Morgan Stanley | MUFG

FOUNDATION

October 21, 2026 09:25 AM GMT

Investor Presentation | Japan

Semiconductor Production Equipment: Tech Monthly Oct 2026

MORGAN STANLEY MUFG SECURITIES CO., LTD.+

Suzune Tamura, CFA
Equity Analyst
Suzune.Tamura@morganstanleymufg.com +81 3 6836-8891

Kazuo Yoshikawa, CFA
Equity Analyst
Kazuo.Yoshikawa@morganstanleymufg.com +81 3 6836-8408

SEMICONDUCTOR PRODUCTION EQUIPMENT

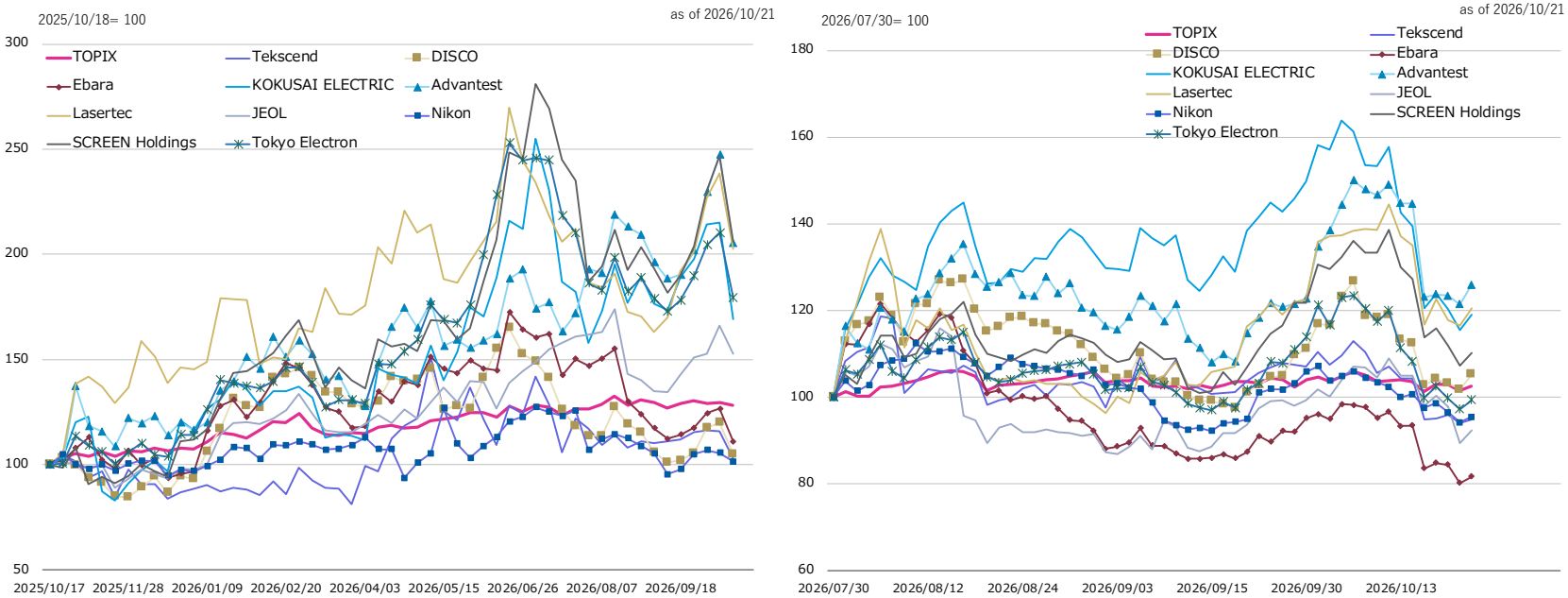
Japan
Industry View **Attractive**

Morgan Stanley does and seeks to do business with companies covered in Morgan Stanley Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Morgan Stanley Research. Investors should consider Morgan Stanley Research as only a single factor in making their investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

+= Analysts employed by non-U.S. affiliates are not registered with FINRA, may not be associated persons of the member and may not be subject to FINRA restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Stock price performance



Source: FactSet data, Morgan Stanley Research

Stock performance and valuations

			Rating	Share price		Performance				Valuation																				
				(LC)	(LC)					Cons PE (x)			MSe PE (x)			Cons EV/EBITDA (x)			MSe EV/EBITDA (x)			Cons P/B (x)			MSe P/B (x)			Cons Div. yield		
			MS	Last close	MS PT	YTD	3m	1m	9/20 ~	F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3	F1	F2	F3
Semiconductor Production Equipment (Japan)																														
8035	JP	Tokyo Electron	OW	10,085	13,600	46.9%	-22.5%	-5.1%	-4.1%	29.4	20.9	16.8	27.2	18.4	15.8	20.4	15.0	12.4	18.9	13.0	11.2	9.4	7.7	6.4	9.8	8.2	6.7	1.7%	2.3%	2.9%
7735	JP	SCREEN Holdings	OW	12,805	17,000	68.0%	-22.4%	0.0%	0.0%	20.4	15.3	12.9	18.7	13.5	11.3	12.6	9.7	8.2	11.4	8.3	6.9	4.3	3.6	3.1	4.2	3.5	2.8	1.5%	2.0%	2.4%
6525	JP	Kokusai Electric	OW	7,394	9,300	34.6%	-16.0%	-16.8%	-8.8%	29.6	19.9	15.2	29.2	19.1	17.4	17.4	12.2	9.7	17.1	11.7	10.7	6.6	5.4	4.4	6.6	5.6	4.9	0.9%	1.3%	1.7%
6146	JP	DISCO	OW	52,630	67,000	9.3%	-18.8%	0.4%	0.4%	30.1	24.3	20.4	26.3	21.2	18.2	20.5	16.9	14.5	18.1	14.7	12.7	8.3	6.9	5.9	8.1	6.7	5.5	1.3%	1.6%	2.1%
6857	JP	Advantest	OW	33,870	45,000	72.5%	23.1%	5.7%	5.7%	36.2	27.8	22.9	34.9	21.3	16.6	27.6	21.2	17.5	26.4	15.6	12.2	20.1	13.3	9.4	20.5	12.3	7.9	0.3%	0.6%	0.8%
6361	JP	Ebara	OW	3,970	6,400	7.8%	-26.3%	-8.2%	-2.2%	18.0	14.8	12.2	16.5	12.4	10.8	11.1	8.6	7.2	12.8	8.6	7.4	3.2	2.8	2.5	3.2	2.7	2.4	1.9%	2.3%	2.9%
6920	JP	Lasertec	UW	39,190	34,000	32.2%	-6.4%	0.3%	0.3%	34.8	25.7	21.7	36.9	29.5	24.1	24.5	18.3	15.2	25.5	20.5	16.8	11.2	8.6	6.7	11.5	8.9	6.9	0.9%	1.3%	1.5%
6951	JP	JEOL	UW	6,874	7,000	36.6%	-14.4%	-5.4%	-1.4%	16.0	13.3	12.3	16.1	14.5	12.5	9.7	7.8	7.5	10.7	8.7	7.6	2.1	1.9	1.8	2.2	2.0	1.8	1.9%	2.3%	2.4%
7731	JP	Nikon	UW	1,724	1,100	-1.2%	-21.6%	-1.3%	-1.3%	50.8	26.0	19.6	NA	19.0	NA	12.1	9.3	8.2	NA	8.3	NA	1.0	0.9	0.9	NA	0.9	NA	1.2%	1.9%	2.0%
429A	JP	Tekscend	EW	3,385	4,600	11.7%	-4.8%	-10.2%	-2.2%	12.8	11.9	10.4	11.8	11.0	8.9	5.6	4.9	4.2	5.5	4.6	3.8	1.7	1.6	1.4	1.7	1.5	1.4	2.1%	2.2%	2.5%
(Not covered)																														
PLAB	US	Photronics	NA	29	NA	-10.6%	-1.1%	-1.7%	-1.7%	14.2	14.0	13.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semiconductor Capital Equipment (North America)																														
LRCX	US	Lam Research	OW	263	385	53.9%	-14.1%	-8.6%	-1.6%	27.6	21.8	18.4	26.2	20.2	17.6	22.6	18.2	15.6	21.6	17.0	14.9	17.7	12.2	9.4	NA	NA	NA	0.5%	0.5%	0.6%
AMAT	US	Applied Materials	EW	405	563	57.6%	-23.0%	-8.9%	-1.9%	31.6	21.6	16.5	31.7	20.7	16.4	27.3	18.1	14.4	27.8	17.5	14.0	11.7	9.1	7.3	11.5	8.9	7.0	0.5%	0.5%	0.6%
KLAC	US	KLA Corp	OW	162	227	33.1%	-22.1%	-8.6%	-1.6%	29.3	23.8	19.8	28.1	21.7	18.9	24.2	19.7	16.8	23.0	18.2	16.0	22.9	19.8	13.8	24.0	19.0	14.2	0.6%	0.7%	0.8%
TER	US	Teradyne	EW	337	397	73.9%	0.8%	-9.4%	-1.4%	36.5	28.4	21.5	36.4	28.3	23.8	29.5	22.3	16.8	28.9	22.9	19.6	13.4	10.0	7.7	13.9	10.8	8.0	0.2%	0.2%	0.2%
Semiconductors (Japan)																														
285A	JP	Kioxia Holdings	OW	13,140	37,000	277.8%	-24.4%	-27.8%	-8.8%	3.7	2.7	2.4	4.3	3.7	4.1	2.7	2.0	1.8	2.9	2.6	2.8	3.4	1.8	1.1	4.2	2.1	1.5	1.6%	2.9%	5.2%
7741	JP	HOYA Corp	EW	25,990	29,000	9.7%	3.1%	15.0%	15.0%	31.0	27.0	23.4	31.3	27.3	24.3	20.4	18.1	15.8	20.3	17.9	15.6	8.9	8.3	7.7	8.8	7.4	6.3	1.3%	1.5%	1.7%
Semiconductors (North America)																														
NVDA	US	NVIDIA Corp	OW	216	300	16.1%	6.5%	-2.6%	-1.6%	23.3	13.7	10.1	23.5	14.4	9.0	19.1	11.4	8.9	19.3	11.4	8.0	16.8	9.1	5.5	17.2	9.7	6.0	0.4%	0.5%	0.5%
Mid Small Cap/Manufacturer (Japan):																														
7729	JP	Tokyo Seimitsu	OW	16,845	21,000	51.7%	-1.2%	-2.8%	-1.8%	21.0	16.6	14.2	20.6	16.0	15.2	12.7	10.3	9.0	12.7	10.0	9.3	3.3	2.9	2.6	3.3	2.9	2.6	1.9%	2.4%	2.9%
6315	JP	Towa	EW	2,065	2,500	-4.0%	-26.0%	-3.8%	-1.8%	17.7	13.7	11.8	18.9	13.8	13.0	10.3	8.2	7.1	9.9	7.6	7.2	2.1	1.9	1.6	2.0	1.8	1.6	1.2%	1.4%	1.5%
6871	JP	Micronics Japan	OW	12,530	16,000	77.7%	-10.3%	-6.4%	-1.4%	20.3	15.8	11.9	20.6	15.7	12.3	11.7	8.4	6.7	11.7	8.4	6.7	5.8	4.6	3.6	5.7	4.5	3.5	1.5%	2.0%	2.7%
3110	JP	Nitto Boseki	OW	2,912	4,600	42.7%	-4.1%	-5.5%	-1.5%	23.4	17.7	13.1	24.3	17.3	12.8	12.8	9.9	7.6	13.1	9.7	7.5	2.9	2.6	2.3	2.9	2.5	2.2	1.1%	1.4%	1.9%

Note: Data as of October 20 market close. Prices and price targets are in Japanese yen except for Teradyne, Applied Materials, Lam Research, KLA and Photronics, which are in US dollars. Tokyo Seimitsu, Towa, Micronics Japan and Nitto Boseki are covered by Yoshihito Hasegawa. Koixia Holdings is covered by Kazuo Yoshikawa. Teradyne, Applied Materials, Lam Research, and KLA are covered by Shane Brett; NA = No data found on FactSet/Morgan Stanley Research. Photronics is not covered; Japan Semiconductors: In-Line
Mid Small Cap/Manufacturer (Japan): In-Line, Semiconductor Capital Equipment (North America): In-Line
Source: FactSet, Morgan Stanley Research; Cons = based on FactSet Consensus; MSe = Morgan Stanley Research estimates

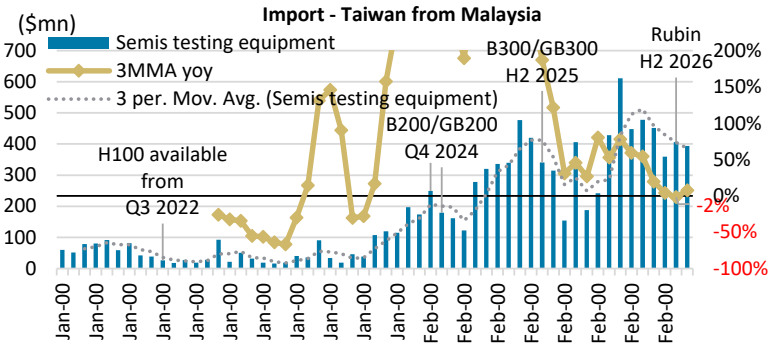
Jul-Sep 2026 Results Preview

Focus KPI	Focus KPI Surprise	Likely impact to consensus EPS*
KOKUSAI ELECTRIC	6525.T	
Guidance hike	— In-line	▲ Modest revision higher
• Announced major guidance hike at Apr-Jun results; expect only small upward revision at Jul-Sep results.		
SCREEN Holdings	7735.T	
SPE segment margin	▲ Very likely upside surprise	▲ Modest revision higher
• Forecast recovery in SPE margin, from 15% in 1Q to 28% in 2Q, and expect prospects to recover for longer-term improvement in margins. • Also expect slight full-year guidance hike, driven mainly by 2H.		
Advantest	6857.T	
Full-year earnings and capacity plan	▲ Likely upside surprise	▲ Modest revision higher
• Still expect upward revision to guidance. • Plan for SoC tester capacity may also be updated.		
Tekscend Photomask	429A.T	
Progress vs. full-year guidance	▲ Likely upside surprise	▲ Modest revision higher
• Expect solid progress vs. full-year guidance, tracking above plan. • Do not anticipate full-year guidance hike.		
DISCO	6146.T	
Shipments plan	— In-line	— Largely unchanged
• Expect shipments/guidance in line with our estimates. • Increase in production support staff may be positive catalyst.		
Lasertec	6920.T	
Revisions to full-year order guidance	▼ Very likely downside surprise	— Largely unchanged
• Despite high expectations, expect only a small upward revision for order guidance.		
Tokyo Electron	8035.T	
2H guidance	▲ Very likely upside surprise	▲ Modest revision higher
• Expect full-year OP guidance for ¥1.1trn, with prospects for profit guidance to top consensus. • Also look for updates on cryo and other new products.		

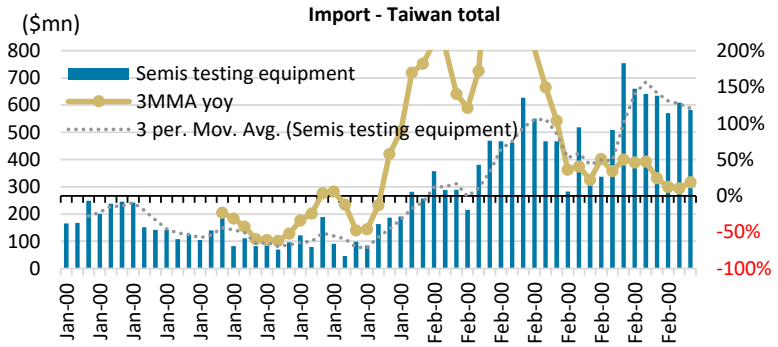
*Direction of next 12-month consensus EPS; Source: Company data, Morgan Stanley Research

Test-related equipment import/テスト関連輸入統計

Taiwan/台湾

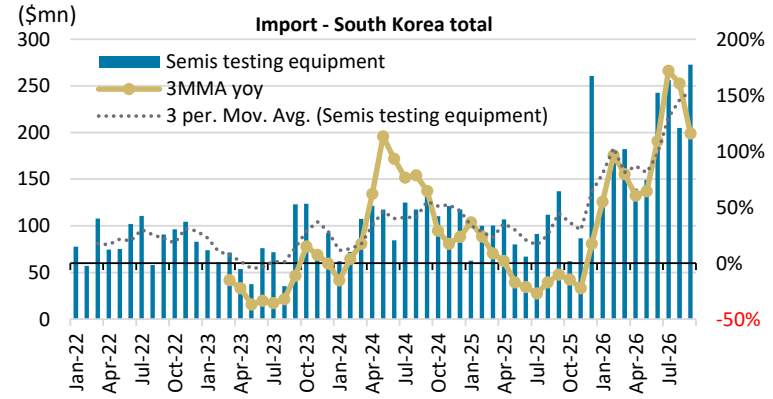


Source: Ministry of Economic Affairs, R.O.C., Morgan Stanley Research



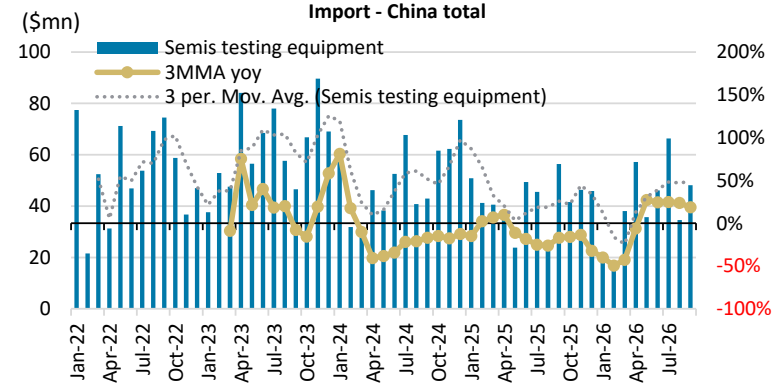
Source: Ministry of Economic Affairs, R.O.C., Morgan Stanley Research

South Korea/韓国



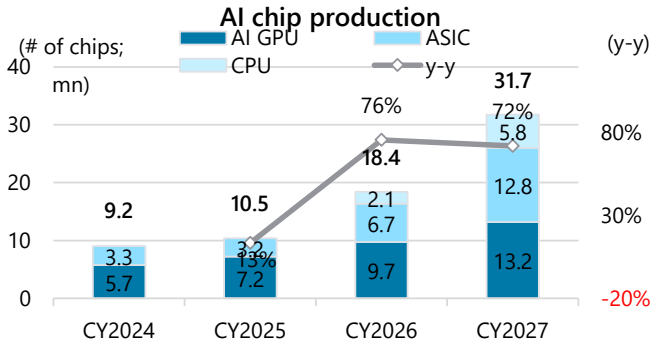
Source: Korea Customs Service, Morgan Stanley Research

China/中国

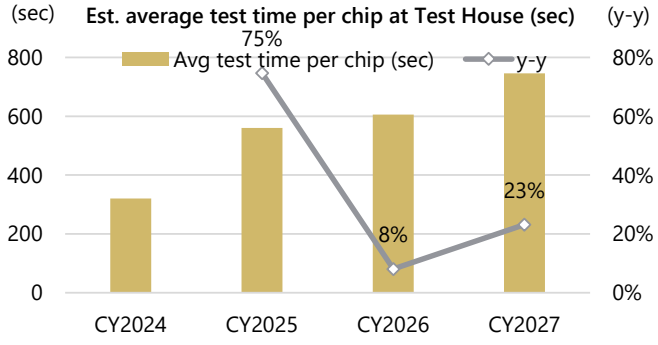


Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

Bottom-up testing demand / ボトムアップでテスト需要を計算



Source: Morgan Stanley Research estimates, calculated by our team based on Morgan Stanley forecasts



Source: Morgan Stanley Research estimates, calculated by our team based on Morgan Stanley forecasts of a Taiwan test house

	CY2023	CY2024	CY2025	CY2026	CY2027
Compute TEST TAM (2024=100)		**100**	**198**	**377**	**799**
Intensity factor y-y		0%	75%	8%	23%
x Volume factor y-y		0%	13%	76%	72%
Δcompute TEST TAM			**+98**	**+179**	**+422**
y-y			**NA**	**82%**	**137%**
Our Asia team's estimates on final test time at KYEC					
H-series		350	350	350	350
B-series with GDDR7			350	350	350
B-series with HBM			850	1,000	850
R-series				1,000	1,275
G CPU			300	300	300
V CPU				700	700
TPU blended			186	340	450
GOOGL CPU blended				300	300

Source: Morgan Stanley Research estimates

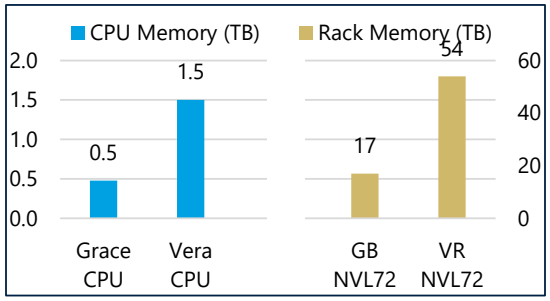
Our forecasts of Advantest's Compute/Communication/アドバンテストのコンピュート/通信向け弊社予想

(JPY mn)	24/3	25/3	26/3	27/3	28/3	29/3
Computing/Communication				**MSe**	**MSe**	**MSe**
Computing/Communication	**147,360**	**396,360**	**729,030**	**1,307,000**	**2,289,000**	**2,975,000**
USD mn	***1,030***	***2,591***	***4,860***	***8,434***	***14,766***	***19,196***
y-y	NA	151%	88%	74%	75%	30%
V93000 EXA Scale price (¥mn) (asmp.)	243	260	255	264	264	264
$mn	***1.7***	***1.7***	***1.7***	***1.7***	***1.7***	***1.7***
y-y	*NA*	*0%*	*0%*	*0%*	*0%*	*0%*
Implied units (unit)	**606**	**1,524**	**2,859**	**4,961**	**8,686**	**11,292**
y-y	NA	151%	88%	74%	75%	30%

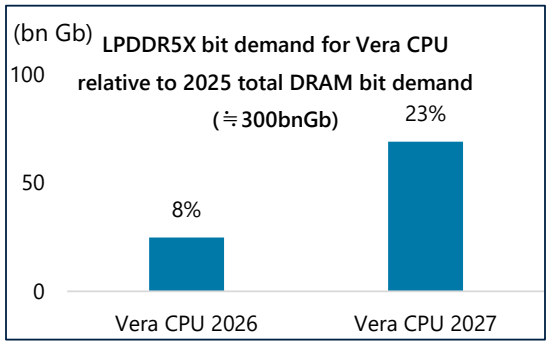
Source: Company data, Morgan Stanley Research; MSe = Morgan Stanley Research estimates

Memory supply/demand related to AI / メモリのAI関連需給

Sizable memory consumption for latest AI devices



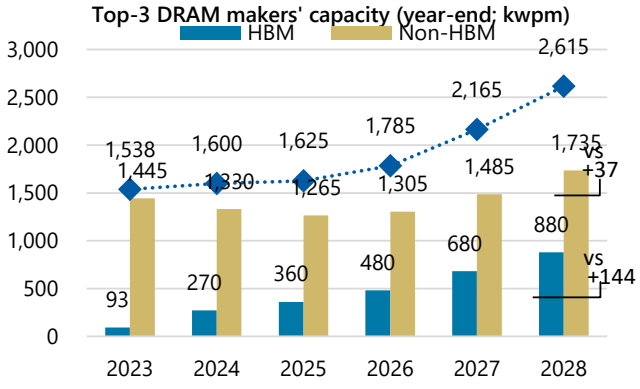
Source: Nvidia, Morgan Stanley Research



Source: Trendforce, Morgan Stanley Research estimates

Bottom-up HBM demand (TB)					
	2024	2025	2026	2027	**2027**
TOTAL	**1,011**	**1,946**	**3,765**	**5,349**	*2.7x*
y-y		*92%*	*94%*	*42%*	vs 2025
AI GPU	760	1,602	2,477	2,477	
ASIC	239	337	1,288	2,872	
Others	13	7	0	0	

Note: calculated based on Morgan Stanley Research estimates on CoWoS allocation; includes AI devices such as AI GPUs, AI ASICs and AI CPUs from international AI semi players
Source: Morgan Stanley Research estimates



Source: Trendforce, Morgan Stanley Research estimates

HBM4 vs 4E, 8Hi vs 12Hi

		HBM4	HBM4E	4E vs 4
Die capacity	Gb/die	24	32	33%
Die width	mm	12.8	13.7	(=√186.6)
Die height	mm	11.0	13.7	(=√186.6)
Die area	mm^2	140.8	186.6	***33%***
DPW	die/wafer	432	318	***-26%***
HBM4 Yield scenarios				
95.0%		*95.0%*	93.5%	-1.6%
# of KGD		410	297	***-28%***
90.0%		*90.0%*	87.0%	-3.3%
# of KGD		388	276	***-29%***
85.0%		*85.0%*	80.7%	-5.1%
# of KGD		367	256	***-30%***
80.0%		*80.0%*	74.5%	-6.9%
# of KGD		345	236	***-32%***

Layers	**Hi**	**8**	**12**	
Die stacking Yield scenarios				**12Hi vs 8Hi**
99.4%	/layer	*95.0%*	92.6%	-3%
98.7%	/layer	*90.0%*	85.4%	-5%
98.0%	/layer	*85.0%*	78.4%	-8%
97.3%	/layer	*80.0%*	71.6%	-11%
95.6%	/layer	*70.0%*		
93.8%	/layer	*60.0%*		

Note: HBM4 die size is based on JEDEC's s
size increase vs 4 assumed as equal to die
could be higher than that due to peripheral
yield for HBM4E is calculated under the ass
density/area is the same with HBM4 assump
yield assumes per layer yield stay the same
heights, which in reality should not be the ca
Source: Trendforce, Morgan Stanley Resea



Progress seen toward High-NA EUV adoption / High-NA EUV採用の動きが進展

Major players announced High-NA adoption roadmap /
主要半導体メーカーがHigh-NA EUVの採用時期を公表

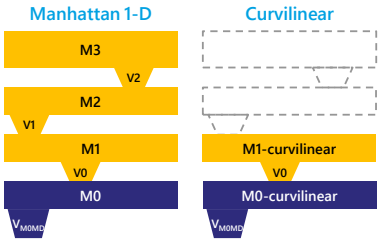
Announced in 2022 / 22年公表
- **Intel:** 2026~ (Intel 18A)

Announced in Sep 2026 / 26年9月公表
- **Samsung:** 2028~ (DRAM)
- **TSMC:** 3030~

Source: Company comments, Morgan Stanley Research

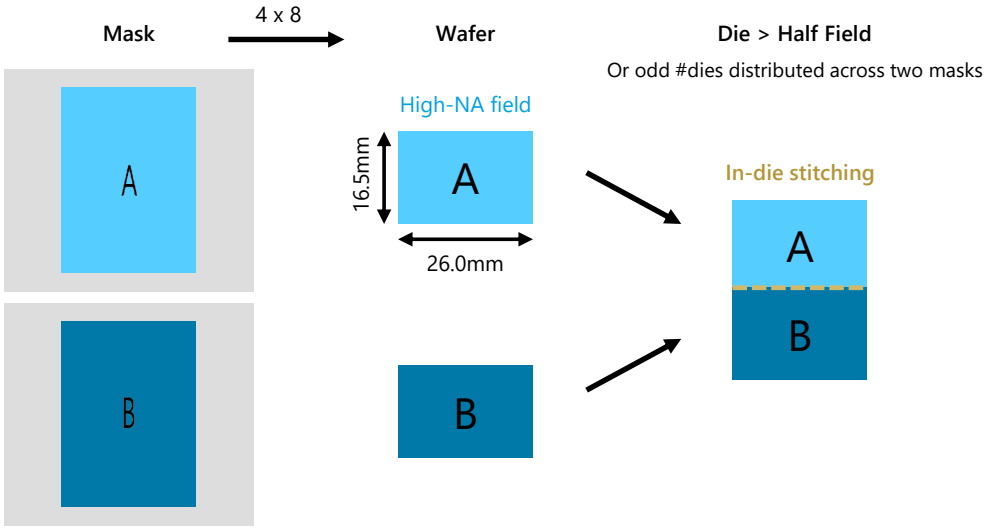
Merits of adopting HNA / HNA導入のメリット

- High resolution and image contrast /高い解像度とコントラスト
- Process simplification /プロセスステップ数削減
- Design flexibility y/ デザインの柔軟性



Source: imec, Morgan Stanley Research

High-NA EUV adoption leading to the need for stitching and large masks /
High-NA EUVの導入にあたりスティッチング技術やラージマスクへの移行が求められている



Source: imec, ASML, Morgan Stanley Research

Issues for large mask / 大判マスクの課題

■**Difficulty:** Materials>front-end process>e-beam tools> back-end tools
■**難易度:** 材料>前工程プロセス>電子ビーム描画装置>後工程装置

■ **Price:** LNA EUV HVM mask ~$500k/layer vs Large mask at least >$1mn /layer
■**価格:** LNA EUVマスク ~$500k/枚 vs ラージマスク 最低でも>$1mn/枚

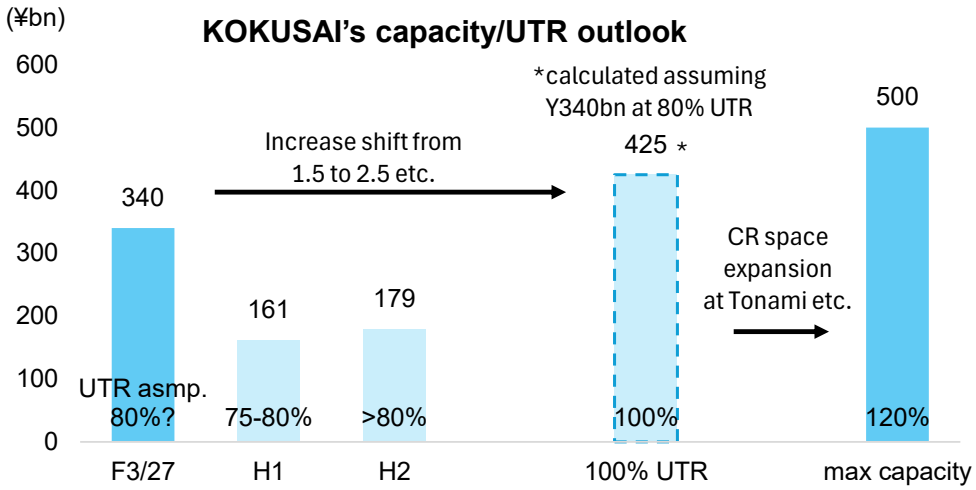
KOKUSAI ELECTRIC (6525): Visit to Toyama and Tonami Sites

- **Utilization:** UTR is currently in the high-70% range and is expected to exceed 80% in 2H.
- **稼働：** 足元の稼働率は70%台後半で、下期には80%以上へ上昇する見通し

- **Capacity:** Currently converting existing space at its Tonami facility into cleanroom space, with completion expected in F3/28, which is to increase production by 20%.
生産キャパ： 砺波事業所の既存スペースをクリーンルームへ改装中で、来期に完成予定。新スペースの立ち上げにより、生産能力は現状の100%を基準に120%まで拡大見込み

- **LT:** equipment lead times have extended from 6 to 8 months, primarily due to component procurement delays, with supplier capacity remaining a key bottleneck.
- **LT:** 装置リードタイムの長期化（6か月→8か月）は主に部材調達に起因しており、サプライヤーの供給能力が引き続き制約要因

- **Productivity:** KOKUSAI is pursuing gradual productivity improvements in line with its roadmap through the early 2030s, with progress currently on track.
- **生産性：** 2030年代前半までのロードマップに沿って漸進的な改善を進めており、進捗は計画通り

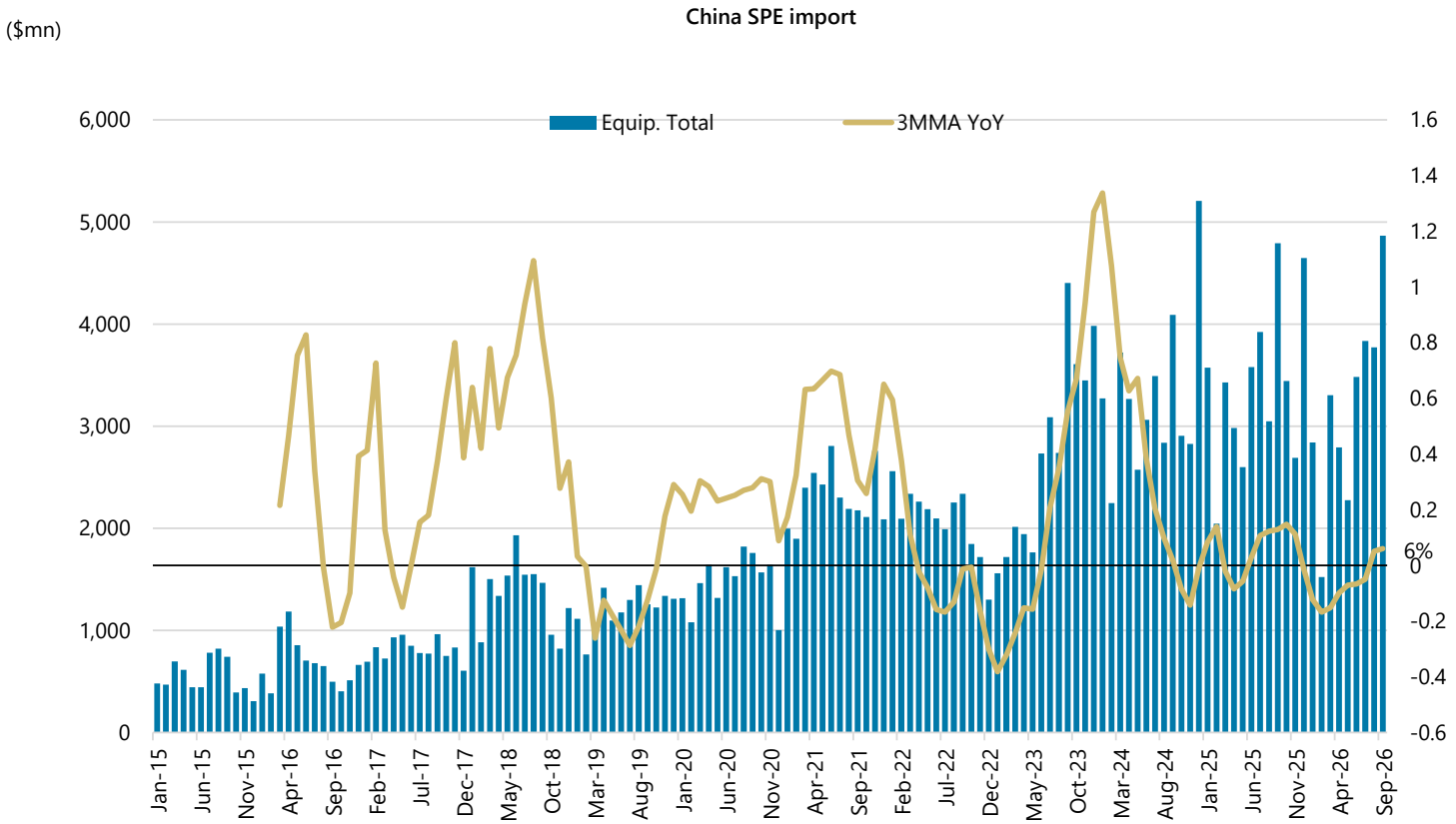


Source: Company comments, Morgan Stanley Research



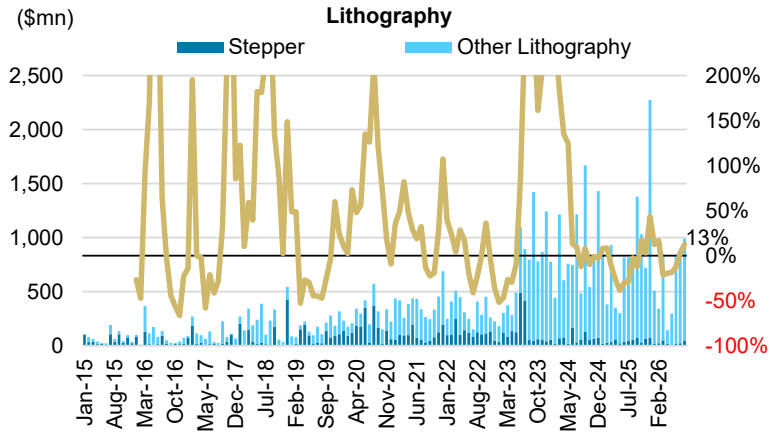
Source: Company comments, Morgan Stanley Research

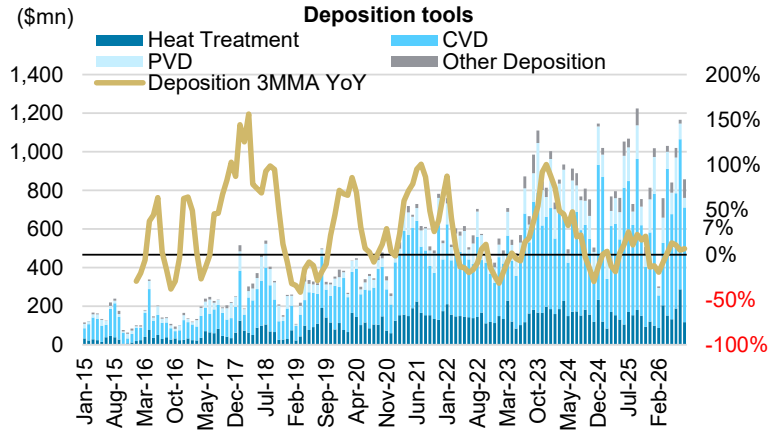
China monthly SPE import data: Sep +6% YoY, 3MMA

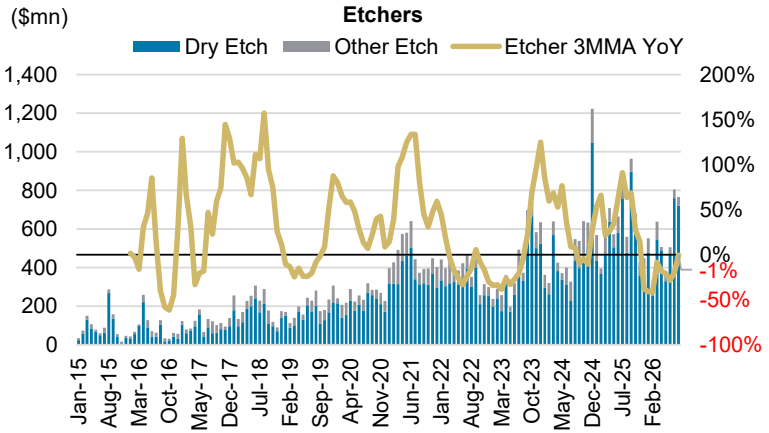


Note: Data excludes handling equipment and components
Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

China monthly SPE import data

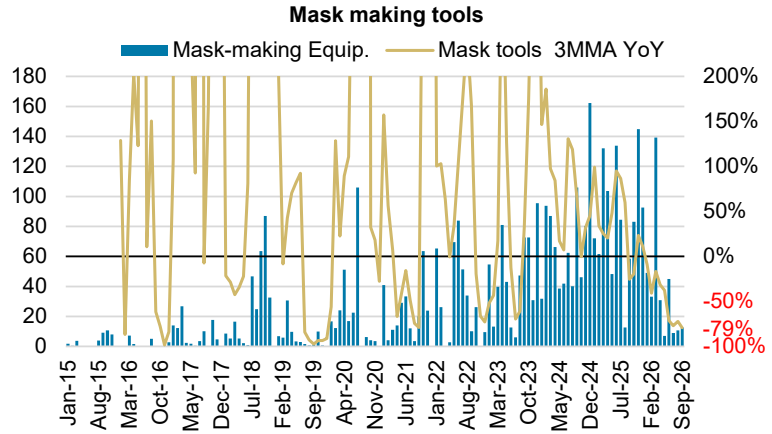


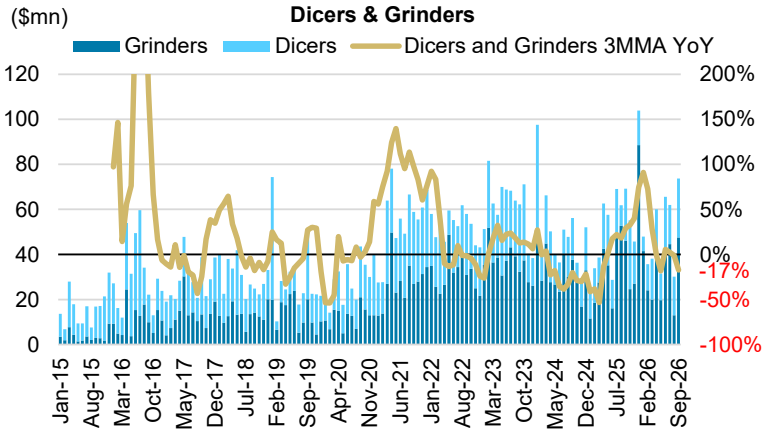


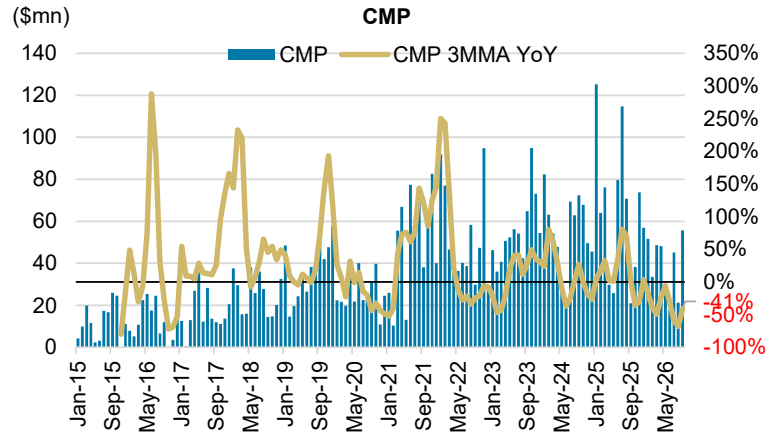


Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

China monthly SPE import data

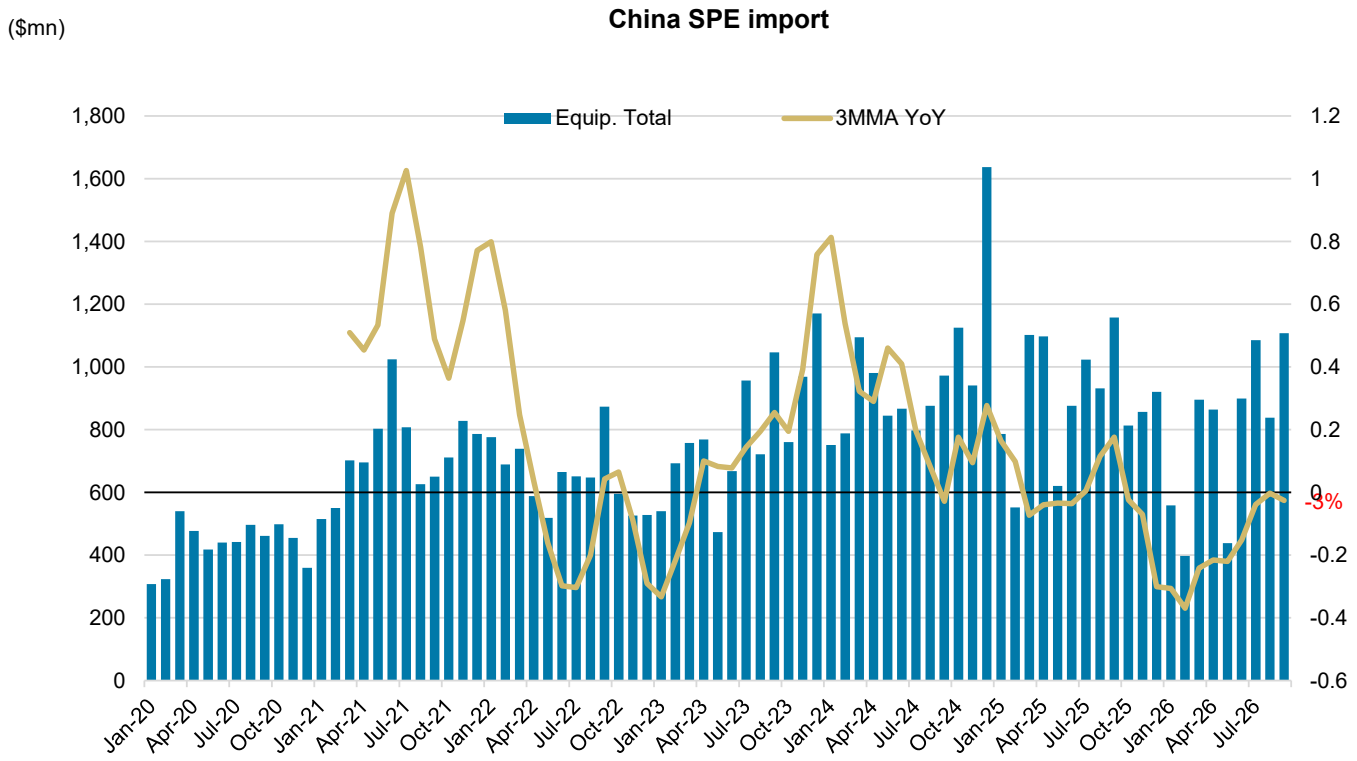






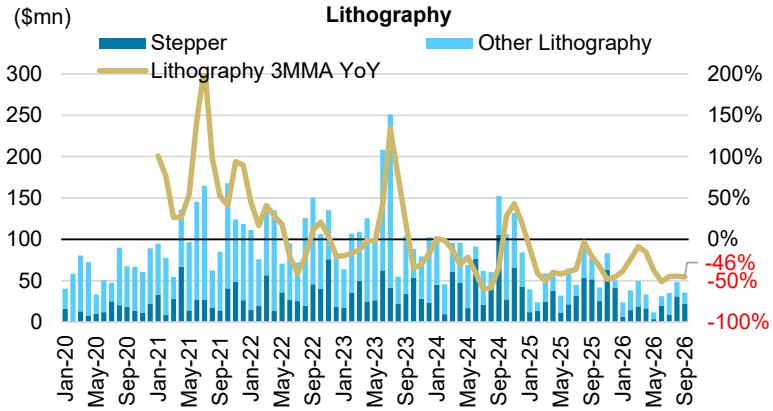
Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

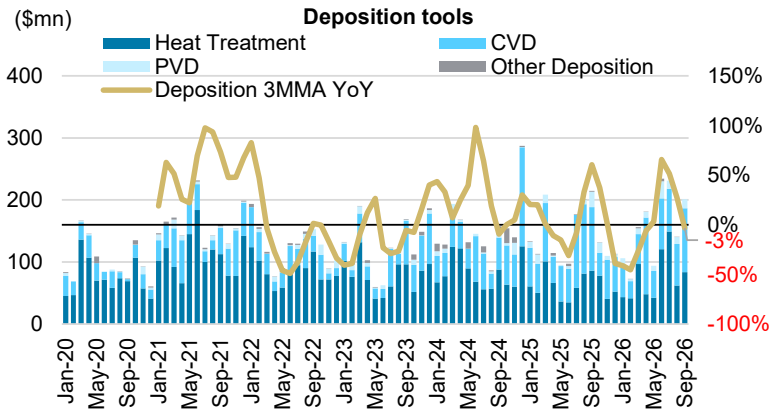
China monthly SPE imports from Japan: Sep -3% YoY, 3MMA

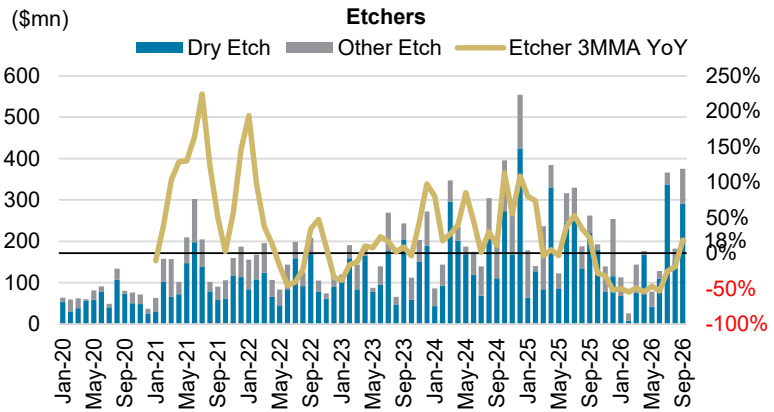


Note: Data excludes handling equipment and components
Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

China monthly SPE imports from Japan

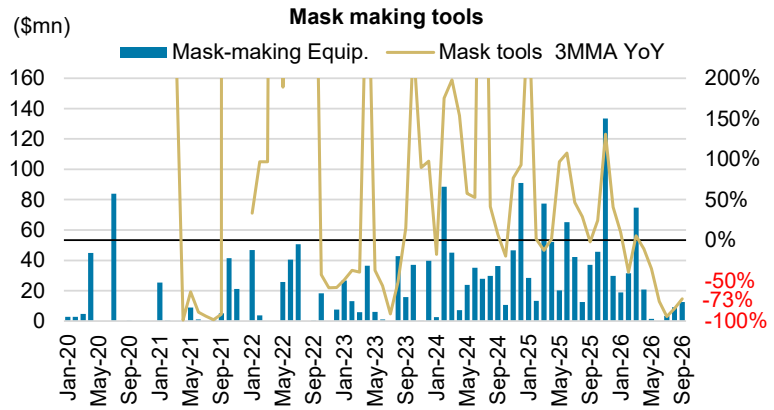


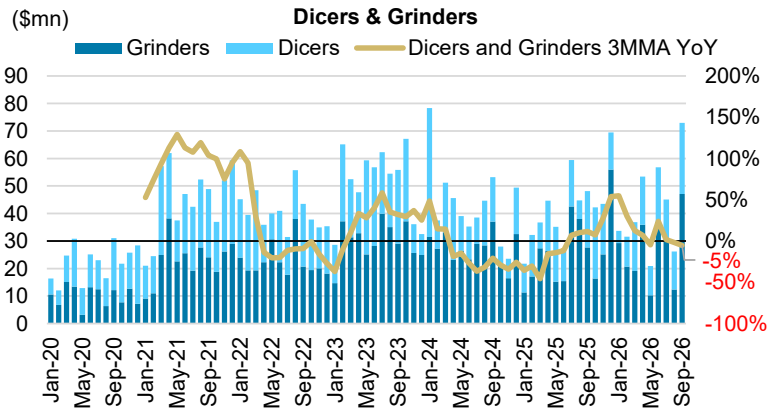


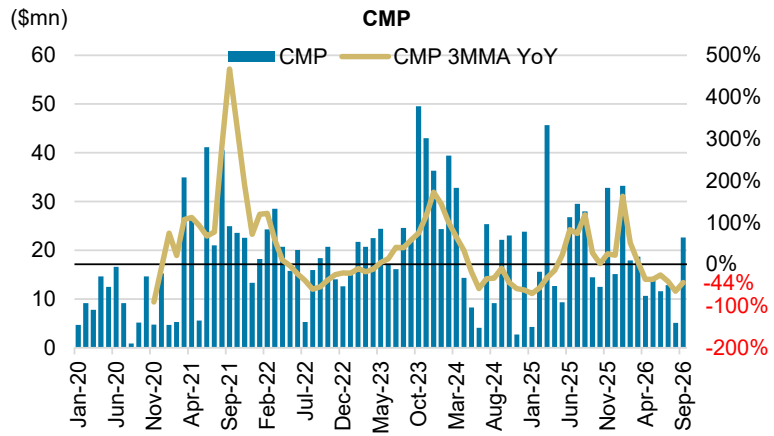


Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

China monthly SPE imports from Japan

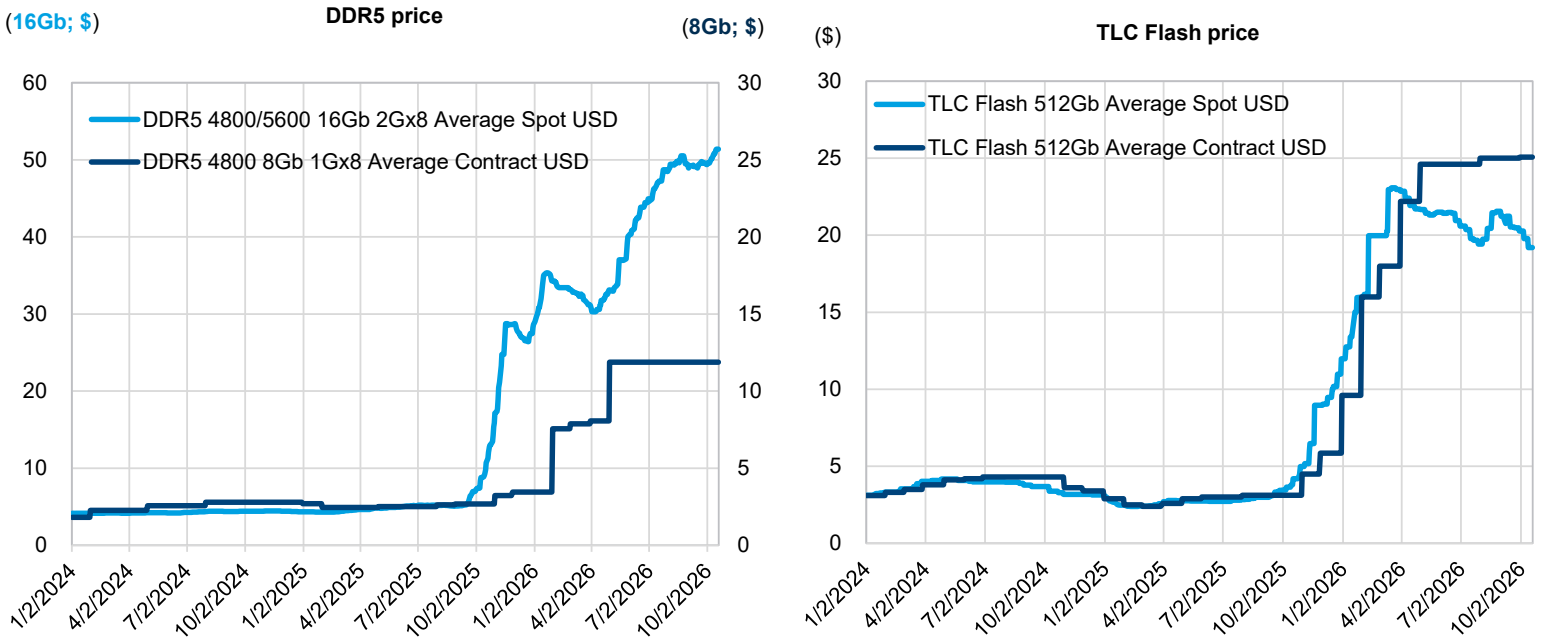






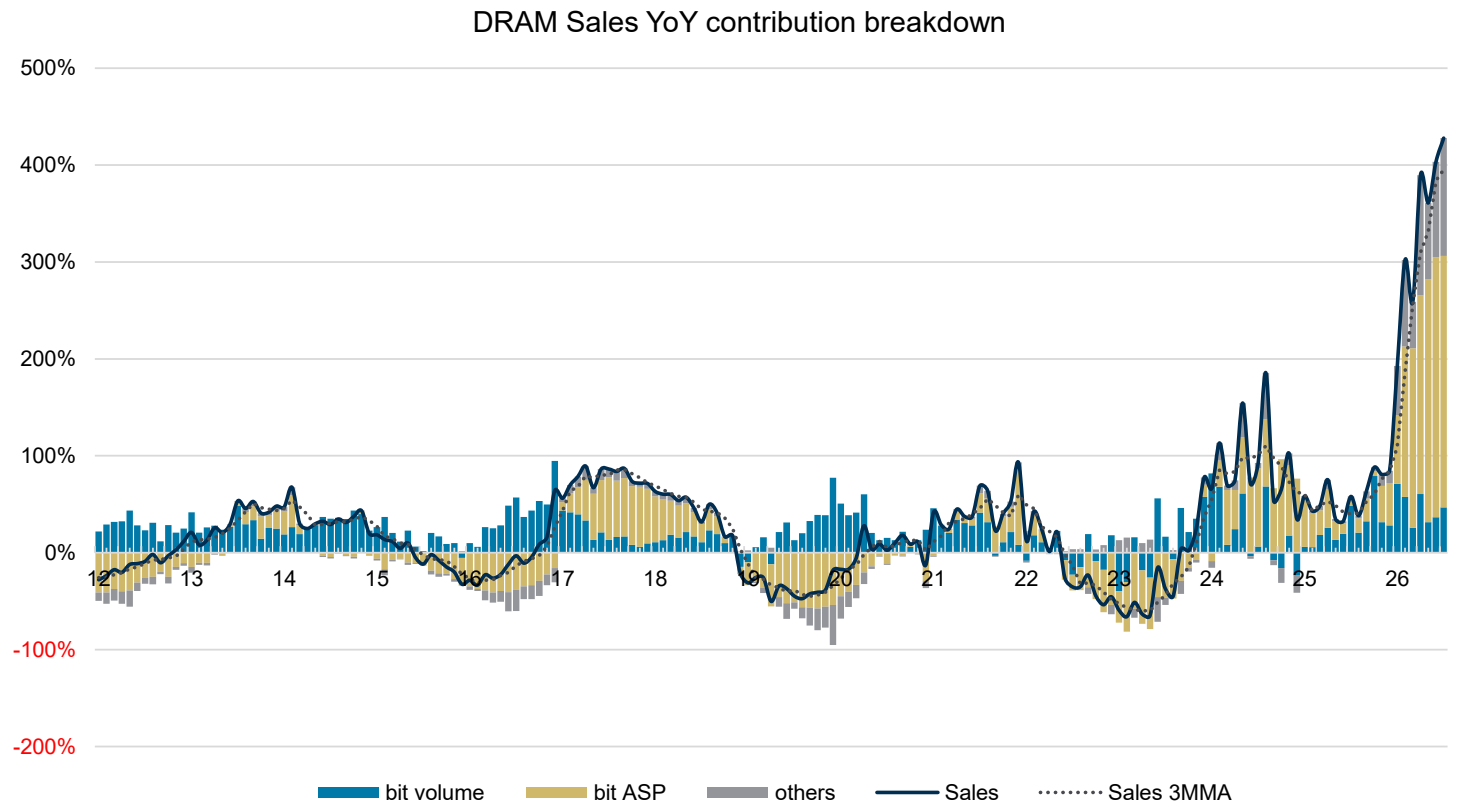
Source: General Administration of Customs of the People's Republic of China, Morgan Stanley Research

Memory price trends



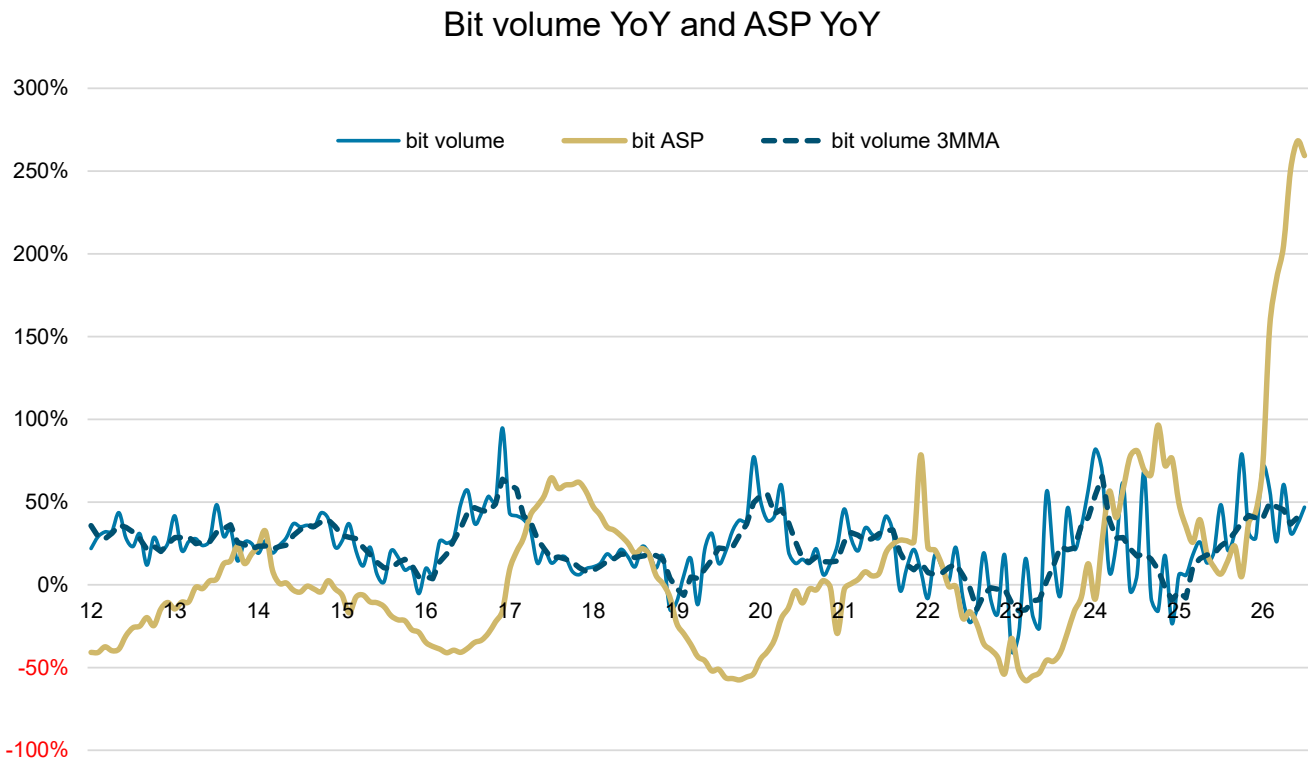
Source: FactSet, Morgan Stanley Research

DRAM YoY growth



Source: WSTS, Morgan Stanley Research

DRAM bit shipment and ASP YoY growth



Source: WSTS, Morgan Stanley Research

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared by Morgan Stanley MUFG Securities Co., Ltd. and its affiliates (collectively, "Morgan Stanley").

For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/eqr/disclosures/webapp/generalresearch, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.

For valuation methodology and risks associated with any recommendation, rating or price target referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61(0)2-9770-1505; Tokyo +81(0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: Suzune Tamura, CFA; Kazuo Yoshikawa, CFA.

.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies. A Portuguese version of the policy can be found at www.morganstanley.com.br

Important Regulatory Disclosures on Subject Companies

As of September 30, 2026, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Advantest, Ebara, KOKUSAI ELECTRIC, Lasertec, SCREEN Holdings.

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of KOKUSAI ELECTRIC, Tekscend Photomask.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from JEOL, Tekscend Photomask, Tokyo Electron.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Advantest, DISCO, Ebara, JEOL, KOKUSAI ELECTRIC, Lasertec, Nikon, SCREEN Holdings, Tekscend Photomask, Tokyo Electron.

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Tokyo Electron.

Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Advantest, Ebara, JEOL, KOKUSAI ELECTRIC, Lasertec, Nikon, SCREEN Holdings, Tekscend Photomask, Tokyo Electron.

Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: Tokyo Electron.

The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues. Equity Research analysts' or strategists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report. Morgan Stanley trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of the debt research report.

Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of September 30, 2026)

The Stock Ratings described below apply to Morgan Stanley's Fundamental Equity Research and do not apply to Debt Research produced by the Firm.

For disclosure purposes only (in accordance with FINRA requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond

Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1599	43%	455	48%	28%	783	44%
Equal-weight/Hold	1563	42%	394	42%	25%	763	43%
Not-Rated/Hold	2	0%	1	0%	50%	1	0%
Underweight/Sell	570	15%	96	10%	17%	227	13%
Total	3,734		946			1774	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.
Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.
Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding any material conflict of interest that can reasonably be expected to have influenced Morgan Stanley Smith Barney LLC's choice of a third-party research provider or the subject company of a third-party research report, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to https://www.morganstanley.com/eqr/disclosures/webapp/generalresearch.
Each Morgan Stanley research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley Research policy is to update research reports as and when the Research Analyst and Research Management deem appropriate, based on developments with the issuer, the sector, or the market that may have a material impact on the research views or opinions stated therein. In addition, certain Research publications are intended to be updated on a regular periodic basis (weekly/monthly/quarterly/annual) and will ordinarily be updated with that frequency, unless the Research Analyst and Research Management determine that a different publication schedule is appropriate based on current conditions.
Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.
Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.
Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.
Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound

by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html). Please use the provided link to review the Terms and Conditions and Most Important Terms and Conditions for Morgan Stanley India Company Private Limited (https://www.morganstanley.com/assets/pdfs/about-us-global-offices/india/Terms_and_conditions.pdf) and the following link to review the audit report (https://ny.matrix.ms.com/eqr/research/webapp/researchdocs/MSICPL_Morgan_Stanley_Research_Audit_Report.pdf).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management. Morgan Stanley may make investment decisions that are inconsistent with the recommendations or views in this report.

To our readers based in Taiwan or trading in Taiwan securities/instruments: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Any non-customer reader within the scope of Article 7-1 of the Taiwan Stock Exchange Recommendation Regulations accessing and/or receiving Morgan Stanley Research is not permitted to provide Morgan Stanley Research to any third party (including but not limited to related parties, affiliated companies and any other third parties) or engage in any activities regarding Morgan Stanley Research which may create or give the appearance of creating a conflict of interest. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves. Neither this report nor any part of it is intended as, or shall constitute, provision of any consultancy or advisory service of securities investment as defined under PRC law. Such information is provided for your reference only.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A. located at Av. Brigadeiro Faria Lima, 3600, 6th floor, São Paulo - SP, Brazil; and is regulated by the Comissão de Valores Mobiliários; in Mexico by Morgan Stanley México, Casa de Bolsa, S.A. de C.V which is regulated by Comision Nacional Bancaria y de Valores. Paseo de los Tamarindos 90, Torre 1, Col. Bosques de las Lomas Floor 29, 05120 Mexico City; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents) and by Morgan Stanley Bank Asia Limited; in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research) and by Morgan Stanley Bank Asia Limited, Singapore Branch (Registration number T14FC0118J); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited having Corporate Identification No (CIN) U22990MH1998PTC115305, regulated by the Securities and Exchange Board of India ("SEBI") and holder of licenses as a Research Analyst (SEBI Registration No. INH000001105); Stock Broker (SEBI Stock Broker Registration No. INZ000244438), Merchant Banker (SEBI Registration No. INM000011203), and depository participant with National Securities Depository Limited (SEBI Registration No. IN-DP-NSDL-567-2021) having registered office at Altimus, Level 39 & 40, Pandurang Budhkar Marg, Worli, Mumbai 400018, India; Telephone no. +91-22-61181000; Compliance Officer Details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: tejarshi.hardas@morganstanley.com; Grievance officer details: Mr. Tejarshi Hardas, Tel. No.: +91-22-61181000 or Email: msic-compliance@morganstanley.com. Morgan Stanley India Company Private Limited (MSICPL) may use AI tools in providing

research services. All recommendations contained herein are made by the duly qualified research analysts; in Germany and the European Economic Area where required by Morgan Stanley Europe S.E., authorised and regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin) under the reference number 149169; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority, disseminates in the UK research that it has prepared, and research which has been prepared by any of its affiliates, only to persons who (i) are investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Order"); (ii) are persons who are high net worth entities falling within Article 49(2)(a) to (d) of the Order; or (iii) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000, as amended) may otherwise lawfully be communicated or caused to be communicated. RMB Morgan Stanley Proprietary Limited is a member of the JSE Limited and A2X (Pty) Ltd. RMB Morgan Stanley Proprietary Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited. Morgan Stanley Research is disseminated in Canada by Morgan Stanley Canada Limited and Morgan Stanley Wealth Management Canada Inc., members of the Canadian Investment Regulatory Organization (CIRO). The information in Morgan Stanley Research is being disseminated by Morgan Stanley Saudi Arabia, regulated by the Capital Market Authority in the Kingdom of Saudi Arabia, and is directed at Sophisticated investors only.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA) or by Morgan Stanley & Co. International plc (ADGM Branch), regulated by the Financial Services Regulatory Authority Abu Dhabi (the FSRA), and is directed at Professional Clients only, as defined by the DFSA or the FSRA, respectively. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria of a Professional Client. A distribution of the different MS Research ratings or recommendations, in percentage terms for Investments in each sector covered, is available upon request from your sales representative.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided exclusively to persons based on their risk and income preferences by the authorized firms. Comments and recommendations stated here are general in nature. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The trademarks and service marks contained in Morgan Stanley Research are the property of their respective owners. Third-party data providers make no warranties or representations relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages relating to such data. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and S&P.

Morgan Stanley Research, or any portion thereof may not be reprinted, sold or redistributed without the written consent of Morgan Stanley.

Indicators and trackers referenced in Morgan Stanley Research may not be used as, or treated as, a benchmark under Regulation EU 2016/1011, or any other similar framework.

The issuers and/or fixed income products recommended or discussed in certain fixed income research reports may not be continuously followed. Accordingly, investors should regard those fixed income research reports as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or individual fixed income products.

Morgan Stanley may hold, from time to time, material financial and commercial interests regarding the company subject to the Research report.

Registration granted by SEBI and certification from the National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

References to any prediction market or event contract do not constitute an offer, solicitation, recommendation, or endorsement to participate in any such market or contract. Morgan Stanley Research may not be distributed or made available in any jurisdiction where such distribution would be unlawful or otherwise prohibited by applicable law.

INDUSTRY COVERAGE: Semiconductor Production Equipment

COMPANY (TICKER)	RATING (AS OF)	PRICE* (10/21/2026)
Kazuo Yoshikawa, CFA		
JEOL (6951.T)	U (10/19/2026)	¥7,076
Suzune Tamura, CFA		
Advantest (6857.T)	O (01/17/2024)	¥34,440
DISCO (6146.T)	O (07/07/2023)	¥53,570
Ebara (6361.T)	O (12/04/2024)	¥4,003
KOKUSAI ELECTRIC (6525.T)	O (12/19/2025)	¥7,361
Lasertec (6920.T)	U (07/28/2025)	¥39,770
Nikon (7731.T)	U (08/08/2023)	¥1,748
SCREEN Holdings (7735.T)	O (11/13/2025)	¥12,910

Tekscend Photomask (429A.T)	E (11/18/2025)	¥3,390
Tokyo Electron (8035.T)	O (12/19/2025)	¥10,160

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

© 2026 Morgan Stanley MUFG