June 29, 2025



TMT U.S. Equity Research

Semiconductors & Semiconductor Capital Equipment

Industry Commentary

Data Center and Al Server Calls: GPU, Custom Si, ARM Ramps, Maia Challenges

We provide a thematic update on AI hardware accelerators' roadmap post our AI Server industry calls. **Key highlights: 1) Custom Silicon shipments could EXCEED GPUs in 2026** with TPU/MTIA/OpenAI/AAPL as we've noted **(LINK)**, Also **ARM big beneficiary as Cobalt ramps, we estimate up 100% y/y, 2)** REASONING driving token generation up 10-12x vs single shot LLMs (Exhibit-1), **3)** NVDA B300 pull-in and potential *air-cooled Rubin* as NVDA ecosystem moat remains strong with CUDA SW+HW leadership, **and 4)** China AI chips improving (we believe ~1 generation behind) but **software still key.** We continue to see **NVDA, AVGO, CRDO** leading with GPU/ASIC, **ARM** (key chip IP) **MU** (HBM), and **DELL** leading in the server market. If we have been helpful with your investment process **(Link)** - we would really appreciate your vote in the "Semiconductors & Semi Cap Equipment" and "Autos" categories as we look to increase our ranking (Link to Vote).

Key Points

Custom Silicon - TPU/MTIA BIG Ramps, OpenAl/AAPL 2H26, But also MSFT COBALT Major Ramp for ARM. Our call noted 2026 custom silicon ramping strongly, delivering 2-10x better Perf/Watt vs GPUs, could exceed 2026 GPU shipments. While 2025 TPU shipments are estimated at ~1.5-2M and Trainium at ~1.5M units, MTIA v3/v4 is ramping in 2H25E and aggressively into 2026E, up >2-3x y/y (positive AVGO). MTIA v3 is estimated to see 25% better perf/\$ vs. Hopper while being >50% lower-cost. We also see potential 2H26E AVGO tailwinds with OpenAl/AAPL ramp. We believe AVGO's 3.5D F2F advanced packaging is ~12 months ahead of competition (~MRVL). Call noted Maia1/2 delayed, benefiting NVDA as Azure key customer. We see ARM major beneficiary as Cobalt we believe is growing 100% y/y from 5-10% Azure penetration in 2024, to 15-20% in 2025E, and potentially ~33% 2026E. Also ARM Al processor Izanagi for Project Stargate with Softbank (9984.JP, covered by Yusuke Hori, Buy, ¥9,000PT)/OpenAl tailwind. New reasoning model Claude Sonnet 3.7 is 3-6x more expensive vs DeepSeek R1, justifying Custom ASIC use for efficiency gains.

LLM Driving Compute - reasoning driving tokens generated up 2-9x, context sizes (128K to >1M) growing, multi-modality, larger model weights, latency, as demand grows >20x y/y - DRIVES HBM (MU) Content. We continue to see test-time scaling (reasoning) driving accelerated token demand, up 10-12x vs. non-reasoning models(Exhibit 1), with reasoning tokens accounting for ~73-98% generated in similar situations and Answer tokens ~15%. HBM Big Road ahead driving capability of extended thinking models with 1) Tensor Parallelism, 2) Reducing Throughput latency, and 3) Larger context windows 128K to 1M. MU beneficiary, as TPU, MTIA HBM reach parity with NVDA, we estimate at ~192-244GB.

China domestic custom silicon growing but still lagging, SW key. China AI chips are closing the gap, with Ascend 920C ~13% faster vs 910C, though still expected to only replace banned H20. We also note key software, with ML libraries widening the gap between CN competitors vs. NVDA. If we have been helpful with your investment process (VIDEO Link) - we would really appreciate your vote in the "Semiconductors & Semi Cap Equipment" and "Autos" categories as we look to increase our ranking (Link to Vote).

MIZUHO SECURITIES USA LLC

Connect With Our Analysts

Vijay Rakesh | Managing Director

+1 312 294 8682 | Vijay.Rakesh@mizuhogroup.com

David Liu | Senior Associate

+1 201 626 1539 | David.Liu@mizuhogroup.com

Jacob Grandstaff | Senior Associate

+1 312 294 8694 | Jacob.Grandstaff@mizuhogroup.com

Symbol	PT (Previous)	Rating (Previous)	Price	
AMD	\$135.00	Outperform	\$143.81	
ARM	\$160.00	Outperform	\$165.46	
AVG0	\$310.00	Outperform	\$269.35	
CRDO	\$81.00	Outperform	\$93.49	
DELL	\$145.00	Outperform	\$123.99	
INTC	\$22.00	Neutral	\$22.69	
MU	\$150.00	Outperform	\$124.76	
NVDA	\$170.00	Outperform	\$157.75	
STX	\$130.00	Outperform	\$141.44	
WDC	\$61.00	Outperform \$63.29		

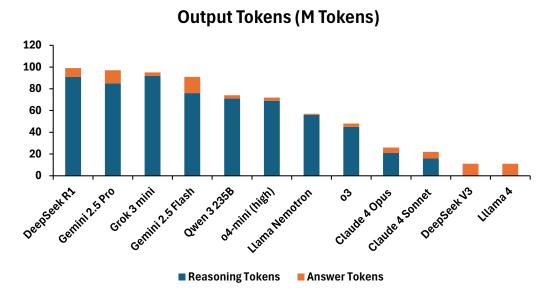
Source: Bloomberg and Mizuho Securities USA

NVDA: pulls in B300, air-cooled Rubin, key ecosystem moats (CUDA, Spectrum-X, NVLink) position it well. We believe NVDA GB300 ramps ~2H25E with sampling 3Q25E/production into 4Q25E. NVDA could launch air-cooled Rubin for existing air-cooled data centers. We believe power remains a challenge, as NVL576 potentially coming in at ~600kW/rack (NVL72 ~120kW) in 2027E potentially challenges exploring disaggregated power racks solutions. We continue to see NVDA's GPU HW/SW-CUDA moat significantly ahead vs RoCM but also rack-scale ecosystem expanding with NVLink/Spectrum-X/Infiniband and expanding NVDA DGX Cloud adoption following the Lepton AI acquisition.

REASONING Driving Token generation 10-12x Vs single-shot LLMs while Answer Token ~15% of Token Generation

We continue to see test-time scaling (reasoning) driving accelerated token demand, up 10-12x vs. non-reasoning models, with reasoning tokens accounting for \sim 73-98% generated in similar situations and Answer tokens \sim 15%. The rapid rise of reasoning models has led to increasing need for compute dedicated to inference, which NVDA has noted could be 100-1000x current levels. When asked the same set of questions across 12 different leading LLMs, including 2 non-reasoning models, the tokens generated to reach a solution ranged from 2-9x for reasoning models compared to models that give a direct answer, with Deepseek R1 generating 99M tokens to get to a result vs. Llama 4 at 11M. We also highlight that the majority of tokens generated by reasoning models was dedicated to reasoning rather than answers, with reasoning token mix ranging from 73-98% of tokens generated.

Exhibit 1 - Reasoning Models Generating Significantly Higher Token Counts



Source: Artificial Analysis, MSUSA Estimates

While NVDA is the GOLD Standard for Training Globally, Custom ASIC shipments could EXCEED GPU Shipments in 2026E.

We estimate strong initial ramps of NVDA Rubin in 2026E could see NVDA shipments up 14% y/y, as our speakers noted that NVDA could roll out an air-cooled version of Rubin as many traditional data centers are still built to support air-cooled architectures, which expands its TAM. We continue to see AMD as a key second source for GPUs, but share is expected to remain small as MI308 bans in China could also have an adverse effect on GPU shipments this year ahead of MI355X ramps with partners META, MSFT, potentially AMZN. Furthermore, we see AVGO continuing to dominate the ASIC market as MTIA ramps in 2025/26E alongside TPU, while potential AAPL and OpenAI projects could provide additional 2026E+ tailwinds as AVGO sees its TAM expanding to \$60-90B by F27E.

scotiagam.com - 1832 Asset Management, L.P. - 30/06/2025 02:16 AM UTC

While Custom Si startup costs are high, we estimate at ~\$50M per chip, the marginal cost declines for CSPs exceed GPUs, while also delivering 50% lower power and better performance efficiency gains with some focus on vendor lock-in/dependency risk. Custom Si on average costs, we estimate, \$5,000-9,000 per chip vs GPUs at \$25,000-40,000/chip, giving ASICs a clear cost advantage vs. merchant silicon.

Also, TPUv7p (9216 Ironwood) is expected to deliver 10X better performance vs TPUv6p, at 700mm2 single compute die on 3nm, potentially delivering single-die performance at ~5-10% die size of NVDA B200, which runs on its on multi-chip module. Similarly, we estimate MTIA T-V2/3 mid-2026 doubles the silicon area vs prior generation and is expected to have die area closer to Rubin. Anthropic is currently running on AMZN Trn2, though AMZN has noted on raw compute Trn2 lags Blackwell.

The call also noted some risk to legacy GPU platforms (Ampere, Hopper) being assigned to Inferencing, as many of the older Inferencing platforms lack enough memory/HBM, and cannot run the newer large LLMs for inferencing, or suffer from significant latency and narrow bandwidth. So many of the Ampere platforms have been going unutilized as LLM sizes/latency/bandwidth demands grow.

Exhibit 2 - NVDA with Some Near-term Headwinds from Loss of H20, But Blackwell Strong

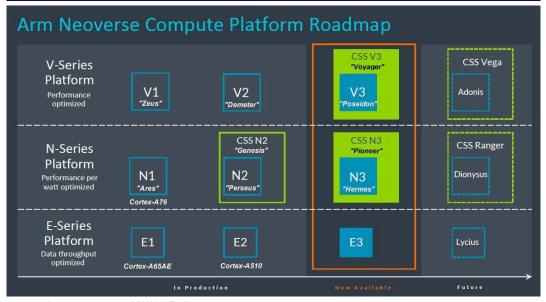
Total AI Accelerator Shipment	ts						
	2023	2024	2025E	2026E	2027E	2028E	2029E
Nvidia	1,850,000	4,500,000	5,300,000	6,020,000	6,206,000	6,421,000	6,704,000
AMD	120,000	550,000	775,000	885,000	945,000	1,027,000	1,049,000
Intel	63,000	83,000	90,000	100,000	155,000	213,000	226,000
GPU Total	2,033,000	5,133,000	6,165,000	7,005,000	7,306,000	7,661,000	7,979,000
ASIC	1,519,400	2,996,000	5,110,000	6,393,000	7,170,000	7,719,996	8,169,978
Total	3,552,400	8,129,000	11,275,000	13,398,000	14,476,000	15,380,996	16,148,978

Source: Company reports, MSUSA Estimates

ARM Continues To Expand Its Reach in Compute, Targeting 50% Server CPU Share in 2025E

Our calls noted that key hyperscalers are continuing to ramp in-house CPUs built on ARM, as we believe Graviton is now being deployed in >50% of new AWS traditional compute servers, while Azure is ramping Cobalt from $\sim\!15\%$ in 2025E to $\sim\!33\%$ of servers in 2026E and Axion ramps progressing nicely at GCP, all major tailwinds for ARM. Following CEO Rene Haas' keynote at our 2025 Tech conference (Link), we noted ARM is targeting increasing its server CPU share to 50% by year-end 2025E as it is seeing additional tailwinds from NVDA Grace CPUs. We note additional tailwinds for ARM from Stargate, as it works on an AI accelerator Izanagi for training workloads with partner Softbank's acquisitions Graphcore and Ampere acquisitions enabling its Neoverse Compute Subsystems (CSS) to develop in-house silicon.

Exhibit 3 - ARM Driving Compute Share Higher Through Strength of Neoverse Platform



Source: Company reports, MSUSA Estimates

With H20 and MI308 Banned, China Looking Inward for Alternatives

As the AI race continues to heat up, China AI players are continually looking inward to develop AI accelerators to meet their AI ambitions following the US's ban on H20 and MI308 shipments. We believe Huawei, with Ascend, has made the strongest push into GPUs, but we note traction at China Hyperscalers (Alibaba, Baidu, Tencent, ByteDance) has been limited as they continue to work on their internal GPU/ASIC efforts and continue to rely on their existing supply of NVDA GPUs.

AMZN First To Have B200 On-Demand

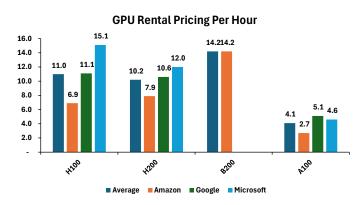
Rental prices of NVDA GPUs remains elevated at key leading US CSPs, with avg. H100 pricing coming in at \$11/hr and H200 at \$10.20 as we see the majority of GPU remaining contracted, rather than on-demand. ASICs now deliver 2-10x better perf/watt as compared to GPUs, delivering ~40% cost reductions for specific workloads. We believe more favorable pricing for ondemand ASICs could drive Hyperscalers to ramp deployments, offering better deals to customers and more quickly capitalizing on growing AI demand, while also lowering reliance on NVDA.

Exhibit 4 - China Rolling Out Al Accelerators With US
Products Banned

OEM	Chip Name	Performance/Specs			
Huawei	Ascend 920 (920C)	900+ TFLOPS, 4 TB/s of HBM3, 30-40%			
Huawei	Ascend 320 (320C)	effiency boost vs. 910C			
	Ascend 910 (C/B)	for High-end Training, 910B performance			
Huawei		similar to A100/1000, 910C seeing			
		improved yields			
Alibaba	Hanguang 800	ASIC inference chip, widely deployed in			
Alibaba		Ali Cloud			
Baidu	Kunlun II/III	Dual-mode training + inference			
Daluu	Kulltuli II/III	architecture			
Tencent	Zixiao + Enflame	Al Inference ASICs			
Biren	BR100	~2 PFLOPS on graphics workloads			
Horizon Robotics	Journay 2 (DDLL2 0)	>4 TOPS @ 2W using ARM Cortex-A53			
HOHZOH RODOLICS	Journey 2 (BPU 2.0)	Cores			

Source: Proprietary Industry Expert Presentation, company reports, MSUSA Estimates

Exhibit 5 - MSFT with Highest Rental Prices of NVDA GPUs, AMZN First to Deploy B200



Source: Artificial Analysis, MSUSA Estimates



Price Target Calculation and Key Risks

Advanced Micro Devices, Inc. (AMD)

Investment Thesis

We see AMD well-positioned as a second-place AI accelerator competitor after enjoying continued strength in DC compute with share gains as it ramps its Zen 5 Turin with missteps from its competitor. We believe AI accelerator demand remains strong as MI325x/355x ramp in 2025E, with a strong roadmap to MI400X and beyond driving into the ~\$500B AI accelerator market by 2028E (~60% 23-28E CAGR), currently dominated by NVDA, with upside from an estimated ~MSD% market share. 2025E could see continued strong roadmap execution with Zen 6 Medusa and Venice.

Base Case/PT

With AMD gaining server share, a potential PC rebound and upcoming AI product launches, we see a base case PT of \$135, 20.9x our F26E P/E.

Bull Case/PT

If AMD can win significant server/DC market and capitalize on growth in AI, AMD could drive EPS to \$5.60 with accretive GMs and better than expected Instinct ramps, implying a bull case PT of \sim \$180 and a 25.3x F26E P/E with a \$7.10 EPS.

Bear Case/PT

If AMD is unable to maintain current roadmap execution momentum and loses server market share, AMD could see growth decline, leading to a downside EPS of \$5.87, with a 17.0x F26E P/E and implying a bear case PT of ~\$100.

Risks

AMD could see challenges with an AI slowdown into 2025 or a PC market rebound in 2025E not materializing. We also believe INTC proves more of a threat to AMD vs. prior years with its new product roadmap which could slow or reverse AMD's recent share gains. We would also note AMD remains a distant second supplier to NVDA in the AI GPU race, with limited CoWoS allocations potentially limiting growth.

Broadcom Inc. (AVGO)

Investment Thesis

AVGO remains an industry leader with strong profitability, GM/OM at ~79%/65% and FCF/year growing toward ~\$31B by F25E while benefiting from key secular AI drive tailwinds for its networking and custom ASIC business. AVGO could benefit from accelerating AI tailwinds with potential for AI revenue growing to ~\$40-50B by F27E (up 4x vs. F24) and a current custom silicon SAM of ~\$17.5B (AVGO ~70% share) potentially growing to \$60-90B with AI networking Tomahawk and Jericho outpaces Infiniband as 800G/1.6T transitions take hold. We continue to see strength in its broad semiconductor portfolio including Wireless (iPhone), Networking (Tomahawk, Jericho, Trident), Storage, Broadband (Wifi6/6e/7), and Software, where >90% of bookings are recurring. We see iPhone content remaining strong, ramping iPhone 16 with potential for further gains in 17.

Base Case/PT

We see AVGO well positioned with Networking and AI ramps, a strong position in Wireless, and margin-accretive software. We rate AVGO Outperform, with a \$310 PT based on \sim 37.6x our F26E EPS estimate.

Bull Case/PT

If AVGO can see improved AI opportunities in custom silicon and networking we believe AVGO could see a Bull case PT of \sim \$425, with an \$8.90 upside F26E EPS, indicating a \sim 47.8x F26E P/E.

Bear Case/PT

The company could see headwinds in key growth drivers in Networking/AI with increasing competition, representing a Bear case PT of \sim \$225, \sim 29.5x our downside F26E EPS of \$7.63.

Risks

AVGO competes in a cyclical, technologically intensive industry and sells to a concentrated customer base. Risks include: a) AVGO's continued success of its research and development efforts, b) execution of its new product launches, c) dependence on contract manufacturing and third-party manufacturers, d) customer concentration, e) competition, and f) pricing pressure from possible new

@scotiagam.com - 1832 Asset Management, L.P. - 30/06/2025 02:16 AM UTC

market entrants from China, Asia-Pacific, or Taiwan. We could also see changes in legal and regulatory requirements, tariffs and exchange rates limiting growth.

Credo Technology Group Hldg (CRDO)

Investment Thesis

CRDO is a technology innovator with strength in SerDes IP, server interconnect products with its AEC (active electrical cables), Optical DSP, Line Card PHY, chiplets, and IP licensing. CRDO is actively engaged with all seven major hyperscalers, as well as CSP, Enterprise, and Networking customers and is benefiting from increased AI infrastructure spending for its Optical and AEC solutions. CRDO has strong GMs at \sim 65% (at to above LT 63-65%), and we believe is an attractive company with competitive advantages in SerDes IP that can drive materially lower TCO in Data Centers compared to the competition with a TAM potentially \sim 15x its current AEC revenue run rate of \sim \$400M/yr.

Base Case/PT

Our \$81 PT is ~15.5x our F27E P/S and represents our base case scenario. We view CRDO as a leader, with a full suite of products addressing the 400G+ market, growing 2x overall DC market.

Bull Case/PT

If CRDO can successfully ramp at its 3 key hyperscale customers, ramp capacity and potentially add additional hyperscale customers, as well as see overall faster 400G/800G ramps, it could see benefits to its top and bottom lines. Our upside case scenario implies a \$130PT, and ~23x our upside F27E sales of \$1.1B.

Bear Case/PT

If CRDO sees tougher than expected competition, fails to sustain traction with AEC, or sees a slowdown in DC, we see CRDO trading at \$50, ~11x our downside F27E topline of \$909M.

Risks

CRDO is sensitive to spending from a few large customers in the Data Center market, including US/China hyperscalers and CSPs. While an advantage typically, if its customers significantly pull back on buildouts and investment, then this could negatively impact CRDO's growth. Competition, mainly from AVGO and MRVL, could be headwinds to CRDO, as well exposure to China customers, and TSMC as its sole source foundry partner.

NVIDIA Corporation (NVDA)

Investment Thesis

We see NVDA remaining the leader in the AI training and inference chips for Data Center applications (we estimate >95% share today), which we believe is growing at $\sim60\%$ CAGR to >\$500B by 2028E. Gaming GPUs (we estimate >75% PC share) are expected to remain healthy and stable, while NVDA's automotive ADAS pipeline remains strong. We continue to see NVDA executing its roadmap, with GB200 and NVL72/36 ramping in 2025E, as well as increasing its AI server content via the Grace CPU. We believe headwinds from China AI chip restrictions remain muted. We also see upgrade cycle opportunity for the RTX 50-series as RTX 40-series penetration remains at $\sim10\%$ of the PC market, as NVDA could see a >\$14B/yr Gaming revenue run rate.

Base Case/PT

NVDA remains well positioned in the machine learning, deep learning, and AI markets. Our \$170 PT reflects ~31x F27E P/E, still within its historical range ~20-65x as it retains >75-90% market share in merchant DC/AI.

Bull Case/PT

NVDA has significant market leading opportunities in the AI/DC, Gaming, and Automotive markets, which could drive F27E EPS to \sim \$6.02 and a share price of \sim \$250, with a \sim 42x F27E P/E.

Bear Case/PT

If NVDA is unable to maintain strong growth in key markets as well as fails to continue to capitalize on AI opportunities, we could see it trading closer to ~22x our bear case F27E EPS of ~\$4.97, implying a share price of ~\$110.

Risks

Escalations of export restrictions to China and other geopolitical tensions (Taiwan) or a significant pullback in Al Server spending could be major headwinds. We would also note limited CoWoS capacity at TSMC, and other suppliers, potential for FTC lawsuits, and growing competition both domestically and in China, with current shipment bans, pose additional challenges.

Intel Corporation (INTC)

Investment Thesis

We believe a new CEO could provide opportunities with a vision to return the company to growth and a trajectory to catch up with key peers AMD/NVDA in AI, Server, and PC. INTC's market opportunities remain abundant with leading share in server CPU, strong, but declining, market share in PC, and a lagging AI portfolio with Gaudi/Falcon Shores. However, we see challenges with execution as its foundry roadmap remains weak, while its AI accelerator roadmap lags both AMD/NVDA. We do see FPGA spinoff a value-adding driver, but overall remain on the sidelines with multiple headwinds and lacking company vision. We continue to see the potential spin-off/sale of its foundry business as long-term positive.

Base Case/PT

While INTC has multiple potential tailwinds including AI opportunities, IFS expansion, margin improvements and the FPGA spin, execution in these key segments has been weak with soft AI and server traction and PC share loss. We rate INTC Neutral with a \$22 PT, ~31.6x our F26E EPS.

Bull Case/PT

If INTC can generate better than expected DC/Al revenues, successfully ramp IFS, or unlock value with business unit spin-offs, INTC could see a \$29PT at ~37.9x F26E EPS.

Bear Case/PT

If INTC has issues with new nodes/product ramps, sees softer DC/AI, or sees foundry setbacks, we believe it could lead to share gains for AMD and NVDA, leading to a bear case PT at \sim \$15, or \sim 23.7x F26E EPS.

Risks

INTC will need to continue to execute in 2025E on its process node roadmap as well as gain traction in its Foundry business, while it continues its search to find new leadership. Further missteps could see it lose further share to AMD in PC and/or Server, as well as fall farther behind in the AI race to NVDA.

Western Digital Corporation (WDC)

Investment Thesis

We believe the HDD market is set up well heading into 2025E, as AI server demand remains strong, we estimate up 25% y/y, while traditional compute servers are also estimated up ~7% y/y. With more PC customers moving to SSD for storage needs, we believe the server market is now the key customer for HDDs. We expect overall HDD shipments to trend lower, but we see strength in nearline/enterprise HDDs, with increasing capacities as AI server customers see increasing storage needs. Despite losing some share to STX in 2024, we believe WDC remains a key player in the HDD market and market leader with its UltraSMR 36TB products launching in 2H25E ramping well, but we note near-term headwinds as key competitors launch their initial products in 2025E, driving better TCO vs. UltraSMR, potentially leading to further share loss. We see HAMR as a long-term catalyst for WDC, with 2 major CSP customers already sampling products ahead of a 2027E launch, with first drives likely at 38TB. With the SNDK spin now behind it, we see limited near-term tailwinds for WDC's business as we see it trading at a slight discount to key peer STX.

Base Case/PT

We see nearline HDD remaining strong and potential for further ASP boosts into 2025E with higher capacity drives ramping. We see potential for some slight share loss in 2025E for WDC as competitors start to ramp HAMR products, ahead of WDC's estimated launch in 2027E. We rate WDC Outperform with a \$61PT, ~11.4x our F26E EPS.

Bull Case/PT

If WDC sees stronger than expected uptick in HDD demand from Al server customers, or its UltraSMR products ramp better than expected with HAMR on the horizon, we believe WDC could see trade at \$100/share, or ~17.3x our upside F26E EPS of \$5.78.

Bear Case/PT

If WDC has slower than expected high capacity ramps, or softer overall demand, which limit shipments and lead to lower ASPs and greater than expected share losses, we believe WDC could be \$25/share, ~5.0x our bear case F26E EPS of \$4.96.

Risks

WDC competes in a cyclical, technologically intensive industry and sells to a concentrated customer base. Key risks include competition from STX and Toshiba, typical cyclicality seen in the HAMR market, lack of a HAMR portfolio until 2027E, declining PC HDD demand, reliance on the server market to drive demand with AI servers as key driver, a slowdown in hyperscaler capex spend and lower than expected ASP gains from node transitions.

Seagate Technology PLC (STX)

Investment Thesis

We believe STX could see 2025E tailwinds with continued strength in AI as HAMR ramps and enterprise SSD and nearline demand remain strong. We believe HDD pricing bottomed in the SepQ'23 with improvements over the last few quarters helping improve margins as STX heads into 2HF25E. We believe STX's long-awaited HAMR began ramping at customers in 4Q24 laying a foundation for a potentially better F25E(Jun) as costs, utilization, pricing continue to drive improving margins. We believe long-term Exabyte growth remains in the mid-20% range y/y. We see STX with another strong year in its VIA business in C25E, driven by higher demand for smart applications, as well as analytics for AI at the edge. We also see STX as a potential winner from AI on-device as OEMs look to improve storage capabilities, as well STX potentially benefiting from better cloud and enterprise demand.

Base Case/PT

In our Base Case, we see lower inventory and a demand upcycle driven by Cloud/Enterprise in C25E as AI strength remains a key tailwind, driving our Outperform rating on STX and \$130 PT, ~13.5x our F26E P/E.

Bull Case/PT

②scotiagam.com - 1832 Asset Management, L.P. - 30/06/2025 02:16 AM UTC

STX could continue to see strong ramps in Cloud storage, particularly in higher margin nearline, given faster-than-expected AI ramps as well as improved operating leverage driven by the HAMR technology ramp as production yields increase, resulting in our Bull Case F26E EPS of \$10.41 which we value at a $\sim 15.8x$ P/E, implying an upside PT of \$165.

Bear Case/PT

In our Bear Case, STX could see significant headwinds related to HDD share loss, potential HAMR ramp challenges, and consumer end-market demand softening more-than-expected. In our downside scenario, we see F26E EPS tracking lower at \$8.93 while our target P/E multiple falls to $\sim 10.6x$, implying a Bear Case PT of \$95.

Risks

Key risks for STX include underutilization remaining low and cloud/enterprise demand growth, particularly for AI, being weaker than expected, leading to headwinds to its GM trajectory. We would also note potential headwinds from no in-house NAND supply, traditional cyclicality tied to memory/storage markets, and delays to the ramp of its HAMR products.

Micron Technology, Inc. (MU)

Investment Thesis

We see MU benefiting from AI driven tailwinds supporting HBM share gains led by NVDA, while AI enabled PCs and phones could see DRAM and NAND content double. We believe MU remains well positioned with leading edge DRAM nodes driving cost downs while remaining disciplined with wafer starts, but we note near-term headwinds with NAND pricing better into 2H25E. We believe MU remains attractive with strong AI demand, driven by HBM, Data center SSDs, LP5 and high-density DIMMs offsetting lagging edge DRAM and NAND demand lookto mostly be behind it as PC/handset inventories appear to be mostly flushed out, with AI on-device and higher ASP products driving tailwinds.

Base Case/PT

We see continued strength into 2H25 improving with better HBM pricing, industry supply discipline, and further ramps of leading edge products, offsetting legacy product weakness. We rate MU Outperform with a \$150 PT, ~2.4x F26E P/B.

Bull Case/PT

Extraneous shocks to supply, faster than expected recovery in demand/inventory could drive DRAM/NAND prices higher earlier, as well as HBM ramps ahead of expectations, and drive upside to the stock, we believe towards ~\$200, at ~3.2x our upside F26E P/B.

Bear Case/PT

Higher than expected pricing pressure on NAND and DRAM into 2H25E, with softer than expected demand from Data Center, PC, or handsets, as well as slower than expected share gains in HBM, could see a return to broad-based memory oversupply and MU trade closer to \sim 1.7x our downside F26E P/B, or \sim \$105.

Risks

Key risks include for MU include memory ASP declines and cyclicality, competitive and market share pressures, increased industry memory capacity and capex from competitors, higher than expected costs or yield issues, slower DRAM/NAND improvement and/or yield issues affecting ramps, and increased HBM competition from Hynix/Samsung, limiting MU's share growth.

Arm Holdings plc (ARM)

Investment Thesis

ARM is a global leader in semiconductor intellectual property (IP), powering >99% of the world's smartphones and has shipped 300B + Arm-based chips to date. Arm leverages a broad IP platform across client (smartphone, PC, XR and wearables), infrastructure (servers, cloud, networking, and 5G), automotive, and Internet-of-Things (IoT) end-markets to bring energy-efficient central processing units (CPU), graphics processing units (GPU), and system IP to its customers. We see ARM well positioned as the company should see increasing royalty revenues driven by a shift from v8 (\sim 4% royalty rate) to v9 (\sim 8-10% royalty rate), a 2-3x increase, and we estimate overall royalty rates growing \sim 70%+ by F26E. In addition to a \sim 99% share in the Smartphone market but is also seeing strong opportunities in Infrastructure at AI customers AMZN/NVDA/MSFT/GOOGL and Automotive with xEV driving ADAS, infotainment, and complete in-car compute systems.

Base Case/PT

We see Arm as a global leader in semiconductor IP, and increasing opportunities in DC, client and automotive to drive better units/content. We rate Arm Outperform with a \$160 PT, ~1.5x F27E PEG.



Bull Case/PT

Arm could see stronger than anticipated demand and share gains driven by Al ramps, improved IoT, and faster transitions to v9. In our Bull case scenario, we see Arm share prices rising to \$264, at \sim 2.5x PEG.

Bear Case/PT

If Arm sees slower v9 adoption, or is impacted by geopolitical headwinds with Arm China, we could see weaker earnings growth and softer \sim 0.9x PEG, resulting in a Bear case scenario of \$97/share.

Risks

ARM could see competition from emerging open-sourced architectures such as RISC-V, but could also see impacts from slower AI/ handset markets as well as challenges sustaining higher royalty rates. We would also note that ARM's current revenue mix is highly tied to the handset market, where it has \sim 100% market share, while its top 5 customers make up >50% of its revenues and sees investor concentration with Softbank still owning \sim 90% of shares.

Dell Technologies Inc. (DELL)

Investment Thesis

We see DELL as a growing player in the AI server market, with F4Q25 sales of \$2.1B, a \$9B AI server backlog exiting February, and even stronger pipeline (several multiples of backlog and up q/q in the JanQ) as it looks to capture share. We see DELL preparing for the ramp of GB200 platforms this year as it recently added 2 DLC servers to its product lineup. We do see headwinds from limited AI server OMs, but we would note offsets from traditional compute server strength and its strong storage margins. We see potential tailwinds from DELL with increasing storage needs tied to AI server cluster ramps, as well as benefit from an expected corporate PC refresh, which could lead to higher adoption of AI PCs as refresh cycles have elongated to 3-4 years post-Covid vs. historical 2-3 years. We believe DELL has negative WC due to strong supplier relationships and a strong balance sheet, which helps drive strong FCF to support its growth into the AI server market.

Base Case/PT

With a strong compute server market share, growing AI server share, and a pending corporate PC refresh, we rate DELL Outperform with a \$145 PT, 13.7x our F27E EPS of \$10.60.

Bull Case/PT

If DELL can build off its AI server backlog and capture more of its pipeline, as well as see strong ramps of AI PCs and corporate PC orders, we believe DELL's F27E EPS could reach \$11.66 and trade at an 17.2x P/E, indicating a \$200PT.

Bear Case/PT

If DELL sees its AI share stagnate or fall and the PC refresh cycle takes longer than expected, we could see DELL's F27E come in below our estimates at \$9.64 and trade at a 10.4x P/E, or a \$100PT.

Risks

DELL risks include the potential slowing of AI server ramps, slower than expected AI PC ramps, a continued drawing out of corporate PC refreshes, customer concentration in the AI server market as DELL mostly services Tler-2 CSPs and enterprise customers who traditionally have less deployable capital than hyperscalers, margin sensitivity as ramping of AI servers could lead to compressed margins in the short-term as it offers deals to win share, competition with AI server builds all fairly similar and DLC server being expensive and leading customers potentially back to air-cooled, as well as geopolitical/macro risks.

Companies Mentioned (prices as of 6/27/2025)

Alphabet, Inc. (GOOGL- Outperform \$178.53) SoftBank Group Corp. (9984 JP- Not Rated) Amazon.com, Inc. (AMZN-Outperform \$223.30)