs of stopping when we look at the quarterly dynamics of TSM's financials, indeed.

Being a global advanced chip producer and supplying the biggest customers like Apple (AAPL), Nvidia (NVDA), AMD (AMD), to name a few, with its leading-edge process technologies, I think TSM should keep enjoying the overall tailwind from today's AI demand. And given the fact that now their "7nm and below" chips category collectively represents ~74% of total wafer revenue, and about 76% of their consolidated sales are coming from the North American continent, I don't see any major risks to their future profitability. It's always been a fact that semiconductor stocks are primed for an eventual cycle turn, and I don't argue with this as with a core business cycle theory, but for now, the demand growth is simply too robust to expect any near-term deterioration. Maybe the cycle's turn comes in 2-3 years at some point, but I'd not expect it next year, given the large caps' AI-driven CapEx plans.

If there's any lesson to take from the spending plans issued by the world's largest technology companies over the past two weeks, it's to never underestimate the fear of missing out.

Microsoft Corp., which set a $24.2 billion capital spending record last quarter, plans to drop upwards of $30 billion in the current period. Amazon.com Inc. similarly spent $31.4 billion last quarter, almost double what it dropped a year ago, and is maintaining that level of investment. Google owner Alphabet Inc. raised its capital expenditures guidance this year to $85 billion.

Bloomberg

Anyway, seeing the chip buyers' intents, and after evaluating its own supply capabilities, TSM's management decided to raise its FY2025 revenue growth guidance to the mid-30% range (previously, they were guiding for ~30% YoY, so it's a major update). Specifically for the next quarter, Q4 2025, TSM sees its total sales at a range of $32.2-33.4 billion (~$32.8 billion at the midpoint), which is meaningfully stronger compared to the consensus at the time of this writing:

Fiscal Period Ending	Revenue Estimate	YoY Growth	Low	High	# of Analysts
FQ3 2025 (Sep 2025)	31.56B	33.55%	30.35B	32.61B	22
FQ4 2025 (Dec 2025)	31.35B	18.89%	27.75B	36.11B	22
FQ1 2026 (Mar 2026)	31.01B	20.28%	27.54B	37.63B	19
FQ2 2026 (Jun 2026)	33.30B	4.92%	29.10B	37.95B	17
FQ3 2026 (Sep 2026)	37.57B	19.07%	31.89B	41.93B	15

SA, TSM's rev consensus

Here we come to my initial take - despite TSM's tremendous success in achieving and even exceeding its own guidance, the market has been pessimistically assessing its forward revenue generation potential for the past few quarters. The difference of TSM's Q4 guidance to the current consensus is over 4.6% or about $1.45 billion in absolute terms, which is a lot, and it's usually unacceptable for any of TSM's Western peers I can think of.

I think that this year, TSM has gotten the strongest it's ever been before, and the Street just keeps looking at the firm with some skepticism, which can give prospective investors a nice buying opportunity in case there's some valuation upside.

Risks And Your Takeaway

I can be wrong in my assumption that TSM's margins will be sustained at a higher-than-expected level. As I noted in my previous article on the stock, the Street is likely pricing in that TSMC will eventually see its operating leverage shrinking because of the "Foundry 2.0" strategy implementation. Indeed, the management's $42 billion CapEx spending for FY2025 stayed in not going anywhere, and the management itself noted potential business impacts from U.S. trade tariffs and FX fluctuations. So, it can probably be a reason for no earnings revisions coming into play shortly after the Q3 print. And perhaps it can become a reason for TSM's discounted valuation compared to its Western peers.

Despite the above risks, I think that TSM should be repriced higher when investors start to reassess the firm's prospects, given all the recent corporate developments and the Q3 earnings report. The results came in much stronger than expected, and the rise we saw in the management's guidance suggests that major investment houses should start to raise their price targets shortly, and it can fuel a further rally.

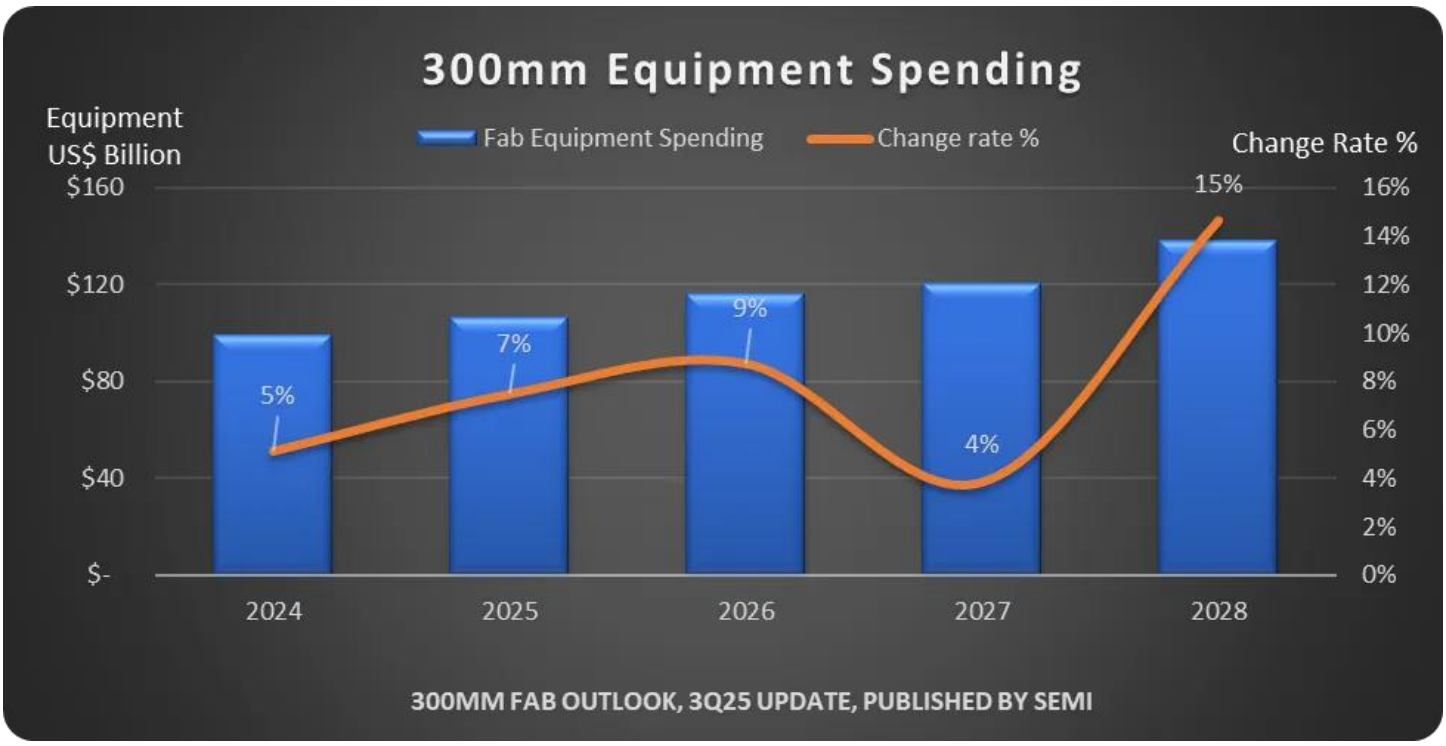
SEMI reports global 300mm fab equipment spending expected to total $374 billion over next three years

Oct 8, 2025 SEMI

SEMICON West – PHOENIX — October 8, 2025 — Global 300mm fab equipment spending is expected to reach $374 billion from 2026 to 2028, SEMI reported today in its latest 300mm Fab Outlook. This robust investment reflects fab regionalization and surging AI chip demand for data centers and edge devices, while underscoring the growing commitment to semiconductor self-sufficiency across key regions through localized industrial ecosystems and supply chain restructuring.

SEMIWorldwide 300mm fab equipment spending is expected to surpass $100 billion for the first time in 2025, growing 7% to $107 billion. The report projects investment will increase 9% to $116 billion in 2026, 4% to $120 billion in 2027, and 15% to $138 billion in 2028.

“The semiconductor industry is entering a pivotal era of transformation, driven by unprecedented demand for AI-enabled technologies and a renewed focus on regional self-sufficiency,” said Ajit Manocha, President and CEO of SEMI. “Strategic global investments and collaboration are driving robust, advanced supply chains and faster deployment of next-generation semiconductor manufacturing technologies. The global expansion of 300mm fabs will enable progress in data centers, edge devices, and the digital economy.”



Segment Growth

The Logic & Micro segment is projected to lead equipment expansion with $175 billion in total investments from 2026 to 2028. Foundries are expected to be the primary drivers of this growth, fueled by sub-2nm capacity build-outs. Key enablers include advanced technologies such as gate-all-around (GAA) architecture and backside power delivery, which are essential to enhancing chip performance and power efficiency for increasingly demanding AI workloads. More advanced 1.4nm process technology is expected to enter volume production by 2028-2029. Additionally, AI performance improvements are anticipated to drive massive growth in edge-devices including automotive electronics, IoT applications, and robotics. Beyond advanced processes, demand across all nodes and various electronics devices is expected to surge significantly, fueling mature process equipment investment.

The Memory segment is projected to rank second with $136 billion in spending over the three-year period, marking the beginning of a new growth cycle for the segment. DRAM-related equipment investment is expected to exceed $79 billion from 2026 to 2028, with 3D NAND investment reaching $56 billion over the same period. AI training and inference have driven comprehensive demand increases across various types of memory. AI training requires greater data transmission bandwidth and extremely low latency, significantly boosting high bandwidth memory (HBM) demand. Moreover, model inference generates higher quality and more diverse AI digital content, creating substantial demand for end storage capacity and driving 3D NAND Flash requirements. This robust demand has sustained elevated levels of supply chain investment in memory over the medium to long term, helping to mitigate potential downturns from traditional memory cycle fluctuations.

Analog-related segments' anticipated investment is projected to exceed $41 billion over the next three years.

Including Compound semiconductors, the power-related segment is expected to invest $27 billion from 2026 to 2028.

Regional Growth

China is expected to continue to lead in 300mm equipment spending with $94 billion in projected investments from 2026 to 2028, sustained by national self-sufficiency policies.

Korea is projected to rank second in global 300mm equipment spending over the three-year period with $86 billion invested, supporting industries worldwide in generative AI demand.

Taiwan is expected to invest $75 billion in 300mm equipment over the three years, ranking third. Investment will concentrate primarily on 2nm and sub-2nm capacity to maintain dominance in advanced foundry capacity and technology leadership.

The report projects Americas to invest $60 billion from 2026 to 2028, rising to fourth position. U.S. suppliers are expanding advanced process capacity to meet surging AI application demands while catalyzing domestic industrial and investment upgrades to maintain global technology development leadership.

Japan, Europe & Middle East, and Southeast Asia are projected to invest $32 billion, $14 billion, and $12 billion, respectively, over the three-year period. Policy incentives aimed at alleviating critical semiconductor supply concerns are expected to increase equipment investment by more than 60% in these regions by 2028 compared to 2024.

Geopolitical hijinks: export controls, rare earths, and blacklists; SEMICON West announcement blitz; Intel readies 18A; AMD-OpenAI 6 GW deal; new 300mm GaN program; fab spending and EDA reports; acquisitions

Oct 10, 2025 THE SE STAFF

SEMICON West was held in Phoenix this week, with presentations covering heterogeneous integration, AI, quantum, supply chain resilience, and more. Amid the buzz of the conference, some key manufacturing and test announcements were made this week:

The strategic importance of the Phoenix area hub was highlighted. Amkor Technology broke ground this week on its advanced packaging and test campus in Peoria, Arizona, and announced it had increased its investment to $7 billion across two phases for a total of 750,000 square feet of cleanroom space.

Intel released the architectural details of its next-gen client processor, Intel Core Ultra series 3, which is the company's first product built on Intel 18A, and announced that its Fab 52 in Chandler, Arizona "is fully operational and set to reach high-volume production using Intel 18A later this year."

Teradyne introduced a dual-sector automated test system for both high-volume and high-mix/low-volume testing of power semiconductors.

Lam Research debuted new software that combines optimization techniques, virtual silicon digital twins, AI/ML, and inline fab data to reduce process variability and improve yield.

Advantest is incorporating machine learning technology from NVIDIA into its Real-Time Data Infrastructure platform for test data management and analysis. NVIDIA also adopted the platform for high-volume production.

Applied Materials unveiled several new products, including an integrated die-to-wafer hybrid bonding system, a selective epitaxy platform, and an e-beam metrology system with sub-nanometer resolution.

Fig. 1: Global participation at SEMICON West 2025. Source: Semiconductor Engineering

Trade Wars and Geopolitics:

- China tightened export controls on rare earths and magnets, including technology for processing rare earths. This escalation strengthens China's leverage in upcoming trade talks, says CSIS.
- In a move to reduce reliance on China's rare earths, the U.S. government took a 10% stake in Canadian minerals company Trilogy Metals, and approved an Alaska project to access copper, cobalt, gallium, and germanium.
- The U.S. government sanctioned a number of companies in China, Turkey, and the UAE for providing support to Iran's military. Two subsidiaries (in Hong Kong and China) of U.S.-based chip distributor Arrow Electronics were added to the entity list. Arrow spokesperson John Hourigan disputed the charge and is in discussions with the government to resolve it.
- China added its own list of newly sanctioned companies to its "unreliability entity list," targeting companies cooperating with Taiwan and companies casting doubt on China's chip development.
- AMD and OpenAI announced a 6 gigawatt agreement to power OpenAI's next-gen of AI infrastructure across multiple generations of AMD Instinct GPUs, starting with the MI450 series in H2 2026. As part of the deal, AMD issued OpenAI a warrant for up to 160 million shares of AMD common stock, structured to vest as specific milestones are achieved. NVIDIA CEO Jensen Huang said he was surprised AMD offered OpenAI 10% of the company, and also commented on the US-China AI race in an interview with CNBC.

- Imec expanded its industrial affiliation program on gallium nitride (GaN) power electronics to develop 300mm GaN epi growth and low- and high-voltage GaN HEMT process flows.

Reports:

- Third quarter chip industry startup funding was dominated by massive rounds, with 75 companies raising $6B.
- Global 300mm fab equipment spending is expected to grow 7% to $107B in 2025, according to SEMI, reaching $138B in 2028, driven by fab regionalization and surging AI chip demand.
- The ESD Alliance reported that the electronic system design industry revenue rose 8.6% to about $5B in Q2 2025. All product and application categories increased, with the exception of IC physical design and verification, which decreased by almost 10%.
- Latest industry financials: TSMC UMC (Sept. sales).

Data Center Reality: Whispers From Data Center Alley

Oct 1, 2025 Jennifer Warren

Summary

- Digital Realty is positioned to benefit from hyperscalers, AI workloads, and colo data center demand, especially in key markets like Northern Virginia.
- DLR's growth strategy targets both U.S. and international markets, leveraging its classic hyperscale and colocation demand.
- The data center sector faces varied competition, with multiple strategies of hyperscalers, neoclouds, and both GPU and custom chip developments shaping future workloads.
- Investors should consider the evolving risk/reward profiles in digital infrastructure, using both bottom-up and top-down approaches to capture long-term opportunities.
- The Northern Virginia data center market offers insights about the future—though not all is written in stone.

Believe_in_me/iStock via Getty Images

In assessing the demand for digital infrastructure—the data center—forecasts abound. Indeed, the spectrum of types of data center developments is varied. Through my research, I'll cull a few highlights of late to cut through some noise. As any firm's leader will say: You have to identify a strategy and go forward with the best data at hand. What you eliminate is equally important. In this note, energy is outside of the scope. Digital infrastructure development is the focal point.

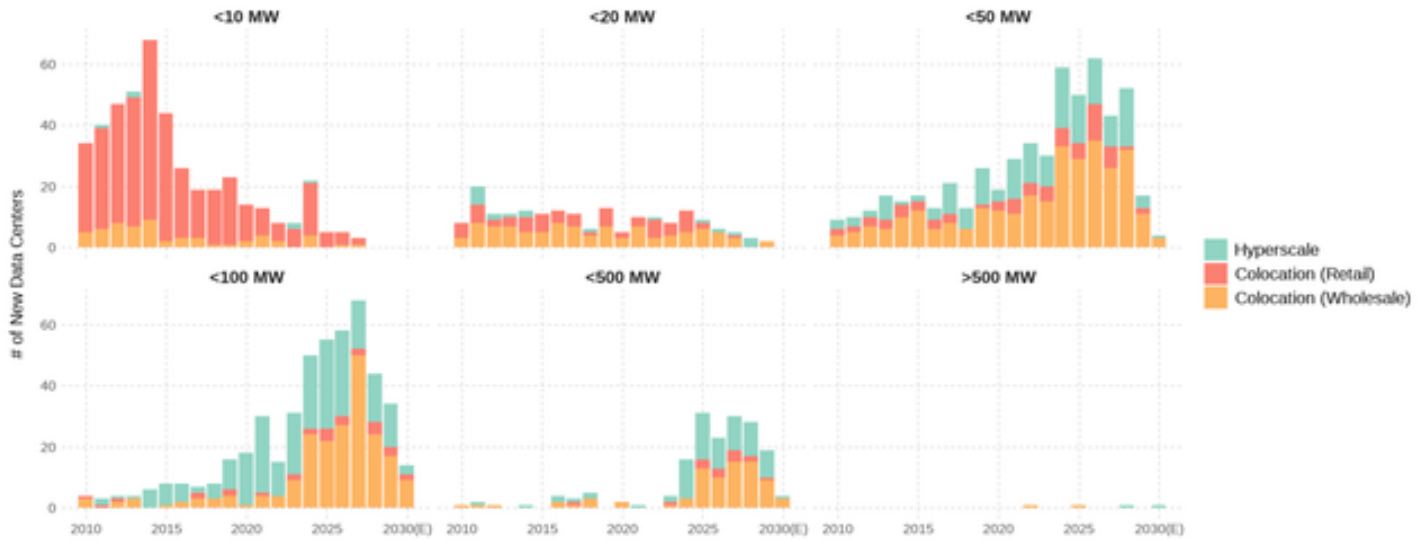
From news stories and announcements, one would believe trillions will be spent on AI infrastructure, which includes the subset of digital infrastructure. This may be true, and the math may add up. However, in considering the environment of the next few years, the insights of Digital Realty's (DLR) chief executive, Andrew Power offers color about chips, which speaks to the densification issues at play:

"You have a whole host of others that are building their own types of chips or trying to compete, looking for efficiencies in the infrastructure from a power density standpoint."

He continues about the various workloads ahead. "There's a world where numerous types of workloads from network to compute towards GPU AI today in training, machine learning, (and) ultimately inference (exist), incorporating private data sets in various private forms of power densities." Additionally, in a video interview with a chips expert, we discuss Nvidia (NVDA), Broadcom (AVGO) and AMD (AMD), custom chips and what's ahead. Bottom line: competition, proprietary work, cost and efficiency are driving the shift.

Aside from some select technology factors on the AI infrastructure side, the data center itself offers insight. The following chart indicates the potential variety of workloads ahead. This chart highlights a large group in the middle and a distribution spread across data center sizes. It mirrors both what we hear from top hyperscalers, Microsoft (MSFT), Amazon (AMZN), Meta (META) and Google (GOOG) (GOOGL), and the world of Digital Realty.

Planned data centers by size to 2030 (by power bucket)

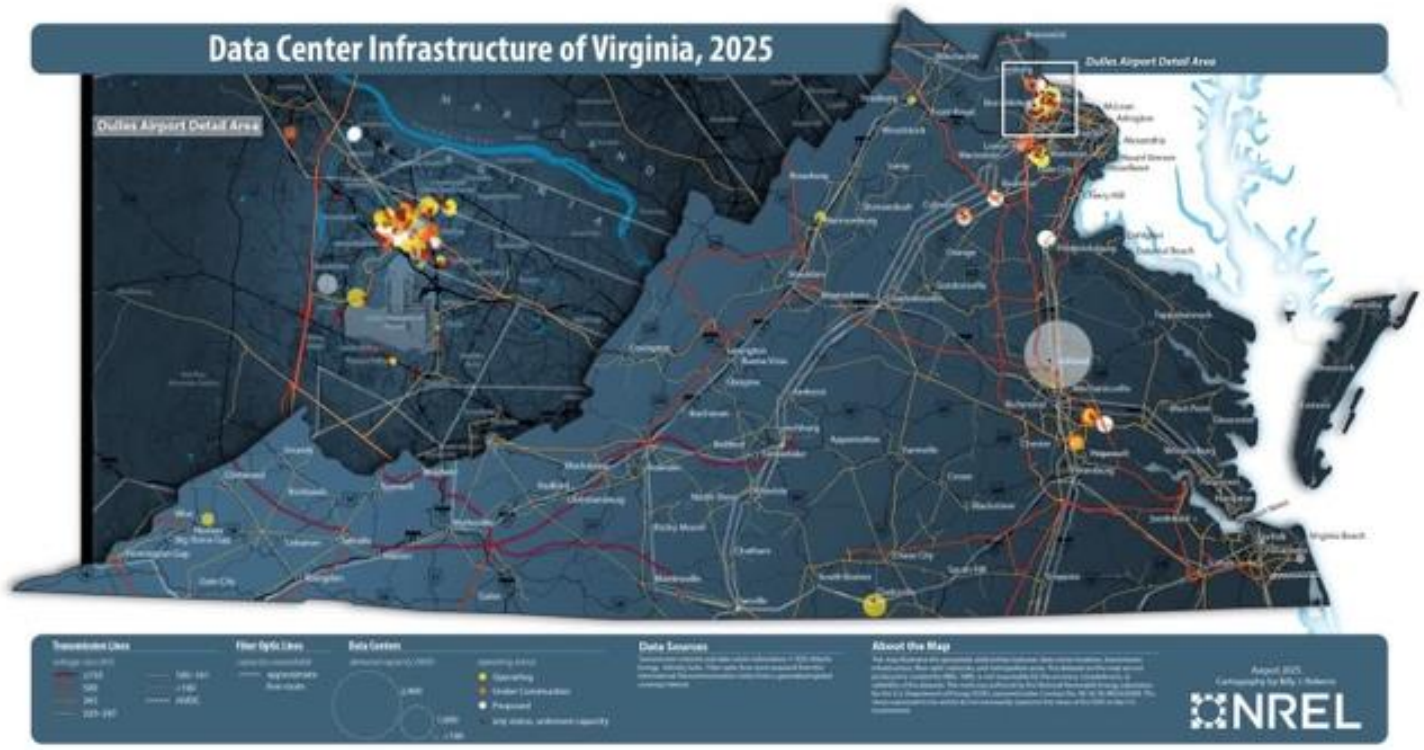


Data centers by size (USC Marshall, Hiatt, 2025)

Zooming in on Virginia

Data center development has location sensitivities. For Digital Realty, their markets align with both colo wholesale, largely, and hyperscale. Power notes, “Northern Virginia is our largest market. Our runway for growth in that market could more than double what we have today.” In the U.S. they plan the same playbook in the Chicago, Dallas, and Atlanta markets. Internationally, it's Frankfurt, Amsterdam, London, Paris, Asia Pacific, South America and South Africa.

Research converges to show that the Virginia story is true. Virginia is expected to add nearly 19 GW of additional nameplate capacity in the next five years, followed by Texas with roughly 5 GW. These are real (energy) permitted projects, based on University of Southern California (USC) Marshall School energy research. From my inquiries with researchers, up to 2030, in the U.S., 94 GW would be required at "full capacity" - that is 24/7 runs. Thinking about average use, a capacity factor of 80% would suggest around 75 GW on average. These numbers will only get more precise over time for many reasons.

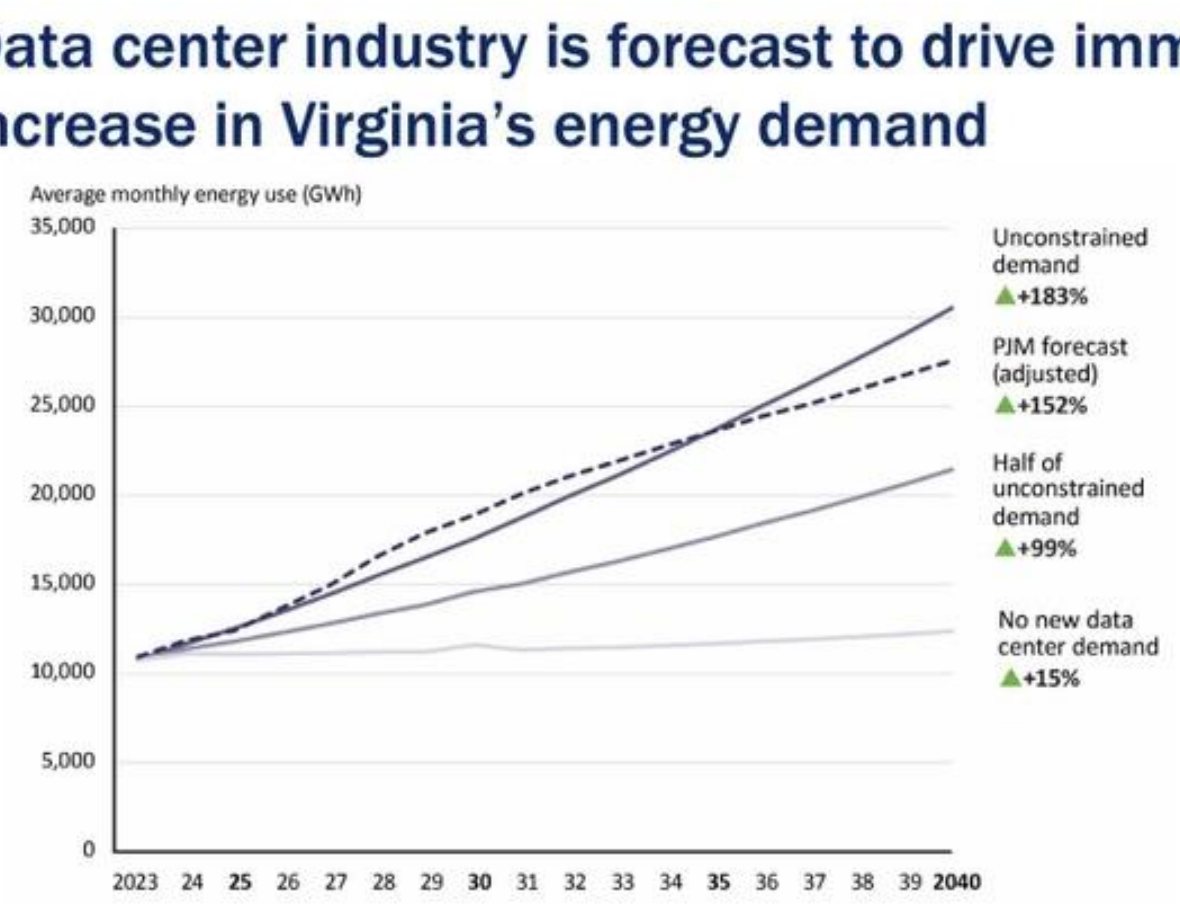


Data center of Virginia, 2025 (NREL, cartographer Roberts)

From a 2024 report, Virginia's Joint Legislative Audit and Review Commission says:

Overall, the data center industry is estimated to contribute 74,000 jobs, $5.5 billion in labor income, and $9.1 billion in GDP to Virginia's economy annually. Most of these economic benefits derive from the construction phase rather than data centers' ongoing operations.

In looking at the graphic below, right now Virginia is set to rise to the "half of unconstrained demand" level by 2030. This circles the USC numbers above.



Data center demand forecast (Virginia's Joint Legislative Audit and Review Commission)

Hedging demand

Further, to hedge about demand, Power relays important points. "Digital Realty customers 'chose these markets (because of) fungibility of the workload," he says. "If they get their AI demand wrong, they have other real business use cases (and) cloud computing that they can put in (those) capacity blocks."

Incidentally, owing to hyperscale demand, Digital Realty created a hyperscale fund. Its inaugural data center fund for hyperscale in the U.S., north of $3 billion, was upsized and oversubscribed. It's strategic private capital to scale "other businesses or assets in hyperscale that we think are going to come to need natural homes," says Power.

There are unequivocally other types of demand emerging within the numbers, both within public markets and outside of them. Publicly, we observe this from neoclouds such as CoreWeave (CRWV), with related players such as Applied Digital (APLD).

Recently, Barclays suggested that one gigawatt (GW) of data center capacity would cost $50-60 billion per GW. My research indicates that is likely the high end. The variety of factors involved in the cost of the data center indicates that great competition exists in the space. At some point, cost will matter even more as hyperscalers' ROI becomes better understood. Firms like Digital Realty have different return profiles than a hyperscaler or neocloud.

Meanwhile for investors, one must understand the differing risk/reward profiles of their choices. I'm generally optimistic about the prospects of AI technology, which emerges with dense compute, hyperscalers, new

entrants, and use cases. But how we really get there may change too. Still, the infrastructure is the vital piece for many reasons. Investors need to allocate accordingly, with bottom-up and top-down approaches to capture the opportunity.

Veeco Instruments Inc. (VECO) Joint Investor Call (Transcript) : axcelis+Veeco

Oct 1, 2025 SA Scripts

Veeco Instruments Inc. (NASDAQ:VECO) Joint Investor Call October 1, 2025 8:30 AM EDT

Company Participants

- David Ryzhik - Senior Vice President of Investor Relations and Corporate Strategy
- Russell Low - CEO, President & Director
- William Miller - CEO & Director
- James Coogan - Executive VP & CFO
- John Kiernan - Senior VP & CFO

Conference Call Participants

- Craig Ellis - B. Riley Securities, Inc., Research Division
- Auguste Richard - Northland Capital Markets, Research Division
- Mark Miller - The Benchmark Company, LLC, Research Division
- Jonathan Dorsheimer - William Blair & Company L.L.C., Research Division
- Duksan Jang - BofA Securities, Research Division

Operator

Greetings, and welcome to the Axcelis and Veeco Merger Announcement Conference Call. [Operator Instructions]. Please note that this conference is being recorded. A copy of the investor presentation accompanying this call is available on the Investor Relations pages of both companies' websites as well as the company's joint transaction website, www.www.AxcelisVeeco.com.

I would now like to hand the conference over to David Ryzhik, Axcelis Senior Vice President of Investor Relations and Corporate Strategy. Please go ahead.

David Ryzhik

Senior Vice President of Investor Relations and Corporate Strategy

Thank you, operator, and welcome, everyone. Statements made during this call may include forward-looking statements within the meaning of the federal securities laws, which are subject to risks and uncertainties that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. Such risks and uncertainties include, but are not limited to, those associated with the proposed transaction between Axcelis and Veeco including the risk that the transaction may not be completed on the anticipated terms or at all, the failure to obtain necessary regulatory or shareholder approvals, integration risk risks associated with post-closing capital allocation by the combined company and other factors that are detailed in the company's respective filings with the SEC.

We will also discuss certain forward-looking non-GAAP financial measures, which are not prepared in accordance with generally accepted accounting principles. Please refer to the safe harbor disclaimer and non-GAAP financial measures discussion in the accompanying investor presentation. The investor presentation, the press release and the recording of this call will be available on both companies' websites as well as the company's joint transaction website, www.AxcelisVeeco.com.

We do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Now turning to Slide 4. Participating on today's call are Axcelis' President and Chief Executive Officer, Dr. Russell Low; and EVP and Chief Financial Officer, Jamie Coogan; and Veeco's President and Chief Executive Officer, Dr. Bill Miller; and SVP and Chief Financial Officer, John Kiernan. With that, I'll turn the call over to Russell.

Russell Low

CEO, President & Director

Thank you, David. Good morning, and thank you for joining us today on short notice. Jamie and I are thrilled to be joined by Bill and John to speak to you about the transformational combination with Axcelis and Veeco.

As industry peers, we know each other well, those of us on the Axcelis team have long admired betas track record of innovation and ability to deliver breakthrough products for customers. I bring that to companies together, we are building a leading semiconductor equipment company with the capabilities, resources and financial foundation to drive sustainable value creation for shareholders and deliver meaningful benefits to all our stakeholders.

This is a uniquely compelling combination of a few important ways. First, Axcelis and Veeco together will offer a broader and more diverse product portfolio serving the global supply chain with solutions that span a wide range of semiconductor manufacturing needs. For example, our implant solutions and because annealing solutions are in patent steps in the semiconductor manufacturing process. Optimizing the synergies between these two steps provide significant opportunities to enhance semiconductor device performance and yield.

Second, will expand our total addressable market opportunity with greater exposure to secular tailwinds. Third, we'll be able to leverage technical capabilities and expertise to increase R&D scale and accelerate innovation for customers.

And lastly, but importantly, the transaction is expected to be accretive to non-GAAP earnings per share within the first year post closing, and the combined company will have an even stronger financial profile and cash

position giving us the financial flexibility to capitalize on value to enhance the organic growth opportunities as well as return capital to shareholders.

I want to take a bit of time to talk about the compelling fit between the two companies from a strategic perspective on what we look like together. We believe this combination will establish a new leader with even brighter prospects for growth and value creation that either company on a stand-alone basis could achieve.

Many of you are familiar with the Axcelis story and our industry-leading position through the design, manufacture and complete life cycle support of Ion Implantation systems. I also know firsthand the powerful capabilities and talented team that Veeco brings having spent almost 5 years there prior to joining Axcelis. Their Laser Annealing, Ion Beam, Wet Processing, Lithography and MOCVD technologies are highly complementary to ours.

As I mentioned, our products used in adjacent process steps in semiconductor production with Veeco's annealing products, which almost always follow Ion Implantation to repair crystal damage and activate the implied dopants. These two steps are implantation and anneal a fundamental and essential within the semiconductor manufacturing process.

In advanced packaging, Veeco also specializes in Wet Processing and Lithography critical technologies, which continue to grow to meet evolving customer needs for AI applications. We believe this is truly a great fit that the combination of our two companies doesn't just work on paper. We're also confident about the upside value potential this combination because of the people. Both companies have talented specialized teams focused on innovation and customer service. Together, this team will be fueled by more than $230 million in combined pro forma R&D investment to develop next-generation products and capabilities to meet evolving customer high-value needs.

By joining together, we established the fourth largest U.S. Wafer Fabrication Equipment Supplier by revenue, delivering meaningful scale and resources to better compete throughout the global semiconductor equipment value chain. Our highly complementary and diversified technologies, solutions and geographic footprint will allow us to capitalize on expanded addressable market.

Combined company also have a resilient operating profile and balance sheet, which is a deliberate result of the all-stock transaction structure. Jamie will touch more on the combined company financial profile later in the call. We also expect to deliver significant benefits for employees, customers and partners as a stronger organization with additional opportunities and capabilities. We'll now dive into each of these areas in more detail, and I'll turn it over to Bill to begin with the combined market opportunities we see.

William Miller

CEO & Director

Thank you, Russell, and thank you to our investors and analysts for joining us today. I've known Russell and the Axcelis team for many years. As we've discussed, bringing the companies together, the opportunity to drive innovation and excellence for our customers has only become more compelling.

Before I go further, I want to acknowledge the Veeco team for their hard work, which has allowed us to take this next transformative step. Solving complex challenges for our customers is what we do, as Russell outlined,

and this merger better enables us all to deliver for our combined customer base with next-gen innovative solutions.

One of the most attractive components of this transaction is how we'll unlock new product technology and market opportunities for the combined company. By bringing our companies together, we expect to benefit from an expansion of our addressable markets to more than $5 billion. Leveraging Axcelis and Veeco's core competencies in respective technology portfolios, we're positioned to capitalize on sizable and growing end markets with significant secular tailwinds, including growth in artificial intelligence and the corresponding demand for Power Solutions.

Turning now to Slide 9. Similarly, the combined company will have an expanded product portfolio supported by robust aftermarket services to serve global customers. We will combine Axcelis strength across the full spectrum of Ion Implantation applications with our leadership positions spanning Laser Annealing, Ion Beam Deposition, Wet Processing and MOCVD solutions. Together, we will be able to leverage both companies' technical competencies to accelerate next-generation innovation for our customers and unlock new market opportunities.

From a geographical perspective, this transaction will diversify our respective regional exposure across key geographies. For example, Axcelis can leverage the strong combined sales channels in semi and compound semi to pull each product into respective markets and drive increased penetration with Tier 1 foundry logic memory and IDM customers. The diversified geographic presence and expanded operational footprint allows us to leverage Axcelis' strength in China and Korea, Veeco strength in Taiwan, and Axcelis and Veeco's complementary presence in Japan.

On the next 2 slides, you'll see how our complementary portfolio of solutions fit together in the semiconductor and compound semiconductor equipment markets. In the front-end semi manufacturing process, the adjacency of Axcelis' Ion Implantation products with our Deposition and Annealing products in our customer Semiconductor manufacturing process invites innovation and unlocks new opportunities, particularly as we work on future road maps with customers.

Starting with deposition, Veeco brings differentiated technologies that broaden our portfolio and strengthen the way we support customers through increasingly complex manufacturing steps. Because Ion Beam Deposition technology has enabled the adoption of low defect density EUV mask blanks and has helped enable advanced node semiconductor manufacturing.

More recently, Veeco has developed an application for of our IBD EUV system for high transparency pellicles. The IBD EUV system delivers an EUV transmission rate better than previous pellicle deposition technology and improves yield through low defect density, making it a critical enabler for high-volume manufacturing of EUV pellicles at the 2-nanometer node and beyond.

Additionally, Veeco has an Ion Beam Deposition product, which is an evaluation phase for low resistivity materials. Innovation in material properties is increased requirement and advanced nodes where there is a premium for a higher performance compute and lower power loss, which these films enable.

At the next step, Axcelis' Ion Implanters deliver ions of high purity at the right dose, energy and angle to modify the electrical or physical characteristics of material. Enabling the precise formation of transistors. Axcelis' products cover the industry's widest energy range from 200 eV to 15 MeV for all device applications.

Next, in Annealing, Veeco has capabilities that deliver the performance and precision customers need to advance their most demanding technology road map to keep pace with next-generation device requirements. Veeco's low thermal budget Laser Annealing technology enables our customers to precisely anneal the dopants while not impacting other thermally sensitive regions of the device. Our LSA is well established and our complementary NSA 500 is in evaluation to further extend our leadership in this segment.

Finally, in Advanced Packaging, Veeco has developed solutions for both Wet Processing and Lithography playing an important role in flux cleaning for both high-bandwidth memory and Chip-on-Wafer-on-Substrate type architectures. Our solutions are optimized for performance at the required cost of ownership, and we're further extending this technology to Panel-level Packaging. Our Lithography solutions have been optimized for steps like bumping and copper pillar with features like warped wafer handling.

For compound semiconductor customers, the combination provides Power Solutions across epitaxial and implant products. Together, Axcelis and Veeco bring complementary strengths in compound semiconductors, Axcelis' leadership in power device applications, combined with Veeco's expertise and depth in epitaxy and deposition creates a stronger platform to serve high-growth markets like silicon carbide and gallium nitride.

Veeco is focused on 300-millimeter GaN on silicon which we expect to be an important inflection point in the near future. Our Propel 300 as a leadership position in this developing opportunity. Our silicon carbide Epi complements Axcelis' industry-leading implant products potentially enabling high-quality Epi to end customers.

As you can see, this combination creates a new leader, supported by highly complementary businesses and an expanded portfolio of products and solutions to better address our customers' needs.

At closing, the combined company will have strengthened its global footprint, allowing us to better meet our customers' needs in the places where they operate, providing a competitive advantage. We'll have a more robust supply chain, supporting differentiated next-generation technologies for customers with accelerated lead times. We expect to leverage the proximity of our East Coast Ion Beam centers of excellence to develop new products and technology, accelerating customer road maps. I'll now turn it back over to Russell.

Russell Low

CEO, President & Director

Thanks, Bill. Turning now to the breakdown of the value creation opportunities we see given our respective core competencies. We believe each company can open new doors to the other and unlock cross-selling synergies. Our combined technical depth will enable us to optimize technology advancements. So the cross-selling opportunity is something I'm really excited to pursue because we are able to serve our customers even better and grow our business at the same time.

For example, from a technology perspective, we have deep ion sourcing component expertise which can be harnessed to enhance Veeco's Ion Beam Deposition capabilities and vice versa. From a market perspective, we are strong in certain carbide, while Veeco is an exciting opportunity in MOCVD for GaN-on-Silicon. This combined presence allows us to be a comprehensive solution provider for key wide-band gap materials which are becoming more and more relevant given today's increased demand for power efficiency.

In addition, Veeco's MOCVD business also has an opportunity in micro LED as well as Indium Phosphide for optical communication products, which is emerging in the data center. Moreover, our strengths in memory and mature foundry logic are complemented very well by Veeco's strength in Advanced Logic and Advanced Packaging, which stretches across Annealing, Ion Beam Deposition and Wet Processing solutions.

Finally, the combined company will be supported by market services to better serve our customers through access to expanded installed base. This transaction is truly about growth, which we believe will enable us to deliver benefits to all stakeholders. For customers will expand our product offerings, increase R&D scale and capitalize on the core competencies of both companies to drive customer road maps while providing end-to-end support across the full manufacturing process.

Veeco and Axcelis has shared cultures of routine respect, collaboration and a common desire to make a difference, which we will continue to uphold as a combined company. Our next chapter will build on a strong foundation our employees are created, and we are deeply grateful to each of them for helping to make this transaction possible. As we work to bring our two organizations together, we look forward to creating exciting new opportunities for our employees. With that, I'll now turn the call to Jamie to walk us through the transaction terms and financials.

James Coogan

Executive VP & CFO

Thanks, Russell. Before I discuss some of the financial benefits, let's review some of the key transaction terms on Slide 16. Our agreement is structured as an all-stock transaction with Veeco shareholders receiving 0.3575 shares of Axcelis common stock for each share of Veeco common stock they own. At close, Axcelis shareholders will own approximately 58% and Veeco shareholders will own approximately 42% of the combined company on a fully diluted basis.

We will also have a governance and leadership structure that leverages the experience of both companies. Russell will serve as CEO, and I will serve as CFO of the combined company. The Board will comprise 11 directors, six from Axcelis and four from Veeco and be chaired by Tom St. Dennis, who currently sits on the Board of both companies. Jorge Titinger, current Chairperson of Axcelis will remain on the board of the combined company. Bill will join the Board of the combined company and serve as Chair of its Technology Committee.

At close, the combined company will be headquartered in Beverly, Massachusetts and to reflect the transformational nature of this transaction, we will assume a new name, ticker symbol and brand. As for timing, we expect to close the transaction in the second half of 2026 and subject to approval by Axcelis and Veeco shareholders, receipt of required regulatory approvals and the satisfaction of other customary closing conditions.

Turning to Slide 17. Let's dive into how this merger will create a combined company with a robust financial profile that will enable us to drive enhanced shareholder value. As Russell touched on earlier, the combined company will have greater scale and financial flexibility to enable further investment in the business, generating more opportunities for growth. Looking at our companies on a 2024 pro forma basis, we generated $1.7 billion in revenue, a strong gross margin profile of 44% and on the bottom line, adjusted EBITDA of $387 million with a 22% adjusted EBITDA margin. These pro forma figures do not reflect the anticipated synergies.

As in any combination like this, we will realize cost savings. We are estimating $35 million of run rate cost synergies within 24 months post closing, primarily from standard public company costs as well as cost of goods sold and operating expense efficiencies. Moreover, this estimate does not include additional savings from our share-based compensation expense. As we noted in the press release, we expect the combination will be accretive to non-GAAP EPS within the first year post close. With over $900 million in combined cash and the expected synergies we will benefit from a strong operating profile and the financial foundation to drive returns.

As we touched on earlier, the all-stock transaction structure will result in a strong combined cash position that enables value creative capital allocation centered around three priorities.

First, and most importantly, we will focus on reinvesting in the business to drive organic growth. Second, we will evaluate opportunities to return capital to shareholders. To that end, we expect to execute a share repurchase program following the closing of the transaction. And finally, we will prudently consider inorganic growth in M&A in the longer term.

Together, these priorities give us the flexibility to invest through cycles, deliver returns to our shareholders and pursue growth opportunities in a disciplined way. With that, we'll open the line for questions.

Question-and-Answer Session

Operator

Thank you. We'll now be conducting a question-and-answer session. [Operator Instructions]. Our first question comes from the line of Craig Ellis with B. Riley Securities.

Craig Ellis

B. Riley Securities, Inc., Research Division

Yes. Thank you to on the deal, which seems quite transformative. Russell, I wanted to direct my first question to you, and it's related to the points that you made on Slide 14, which really focused, I think, on the crux of the issues that you all presented, which is the -- really the growth synergies and the revenue synergies and what I was hoping you could do is across the parameters you identify technology, markets and services. Give us some sense of which the bigger top line beneficiaries would be? And to the extent that you could provide any magnitude similar to the way Jamie scoped the cost benefits 2 years out, that would be helpful.

Russell Low

CEO, President & Director

Craig, thanks for the question. So yes, so what really excites us is how complementary Veeco is with Axcelis from a product, technology and market perspective. And you're right, Slide 14 has a pretty good rundown of those combination benefits.

So I think the start them in sort of maybe order. It's hard to know what the magnitude is going to be. We haven't able to be able to tell that yet, but or implantation annealing are adjacent to each other in the fab and both are sold into the same diffusion module in the fab. I mean, together, we have the cross-selling opportunity and the deep technical expertise in both steps which we believe provides an opportunity to drive technology optimization to deliver better solutions for customers. These two technologies are really aligned.

We also have deep Ion Source and Component Expertise. We're talking about plasma physics here. And this can enhance Veeco's Ion Beam Deposition capabilities and vice versa. And we have a lot of overlap in Ion Beam physics. We also have overlap in particle control, which is absolutely critical for advanced logic and electrostatic chucks as well. So there's a lot of overlap here in the technology. But I'd say we're actually really excited about having lots of really smart people working together.

From a market perspective, as you know, Craig, we're strong in silicon carbide. While Vega has an exciting opportunity in MOCVD for GaN. This will be power GaN, and that's where we've had limited exposure to date. I mean we have sold some implant calls for gallium nitride, but it's more of a periphery application rather than the core growing the entire Epi stack. So the combined presence allows us to have a comprehensive solution provided for wide-band gap materials. These are becoming more and more relevant today as the demand for power efficiency increases and the general electrification. So I think this is a really good secular tailwind.

In addition, we mentioned that Veeco MOCVD business also has an opportunity in micro LED, so displays, display technology, as well as indium phosphide. So indium phosphide is used for optical communication products. And as you know, that's finding an opportunity in data centers for a very rapid data transfer rates. But going a little bit further into markets, we have strengths, as you know, in memory and mature foundry logic and these are really well complemented with Veeco's strength in Advanced Logic and Advanced Packaging, which actually stretches across their annealing, the Ion Beam Deposition, the wet processing solutions and lithography.

So as you know, Advanced Logic as well as Advanced Packaging has been an area where Axcelis has been underrepresented. We believe each company can open new doors for the other and unlock potential cross-selling synergies in the combined company. So in the end, Craig, you need great technology and great relationships. And by combining the company, we really have strengthened our portfolio that we can offer to customers and our intimate knowledge of those customers.

Craig Ellis

B. Riley Securities, Inc., Research Division

That's great. And then the follow-up is for Jamie. Jamie, when I look at the $35 million in run rate forward to your cost savings, it looks like it equates to about 5% of what would be Veeco COGS and OpEx. And so the question, given that the company will benefit from reduced D&O and public company costs, what are you baking into that cost saving, expense estimate? And what are some of the key dependencies that we need to think about, whether it be nuances like ERP system coordination or other things on the way to capturing that $35 million.

James Coogan

Executive VP & CFO

Yes. No, great question, Craig. And John and I have actually had a couple of conversations already as we've gone through this process to sort of start to think about how we attack the cost synergy piece here. I think it's important to remember, right, that this is -- this transaction is not necessarily about the cost cutting. It is about the potential synergistic opportunity between our markets, our technologies, our customers, right, the complementary nature of this transaction is what really excites us.

But to that end, we do see opportunities here in both COGS. I think that's really material spend, right, is the kind of best way to think about that is maybe the largest component potential opportunity on the operating efficiencies. We're going to continue to invest in R&D. We talked about the combined R&D power of the business, $230 million of combined R&D spend on a pro forma basis. So we want to make sure that the technologies are well positioned. The business has the resources it needs to go after the revenue opportunities that Russell and Bill highlighted on the call.

As it relates to some of the longer poles. IT is always going to be one as we think about the systems integration that just takes time to look at processes, do some process reengineering system selection and others. And I think importantly, the collaborative nature in which we're going to work together with the Veeco team as we go through this, is going to help to inform the necessary steps to achieve those synergy numbers.

I would say, again, we're going to put our heads together. We put out an achievable number. We believe we can get the majority of that within the 12-month period with the full right after 24 months. And as John and I worked together, I don't know if John, there's anything you want to add relative to the process we're going to undertake.

John Kiernan

Senior VP & CFO

Yes. So thank you, Jamie. And I agree with everything that Jamie just laid out here. I think there is opportunity clearly for this type of transaction for the type of synergies that Jamie described. But what we're more excited about is really the opportunity for revenue synergies and to improve our capabilities for our customers. That's really much more exciting about this transaction here. Russell really laid out nicely the opportunities for collaboration between the two companies and the complementary strengths and technology amongst the company, and that's what we're really excited about today.

Operator

[Operator Instructions]. Our next question comes from the line of Auguste Richard with Northland Capital Markets.

Auguste Richard

Northland Capital Markets, Research Division

Congratulations on the transaction. I just had one question. The combination of two companies have always made sense to me why now? And how did you calculate the percentage of ownership in NewCo?

William Miller

CEO & Director

Yes, Gus, great question. I would say we've been talking -- the two companies have been talking to each other for over a long time, actually Russell work at Veeco, so we've known each other for over a decade. So I think the

why now is we've always had the same complementary technology and the strategic rationale always made sense.

But clearly, with the dawn of artificial intelligence and the drive for high-performance computing and high-bandwidth memory, as well as now the electrification and the adoption of silicon carbide and GaN, it just -- the why now, the real driver for it is really kind of AI and electrification and the opportunity to grow scale for both companies. And we're really excited about the opportunities it's made a strategic sense for a long time.

Russell Low

CEO, President & Director

Totally agree, Bill. The secular tailwinds are really exciting. So in obviously electrification, we're putting together GaN and silicon carbide and wide-band gap. That's very exciting, having a full portfolio of products we can offer our customers. And then when you think about AI, it's kind of really -- it's high performance compute. It's high bandwidth memory, and it's also Advanced Packaging, and we check a lot of boxes on the combined company. So we actually feel like we can offer our customers full solutions to some of their really demanding problems as a combined company.

Operator

Our next question comes from the line of Mark Miller with the Benchmark Company.

Mark Miller

The Benchmark Company, LLC, Research Division

Congratulations on the deal. And I'm just wondering, you indicated there's several areas that could really be of interest to investors in terms of more exposure data center, Advanced Packaging, power electronics, which one do you think will be most important?

William Miller

CEO & Director

Yes, that's a tough one to handicap. I would say, we have significant opportunities to cross-sell, for example, Axcelis has very strong relationships in silicon carbide and compound semi. Veeco has a strong position just developing in 300-millimeter GaN-on-silicon. Clearly, we can leverage their relationships and their strong customer support to roll out that on a larger scale with GaN as that happens.

And likewise, I think Veeco's strong position in Laser Annealing in the leading edge will provide, hopefully, a positive conduit for Axcelis' Ion Implant in advanced semi. And so the relative magnitude of those.

And I think Russell mentioned it a few minutes ago, the opportunity to take some of the core technologies from Axcelis, whether that's particle knowledge, Electrostatic Chuck Ion Beam physics to the Veeco's Ion Beam Deposition could be a significant game changer in the next 3 to 5 years and really help us accelerate the joint company's road map and really meet the customers' needs for their future requirements.

Mark Miller

The Benchmark Company, LLC, Research Division

You just mentioned two technologies that are similar. Your Ion Beam Deposition, Ion Beam Matching, Axcelis' Ion Implant. Do you see any ability to leverage the technology of either of these products into the other?

William Miller

CEO & Director

I would say when you look at the cadre of technical people here in Beverly, [Massachusetts] and on Long Island, there's a lot of technical overlap in decades and probably centuries of experience between the two teams. So I think there's a lot of -- I think Russell mentioned a little earlier, you put a lot of break people in the room on a big problem. They're going to figure something out.

Russell Low

CEO, President & Director

Yes. I think that's absolutely right. And I am being felid like to think it was actually a science. A lot of it is an art and having smart people with lots of different experience, bring all of that experience to bear on difficult problems, I think that's going to be a really great opportunity to collaborate.

Mark Miller

The Benchmark Company, LLC, Research Division

Congratulations on the deal.

Operator

Our next question comes from the line of Jed Dorsheimer with William Blair.

Jonathan Dorsheimer

William Blair & Company L.L.C., Research Division

Congrats both of you for the combined transaction. I guess first question is while -- if I look at the technology overlap as you've outlined, it makes a lot of sense. But there is -- and maybe I've got this wrong. But if I look at -- I'm just wondering how you might address the cultural difference between tools that are lower volume, maybe higher precision versus more of a batch approach and kind of marrying those two and whether or not this signals a shift in technological strategic shift that would be more Veeco or more Axcelis or down the middle of the fairway there? And then I have a follow-up.

William Miller

CEO & Director

Jed, Bill Miller here. I haven't talked to you -- it's been a while. So as you remember, at that time, Veeco's MOCVD was largely batch tools, kind of high-volume batch systems. And over the last decade or so, our MOCVD equipment has really morphed from back size to single wafer a 200-millimeter now single wafer 300-

millimeter GaN-on-silicon. So we're actually similarly in our MOCVD business, specifically moving towards moving substantially towards single wafer our Laser Annealing tools are single wafer and our in beam deposition tools are single wafer. So I would say it marries very nicely with the automation and common technical bits that clearly, I would say both companies are on a single wafer.

Russell Low

CEO, President & Director

Right. And I think your way for processing is your wafer processing is also similar. So this is very much a single wafer culture, if you like, Jed, to use your word coming together.

Jonathan Dorsheimer

William Blair & Company L.L.C., Research Division

Got it. Well, that makes a ton of sense. And then last question. In terms of focus area, particularly around compound semis, I'm just wondering how you're thinking about there's so much activity around reshoring. Most of the reshoring is going to be leading edge, not trailing edge power. But it seems to me that the combination of the two businesses might have a larger impact of -- or be able to capture greater opportunity in some of that reshoring for AI. I'm curious your thoughts there or if a lot of the foundry and compound will be focused on the Asian markets?

Russell Low

CEO, President & Director

Well, so I think as you know, Jed, we are equipment suppliers. So we will be supplying to our customers and in all the various geographies One of the things I think you're going to see is as we become more -- each company is becoming more aware of security and went to recur, you're going to kind of build in some kind of inefficiency into the system. So in some respects, this is actually an additional tailwind where you're going to have multiple companies in each country that are deemed to be secure. And as a consequence, we will absolutely want to work with all of those people.

James Coogan

Executive VP & CFO

Yes. We're being a U.S. provider right into the U.S. market really does position us well for the potential expansion, both in the trailing as well as the leading-edge nodes. And I'd imagine, Jed, there will be some expansion on the trailing edge as well as to ensure that we've got the full complementary suite of semiconductors necessary for call it, national security reasons. And that trend is likely going to continue, not just in the U.S. but also probably in other regions of the [geography].

Russell Low

CEO, President & Director

I talked about bifurcation were the kind of a Western world is heading towards more advanced devices like trench or super junction. They're going from smaller wafers, 6-inch to 8-inch, and now you've been talking about 12-inch. I think you're going to see a bifurcation where there's going to be the more advanced customers will be working to do the smallest possible device and the largest possible wafer and then you're going to get a little -- a large amount of trailing edge technology, which is probably going to be planar type device. I'm talking about silicon carbon specifically on the smaller wafers and they'd be kind of like in volume.

Operator

Our next question comes from the line of Duksan Jang with Bank of America.

Duksan Jang

BofA Securities, Research Division

I just had a quick question on what you see on the regulatory approval plan just given both companies have a sizable China exposure. And from Axcelis' point of view, you're also entering more of the leading-edge space as opposed to your prior more mature node exposure. So any color on that would be helpful.

Russell Low

CEO, President & Director

I'll leave that one off and then let other people chime in. But yes, this transaction is expected to close in the second half of '26, so obviously subject to approval by shareholders of both companies. Received the required recency approvals, which you are talking about and the satisfaction of other customary closing conditions. We are well advised, and we would not have agreed to a transaction we did not think we could compete -- complete. There really is no overlap between the two companies, and we're both U.S. based. As a result, we see no reason this deal get held up in the regulatory process.

And this merger allows the combined company to be more efficient compared to the larger players in that market while also providing our customers, which is really important, the enhanced technologies and capabilities, which can accelerate their road maps.

James Coogan

Executive VP & CFO

Yes. We think that's a really important point, Duksan this actually allows us to compete significantly more effectively as a combined business against the larger players in the space provides our customers alternatives, a stronger alternative and enhances the technology development stack through the combined research development and technical know-how of our teams. So we think that on a regulatory basis, that those are all really positive indicators for us as we move forward.

Operator

Thank you. Ladies and gentlemen, that concludes our question-and-answer session. I'll turn the floor back to Dr. Low for any final comments.

Russell Low

CEO, President & Director

Thank you all. We hope you appreciate this transformational moment for Axcelis and Veeco as we set out to create an industry-leading semiconductor equipment company, we look forward to bringing together our highly complementary technologies, portfolios, end markets and teams to deliver diversified solutions to support customers through semiconductor production process while delivering returns to our shareholders.

I want to thank the team that both Axcelis and Veeco for their hard work and dedication to serving customers with excellence. I can't wait to see what we can accomplish together. Operator, you can now conclude the call. Thank you.

Operator

Thank you. Ladies and gentlemen, this concludes today's conference call. You may disconnect your lines at this time. Thank you for your participation.