Morgan Stanley | RESEARCH

UPDATE

April 30, 2026 02:14 PM GMT

Hon Precision | Asia Pacific

CPO Insert Test Update; Key Takeaways from TWSE Investor Conference

MORGAN STANLEY TAIWAN LIMITED+

Tiffany Yeh
Equity Analyst
Tiffany.Yeh@morganstanley.com +886 2 7712-3032

Charlie Chan
Equity Analyst
Charlie.Chan@morganstanley.com +886 2 2730-1725

Daniel Yen, CFA
Equity Analyst
Daniel.Yen@morganstanley.com +886 2 2730-2863

MORGAN STANLEY ASIA LIMITED+

Daisy Dai, CFA
Equity Analyst
Daisy.Dai@morganstanley.com +852 2848-7310

MORGAN STANLEY TAIWAN LIMITED+

Lucas Wang
Research Associate
Lucas.Wang@morganstanley.com +886 2 2730-2875

MORGAN STANLEY ASIA LIMITED+

Ethan Jia
Research Associate
Ethan.Jia@morganstanley.com +852 3963-2287

Henry Zhao
Research Associate
Henry.Zhao@morganstanley.com +852 2239-7731

Hon Precision attended the TWSE investor conference today:

- **CPO (Exhibit 1):** Hon Precision will start shipping its Insertion 4 CPO FT handler in 4Q26, with scaled revenue coming in 2027. Our checks suggest that Hon Precision is the sole handler supplier for the Insertion 4E testing. It will conduct pure electrical testing in 2025-2026 for the scale-out switch, then start optical-electrical simultaneous testing in 2027, mainly for the scale-up switch.
- **Capacity outlook:** It plans at least 40% Y/Y capacity expansion in 2026. With more space secured, it would further update the outlook on the May 12 earnings call.
- **SLT Handler:** Hon Precision holds 60-70% market share in ASIC SLT solutions, including Google TPU and next-gen Trainium.

Stay OW: We believe Chroma (covered by Derrick Yang) and Hon Precision are not in direct competition, but instead handle Insertion 4O and Insertion 4E respectively. On the other hand, we see no changes in Hon Precision's leading position in the AI/HPC handler market in the near term. Current P/E is 26x for 2027e, which we view as attractive vs. 70% earnings CAGR during 2025-2028e.

Exhibit 1: We believe Chroma and Hon Precision are not competing in the same field, but instead are in charge of Insertion 4O and Insertion 4E, respectively

Test Insertion	Insertion 1	Insertion 2	Insertion 3	Insertion 4		Insertion 5 (potential)
				Insertion 4O	Insertion 4E	
Test content	Electronic IC (EIC) & Photonic IC (PIC)	EIC die to PIC wafer (after SoIC)	Optical engine (die-to-die)	CPO package (ASIC+OE) Optical Testing	CPO package (ASIC+OE) Electrical Testing (2025-2026) Optical+Electrical Testing (starting 2027e)	CPO package (ASIC+OE) SLT?
Testing surface						
Key Product timeline	2025-2026 Scale-out CPO switch (Spectrum+Quantum) products 2027e onward: Scale-out CPO switch (Spectrum+Quantum) + Scale-up CPO switch products					
Testing details	El. & opt. DC, (power, loss, dark current etc.)	E/O, O/E, O/O, high speed, S-parameters	Full calibration/DC, high-speed functional, optical loopback, alternatively: S-parameters	Optical Light Transmission Testing, optical loopback	BER testing, signal testing	Full system functional validation
Testing service provider	Foundry (Wafer-level) TSMC	Foundry (Wafer-level) TSMC	OSAT (Die/chip level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)	OSAT (Die/package level) SPIL (ASE Group)
Equipment and Consumable Vendor	PIC ATE tester: 1) Advantest + TEL + Formfactor 2) Chroma (underqualification) EIC tester: 1) Teradyne + TEL EIC Probe card: FormFactor	Wafer level testing: 1)Ficontec +Formfactor +Teradyne 2) Advantest+ **MPI**	Die-to-die prober: 1. TEL 2. MPI Optical engine E/O tester+laser reliability test+ELS source test head: Chroma **Optical and Electrical Test Socket: Winway**	CPO switch tester: Chroma **Coaxial socket/Hypersocket: Winway**	ATE tester: 1) Advantest (under qualification) 2)Teradyne **FT Handler+ELS source test head+optical alignmnet stage : Hon Precision** **Coaxial socket/Hypersocket: Winway**	CPO SLT tester: Chroma (under qualification) **Coaxial socket/Hypersocket: Winway**

Source: Company data, Morgan Stanley Research

Hon Precision (7769.TW, 7769 TT)

Greater China Technology Semiconductors | Taiwan

Stock Rating	**Overweight**
Industry View	**Attractive**
Price target	NT$5,000.00
Up/downside to price target (%)	1
Shr price, close (Apr 30, 2026)	NT$4,945.00
52-Week Range	NT$5,285.00-788.00
Sh out, dil, curr (mn)	162
Mkt cap, curr (mn)	NT$801,142
EV, curr (mn)	NT$747,541
Avg daily trading value (mn)	NT$2,875

Fiscal Year Ending	12/25	12/26e	12/27e	12/28e
EPS (NT$)**	76.26	116.17	193.10	308.30
Prior EPS (NT$)**	-	-	-	-
EPS (NT$)§	74.31	111.69	168.73	308.30
Revenue, net (NT$ mn)	30,271	52,343	82,941	127,341
EBITDA (NT$ mn)	15,114	26,109	43,486	69,571
ModelWare net inc (NT$ mn)	12,362	20,899	34,739	55,464
P/E	44.9	42.6	25.6	16.0
P/BV	9.6	13.6	10.8	8.1
RNOA (%)	-	467.2	104.7	96.1

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.

ROE (%)	-	36.0	53.2	67.1
EV/EBITDA	33.2	29.4	17.8	11.3
Div yld (%)	2.2	2.0	0.0	0.0
FCF yld ratio (%)**	3.0	(0.7)	1.4	2.6
Leverage (EOP) (%)	(92.4)	(51.4)	(34.8)	(22.0)

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework
§ = Consensus data is provided by Refinitiv Estimates
** = Based on consensus methodology
e = Morgan Stanley Research estimates

Catalyst Event Preview

Company / Catalyst	Date	Importance	Surprise
Hon Precision 7769.TW			
1Q26 Earnings Call **Takeaways:** • Capacity expansion outlook • CPO outlook • Gross margin outlook	12 May 2026	High	↑ Modest upside surprise

Source:Company data, Morgan Stanley Research

Valuation Methodology and Risks

Hon Precision (7769.TW)

We derive our price target from a residual income model, as we believe this can best capture the long-term value. We assume a 9.8% cost of equity (risk-free rate 2.0% and risk premium 6.0%), a payout ratio of 62%, a medium-term growth rate of 10%, and a terminal growth rate of 3.0%. Our price target implies 43x/26x/16x 2026e/2027e/2028e P/E.

Risks to Upside

- Stronger-than-expected AI demand
- Stronger-than-expected market share expansion
- Faster-than-expected CPO development with more testing needs emerge

Risks to Downside

- Slower-than-expected AI demand
- Stronger-than-expected market share gain from peers
- Slower-than-expected CPO development

人在草木间

更多资料请加V⬇

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared or are disseminated by Morgan Stanley Asia Limited (which accepts the responsibility for its contents) and/or 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/or Morgan Stanley Taiwan Limited and/or Morgan Stanley & Co International plc, Seoul Branch, and/or 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), and/or 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), and/or 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 which accepts the responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research, and their affiliates (collectively, "Morgan Stanley"). 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.

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: Charlie Chan; Daisy Dai, CFA; Tiffany Yeh; Daniel Yen, 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 March 31, 2026, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: ACM Research Inc, Advanced Micro-Fabrication Equipment Inc, Advanced Wireless Semiconductor Co, Alchip Technologies Ltd, AllRing Tech Co., AP Memory Technology Corp, ASE Technology Holding Co. Ltd., ASMPT Ltd, Global Unichip Corp, **Hon Precision**, JCET Group Co Ltd, King Yuan Electronics Co Ltd, Macronix International Co Ltd, Montage Technology Co Ltd, MPI Corporation, Nanya Technology Corp., NAURA Technology Group Co Ltd, Novatek, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Realtek Semiconductor, Shanghai Fudan Microelectronics, Silergy Corp., TSMC, UMC, Vanguard International Semiconductor, WIN Semiconductors Corp, Winbond Electronics Corp, WPG Holdings, WT Microelectronics Co. Ltd..

Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Montage Technology Co Ltd.

Within the last 12 months, Morgan Stanley has received compensation for investment banking services from ASMPT Ltd, Montage Technology Co Ltd.

In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Alchip Technologies Ltd, AP Memory Technology Corp, ASE Technology Holding Co. Ltd., ASMedia Technology Inc, ASMPT Ltd, Espressif Systems, GigaDevice Semiconductor Beijing Inc, GlobalWafers Co Ltd, Gudeng Precision, Himax Technologies Inc, Iluvatar CoreX Semiconductor Co., Ltd., Innoscience, King Yuan Electronics Co Ltd, Macronix International Co Ltd, MediaTek, Montage Technology Co Ltd, Novatek, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Realtek Semiconductor, Silergy Corp., Silicon Motion, TSMC, UMC, Universal Scientific Ind. (Shanghai), Vanguard International Semiconductor, Winbond Electronics Corp, WPG Holdings, WT Microelectronics Co. Ltd..

Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from ASE Technology Holding Co. Ltd., King Yuan Electronics Co Ltd, MediaTek, Nanya Technology Corp., Novatek, Nuvoton Technology Corporation, Realtek Semiconductor, Silicon Motion, SMIC, TSMC, UMC, Universal Scientific Ind. (Shanghai), Winbond Electronics Corp, WT Microelectronics Co. Ltd..

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: Alchip Technologies Ltd, AP Memory Technology Corp, ASE Technology Holding Co. Ltd., ASMedia Technology Inc, ASMPT Ltd, Espressif Systems, GigaDevice Semiconductor Beijing Inc, GlobalWafers Co Ltd, Gudeng Precision, Himax Technologies Inc, Iluvatar CoreX Semiconductor Co., Ltd., Innoscience, King Yuan Electronics Co Ltd, Macronix International Co Ltd, MediaTek, Montage Technology Co Ltd, Novatek, Phison Electronics Corp, Powerchip Semiconductor Manufacturing Co, Realtek Semiconductor, Silergy Corp., Silicon Motion, TSMC, UMC, Universal Scientific Ind. (Shanghai), Vanguard International Semiconductor, Winbond Electronics Corp, WPG Holdings, WT Microelectronics Co. Ltd..

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: ASE Technology Holding Co. Ltd., King Yuan Electronics Co Ltd, MediaTek, Montage Technology Co Ltd, Nanya Technology Corp., Novatek, Nuvoton Technology Corporation, Realtek Semiconductor, Silicon Motion, SMIC, TSMC, UMC, Universal Scientific Ind. (Shanghai), Winbond Electronics Corp, WT Microelectronics Co. Ltd..

Morgan Stanley & Co. LLC makes a market in the securities of ACM Research Inc, Himax Technologies Inc, Silicon Motion.

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 March 31, 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	1534	42%	461	50%	30%	698	43%
Equal-weight/Hold	1573	43%	372	40%	24%	716	44%
Not-Rated/Hold	4	0%	1	0%	25%	1	0%
Underweight/Sell	568	15%	89	10%	16%	209	13%
Total	3,679		923			1624	

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

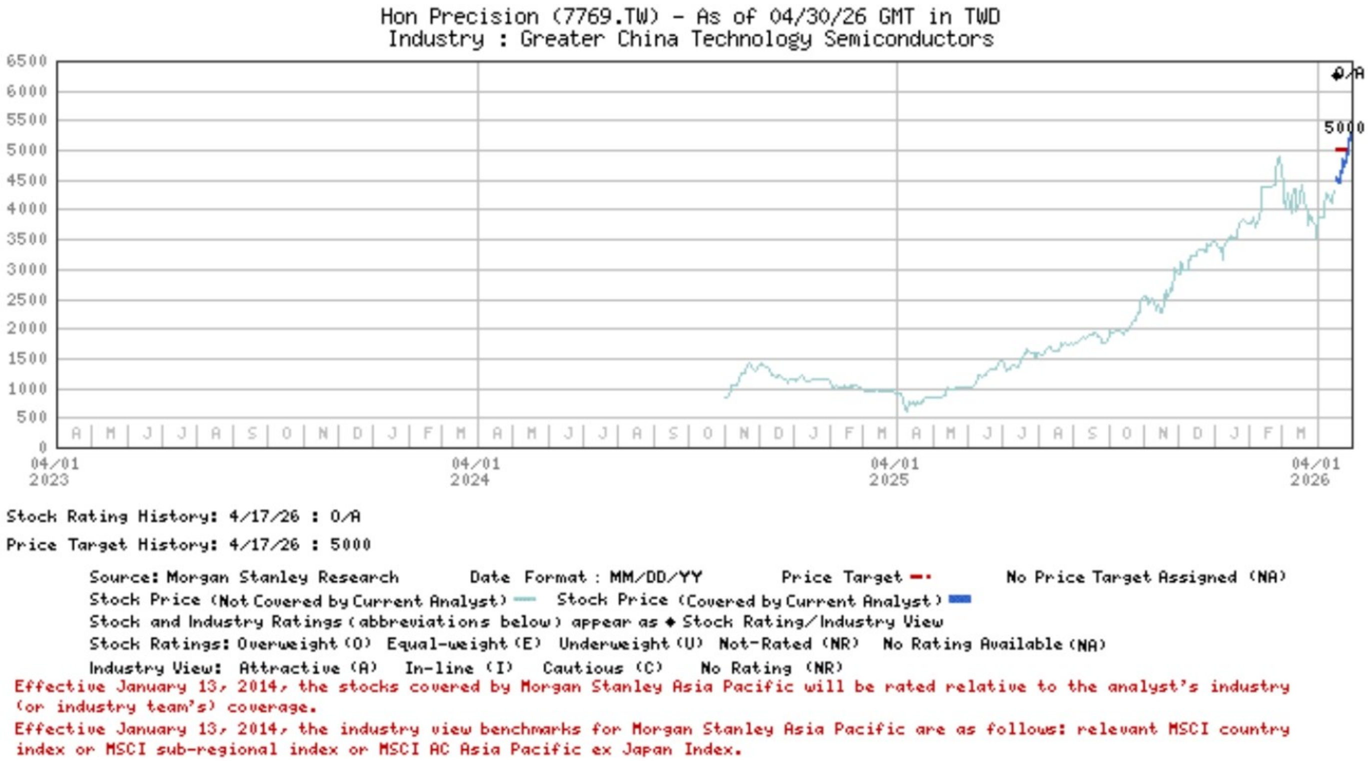
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

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.

Stock Price, Price Target and Rating History (See Rating Definitions)



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.

Certain information in Morgan Stanley Research was sourced by employees of the Shanghai Representative Office of Morgan Stanley Asia Limited for the use of Morgan Stanley Asia Limited. 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 Canada by Morgan Stanley Canada Limited; 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. 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.

Morgan Stanley Hong Kong Securities Limited is the liquidity provider/market maker for securities of ASMPT Ltd, Hua Hong Semiconductor Ltd listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk.

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.

INDUSTRY COVERAGE: Greater China Technology Semiconductors

COMPANY (TICKER)	RATING (AS OF)	PRICE* (04/30/2026)
Charlie Chan		
ACM Research Inc (ACMR.O)	O (03/07/2023)	US$48.65
Advanced Micro-Fabrication Equipment Inc (688012.SS)	O (11/06/2023)	Rmb376.30
Advanced Wireless Semiconductor Co (8086.TWO)	U (07/14/2025)	NT$144.00
Alchip Technologies Ltd (3661.TW)	O (05/14/2021)	NT$4,135.00
ASE Technology Holding Co. Ltd. (3711.TW)	O (09/15/2024)	NT$478.00
Cambricon Technology Corporation (688256.SS)	O (04/27/2026)	Rmb1,699.96
Global Unichip Corp (3443.TW)	O (07/27/2024)	NT$4,260.00
GlobalWafers Co Ltd (6488.TWO)	O (09/19/2025)	NT$580.00
Gudeng Precision (3680.TWO)	O (11/25/2025)	NT$537.00
Hua Hong Semiconductor Ltd (1347.HK)	E (03/12/2026)	HK$114.10
Iluvatar CoreX Semiconductor Co., Ltd. (9903.HK)	O (04/27/2026)	HK$465.80
King Yuan Electronics Co Ltd (2449.TW)	O (03/03/2023)	NT$302.50
Maxscend Microelectronics Co Ltd (300782.SZ)	U (01/11/2021)	Rmb99.62
MediaTek (2454.TW)	O (11/28/2025)	NT$2,610.00
MetaX Integrated Circuits (688802.SS)	E (04/27/2026)	Rmb758.03
Nanya Technology Corp. (2408.TW)	E (03/20/2026)	NT$215.50
NAURA Technology Group Co Ltd (002371.SZ)	O (11/06/2023)	Rmb536.99
OmniVision Integrated Circuits Group Inc (603501.SS)	E (11/17/2025)	Rmb98.30
Phison Electronics Corp (8299.TWO)	E (02/25/2026)	NT$1,900.00
SG Micro Corp. (300661.SZ)	E (11/03/2025)	Rmb91.94
Silergy Corp. (6415.TW)	E (04/21/2026)	NT$427.00
SMIC (0981.HK)	O (10/21/2025)	HK$70.90
TSMC (2330.TW)	O (02/07/2022)	NT$2,135.00
UMC (2303.TW)	E (04/20/2026)	NT$77.30
Vanguard International Semiconductor (5347.TWO)	E (01/14/2026)	NT$145.50
WIN Semiconductors Corp (3105.TWO)	U (07/14/2025)	NT$536.00
Daisy Dai, CFA		
ASMPT Ltd (0522.HK)	O (07/24/2025)	HK$163.10
China Resources Microelectronics Limited (688396.SS)	U (03/02/2026)	Rmb56.65

Elan Microelectronics Corp (2458.TW)	O (10/03/2025)	NT$136.50
Empyrean Technology Co Ltd (301269.SZ)	E (01/17/2025)	Rmb88.82
Hangzhou Silan Microelectronics Co. Ltd. (600460.SS)	U (08/25/2025)	Rmb28.90
Innoscience (2577.HK)	E (10/13/2025)	HK$64.15
JCET Group Co Ltd (600584.SS)	E (01/16/2026)	Rmb45.56
Shanghai Fudan Microelectronics (1385.HK)	O (03/07/2025)	HK$38.86
SICC Co Ltd (688234.SS)	O (03/20/2026)	Rmb101.00
StarPower Semiconductor Ltd (603290.SS)	O (03/01/2022)	Rmb103.92
Unigroup Guoxin Microelectronics Co Ltd (002049.SZ)	U (01/10/2023)	Rmb77.32
Universal Scientific Ind. (Shanghai) (601231.SS)	O (11/05/2025)	Rmb37.80
Yangjie Technology (300373.SZ)	O (06/10/2022)	Rmb75.88
Daniel Yen, CFA		
AP Memory Technology Corp (6531.TW)	O (07/11/2025)	NT$840.00
ASMedia Technology Inc (5269.TW)	U (10/03/2025)	NT$1,365.00
Aspeed Technology (5274.TWO)	O (06/09/2025)	NT$16,475.00
Egis Technology Inc (6462.TWO)	E (01/28/2026)	NT$122.00
Espressif Systems (688018.SS)	O (05/15/2023)	Rmb172.12
GigaDevice Semiconductor Beijing Inc (603986.SS)	O (05/15/2025)	Rmb312.99
Macronix International Co Ltd (2337.TW)	O (09/18/2025)	NT$154.00
Montage Technology Co Ltd (6809.HK)	O (03/18/2026)	HK$261.80
Montage Technology Co Ltd (688008.SS)	O (03/18/2026)	Rmb173.30
Novatek (3034.TW)	U (02/04/2026)	NT$409.00
Nuvoton Technology Corporation (4919.TW)	U (11/10/2025)	NT$147.50
Parade Technologies Ltd (4966.TWO)	E (01/30/2026)	NT$575.00
Powerchip Semiconductor Manufacturing Co (6770.TW)	O (10/27/2025)	NT$51.90
Realtek Semiconductor (2379.TW)	E (01/30/2026)	NT$537.00
Shenzhen Goodix Technology Co Ltd (603160.SS)	U (07/14/2025)	Rmb64.89
Winbond Electronics Corp (2344.TW)	E (03/20/2026)	NT$89.80
WPG Holdings (3702.TW)	O (03/16/2026)	NT$101.00
WT Microelectronics Co. Ltd. (3036.TW)	O (01/27/2026)	NT$204.00
Duan Liu		
Dosilicon Co Ltd (688110.SS)	U (09/06/2024)	Rmb143.77
Shenzhen Longsys Electronics Co Ltd (301308.SZ)	E (02/25/2026)	Rmb401.12
Tiffany Yeh		
AllRing Tech Co. (6187.TWO)	O (09/23/2025)	NT$1,210.00
FOCI Fiber Optic Communications Inc (3363.TWO)	O (01/15/2025)	NT$769.00
Himax Technologies Inc (HIMX.O)	E (02/04/2026)	US$11.45
Hon Precision (7769.TW)	O (04/17/2026)	NT$4,945.00
MPI Corporation (6223.TWO)	O (04/17/2026)	NT$4,925.00
Silicon Motion (SIMO.O)	O (05/06/2024)	US$217.50
Winway Technology Co Ltd (6515.TW)	O (04/17/2026)	NT$10,385.00

Stock Ratings are subject to change. Please see latest research for each company.

* Historical prices are not split adjusted.

© 2026 Morgan Stanley