



Asia Weekday Webcasts

Tuesday TMT

Investor presentation | Asia Pacific

TMT Webcast: Analog Semiconductors – How Will China Chip In?

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Greater China IT Services and Software

Asia Pacific
IndustryView **In-Line**

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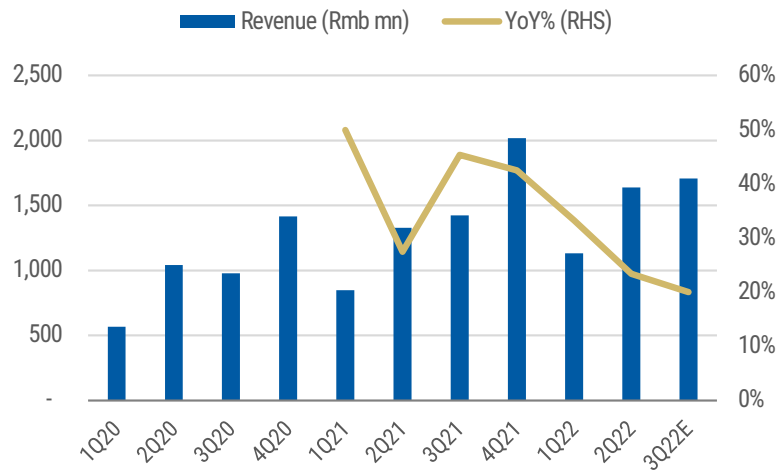
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Glodon: Resilient Quarter; Reiterate OW

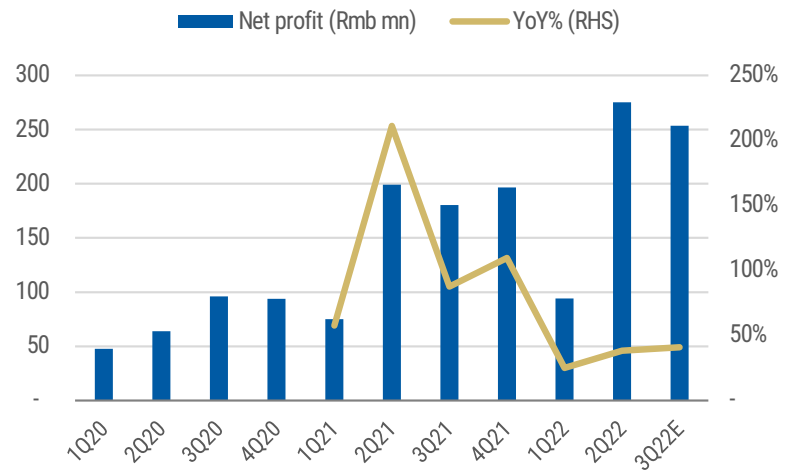
Yang Liu

Glodon 3Q22 Preview

3Q22 revenue to grow 20%YoY to Rmb1.7bn



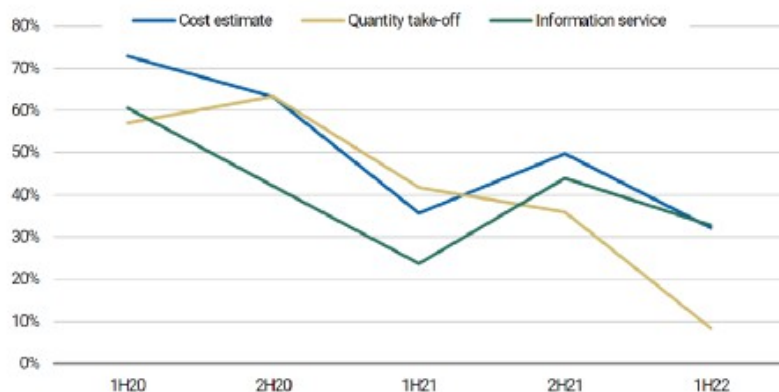
Normalized net profit to growth 41%YoY to Rmb254mn



Source: Company data, Morgan Stanley Research estimates

Key Indicators To Watch For

Glodon's New Cloud Order



Monthly New Property Starts Growth (China)



Source: Company data, NBS, Morgan Stanley Research.

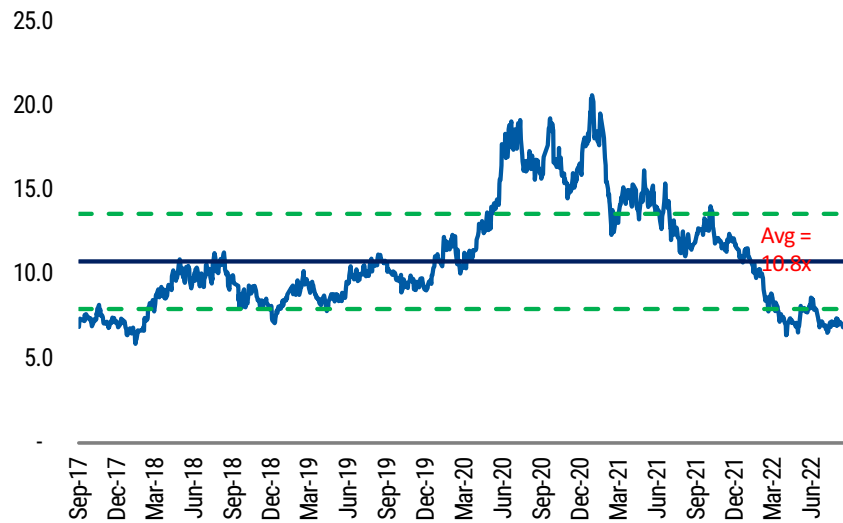
Glodon: Key comps

Ticker	Name	Rating	CURR	PX	Market cap (LC mn)	EV (LC mn)	EV/S			P/E			Rev CAGR (21-24)	EPS CAGR (21-24)
							2022E	2023E	2024E	2022E	2023E	2024E		
China SaaS														
002410.SZ	Glodon	O	CNY	45.21	53,857	51,489	7.3	6.0	5.0	54.3	37.4	26.7	22%	46%
0909.HK	MYC	E	HKD	5.01	10,856	5,178	2.4	2.1	1.9	NA	40.8	20.4	1%	7%
002153.SZ	Shiji Info	U	CNY	13.09	27,481	26,837	8.3	7.1	6.1	NA	90.6	8.2	11%	NA
2013.HK	Weimob	E	HKD	2.64	7,470	7,425	3.1	2.6	2.0	NA	NA	49.5	3%	NA
688111.SS	KSO	E	CNY	216.30	99,762	91,738	23.2	17.9	14.4	95.4	67.4	52.3	25%	31%
0268.HK	Kingdee	E	HKD	10.57	40,728	35,042	6.3	5.0	4.0	NA	NA	119.5	19%	NA
600588.SS	Yonyou	E	CNY	18.05	61,981	59,579	5.8	4.7	3.8	163.8	70.7	34.0	21%	63%
3738.HK	Vobile	*	HKD	2.56	5,421	6,231	4.9	3.1	2.2	90.1	67.5	34.6	59%	NA
Median							6.0	4.9	3.9	92.7	67.4	34.3	20%	38%
Average							7.7	6.1	4.9	100.9	62.4	43.1	20%	37%
Global AEC														
ADSK.O	Autodesk	E	USD	187.15	40,398	41,502	8.3	7.5	6.6	28.6	24.2	20.4	12%	22%
BSY.O	Bentley System	*	USD	31.77	9,162	10,899	9.8	8.9	8.0	56.4	49.3	30.0	12%	53%
PCOR.N	Procore	*	USD	51.31	7,020	6,503	9.4	7.6	6.3	NA	NA	NA	26%	-3%
Median							9.4	7.6	6.6	42.5	36.7	25.2	12%	22%
Average							9.1	8.2	7.3	42.5	36.7	25.2	12%	37%

Note: for non-covered (*) stocks, we use Refinitiv consensus estimate.

Source: Refinitiv, Morgan Stanley Research estimates.

Glodon: Historical NTM EV/S

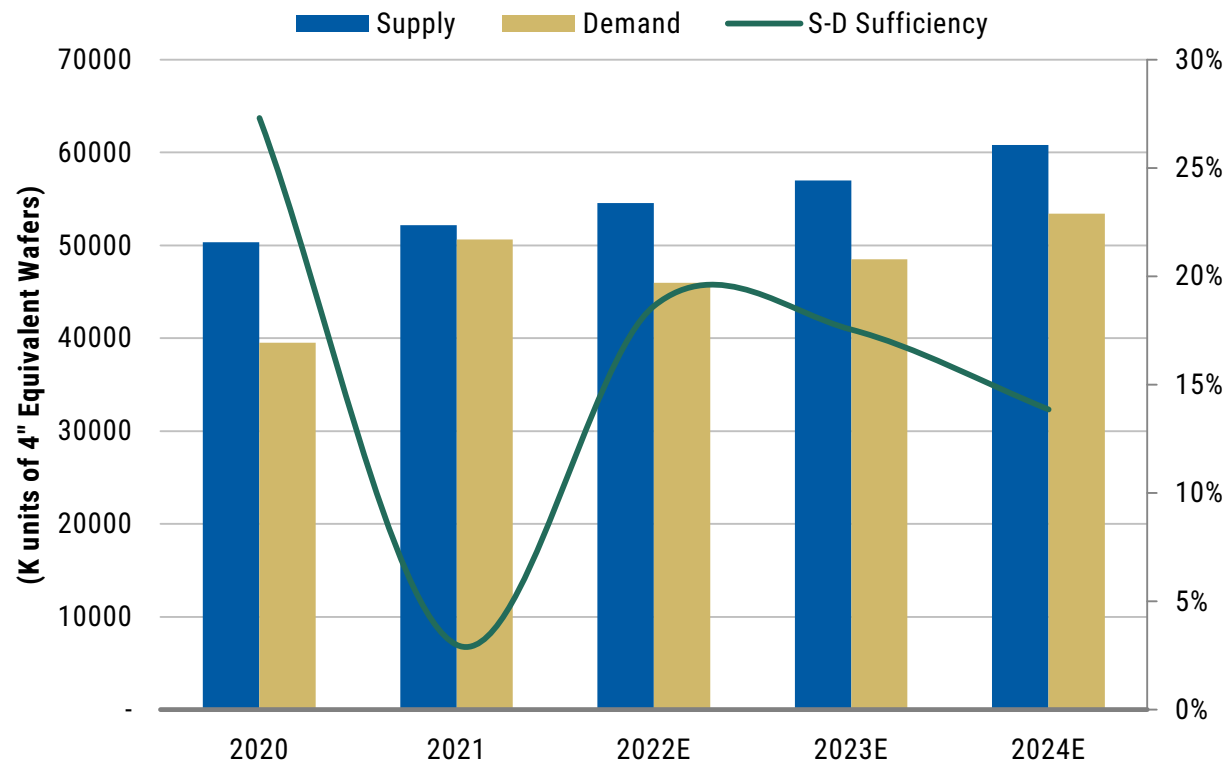


Source: Refinitiv, Morgan Stanley Research estimates.

Dimming Mini and Micro LED Opportunities

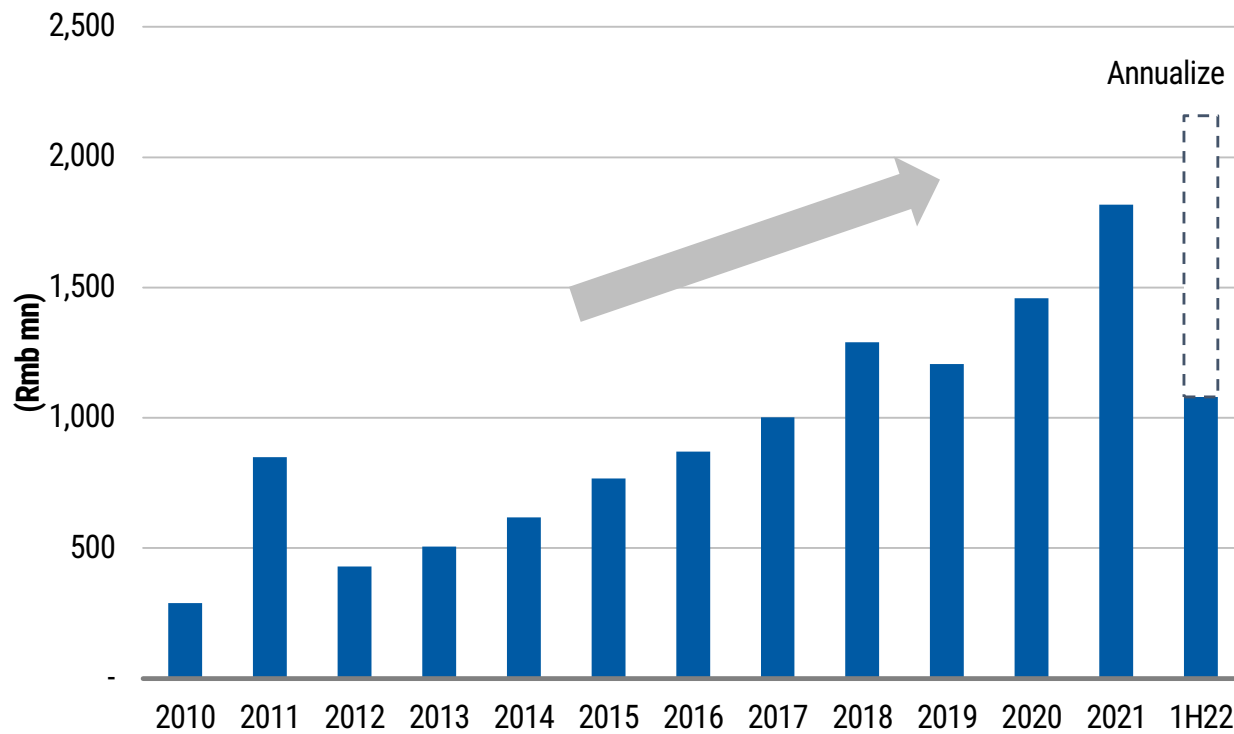
Derrick Yang

Global LED in Oversupply in 2023-24e



Source: LEDinside, Morgan Stanley Research estimates

LED Subsidy Not Slowing Down in China



Source: Company data, Morgan Stanley Research

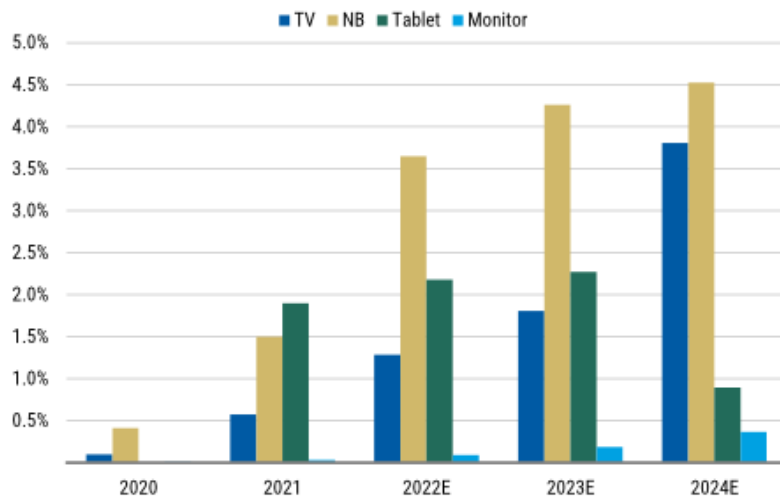
Comparison of Different Display Technologies

	Regular LCD	Mini LED LCD	AMOLED
Light Source	Backlight Module	Backlight Module	Self Emissive
Brightness (cd/m²)	3,000	10,000	1,000
Contrast Ratio	5,000:1	1,000,000:1	10,000:1
Color Gamut	NTSC 74%	NTSC 140%	NTSC 125%
Life Time (Hours)	60,000	60,000	20,000-30,000
Response Time	ms	ms	um
Power Consumption	1.0x	~1.0-1.2x	0.4-0.5x
Working Temperature (°C)	-40 to +100	-40 to +100	-30 to +85
Max Resolution (ppi)	800	800	500

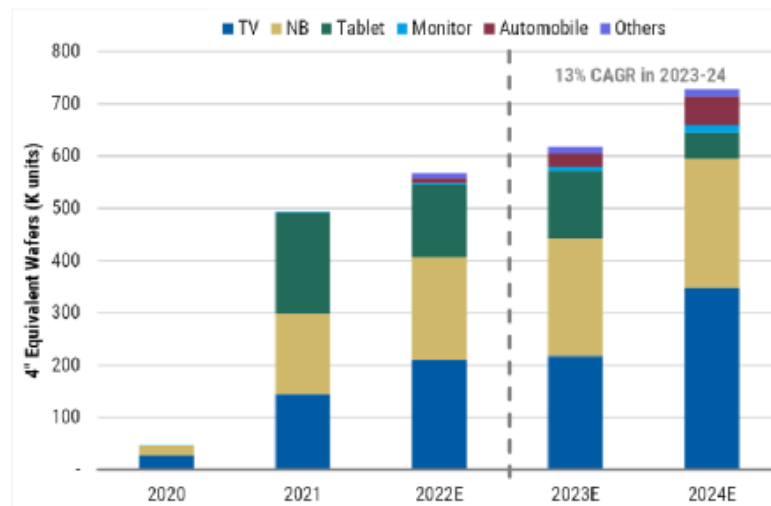
Source: Company data, Morgan Stanley Research

Mini LED Penetration and Market Forecast

Mini LED Penetration Among Major Applications



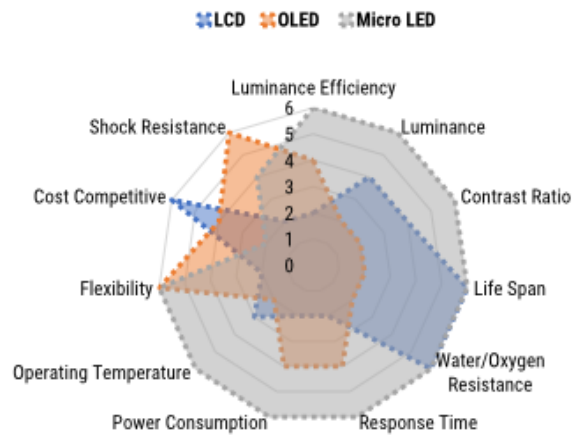
Global LED Revenue from Mini LED to Expand at a 13% CAGR in 2023-24e



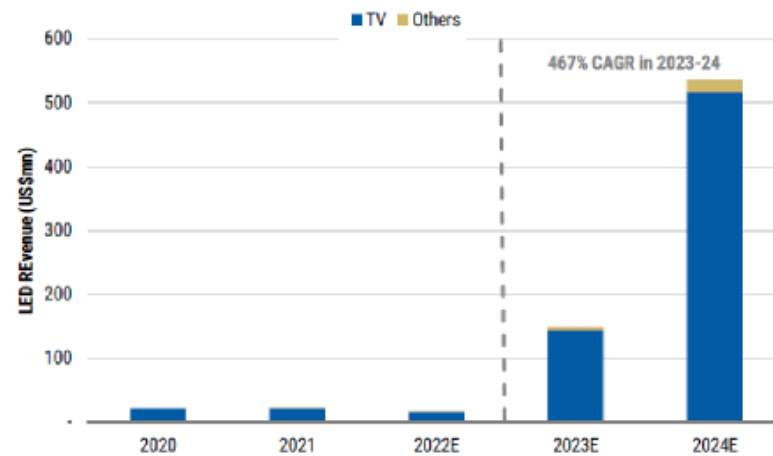
Source: LEDinside, Omdia, Morgan Stanley Research estimates

Micro LED Advantages and Market Forecasts

Comparison of Properties for Different Display Technologies



Global LED Revenue from Micro LED to Grow at a 467% CAGR in 2022-24e



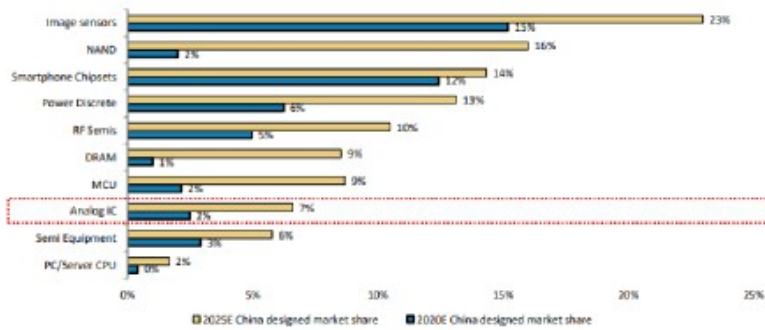
Source: LEDinside, Omdia, Morgan Stanley Research estimates

Analog IC: Identifying the long-term beneficiaries Greater China Semiconductor Ray Wu

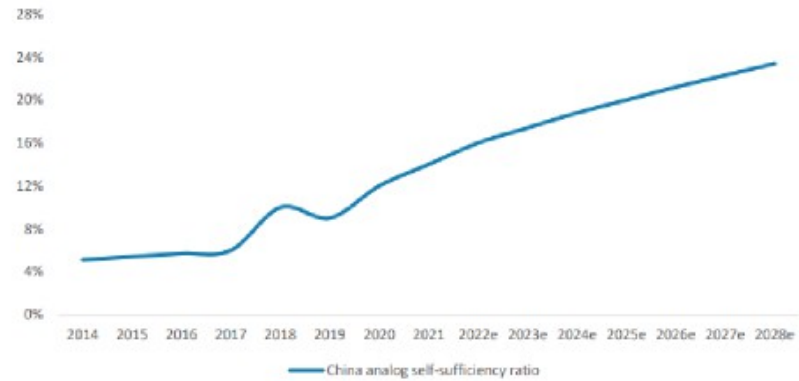
Ticker	Company	Rating		Price Target		Price Close	Upside/downside %
		New	Old	New	Old		
688052.SS	Novosense	OW	na	420.00	na	290.50	45%
300661.SZ	SG Micro	EW	na	170.00	na	136.52	25%
688536.SS	3Peak	EW	EW	313.00	382.55	253.50	23%
6415.TW	Silergy	UW	UW	430.00	508.00	450.00	-4%
6719.TW	uPI	UW	UW	230.00	230.00	252.00	-9%
688595.SS	Chipsea	UW	UW	33.00	38.00	37.19	-11%
688798.SS	Awinic	UW	na	75.00	na	90.54	-17%

China's localization is a clear trend in the analog IC market

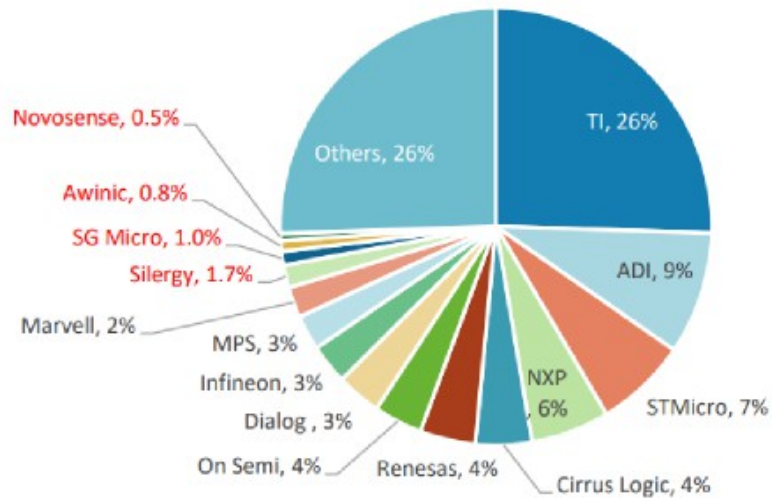
China-designed semis' market share, 2020 vs. 2025



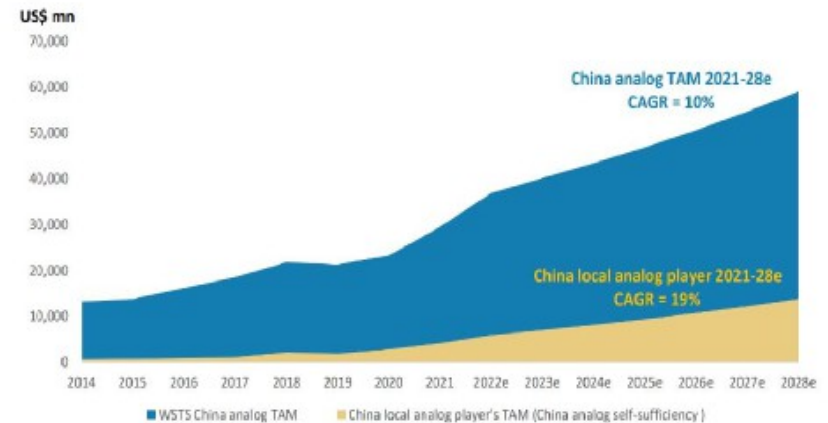
China analog self-sufficiency ratio



China players' analog IC market share, 2021



China local analog player's TAM: China local analog player's addressable market to enjoy a 19% CAGR, 2021-28e



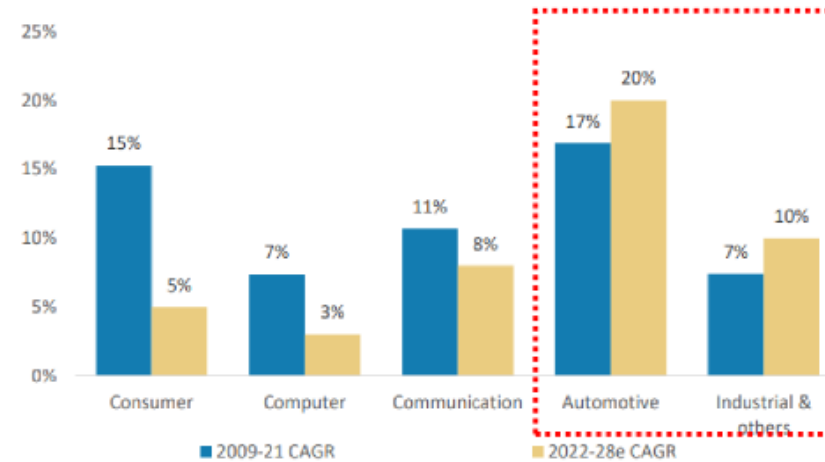
Source: Morgan Stanley Research estimates

Focus on companies dedicated to application specific areas

China is an increasingly important market for global analog industry



China application-specific analog growth by application (2009-21 CAGR vs. 2022-28e CAGR)



Source: Company data, Morgan Stanley Research estimates

Greater China analog IC company revenue exposure

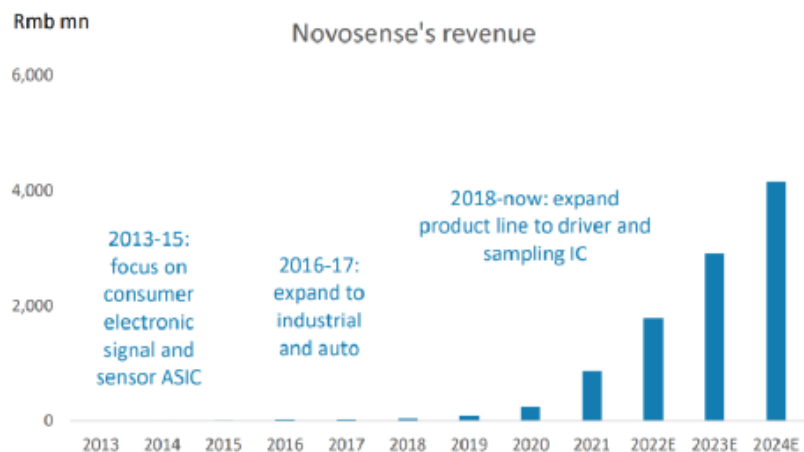
Quantifying China's auto analog semi business opportunity

Analog companies	Ticker	By product			By end application						
		PMIC	Signal chain	Others	PC	Smartphone	TV	Server	Industrial	Auto	Others
Taiwan companies											
Silergy	6415.TW	90%	10%	0%	25%	5%	8%	3%	20%	5%	34%
uPi	6719.TW	70%	0%	30%	58%	12%	0%	18%	0%	0%	12%
Richtek	Under MTK (2454.TW)	60%	20%	20%	33%	43%	15%	1%	0%	0%	8%
GMT	8081.TW	100%	0%	0%	70%	0%	9%	0%	0%	0%	21%
Anpec	6138.TW	50%	0%	50%	73%	6%	8%	0%	0%	0%	13%
China companies											
SG Micro	300661.CH	68%	32%	0%	30%	30%	5%	0%	18%	4%	13%
Novosense	688052.CH	2%	98%	1%	8%	8%	0%	0%	60%	18%	6%
Awinic	688798.CH	35%	65%	0%	8%	65%	6%	0%	1%	1%	19%
3Peak	688536.CH	22%	78%	0%	0%	0%	0%	0%	35%	5%	60%
Chipsea	688595.CH	0%	18%	82%	5%	11%	5%	0%	36%	1%	42%
Chipown	688508.CH	100%	0%	0%	16%	16%	10%	0%	16%	0%	42%
Joulwatt	Private	Mainly	na	na	na	na	na	na	na	na	na
ChipOne	Private	Mainly	na	na	na	na	na	na	na	na	na
SouthChip	Private	Mainly	na	na	na	na	na	na	na	na	na
Global companies											
Texas Instrument	TI.O	na	na	na	23%	11%	1%	6%	36%	21%	2%
Analog Devices	ADI.O	na	na	na	13%	21%	0%	0%	50%	16%	0%
NXP	NXPI.O	na	na	na	0%	13%	0%	0%	22%	50%	15%

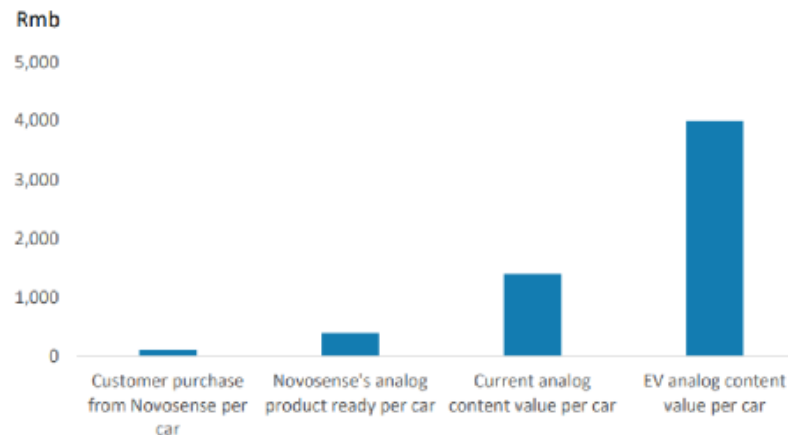
Source: Company data, Morgan Stanley Research estimates

Novosense (688052.SS; OW) - A rising star dedicated to industrial and auto applications

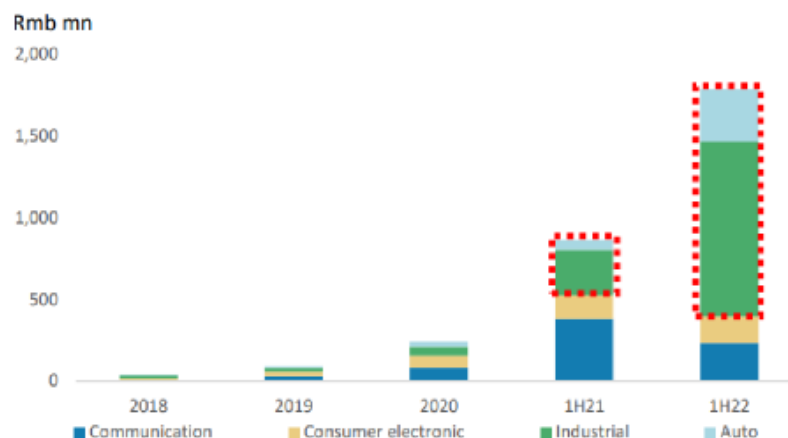
Novosense's business development



Still significant room to grow in the auto analog space - raising content value



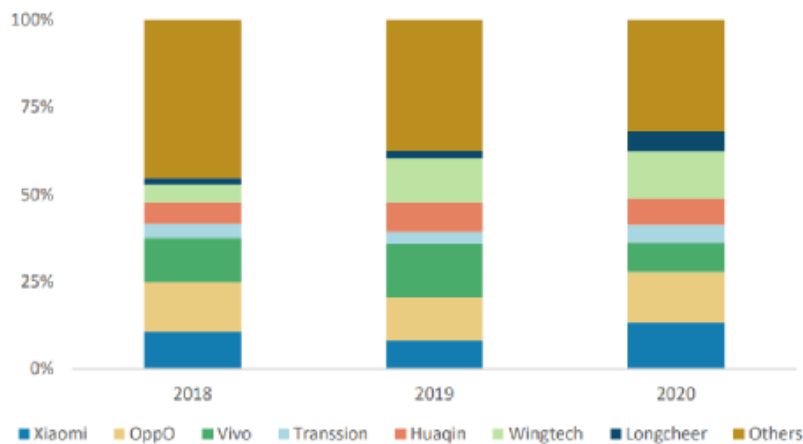
Novosense has enjoyed strong growth momentum from industrial and auto



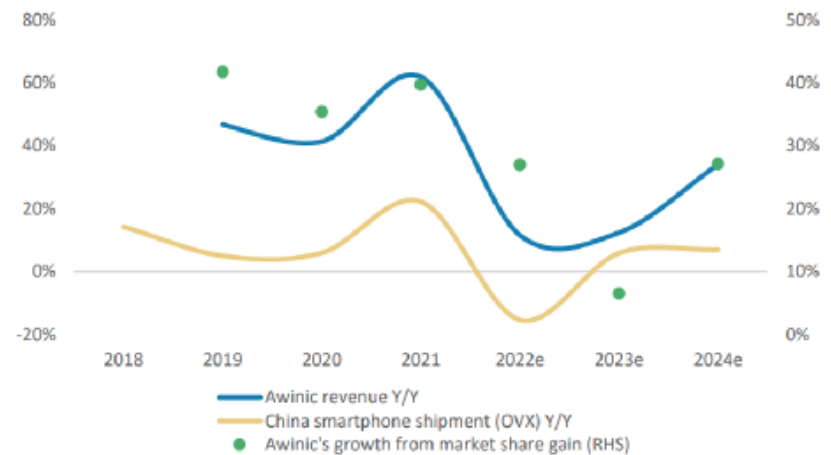
Source: Company data, Bloomberg, Morgan Stanley Research estimates.

Awinic (688798.SS; UW) – Faces greater headwinds than peers

Awinic's key customers are mainly smartphone OEMs and ODMs



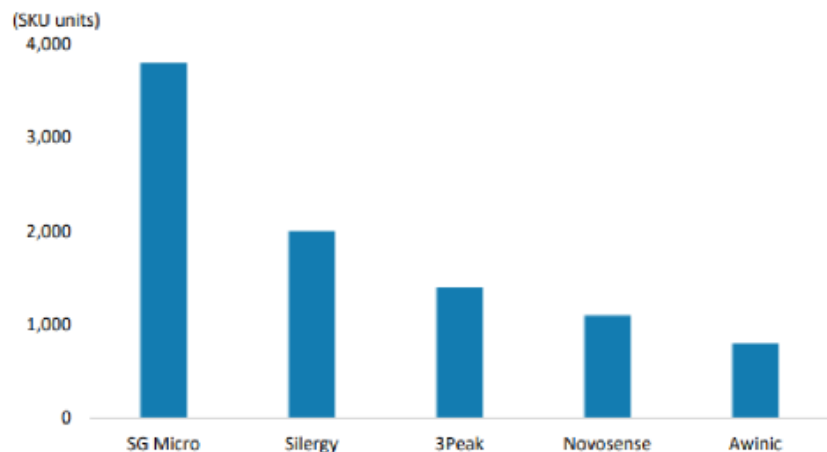
Awinic's revenue growth momentum has a strong correlation to China smartphone (OVX) unit shipments



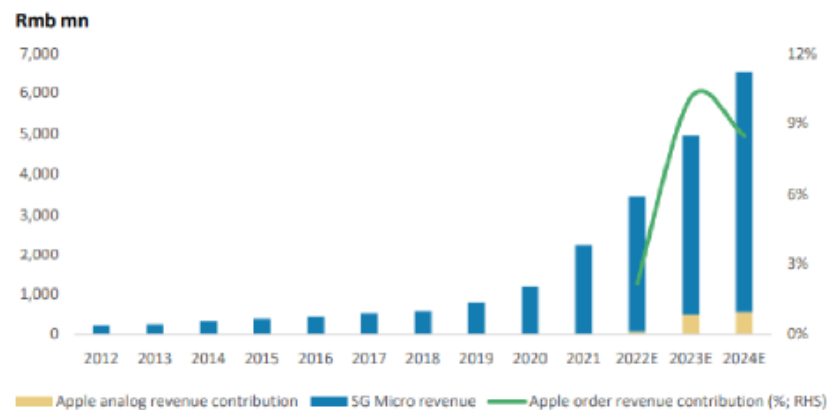
Source: Company data, Morgan Stanley Research estimates

SG Micro (300661.SZ; EW) – iPhone business creates upside potential, but the analog cycle is our primary concern

SG Micro has the largest SKU portfolio among Greater China analog companies in our coverage



iPhone business may have potential to contribute more than 10% of SG Micro's revenue, if Apple were to release more analog orders to SG Micro



Source: Company data, Morgan Stanley Research estimates

Valuation Methodology and Risks

Glodon Co. Ltd. (002410.SZ)

Base case, derived from a 10-year DCF model. We assume a WACC of 10.5% (4% risk-free rate, 6.5% risk premium, 1.1 beta, 5% cost of debt). The WACC is slightly lower than what we assume for other Chinese software peers because we believe its higher recurring revenue contribution will reduce the volatility in the business. We assume a terminal growth rate of 3%.

Risks to Upside

- Consistent updates on the progress of the SaaS transition with good high conversion rate and high ARR
- Breakthrough in construction engineering product
- Strong demand from downstream, particularly new home starts

Risks to Downside

- Loss of market share to peers/piracy during the SaaS transition, or a major delay in the transition
- Weak macro economy
- Slower-than-expected order delivery for engineering

SG Micro Corp. (300661.SZ)

Risks to Upside

Risks to Downside

Suzhou Novosense Microelectronics Co Ltd (688052.SS)

Risks to Upside

Risks to Downside

Shanghai Awinic Technology (688798.SS)

Risks to Upside

Risks to Downside

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(as of August 31, 2022)

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

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STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	1356	38%	304	41%	22%	596	39%
Equal-weight/Hold	1589	45%	349	47%	22%	716	47%
Not-Rated/Hold	0	0%	0	0%	0%	0	0%
Underweight/Sell	610	17%	90	12%	15%	225	15%
TOTAL	3,555		743			1537	

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.

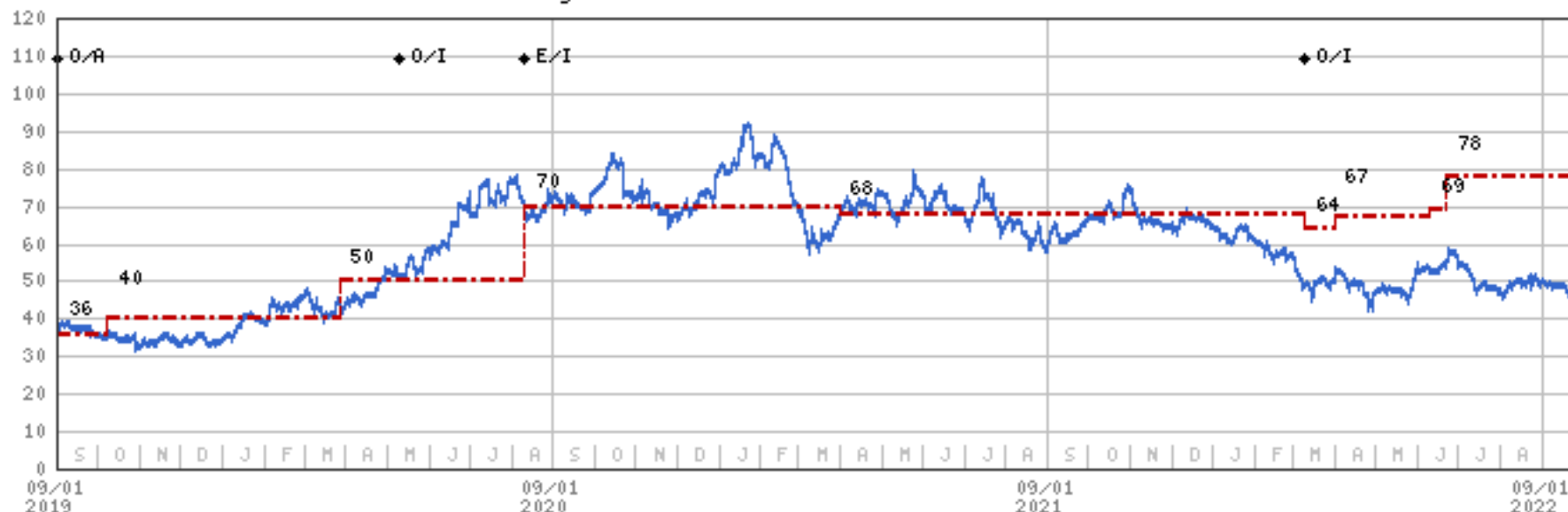
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

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)

Glodon Co. Ltd. (002410.SZ) - As of 9/25/22 in CNY
 Industry : Greater China IT Services and Software



Stock Rating History: 9/1/17 : /NR; 11/15/18 : /NR; 6/19/19 : 0/A; 5/11/20 : 0/I; 8/11/20 : E/I; 3/10/22 : 0/I

Price Target History: 6/19/19 : 36; 10/8/19 : 40; 3/27/20 : 50; 8/11/20 : 70; 3/31/21 : 68; 3/10/22 : 64; 3/31/22 : 67; 6/9/22 : 69; 6/22/22 : 78

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target --- No Price Target Assigned (NA)
 Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) ■
 Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

SG Micro Corp. (300661.SZ) - As of 9/26/22 in CNY
 Industry : Greater China Technology Semiconductors



Stock Rating History: 9/1/17 : NA/I; 11/16/18 : NA/C; 9/5/19 : NA/I; 12/4/19 : NA/A; 4/23/20 : NA/I; 10/12/21 : NA/C; 9/27/22 : E/C
 Price Target History: 9/27/22 : 170

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target --- No Price Target Assigned (NA)
 Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) ■
 Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Shanghai Awinic Technology (688798.SS) - As of 9/26/22 in CNY
 Industry : Greater China Technology Semiconductors



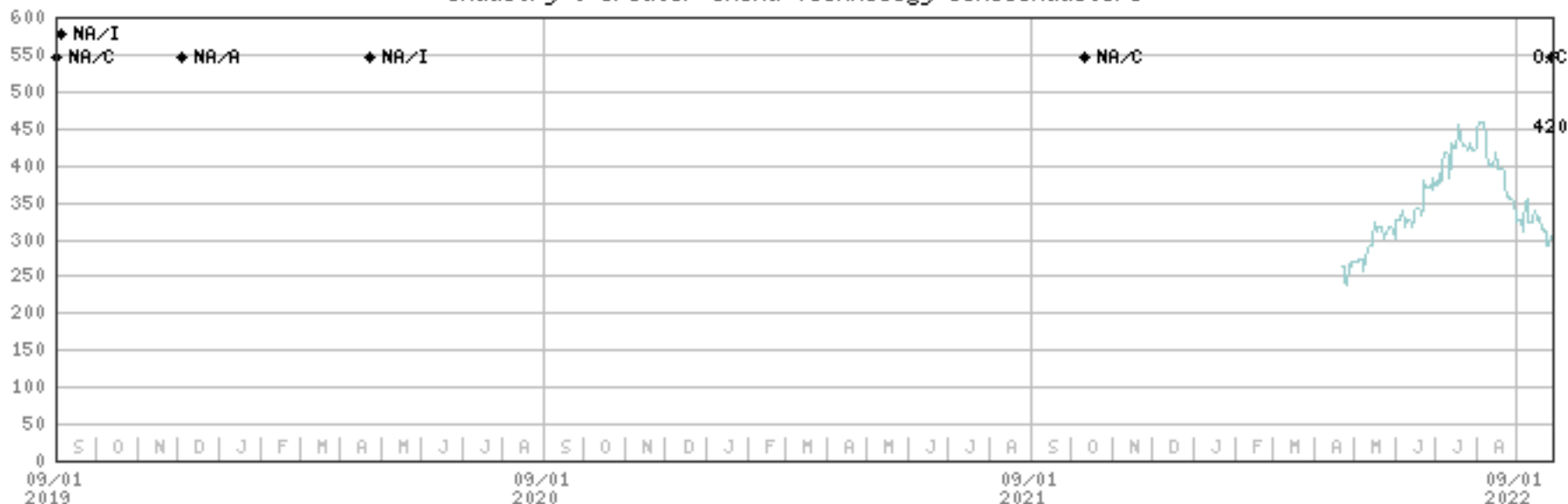
Stock Rating History: 9/1/17 : NA/I; 11/16/18 : NA/C; 9/5/19 : NA/I; 12/4/19 : NA/A; 4/23/20 : NA/I; 10/12/21 : NA/C; 9/27/22 : U/C
 Price Target History: 9/27/22 : 75

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target --- No Price Target Assigned (NA)
 Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) ■
 Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Suzhou Novosense Microelectronics Co Ltd (688052.SS) - As of 9/26/22 in CNY
 Industry : Greater China Technology Semiconductors



Stock Rating History: 9/1/17 : NA/I; 11/16/18 : NA/C; 9/5/19 : NA/I; 12/4/19 : NA/A; 4/23/20 : NA/I; 10/12/21 : NA/C; 9/27/22 : O/C
 Price Target History: 9/27/22 : 420

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target -- No Price Target Assigned (NA)
 Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) ■
 Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Greater China IT Services and Software

COMPANY (TICKER)	RATING (AS OF)	PRICE* (09/26/2022)
Lydia Lin		
Shiji Info Tech (002153.SZ)	U (06/28/2022)	Rmb12.63
Sharon Shih		
Beijing Orient National Communication (300166.SZ)	E (06/19/2019)	Rmb7.38
iFlytek Co Ltd (002230.SZ)	E (04/20/2021)	Rmb33.40
Yang Liu		
Agora Inc. (API.O)	O (05/03/2022)	US\$3.95
Beijing Kingsoft Office Software Inc (688111.SS)	E (09/06/2021)	Rmb206.67
Beijing Thunisoft Corp (300271.SZ)	U (12/03/2021)	Rmb5.91
DBAPPSECURITY Co. Ltd (688023.SS)	E (08/03/2021)	Rmb141.55
Glodon Co. Ltd. (002410.SZ)	O (03/10/2022)	Rmb44.27
Hundsun Technologies Inc. (600570.SS)	O (11/29/2021)	Rmb32.04
Kingdee International Software Group (0268.HK)	E (04/25/2022)	HK\$11.52
Kingsoft Corp Ltd (3888.HK)	E (03/28/2022)	HK\$22.00
Ming Yuan Cloud Group Holdings Limited (0909.HK)	E (08/23/2022)	HK\$5.65
NSFOCUS Technologies Group Co Ltd (300369.SZ)	E (01/04/2021)	Rmb8.35
OneConnect Financial Tech Co Ltd (OCFT.N)	E (08/04/2021)	US\$8.81
Qi An Xin Technology Group Inc (688561.SS)	O (01/04/2021)	Rmb45.26
Sangfor Technologies Inc (300454.SZ)	U (01/27/2022)	Rmb104.81
Shanghai Baosight Software Co Ltd (600845.SS)	U (05/11/2020)	Rmb38.07
Shenzhen Sunline Tech Co Ltd (300348.SZ)	E (07/27/2021)	Rmb10.75
Topsec Technologies Group Inc (002212.SZ)	E (06/30/2022)	Rmb9.14
Tuya Inc. (TUYAN)	E (02/19/2022)	US\$1.00
VenusTech (002439.SZ)	O (06/19/2019)	Rmb19.63
Wangsu Science & Technology (300017.SZ)	U (03/20/2019)	Rmb4.62
Weimob Inc (2013.HK)	E (03/29/2022)	HK\$2.94
Winning Health Technology Group Co Ltd (300253.SZ)	U (06/19/2019)	Rmb6.28
Yonyou Network Technology Co Ltd (600588.SS)	E (04/25/2022)	Rmb17.76
Yusys Technologies Co Ltd (300674.SZ)	O (07/27/2021)	Rmb13.65

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* Historical prices are not split adjusted.