

# 受益于战略新兴行业发展，看好优质新材料龙头 2023年基础化工投资策略

Optimistic about leading high-quality new materials companies benefiting from strategic emerging industries

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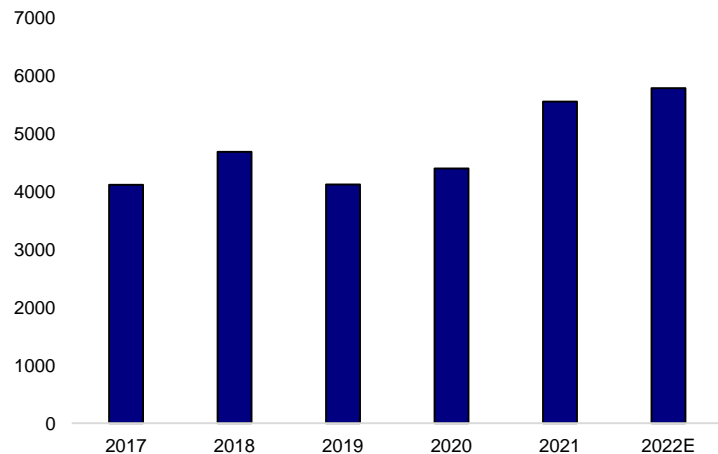
2022年12月6日

1. 需求端：半导体、新能源等新兴行业快速发展
2. 新材料：高壁垒产品进口替代空间广阔
3. 建议关注公司
4. 风险提示

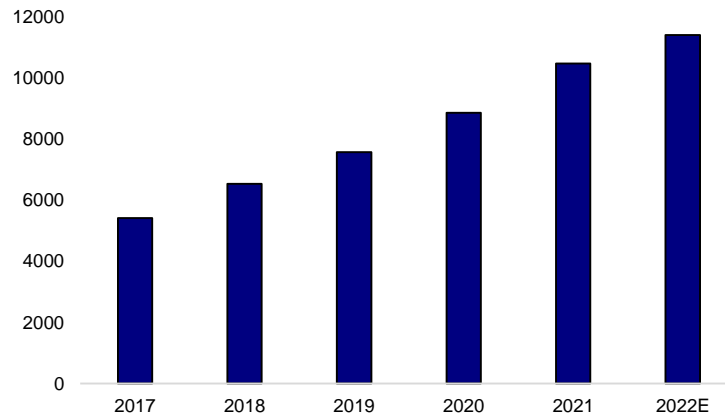
公司主全球半导体销售额稳定增长。2017-2021年全球半导体销售额从2017年4122亿美元增长至2021年5559亿美元。

中国半导体市场规模增速高于全球。2017-2021年国内半导体市场规模从5411亿元增长至10458亿元，复合增长率17.9%，中国是全球需求最大的半导体市场。

图：2017-2022全球半导体市场规模（亿美元）



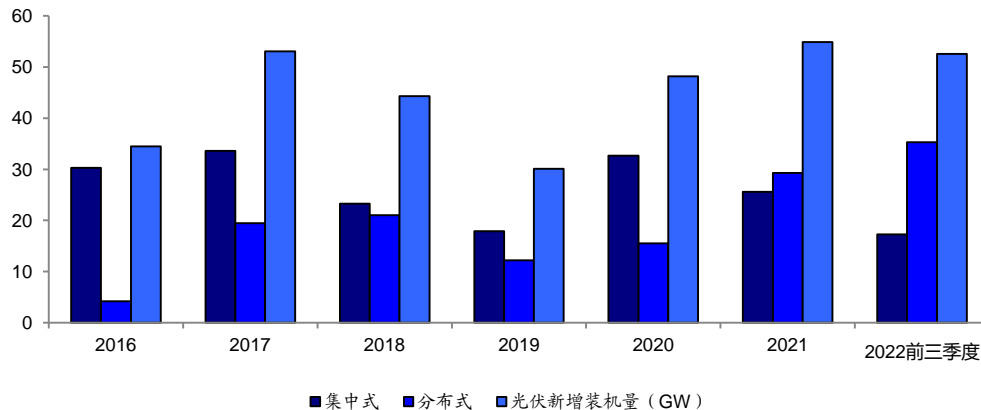
图：2017-2022中国集成电路市场规模（亿元）



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国内光伏行业虽起步较晚，但发展迅速。国家及各地政府政策驱动下，光伏发电快速增长，2020年，我国光伏新增装机48.2GW，同比增长59%，2021年光伏新增装机量达到54.88GW，同比增长14%。

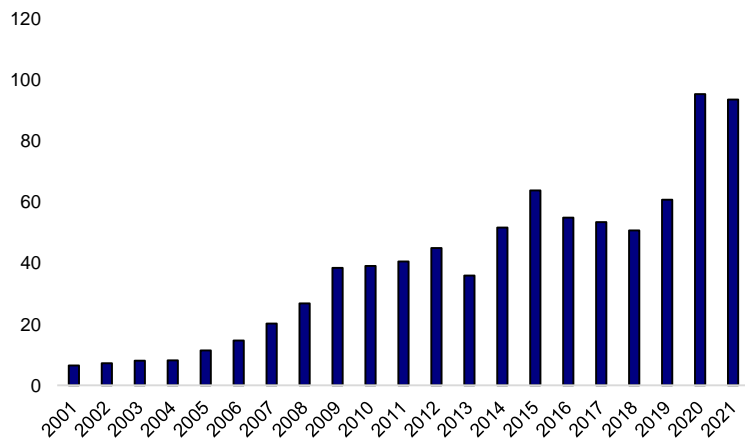
图：2016-2022前三季度中国光伏新增装机量（GW）



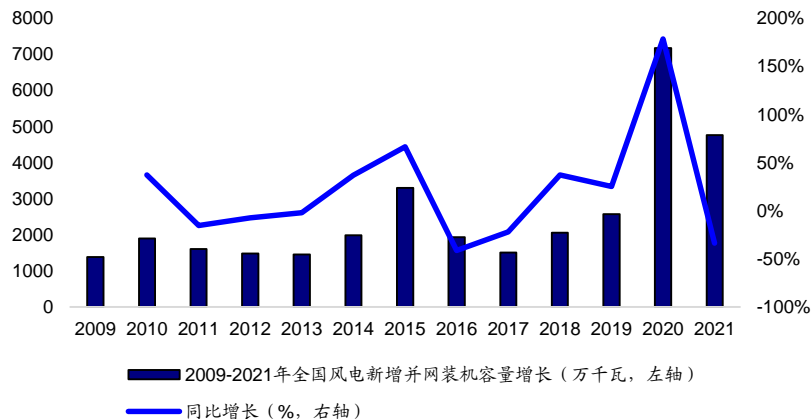
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国内风电行业趋势向好。2021年全球新增风电装机量93.6GW，较2020年下降1.8%。2021年全国风电新增并网装机47.57GW，其中陆上风电新增装机30.67GW，海上风电新增装机16.9GW。2022年前三季度，全国风电新增并网装机19.24GW，其中陆上风电新增装机18GW、海上风电新增装机1.24GW。

图：2001-2021全球风电新增装机走势（GW）



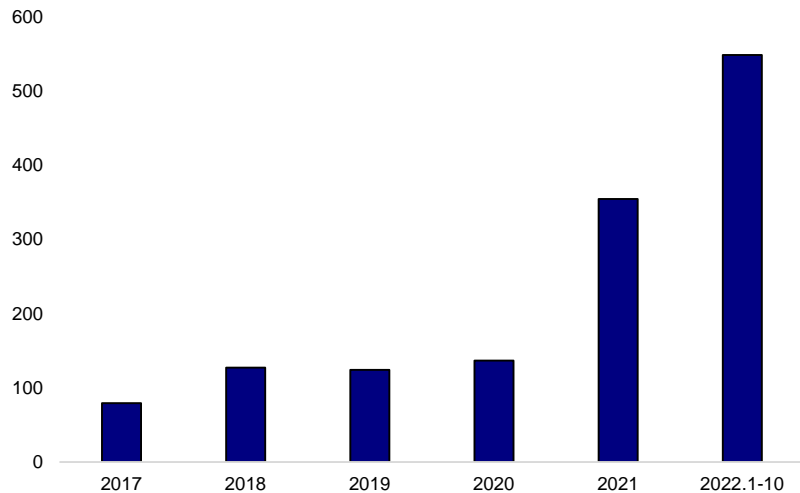
图：2009-2021全国新增并网装机容量增长（万千瓦）



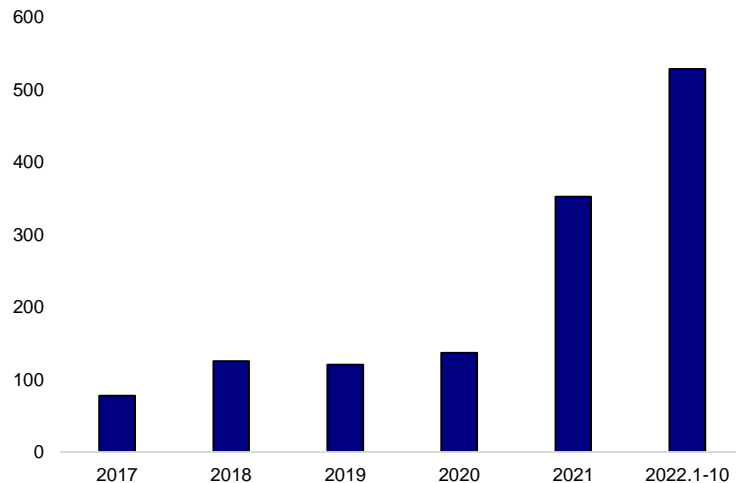
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新能源汽车加速发展。2022年1-10月，新能源汽车产销分别为548.5万辆和528万辆，同比均增长1.1倍。其中纯电动汽车产销分别为426.8万辆和411.9万辆，同比增长97.5%和93.1%。

图：2017-2022年10月中国新能源汽车产量统计情况（万辆）



图：2017-2022年10月中国新能源汽车销量统计情况（万辆）



注：公司2021年年报中仅披露除草剂销量及售价

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## 政策驱动，氢能发展前景广阔

政策方面，2022年3月，国家发展改革委、国家能源局联合印发《氢能产业发展中长期规划（2021-2035年）》，到2025年，形成较为完善的氢能产业发展制度政策环境，产业创新能力显著提高，基本掌握核心技术和制造工艺，初步建立较为完整的供应链和产业体系，燃料电池车辆保有量约5万辆，部署建设一批加氢站。可再生能源制氢量达到10-20万吨/年。到2035年，形成氢能产业体系，构建涵盖交通、储能、工业等领域的多元氢能应用生态。

表：全球氢能政策

时间	部门	政策名称	政策
2022.3	国家发展改革委、国家能源局	氢能产业发展中长期规划（2021-2035年）	到2025年，燃料电池车辆保有量约5万辆，部署建设一批加氢站。到2035年，形成氢能产业体系，构建涵盖交通、储能、工业等领域的多元氢能应用生态
2022.11	宁夏回族自治区	宁夏回族自治区氢能产业发展规划	到2025年，区将初步建立以可再生能源制氢为主的氢能供应体系，可再生能源制氢能力将达到8万吨以上
2022.10	中山市发展和改革局	中山市氢能发展规划（2022-2025年）	到2025年，氢能产业规模达到100亿元。到2030年，氢能产业规模达到500亿元以上
2022.11	美国能源部	氢能计划发展规划	提出未来十年及更长期的氢能研究、开发和示范的总体战略框架，设定了2030年氢能发展的技术和经济指标

资料来源：中国发改委网，中国政府网，中山市人民政府网，中国科学院科技战略咨询研究院，海通国际整理

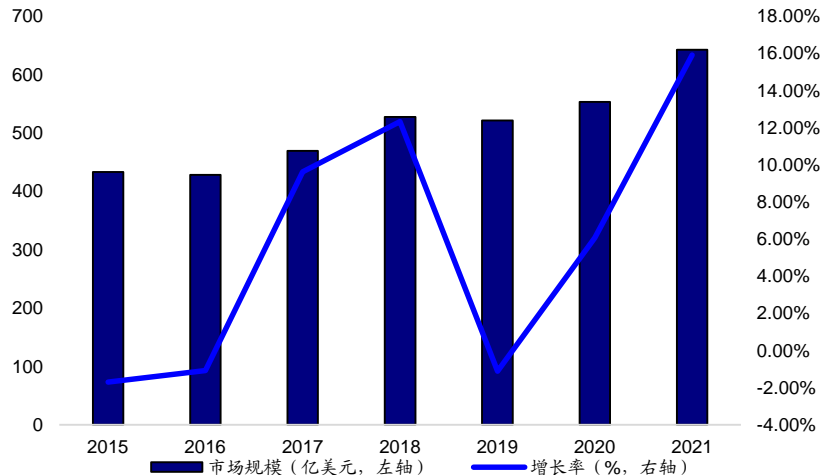
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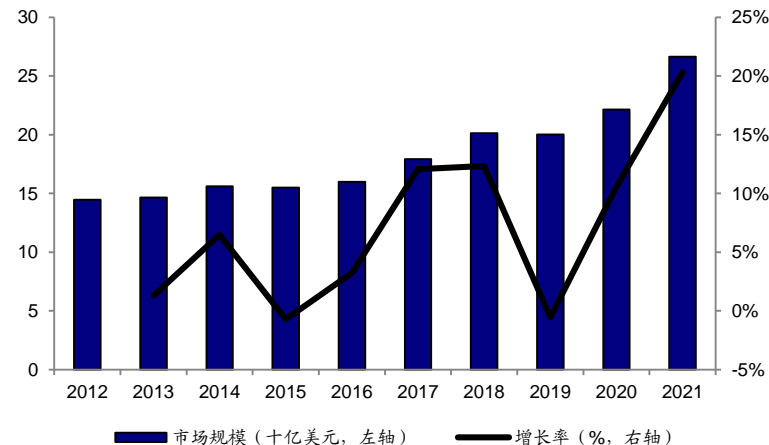


2021年全球半导体材料市场规模再创新高。根据艾邦半导体网援引SEMI，2021年全球半导体材料市场营收达到643亿美元，同比增长15.9%。其中2021年晶圆制造材料与封装材料营业收入达到404亿美元和239亿美元，同比增长15.5%和16.5%。

图：全球半导体材料行业市场规模及增速



图：国内半导体材料行业市场规模及增速



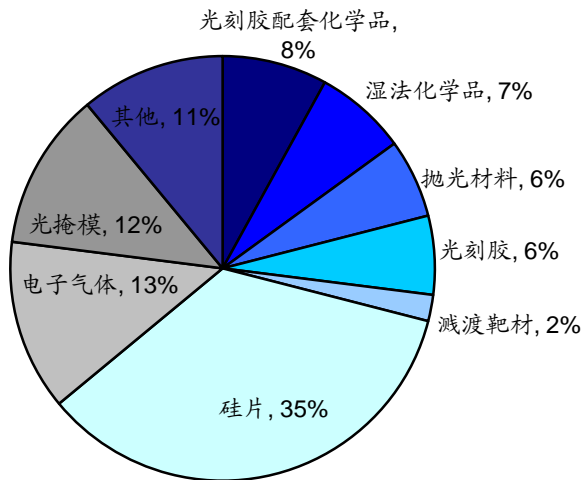
资料来源：SEMI，前瞻产业研究院，艾邦半导体网援引SEMI，海通国际整理

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# 硅片、光刻胶等是最主要半导体制造材料

半导体制造材料主要包括硅片、电子特气、光掩模、光刻胶配套化学品、光刻胶、湿法化学品与溅射靶材等。根据SEMI统计，2020年硅片、电子特气、光掩模、光刻胶配套化学品分别占全球半导体制造材料行业34.98%、13.01%、12.29%、7.61%。

图：2020年半导体制造材料市场结构



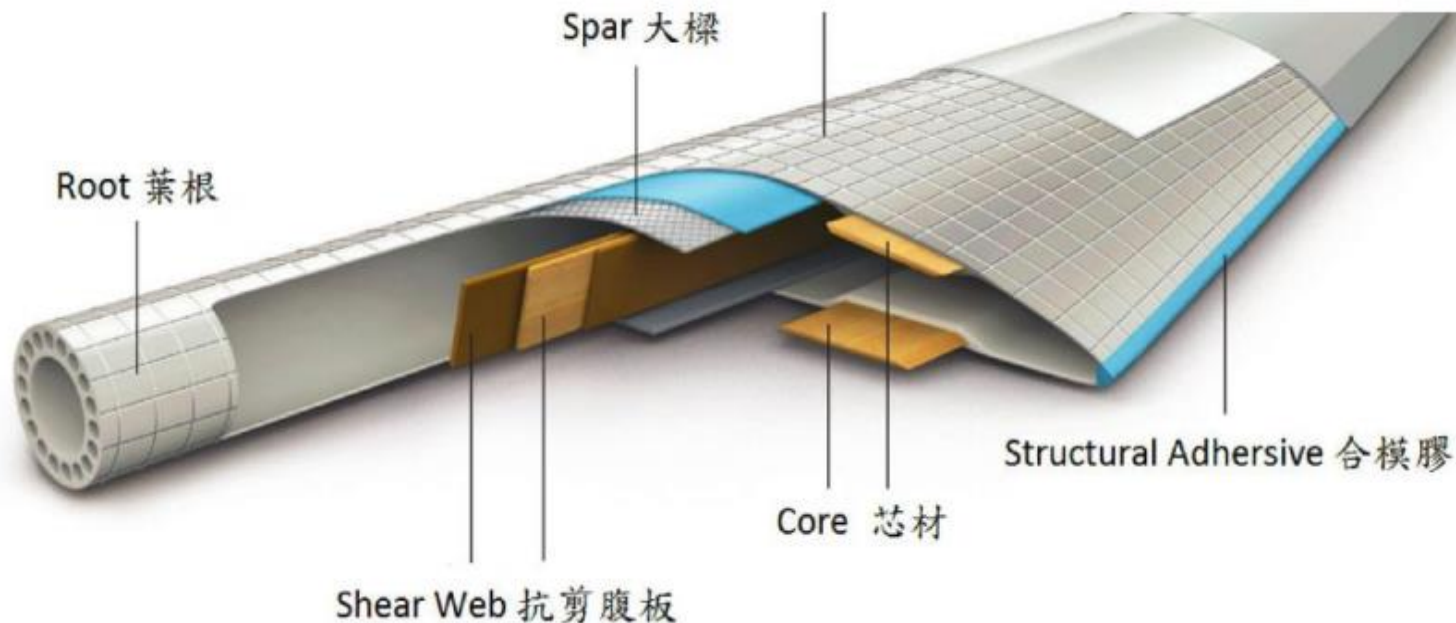
资料来源：沪硅产业2021年度向特定对象发行A股股票募集说明书（注册稿）援引SEMI，海通国际整理

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# 树脂和增强纤维是风电叶片的主要原材料

国内目前叶片成本的 80% 来源于原材料，其中增强纤维、芯材、基体树脂与粘接胶，合计占比超过总成本价格的 85%，增强纤维与基体树脂占超过 60%，粘接胶与芯材各占比都超过 10%。

图：风电叶片结构



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# 树脂和增强纤维是风电叶片的主要原材料

风电叶片制造的改性环氧树脂，由基础环氧树脂与固化剂、助剂、稀释剂等深加工制成。其特点是与玻璃纤维、碳纤维具有良好的浸润性，同时具备低粘度、机械性能好等特性，工艺操作性与耐热性优异，与增强材料复合后具有优异的力学性能和耐疲劳性能。风电叶片用材料根据用途不同一般可以分为灌注树脂、手糊树脂、模具树脂、胶粘剂、风电叶片大梁用预浸料树脂、风电叶片大梁用拉挤碳板树脂等。

表：风电叶片结构

树脂种类	功能介绍
风电叶片灌注树脂	是由特殊环氧树脂主剂及固化剂所构成的双组份专用树脂，主要应用于风电叶片的制备。特性优点为低粘度、胶化时间长、机械性能好、高耐热性、对纤维具有良好浸润性
风电叶片手糊树脂	用可搭配合适的固化剂来使用，制备多种类型的手糊树脂，以满足客户对各种成型工艺的要求
风电叶片模具树脂	具有高耐温特性的环氧树脂体系，特别适用于玻璃纤维及碳纤维等复合材料上。可搭配灌注或手糊工艺使用，有效缩短固化时间，提高生产效率，且具有良好的机械性能与韧性。
风电叶片用胶粘剂	是一款双组份、无溶剂型环氧胶粘剂，适用于树脂基复合材料及金属部件之间的相互粘接，产品耐高低温性能优异，在粘接间隙较大的情况下也有较好的粘接性及抗流挂性，此外该产品还具备较好的韧性，能够满足叶片的抗疲劳性能。
风电叶片大梁用预浸料树脂	单组份无溶剂型环氧树脂，与碳纤维浸润性好、树脂流动性佳。该产品可以低温成型，放热温度低。制成的碳纤维大梁的孔隙率低，具有优异的静态机械性能与动态疲劳性能。
风电叶片大梁用拉挤树脂	双组份无溶剂型环氧树脂，具有低粘度的特性，胶化操作时间较长。在拉挤工艺中可以体现出优异的脱模特性，提升拉挤成型速度，并且保有优异的二次接着性能

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# 碳纤维具备出色的力学性能和化学稳定性

碳纤维是由聚丙烯腈等有机纤维在高温环境下裂解碳化形成的含碳量高于90%的碳主链结构无机纤维。碳纤维具备出色的力学性能和化学稳定性，密度比铝低、强度比钢高，同时具有质轻、高强度、高模量、导电、导热、耐腐蚀、耐疲劳、耐高温、膨胀系数小等一系列其他材料所不可替代的优良性能。

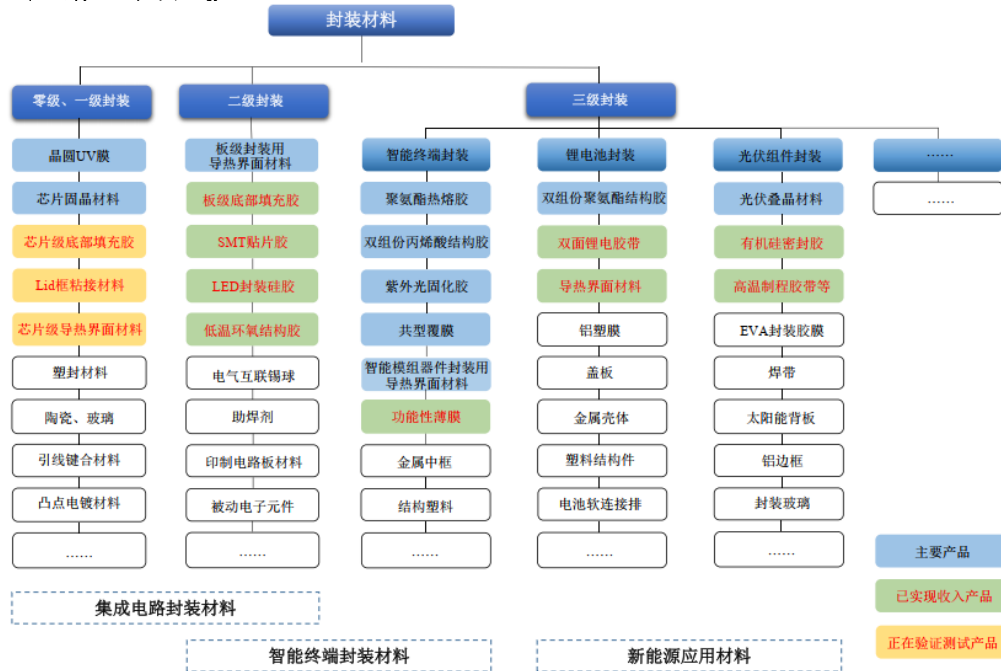
图：碳纤维产品分类



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胶粘剂原材料为银粉、银铜粉等粉体材料类，多元醇、有机硅树脂、丙烯酸酯、多异氰酸酯、环氧树脂等树脂类。可以用于集成电路封装、智能终端封装、新能源应用等领域。

图：胶粘剂应用领域广泛



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## 我们优选技术或品牌壁垒高、成长性强的行业龙头：

- 联瑞新材：持续扩产球形硅微粉强化竞争优势
- 建龙微纳：分子筛行业龙头
- 华特气体：国内电子特气龙头，持续扩产加快国产化替代
- 中复神鹰：国内率先突破干喷湿纺技术
- 国瓷材料：新材料长期发展可期
- 回天新材：新赛道产品持续放量



球形硅微粉中高端应用占比呈增长趋势。公司球形硅微粉目前大批量应用于环氧塑封料、覆铜板、灌封料、陶瓷等领域。在环氧塑封料领域，从SOP\QFN\BGA到MUF\CUF封装实现全覆盖，从常规产品到 Low  $\alpha$  产品实现全覆盖，而且下游应用中高端封装中的产品占比呈增长趋势。底部填充材料（Underfill）应用的产品，公司已与国内的一些客户形成批量销售，国外的客户目前已开始送样。在覆铜板领域，公司Low Df（低介质损耗）球形硅微粉广泛应用于各等级高频高速基板，特别是部分球形硅微粉满足了M6级别以上的Ultra Low Df（超低介质损耗）覆铜板的性能要求，并实现了批量销售。

表：公司投资项目

项目名称	新增产能	投产时间
硅微粉生产基地建设项目	角形硅微粉11529吨， 球形硅微粉7200吨	2020年4季度
硅微粉生产线智能化升级及产能扩建项目	角形硅微粉15000吨	2020年2季度
高流动性高填充熔融硅微粉产能扩建项目	熔融硅微粉10000吨	2021年1季度
电子级新型功能性材料项目	球形氧化铝粉、 液态填料9500吨	2021年
年产15000吨高端芯片封装用球形粉体生产线建设项目	球形硅微粉15000吨	2023年（拟投产）

资料来源：联瑞新材招股书、关于设立全资子公司实施电子级新型功能性材料项目的公告、关于投资年产15000吨高端芯片封装用球形粉体生产线建设项目的公告，2020年年报，海通国际整理

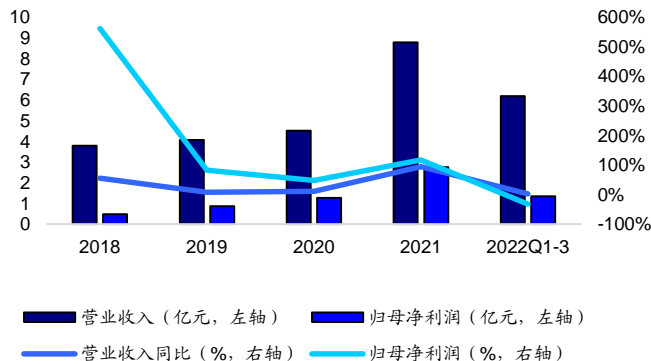
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- 扩建项目投产不及预期;
- 下游需求不及预期风险
- 能源价格上涨超过预期的风险。

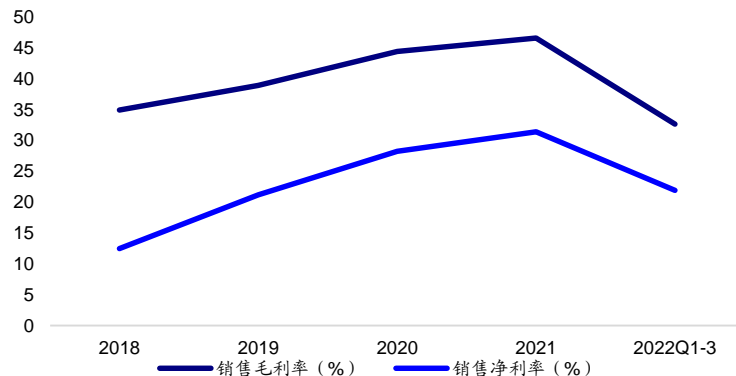
公司是国内分子筛行业龙头企业。公司主要产品为医疗保健制氧分子筛、工业制氧分子筛、制氢分子筛、气体干燥与净化用分子筛、煤化工及石油化工领域分子筛、环境保护领域分子筛、建筑材料领域分子筛等。公司产品的性能指标均具有与国际大型分子筛企业竞争的能力，多种分子筛产品已在深冷空分制氧和变压吸附制氧领域突破垄断，实现了进口替代。

推出新产品，不断拓展应用领域。2018-2022Q1-3 公司营业收入分别为3.78、4.06、4.52、8.78、6.18亿元，同比增长54.70%、7.34%、11.23%、94.36%、-18.66%；归母净利润分别为0.47、0.86、1.27、2.75、1.35亿元，同比增长562.03%、82.70%、48.10%、116.22%、-32.57%。2022年上半年，公司抓住市场空缺机会，推出了应用于高真空多层绝热容器的脱氢分子筛吸附剂、第五代高效深冷空分制氧专用分子筛等新产品，进一步拓宽了公司的市场领域。

图：2018-2022Q1-3建龙微纳营业收入及归母净利润情况



图：2018-2022Q1-3建龙微纳销售毛利率及净利率



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## 建龙微纳风险提示

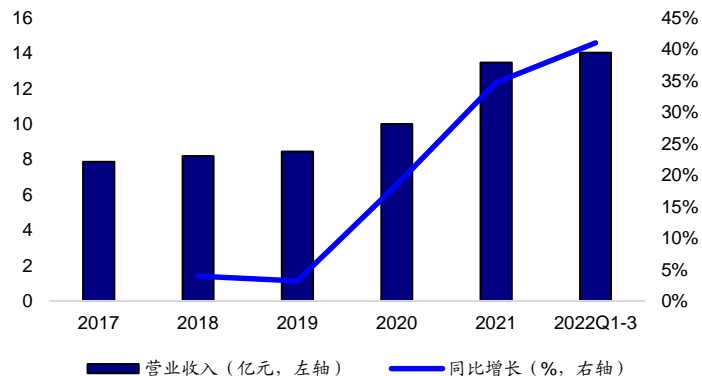
- 新产品放量不及预期;
- 下游需求不及预期风险。

# 华特气体：国内电子特气龙头，持续扩产加快国产化替代

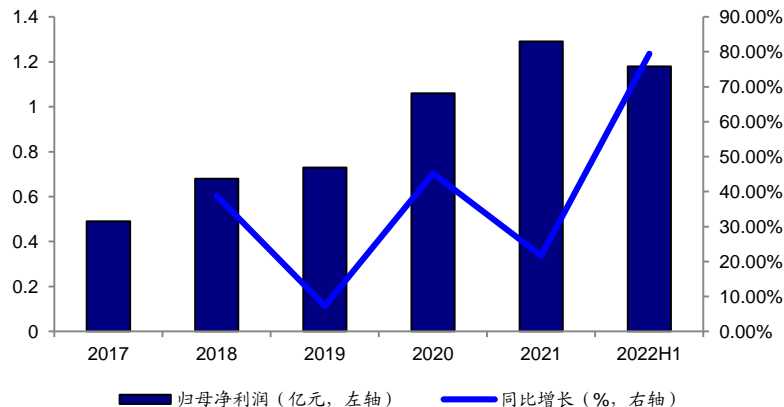
公司成立于1999年2月，主营业务以特种气体的研发生产及销售为核心，辅以普通工业气体和相关气体设备与工程业务，提供气体一站式综合应用解决方案。

公司特种气体技术领先，加速实现进口替代。公司逐步实现了高纯六氟乙烷、高纯三氟甲烷、光刻气、高纯四氟化碳、高纯二氧化碳、高纯一氧化碳、高纯八氟丙烷、高纯一氧化氮等近20多个产品的进口替代。公司自主研发的Ar/F/Ne、Kr/Ne、Ar/Ne和Kr/F/Ne4种混合气并在2017年得到全球最大光刻机制造厂商ASML的认证，全球仅4家，并于2021年4款光刻气同样也得到了日本GIGAPHOTONR的认证。公司是中国唯一的一家得到认证的气体公司。

图：2017-2022Q1-3华特气体营业收入情况



图：2017-2022Q1-3华特气体归母净利润情况

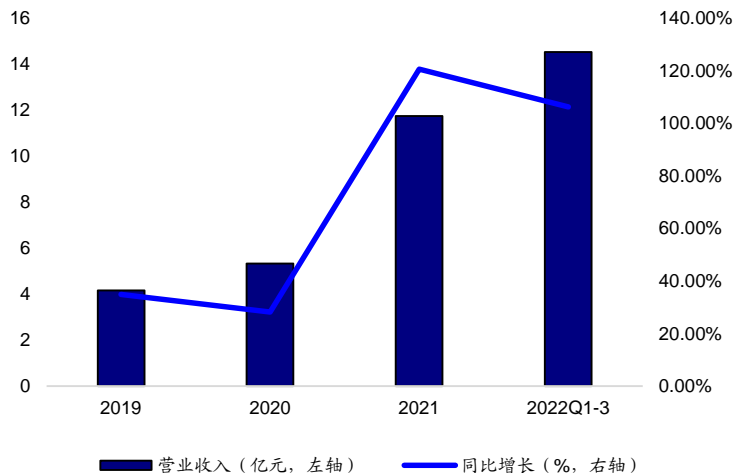


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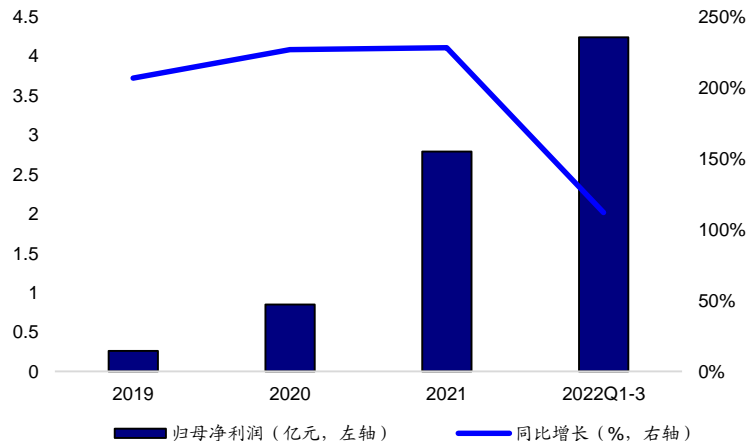
- 新产品放量不及预期;
- 产品认证进度不及预期;
- 下游需求不及预期风险。

公司碳纤维产品涵盖了高强型、高强中模型、高强高模型等，已基本实现对行业龙头日本东丽的主要碳纤维产品型号的对标，主要碳纤维产品型号包括SYT45S、SYT49S、SYT55S和SYM40等。截至2022年6月30日，公司产能为14500吨/年，包括连云港生产基地的3500吨/年产能，以及西宁万吨碳纤维项目于2022年5月建成并投产的11000吨/年产能，产能及产量均处于国内碳纤维生产企业前列。

图：2019-2022Q1-3中复神鹰营业收入情况



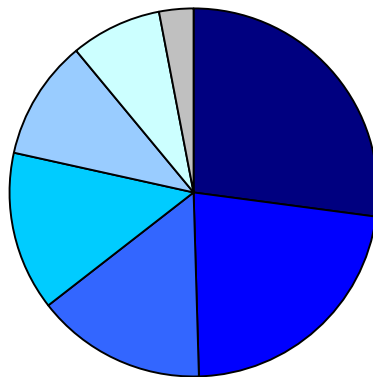
图：2019-2022Q1-3中复神鹰归母净利润情况



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公司率先实现干喷湿纺技术。干喷湿纺工艺具有碳纤维表面缺陷少、拉伸性能和复合材料加工工艺性能优异、纺丝速度快等优点，国际上日本东丽和美国赫氏率先实现了干喷湿纺工艺的突破，形成了成熟的干喷湿纺碳纤维产品。公司经过多年自主研发和技术创新，于2013年在国内率先突破了千吨级碳纤维原丝干喷湿纺工业化制造技术，建成了国内首条千吨级干喷湿纺碳纤维产业化生产线。公司产品广泛应用于航空航天、风电叶片、体育休闲、压力容器、碳/碳复合材料、交通建设等领域，2021年上半年营业收入占比分别为13.92%、14.88%、26.98%、10.48%、22.34%、7.96%。

图：2021H1中复神鹰各板块营业收入



■ 体育休闲 ■ 碳/碳复合材料 ■ 风电叶片 ■ 航空航天 ■ 压力容器 ■ 交通建设 ■ 其他

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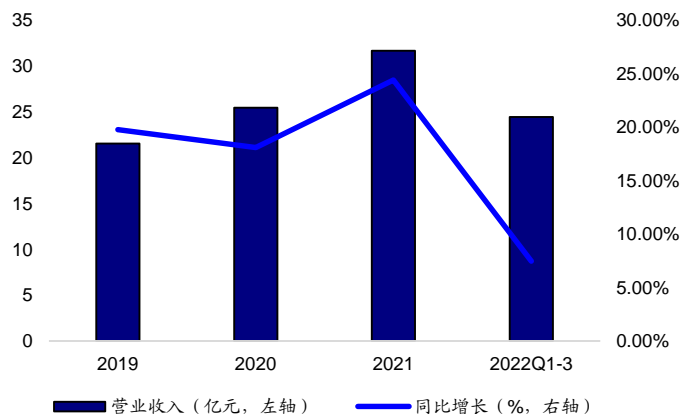


## 中复神鹰风险提示

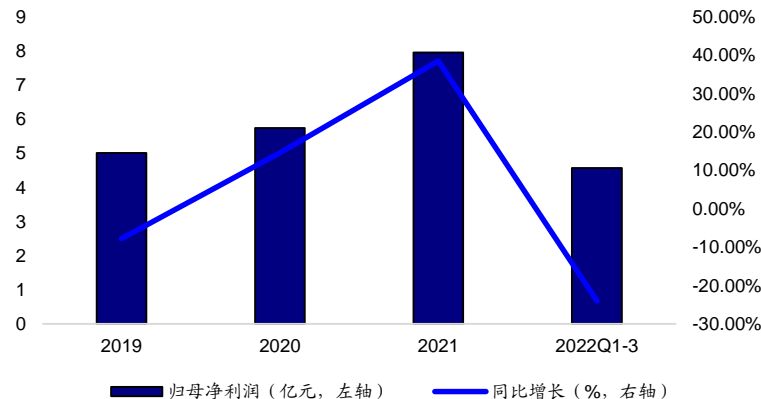
- 新产品放量不及预期;
- 下游需求不及预期风险;
- 行业竞争加剧的风险。

公司主要包括电子材料、催化材料、生物医疗材料、新能源材料、精密陶瓷和其他材料板块。电子材料板块，公司是国内MLCC介质材料的龙头生产商，实现了从消费电子、通讯到车规所有类型的基础粉和配方粉的全覆盖。公司电子浆料业务与MLCC粉体材料业务具有高度的客户协同性。催化材料板块，公司重点拓展尾气处理的前装市场，持续推进与下游主机厂和整车厂的配合工作，与OEM客户配合取得了越来越多的公告，商用车、乘用车、非道路机械和船机等应用领域实现了快速突破；生物医疗材料板块，公司拥有纳米级复合氧化锆粉体、氧化锆瓷块、玻璃陶瓷、树脂基陶瓷、数字化解决方案等系列牙科产品，具备从原料端持续优化产品的竞争优势；新能源材料板块，截至2022年6月，公司已经完成1.25万吨勃姆石产线建设并正式投产，高纯超细氧化铝已经完成1万吨产能的建设。

图：2019-2022Q1-3国瓷材料营业收入情况



图：2019-2022Q1-3国瓷材料归母净利润情况



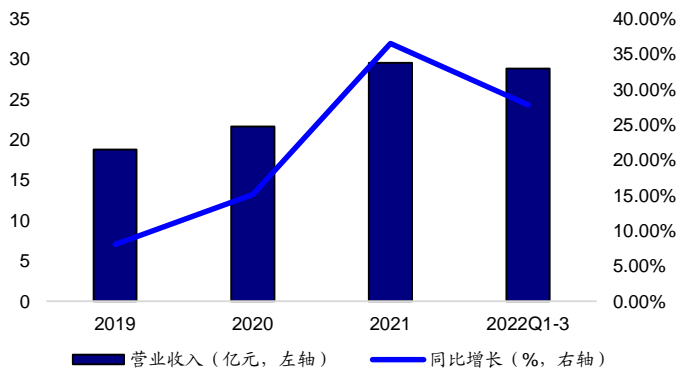
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- 国六进展不及预期风险;
- 产品价格大幅下跌风险;
- 下游需求不及预期风险。

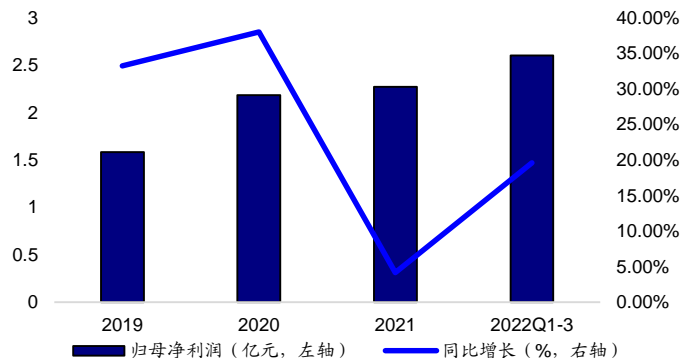
国内工程胶粘剂行业的龙头企业。公司目前主营业务产品涵盖高性能有机硅胶、聚氨酯胶、环氧树脂胶、厌氧胶、丙烯酸酯胶等工程胶粘剂及太阳能电池背膜，产品广泛应用在光伏新能源、通信电子等众多领域。

公司动力电池及光伏相关业务营业收入实现快速增长。公司光伏新能源业务发展势头强劲，光伏硅胶市占率进一步提升，行业头部客户保持高份额供货，2022年上半年销售收入同比增长52.72%；太阳能电池背膜业务通过战略新品CPC（双面涂覆型背膜）的销售提升以及客户结构优化等措施，实现产品盈利水平提升，销售收入同比增长90.85%；电子电器业务领域，公司实现销售收入2.9亿元，同比增长37.71%，其中消费电子、汽车电子、光伏逆变器等应用领域市场开拓成效显著，销售收入均实现一倍以上增速；新能源汽车及动力电池业务围绕宁德时代、比亚迪、亿纬锂能等重点客户持续发力，乘用车业务在比亚迪、日产等主流车企加速突破。

图：2019-2022Q1-3回天新材营业收入情况



图：2019-2022Q1-3回天新材归母净利润情况



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- 客户认证进度不及预期的风险;
- 下游需求不及预期风险。

表：化工行业建议关注公司盈利预测

公司代码	公司名称	收盘价 (元)	EPS (元/股)			PE (倍)		
			2021	2022E	2023E	2021	2022E	2023E
300285	国瓷材料	29.66	0.79	0.65	0.93	37	46	32
688300	联瑞新材	54.50	1.39	1.58	2.25	39	35	24
688357	建龙微纳	104.70	4.65	3.64	5.65	23	29	19
300041	回天新材	17.46	0.53	0.75	1.00	33	23	17
688295	中复神鹰	47.80	0.31	0.65	0.98	154	74	49
688268	华特气体	80.61	1.08	1.82	2.40	75	44	34

资料来源：WIND，股价为2022年12月02日收盘价，每股收益均为WIND一致预期，海通国际整理

1. 回顾：国内经济增长趋弱，化工品价格高位回落
2. 周期：推荐景气度持续时间较长的子行业
3. 新材料：挖掘国产替代趋势下的优质成长股
4. 建议关注公司
5. 风险提示

- 新产品放量不及预期;
- 新项目投产进度不及预期;
- 下游需求不及预期风险。



## Summary

- **Demand side:** rapid development of emerging industries such as semiconductor and new energy
- **New materials:** high barrier products have broad import substitution space
- Our top picks include: NOVORAY CORPORATION, Luoyang Jianlong Micro-nano New Material, Guangdong Huate Gas, Zhongfu Shenying Carbon Fiber, Shandong Sinocera Functional Material and Hubei Huitian New Materials
- Risk statement

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## 分析师股票评级

**优于大市**，未来12-18个月内预期相对基准指数涨幅在10%以上，基准定义如下

**中性**，未来12-18个月内预期相对基准指数变化不大，基准定义如下。根据FINRA/NYSE的评级分布规则，我们会将中性评级划入持有这一类别。

**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

**各地股票基准指数：**日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100, 美国 – SP500; 其他所有中国概念股 – MSCI China.

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## Analyst Stock Ratings

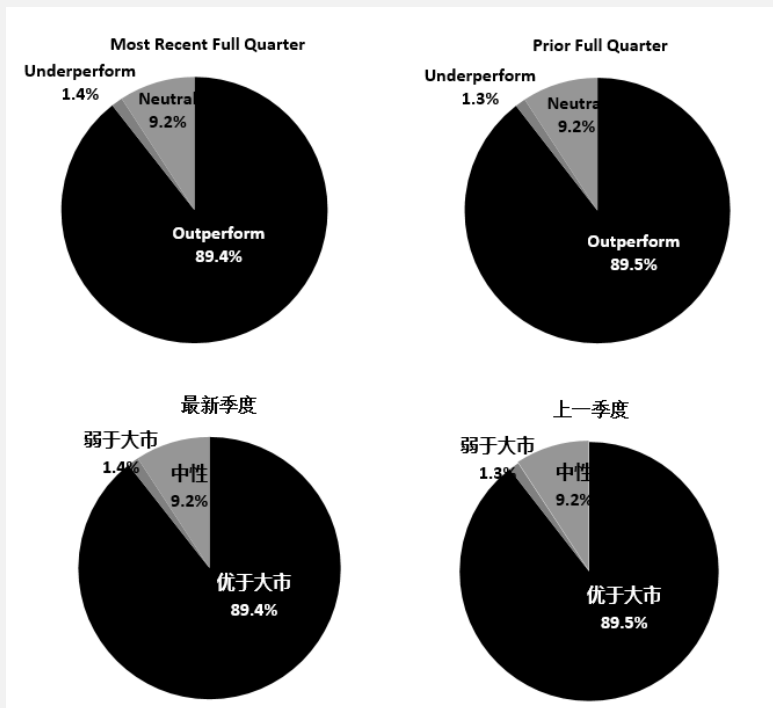
**Outperform:** The stock's total return over the next 12-18 months is expected to exceed the return of its relevant broad market benchmark, as indicated below.

**Neutral:** The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

**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.

**Benchmarks for each stock's listed region are as follows:** Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100, US – SP500; for all other China-concept stocks – MSCI China.

## 评级分布 Rating Distribution



## 截至2022年9月30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	89.4%	9.2%	1.4%
投资银行客户*	5.5%	6.8%	4.5%

\*在每个评级类别里投资银行客户所占的百分比。

上述分布中的买入，中性和卖出分别对应我们当前优于大市，中性和落后大市评级。

只有根据FINRA/NYSE的评级分布规则，我们才将中性评级划入持有这一类别。请注意在上表中不包含非评级的股票。

### 此前的评级系统定义（直至2020年6月30日）：

**买入**，未来12-18个月内预期相对基准指数涨幅在10%以上，基准定义如下

**中性**，未来12-18个月内预期相对基准指数变化不大，基准定义如下。根据FINRA/NYSE的评级分布规则，我们会将中性评级划入持有这一类别。

**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.

### Haitong International Equity Research Ratings Distribution, as of Sep 30, 2022

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	89.4%	9.2%	1.4%
IB clients*	5.5%	6.8%	4.5%

\*Percentage of investment banking clients in each rating category.

BUY, Neutral, and SELL in the above distribution correspond to our current ratings of Outperform, Neutral, and Underperform.

For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

### Previous rating system definitions (until 30 Jun 2020):

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

**NEUTRAL:** The stock's total return over the next 12-18 months is expected to be in line with the return of its relevant broad market benchmark, as indicated below. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

**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.

**Benchmarks for each stock's listed region are as follows:** Japan – TOPIX, Korea – KOSPI, Taiwan – TAIEX, India – Nifty100; for all other China-concept stocks – MSCI China.

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