

和林微纳 Suzhou Uigreen Micro&nano Technologies (688661 CH)

首次覆盖：封测端核心耗材；绑定大客户深度受益算力爆发

Key Testing Consumable; To Benefit From Mass Demand on Computing Power: Initiation

观点聚焦 Investment Focus

首次覆盖优于大市 Initiate with OUTPERFORM

评级	优于大市 OUTPERFORM
现价	Rmb79.00
目标价	Rmb100.00
市值	Rmb7.10bn / US\$1.02bn
日交易额(3个月均值)	US\$22.92mn
发行股票数目	89.87mn
自由流通股(%)	76%
1年股价最高最低值	Rmb111.88-Rmb46.06

注：现价 Rmb79.00 为 2023 年 5 月 9 日收盘价



资料来源: Factset

	1mth	3mth	12mth
绝对值	-24.0%	15.3%	70.4%
绝对值(美元)	-24.5%	12.9%	64.4%
相对 MSCI China	-21.3%	24.6%	69.0%

(Rmb mn)	Dec-22A	Dec-23E	Dec-24E	Dec-25E
营业收入	288	415	739	1,157
(+/-)	-22%	44%	78%	57%
净利润	38	48	170	320
(+/-)	-63%	25%	257%	88%
全面摊薄 EPS (Rmb)	0.46	0.53	1.89	3.56
毛利率	39.0%	36.3%	41.5%	42.1%
净资产收益率	4.2%	3.7%	12.4%	20.0%
市盈率	172	149	42	22

资料来源: 公司信息, HTI

(Please see APPENDIX 1 for English summary)

FT 探针绑定大客户，深度受益算力爆发：英伟达为公司探针业务第一大客户，占其探针业务收入比例为 71%/52%（2022 年因英伟达库存调整，收入占比有所下降）。伴随 AI 应用推动数据中心 GPU 需求，我们认为英伟达 GPU 出货将保持高增长。根据我们的供应链调研，以台积电 CoWoS 产能测算，2023 年英伟达 A100/H100 出货量将有望达到 100-110 万颗，较 2022 年 50-60 万颗实现翻倍增长。尽管游戏业务增速相对较慢，我们认为英伟达 FT 探针需求 2022-2025 CAGR 仍有望超过 30%，而公司在英伟达 FT 探针采购中份额相对较低，有较大提升空间。受益于市占率提升以及 AI 驱动需求，我们测算公司 2023/2024/2025 年英伟达相关收入为 1.1/2.6/4.3 亿元。另一方面，我们认为公司将充分受益于国内高性能计算芯片的发展，FT 探针国产替代空间同样巨大。

募投进军 MEMS 探针，国产替代空间广阔：公司 2022 年定增建设 MEMS 晶圆测试探针以及基板测试探针能力。根据华经产业研究院数据，2020 年中国探针卡市场占全球 12.5%，但国内供应商国内份额仅 8%，且主要集中在悬臂式探针卡，MEMS 探针国产替代空间巨大。另一方面 MEMS 探针将受益于 Chiplet 发展，我们测算 2024/2035 年 Chiplet 带来的 CP 探针卡需求增量将达到 1.2/12 亿美金。依托于现有 FT 探针所建立的良好客户基础，公司 MEMS 工艺晶圆测试探针已得到部分客户的验证诉求。公司 MEMS 探针产品或于 25 年开始量产，将为公司进一步打开市场空间。

MEMS 零部件行业逐步回暖，新品带动收入及毛利增长：由于需求疲弱，费用增加以及产能利用率下滑，2022 年 MEMS 精密零部件收入同比下滑 24%，同时毛利率下滑至 34%（vs 2021 年 42%）。但我们认为，伴随经济形势回暖，消费电子需求有望逐步复苏，加之压力传感器、光学传感器零部件进入放量期，公司 MEMS 精密零部件收入及毛利均会稳步回升。我们测算公司 2026 年精密零部件可服务市场空间将超过 3.4 亿美元，而未来 AR/VR 领域爆发将进一步打开增量空间。

估值与建议：由于公司目前 A 股并无直接可比公司，我们建议类比半导体零部件公司给予估值。我们预计公司 2023/2024/2025 年归母净利润分别 0.5/1.7/3.2 亿元。考虑到公司将充分受益于 AI 需求爆发增长，基本面仍有超预期空间，给予 53x 2024PE（历史预期估值 1SD 分位）对应目标价 100 元，首次覆盖给予“优于大市”评级。

风险：1) 新产品推广不及预期；2) 竞争加剧；3) 产能释放不及预期。

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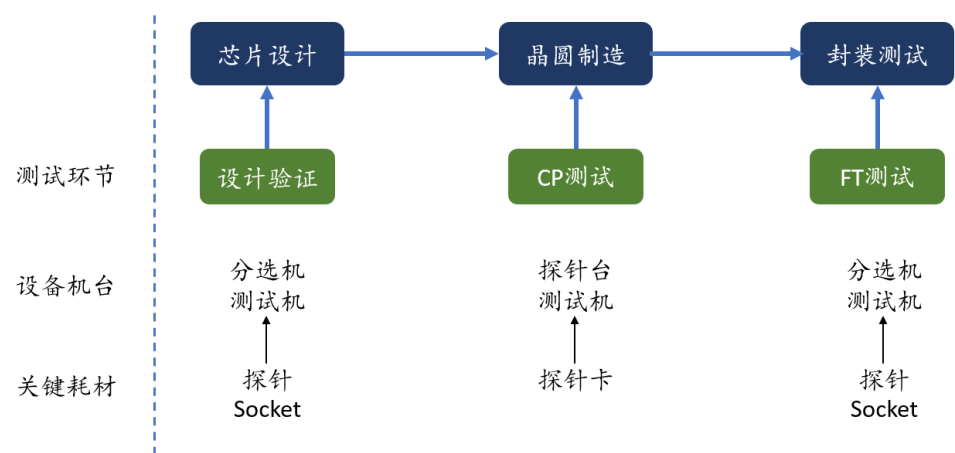
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半导体测试探针-受益于先进芯片制造；国产替代空间广阔

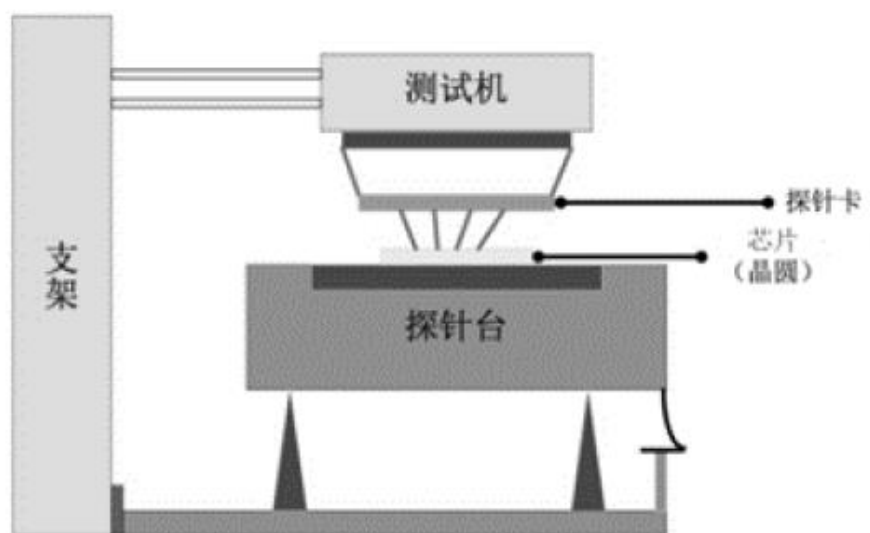
半导体测试探针主要用于半导体芯片测试环节，通过连接测试机来检测芯片的性能指标，是芯片测试环节的关键耗材。芯片测试一般需要用到三种测试设备，即测试机、分选机和探针台，其中测试机通过测试探针与芯片引脚或晶圆连接，施加输入信号，采集被检测芯片的输出信号，判断芯片功能和性能的有效性。另一方面，半导体芯片的测试主要可分为三个阶段：芯片设计中的设计验证、晶圆制造中的晶圆测试（CP测试）以及封装完成后的成品测试（FT测试）。在设计验证和成品测试环节，测试机需要和分选机配合使用，半导体测试探针出货形式主要为探针+Socket，其中探针占据70~80%价值量。在晶圆检测环节，测试机需要和探针台配合使用，测试探针出货形式主要为探针卡，该领域在测试耗材中市场规模较大，集中度高，且核心供应商均为外国企业。

图1 半导体测试环节



资料来源：长川科技招股说明书，华经产业研究院，HTI

图2 晶圆测试示意图

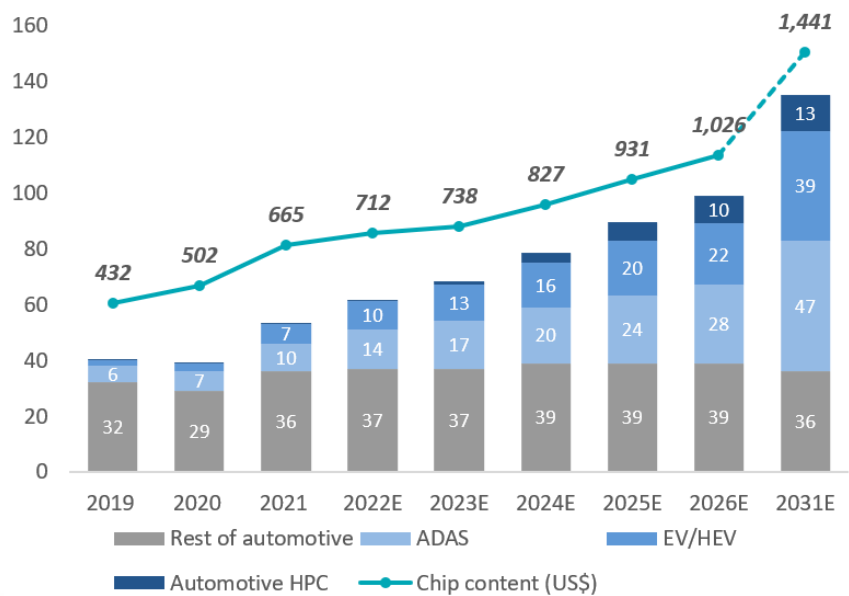


资料来源：Uresearch，HTI

FT 测试探针-高端 SoC 推动市场增长

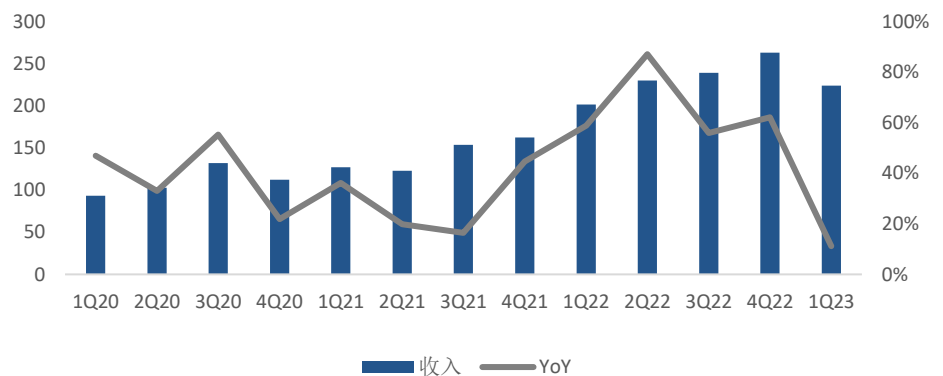
高性能 SoC 为 FT 测试探针核心推动力。随着 AI 及服务器为代表的 HPC 以及汽车电子高速发展，高性能 SoC 及计算芯片的需求随之爆发。其架构更为复杂，封装难度更高（如台积电 CoWoS 2.5D 封装），性能也更为强大（大数据吞吐量、高算力等），对测试探针也提出了更高的要求，如更大的可负载电流、更小的接触阻抗、更快的测算速度等。根据 Uresearch 数据，2021 年全球探针市场规模约 15.9 亿美元，2025 年有望达到 27.4 亿美元，复合增长率达 14.5%。

图3 全球汽车半导体市场规模（十亿美元）



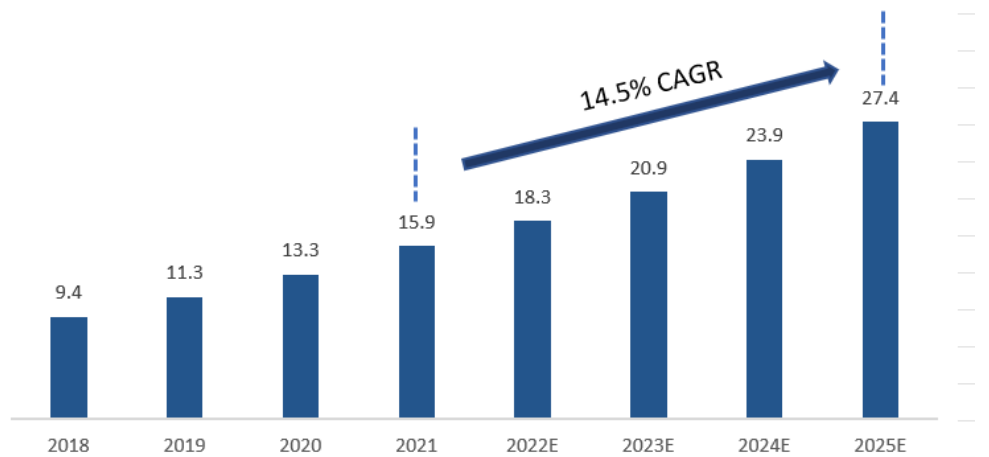
资料来源：Gartner, HTI

图4 台积电 HPC 收入（十亿台币）



资料来源：Bloomberg, HTI

图5 全球探针市场规模 (亿美元)



资料来源: Uresearch, HTI

FT 测试探针竞争格局相对分散，高端产品壁垒高且国产化率仍低。根据 Uresearch 数据，2021 年中国探针市场规模约 18.8 亿人民币，2025 年有望达到 32.8 亿人民币。过去国内探针厂商产品主要集中在中低端领域，主要以 PCB 探针、ICT 测试探针等为主。近年来国内探针厂商如和林微纳、台易电子、木王探针、先得利等，也开始逐步布局半导体测试探针产品。在高端 SoC 测试领域，探针生产技术难度较高（精密度、一致性要求高），而且需要通过终端（IC 设计厂）测试验证，有明显的先发优势。尤其是高性能计算类芯片如 CPU、GPU 等往往在客户芯片设计环节获得 Design-In 才有可能在客户进入量产时成为主要供应商。

图6 半导体探针主要玩家

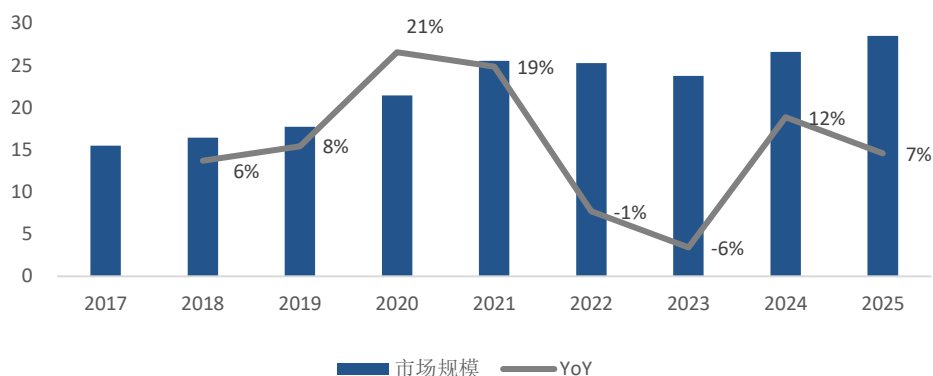
地区	主要厂商
美国	QA Technology、Smiths Interconnect
欧洲	Ingun、Feinmetall
日本	Yokowo、Seiken、Aikosha
韩国	Leeno、Qualmax
台湾	钛辅、大中探针
中国	先得利、木王探针、和林微纳

资料来源: 公开资料, HTI

CP 测试探针卡-受益于先进制程推进以及 Chiplet

根据 Yole 数据，2022 年全球 CP 探针卡市场规模约 25 亿美元，并有望于 2025 年达到 29 亿美元。探针卡可以分为悬臂式、垂直式、以及 MEMS 探针卡。其中悬臂式探针卡主要用于 LCD Driver、低端的 SoC 和电源芯片等的测试。而通过 MEMS 技术生产的探针可以有效提高探针精密度及产量，广泛用于高端 SoC 测试，在探针卡市场中占据超过 60% 份额。同时 MEMS 工艺探针需要使用光刻技术进行加工，经过涂胶、光刻、沉积等一系列流程之后得到成品，具备较高的技术门槛。

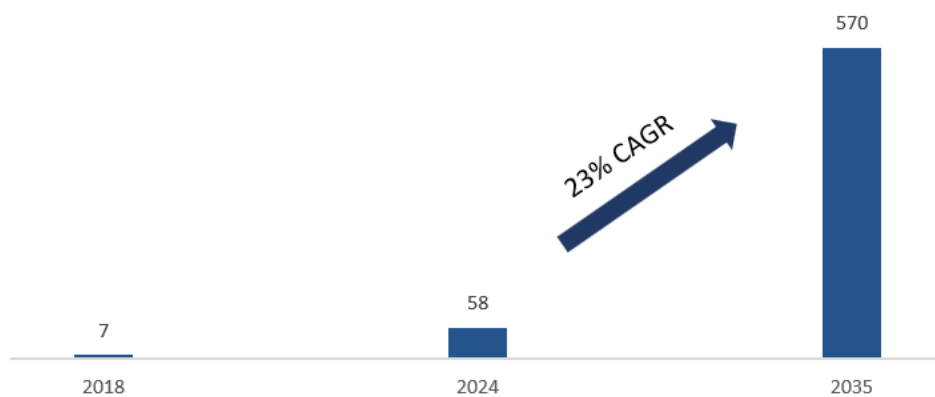
图7 探针卡市场规模 (亿美元)



资料来源: Yole, HTI

我们认为 CP 探针卡增长的核心动力来源于先进制程的持续推进以及 Chiplet 带来的增量市场。Chiplet 是指将一个功能丰富且面积较大的芯片裸片 (Die) 拆分成多个芯粒 (Chiplet)，将预先生产好的芯粒组合在一起，通过先进封装的形式 (比如 3D 封装) 组成一个系统芯片。其中重要的环节变化是前道晶圆测试由原来的抽检变为全检，对应前道探针的使用量将大幅增加。若类比半导体设备市场占全球半导体市场 16%，封测设备占半导体设备市场 18%，而探针卡价值量占封测设备 15% (以上为 2022 年数据测算)，同时假设晶圆测试抽检比例为 20%，而 Chiplet 为全检，则 2024/2035 年 Chiplet 带来的 CP 探针卡需求增量将达到 1.2/12 亿美金。

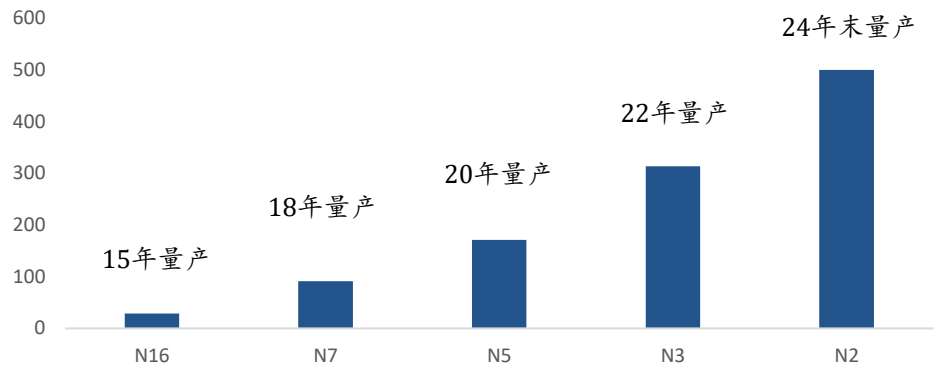
图8 Chiplet 市场规模 (亿美元)



资料来源: Omedia, HTI

另一方面伴随随半导体制造工艺向下迁移，更高的晶体管密度以及更细的线宽意味着测试时探针的数量更多、探针间距更细，将带动探针卡量价齐升。以 TSMCN3/N3B 为例，其晶体管密度较 N5 提升超过 80%，随着台积电主要客户向 N3 迁移，我们认为将显著带动高端探针卡市场。

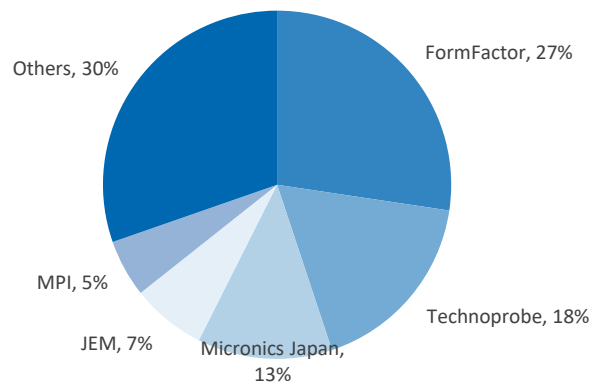
图9 TSMC 各制程晶体管密度及量产时点



资料来源: Uresearch, HTI

探针卡领域亟待突破，替代空间巨大。 探针卡市场集中度高，2020 年全球前五大探针卡企业掌握了 70% 左右的市场份额，其中 FormFactor 为全球第一大探针卡厂商，占据全球约 27% 的市场份额。根据华经产业研究院数据，2020 年中国探针卡市场占全球 12.5%，但本土供应商国内份额仅 8%，且主要集中在低端悬臂式探针卡领域。同时在美国极力遏制中国高性能计算芯片发展的背景下，探针卡作为高端芯片封测关键零部件亟需打破国外垄断。

图10 探针卡市场竞争格局



资料来源: 华经产业研究院, HTI

MEMS 精密零部件：行业触底回暖，XR 未来可期

期待 2H23 需求回暖带动行业复苏

受全球通胀、地缘政治冲突等影响，2022 年手机出货量同比下降约 8%，TWS 耳机出货量同比下降 2%，同时客户进入去库存周期，MEMS 精密零部件行业受到较大冲击。我们认为伴随库存调整即将结束，叠加需求有望于 2H23 温和复苏，行业或在下半年有所反弹。

图11 全球智能机和主要品牌出货预估 (百万台)

Shipments (mn)	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	2023E	2023 YoY	2024E	2024 YoY
Global smartphone	345	313	334	368	314	286	302	304	1180		1230	
YoY	25%	13%	-5.8%	-1.8%	-8.9%	-8.7%	-9.7%	-17.4%	-2.1%		4.2%	
By OEMs												
Samsung	74.5	59.1	69.5	69.0	74.5	63.1	64.0	59.3	255	-2%	258	1%
Apple	55.3	44.4	51.1	85.0	56.5	45.4	51.9	72.6	218	-4%	222	2%
Huawei	14.9	8.7	7.0	6.9	6.9	6.3	8.6	8.1	40	33%	70	75%
New Honor	4.0	7.2	14.0	15.1	14.3	14.1	14.2	13.8	58	3%	50	-14%
OPPO/Realme	49.4	48.7	50.1	50.5	41.8	37.7	39.4	36.3	155	-1%	163	5%
vivo	35.0	31.7	33.3	28.3	25.3	24.8	25.9	23.0	95	-4%	100	5%
Xiaomi	48.7	53.3	44.5	45.0	39.9	39.5	40.5	30.6	140	-7%	152	9%
Share %												
Samsung	22%	19%	21%	19%	24%	22%	21%	20%	22%		21%	
Apple	16%	14%	15%	23%	18%	16%	17%	24%	18%		18%	
Huawei	4%	3%	2%	2%	2%	2%	3%	3%	3%		6%	
New Honor	1%	2%	4%	4%	5%	5%	5%	5%	5%		4%	
OPPO/Realme	14%	16%	15%	14%	13%	13%	13%	12%	13%		13%	
vivo	10%	10%	10%	8%	8%	9%	9%	8%	8%		8%	
Xiaomi	14%	17%	13%	12%	13%	14%	13%	10%	12%		12%	

资料来源：IDC，HTI 预测

XR 带来广阔市场空间

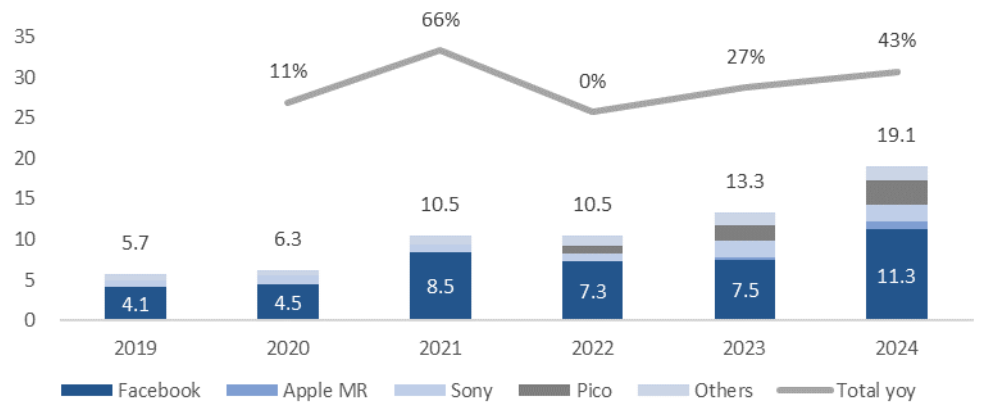
根据 Wellsenn XR 对 Meta Quest Pro 的拆机报告显示，Quest Pro 售价为 1100 美元，其中传感器+声学价值量达 70 美元，若假设 MEMS 精密零组件价值量占比为 6.8%（数据来源：和林微纳招股书以及 Yole），则其价值量可达 30-40 人民币。而业界预估苹果 MR 单价可能高达 3000 美元，其 MEMS 精密零组件价值量或超过 50 人民币。未来伴随 XR 技术逐步成熟，且内容更为丰富，未来 XR 设备出货有望维持高速增长，将为 MEMS 精密零组件带来显著市场空间增量。

图12 Meta Quest Pro 成本 (美元)

部件	内容	价值量
主板	SoC、ROM、PMIC、蓝牙、WIFI芯片、PCB等	169
传感器	摄像头、电子罗盘、IMU、距离传感器等	60
光学模组	Pancake光学模组、LCD显示屏、瞳距调节等	157
结构件	外壳、内部精密零部件	18
散热模组	散热风扇及导管	8
电源系统	充电电池、电源线等	127
声学模组	扬声器及阵列麦克风	11
手柄		18
配件		19
BOM		586

资料来源: Wellsenn XR, HTI

图13 全球 ARVR 出货量 (百万台)



资料来源: IDC, HTI 预测

和林微纳：GPU 封测端核心耗材；深度绑定大客户受益算力爆发

绑定核心客户，深度受益算力需求爆发

英伟达为公司探针业务核心客户，AI 爆发+市占率提升业绩弹性大。2021/2022 年公司英伟达相关收入为 1.1/0.63 亿，占公司探针业务收入比例为 71%/52%。2022 年因英伟达库存调整，收入及收入占比均有所下降。未来伴随 AI 应用推动数据中心 GPU 需求，我们预期 2025 年全球云 GPU TAM 将达到 280 亿美元（44% CAGR）。凭借其 GPU 出色的性能以及 CUDA 系统提供护城河，我们认为英伟达将维持在服务器 GPU 市场的领导地位，充分受益 AI 高增长。根据我们的供应链调研显示，以台积电 CoWoS 产能测算，2023 年英伟达 A100/H100 出货量将有望达到 100-110 万颗，较 2022 年 50-60 万颗实现翻倍增长。尽管游戏业务增速相对较慢，我们认为英伟达 FT 探针需求 2022-2025 CAGR 仍有望超过 30%，且有超预期空间。目前英伟达探针供应商主要包括美国 Smiths Interconnect，日系厂商以及和林微纳。公司在英伟达 FT 探针采购中份额仍相对较低，有较大提升空间。在市占率提升以及 AI 驱动需求的情况下，我们测算公司 2023/2024/2025 年英伟达相关收入为 1.1/2.6/4.3 亿。

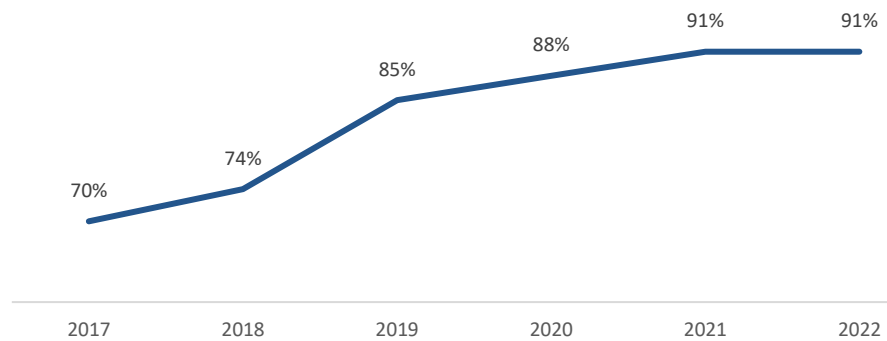
国内先进计算芯片提供第二成长极。根据 Uresearch 数据，2021 年中国探针市场规模约 18.8 亿人民币，2025 年有望达到 32.8 亿人民币。伴随美国加大对国内先进计算芯片限制，中国 CPU 厂商已经全部被列入实体清单，而 GPU 厂商寒武纪、景嘉微同样在列。虽然实体清单不限制韩国、日本探针企业出货（美国科技含量小于 25%），但出于供应链安全的考虑，FT 探针国产化需求仍然急迫，公司有望充分受益国产替代趋势。

图 14 HTI AI 服务器模型

	2020	2021	2022	2023E	2024E	2025E	23-25 CAGR
Server shipment (IDC) (mn)	12.2	14.5	15.4	15.4	16.2	16.7	4%
GPGPU Servers %	0.8%	0.8%	0.9%	1.2%	1.6%	2.0%	
GPGPU server shipment (mn)	0.10	0.11	0.13	0.18	0.26	0.33	34%
Avg GPU per server	5.3	5.4	6.2	6.9	7.1	7.2	
AI Server CPU (mn)	0.5	0.6	0.8	1.3	1.8	2.4	
GPU ASP (USD)	7,600	8,360	9,196	10,240	11,400	13,000	
Cloud GPU TAM (US\$M)	4,058	4,966	7,596	13,005	20,951	31,193	55%

资料来源：Trendforce，HTI 预测

图15 Nvidia 全球服务器 GPU 市场市占率



资料来源: Gartner, HTI 预测

图16 国内高性能计算芯片厂商

计算芯片	主要厂商
CPU	海光信息、兆芯、龙芯中科、华为鲲鹏、飞腾信息、申威科技
GPU	海光信息、龙芯中科、景嘉微、寒武纪、壁仞科技、摩尔线程、沐曦集成电路、芯瞳半导体、燧原科技
自动驾驶芯片	地平线、黑芝麻、芯驰科技

资料来源: 公开资料, HTI

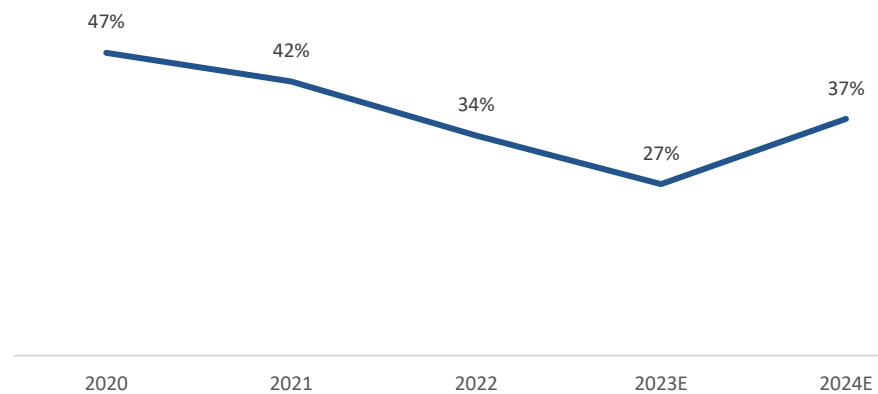
募投研发 MEMS 晶圆探针，国产替代蓝海市场

公司 2022 年定增建设 MEMS 晶圆测试探针以及基板测试探针能力。我们认为 MEMS 探针将受益于 Chiplet 增长带来的机会，根据前文测算，2024/2035 年 Chiplet 带来的 CP 探针卡需求增量将达到 1.2/12 亿美金。另一方面根据华经产业研究院数据，2020 年中国探针卡市场占全球 12.5%，但国内供应商国内份额仅 8%，且主要集中在悬臂式探针卡，国产替代空间巨大。依托于现有 FT 探针所建立的良好客户基础，公司 MEMS 工艺晶圆测试探针已得到部分客户的验证诉求。我们认为未来公司 MEMS 探针将同步切入国内、海外市场，为公司进一步打开市场空间。根据年报披露，项目于 24 年年底进入可使用状态，逐步开始量产。

MEMS 零部件短期业绩压力大，新品进入放量期带动业绩修复

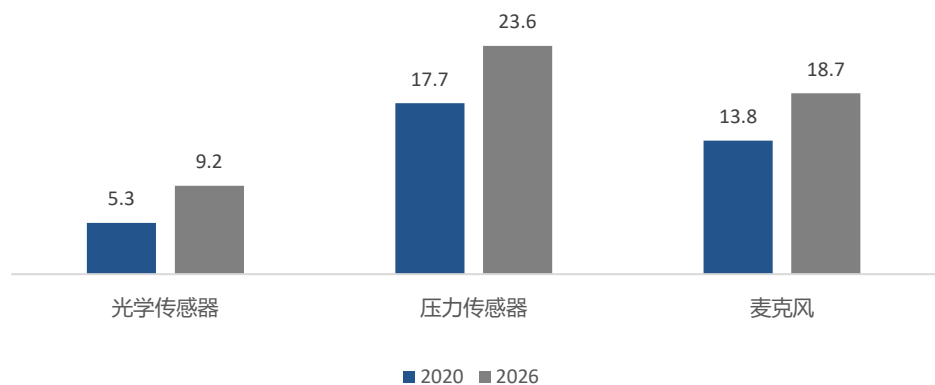
公司 MEMS 精密零部件收入 90% 应用于声学麦克风，终端主要为手机以及 TWS 耳机。受消费电子需求下滑影响，公司 2022 年相关收入 1.5 亿元，同比下降 24%。同时，由于产能扩张，期间费用增加以及产能利用率下滑，2022 年产品毛利率下滑至 34%，1Q23 公司整体毛利率降至 22%。但我们认为，伴随经济形势回暖，消费电子需求有望逐步复苏，加之压力传感器、光学传感器零部件进入放量期，公司 MEMS 精密零部件收入及毛利均会稳步回升。根据林微纳招股书以及 Yole 数据，2019 年 MEMS 麦克风精微零部件的市场规模占整体 MEMS 微型麦克风市场规模 6.83%。同时 Yole 预测 2026 年麦克风、压力传感器、光学传感器市场空间分别为 18.7/23.6/9.2 亿美元，若精微电子零部件占传感器价值量均以 6.83% 测算，公司 2026 年精密零部件可服务市场空间将超过 3.4 亿美元。目前公司压力传感器以及光学传感器零部件已经进入放量期。另一方面，Quest Pro 精微电子零部件价值量可达 30-40 人民币，而苹果 MR 超过 50 人民币，未来 AR/VR 领域爆发将打开增量市场空间。

图17 和林微纳 MEMS 零部件毛利率及预测



资料来源：Wind，HTI 预测

图18 MEMS 细分产品市场规模

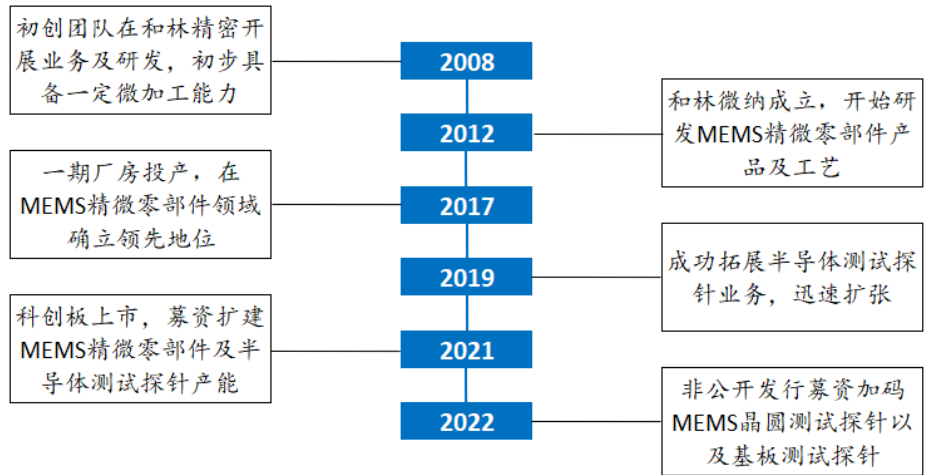


资料来源：Yole，HTI

公司介绍

苏州和林微纳科技股份有限公司成立于 2012 年 6 月，是一家专注于微型精密制造的国家高新技术企业。产品广泛应用于 MEMS 精微制造，半导体芯片测试，新能源汽车，医疗器械等多个高端制造领域。

图19 公司发展历程



资料来源：Wind，公司官网，HTI

图20 十大股东明细

排名	股东名称	持股比例(%)
1	骆兴顺	34.3%
2	钱晓晨	8.7%
3	马洪伟	5.5%
4	苏州和阳管理咨询合伙企业(有限合伙)	5.3%
5	崔连军	3.3%
6	余方标	3.2%
7	江晓燕	2.0%
8	兴全新视野灵活配置定期开放混合型发起式证券投资基金	1.9%
9	兴全商业模式优选混合型证券投资基金	1.7%
10	罗耘天	1.3%
	合计	67.4%

资料来源：Wind，HTI

投资建议

财务预测

受益于 AI 的需求推动，以及在英伟达的份额提升，公司探针业务将保持高增长。而 MEMS 零组件业务也有望于 23 年下半年逐步复苏，24 年将回归增长轨道。我们预测公司 23/24/25 年收入分别为 4.2/7.4/11.6 亿元，同比增长 44%/78%/57%，归母净利润分别 0.5/1.7/3.2 亿元。

图21 公司季度利润预测

百万元	2022	1Q23E	2Q23E	3Q23E	4Q24E	2023E	1Q24E	2Q24E	3Q24E	4Q24E	2024E
营业收入	288	43	77	135	161	415	146	164	185	244	739
营业成本	-176	-34	-54	-82	-95	-265	-86	-97	-109	-141	-433
毛利	112	9	23	52	66	151	59	68	76	103	307
研发费用	-54	-17	-14	-18	-21	-70	-19	-16	-22	-23	-81
销售及管理费用	-39	-10	-9	-10	-18	-47	-12	-10	-11	-20	-53
营业费用	-93	-27	-22	-28	-39	-117	-31	-26	-33	-43	-134
营业利润	19	-18	1	24	26	34	28	41	43	60	173
其他营业收入	17	7	2	3	3	15	4	4	4	4	16
利润总额	36	-11	3	27	29	48	32	45	47	65	189
所得税	2	4	0	-1	-3	-1	-3	-5	-5	-6	-19
少数股东损益	0	0	0	0	0	0	0	0	0	0	0
净利润	38	-7	3	25	26	48	29	41	42	58	170
利润率											
毛利率	39%	22%	30%	39%	41%	36%	41%	41%	41%	42%	41%
营业利润率	7%	-41%	1%	18%	16%	8%	19%	25%	23%	25%	23%
税率	-5%	34%	0%	5%	10%	1%	10%	10%	10%	10%	10%
净利润率	13%	-17%	4%	19%	16%	11%	20%	25%	23%	24%	23%
增长率											
收入增长率	-22%	-52%	-2%	114%	182%	44%	239%	114%	37%	52%	78%
毛利增长率	-30%	-76%	-32%	118%	304%	34%	539%	192%	46%	57%	103%
营业利润增长率	-82%	-184%	-93%	29449%	-259%	74%	-259%	4233%	78%	130%	416%
净利润增长率	-63%	-137%	-81%	207%	-505%	25%	-504%	1137%	67%	121%	257%

资料来源：Wind, HTI 预测

投资建议

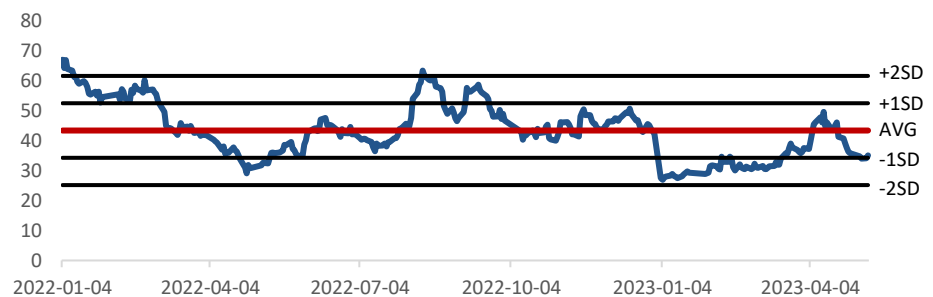
由于公司目前 A 股并无直接可比公司，我们建议类比半导体零部件公司给予估值。我们预计公司 2023/2024/2025 年归母净利润分别 0.5/1.7/3.2 亿元。考虑到公司将充分受益于 AI 需求爆发增长，基本面仍有超预期空间，给予 53x 2024PE（历史预期估值 1SD 分位）对应目标价 100 元，首次覆盖给予“优于大市”评级。

图22 公司可比公司盈利预测及估值

公司	代码	市值 (亿人民币)	净利润 (百万人民币)			22-24 CAGR	PE		
			2023	2024	2025		2023	2024	2025
富创精密	688409.CH	204	337	497	680	42%	60.5	41.0	30.0
茂来光学	688502.CH	91	80	106	140	32%	113.8	85.8	65.0
江丰电子	300666.CH	178	396	536	664	29%	44.9	33.2	26.8
Average						35%	73.1	53.4	40.6

资料来源：Wind, Bloomberg, HTI

图23 公司历史预期 PE 估值



资料来源：Wind, HTI

风险： 1) 新产品推广不及预期； 2) 竞争加剧； 3) 产能释放不及预期。

财务指标	Dec-21A	Dec-22A	Dec-23E	Dec-24E	Dec-25E	资产负债表 (百万元)	Dec-21A	Dec-22A	Dec-23E	Dec-24E	Dec-25E
成长性						货币资金	112	206	250	318	489
营业收入增长率	61%	-22%	44%	78%	57%	存货	39	60	52	86	132
营业利润增长率	44%	-82%	74%	416%	96%	应收账款	73	55	94	167	262
净利润增长率	68%	-63%	25%	257%	88%	其他流动资产	252	739	639	589	589
利润率						流动资产	476	1,060	1,035	1,160	1,472
毛利率	44%	39%	36%	41%	42%	固定资产	87	222	316	389	427
EBITDA利润率	31%	12%	16%	30%	34%	其他非流动资产	132	58	57	57	56
营业利润率	29%	7%	8%	23%	29%	非流动资产	219	280	373	445	483
净利润率	28%	13%	11%	23%	28%	资产总额	695	1,340	1,408	1,605	1,955
投资回报率						短期债务	-	-	-	-	-
ROE	28%	4%	4%	12%	20%	应付账款	56	43	69	112	174
ROA	22%	4%	3%	11%	18%	其他流动负债	23	21	21	21	21
利润表 (百万元)						流动负债	79	65	90	133	195
营业收入	370	288	415	739	1157	长期借款	38	-	-	-	-
营业成本	208	176	265	433	669	其他非流动负债	7	18	18	18	18
毛利	162	112	151	307	487	非流动负债	45	18	18	18	18
营业费用	54	93	117	134	149	负债总额	124	82	108	151	213
营业利润	107	19	34	173	338	实收资本	440	1,129	1,129	1,129	1,129
其他营业收入	6	10	4	4	4	留存收益	118	111	154	307	595
其他	3	6	6	7	7	股东权益	571	1,258	1,301	1,454	1,742
利息收入	2	2	4	5	6	负债及股东权益总额	695	1,340	1,408	1,605	1,955
利息费用	0	-1	0	0	0	现金流量表 (百万元)					
利润总额	118	36	48	189	356	净利润	103	38	48	170	320
所得税及少数股东损益	14	-2	1	19	36	折旧及摊销	8	17	34	48	59
净利润	103	38	48	170	320	运营资本变化	-3	-15	-6	-63	-80
						其他	-5	28	0	0	0
						经营活动现金流	104	68	76	156	300
						投资活动现金流	-368	-626	-27	-71	-97
						融资活动现金流	350	605	-5	-17	-32
						现金及等价物增加额	84	47	44	68	171
						自由现金流	-65	-23	-51	35	203

资料来源: Wind, HTI 预测

APPENDIX 1**Summary**

Deep corporation with major customer; To fully benefit from exploding computing power demand: Nvidia was the company's largest customer, occupying 71% / 52% of its FT probe revenue. With the increasing demand for AI applications, the demand for GPU will grow significantly. Based on our supply chain research, calculated with CoWoS capacity from TSMC, the A100/H100 shipment in 2023 is expected to reach 1.0-1.1 million units, compared with 0.5-0.5 million units in 2022. We believe Nvidia's FT probe demand CAGR for 2022-2025 CAGR might exceed 30% and Unigreen's market share in Nvidia remains low. With the increase in market share and demand boosted by AI, we expect the revenue from Nvidia to be 1.1/2.6/4.3 billion yuan in 2023/2024/2025. On the other hand, we believe that the company will also fully benefit from the development of domestic high-performance computing chips with huge space for domestic substitution.

Private placement for MEMS probe card: Company announced in 2022 to engage in MEMS and IC substrate probe card. We expect probe card will benefit from Chiplet development, and we estimate that in 2024/2035, Chiplet related CP probe card demand will reach 0.12/1.2 billion USD. On the other hand, as China accounts for 12.5% of the global market in 2020, domestic players only account for 8% of local market share. Based on the good customer base form FT probe, the company's MEMS probe card has drawn good expectation from its customer.

Pressured MEMS component business in ST; New product to drive profit growth: Due to weak demand, cost increase and utilization rate decrease, MEMS component sales in 2022 decreased by 24%, while GM decreased to 34% (vs. 2021 42%). However, we believe consumer electronics demand will gradually recover and profit to be driven by new product including optical and pressure sensor component's ramp-up. In 2026, our company's MEMS component SAM will exceed 3.4 million dollars, and AR/VR will expand the market size one step further.

Investment recommendations: In 2023/2024/2025, we expect the company's profit to be 0.5/1.7/3.2 billion yuan. Our target price of Rmb 100 is based on 53x 2024 PE at 1SD 1-year forward PE.

Risks: 1) Delayed launch of new products; 2) Competition intensified; 3) Slower capacity expansion.

附录 APPENDIX

重要信息披露

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弱于大市, 未来 12-18 个月内预期相对基准指数跌幅在 10%以上, 基准定义如下

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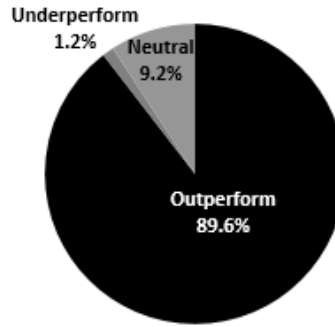
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Underperform: The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

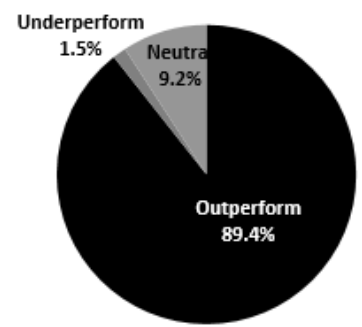
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评级分布 Rating Distribution

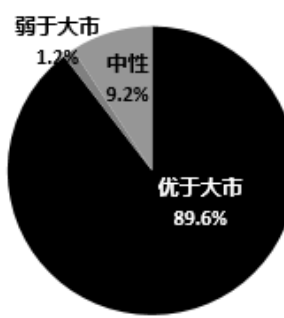
Most Recent Full Quarter



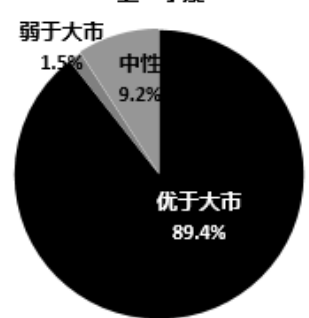
Prior Full Quarter



最新季度



上一季度



截至 2023 年 3 月 31 日海通国际股票研究评级分布

	优于大市	中性 (持有)	弱于大市
海通国际股票研究覆盖率	89.6%	9.2%	1.2%
投资银行客户*	5.2%	6.4%	9.5%

*在每个评级类别里投资银行客户所占的百分比。

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卖出, 未来 12-18 个月内预期相对基准指数跌幅在 10%以上, 基准定义如下

各地股票基准指数: 日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

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IB clients*	5.2%	6.4%	9.5%

*Percentage of investment banking clients in each rating category.

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SELL: The stock's total return over the next 12-18 months is expected to be below the return of its relevant broad market benchmark, as indicated below.

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