

# Nvidia Corp. (NVDA)

Reiterate Buy (on Conviction List) as supply of AI infrastructure still not caught up to demand; FY3Q EPS preview

<b>NVDA</b>	12m Price Target: <b>\$150.00</b>	Price: <b>\$139.91</b>	Upside: <b>7.2%</b>
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We reiterate our Buy rating on NVDA (also on the Americas Conviction List) ahead of the company's FY3Q (Oct) earnings release scheduled for 11/20 (post market close). Although we expect FY1Q (April) to be the true 'break out' quarter in which the ramp of Blackwell coupled with improved supply-side conditions drives meaningful positive EPS revisions, we expect FY3Q (Oct) results, FY4Q (Jan) guidance and management commentary on the earnings call to support our constructive thesis on the stock. With NVDA still trading well below its past 3-year median P/E multiple relative to our broader coverage universe, we believe the stock is set up well to sustain its outperformance. See our full note for a summary of the key takeaways from CY3Q24 earnings season so far (particularly, reports and commentary from the major CSPs/hyperscalers) and our updated Bull/Bear framework.

## Key Takeaways from CY3Q24 Earnings Season and Implications for Nvidia

**Demand for Compute remains strong:** Four of Nvidia's largest customers — Alphabet (10/29), Meta (10/30), Microsoft (10/30) and Amazon (10/31) — reported earnings last week. Although the evolution in the rate of cloud revenue growth varied by customer (for instance, Google exhibited acceleration from +29% yoy in 2Q24 to +35% yoy in 3Q24, while Microsoft Azure's growth decelerated marginally from +34% (+35% in CC) to +33% (+34% in CC) yoy and AWS' rate of growth was stable at +19% yoy, all three explicitly stated or implied that supply, not demand, remains a constraining factor. Microsoft, in fact, noted their expectation for Azure revenue growth to re-accelerate in FY2H25 (i.e. March and June quarters) as more capacity comes online. Reports and comments from Nvidia's partners and competitors also point to a robust AI infrastructure market backdrop. **1) SK Hynix:** our colleague, Giuni Lee, estimates

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### Key Data

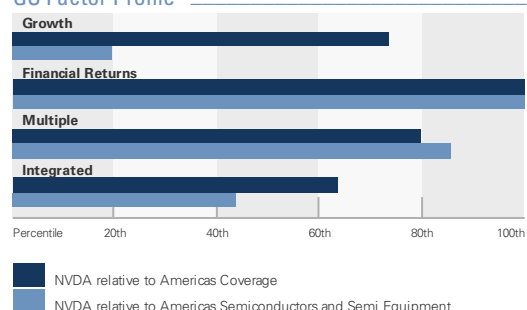
Market cap:	\$3.5tr
Enterprise value:	\$3.5tr
3m ADTV:	\$35.7bn
United States	
Americas Semiconductors and Semi Equipment	
M&A Rank:	3
Americas Conviction List	

### GS Forecast

	1/24	1/25E	1/26E	1/27E
Revenue (\$ mn)	60,922.0	129,630.9	198,876.5	229,179.9
EBITDA (\$ mn)	35,093.0	83,256.2	128,025.2	148,470.4
EBIT (\$ mn)	33,585.0	81,568.2	126,275.2	146,640.4
EPS (\$)	1.15	2.77	4.39	5.25
P/E (X)	34.5	50.5	31.9	26.6
EV/EBITDA (X)	28.0	41.0	25.9	21.5
FCF yield (%)	2.8	1.9	3.1	4.0
Dividend yield (%)	0.0	0.0	0.0	0.0
Net debt/EBITDA (X)	0.1	(0.2)	(0.5)	(0.8)

	7/24	10/24E	1/25E	4/25E
EPS (\$)	0.64	0.73	0.83	0.96

### GS Factor Profile



Source: Company data, Goldman Sachs Research estimates.  
See disclosures for details.

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Buy

CL

## Nvidia Corp. (NVDA)

Rating since Feb 23, 2023

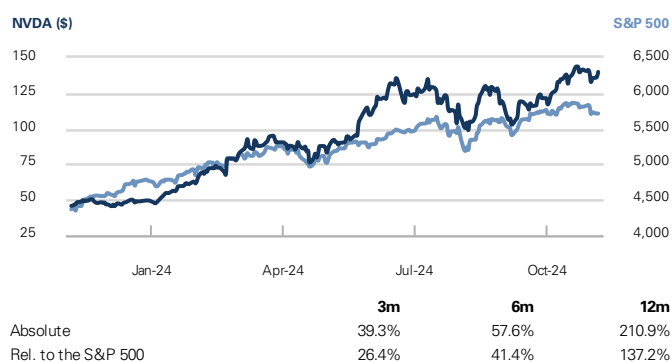
## Ratios &amp; Valuation

	1/24	1/25E	1/26E	1/27E
P/E (X)	34.5	50.5	31.9	26.6
EV/EBITDA (X)	28.0	41.0	25.9	21.5
EV/sales (X)	16.2	26.3	16.7	13.9
FCF yield (%)	2.8	1.9	3.1	4.0
EV/DACF (X)	30.7	46.6	29.2	24.2
CROCI (%)	66.4	108.6	136.8	144.6
ROE (%)	88.4	108.5	97.1	76.8
Net debt/EBITDA (X)	0.1	(0.2)	(0.5)	(0.8)
Net debt/equity (%)	5.6	(24.8)	(47.2)	(60.4)
Interest cover (X)	132.7	335.7	526.1	611.0
Inventory days	118.3	75.1	58.3	55.2
Receivable days	41.4	40.0	42.0	45.5
Days payable outstanding	44.1	41.1	34.0	32.8

## Growth &amp; Margins (%)

	1/24	1/25E	1/26E	1/27E
Total revenue growth	125.9	112.8	53.4	15.2
EBITDA growth	345.7	137.2	53.8	16.0
EPS growth	413.1	140.0	58.4	19.8
DPS growth	0.0	112.5	17.6	0.0
Gross margin	73.6	75.4	73.5	73.5
EBIT margin	55.1	62.9	63.5	64.0

## Price Performance



Source: FactSet. Price as of 5 Nov 2024 close.

## Income Statement (\$ mn)

	1/24	1/25E	1/26E	1/27E
Total revenue	60,922.0	129,630.9	198,876.5	229,179.9
Cost of goods sold	(16,105.0)	(31,872.6)	(52,677.4)	(60,681.2)
SG&A	(2,558.0)	(3,412.1)	(4,162.3)	(4,566.4)
R&D	(8,674.0)	(12,778.0)	(15,761.6)	(17,291.9)
Other operating inc./exp.)	—	—	—	—
<b>EBITDA</b>	<b>35,093.0</b>	<b>83,256.2</b>	<b>128,025.2</b>	<b>148,470.4</b>
Depreciation & amortization	(1,508.0)	(1,688.0)	(1,750.0)	(1,830.0)
<b>EBIT</b>	<b>33,585.0</b>	<b>81,568.2</b>	<b>126,275.2</b>	<b>146,640.4</b>
Net interest inc./exp.)	611.0	1,522.0	2,810.0	4,360.0
Income/(loss) from associates	—	—	—	—
<b>Pre-tax profit</b>	<b>34,196.0</b>	<b>83,090.2</b>	<b>129,085.2</b>	<b>151,000.4</b>
Provision for taxes	(5,433.0)	(14,406.1)	(21,944.5)	(25,670.1)
Minority interest	—	—	—	—
Preferred dividends	—	—	—	—
<b>Net inc. (pre-exceptionals)</b>	<b>28,763.0</b>	<b>68,684.1</b>	<b>107,140.7</b>	<b>125,330.4</b>
<b>Net inc. (post-exceptionals)</b>	<b>29,759.0</b>	<b>70,139.1</b>	<b>107,140.7</b>	<b>125,330.4</b>
<b>EPS (basic, pre-exception) (\$)</b>	<b>1.17</b>	<b>2.80</b>	<b>4.44</b>	<b>5.31</b>
<b>EPS (diluted, pre-exception) (\$)</b>	<b>1.15</b>	<b>2.77</b>	<b>4.39</b>	<b>5.25</b>
<b>EPS (ex-ESO exp., dil.) (\$)</b>	<b>1.30</b>	<b>2.97</b>	<b>4.63</b>	<b>5.54</b>
DPS (\$)	0.02	0.03	0.04	0.04
Div. payout ratio (%)	1.4	1.2	0.9	0.8
Wtd avg shares out. (basic) (mn)	24,692.5	24,545.2	24,168.5	23,593.9
Wtd avg shares out. (diluted) (mn)	24,932.5	24,806.8	24,425.8	23,854.9

## Balance Sheet (\$ mn)

	1/24	1/25E	1/26E	1/27E
Cash & cash equivalents	7,281.0	29,213.7	73,159.4	122,871.1
Accounts receivable	9,999.0	18,443.1	27,288.4	29,796.9
Inventory	5,282.0	7,825.5	9,000.3	9,345.7
Other current assets	21,783.0	30,254.0	30,254.0	30,254.0
<b>Total current assets</b>	<b>44,345.0</b>	<b>85,736.3</b>	<b>139,702.2</b>	<b>192,267.6</b>
Net PP&E	3,914.0	5,040.0	5,290.0	5,460.0
Net intangibles	17,469.0	20,709.0	20,709.0	20,709.0
Total investments	0.0	0.0	0.0	0.0
Other long-term assets	—	—	—	—
<b>Total assets</b>	<b>65,728.0</b>	<b>111,485.3</b>	<b>165,701.2</b>	<b>218,436.6</b>
Accounts payable	2,699.0	4,480.5	5,332.3	5,588.6
Short-term debt	1,250.0	0.0	0.0	0.0
Current lease liabilities	—	—	—	—
Other current liabilities	6,682.0	10,289.0	10,289.0	10,289.0
<b>Total current liabilities</b>	<b>10,631.0</b>	<b>14,769.5</b>	<b>15,621.3</b>	<b>15,877.6</b>
Long-term debt	8,459.0	8,461.0	8,461.0	8,461.0
Non-current lease liabilities	—	—	—	—
Other long-term liabilities	3,660.0	4,640.0	4,640.0	4,640.0
<b>Total long-term liabilities</b>	<b>12,119.0</b>	<b>13,101.0</b>	<b>13,101.0</b>	<b>13,101.0</b>
<b>Total liabilities</b>	<b>22,750.0</b>	<b>27,870.5</b>	<b>28,722.3</b>	<b>28,978.6</b>
Preferred shares	—	—	—	—
<b>Total common equity</b>	<b>42,978.0</b>	<b>83,614.8</b>	<b>136,978.9</b>	<b>189,458.0</b>
Minority interest	—	—	—	—
<b>Total liabilities &amp; equity</b>	<b>65,728.0</b>	<b>111,485.3</b>	<b>165,701.2</b>	<b>218,436.6</b>
BVPS (\$)	1.72	3.37	5.61	7.94

## Cash Flow (\$ mn)

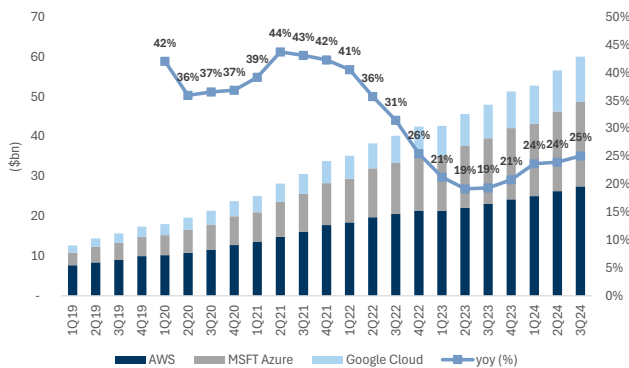
	1/24	1/25E	1/26E	1/27E
Net income	29,759.0	70,139.1	107,140.7	125,330.4
D&A add-back	1,508.0	1,688.0	1,750.0	1,830.0
Minority interest add-back	—	—	—	—
Net (inc)/dec working capital	(4,516.0)	(6,545.2)	(9,168.3)	(2,597.5)
Others	1,340.0	2,683.6	7,190.1	8,092.5
<b>Cash flow from operations</b>	<b>28,091.0</b>	<b>67,965.5</b>	<b>106,912.5</b>	<b>132,655.4</b>
Capital expenditures	(1,068.0)	(2,346.0)	(2,000.0)	(2,000.0)
Acquisitions	—	—	—	—
Divestitures	—	—	—	—
Others	(9,498.0)	(7,532.0)	—	—
<b>Cash flow from investing</b>	<b>(10,566.0)</b>	<b>(9,878.0)</b>	<b>(2,000.0)</b>	<b>(2,000.0)</b>
Dividends paid	(395.1)	(834.1)	(966.7)	(943.8)
Share issuance/(repurchase)	(9,533.0)	(30,898.0)	(60,000.0)	(80,000.0)
Inc/(dec) in debt	—	—	—	—
Others	(3,705.9)	(4,422.7)	—	—
<b>Cash flow from financing</b>	<b>(13,634.0)</b>	<b>(36,154.8)</b>	<b>(60,966.7)</b>	<b>(80,943.8)</b>
<b>Total cash flow</b>	<b>3,891.0</b>	<b>21,932.7</b>	<b>43,945.8</b>	<b>49,711.6</b>
Free cash flow	27,023.0	65,619.5	104,912.5	130,655.4
Free cash flow per share (basic) (\$)	1.09	2.67	4.34	5.54

Source: Company data, Goldman Sachs Research estimates.

that SK Hynix grew HBM revenue in 3Q24 by more than 70% qoq and 330% yoy to ~\$2.7bn, as the company's revenue mix shifted from one that was HBM3-heavy in 1H24 to HBM3E-heavy in 3Q24. Looking ahead, SK Hynix spoke to good demand visibility supported by long-term contracts with customers and the fact that their HBM capacity is sold out through the end of CY2025, **2) Samsung Electronics:** although it has taken Samsung longer than expected to win customer approval with its 8Hi HBM3E technology, the company nevertheless managed to grow HBM revenue by more than 70% qoq in 3Q24, driven by broad-based strength in AI; **3) AMD:** during its Advancing AI event hosted on Oct 10, AMD increased its AI accelerator TAM forecast from \$400bn by 2027 prior to \$500bn by 2028. In conjunction with its 3Q24 earnings release last week, management also raised its 2024 Data Center GPU revenue outlook to >\$5bn, up from >\$4.5bn as of three months ago and >\$2bn a year go.

**Exhibit 1: Cloud revenue growth has accelerated over the past few quarters, despite persistent supply constraints**

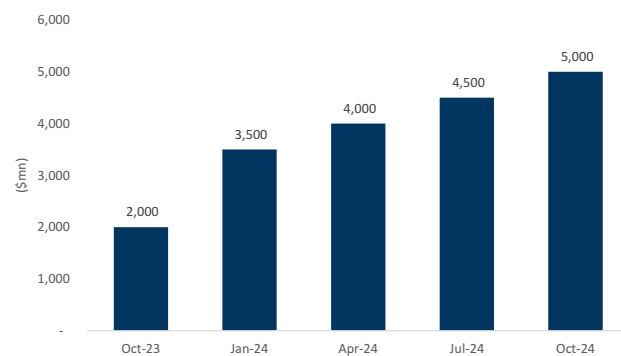
Cloud revenue and cloud revenue growth (yoy %)



MSFT Azure revenues are pre-restatement

Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 2: AMD's 2024 Data Center GPU revenue outlook has increased from \$2.0bn as of October last year to >\$5.0bn today**  
AMD's 2024 Data Center GPU revenue outlook (\$mn)



Source: Company data

**AI use cases:** The most frequent pushback to our positive investment thesis on NVDA has been the view that limited AI adoption (or ROI) would lead to a decline in AI infrastructure spending and, in turn, Nvidia's revenue and earnings. While we subscribe to the view that Nvidia will ultimately experience a cyclical correction when customers enter a phase of compute capacity digestion and/or optimization, we believe the likelihood of this happening in the near-term (i.e. 6-12 months) is limited, particularly given the recent increase in the breadth of AI use cases. We list below several examples that have been highlighted by cloud service providers (CSPs), hyperscalers and enterprises that span a broad spectrum of industry verticals and applications. **1) TSMC** shared that they actively leverage AI in their R&D operations and that a 1% increase in productivity has the potential to drive ~\$1bn in cost savings. **2) Snap**, who integrated Google Gemini's multi-modal capabilities in its My AI chatbot, witnessed >2.5x more engagement in the US. **3) Amazon Q**, a generative AI-powered assistant for software development saved Amazon's teams \$260 million and 4,500 developer years in migrating over 30,000 applications to new versions of the Java JDK. **4) Audi** used Google's AI tools for a campaign that increased the company's website visits by 80% and increased clicks by 2.7x, delivering a lift in its sales. **5) Google** shared that they have been able to improve efficiency of its engineers through the usage of AI which now

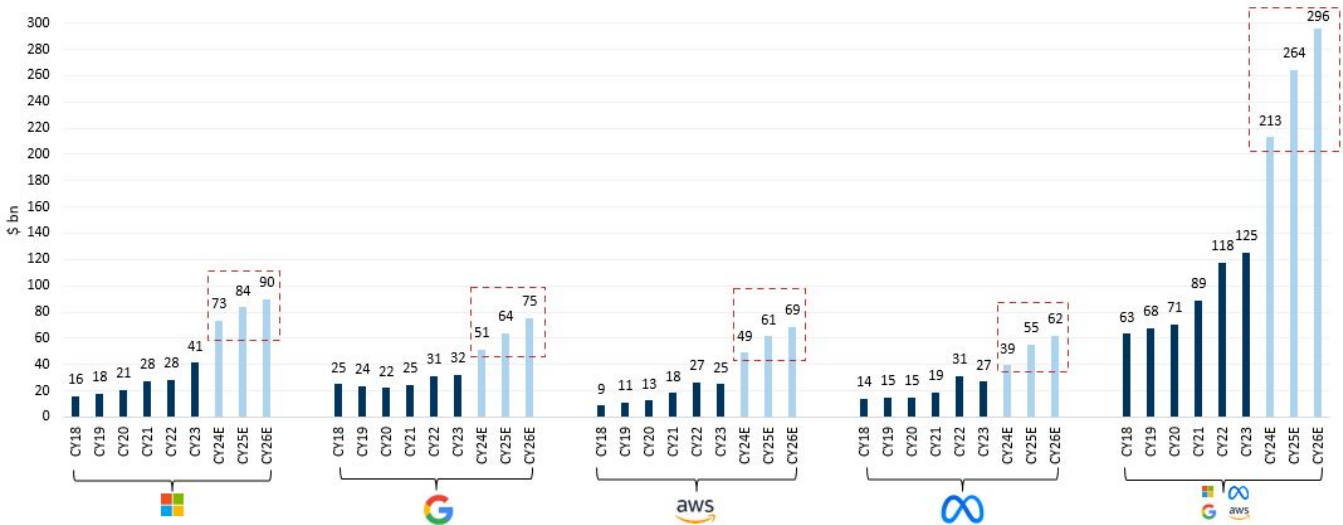
generates more than a 1/4 of all new code at the company. **6) LG AI Research** used a combination of Google TPUs and GPUs and reduced inference processing time for its multi-modal model by more than 50% and operating costs by 72%. **7) Volkswagen of America** is using Gemini to power its new myVW virtual assistant.

**Larger, more complex models to drive more demand for Compute:** while early large language models (LLMs) from the leading hyperscalers were trained mostly on text, models have increasingly become multi-modal in nature, while also growing in sophistication and complexity. One example would be OpenAI's o1 models that were designed to 'reason' (or spend more time thinking) before responding to a prompt. In the case of Meta, management on its 3Q24 earnings call highlighted that Llama 4.0 is currently being trained on a cluster of >100k H100 GPUs (which compares with Llama 3.0 405B that was trained on a cluster of 16k H100 GPUs). Similarly, xAI announced that it recently brought online Colossus, a 100k H100 GPU training cluster, and that it will double in size in a few months as it adds 50k H200 GPUs, also from Nvidia. As Nvidia, its customers and the broader eco-system continue to pursue AGI/ASI, we envision AI models growing progressively in complexity and, in turn, demanding more compute resources not only for Training (where Nvidia has been dominant competitively throughout) but also for Inferencing — a market in which, historically, general-purpose CPUs had a strong foothold but increasingly leverages accelerated computing given the need to satisfy both throughput and latency requirements.

**Cloud capex expectations went up (again):** following last week's earnings prints, our colleagues raised, to different degrees, capex estimates for the large CSPs. In aggregate, we now estimate global cloud capex to increase 70%/24%/11% yoy in 2024/25/26, up from 64%/14%/7% yoy prior, respectively. At the individual company level, management teams shared the following: **1) Microsoft** expects capex to grow sequentially in the December quarter given current cloud and AI demand signals, **2) Google** expects to spend ~\$13bn in capex in 4Q24 (flat qoq) after which it plans to increase capex again in 2025, albeit not at the same rate as 2024 (i.e. 59% yoy, per GSe), **3) Meta** narrowed its 2024 capex guide from \$37-\$40bn prior to \$38bn-\$40bn (+44% yoy at the midpoint) and noted its expectation for capex in 2025 to be up significantly vs. 2024 and **4) Amazon's** 2024 capex guide of \$75bn implies ~\$23bn capex in 4Q24 (+8% qoq, per GSe), while management also stated that capex is expected to be up in 2025 driven by spending in Gen AI infrastructure.

Exhibit 3: Our colleagues’ capex forecasts point to a 24%/ 11 % yoy increase in Cloud capex in CY2025/26, respectively, following a 70% increase in 2024

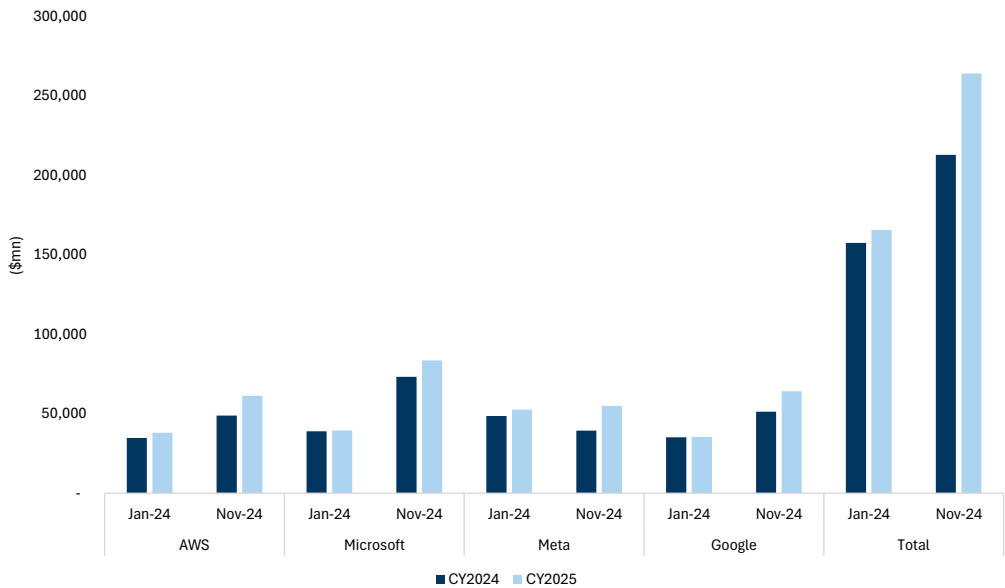
Capex (\$bn) at Microsoft + Google + Amazon + Meta



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 4: Our CY2024/25 bottom-up U.S. cloud capex forecasts have increased 35%/59%, respectively, since the beginning of the year

CY2024/25 capex forecasts for AWS, Microsoft, Meta and Google (Today vs. January 2024)



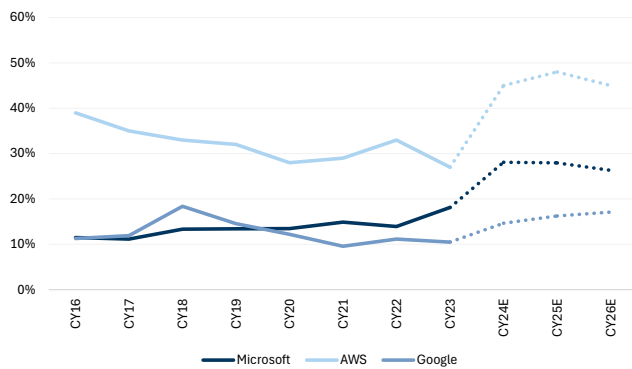
Source: Company data, Goldman Sachs Global Investment Research

**Capital intensity has increased but is at manageable levels, in our view:** as a way to gauge the sustainability of capital spending, we track capital intensity (i.e. capex as a % of revenue) and FCF generation at the large CSPs/hyperscalers. As we illustrate in [Exhibit 5](#), capital intensity at Microsoft, AWS and Google are expected to increase in 2024 and then trend flat to down through 2026, per our colleagues’ estimates. While growth in capital intensity in 2024 and the trajectory into 2025 will lead to increased scrutiny around capital spending on the part of investors, we believe there is enough

evidence of associated revenue acceleration for these companies to be able to balance long-term aspirations (that require aggressive capex) with near-term margins and returns. In the case of Microsoft, our colleague, Kash Rangan, believes that the company will be able to deliver growth in AI revenue (which is already happening at a much faster rate than what the company witnessed during the cloud compute cycle; [Exhibit 6](#)) while executing on cost management initiatives, and ultimately limit the capital investments' impact on corporate operating margins and EPS. Amazon, similarly, stated on its recent earnings call that its AWS AI business, growing at a triple-digit (%) rate, is already at a multi-billion dollar run-rate and is growing >3x faster than when AWS itself was at this stage of its evolution.

**Exhibit 5: Capex intensity (%) is expected to increase this year and stay elevated through 2026**

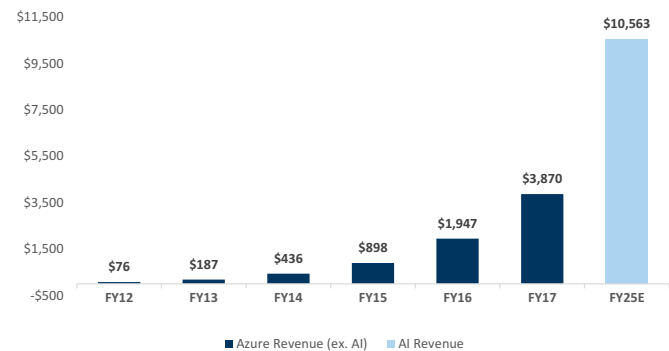
Capital intensity (Microsoft, AWS, Google)



Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 6: Azure AI revenue in Year 2 (FY2025E) is on track to significantly exceed Azure revenue in Year 7 (FY2017) of the Cloud Computing cycle**

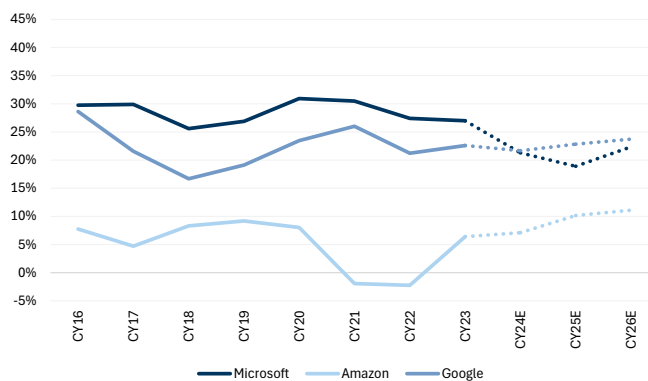
Azure AI revenue in FY25 (GSe) vs. Azure revenue (FY2012-17)



Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 7: Our colleagues expect FCF margins (%) to trend flat to up through CY2026 even in the face of growing capex requirements**

FCF (%) margin (Microsoft, Amazon, Google)



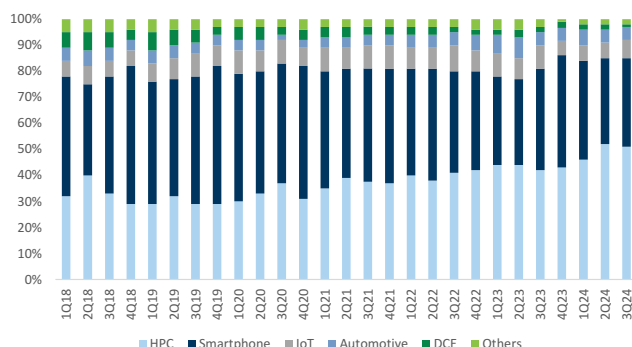
Source: Company data, Goldman Sachs Global Investment Research

**Supply chain datapoints indicative of sustained sequential growth:** Intra-quarter datapoints from other suppliers that make up the broader AI infrastructure eco-system have also been indicative of a positive demand backdrop. Some of the notable datapoints include: **1) TSMC** (covered by Bruce Lu): HPC revenue grew 65% yoy (in USD terms) in 3Q24, accelerating from +18%/+57% in the preceding two quarters



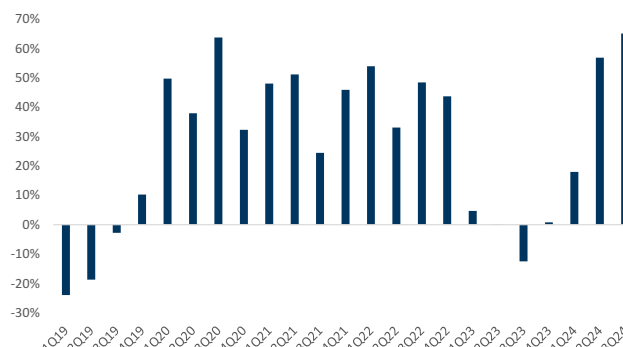
(Exhibit 9). For the full-year, AI revenue (i.e. including GPUs, AI accelerators more broadly and CPUs used for Training and Inference, per TSMC) is expected to grow >3x yoy and represent mid-teens % of total revenue. Driven by strength in AI, TSMC also revised up its 2024 revenue forecast from “up slightly above mid-20% yoy” to “up close to 30% yoy.” **2) Taiwan ODM (Wistron, Wiywynn, Gigabyte):** with relatively high exposure to AI servers, all three companies reported 3Q24 results that exceeded consensus expectations ([Wistron](#), [Wiywynn](#) and [Gigabyte](#)). **3) Hon Hai** (covered by Allen Chang): Hon Hai, who is expected to have dominant share of the initial shipments of Nvidia’s Blackwell GB200 racks, per our colleagues, reported strong September monthly revenue and 3Q24 results ([here](#)) and also shared its optimism on the AI server volume ramp in 2025 at its Tech Day hosted on 10/8 in Taipei ([here](#)). **4) Vertiv** (covered by Mark Delaney): Vertiv reported strong 3Q24 results and raised its 2024 revenue, EBIT and EPS outlook. Importantly, the company noted that it expects revenue growth in CY2025 to accelerate from +14% yoy in CY2024, based upon its strong backlog and pipeline ([here](#)). **5) Digital Realty** (covered by Jim Schneider): DLR reported 3Q24 total new bookings of \$521mn (vs. prior Street consensus (FactSet) of \$164mn) with ~4% embedded escalators over a multi-year period, suggesting continued supply constraints and robust demand trends.

**Exhibit 8: HPC as a % of TSMC’s total revenue was 51% in 3Q24, up from 42% a year ago**  
TSMC Platform Sales Breakdown (%)



Source: Company data

**Exhibit 9: TSMC’s rate of HPC revenue growth has accelerated over the past few quarters**  
TSMC’s HPC revenue yoy growth rate in USD (%)



Source: Company data

## FY2Q (July) and FY3Q (October) Preview

**FY3Q (October):** We model \$34.3bn (+14% qoq, +90% yoy) in revenue, 75.4% in non-GAAP gross margin (excl. SBC) and \$0.79 in non-GAAP EPS (excl. SBC) — all above FactSet consensus ([Exhibit 10](#)). We expect strong demand for Nvidia’s Hopper-based GPUs (i.e. H100 and particularly the H200) and Spectrum-X (i.e. Ethernet-based Networking product) to drive strong double-digit (%) Data Center revenue growth. By customer type, we expect broad-based strength across the large CSPs as well as enterprise and sovereign customers.

**FY4Q (January):** We model \$39.2bn (+14% qoq, +77% yoy) in revenue, 73.3% in non-GAAP gross margin (excl. SBC) and \$0.88 in non-GAAP EPS (excl. SBC) — once again, above FactSet consensus. We expect early shipments of Blackwell-based GPUs (recall management commentary from last quarter that pointed to several billion dollars

of Blackwell shipments in FY4Q) to augment increased shipments of Hopper-based GPUs.

#### Exhibit 10: Our near-term estimates sit above Street consensus

GSe vs. FactSet consensus

NVDA GSe vs. Street (\$mn except per share data)	3Q24			4Q24		
	GS	Street	% Diff.	GS	Street	% Diff.
Revenue	34,343	32,966	4.2%	39,204	36,552	7.3%
Gross Margin (%)	75.4%	74.9%	0.5%	73.3%	73.6%	-0.3%
Operating Margin (%)	66.6%	65.4%	1.2%	65.3%	64.4%	0.9%
EPS	\$0.79	\$0.74	6.3%	\$0.88	\$0.81	8.8%

Source: Goldman Sachs Global Investment Research, FactSet

#### Exhibit 11: Our 2025/26 non-GAAP EPS (excl. SBC) estimates sit 14% above consensus

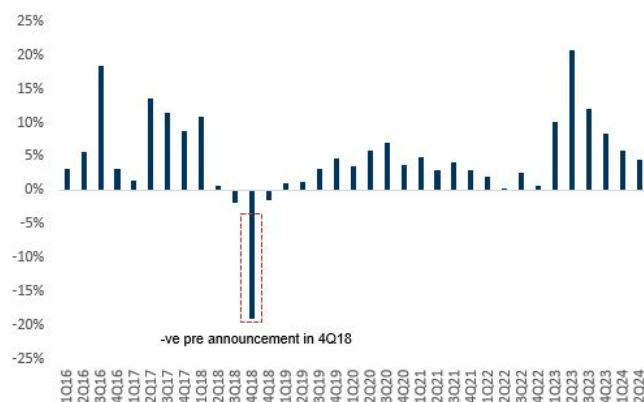
GSe vs. FactSet Consensus

NVDA (\$mn except per share data)	CY24			CY25			CY26		
	GS	Street	% Diff.	GS	Street	% Diff.	GS	Street	% Diff.
Revenue	129,631	125,708	3.1%	198,876	181,189	9.8%	229,180	216,944	5.6%
Gross Margin (%)	75.5%	75.6%	-0.1%	73.6%	73.4%	0.2%	73.6%	73.1%	0.5%
Operating Margin (%)	66.7%	65.4%	1.3%	66.5%	64.8%	1.7%	66.9%	64.7%	2.2%
EPS	\$2.97	\$2.85	4.3%	\$4.63	\$4.07	13.7%	\$5.54	\$4.86	13.9%

Source: Company data, Goldman Sachs Global Investment Research, FactSet

#### Exhibit 12: The magnitude of Nvidia's revenue beats have narrowed over the last few quarters, but could expand again in CY2025 driven by Blackwell...

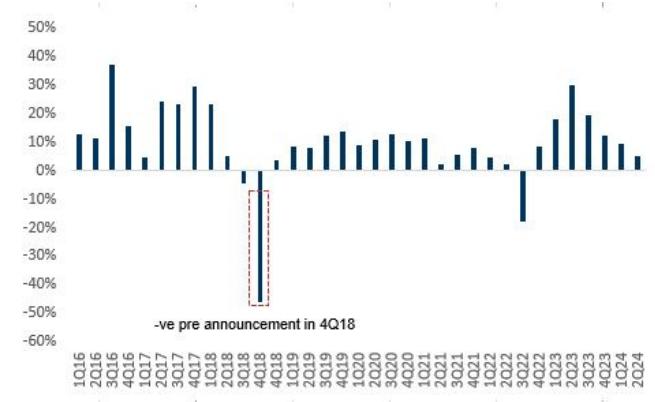
% beats/misses in Nvidia quarterly revenue vs. Street consensus



Source: FactSet

#### Exhibit 13: ... and the same could be said about Nvidia's non-GAAP EPS (excl. SBC)

% beats/misses in Nvidia's quarterly non-GAAP EPS (excl. SBC) vs. Street consensus



Source: FactSet

### Bull/Bear Analysis

Below we present an updated bull/bear framework to gauge NVDA's risk/reward profile at current levels. In short, we believe risk/reward on the stock is marginally favorable with our most bullish scenario pointing to 65% potential upside vs. 61% potential downside under our most bearish scenario. See below for a brief summary of the assumptions supporting our analysis.

#### Assumptions:

- In our most bearish scenario, we assume a 25% yoy decline in Data Center segment revenue in CY2025. We believe this assumption is conservative enough to qualify as an input for our "most bearish" scenario, especially given recent



commentary from the Tier-1 CSPs indicating sustained capex growth through CY2025 and the broadening of Nvidia's customer base in Enterprise and Sovereign. All in, our updated Bear #2 scenario assumes \$86bn in Data Center segment revenue or 53% below our current central case.

- In our bearish scenario ("Bear #1"), we assume CY2025 Data Center segment revenue of \$133bn or the mid-point of our base case and most bearish scenario.
- In our most bullish scenario ("Bull #2"), we assume a yoy growth rate of 100% for the Data Center segment in CY2025 or \$228bn in revenue.
- In our bullish scenario ("Bull #1"), we assume CY2025 Data Center segment revenue of \$205bn or the mid-point of our base case and most bullish scenario.
- Gross margin assumptions for every business segment remain fixed across all scenarios (i.e. it is segment mix that influences corporate gross margin).
- We adjust opex and SBC in accordance with changes in revenue.
- All other line items (i.e. interest income and other, diluted share count) are unchanged from our base case assumptions.
- We assume target P/E multiples of 25x and 30x in our most bearish and bearish scenarios, and 35x and 40x in our bullish and most bullish scenarios. For context, as shown in [\(Exhibit 16\)](#) below, NVDA's P/E based on NTM consensus EPS has ranged between 20x and 65x since 2019 with a 40x median on a 3-year lookback.

**Exhibit 14: Our Bull/Bear Analysis points to a marginally favorable risk/reward profile for NVDA**

Nvidia Bull/Bear Analysis based on CY2025 (\$mn, unless otherwise indicated)

	Bear # 2	Bear # 1	Base	Bull # 1	Bull # 2
<b>Revenue</b>	<b>103,304</b>	<b>151,090</b>	<b>198,876</b>	<b>222,399</b>	<b>245,922</b>
yoy %	-20%	17%	53%	72%	90%
Gross Profit	74,520	110,359	146,199	163,841	181,483
% of revenue	72.1%	73.0%	73.5%	73.7%	73.8%
Opex	17,768	18,634	19,924	21,128	22,133
yoy %	10%	15%	23%	30%	37%
Operating Income	56,751	91,726	126,275	142,713	159,350
% of revenue	55%	61%	63%	64%	65%
Interest & Other	2,810	2,810	2,810	2,810	2,810
Taxes	10,125	16,071	21,944	24,739	27,567
Tax rate	17.0%	17.0%	17.0%	17.0%	17.0%
Share Count	24,426	24,426	24,426	24,426	24,426
<b>EPS (incl SBC)</b>	<b>\$2.02</b>	<b>\$3.21</b>	<b>\$4.39</b>	<b>\$4.94</b>	<b>\$5.51</b>
<b>EPS (excl SBC)</b>	<b>\$2.21</b>	<b>\$3.43</b>	<b>\$4.63</b>	<b>\$5.20</b>	<b>\$5.78</b>
P/E Multiple*	25x	30x	32x	35x	40x
<b>Valuation</b>	<b>\$55</b>	<b>\$103</b>	<b>\$150</b>	<b>\$182</b>	<b>\$231</b>
vs. current price	-61%	-26%	7%	30%	65%

<b>Segment revenue</b>					
Gaming	13,173	13,173	13,173	13,173	13,173
Pro-Viz	2,073	2,073	2,073	2,073	2,073
<b>Data Center</b>	<b>85,571</b>	<b>133,357</b>	<b>181,144</b>	<b>204,666</b>	<b>228,189</b>
<b>yoy (%)</b>	<b>-25%</b>	<b>17%</b>	<b>59%</b>	<b>79%</b>	<b>100%</b>
Automotive	2,099	2,099	2,099	2,099	2,099
OEM & Other	387	387	387	387	387

<b>Segment gross margin</b>					
Gaming	58%	58%	58%	58%	58%
Pro-Viz	70%	70%	70%	70%	70%
Data Center	75%	75%	75%	75%	75%
Automotive	53%	53%	53%	53%	53%
OEM & Other	30%	30%	30%	30%	30%

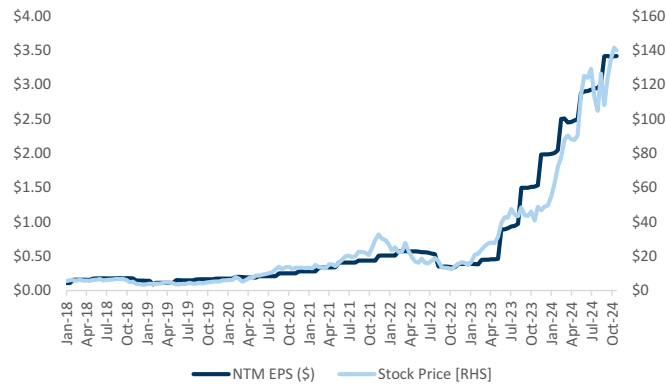
\*Base case multiple of 32x is implied from our current 12-month price target of \$150 which is based on 50x our normalized EPS estimate of \$3.00

Source: Company data, Goldman Sachs Global Investment Research

**Investment Thesis, Price Target Methodology, and Key Risks**

We reiterate our Buy rating (also on the Conviction List) on NVDA ahead of FY3Q results scheduled for November 20 (post close). While the ongoing debate centered around customer ROI and its implications for future AI infrastructure capex is likely to stay and, in turn, keep NVDA's valuation multiple in check, we expect positive EPS revisions to drive stock price appreciation as they have in the past ([Exhibit 15](#)). As we illustrate above, note that our CY2025/26 non-GAAP EPS (excl. SBC) estimates of \$4.63/\$5.54 sit 14%/14% above FactSet consensus. As illustrated in [Exhibit 16](#), while NVDA is currently trading at 41x or at a 68% premium vis-à-vis the median stock in our coverage universe on NTM P/E, it is still well below its past 3-year median premium of 137% ([Exhibit 17](#)).

**Exhibit 15: NVDA has moved in tandem with NTM consensus EPS**  
Nvidia NTM Consensus EPS (\$) and Stock Price (\$)

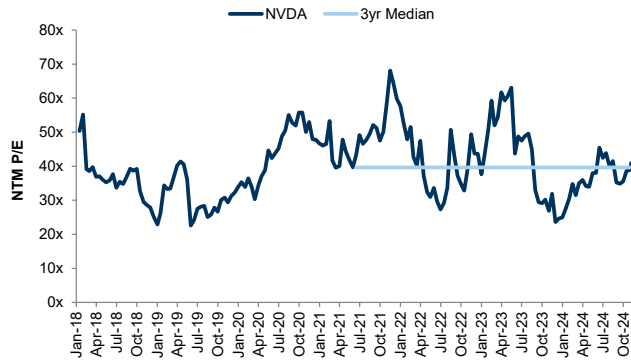


Source: FactSet

Our 12-month price target of \$150 is based on 50x (unchanged) our normalized EPS estimate of \$3.00. Note our price target of \$150 implies a 29x multiple on our Q5-Q8 non-GAAP EPS (excl. SBC) estimate of \$5.15. Key downside risks to our estimates and price target include: 1) a sudden decline in Gen AI infrastructure spend by the major CSPs and/or enterprises; 2) further restrictions on GPU exports; 3) delays in new product introductions; 4) weaker-than-expected demand for Gaming GPUs; and 5) supply chain issues.

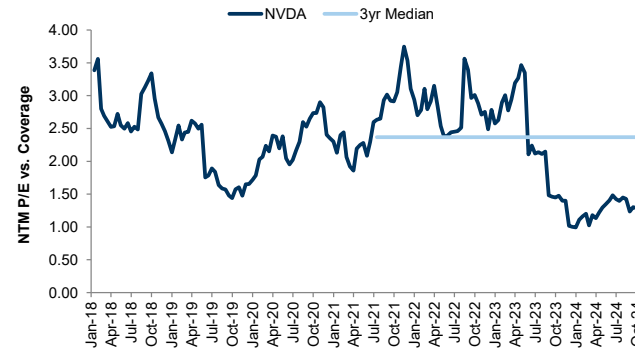
**Valuation**

**Exhibit 16: NVDA is trading at 41x and marginally above its past 3-year median of 40x on NTM P/E**  
NVDA NTM P/E



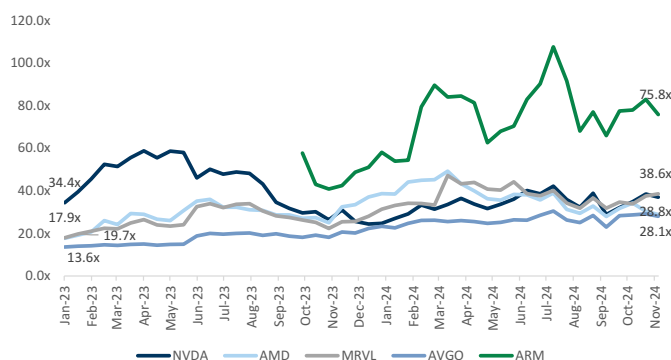
Source: FactSet

**Exhibit 17: NVDA is trading at a 68% premium to the median stock in our coverage universe on NTM P/E, well below its past 3-year median premium of 137%**  
NVDA NTM P/E relative to the median stock in our coverage universe



Source: FactSet

**Exhibit 18: NVDA's NTM P/E multiple has expanded less than that of all its AI-exposed peers on a YTD basis**  
NTM P/E for AI-exposed stocks



Source: FactSet

**Exhibit 19: NVDA's YTD outperformance has been driven by both positive estimate revisions and multiple expansion**  
YTD Stock Price Performance, YTD Changes in Consensus EPS (CY2024/25), and YTD Changes in Forward P/E on Street Consensus EPS (CY2024/25)

YTD	Stock Price			Consensus EPS						Forward P/E					
				CY24			CY25			CY24			CY25		
	12/31/23	11/5/24	% Change	12/31/23	11/5/24	% Change	12/31/23	11/5/24	% Change	12/31/23	11/5/24	% Change	12/31/23	11/5/24	% Change
NVDA	\$49.52	\$139.93	+182.6%	\$2.10	\$2.84	+35.7%	\$2.40	\$4.02	+67.8%	23.6x	49.2x	+108.3%	20.7x	34.8x	+68.4%
PI	\$90.03	\$198.23	+120.2%	\$0.90	\$2.08	+130.2%	\$2.04	\$2.71	+33.2%	99.8x	95.5x	-4.4%	44.2x	73.1x	+65.3%
CRDO	\$19.47	\$41.85	+114.9%	\$0.30	\$0.27	-10.8%	\$0.60	\$0.71	+19.5%	64.7x	156.0x	+141.0%	32.7x	58.8x	+79.9%
ARM	\$75.15	\$140.65	+87.2%	\$1.09	\$1.35	+23.4%	\$1.71	\$2.06	+20.4%	68.8x	104.3x	+51.6%	43.9x	68.2x	+55.4%
AVGO	\$111.63	\$173.90	+55.8%	\$5.01	\$5.19	+3.6%	\$5.74	\$6.47	+12.7%	22.3x	33.5x	+50.4%	19.5x	26.9x	+38.2%
MRVL	\$60.31	\$87.19	+44.6%	\$1.36	\$0.80	-41.0%	\$2.32	\$1.80	-22.2%	44.5x	109.0x	+144.8%	26.1x	48.4x	+85.9%
WDC	\$52.37	\$66.83	+27.6%	\$0.99	\$5.76	+480.9%	\$5.53	\$8.41	+52.0%	52.8x	11.6x	-78.0%	9.5x	7.9x	-16.0%
MU	\$85.34	\$105.49	+23.6%	\$1.86	\$3.95	+112.8%	\$7.87	\$10.08	+28.1%	45.9x	26.7x	-41.9%	10.8x	10.5x	-3.5%
STX	\$85.37	\$101.65	+19.1%	\$2.55	\$4.83	+89.4%	\$4.94	\$8.55	+73.1%	33.5x	21.0x	-37.1%	17.3x	11.9x	-31.2%
TXN	\$170.46	\$202.46	+18.8%	\$6.50	\$5.10	-21.5%	\$7.97	\$5.83	-26.8%	26.2x	39.7x	+51.3%	21.4x	34.7x	+62.4%
KLAC	\$581.30	\$670.33	+15.3%	\$24.32	\$26.99	+11.0%	\$28.53	\$31.02	+8.7%	23.9x	24.8x	+3.9%	20.4x	21.6x	+6.1%
AMAT	\$162.07	\$186.48	+15.1%	\$7.81	\$8.67	+11.0%	\$9.08	\$9.97	+9.7%	20.8x	21.5x	+3.6%	17.8x	18.7x	+4.9%
ADI	\$198.56	\$217.60	+9.6%	\$7.22	\$6.19	-14.2%	\$9.20	\$8.09	-12.1%	27.5x	35.1x	+27.7%	21.6x	26.9x	+24.6%
AVT	\$50.40	\$54.58	+8.3%	\$5.88	\$4.13	-29.7%	#N/A	\$5.06	#N/A	8.6x	13.2x	+54.0%	#N/A	10.8x	#N/A
MKSI	\$102.87	\$100.94	-1.9%	\$4.80	\$5.65	+17.6%	\$7.16	\$7.48	+4.4%	21.4x	17.9x	-16.6%	14.4x	13.5x	-6.0%
NXPI	\$229.68	\$224.65	-2.2%	\$14.60	\$13.20	-9.6%	\$16.36	\$13.77	-15.9%	15.7x	17.0x	+8.2%	14.0x	16.3x	+16.3%
LRCX	\$78.33	\$76.40	-2.5%	\$2.96	\$3.33	+12.6%	\$3.99	\$3.78	-5.2%	26.5x	22.9x	-13.3%	19.7x	20.2x	+2.9%
ARW	\$122.25	\$118.84	-2.8%	\$14.26	\$10.34	-27.5%	\$17.85	\$12.60	-29.4%	8.6x	11.5x	+34.0%	6.8x	9.4x	+37.7%
TER	\$108.52	\$105.45	-2.8%	\$3.69	\$3.18	-13.9%	\$5.82	\$4.19	-28.0%	29.4x	33.2x	+12.9%	18.6x	25.2x	+35.0%
AMD	\$147.41	\$141.66	-3.9%	\$3.74	\$3.33	-11.0%	\$5.09	\$5.03	-1.2%	39.4x	42.6x	+7.9%	29.0x	28.2x	-2.7%
ENTG	\$119.82	\$103.12	-13.9%	\$3.31	\$2.96	-10.4%	\$4.83	\$3.81	-21.1%	36.2x	34.8x	-4.0%	24.8x	27.1x	+9.1%
ON	\$83.53	\$70.20	-16.0%	\$4.77	\$4.01	-15.9%	\$5.44	\$4.32	-20.6%	17.5x	17.5x	-0.0%	15.4x	16.3x	+5.8%
MCHP	\$90.18	\$75.09	-16.7%	\$4.41	\$1.99	-54.8%	\$5.31	\$2.96	-44.2%	20.5x	37.7x	+84.4%	17.0x	25.4x	+49.3%
AMKR	\$33.27	\$26.33	-20.9%	\$2.05	\$1.38	-32.6%	\$2.80	\$1.90	-32.2%	16.2x	19.1x	+17.5%	11.9x	13.9x	+16.7%
SWKS	\$112.42	\$88.58	-21.2%	\$7.35	\$6.00	-18.4%	\$8.84	\$6.61	-25.2%	15.3x	14.8x	-3.5%	12.7x	13.4x	+5.3%
COHU	\$35.39	\$27.55	-22.2%	\$1.78	\$0.18	-109.8%	\$2.59	\$0.89	-65.6%	19.8x	-157.3x	-892.4%	13.7x	30.9x	+126.1%
QRVO	\$112.61	\$71.80	-36.2%	\$6.96	\$5.35	-23.1%	\$8.87	\$5.31	-40.2%	16.2x	13.4x	-17.1%	12.7x	13.5x	+6.6%
INTC	\$50.25	\$23.32	-53.6%	\$1.93	-\$0.14	-107.3%	\$2.66	\$0.96	-64.0%	26.0x	-165.8x	-738.1%	18.9x	24.4x	+29.0%

Source: FactSet

# Disclosure Appendix

## Reg AC

We, Toshiya Hari, Anmol Makkar, Chris Kress, David Balaban and Nicola Cascarano, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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**Growth** is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

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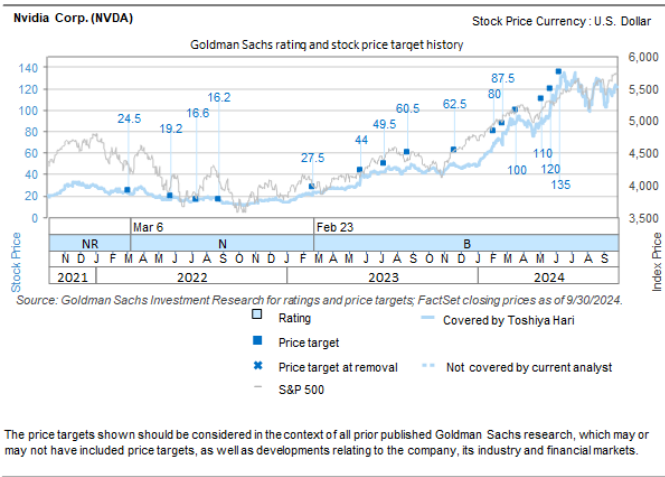
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	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	49%	34%	17%	63%	57%	40%

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Price target and rating history chart(s)



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