JAPAN TECHNOLOGY: SEMICONDUCTORS

Sector view update: Demand remains strong despite concerns over sustainability of AI investment; reiterate Buy on six stocks

Shuhei Nakamura
+81(3)4587-9932 | shuhei.nakamura@gs.com
Goldman Sachs Japan Co., Ltd.

Kaho Otake
+81(3)4587-7498 | kaho.otake@gs.com
Goldman Sachs Japan Co., Ltd.

Focusing on changes in sales growth potential, production capacity, and profit margins as demand strengthens further

We outline our views on Japan Semiconductors / SPE coverage stocks ahead of the earnings season. While share prices of companies in our coverage lack direction and sentiment remains weak due to concerns over the sustainability of AI investment and higher interest rates, demand is actually gaining strength, as evidenced by record-high orders booked in the most recent quarter (Jun-Aug) by Rorze Corporation (6323.T, Not Covered), which supplies wafer transfer equipment to SPE companies, and Marumae (6264.T, Not Covered), which handles key components such as vacuum parts. In this environment, we believe the key for the SPE sector at upcoming earnings will be to confirm the following heading into the next fiscal year, (1) whether sales growth above the sector average can be achieved, (2) whether there is sufficient production capacity to handle the high level of orders, and (3) whether profit margins can be improved alongside high sales growth.

Highlighting Buy-rated Lasertec, Disco, Tokyo Electron, and Ebara

From this perspective, within the SPE sector, we reiterate our Buy ratings on **Lasertec** (TAM expansion for ACTIS), **Disco** (TAM expansion for advanced packaging), **Tokyo Electron (TEL)** (margin expansion through price hikes), and **Ebara** (CMP market growth and potential for market share gains). Meanwhile, we maintain our cautious stance on **Ulvac, SCREEN Holdings, and Tokyo Seimitsu** due to concerns over production capacity and profit margins.

Reiterating Buy ratings on Kioxia and HOYA

We also reiterate our Buy ratings on **Kioxia Holdings** and **HOYA** from the perspective of heightened storage demand driven by the expansion of AI data centers. For Kioxia, in addition to a high likelihood that the upward pricing trend will continue for the time being, we believe that the enhancement of shareholder returns, including dividends and ongoing share buybacks backed by ample free cash flows, will serve as a catalyst for a share price rebound. For HOYA, we believe its core HDD glass substrates and EUV mask blanks have entered a phase of further accelerated growth, and if this view is confirmed at 2Q results, it should serve as a catalyst for a further rise in market earnings expectations.

Goldman Sachs does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html. Analysts employed by non-US affiliates are not registered/qualified as research analysts with FINRA in the U.S.

Exhibit 1: Our ratings and new/old 12-month target prices for companies in our coverage

Company Name	Ticker	Rating	Price target (¥) New	Price target (¥) Old	Current price (¥)	Up/down side
Kioxia HD	**285A.T**	**Buy**	**39,000**	**38,667**	**12,880**	**+203%**
Disco	**6146.T**	**Buy**	**105,000**	**105,000**	**53,180**	**+97%**
Ebara	**6361.T**	**Buy**	**7,900**	**7,900**	**4,138**	**+91%**
Lasertec	**6920.T**	**Buy***	**70,000**	**70,000**	**39,220**	**+78%**
Tokyo Electron	**8035.T**	**Buy**	**18,000**	**18,000**	**10,365**	**+74%**
HOYA	**7741.T**	**Buy**	**36,000**	**36,000**	**24,955**	**+44%**
Kokusai Electric	6525.T	Neutral	10,500	10,500	7,716	+36%
Advantest	6857.T	Neutral	44,000	43,000	34,340	+28%
JEOL	6951.T	Neutral	8,300	8,300	7,542	+10%
SCREEN HD	**7735.T**	**Sell**	**13,200**	**12,800**	**13,565**	**-3%**
Tokyo Seimitsu	**7729.T**	**Sell**	**17,000**	**16,500**	**17,745**	**-4%**
Ulvac	**6728.T**	**Sell**	**7,200**	**7,200**	**7,990**	**-10%**

*= On APAC Conviction List. Priced as of October 15, 2026.

Source: Company data, Goldman Sachs Global Investment Research

Exhibit 2: Our new/old earnings estimates vs. Bloomberg consensus

Updated as of 15-Oct-2026

Sales		FY1						FY2					FY3				
(JPY mn)	FY-end	(CoE)	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG
Kioxia HD	3		10,711,300	10,528,200	+1.7%	10,095,588	+6%	14,186,700	13,775,000	+3.0%	13,775,000	+3%	16,919,200	16,421,300	+3.0%	14,935,500	+13%
DISCO	3		598,700	598,700	0.0%	555,600	+8%	772,600	772,600	0.0%	670,000	+15%	918,000	918,000	0.0%	752,000	+22%
Ebara	12	1,053,000	1,085,700	1,085,700	0.0%	1,070,000	+1%	1,324,000	1,324,000	0.0%	1,230,000	+8%	1,535,400	1,535,400	0.0%	1,346,050	+14%
Kokusai Electric	3	340,000	350,300	350,300	0.0%	343,750	+2%	472,500	472,500	0.0%	440,000	+7%	596,400	596,400	0.0%	511,100	+17%
Ulvac	6	255,000	260,400	260,400	0.0%	260,400	0%	277,000	277,000	0.0%	277,163	-0%	298,300	298,300	0.0%	298,000	+0%
Advantest	3	1,714,000	1,755,600	1,791,200	-2.0%	1,753,300	+0%	2,331,600	2,258,400	+3.2%	2,247,000	+4%	2,682,800	2,588,400	+3.6%	2,672,914	+0%
Lasertec	6	290,000	309,900	309,900	0.0%	299,558	+3%	467,200	467,200	0.0%	381,150	+23%	587,000	587,000	0.0%	424,000	+38%
JEOL	3	164,000	167,900	167,900	0.0%	167,900	0%	185,400	185,400	0.0%	185,400	0%	199,600	199,600	0.0%	199,600	0%
Tokyo Seimitsu	3	189,000	192,100	191,200	+0.5%	191,350	+0%	220,600	215,200	+2.5%	224,000	-2%	245,400	237,700	+3.2%	248,800	-1%
SCREEN Holdings	3	743,000	749,600	753,800	-0.6%	749,861	-0%	973,200	943,500	+3.1%	888,078	+10%	1,161,900	1,130,500	+2.8%	1,030,500	+13%
HOYA	3		1,071,800	1,066,500	+0.5%	1,051,809	+2%	1,166,200	1,156,800	+0.8%	1,136,700	+3%	1,270,500	1,254,900	+1.2%	1,250,550	+2%
Tokyo Electron	3		3,464,000	3,464,000	0.0%	3,410,822	+2%	4,575,800	4,575,800	0.0%	4,340,000	+5%	5,756,100	5,756,100	0.0%	5,087,800	+13%

Operating profit		FY1						FY2					FY3				
(JPY mn)	FY-end	(CoE)	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG
Kioxia HD	3		8,597,900	8,426,600	+2.0%	8,002,100	+7%	11,775,800	11,381,400	+3.5%	11,140,896	+6%	14,057,600	13,578,500	+3.5%	12,033,993	+17%
DISCO	3		290,600	290,600	0.0%	249,900	+16%	393,500	393,500	0.0%	308,903	+27%	477,800	477,800	0.0%	357,777	+34%
Ebara	12	125,000	131,300	131,300	0.0%	129,000	+2%	206,100	206,100	0.0%	171,550	+20%	265,600	265,600	0.0%	203,673	+30%
Kokusai Electric	3	79,400	83,500	83,500	0.0%	81,000	+3%	128,300	128,300	0.0%	122,000	+5%	175,000	175,000	0.0%	150,500	+16%
Ulvac	6	28,000	27,000	27,000	0.0%	29,900	-10%	33,300	33,300	0.0%	33,472	-1%	38,400	38,400	0.0%	40,000	-4%
Advantest	3	846,000	883,900	906,900	-2.5%	887,853	-0%	1,205,200	1,155,800	+4.3%	1,162,900	+4%	1,345,400	1,297,300	+3.7%	1,321,963	+2%
Lasertec	6	125,000	145,300	145,300	0.0%	135,000	+8%	231,800	231,800	0.0%	186,079	+25%	296,900	296,900	0.0%	207,500	+43%
JEOL	3	26,500	28,700	28,700	0.0%	28,000	+2%	34,600	34,600	0.0%	34,948	-1%	37,500	37,500	0.0%	37,498	+0%
Tokyo Seimitsu	3	44,000	45,300	44,500	+1.8%	45,000	+1%	54,600	52,400	+4.2%	56,680	-4%	61,800	59,500	+3.9%	61,459	+1%
SCREEN Holdings	3	156,500	159,600	159,100	+0.3%	161,700	-1%	208,200	199,200	+4.5%	207,634	+0%	256,800	251,000	+2.3%	251,000	+2%
HOYA	3		348,200	344,600	+1.0%	345,000	+1%	402,000	394,800	+1.8%	390,000	+3%	453,600	441,600	+2.7%	435,800	+4%
Tokyo Electron	3		1,058,700	1,058,700	0.0%	1,011,857	+5%	1,627,100	1,627,100	0.0%	1,400,300	+16%	2,244,800	2,244,800	0.0%	1,760,241	+28%

Net profit		FY1						FY2					FY3				
(JPY mn)	FY-end	(CoE)	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG
Kioxia HD	3		5,989,400	5,869,500	+2.0%	5,624,305	+6%	8,234,700	7,958,600	+3.5%	7,798,800	+6%	9,833,500	9,498,200	+3.5%	8,351,536	+18%
DISCO	3		216,600	216,600	0.0%	184,933	+17%	292,900	292,900	0.0%	235,641	+24%	355,500	355,500	0.0%	267,259	+33%
Ebara	12	99,500	107,300	107,300	0.0%	100,570	+7%	147,800	147,800	0.0%	118,400	+25%	191,500	191,500	0.0%	138,900	+38%
Kokusai Electric	3	55,500	60,500	60,500	0.0%	59,100	+2%	93,300	93,300	0.0%	87,400	+7%	127,500	127,500	0.0%	110,600	+15%
Ulvac	6	19,000	19,600	19,600	0.0%	21,300	-8%	24,200	24,200	0.0%	24,338	-1%	27,900	27,900	0.0%	28,400	-2%
Advantest	3	660,000	670,500	687,000	-2.4%	683,000	-2%	869,800	834,200	+4.3%	873,750	-0%	971,100	936,400	+3.7%	1,010,700	-4%
Lasertec	6	90,000	104,800	104,800	0.0%	99,138	+6%	167,200	167,200	0.0%	132,278	+26%	214,100	214,100	0.0%	148,600	+44%
JEOL	3	21,300	21,700	21,700	0.0%	21,500	+1%	25,900	25,900	0.0%	26,300	-2%	28,000	28,000	0.0%	28,000	0%
Tokyo Seimitsu	3	30,800	31,800	31,300	+1.6%	32,553	-2%	38,300	36,800	+4.1%	40,100	-4%	43,400	41,800	+3.8%	46,517	-7%
SCREEN Holdings	3	115,000	116,900	116,500	+0.3%	118,700	-2%	149,800	143,400	+4.5%	153,900	-3%	184,400	180,300	+2.3%	186,162	-1%
HOYA	3		281,900	279,100	+1.0%	274,300	+3%	323,400	317,800	+1.8%	310,250	+4%	363,800	354,400	+2.7%	346,440	+5%
Tokyo Electron	3		826,100	826,100	0.0%	781,500	+6%	1,264,100	1,264,100	0.0%	1,085,320	+16%	1,740,100	1,740,100	0.0%	1,321,500	+32%

EPS		FY1						FY2					FY3				
(JPY)	FY-end	(CoE)	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG	GSE New	GSE Old	New vs. Old	BBG	vs. BBG
Kioxia HD	3		3,745.6	3,670.6	+2.0%	3,524.8	+6%	5,316.0	5,492.3	-3.2%	4,848.0	+10%	6,739.7	8,055.8	-16.3%	6,006.4	+12%
DISCO	3		1,996.9	1,996.9	0.0%	1,706.2	+17%	2,700.3	2,700.3	0.0%	2,163.7	+25%	3,277.5	3,277.5	0.0%	2,464.4	+33%
Ebara	12	217.9	235.6	235.6	0.0%	221.8	+6%	328.9	328.9	0.0%	261.9	+26%	435.8	435.8	0.0%	304.5	+43%
Kokusai Electric	3	237.6	259.4	259.4	0.0%	253.3	+2%	400.1	400.1	0.0%	373.7	+7%	546.7	546.7	0.0%	461.3	+19%
Ulvac	6	386.2	398.6	398.6	0.0%	432.5	-8%	492.1	492.1	0.0%	496.3	-1%	567.4	567.4	0.0%	577.5	-2%
Advantest	3	911.6	941.4	965.0	-2.4%	930.9	+1%	1,247.9	1,196.3	+4.3%	1,194.6	+4%	1,393.2	1,342.8	+3.8%	1,442.9	-3%
Lasertec	6	1,004.1	1,169.2	1,169.2	0.0%	1,105.1	+6%	1,865.4	1,865.4	0.0%	1,459.9	+28%	2,388.7	2,388.7	0.0%	1,639.1	+46%
JEOL	3	432.6	445.5	445.5	0.0%	417.6	+7%	531.7	531.7	0.0%	515.6	+3%	574.9	574.9	0.0%	572.4	+0%
Tokyo Seimitsu	3	758.8	783.4	771.1	+1.6%	798.3	-2%	943.6	906.6	+4.1%	988.0	-4%	1,069.2	1,029.8	+3.8%	1,142.5	-6%
SCREEN Holdings	3	608.1	618.1	616.1	+0.3%	631.3	-2%	792.0	758.4	+4.4%	813.9	-3%	975.0	953.5	+2.3%	980.2	-1%
HOYA	3		863.4	854.8	+1.0%	825.2	+5%	1,015.3	997.7	+1.8%	949.3	+7%	1,160.4	1,130.4	+2.7%	1,080.2	+7%
Tokyo Electron	3		365.4	365.4	0.0%	344.7	+6%	561.0	568.6	-1.3%	479.8	+17%	774.8	796.1	-2.7%	584.2	+33%

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

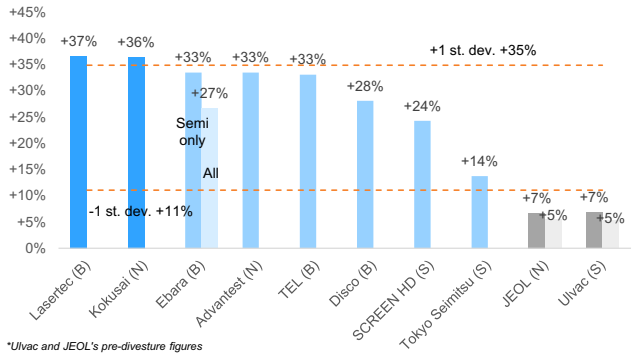
Exhibit 3: Production capacity, lead times, and pricing power for our SPE coverage

		Production capacity	Lead times	Market share (=pricing power)
Front-end	Tokyo Electron	Enough	Broadly unchanged (5-6 months)	Medium to High
	SCREEN HD	Plans to increase SPE capacity to Y900bn+ by FY3/28-end (+25% vs. 2H3/27) thru efficiency gains	No change (4-5 months)	Medium
	Kokusai Electric	Enough (Has capacity for JPY400-450bn in revenues)	No change (8 months)	Medium
	Ulvac	Already at full capacity due to longer procurement lead time for components	Extending (Currently 8-9 months <normally 6 months>)	Low to Medium
	Ebara	Enough	No change in production lead times (6 months for CMP tools)	Medium
	Lasertec	Enough	Slightly extending (ACTIS 1+ years <prev. 1 year>; MATRICS 1 year <prev. ~1 year>	Medium to High
	JEOL	Enough (Tightness in spot-beam writers)	No change (1 year for mask/spot-beam writers)	Medium
Back-end	Disco	Enough (Flexible depending on demand)	No change (3-6 months)	High
	Advantest	Enough	No change (3-6 months)	High
	Tokyo Seimitsu	Currently orders at 1.5x capacity; limited upside in capacity until CY27-end (new factory)	Extending for probers (Currently 6 months <normally 3 months>)	Medium

Note: Points that have changed since our previous report are underlined.

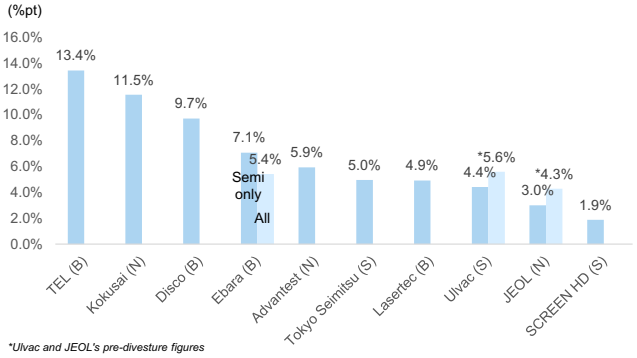
Source: Goldman Sachs Global Investment Research

Exhibit 4: Sales growth rates for 10 SPE coverage companies from FY25 to FY28E



Source: Company data, Goldman Sachs Global Investment Research

Exhibit 5: Changes in OPM for 10 SPE coverage companies from FY25 to FY28E



Source: Company data, Goldman Sachs Global Investment Research

Key points ahead of earnings season and reasons for GSe revisions for each company

Kioxia Holdings (285A.T, Buy)

We raise our FY3/27-FY3/29 operating profit estimates by 2%/4%/4%, reflecting the USD/JPY rate through the end of September and the recent strength in enterprise SSD demand. We forecast 2Q operating profits of just under ¥2 tn and 3Q operating profits of just over ¥2.5 tn, both slightly above Bloomberg consensus forecasts. In addition, we expect ongoing shareholder returns combining dividends and share buybacks backed by ample free cash flows, which we believe is likely to serve as a catalyst for share price appreciation. We raise our 12-month target price to ¥39,000, from ¥38,667 (reflecting a stock split).

Disco (6146.T, Buy)

While we make no changes to our earnings estimates, we think there is a high likelihood that 3Q shipment value will substantially beat the market (Visible Alpha) consensus of c.¥150 bn (broadly flat qoq), and we believe 2Q earnings are likely to act as a catalyst for share price appreciation. We believe the YTD underperformance is due to the fact that, unlike some back-end equipment manufacturers, Disco does not disclose orders, making it difficult for forward-looking expectations to rise. However, we view the +46% qoq increase in contract liabilities (mainly advances received) to ¥73 bn at end-1Q3/27 as evidence of increasing inquiries and orders that will lead to future sales. Looking ahead, we forecast an uptick in shipment momentum as the company benefits from various technological shifts such as advanced packaging investment by OSATs, EMIB-T, hybrid bonding, and CPO.

Ebara (6361.T, Buy)

We make no changes to our earnings estimates. At 3Q results, although we do not expect revisions to guidance for sales and operating profits, we believe it is likely that orders will be revised up again, centered on the precision machinery business. We believe that the profit margin outlook for precision machinery appearing underwhelming at 2Q results led to the subsequent share price underperformance. However, we think a re-rating is likely if upcoming quarterly earnings increase visibility on the potential for robust top-line growth heading into FY12/27 to steadily lead to higher profit margins.

Kokusai Electric (6525.T, Neutral)

We make no changes to our earnings estimates. Given that the lead time from order to sales is c.8 months, even assuming 2Q orders remain strong as in 1Q, the contribution to FY3/27 sales would likely be limited. Therefore, we do not expect the company to revise guidance at 2Q results (although we see the potential for front-loaded equipment and demand for parts and services to beat expectations toward the end of the fiscal year). While we expect high growth to continue in FY3/28, the company has explained that WFE demand is expanding about two years ahead of its assumptions at the start of the year. Consequently, we think the focus will be on whether it can secure sufficient production capacity heading into FY3/28.

Ulvac (6728.T, Sell)

We make no changes to our earnings estimates. Given strong demand centered on the semiconductor sector, we see room for a FY6/27 order guidance beat, mainly in 2H. However, we believe the potential for upside to earnings is limited as procurement difficulties and extended lead times are occurring broadly, including in rare earths and electronic components. Even if sufficient parts and components can be secured, we think procuring them on the open market could lead to higher costs. As such, we are mindful of the risk that FY6/27 profit margins might not rise in line with guidance.

Advantest (6857.T, Neutral)

Reflecting trade statistics released to date and figures for our latest server model (report link), we cut our FY3/27 operating profit estimate by 3% but raise our FY3/28-FY3/29 operating profit estimates by 4%/4%. We raise our 12-month target price to ¥44,000, from ¥43,000. While it is unlikely that full-year guidance will be substantially revised upward at the upcoming earnings announcement as it was in 1Q, the tester market remains brisk, centered on GPUs/ASICs/CPUs. If the expansion of SoC tester production capacity to 10,000 units is further brought forward, it would likely be positive for the share price. Furthermore, considering the shareholder return policy for the current medium-term plan period (FY3/25-FY3/27; total shareholder return ratio of 50% or more), an additional share buyback could be announced at 2Q results or before the end of the fiscal year.

Lasertec (6920.T, Buy, on CL)

While we make no changes to our earnings estimates, we see a growing likelihood that the FY6/27 order guidance range of ¥300-400 bn will be revised upward at 1Q earnings due to further expansion in investment appetite among key customers (our forecast is ¥425.6 bn). We estimate that over ¥100 bn in orders was recorded in 1Q (an annualized rate of over ¥400 bn). If this is confirmed at the results briefing, we think it would serve as a catalyst for market expectations for FY6/27 orders to rise further. We maintain our bullish stance based on our view that the TAM will expand as adoption of the mainstay ACTIS grows in logic fabs and DRAM.

JEOL (6951.T, Neutral)

We make no changes to our earnings estimates. 1Q3/27 was a slow start, and we believe 2Q also carries the risk of a slight guidance miss depending on the progress of mask writer sales. While we think the full-scale earnings contribution from 2H of spot-beam mask writers, which have become essential for increased production of optical devices (DFB lasers), will provide support for the share price, we maintain our view that it will be difficult to achieve earnings growth exceeding market consensus without a full-scale recovery in demand for multi-beam mask writers and scientific & metrology instruments, which make a large contribution to sales and profits.

Tokyo Seimitsu (7729.T, Sell)

We raise our FY3/27-FY3/29 operating profit estimates by 2%/4%/4% to reflect the strength of demand for probers for HBM and OSATs, and we raise our 12-month target price to ¥17,000, from ¥16,500. While we also expect 2Q orders to beat guidance (c.¥40 bn), we maintain our view that room for earnings expansion through FY3/28 will be

relatively limited, as it is likely that upside to production capacity will remain constrained until the new Hanno factory comes online in early spring 2028. We maintain our Sell rating based on the stock's relative valuation within our coverage.

SCREEN Holdings (7735.T, Sell)

Taking into account the potential for post-sales (PS) revenue to expand on the back of high utilization rates at major semiconductor makers and TSMC's latest capex forecasts, we raise our FY3/27-FY3/29 operating profit estimates by 0%/4%/2% and lift our 12-month target price to ¥13,200, from ¥12,800. For FY3/27, we expect a slight beat versus guidance, but while robust demand continues, we think production capacity may be insufficient heading into FY3/28 (the company plans to secure production capacity for SPE sales of just over ¥900 bn by the end of FY3/28, but this may not be enough given the current strength of orders). In addition, we expect the phase of sluggish profit margin improvement to continue from a regional mix perspective. We maintain a cautious stance based on relative valuation within our coverage.

HOYA (7741.T, Buy)

We raise our FY3/27-FY3/29 operating profit estimates by 1%/2%/3% to reflect the recent strength of HDD/EUV mask blanks demand. We leave our 12-month target price unchanged at ¥36,000. We see a strong sense of assurance regarding near-term earnings, with all of its core businesses appearing to perform well. Furthermore, we believe there is a high likelihood that the sales outlook for HDD glass substrates and EUV mask blanks, which the company has previously explained as having an annual growth rate of above 10%, will be revised upward going forward. If such a view is presented at 2Q results, we believe it could serve as a catalyst for the share price to rise.

Tokyo Electron (8035.T, Buy)

While we make no changes to our earnings estimates, we expect 2H/full-year guidance, scheduled to be announced at 2Q results, to serve as a catalyst for share price appreciation. In particular, we think it is likely that the effects of price hikes will materialize in earnest from 4Q3/27. We believe the stock will re-rate if the results announcement paints a picture of gross margins expanding to 50% or more in 4Q and FY3/28.

Exhibit 6: List of key risks for companies in our coverage

Company Name (rating)	Ticker	12-m TP (¥)	Methodology	Risks
Kioxia HD (Buy)	285A.T	39,000	Based on the correlation between P/B and our FY3/27-3/28E ROE estimates.	(-) A slowdown in AI investment centered on hyperscalers (-) Rise of NAND players in China (-) Decline in profit margins due to cost increases or fluctuations in capacity utilization (-) A sharp appreciation of the yen against the US dollar
DISCO (Buy)	6146.T	105,000	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates. We then apply a sector-relative premium of 50%.	(-) slowdown or share loss in AI-related demand (-) slowdown in China demand or tightening of export controls (-) rapid yen appreciation against the USD
Ebara (Buy)	6361.T	7,900	Based on the correlation between P/B and our FY12/27E ROE estimates.	(-) Semiconductor capex enters a downcycle (-) Increasing competitiveness of Chinese CMP system makers (-) Slow adoption of new technology in semiconductor devices (-) Decline in crude oil/LNG prices, oil refining/petrochemical margins
Kokusai Electric (Neutral)	6525.T	10,500	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates.	(+/-) Changes in investment at key customers (+/-) Additional changes in export controls (+/-) Changes in the competitive landscape due to strategic changes at competitors
Ulvac (Sell)	6728.T	7,200	Based on the global SPE sector average multiple of 18X and our FY6/28E estimates. We then apply a sector-relative discount of 60%.	(+) Profitability improvement through early materialization of structural reform effects or price hikes (+) Further expansion of orders accompanied by upward capacity elasticity (+) Recovery in power semiconductor investment in the Chinese market (+) The market favoring stocks with low valuations
Advantest (Neutral)	6857.T	44,000	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates. We then apply a sector-relative premium of 40%.	(+/-) fluctuations in customer capex appetite (+/-) fluctuations in market share (+/-) trends in tester demand for China (+/-) FX fluctuations for JPY/USD
Lasertec (Buy)*	6920.T	70,000	Based on the global SPE sector average EV/EBITDA multiple of 18X and the average of our FY6/28E estimates. We then apply a sector-relative premium of 50%.	(-) Decline in market share due to new entrants (-) Lack of progress in ACTIS adoption by wafer fabs (-) Weaker customer investment appetite for leading-edge process nodes (-) Rapid appreciation of the yen against the US dollar
JEOL (Neutral)	6951.T	8,300	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates. We then apply a sector-relative discount of 50%.	(+/-) substantial changes in investment appetite at major mask shops (+/-) changes in market share for multi-beam mask writers (+/-) sharp fluctuations in the USD/JPY exchange rate.
Tokyo Seimitsu (Sell)	7729.T	17,000	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates, to which we apply a sector-relative discount of 40%.	(+) greater-than-expected semiconductor orders (especially related to generative AI) (+) substantial beat in the metrology instruments segment (+) greater shareholder returns than we expect
SCREEN HD (Sell)	7735.T	13,200	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates, to which we apply a sector-relative discount of 40%.	(+) higher profit margins in the SPE business (+) market share gains due to company-specific factors (+) enhancement of shareholder returns (+) a market shift in favor of value stocks
HOYA (Buy)	7741.T	36,000	Based on a sum-of-the-parts valuation methodology (EV/EBITDA-based), using different multiples for each of Hoya's two segments - lifecare (FY3/27 EV/EBITDA of 15X, FY3/28 EV/EBITDA of 13X) and IT (FY3/27E EV/EBITDA of 35X, FY3/28 EV/EBITDA of 28X).	(-) changes in competitive landscape for EUV blanks (-) decline in EUV blanks usage on uptake of EUV pellicles (-) shifting of interest rate environment changes
Tokyo Electron (Buy)	8035.T	18,000	Based on the global SPE sector average EV/EBITDA multiple of 18X and our FY3/28E estimates. We then apply a sector-relative premium of 30%.	(-) prolonged inventory adjustment phase in the semiconductor industry (-) further strengthening of export restrictions (-) depressed valuation multiple amid upward pressure on interest rates and other factors

* On APAC Conviction List.

Source: Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Shuhei Nakamura and Kaho Otake, 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.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Contributing Authors: Shuhei Nakamura Goldman Sachs Japan Co., Ltd., Kaho Otake Goldman Sachs Japan Co., Ltd..

Unless otherwise stated, the individuals listed in the Contributing Authors disclosure of this report are analysts in Goldman Sachs' Global Investment Research division.

GS Factor Profile

The Goldman Sachs Factor Profile provides investment context for a stock by comparing key attributes to the market (i.e. our universe of rated stocks) and its sector peers. The four key attributes depicted are: Growth, Financial Returns, Multiple (e.g. valuation) and Integrated (a composite of Growth, Financial Returns and Multiple). Growth, Financial Returns and Multiple are calculated by using normalized ranks for specific metrics for each stock. The normalized ranks for the metrics are then averaged and converted into percentiles for the relevant attribute. The precise calculation of each metric may vary depending on the fiscal year, industry and region, but the standard approach is as follows:

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).

Financial Returns and Multiple use the Goldman Sachs analyst forecasts at the fiscal year-end at least three quarters in the future. Growth uses inputs for the fiscal year at least seven quarters in the future compared with the year at least three quarters in the future (on a per-share basis for all metrics).

For a more detailed description of how we calculate the GS Factor Profile, please contact your GS representative.

M&A Rank

Across our global coverage, we examine stocks using an M&A framework, considering both qualitative factors and quantitative factors (which may vary across sectors and regions) to incorporate the potential that certain companies could be acquired. We then assign a M&A rank as a means of scoring companies under our rated coverage from 1 to 3, with 1 representing high (30%-50%) probability of the company becoming an acquisition target, 2 representing medium (15%-30%) probability and 3 representing low (0%-15%) probability. For companies ranked 1 or 2, in line with our standard departmental guidelines we incorporate an M&A component into our target price. M&A rank of 3 is considered immaterial and therefore does not factor into our price target, and may or may not be discussed in research.

Quantum

Quantum is Goldman Sachs' proprietary database providing access to detailed financial statement histories, forecasts and ratios. It can be used for in-depth analysis of a single company, or to make comparisons between companies in different sectors and markets.

Disclosures

The rating(s) for Advantest, DISCO, Ebara, HOYA, JEOL, Kioxia Holdings, Kokusai Electric, Lasertec, SCREEN Holdings, Tokyo Electron, Tokyo Seimitsu and Ulvac is/are relative to the other companies in its/their coverage universe: Advantest, DISCO, Ebara, HOYA, JEOL, Kioxia Holdings, Kokusai Electric, Lasertec, SCREEN Holdings, Tokyo Electron, Tokyo Seimitsu, Ulvac

Company-specific regulatory disclosures

Compendium report: please see disclosures at https://www.gs.com/research/hedge.html. Disclosures applicable to the companies included in this compendium can be found in the latest relevant published research

Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global Equity coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	50%	34%	16%	65%	58%	43%

As of October 1, 2026, Goldman Sachs Global Investment Research had investment ratings on 3,094 equity securities. Goldman Sachs assigns stocks as Buys and Sells on various regional Investment Lists; stocks not so assigned are deemed Neutral. Such assignments equate to Buy, Hold and Sell for the purposes of the above disclosure required by the FINRA Rules. See 'Ratings, Coverage universe and related definitions' below. The Investment Banking Relationships chart reflects the percentage of subject companies within each rating category for whom Goldman Sachs has provided investment banking services within the previous twelve months.

Price target and rating history chart(s)

Compendium report: please see disclosures at https://www.gs.com/research/hedge.html. Disclosures applicable to the compani
compendium can be found in the latest relevant published research



Target price history table(s)

HOYA (7741.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	36,000	24,895
31-Jul-26	35,000	24,675
31-May-26	33,000	27,080
30-Apr-26	32,000	29,100
09-Mar-26	31,000	26,765
30-Jan-26	28,500	25,870
31-Oct-25	26,500	25,085
08-Oct-25	24,000	22,155
23-Jul-25	22,000	18,590
24-Mar-25	20,000	17,490
18-Feb-25	22,000	19,040
03-Feb-25	22,500	19,625
22-Jan-25	23,000	21,500
02-Sep-24	22,000	20,760
01-Aug-24	23,000	18,680
24-Apr-24	22,000	18,685
13-Mar-24	21,000	18,925
01-Feb-24	20,000	18,550
04-Jan-24	19,000	16,995

DISCO (6146.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	105,000	61,360
06-Jul-26	100,000	78,000
30-Jun-26	95,000	81,260
31-May-26	87,000	65,090
22-Apr-26	86,000	74,830
09-Mar-26	83,000	66,500
21-Jan-26	68,000	58,570
08-Jan-26	64,000	55,590
06-Jan-26	62,000	54,200
29-Oct-25	61,000	56,390
08-Oct-25	60,000	52,140
06-Oct-25	56,000	54,000
09-Jul-25	51,000	41,290
30-Jun-25	47,000	42,630
13-Apr-25	43,000	27,470
04-Apr-25	44,000	27,635
24-Mar-25	51,000	33,060
21-Nov-24	59,000	42,380
01-Nov-24	57,000	42,810
04-Oct-24	54,000	39,710
02-Oct-24	56,000	37,410
02-Sep-24	63,000	41,350
22-Aug-24	66,000	43,560
04-Jul-24	71,000	64,580
27-May-24	65,000	61,790
04-Apr-24	60,000	56,750
21-Mar-24	56,000	52,960
13-Mar-24	53,000	50,000
31-Jan-24	43,000	40,380
24-Jan-24	42,000	40,730
04-Jan-24	39,000	33,630
21-Nov-23	34,000	32,030
26-Oct-23	32,000	26,960

SCREEN Holdings (7735.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	12,800	12,970
30-Jun-26	12,500	17,805
13-May-26	9,500	11,215
04-May-26	9,400	10,390
09-Mar-26	18,000	9,515
21-Feb-26	16,500	10,990
30-Jan-26	14,600	9,830
06-Jan-26	13,300	8,035
15-Dec-25	12,200	6,570
31-Oct-25	12,000	7,343
08-Oct-25	12,700	7,333
25-Jul-25	12,600	6,110
30-Jun-25	12,800	5,880
07-Apr-25	12,000	3,954
24-Mar-25	12,500	5,240
31-Jan-25	13,000	5,463
10-Jan-25	12,500	5,040
21-Nov-24	13,000	4,549
31-Oct-24	13,500	5,015
02-Oct-24	13,000	4,956
02-Sep-24	14,500	5,305

JEOL (6951.T)

Date of report	Target price (¥)	Closing price (¥)
22-Jul-26	8,300	8,351
30-Jun-26	7,700	7,450
09-Mar-26	6,800	5,906
13-Feb-26	6,700	6,300
23-Dec-25	6,400	4,941
22-Oct-25	6,300	5,290
08-Oct-25	7,000	5,220
30-Jun-25	6,400	4,404
15-May-25	6,300	4,704
13-Apr-25	6,800	4,354
24-Mar-25	7,000	4,815
12-Feb-25	8,000	5,711
06-Dec-24	8,200	5,390
21-Nov-24	8,400	5,618
02-Oct-24	8,300	5,568
02-Sep-24	8,900	6,645
13-Aug-24	9,100	5,477
26-Jun-24	9,300	6,915
14-May-24	9,000	6,546
01-Apr-24	7,900	6,162
13-Mar-24	6,800	6,155

SCREEN Holdings (7735.T)

Date of report	Target price (¥)	Closing price (¥)
15-Aug-24	15,500	5,523
02-May-24	18,000	8,320
21-Mar-24	17,000	9,445
13-Mar-24	16,000	9,043
09-Feb-24	14,000	8,570
31-Jan-24	12,500	7,335
04-Jan-24	11,000	5,855
25-Nov-23	9,600	5,168
31-Oct-23	8,400	3,467

JEOL (6951.T)

Date of report	Target price (¥)	Closing price (¥)
04-Jan-24	6,300	6,041
05-Dec-23	6,000	5,782
10-Nov-23	5,600	5,143

Tokyo Seimitsu (7729.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	16,500	17,290
04-Aug-26	16,000	18,060
30-Jun-26	15,000	20,130
30-Apr-26	14,000	17,130
09-Mar-26	13,000	14,240
06-Feb-26	8,800	13,845
06-Jan-26	8,700	11,705
08-Oct-25	8,500	10,655
04-Aug-25	7,900	9,255
30-Jun-25	8,300	9,613
09-May-25	7,600	8,559
24-Mar-25	7,700	8,501
16-Feb-25	8,500	8,932
04-Feb-25	7,900	7,219
22-Jan-25	7,600	8,000
01-Nov-24	7,700	8,156
02-Oct-24	7,500	7,742
02-Sep-24	8,300	8,154
02-Aug-24	8,600	8,653
10-May-24	10,000	10,660
21-Mar-24	9,200	11,610
13-Mar-24	8,700	11,580
04-Jan-24	7,800	8,326
23-Nov-23	7,300	8,731

Tokyo Electron (8035.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	90,000	10,858
30-Jul-26	86,000	10,448
30-Jun-26	83,000	15,430
31-May-26	62,000	10,484
04-May-26	57,000	9,490
30-Apr-26	55,000	8,878
09-Mar-26	52,000	7,784
21-Feb-26	50,000	8,792
06-Feb-26	44,000	8,206
06-Jan-26	43,000	7,470
15-Dec-25	38,000	6,228
31-Oct-25	36,000	6,836
08-Oct-25	32,500	5,851
31-Jul-25	30,000	5,466
30-Jun-25	33,000	5,536
07-Apr-25	30,000	3,412
24-Mar-25	32,500	4,438
10-Jan-25	35,000	5,405
02-Oct-24	38,500	5,016
02-May-24	43,000	7,002
21-Mar-24	41,000	7,868
13-Mar-24	40,000	7,478
09-Feb-24	33,000	5,951
04-Jan-24	30,000	4,801
25-Nov-23	27,000	4,801

Kioxia Holdings (285A.T)

Date of report	Target price (¥)	Closing price (¥)
30-Jun-26	116,000	29,893
31-May-26	93,000	21,950
15-May-26	48,000	14,817
28-Apr-26	36,000	12,107
25-Mar-26	26,000	7,482
12-Feb-26	24,000	7,058
30-Jan-26	13,000	7,120
06-Jan-26	11,400	3,867
29-Oct-25	10,000	3,360
23-Sep-25	5,000	1,607
08-Aug-25	2,700	788
30-Jun-25	2,500	834
01-Jun-25	2,300	700

Ebara (6361.T)

Date of report	Target price (¥)	Closing price (¥)
22-Jul-26	7,900	5,593
30-Jun-26	7,800	6,256
31-May-26	7,100	5,683
04-May-26	7,000	5,242
15-Apr-26	6,800	5,004
21-Feb-26	6,600	5,638
13-Feb-26	5,900	5,303
06-Jan-26	5,200	4,050
10-Dec-25	5,000	3,942

Kokusai Electric (6525.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	10,500	8,321
06-Aug-26	10,000	8,224

Advantest (6857.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	43,000	35,900
29-Jul-26	40,000	25,200

Kokusai Electric (6525.T)

Date of report	Target price (¥)	Closing price (¥)
30-Jun-26	9,500	10,855
13-May-26	6,500	6,170
04-May-26	6,700	6,500
11-Mar-26	6,200	5,768
06-Jan-26	5,000	5,812
15-Dec-25	4,400	4,516
18-Nov-25	4,300	4,033
15-Aug-25	3,300	3,066
30-Jun-25	3,600	3,467
07-Apr-25	3,200	1,790
24-Mar-25	3,400	2,803
21-Feb-25	3,450	3,629
07-Feb-25	3,150	2,518
10-Jan-25	3,000	2,242
21-Nov-24	3,500	2,195
11-Nov-24	3,800	2,953
02-Oct-24	4,100	3,130
10-May-24	4,500	4,275
02-May-24	4,200	4,105
13-Mar-24	4,000	3,770
09-Feb-24	3,700	4,100
04-Jan-24	3,350	2,983
25-Nov-23	3,050	3,220

Advantest (6857.T)

Date of report	Target price (¥)	Closing price (¥)
22-Jul-26	35,000	29,585
30-Jun-26	34,000	32,340
31-May-26	30,000	26,170
15-Apr-26	28,000	27,585
09-Mar-26	27,000	22,875
28-Jan-26	23,500	25,540
06-Jan-26	20,500	21,555
07-Nov-25	18,000	19,960
08-Oct-25	16,000	17,965
10-Sep-25	14,500	13,125
09-Jul-25	12,700	10,980
30-Jun-25	11,400	10,655
25-Apr-25	10,000	6,000
13-Apr-25	10,500	5,632
24-Mar-25	11,000	8,005
29-Jan-25	12,000	8,518
22-Jan-25	11,500	9,819
21-Nov-24	10,500	9,385
30-Oct-24	10,000	8,595
02-Oct-24	8,800	6,556
02-Sep-24	8,100	6,796
31-Jul-24	6,000	6,029
25-Jun-24	5,300	5,814
27-May-24	5,200	5,669
26-Apr-24	5,000	5,389
21-Mar-24	5,400	6,747
13-Mar-24	5,200	6,683
31-Jan-24	4,600	5,823
04-Jan-24	4,500	4,615
21-Nov-23	4,100	4,777
31-Oct-23	3,600	3,815

Ulvac (6728.T)

Date of report	Target price (¥)	Closing price (¥)
23-Aug-26	7,200	7,594
14-Aug-26	8,000	9,370
26-Jul-26	8,200	9,622
30-Jun-26	10,300	10,345
31-May-26	9,400	9,504
12-May-26	12,000	11,320
09-Mar-26	11,500	9,054
21-Feb-26	10,900	10,410
10-Feb-26	9,500	8,817
06-Jan-26	8,400	7,481
08-Oct-25	7,700	6,589
13-Aug-25	6,700	5,619
30-Jun-25	6,600	5,306
13-May-25	6,500	5,300
07-Apr-25	7,100	3,991
24-Mar-25	8,100	5,499
12-Feb-25	8,700	6,223
10-Jan-25	9,300	6,257
21-Nov-24	9,700	6,260
11-Nov-24	9,900	7,357
02-Oct-24	11,000	7,503
27-May-24	12,000	11,235
14-May-24	11,700	9,700
02-May-24	11,300	9,700

Lasertec (6920.T)

Date of report	Target price (¥)	Closing price (¥)
22-Jul-26	70,000	42,990
30-Jun-26	67,000	49,700
04-May-26	55,000	42,930
30-Apr-26	53,000	42,690
09-Mar-26	50,000	30,360
21-Feb-26	28,000	30,640
06-Jan-26	27,000	32,760
15-Dec-25	24,000	30,300
31-Oct-25	22,500	28,410
08-Oct-25	20,000	20,030
07-Aug-25	19,000	14,295
30-Jun-25	19,500	19,410
12-May-25	17,500	14,775
07-Apr-25	17,000	10,585
24-Mar-25	18,000	14,040
31-Jan-25	20,000	15,470
10-Jan-25	21,500	15,655
21-Nov-24	24,500	17,280
31-Oct-24	28,500	23,475
02-Oct-24	30,000	22,785
07-Aug-24	34,000	22,170
10-May-24	33,000	40,940
30-Apr-24	30,000	34,600
21-Mar-24	26,500	43,060

Ulvac (6728.T)

Date of report	Target price (¥)	Closing price (¥)
21-Mar-24	10,500	9,862
13-Mar-24	10,000	9,407
13-Feb-24	9,000	7,888
04-Jan-24	8,000	6,408
25-Nov-23	7,200	6,539

Lasertec (6920.T)

Date of report	Target price (¥)	Closing price (¥)
13-Mar-24	25,500	38,270
04-Jan-24	22,500	35,220
25-Nov-23	21,000	30,970

Price targets shown in table(s) are unadjusted for corporate actions.

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; registered market maker. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with a subject company, public appearances and trading in securities covered by the analysts.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of Global Investment Research of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australian Sell-Side Research Independence Policy Statement are available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Brazil:** Disclosure information in relation to CVM Resolution n. 20 is available at https://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** This information is being provided to you for information purposes only and is not, and under no circumstances should be construed as, an advertisement, offering or solicitation by Goldman Sachs & Co. LLC for purchasers of securities in Canada to trade in any Canadian security. Goldman Sachs & Co. LLC is not registered as a dealer in any jurisdiction in Canada under applicable Canadian securities laws and generally is not permitted to trade in Canadian securities and may be prohibited from selling certain securities and products in certain jurisdictions in Canada. If you wish to trade in any Canadian securities or other products in Canada please contact Goldman Sachs Canada Inc., an affiliate of The Goldman Sachs Group Inc., or another registered Canadian dealer. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 10th Floor, Ascent-Worli, Sudam Kalu Ahire Marg, Worli, Mumbai-400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Goldman Sachs (India) Securities Private Limited compliance officer and investor grievance contact details, a copy of the annual compliance audit report and other relevant information and disclosures can be found at this link: https://www.goldmansachs.com/worldwide/india/research-analyst. **Japan:** See below. **Korea:** This research, and any access to it, is intended only for "professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. **Singapore:** Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union and United Kingdom: Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU) (2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is

implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest is available at https://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan Type II Financial Instruments Firms Association, and Investment Management Association of Japan. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Ratings, coverage universe and related definitions

Buy (B), Neutral (N), Sell (S) Analysts recommend stocks as Buys or Sells for inclusion on various regional Investment Lists. Being assigned a Buy or Sell on an Investment List is determined by a stock's total return potential relative to its coverage universe. Any stock not assigned as a Buy or a Sell on an Investment List with an active rating (i.e., a stock that is not Rating Suspended, Not Rated, Early-Stage Biotech, Coverage Suspended or Not Covered), is deemed Neutral. Each region manages Regional Conviction Lists, which are selected from Buy rated stocks on the respective region's Investment Lists and represent investment recommendations focused on the size of the total return potential and/or the likelihood of the realization of the return across their respective areas of coverage. The addition or removal of stocks from such Conviction Lists are managed by the Investment Review Committee or other designated committee in each respective region and do not represent a change in the analysts' investment rating for such stocks.

Total return potential represents the upside or downside differential between the current share price and the price target, including all paid or anticipated dividends, expected during the time horizon associated with the price target. Price targets are required for all covered stocks. The total return potential, price target and associated time horizon are stated in each report adding or reiterating an Investment List membership.

Coverage Universe: A list of all stocks in each coverage universe is available by primary analyst, stock and coverage universe at https://www.gs.com/research/hedge.html.

Not Rated (NR). The investment rating, target price and earnings estimates (where relevant) are removed pursuant to Goldman Sachs policy when Goldman Sachs is acting in an advisory capacity in a merger or in a strategic transaction involving this company, when there are legal, regulatory or policy constraints due to Goldman Sachs' involvement in a transaction, and in certain other circumstances. **Early-Stage Biotech (ES).** An investment rating and a target price are not assigned pursuant to Goldman Sachs policy when this company has neither a drug, treatment or medical device that has passed a Phase II clinical trial nor a license to distribute a post-Phase II drug, treatment or medical device. **Rating Suspended (RS).** Goldman Sachs Research has suspended the investment rating and price target for this stock, because there is not a sufficient fundamental basis for determining an investment rating or target price. The previous investment rating and target price, if any, are no longer in effect for this stock and should not be relied upon. **Coverage Suspended (CS).** Goldman Sachs has suspended coverage of this company. **Not Covered (NC).** Goldman Sachs does not cover this company.

Global product; distributing entities

Goldman Sachs Global Investment Research produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research within the European Economic Area.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by Global Investment Research. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (https://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analyst's published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analyst's fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage universe as described herein.

We and our affiliates, officers, directors, and employees will from time to time have long or short positions in, act as principal in, make a market or act as liquidity provider in, and buy or sell, any securities, derivatives, or other financial instruments referred to in this research (including any financial

instruments issued by the companies referred to herein), unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at https://www.theocc.com/about/publications/character-risks.jsp and https://www.goldmansachs.com/disclosures/cftc_fcm_disclosures. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by Goldman Sachs Global Investment Research may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to https://research.gs.com.

Disclosure information is also available at https://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.

© 2026 Goldman Sachs.

You are permitted to store, display, analyze, modify, reformat, and print the information made available to you via this service only for your own use. You may not resell or reverse engineer this information to calculate or develop any index for disclosure and/or marketing or create any other derivative works or commercial product(s), data or offering(s) without the express written consent of Goldman Sachs. You are not permitted to publish, transmit, or otherwise reproduce this information, in whole or in part, in any format to any third party without the express written consent of Goldman Sachs. You may not use, extract, download or retrieve this information, in whole or in part, to train, finetune, adjust, influence the weights or behavior of, or otherwise develop or improve a machine learning or artificial intelligence model or system, or provide or reproduce this information, in whole or in part, as a prompt or input to any such system without the express written consent of Goldman Sachs. Furthermore, you may not bulk download this information, or employ any robot, spider, crawler, scraper, automated agent, or other electronic means to scrape, harvest, extract, or retrieve this information, without the express written consent of Goldman Sachs. A breach of the above terms may result in termination of your right to access this service.