

# 云海金属 YUNHAI JINSHU (002182 CH)

## 首次覆盖：镁行业全球龙头，拓展深加工及轻量化板块

### Owning a world-class salt lake, enjoy low-cost lithium extraction: Initiation

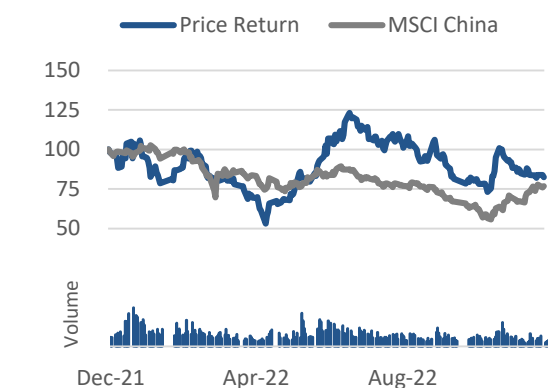
观点聚焦 Investment Focus

#### 首次覆盖优于大市 Initiate with OUTPERFORM

|            |                 |
|------------|-----------------|
| 评级         | 优于大市 OUTPERFORM |
| 现价         | Rmb21.65        |
| 目标价        | Rmb37.60        |
| HTI ESG    | 5.65-2.82-2.83  |
| E-S-G: 0-5 |                 |
| 义利评级       |                 |

|              |                         |
|--------------|-------------------------|
| 市值           | Rmb13.68bn / US\$1.96bn |
| 日交易额 (3个月均值) | US\$2.72mn              |
| 发行股票数目       | 646.42mn                |
| 自由流通股 (%)    | 86%                     |
| 1年股价最高最低值    | Rmb29.18-Rmb16.05       |

注：现价 Rmb21.65 为 2023 年 1 月 30 日收盘价



资料来源：Factset

|               | 1mth   | 3mth   | 12mth  |
|---------------|--------|--------|--------|
| 绝对值           | -12.7% | -23.7% | -23.1% |
| 绝对值 (美元)      | -11.4% | -23.5% | -29.5% |
| 相对 MSCI China | -26.4% | -26.5% | 1.0%   |

| (Rmb mn)       | Dec-21A | Dec-22E | Dec-23E | Dec-24E |
|----------------|---------|---------|---------|---------|
| 营业收入           | 8,117   | 10,488  | 13,913  | 17,808  |
| (+/-)          | 36.5%   | 29.2%   | 32.7%   | 28.0%   |
| 净利润            | 493     | 976     | 1,217   | 1,809   |
| (+/-)          | 102.2%  | 98.0%   | 24.7%   | 48.7%   |
| 全面摊薄 EPS (Rmb) | 0.76    | 1.51    | 1.88    | 2.80    |
| 毛利率            | 14.0%   | 18.2%   | 17.2%   | 19.3%   |
| 净资产收益率         | 14.5%   | 22.7%   | 22.1%   | 24.7%   |
| 市盈率            | 28.71   | 14.50   | 11.63   | 7.82    |

资料来源：公司信息, HTI

(Please see APPENDIX 1 for English summary)

- **公司是镁合金行业的全球龙头，技术水平和成本控制均大幅优于行业平均水平。**公司主营金属镁及其合金的生产和销售，目前公司已形成年产 10 万吨原镁和 20 万吨镁合金的生产能力，其原镁和镁合金产能均居全球第一，铝、镁等主要产品市场份额全球领先，拥有完整的产品研发与制造能力。近年来，集团公司凭借原材料领域的优势，积极向下游轻量化零部件领域拓展，形成了“白云石开采-原镁冶炼-镁合金熔炼-镁合金加工-镁合金回收”完整镁产业链以及“高性能铝合金-铝挤压加工”特色产品系。产品广泛应用于汽车工业、3C 电子及航空航天等领域。
- **加入“宝武系”后或扩展深加工板块。**10 月 17 日，云海金属与宝钢金属签署《股权认购协议》，向宝钢金属非公开发行股票 6200 万股，若顺利发行，控股股东将为宝钢金属，实际控制人将变更为国务院国资委。今年前三季度，公司镁和铝的深加工板块销售同比增长率都在 50% 以上，云海金属并入宝武系后，公司将更加关注深加工领域的增量市场，其中一方面是建筑领域，另一方面是镁在汽车轻量化中的应用推广。
- **依托轻量化发展目标，公司产能加速扩张。**作为镁行业龙头企业，云海金属目前拥有镁合金产能 20 万吨，市占率约 35%，原镁产能 10 万吨，市占率约 10%，均位列全球第一。为了满足轻量化和智能制造的发展需求，现有四个主要的原镁冶炼项目，一是与宝钢金属、青阳共同投建的 30 万吨高性能镁基轻合金、15 万吨镁合金压铸项目；巢湖云海 5 万吨原镁冶炼扩产项目；在山西五台投建年产 10 万吨高性能镁基轻合金、5 万吨镁合金深加工项目；南京云海 3 万吨镁合金压铸项目。
- **投建镁铝合金创新研发中心项目，在镁储氢电池上有研究。**镁基储氢材料可实现大容量固态储氢及常温常压长距离运输。不但可降低氢气的储运成本和能耗，且安全便捷，有望成为氢储运领域的重要关键材料。目前公司正处于研发阶段，与上海交通大学、重庆大学等相关技术研发团队开展镁基储氢研究。
- **盈利预测与评级。**我们预计公司 2022-2024 年 EPS 分别为 1.51 元、1.88 元、2.80 元。我们基于云海金属 2023 年 EPS，参考可比公司估值水平，给予 2023 年 20 倍 PE 估值，目标价 37.6 元，首次覆盖给予“优于大市”评级。
- **风险提示。**原材料价格波动的风险，子公司管理风险。

吴漪婕 Yijie Wu

lisa.yj.wu@htisec.com

## 一、投资亮点

公司主要从事金属镁及其合金的生产和销售，拥有独立完整的供、产、销系统。目前公司已形成年产 10 万吨原镁和 20 万吨镁合金的生产能力，其原镁和镁合金产能均居全球第一，铝、锆等主要产品市场份额全球领先，拥有完整的产品研发与制造能力。近年来，集团公司凭借原材料领域的优势，积极向下游轻量化零部件领域拓展，形成了“白云石开采-原镁冶炼-镁合金熔炼-镁合金加工-镁合金回收”完整镁产业链以及“高性能铝合金-铝挤压加工”特色产品系。经过三十年的发展，成为了一家集矿业开采、有色金属冶炼、加工与回收为一体的高新技术企业，产品广泛应用于汽车工业、3C 电子及航空航天等领域。

## 二、经营业务

### 1、股权结构：云海金属改制和增资控股

公司前身是南京云海特种金属公司，于 1993 年 11 月成立，注册资本为 205.6 万元，1997 年 8 月改制为有限公司，2006 年 8 月由南京云海特种金属有限公司整体变更设立的股份有限公司，并在 2007 年 11 月深圳证券交易所中小板上市。2022 年 10 月 17 日，云海金属与宝钢金属签署《股权认购协议》，向宝钢金属非公开发行股票 6200 万股，若顺利发行，控股股东将为宝钢金属，实际控制人将变更为国务院国资委。

图表 1 公司发展历程

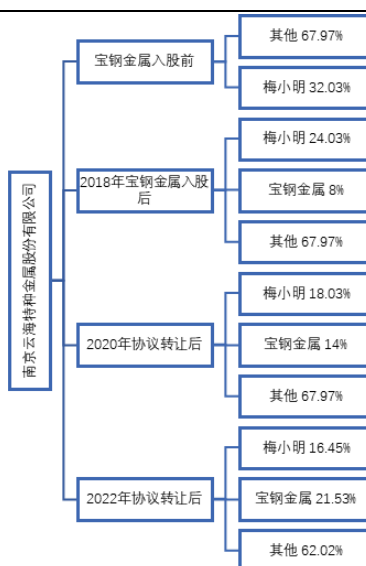
| 时间      | 事件                           |
|---------|------------------------------|
| 1993.11 | 南京云海特种金属有限公司成立               |
| 2007.06 | 五台云海镁业有限公司成立                 |
| 2007.10 | 深圳证券交易所上市                    |
| 2009.06 | 巢湖云海镁业有限公司成立                 |
| 2010.04 | 南京云开合金有限公司成立                 |
| 2011.06 | 南京云海轻金属精密制作有限公司成立            |
| 2014.11 | 全资收购扬州瑞斯乐复合金属材料有限公司          |
| 2018.04 | 集团印度项目公司组成                   |
| 2018.12 | 宝钢入股，成为云海金属战略股东              |
| 2019.07 | 全资收购重庆博奥镁铝金属制造有限公司           |
| 2019.09 | 合资成立山东云信铝业科技有限公司             |
| 2020.08 | 宝钢入股，成为云海金属第二大股东             |
| 2020.11 | 与宝钢金属、池州市人民政府合资成立安徽宝镁轻合金有限公司 |
| 2021.06 | 全资收购天津六合镁制品有限公司              |
| 2021.08 | 巢湖云海轻金属精密制造有限公司              |
| 2021.12 | 成立安徽云海铝业有限公司                 |
| 2022.03 | 合资成立安徽镁铝建筑模板科技有限公司           |
| 2022.10 | 云海金属筹划非公开发行股票，宝钢金属将成第一大股东    |

资料来源：公司官网，海通国际

宝钢金属和云海金属的合作渊源可追溯到四年前。2018 年，公司实际控制人梅小明将其持有的 5171.3803 万股公司股份(占总股本的 8%)转让给宝钢金属，当时转让目的是为公司引进更多资源，同时推动落实宝武集团的‘一基五元’发展战略，发展宝钢金属的轻量化材料和制品产业，促进宝钢金属业务体系的良好发展。一年之后即 2020 年梅小明再度将其持有的 3878.5352 万股公司股份(占总股本的 6%)转让给宝钢金属，使得宝钢金属股份增至 14%，为公司第二大股东。而此次非公开增发若成功，宝钢金属将拿下云海金属的控制权。

宝钢金属通过参与非公开发行，获得公司控制权，将更深入地发挥产业优势及协同效应，进一步聚焦公司的轻量化材料和制品的发展，持续优化在高强钢、镁、铝三大轻金属材料的产业布局与发展载体，从而与宝武的钢铁产业、新材料产业形成战略协同，增大协同优势，实现高质量发展。

图表 2 云海金属股权结构



资料来源：公司公告，海通国际

公司以资源和市场为导向的战略规划，在全国多地区开展项目建设，是国内镁合金行业布局最全面的公司。公司建立了两大原镁供应基地：山西五台、安徽巢湖；三大镁合金供应基地：安徽巢湖子公司主要面对长三角和中部地区客户；山西五台子公司主要面对中西部客户及出口，广东惠州子公司主要面对珠三角客户。2021 年 12 月 28 日公司和宝钢金属共同投资建设年产 30 万吨高性能镁基轻合金及深加工项目开工仪式在安徽省池州市青阳县经济开发区顺利举行。项目建成后，将有效带动下游镁合金深加工企业集聚，在青阳县及毗邻的江南新兴产业集中区形成千亿产业集群，成为中国重要的镁合金应用新材料创新基地。

图表 3 公司分布



资料来源：公司官网，海通国际

## 2. 依托轻量化发展目标，公司产能加速扩张。

作为镁行业龙头企业，云海金属目前拥有镁合金产能 20 万吨，市占率约 35%，原镁产能 10 万吨，市占率约 10%，均位列全球第一。公司近几年的战略是发展汽车轻量化所需的材料和部件，公司主产品镁合金、铝合金及深加工产品就是配套传统汽车和新能源汽车的轻量化需求，提供镁铝替代传统材料的设计和制造。近几年将重点发展仪表盘支架、座椅支架、显示屏支架、中控支架、方向盘、转向件等部件。为了满足轻量化和智能制造的发展需求，现有四个主要的原镁冶炼项目，一是与宝钢金属、青阳共同投建的 30 万吨高性能镁基轻合金、15 万吨镁合金压铸项目；巢湖云海 5 万吨原镁冶炼扩产项目；在山西五台投建年产 10 万吨高性能镁基轻合金、5 万吨镁合金深加工项目；南京云海 3 万吨镁合金压铸项目。

目前，无论在传统燃油汽车，还是在新能源汽车领域中所应用的轻量化材料，基本上都包括铝合金、镁合金、碳纤维和高强度钢。镁合金凭借其低密度等特性已经成为了最有效的汽车轻量化材料。随着镁合金压铸工艺提升，镁铝价格比走低，镁合金汽车结构件将逐步替代铝合金结构件。云海金属已在拓展下游深加工业务，例如在镁合金汽车压铸件方面，2021 年云海金属的方向盘骨架、仪表盘支架、中控支架、座椅支架、显示屏支架等镁质汽车零部件产品业务量同比增长，市场占有率进一步提升。2021 年公司镁合金深加工产品营收 7.02 亿元，同比增长 47.14%，到了 2022 年上半年，“镁合金深加工产品”的营业收入为 2.95 亿元，同比增长 51.30%。由于镁行业的整体规模较小，全球仅有 100 万吨原镁，且产能分散，缺乏研发投入，导致行业加工、合金方向的推广进展缓慢。双方合作后，尤其在控制权变更后，公司将把全镁产业为发展重点，打造全镁产业链，主打镁基材料，加速布局镁制品，加快镁在汽车加工领域的技术革新与下游推广，引领镁基材料消费，为客户提供轻量化解决方案，这也比较契合云海金属的下游应用推广方向。

图表 4 公司 2022 年半年度主营业务毛利

| 产品       | 营业收入（亿元） | 营业成本（亿元） | 毛利率    |
|----------|----------|----------|--------|
| 镁合金产品    | 19.74    | 11.66    | 40.93% |
| 镁合金深加工产品 | 4.76     | 4.65     | 2.44%  |
| 铝合金产品    | 12.18    | 11.96    | 1.82%  |
| 铝合金深加工产品 | 6.51     | 5.83     | 10.45% |
| 中间合金     | 2.26     | 2.17     | 3.95%  |
| 金属锆      | 0.50     | 0.34     | 30.94% |
| 其他       | 2.32     | 1.54     | 33.58% |

资料来源：公司 22 年半年报，海通国际

### 3. 公司形成“白云石开采-原镁冶炼-镁合金熔炼-镁合金加工-镁合金回收”完整镁产业链

公司是镁行业龙头企业，已具有从白云石开采-原镁冶炼-镁合金-镁合金深加工-镁合金回收的完整 的镁产业链：1）上游资源端：巢湖云海和安徽宝镁拥有白云石矿山的采矿权 2）原镁和镁合金：截至 2021 年底，公司共拥有 10 万吨原镁产能 20 万吨镁合金产能，公司镁合金约占国内市场的 35%以上，原镁约占国内市场的 10%，具有行业龙头地位。3）在下游深加工领域，南京云海、巢湖云海精密、荆州云海、天津六合、重庆博奥镁铝已完成精密加工布局。

### 4. 投建镁铝合金创新研发中心项目，在镁储氢电池上有研究

公司在创新技术研发上具有优势，22 年 11 月子公司重庆博奥拟投资建设年产 1500 万件镁合金中大型汽车零部件及镁铝合金创新研发中心项目，项目固定资产投资额为 6.46 亿元，创新研发中心主要规划产品及材料研发中心、装备研发中心、实验及检测中心，同时也是与科研院校合作的基地，拟进行一系列新品类、全工序自动化生产设备研发及应用领域检测和实验，成为西南地区镁铝合金材料和零部件的专业检测机构。公司在镁合金深加工产品方面具有较强的产品设计能力和自我开发模具的能力，不仅能给客户项目支持，也能有效地降低公司的制造成本。

公司也正在积极研发镁基固态储氢材料技术，未来会适时介入该产业。作为氢的可逆“存储”介质，镁基固态储氢材料具有优良的吸放氢性能以及长期循环无动力学衰减和容量损失的优点，可实现大容量固态储氢，常温常压长距离运输。不但可降低氢气的储运成本和能耗，且安全便捷，有望成为氢储运领域的重要关键材料。目前公司与宝钢金属及高校的相关技术研发团队合作开展镁基储氢研究。

### 5. 未来扩产增速增大，海内外生产竞争力强劲

随着青阳项目和公司在巢湖和五台的扩建产能达产以后，预计能够达到 50 万吨原镁和 50 万吨镁合金的规模。随着汽车轻量化对镁的需求的增加，整个中国镁企业的生产竞争力还是十分强劲的，这正是布局的未来增长点，未来也会推进欧洲、北美等海外市场的布局。云海金属是全球领先的全镁产业链企业，与中国宝武新材料产业的发展战略高度契合。通过本次非公开发行，实现国资对云海金属的实际控制，可以充分发挥两者的优势。

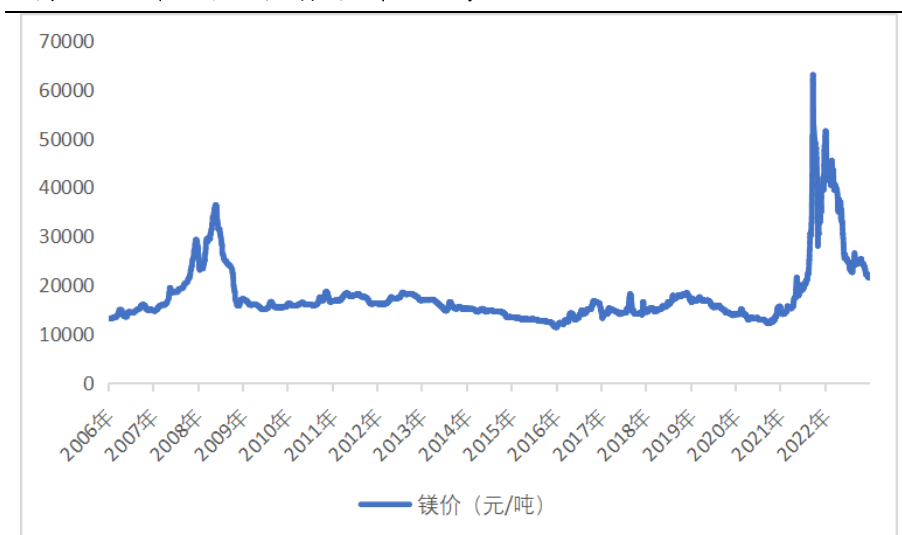


### 三、镁行业:

#### 1. 23 年镁价有望跟随需求上行

2005 年至 2020 年，镁价基本在 1.5 万元/吨-2 万元/吨区间震荡，至今经历过两次大涨，第一轮主因内需急剧扩大叠加生产成本上升，而本轮更多为供给扰动加剧。2021 年，镁价创下历史新高，一度超过 7 万元/吨，2022 年由于需求疲软，镁价持续下行，回顾 12 月镁市场，在供需矛盾影响下，市场价格整体延续前期下行走势，价格跌破 22000 元/吨节点后，部分镁厂面临亏损。我们认为 23 年整体看空美元指数，而金属价格与美元指数呈强负相关性，镁价跟随金属价格共同上涨。同时得益于下游需求，如新能源车轻量化的带动，镁的应用场景不断打开。

图表 5 2005 年-至今镁价趋势图（单位：元/吨）

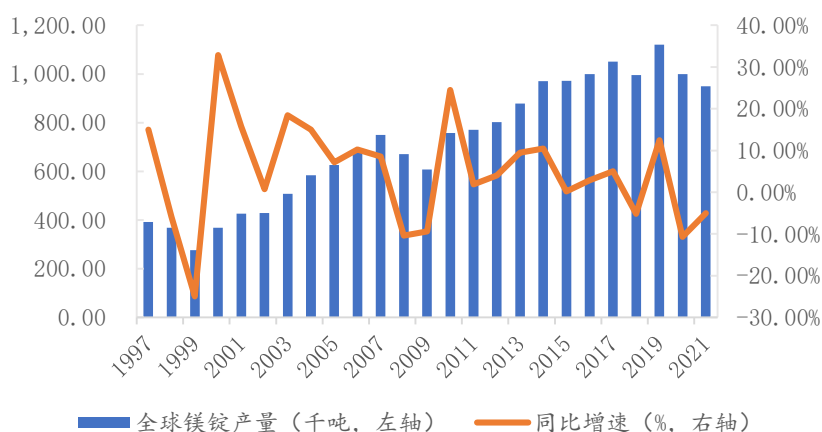


资料来源：Wind，海通国际

#### 2. 我国是世界最大原镁产量国

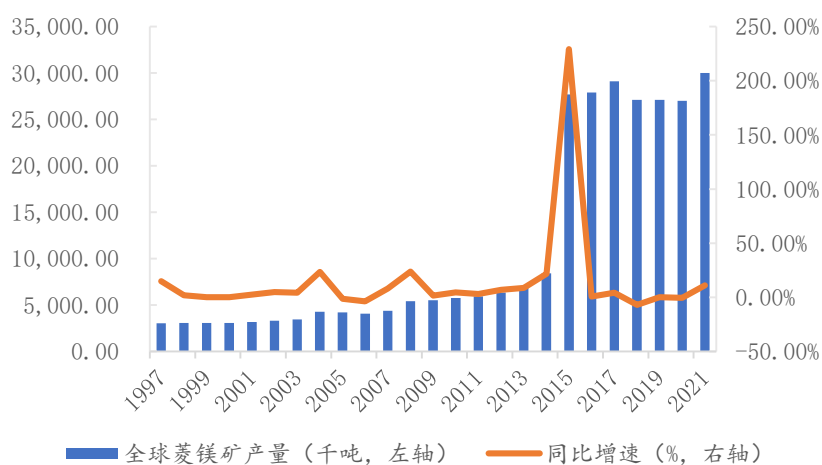
受供给不稳定性影响，2021 年全球镁锭产量为 95 万吨，同减 5%。我国镁锭产量为 80 万吨，同减 10%。2021 年我国原镁产量为 94.88 万吨，占全球总产量的 90%。

图表 6 全球镁锭产量及同比增速



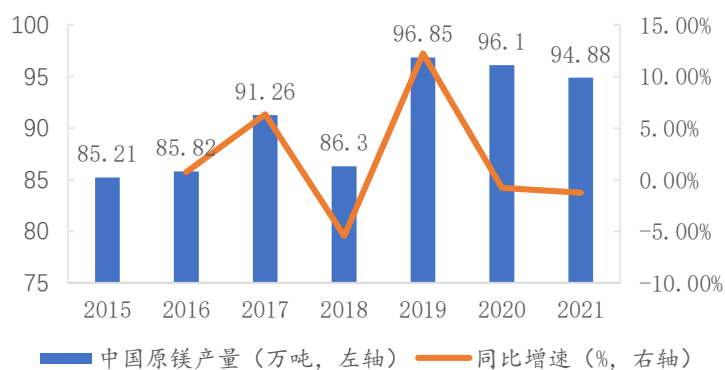
资料来源: USGS, 海通国际

图表 7 全球菱镁矿产量及同比增速



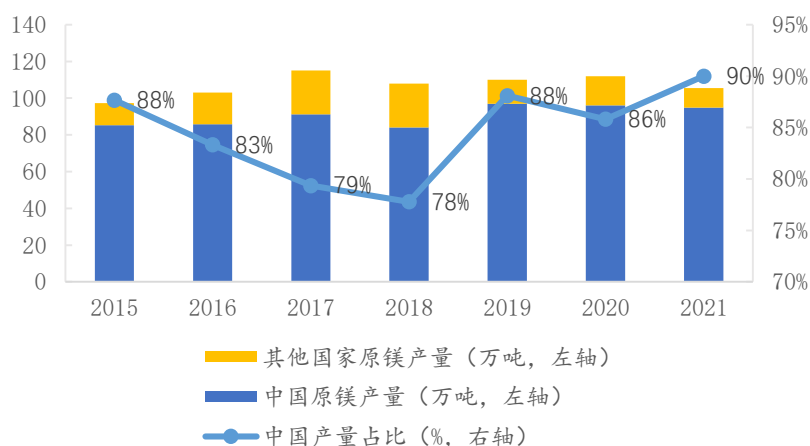
资料来源: USGS, 海通国际

图表 8 中国原镁产量及同比增速



资料来源: 中国有色金属协会, 海通国际

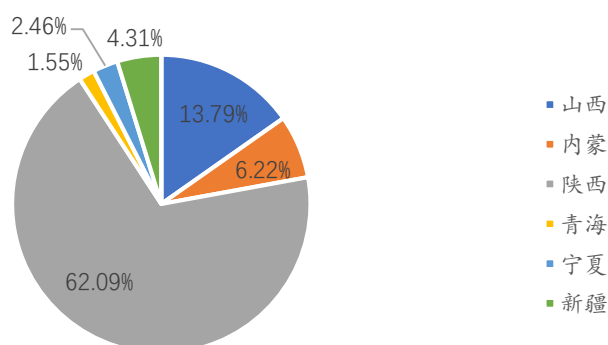
图表 9 中国原镁产量及全球占比



资料来源：中国有色金属协会，海通国际

陕西是我国金属镁主要产地。2021 年陕西生产 54 万吨金属镁，占全国总产量约 62%，其次为山西，占比 14%。内蒙、新疆、宁夏、青海等地也均有生产。从地域上看，总体集中在西北地区。

图表 10 2021 年中国各省份金属镁产量占比



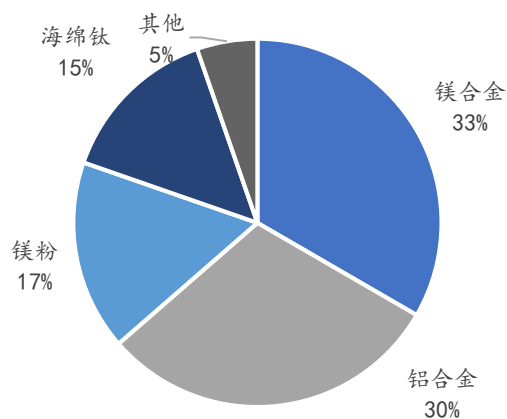
资料来源：百川盈孚，海通国际

### 3. 镁下游应用广泛，汽车轻量化加速镁需求

镁是一种具有延展性的轻质金属，其性能优异，具备密度低、阻尼性能高、散热效果好等特点，应用领域众多，被广泛应用于交通运输、航空航天、化工等行业。2021 年中国金属镁消费量 65.44 万吨，其中 33.36% 用于镁合金加工，16.72% 用于镁粉加工。在镁合金应用方面，2021 年中国镁合金消费量达 26.98 万吨，其中交通运输领域用量为 17.24 万吨，占比达 63.9%。2021 年中国镁粉消费量为 8.36 万吨，其中 65% 的镁粉被应用于钢厂脱硫。

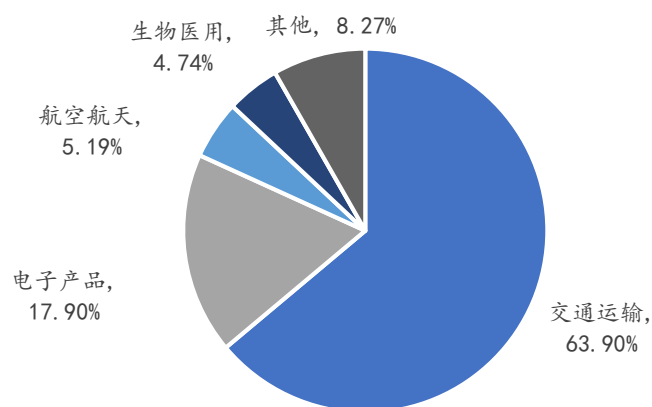


图表 11 2021 年中国金属镁消费结构



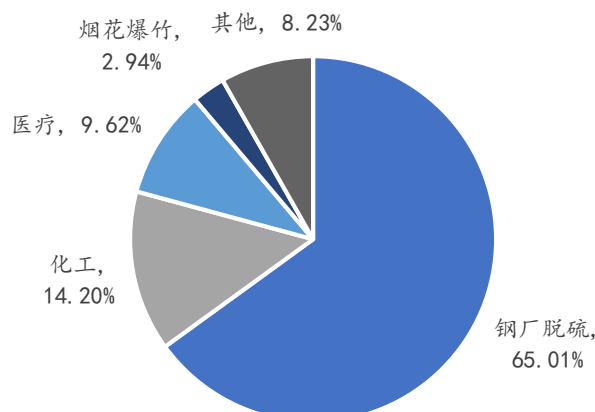
资料来源：百川盈孚，海通国际

图表 12 2021 年中国镁合金消费结构



资料来源：百川盈孚，海通国际

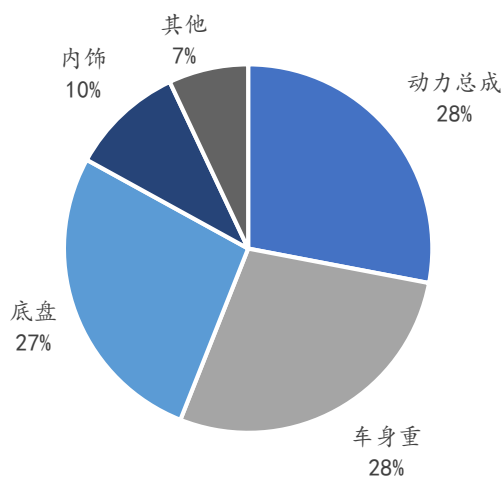
图表 13 2021 年中国镁粉消费结构



资料来源：百川盈孚，海通国际

**汽车轻量化助力镁需求迅速增长。**汽车的油耗水平 60%以上与整车重量有关。汽车自身的重量每减少 100kg，百公里油耗可减少约 0.7L，传统汽车自重每降低 10%，燃油效率可以提高 5.5%，电动车整车重量降低 10%，平均续航里程可相应增加 5~8%。燃油车每节约 1L 燃料可减少二氧化碳排放量 2.5 克，每年至少可以减少 30%以上的排放量。相较于传统汽车，三电系统引起的增重会导致整车增加约 200-300kg 的重量，即新能源汽车空载时的重量几乎相当于传统车满载时的重量。新能源汽车轻量化系数要比传统燃油车高 1.5-4 倍，系数越大，表明整车轻量化程度越低，所以新能源汽车对于轻量化的需求更为迫切。

图表 14 汽车质量分布



资料来源：CNKI，海通国际

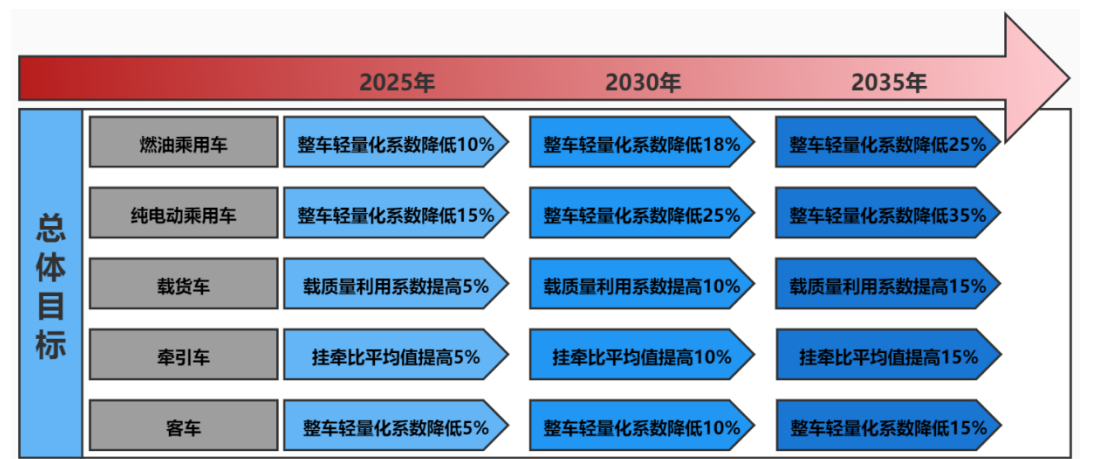
图表 15 部分镁合金材料汽车零部件减重效果对比

| 汽车零部件 | 镁重量 (kg) | 替代重量 (kg) | 减轻重量 (kg) |
|-------|----------|-----------|-----------|
| 壳体    | 5.4      | 12.8      | 7.4       |
| 动力系统  | 36.2     | 55.2      | 19        |
| 电气外壳  | 1.8      | 3.2       | 1.4       |
| 框架    | 7.2      | 14.5      | 7.3       |
| 内饰件   | 21       | 31.2      | 10.2      |
| 方向盘   | 0.9      | 4         | 3.1       |
| 脚踏板   | 1.1      | 5         | 3.9       |
| 轮毂    | 18       | 23        | 5         |

资料来源：CNKI，海通国际

根据中国汽车工程学会发布的《节能与新能源汽车技术路线图 2.0》，到 2035 年，中国将实现燃油乘用车整车轻量化系数降低 25%，纯电动乘用车整车轻量化系数降低 35%；该目标要求镁合金在汽车制造领域扮演更为重要的角色。预计到 2030 年中国单车用镁量将提升到 45Kg。

图表 16 各类车型轻量化路线图



资料来源：中国汽车工程学会，海通国际

图表 17 中国单车用镁量统计及预测表

| 年份       | 2015 年 | 2020 年 | 2025 年 (E) | 2030 年 (E) |
|----------|--------|--------|------------|------------|
| 用镁量 (kg) | 3.7    | 15     | 25         | 45         |

资料来源：CNKI 预测，海通国际

镁合金座椅、方向盘等零部件极大提高行车的安全性和舒适性。镁合金材料的安全性主要体现在其比强度和比刚度的特性上。在同等刚性条件下，1kg 镁合金的坚固程度几乎等同于 1.8kg 铝或 2.1kg 钢的效果。另外，相比于其他金属材料，镁合金材料具有良好的阻尼性，这使其具备优异的减震效果，能够承受较大的冲击震动负荷，其减震效果相比于铝材料高出约 20 倍。镁合金零部件在受到外力冲击时能够吸收更多的能量，因而镁合金材料制成的汽车壳体、轮毂等零部件具备优异的减震抗噪表现，能够有效减轻人员疲劳，提高驾驶舒适性。

图表 18 常用材料性能参数对比表

| 材料种类 | 弹性模量（GPa） | 拉伸强度（MPa） | 减震系数（35MPa）（%） |
|------|-----------|-----------|----------------|
| 镁合金  | 45        | 200-300   | 30-60          |
| 铸铁   | 180       | 200-400   | 10-17          |
| 铝合金  | 70        | 200-350   | 2-5            |
| 工程塑料 | 15-25     | 100-250   | N/A            |

资料来源：CNKI，海通国际

图表 19 汽车常见镁合金零部件

| 系统名称 | 典型镁合金件  |
|------|---|
| 传动系统 | 变速箱外壳、齿轮箱外壳、电机支架、叶片导向器、离合器活塞、变速箱体、机油盘、离合器外壳、交流电机支架、油泵壳、滤油器支架等 |
| 引擎系统 | 发动机支撑架、汽缸盖、气冷汽车引擎、油泵外壳、进气歧管、汽缸体、油盆、阀盖等                        |
| 车体系统 | 门框、仪表盘、座椅架、移动式车顶架、后掀门架、安全气囊外壳、加油箱盖、车灯外壳、引擎盖、车顶板、车身骨架、操纵台架等    |
| 底盘系统 | 转向架、锁架外壳、方向盘、轮圈、刹车及离合器踏板托架等                                   |

资料来源：CNKI，海通国际

图表 20 镁合金在汽车零部件领域的应用

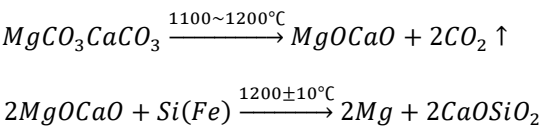


资料来源：宜安科技官网，海通国际

4. 皮江法冶炼镁

4.1 皮江法炼镁的化学原理

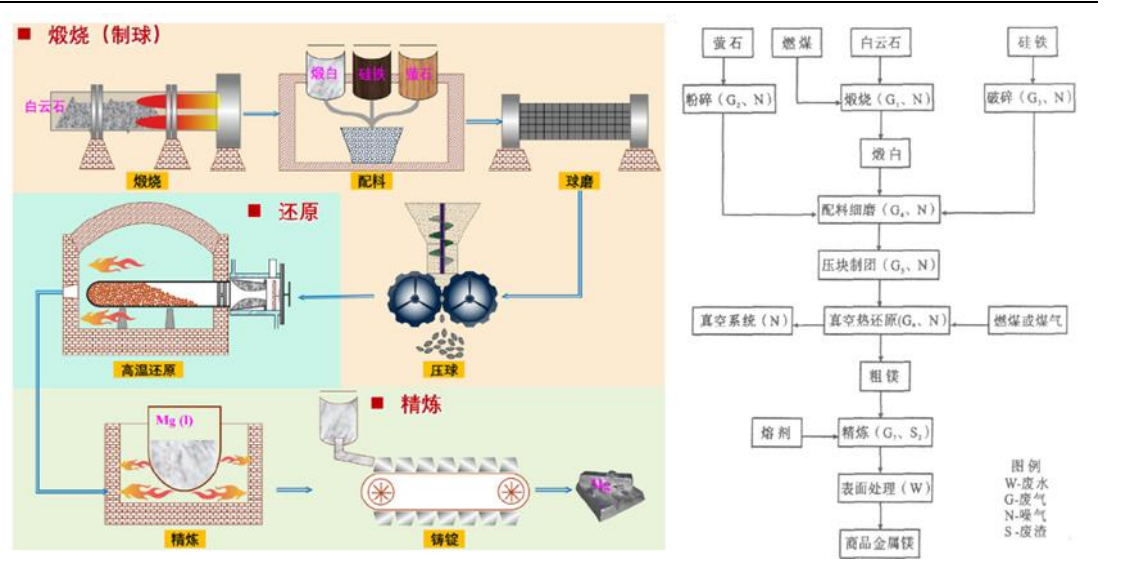
金属镁的制备主要有电解法和热还原法，电解法由于设备成本高，流程复杂，因此我国大多数企业采用皮江法热还原炼镁。皮江法炼镁具有工艺流程简单,所需投资少,设计及生产规模灵活的特点。并且,原料白云石及煤炭在我国分布较广，易得性强。皮江法的化学过程主要分为两步：



4.2 皮江法炼镁的生产流程

皮江法在工业工艺上主要分为三大步，分别为：白云石煅烧、料球热还原与粗镁精炼。从白云石煅烧到配料磨粉、制成料球，再到 1200℃下真空还原，最后进行粗镁精炼、铸锭，成为商品镁锭。

图表 21 皮江法炼镁工业流程图



资料来源：CNKI，海通国际

4.3 皮江法炼镁的成本拆分

根据宁夏惠冶镁业和中国镁业发展报告数据,每产生 1 吨镁锭所需要的综合能耗如下：

图表 22 皮江法流程的每个阶段所需的资源与能量消耗

| 流程阶段    | 原材料投入<br>(t/ t-Mg 锭)                                    | 过程产出<br>(t/ t-Mg 锭) | 能量投入<br>(t/ t-Mg 锭)                                   | 参数  |
|---------|---|---------------------|---|---|
| 1.硅铁生产  | 砂:2.119;<br><br>氧化铁:0.271                               | 硅铁 1.177            | 焦炭: 1.059 t(1.029 tce)<br><br>电力: 10005kWh(3.482 tce) |   |
| 2.煅烧    | 白云石: 10.335   | 煅烧白云石 5.066         | 煤:1.646t(1.529tce)                                    | 能量效率: 68.37%                                |
| 3.镁还原   | 料球: 6.429(包括<br>煅烧白云石,5.066;<br>硅铁,1.177;<br>萤石,0.186 ) | 粗镁:1.042            | 天然气:1600 m³(1.942 tce)                                | 还原率: 85.18%<br>能量效率: 9.85%<br>原材料/镁率 :6.429 |
| 4.精炼和铸造 | 粗镁: 1.042   | 镁锭: 1               | 焦炉煤气: 1020 m³(0.281 tce)                              | 精炼率: 96%                                    |
| 5.其他    | 工业淡水: 12 (0.001 tce)                                    |                     | 电力: 1200kWh ( 0.418 tce)                              |   |
|         |   |                     | 总计: 8.681 tce   |   |

资料来源：Elsevier，海通国际

## 四、财务对比

受镁价下跌，三季度盈利受到冲击，随着宝武金属入股，美联储放缓加息预期增强以及下游需求消费的逐渐复苏，公司盈利有望改善并增长。

图表 24 云海金属 2007-2022Q3 盈利表

|            | 扣非净利 (亿) | 销售净利率% | ROE%  |
|------------|----------|--------|-------|
| 2007/12/31 | 0.51     | 3.63   | 10.75 |
| 2008/12/31 | 0.29     | 1.82   | 4.82  |
| 2009/12/31 | -0.19    | 0.33   | 0.58  |
| 2010/12/31 | 0.19     | 1.03   | 3.20  |
| 2011/12/31 | -0.13    | 0.31   | 0.42  |
| 2012/12/31 | 0.11     | 0.49   | 2.21  |
| 2013/12/31 | 0.21     | 0.08   | 2.79  |
| 2014/12/31 | 0.26     | 0.57   | 3.02  |
| 2015/12/31 | 0.24     | 0.75   | 3.30  |
| 2016/12/31 | 1.06     | 4.32   | 14.46 |
| 2017/12/31 | 1.09     | 3.11   | 10.41 |
| 2018/12/31 | 2.09     | 6.44   | 19.52 |
| 2019/12/31 | 2.79     | 16.35  | 34.06 |
| 2020/12/31 | 2.28     | 4.08   | 8.65  |
| 2021/12/31 | 4.20     | 6.37   | 14.55 |
| 2022Q1-Q3  | 5.55     | 8.90   | 15.88 |

资料来源: Wind, 海通国际

## 五、盈利预测

镁合金、铝合金产品贡献约 70%的总收入，随着未来与宝钢金属合作的青阳项目落地投产，预计将带动公司毛利率由 2021 年的 16.7%增长至 2024 年的 19.3%。由此我们预计公司 2022-2024 年 EPS 分别为 1.51 元、1.88 元、2.80 元。我们基于云海金属 2023 年 EPS，参考可比公司估值水平，给予 2023 年 20 倍 PE 估值，目标价 37.6 元，首次覆盖给予“优于大市”评级。

图表 25 可比公司估值表 (截至 2023 年 1 月 31 日)

| 代码        | 简称   | EPS (元) |        |       | PE (倍) |       |       |
|-----------|------|---------|--------|-------|--------|-------|-------|
|           |      | 2021A   | 2022E  | 2023E | 2021A  | 2022E | 2023E |
| 002340.CH | 格林美  | 0.19    | 0.32   | 0.47  | 53.62  | 22.84 | 15.44 |
| 000969.CH | 安泰科技 | 0.17    | 0.30   | 0.39  | 63.98  | 27.20 | 20.78 |
| 688122.CH | 西部超导 | 1.68    | 2.33   | 3.13  | 57.69  | 41.47 | 30.84 |
| 600114.CH | 东睦股份 | 0.04    | 0.26   | 0.45  | 280.50 | 31.48 | 18.37 |
| 均值        |      | 0.52    | 0.8025 | 1.11  | 113.95 | 30.75 | 21.36 |

注: 收盘价为 2023 年 1 月 31 日价格, EPS 为 wind 一致预期资料来源: Wind, 海通国际

## 六、风险提示

原材料价格波动的风险，子公司管理风险。



## 财务报表分析和预测

| 主要财务指标             | 2021A  | 2022E  | 2023E  | 2024E  | 利润表 (百万元)          | 2021A    | 2022E     | 2023E     | 2024E     |
|--------------------|--------|--------|--------|--------|--------------------|----------|-----------|-----------|-----------|
| <b>每股指标 (元)</b>    |        |        |        |        | <b>营业总收入</b>       | 8,116.56 | 10,487.53 | 13,912.64 | 17,807.81 |
| 每股收益               | 0.76   | 1.51   | 1.88   | 2.80   | 营业成本               | 6,977.72 | 8,580.67  | 11,522.37 | 14,366.66 |
| 每股净资产              | 5.24   | 6.65   | 8.53   | 11.33  | 毛利率%               | 14.0%    | 18.2%     | 17.2%     | 19.3%     |
| 每股经营现金流            | 0.09   | 0.85   | -0.56  | 4.38   | 营业税金及附加            | 39.78    | 51.39     | 68.17     | 87.26     |
| 每股股利               | 0.10   | 0.00   | 0.00   | 0.00   | 营业税金率%             | 0.49%    | 0.49%     | 0.49%     | 0.49%     |
| <b>价值评估 (倍)</b>    |        |        |        |        | 管理费用               | 102.91   | 170.59    | 217.70    | 273.51    |
| P/E                | 28.71  | 14.50  | 11.63  | 7.82   | 管理费用率%             | 1.27%    | 1.63%     | 1.56%     | 1.54%     |
| P/B                | 4.18   | 3.29   | 2.57   | 1.93   | EBIT               | 702.69   | 1,282.43  | 1,597.76  | 2,434.71  |
| P/S                | 1.74   | 1.35   | 1.02   | 0.79   | 财务费用               | 99.14    | 109.64    | 148.64    | 207.13    |
| EV/EBITDA          | 18.42  | 11.09  | 10.16  | 6.63   | 财务费用率%             | 1.22%    | 1.05%     | 1.07%     | 1.16%     |
| 股息率%               | 0.5%   | 0.0%   | 0.0%   | 0.0%   | 资产减值损失             | -1.73    | 0         | 0         | 0         |
| <b>盈利能力指标 (%)</b>  |        |        |        |        | 投资收益               | -16.68   | -9.23     | -16.28    | -21.75    |
| 毛利率                | 14.0%  | 18.2%  | 17.2%  | 19.3%  | <b>营业利润</b>        | 587.05   | 1,388.69  | 1,731.49  | 2,588.10  |
| 净利率                | 6.1%   | 9.3%   | 8.7%   | 10.2%  | 营业外收支              | 8.80     | 7.55      | 7.67      | 7.82      |
| 净资产收益率             | 14.5%  | 22.7%  | 22.1%  | 24.7%  | <b>利润总额</b>        | 581.22   | 1,385.65  | 1,728.19  | 2,584.47  |
| 资产回报率              | 6.7%   | 10.7%  | 10.5%  | 12.3%  | EBITDA             | 905.77   | 1,570.72  | 1,964.26  | 2,782.30  |
| 投资回报率              | 10.3%  | 14.1%  | 14.2%  | 17.1%  | 所得税                | 63.81    | 106.42    | 132.72    | 212.70    |
| <b>盈利增长 (%)</b>    |        |        |        |        | 有效所得税率%            | 7.7%     | 7.68%     | 7.68%     | 8.23%     |
| 营业收入增长率            | 36.5%  | 29.2%  | 32.7%  | 28.0%  | 少数股东损益             | 24.54    | 303.56    | 378.60    | 562.82    |
| EBIT 增长率           | 97.5%  | 82.5%  | 24.6%  | 52.4%  | <b>归属母公司所有者净利润</b> | 140      | 975.67    | 1,216.86  | 1,808.95  |
| 净利润增长率             | 102.2% | 98.0%  | 24.7%  | 48.7%  |                    |          |           |           |           |
| <b>偿债能力指标</b>      |        |        |        |        | <b>资产负债表 (百万元)</b> | 2021A    | 2022E     | 2023E     | 2024E     |
| 资产负债率              | 46.2%  | 43.1%  | 41.2%  | 37.4%  | 货币资金               | 244.06   | -73.39    | -2,226.17 | -383.25   |
| 流动比率               | 1.37   | 1.33   | 1.17   | 1.40   | 应收账款及应收票据          | 166.55   | -23.36    | 238.29    | 49.25     |
| 速动比率               | 0.83   | 0.79   | 0.48   | 0.84   | 存货                 | 1,103.49 | 1,067.97  | 1,979.17  | 1,788.20  |
| 现金比率               | 0.08   | -0.02  | -0.56  | -0.08  | 其它流动资产             | 256.64   | 256.64    | 256.64    | 256.64    |
| <b>经营效率指标</b>      |        |        |        |        | 流动资产合计             | 4,130.26 | 4,148.02  | 4,611.91  | 6,542.79  |
| 应收账款周转天数           | 65.74  | 62.22  | 64.74  | 64.07  | 长期股权投资             | 302.91   | 302.91    | 452.91    | 687.91    |
| 存货周转天数             | 49.30  | 45.55  | 47.60  | 47.20  | 固定资产               | 1,618.34 | 3,202.86  | 4,929.79  | 5,802.19  |
| 总资产周转率             | 1.23   | 1.27   | 1.34   | 1.36   | 在建工程               | 694.44   | 694.44    | 694.44    | 694.44    |
| 固定资产周转率            | 5.28   | 4.35   | 3.42   | 3.32   | 无形资产               | 219.09   | 199.09    | 179.09    | 159.09    |
|                    |        |        |        |        | 非流动资产合计            | 3,279.94 | 4,994.46  | 6,936.38  | 8,108.79  |
|                    |        |        |        |        | <b>资产总计</b>        | 7,410.20 | 9,142.48  | 11,548.29 | 14,651.58 |
| <b>现金流量表 (百万元)</b> | 2021A  | 2022E  | 2023E  | 2024E  | 短期借款               | 1,851.18 | 2,551.18  | 2,943.83  | 3,282.97  |
| 净利润                | 493    | 976    | 1,217  | 1,809  | 应付票据及应付账款          | 942.35   | 1,047.98  | 1,196.88  | 1,123.83  |
| 少数股东损益             | 25     | 304    | 379    | 563    | 预收账款               | 0.00     | 9.86      | 6.54      | 9.77      |
| 非现金支出              | 240    | 288    | 367    | 348    | 其它流动负债             | 22.11    | 22.11     | 22.11     | 22.11     |
| 非经营收益              | 84     | -98    | -132   | -194   | 流动负债合计             | 3,010.75 | 3,126.20  | 3,941.56  | 4,673.08  |
| 营运资金变动             | -785   | -920   | -2,194 | 304    | 长期借款               | 240.29   | 642.52    | 637.52    | 637.52    |
| <b>经营活动现金流</b>     | 57     | 549    | -364   | 2,830  | 其它长期负债             | 30.34    | 30.34     | 30.34     | 30.34     |
| 资产                 | -834   | -1,631 | -1,778 | -821   | 非流动负债合计            | 414.00   | 816.23    | 811.23    | 811.23    |
| 投资                 | -62    | -150   | -235   | -320   | <b>负债总计</b>        | 3,424.75 | 3,942.44  | 4,752.79  | 5,484.31  |
| 其他                 | 1      | -9     | -16    | -22    | 实收资本               | 646.42   | 646.42    | 646.42    | 646.42    |
| <b>投资活动现金流</b>     | -896   | -1,790 | -2,029 | -1,163 | 归属于母公司所有者权益        | 3,388.19 | 4,299.22  | 5,516.08  | 7,325.03  |
| 债权募资               | 315    | 1,102  | 388    | 339    | 少数股东权益             | 597.26   | 900.82    | 1,279.42  | 1,842.24  |
| 股权募资               | 660    | 0      | 0      | 0      | <b>负债和所有者权益合计</b>  | 7,410.20 | 9,142.48  | 11,548.29 | 14,651.58 |
| 其他                 | -148   | -179   | -147   | -163   |                    |          |           |           |           |
| <b>融资活动现金流</b>     | 827    | 923    | 240    | 177    |                    |          |           |           |           |
| <b>现金净流量</b>       | -17    | -317   | -2,153 | 1,843  |                    |          |           |           |           |

备注: (1) 表中计算估值指标的收盘价日期为 1 月 30 日; (2) 以上各表均为简表  
资料来源: 公司年报 (2021), 海通国际

## APPENDIX 1

### Summary

The company is the global leader in the magnesium alloy industry, and its technical level and cost control are significantly better than the industry average. The company is mainly engaged in the production and sales of magnesium metal and its alloys, at present, the company has formed an annual output of 100,000 tons of raw magnesium and 200,000 tons of magnesium alloy production capacity, its primary magnesium and magnesium alloy production capacity are ranked first in the world, aluminum, strontium and other major products market share in the world, with a complete product development and manufacturing capabilities. In recent years, relying on its advantages in the field of raw materials, the group company has actively expanded to the field of downstream lightweight parts, forming a complete magnesium industry chain of "dolomite mining-raw magnesium smelting-magnesium alloy smelting-magnesium alloy processing-magnesium alloy recycling" and a characteristic product line of "high-performance aluminum alloy-aluminum extrusion processing". Products are widely used in the automotive industry, 3C electronics and aerospace and other fields.

After joining the "Baowu Department" or expanding the deep processing plate. On October 17, Yunhai Metal and Baosteel Metal signed the Share Subscription Agreement, offering 62 million shares to Baosteel Metal non-publicly, if the issuance is successful, the controlling shareholder will be Baosteel Metal, and the actual controller will be changed to the State-owned Assets Supervision and Administration Commission of the State Council. In the first three quarters of this year, the company's magnesium and aluminum deep processing sector sales growth rate is more than 50% year-on-year, after Yunhai Metal merged into Baowu series, the company will pay more attention to the incremental market in the field of deep processing, one of which is the construction field, on the other hand, the application and promotion of magnesium in automobile lightweight.

Relying on the goal of lightweight development, the company's production capacity has accelerated expansion. As a leading enterprise in the magnesium industry, Yunhai Metal currently has a magnesium alloy production capacity of 200,000 tons, with a market share of about 35%, and a raw magnesium production capacity of 100,000 tons, with a market share of about 10%, ranking first in the world. In order to meet the development needs of lightweight and intelligent manufacturing, there are four main raw magnesium smelting projects, one is the 300,000-ton high-performance magnesium-based light alloy and 150,000-ton magnesium alloy die-casting project jointly invested with Baosteel Metal and Qingyang; Chaohu Yunhai 50,000 tons of raw magnesium smelting expansion project; In Wutai, Shanxi, an annual output of 100,000 tons of high-performance magnesium-based light alloy and 50,000 tons of magnesium alloy deep processing project was built; Nanjing Yunhai 30,000 tons magnesium alloy die-casting project.

Invested in the construction of magnesium aluminum alloy innovation research and development center project, and there is research on magnesium hydrogen storage batteries. Magnesium-based hydrogen storage materials can realize large-capacity solid hydrogen storage and long-distance transportation at room temperature and pressure. It can not only reduce the storage and transportation cost and energy consumption of hydrogen, but also be safe and convenient, and is expected to become an important key material in the field of hydrogen storage and transportation. At present, the company is in the research and development stage, and carries out magnesium-based hydrogen storage research with Shanghai Jiao Tong University, Chongqing University and other related technology research and development teams.

Profit forecasts and ratings. We expect the company's EPS in 2022-2023 to be 1.51 yuan, 1.88 yuan and 2.80yuan, respectively. Based on Yunhai Metal's 2023 EPS, we give a 20x PE valuation in 2023 with a target price of 37.6 yuan, and initiate with an "Outperform" rating.

Risks. Risk of fluctuations in raw material prices, management risk of subsidiaries.

## 附录 APPENDIX

### 重要信息披露

本研究报告由海通国际分销，海通国际是由海通国际研究有限公司(HTIRL)，Haitong Securities India Private Limited (HSIPL)，Haitong International Japan K.K. (HTIJKK)和海通国际证券有限公司(HTISCL)的证券研究团队所组成的全球品牌，海通国际证券集团(HTISG)各成员分别在其许可的司法管辖区内从事证券活动。

### IMPORTANT DISCLOSURES

This research report is distributed by Haitong International, a global brand name for the equity research teams of Haitong International Research Limited ("HTIRL"), Haitong Securities India Private Limited ("HSIPL"), Haitong International Japan K.K. ("HTIJKK"), Haitong International Securities Company Limited ("HTISCL"), and any other members within the Haitong International Securities Group of Companies ("HTISG"), each authorized to engage in securities activities in its respective jurisdiction.

### HTIRL 分析师认证 Analyst Certification:

我，Yijie Wu，在此保证 (i) 本研究报告中的意见准确反映了我们对本研究中提及的任何或所有目标公司或上市公司的个人观点，并且 (ii) 我的报酬中没有任何部分与本研究报告中表达的具体建议或观点直接或间接相关；及就此报告中所讨论目标公司的证券，我们（包括我们的家属）在其中均不持有任何财务利益。I, Yijie Wu, certify that (i) the views expressed in this research report accurately reflect my personal views about any or all of the subject companies or issuers referred to in this research and (ii) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report; and that I (including members of my household) have no financial interest in the security or securities of the subject companies discussed.

### 利益冲突披露 Conflict of Interest Disclosures

海通国际及其某些关联公司可从事投资银行业务和/或对本研究中的特定股票或公司进行做市或持有自营头寸。就本研究报告而言，以下是有关该等关系的披露事项（以下披露不能保证及时无遗漏，如需了解及时全面信息，请发邮件至 [ERD-Disclosure@htisec.com](mailto:ERD-Disclosure@htisec.com)）

HTI and some of its affiliates may engage in investment banking and / or serve as a market maker or hold proprietary trading positions of certain stocks or companies in this research report. As far as this research report is concerned, the following are the disclosure matters related to such relationship (As the following disclosure does not ensure timeliness and completeness, please send an email to [ERD-Disclosure@htisec.com](mailto:ERD-Disclosure@htisec.com) if timely and comprehensive information is needed).

海通证券股份有限公司和/或其子公司（统称“海通”）在过去 12 个月内参与了 600114.CH 的投资银行项目。投资银行项目包括：1、海通担任上市前辅导机构、保荐人或主承销商的首次公开发行项目；2、海通作为保荐人、主承销商或财务顾问的股权或债务再融资项目；3、海通作为主经纪商的新三板上市、目标配售和并购项目。

Haitong Securities Co., Ltd. and/or its subsidiaries (collectively, the "Haitong") have a role in investment banking projects of 600114.CH within the past 12 months. The investment banking projects include 1. IPO projects in which Haitong acted as pre-listing tutor, sponsor, or lead-underwriter; 2. equity or debt refinancing projects of 600114.CH for which Haitong acted as sponsor, lead-underwriter or financial advisor; 3. listing by introduction in the new three board, target placement, M&A projects in which Haitong acted as lead-brokerage firm.

600114.CH 目前或过去 12 个月内是海通的投资银行业务客户。

600114.CH is/was an investment bank clients of Haitong currently or within the past 12 months.

### 评级定义（从 2020 年 7 月 1 日开始执行）：

海通国际（以下简称“HTI”）采用相对评级系统来为投资者推荐我们覆盖的公司：优于大市、中性或弱于大市。投资者应仔细阅读 HTI 的评级定义。并且 HTI 发布分析师观点的完整信息，投资者应仔细阅读全文而非仅看评级。在任何情况下，分析师的评级和研究都不能作为投资建议。投资者的买卖股票的决策应基于各自情况（比如投资者的现有持仓）以及其他因素。

### 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

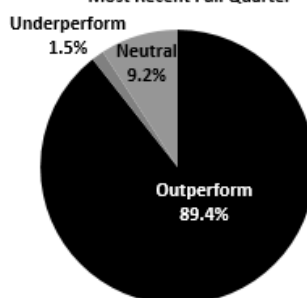
各地股票基准指数：日本 - TOPIX，韩国 - KOSPI，台湾 - TAIEX，印度 - Nifty100，美国 - SP500；其他所有中国概念股 - MSCI China.

### Ratings Definitions (from 1 Jul 2020):

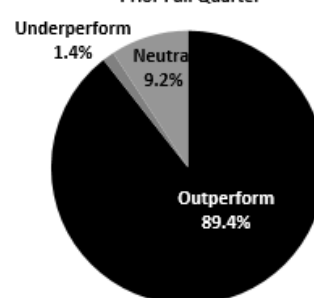
Haitong International uses a relative rating system using Outperform, Neutral, or Underperform for recommending the stocks we cover to investors. Investors should carefully read the definitions of all ratings used in Haitong International Research. In addition, since Haitong International Research contains more complete information concerning the analyst's views, investors should carefully read Haitong International Research, in its entirety, and not infer the contents from the rating alone. In any case,

### 评级分布 Rating Distribution

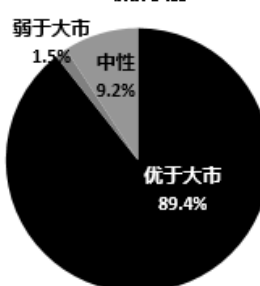
Most Recent Full Quarter



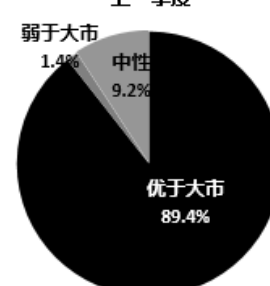
Prior Full Quarter



最新季度



上一季度



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.

#### 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.**

#### 截至 2022 年 12 月 31 日海通国际股票研究评级分布

|             | 优于大市  | 中性<br>(持有) | 弱于大市 |
|-------------|-------|------------|------|
| 海通国际股票研究覆盖率 | 89.4% | 9.2%       | 1.5% |
| 投资银行客户*     | 5.2%  | 7.3%       | 8.3% |

\*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 Dec 31, 2022

|                              | Outperform | Neutral<br>(hold) | Underperform |
|------------------------------|------------|-------------------|--------------|
| HTI Equity Research Coverage | 89.4%      | 9.2%              | 1.5%         |
| IB clients*                  | 5.2%       | 7.3%              | 8.3%         |

\*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.**

**海通国际非评级研究：**海通国际发布计量、筛选或短篇报告，并在报告中根据估值和其他指标对股票进行排名，或者基于可能的估值倍数提出建议价格。这种排名或建议价格并非为了进行股票评级、提出目标价格或进行基本面估值，而仅供参考使用。

**Haitong International Non-Rated Research:** Haitong International publishes quantitative, screening or short reports which may rank stocks according to valuation and other metrics or may suggest prices based on possible valuation multiples. Such rankings or suggested prices do not purport to be stock ratings or target prices or fundamental values and are for information only.

**海通国际 A 股覆盖：**海通国际可能会就沪港通及深港通的中国 A 股进行覆盖及评级。海通证券（600837.CH），海通国际于上海的母公司，也会于中国发布中国 A 股的研究报告。但是，海通国际使用与海通证券不同的评级系统，所以海通国际与海通证券的中国 A 股评级可能有所不同。

**Haitong International Coverage of A-Shares:** Haitong International may cover and rate A-Shares that are subject to the Hong Kong Stock Connect scheme with Shanghai and Shenzhen. Haitong



Securities (HS; 600837 CH), the ultimate parent company of HTISG based in Shanghai, covers and publishes research on these same A-Shares for distribution in mainland China. However, the rating system employed by HS differs from that used by HTI and as a result there may be a difference in the HTI and HS ratings for the same A-share stocks.

**海通国际优质 100 A 股 (Q100) 指数:** 海通国际 Q100 指数是一个包括 100 支由海通证券覆盖的优质中国 A 股的计量产品。这些股票是通过基于质量的筛选过程,并结合对海通证券 A 股团队自下而上的研究。海通国际每季对 Q100 指数成分作出复审。

**Haitong International Quality 100 A-share (Q100) Index:** HTI's Q100 Index is a quant product that consists of 100 of the highest-quality A-shares under coverage at HS in Shanghai. These stocks are carefully selected through a quality-based screening process in combination with a review of the HS A-share team's bottom-up research. The Q100 constituent companies are reviewed quarterly.

**MSCI ESG 评级免责声明条款:** 尽管海通国际的信息供货商 (包括但不限于 MSCI ESG Research LLC 及其附属公司 (「ESG 方」)) 从其认为可靠的来源获取信息 (「信息」), ESG 方均不担保或保证此处任何数据的原创性、准确性和/或完整性,并明确表示不作出任何明示或默示的担保,包括可商售性和针对特定目的的适用性。该信息只能供阁下内部使用,不得以任何形式复制或重新传播,并不得用作任何金融工具、产品或指数的基础或组成部分。此外,信息本质上不能用于判断购买或出售何种证券,或何时购买或出售该证券。即使已被告知可能造成的损害,ESG 方均不承担与此处任何资料有关的任何错误或遗漏所引起的任何责任,也不对任何直接、间接、特殊、惩罚性、附带性或任何其他损害赔偿 (包括利润损失) 承担任何责任。

**MSCI ESG Disclaimer:** Although Haitong International's information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, none of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

**盟浪义利 (FIN-ESG) 数据通免责声明条款:** 在使用盟浪义利 (FIN-ESG) 数据之前,请务必仔细阅读本条款并同意本声明:

**第一条 义利 (FIN-ESG) 数据系**由盟浪可持续数字科技有限责任公司 (以下简称“本公司”) 基于合法取得的公开信息评估而成,本公司对信息的准确性及完整性不作任何保证。对公司的评估结果仅供参考,并不构成对任何个人或机构投资建议,也不能作为任何个人或机构购买、出售或持有相关金融产品的依据。本公司不对任何个人或机构投资者因使用本数据表述的评估结果造成的任何直接或间接损失负责。

**第二条 盟浪**并不因收到此评估数据而将收件人视为客户,收件人使用此数据时应根据自身实际情况作出自我独立判断。本数据所载内容反映的是盟浪在最初发布本数据日期当日的判断,盟浪有权在不发出通知的情况下更新、修订与发出其他与本数据所载内容不一致或有不同结论的数据。除非另行说明,本数据 (如财务业绩数据等) 仅代表过往表现,过往的业绩表现不作为日后回报的预测。

**第三条 本数据**版权归本公司所有,本公司依法保留各项权利。未经本公司事先书面许可授权,任何个人或机构不得将本数据中的评估结果用于任何营利性目的,不得对本数据进行修改、复制、编译、汇编、再次编辑、改编、删减、缩写、节选、发行、出租、展览、表演、放映、广播、信息网络传播、摄制、增加图标及说明等,否则因此给盟浪或其他第三方造成损失的,由用户承担相应的赔偿责任,盟浪不承担责任。

**第四条 如**本免责声明未约定,而盟浪网站平台载明的其他协议内容 (如《盟浪网站用户注册协议》《盟浪网用户服务 (含认证) 协议》《盟浪网隐私政策》等) 有约定的,则按其他协议的约定执行;若本免责声明与其他协议约定存在冲突或不一致的,则以本免责声明约定为准。

**SusallWave FIN-ESG Data Service Disclaimer:** Please read these terms and conditions below carefully and confirm your agreement and acceptance with these terms before using SusallWave FIN-ESG Data Service.

1. FIN-ESG Data is produced by SusallWave Digital Technology Co., Ltd. (In short, SusallWave)'s assessment based on legal publicly accessible information. SusallWave shall not be responsible for any accuracy and completeness of the information. The assessment result is for reference only. It is not for any investment advice for any individual or institution and not for basis of purchasing, selling or holding any relative financial products. We will not be liable for any direct or indirect loss of any individual or institution as a result of using SusallWave FIN-ESG Data.

2. SusallWave do not consider recipients as customers for receiving these data. When using the data, recipients shall make your own independent judgment according to your practical individual status. The contents of the data reflect the judgment of us only on the release day. We have right to update and amend the data and release other data that contains inconsistent contents or different conclusions without notification. Unless expressly stated, the data (e.g., financial performance data) represents past performance only and the past performance cannot be viewed as the prediction of future return.

3. The copyright of this data belongs to SusallWave, and we reserve all rights in accordance with the law. Without the prior written permission of our company, none of individual or institution can use these data for any profitable purpose. Besides, none of individual or institution can take actions such as amendment, replication, translation, compilation, re-editing, adaption, deletion, abbreviation, excerpts, issuance, rent, exhibition, performance, projection, broadcast, information network transmission, shooting, adding icons and instructions. If any loss of SusallWave or any third-party is caused by those actions, users shall bear the corresponding compensation liability. SusallWave shall not be responsible for any loss.

4. If any term is not contained in this disclaimer but written in other agreements on our website (e.g. *User Registration Protocol of SusallWave Website*, *User Service (including authentication) Agreement of SusallWave Website*, *Privacy Policy of Susallwave Website*), it should be executed according to other agreements. If there is any difference between this disclaimer and other agreements, this disclaimer shall be applied.

## 重要免责声明:

**非印度证券的研究报告:** 本报告由海通国际证券集团有限公司 (“HTISGL”) 的全资附属公司海通国际研究有限公司 (“HTIRL”) 发行,该公司是根据香港证券及期货条例 (第 571 章) 持有第 4 类受规管活动 (就证券提供意见) 的持牌法团。该研究报告在 HTISGL 的全资附属公司 Haitong International (Japan) K.K. (“HTIJKK”) 的协助下发行,HTIJKK 是由日本关东财务局监管为投资顾问。

**印度证券的研究报告:** 本报告由从事证券交易、投资银行及证券分析及受 Securities and Exchange Board of India (“SEBI”) 监管的 Haitong Securities India Private Limited (“HTSIPL”) 所发行, 包括制作及发布涵盖 BSE Limited (“BSE”) 和 National Stock Exchange of India Limited (“NSE”) 上市公司 (统称为「印度交易所」) 的研究报告。HTSIPL 于 2016 年 12 月 22 日被收购并成为海通国际证券集团有限公司 (“HTISG”) 的一部分。

所有研究报告均以海通国际为名作为全球品牌, 经许可由海通国际证券股份有限公司及/或海通国际证券集团的其他成员在其司法管辖区发布。

本文件所载信息和观点已被编译或源自可靠来源, 但 HTIRL、HTISCL 或任何其他属于海通国际证券集团有限公司 (“HTISG”) 的成员对其准确性、完整性和正确性不做任何明示或暗示的声明或保证。本文件中所有观点均截至本报告日期, 如有更改, 恕不另行通知。本文件仅供参考使用。文件中提及的任何公司或其股票的说明并非意图展示完整的内容, 本文件并非/不应被解释为对证券买卖的明示或暗示地出价或征价。在某些司法管辖区, 本文件中提及的证券可能无法进行买卖。如果投资产品以投资者本国货币以外的币种进行计价, 则汇率变化可能会对投资产生不利影响。过去的表现并不一定代表将来的结果。某些特定交易, 包括设计金融衍生工具的, 有产生重大风险的可能性, 因此并不适合所有的投资者。您还应认识到本文件中的建议并非为您量身定制。分析师并未考虑到您自身的财务情况, 如您的财务状况和风险偏好。因此您必须自行分析并在适用的情况下咨询自己的法律、税收、会计、金融和其他方面的专业顾问, 以期在投资之前评估该项建议是否适合于您。若由于使用本文件所载的材料而产生任何直接或间接的损失, HTISG 及其董事、雇员或代理人对此均不承担任何责任。

除对本文内容承担责任的分析师外, HTISG 及我们的关联公司、高级管理人员、董事和雇员, 均可不时作为主事人就本文件所述的任何证券或衍生品持有长仓或短仓以及进行买卖。HTISG 的销售员、交易员和其他专业人士均可向 HTISG 的相关客户和公司提供与本文件所述意见相反的口头或书面市场评论意见或交易策略。HTISG 可做出与本文件所述建议或意见不一致的投资决策。但 HTIRL 没有义务来确保本文件的收件人了解到该等交易决定、思路或建议。

请访问海通国际网站 [www.equities.htisec.com](http://www.equities.htisec.com), 查阅更多有关海通国际为预防和避免利益冲突设立的组织和行政安排的内容信息。

**非美国分析师披露信息:** 本项研究首页上列明的海通国际分析师并未在 FINRA 进行注册或者取得相应的资格, 并且不受美国 FINRA 有关与本项研究目标公司进行沟通、公开露面和自营证券交易的第 2241 条规则之限制。

#### IMPORTANT DISCLAIMER

**For research reports on non-Indian securities:** The research report is issued by Haitong International Research Limited (“HTIRL”), a wholly owned subsidiary of Haitong International Securities Group Limited (“HTISGL”) and a licensed corporation to carry on Type 4 regulated activity (advising on securities) for the purpose of the Securities and Futures Ordinance (Cap. 571) of Hong Kong, with the assistance of Haitong International (Japan) K.K. (“HTIJKK”), a wholly owned subsidiary of HTISGL and which is regulated as an Investment Adviser by the Kanto Finance Bureau of Japan.

**For research reports on Indian securities:** The research report is issued by Haitong Securities India Private Limited (“HSIPL”), an Indian company and a Securities and Exchange Board of India (“SEBI”) registered Stock Broker, Merchant Banker and Research Analyst that, inter alia, produces and distributes research reports covering listed entities on the BSE Limited (“BSE”) and the National Stock Exchange of India Limited (“NSE”) (collectively referred to as “Indian Exchanges”). HSIPL was acquired and became part of the Haitong International Securities Group of Companies (“HTISG”) on 22 December 2016.

All the research reports are globally branded under the name Haitong International and approved for distribution by Haitong International Securities Company Limited (“HTISCL”) and/or any other members within HTISG in their respective jurisdictions.

The information and opinions contained in this research report have been compiled or arrived at from sources believed to be reliable and in good faith but no representation or warranty, express or implied, is made by HTIRL, HTISCL, HSIPL, HTIJKK or any other members within HTISG from which this research report may be received, as to their accuracy, completeness or correctness. All opinions expressed herein are as of the date of this research report and are subject to change without notice. This research report is for information purpose only. Descriptions of any companies or their securities mentioned herein are not intended to be complete and this research report is not, and should not be construed expressly or impliedly as, an offer to buy or sell securities. The securities referred to in this research report may not be eligible for purchase or sale in some jurisdictions. If an investment product is denominated in a currency other than an investor's home currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Certain transactions, including those involving derivatives, give rise to substantial risk and are not suitable for all investors. You should also bear in mind that recommendations in this research report are not tailor-made for you. The analyst has not taken into account your unique financial circumstances, such as your financial situation and risk appetite. You must, therefore, analyze and should, where applicable, consult your own legal, tax, accounting, financial and other professional advisers to evaluate whether the recommendations suits you before investment. Neither HTISG nor any of its directors, employees or agents accepts any liability whatsoever for any direct or consequential loss arising from any use of the materials contained in this research report.

HTISG and our affiliates, officers, directors, and employees, excluding the analysts responsible for the content of this document, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research report. Sales, traders, and other professionals of HTISG may provide oral or written market commentary or trading strategies to the relevant clients and the companies within HTISG that reflect opinions that are contrary to the opinions expressed in this research report. HTISG may make investment decisions that are inconsistent with the recommendations or views expressed in this research report. HTI is under no obligation to ensure that such other trading decisions, ideas or recommendations are brought to the attention of any recipient of this research report.

Please refer to HTI's website [www.equities.htisec.com](http://www.equities.htisec.com) for further information on HTI's organizational and administrative arrangements set up for the prevention and avoidance of conflicts of interest with respect to Research.

**Non U.S. Analyst Disclosure:** The HTI analyst(s) listed on the cover of this Research is (are) not registered or qualified as a research analyst with FINRA and are not subject to U.S. FINRA Rule 2241 restrictions on communications with companies that are the subject of the Research; public appearances; and trading securities by a research analyst.

#### 分发和地区通知:

除非下文另有规定, 否则任何希望讨论本报告或者就本项研究中讨论的任何证券进行任何交易的收件人均应联系其所在国家或地区的海通国际销售人员。

**香港投资者的通知事项:** 海通国际证券股份有限公司 (“HTISCL”) 负责分发该研究报告, HTISCL 是在香港有权实施第 1 类受规管活动 (从事证券交易) 的持牌公司。该研究报告并不构成《证券及期货条例》(香港法例第 571 章) (以下简称“SFO”) 所界定的要约邀请, 证券要约或公众要约。本研究报告仅提供给 SFO 所界定的“专业投资者”。本研究报告未经过证券及期货事务监察委员会的审查。您不应仅根据本研究报告中所载的信息做出投资决定。本研究报告的收件人就研究报告中产生或与之相关的任何事宜请联系 HTISCL 销售人员。

**美国投资者的通知事项:** 本研究报告由 HTIRL, HSIPL 或 HTIJKK 编写。HTIRL, HSIPL, HTIJKK 以及任何非 HTISG 美国联营公司, 均未在美国注册, 因此不受美国关于研究报告编制和研



究分析人员独立性规定的约束。本研究报告提供给依照 1934 年“美国证券交易法”第 15a-6 条规定的豁免注册的「美国主要机构投资者」（“Major U.S. Institutional Investor”）和「机构投资者」（“U.S. Institutional Investors”）。在向美国机构投资者分发研究报告时，Haitong International Securities (USA) Inc.（“HTI USA”）将对报告的内容负责。任何收到本研究报告的美国投资者，希望根据本研究报告提供的信息进行任何证券或相关金融工具买卖的交易，只能通过 HTI USA。HTI USA 位于 340 Madison Avenue, 12th Floor, New York, NY 10173，电话（212）351-6050。HTI USA 是在美国于 U.S. Securities and Exchange Commission（“SEC”）注册的经纪商，也是 Financial Industry Regulatory Authority, Inc.（“FINRA”）的成员。HTIUSA 不负责编写本研究报告，也不负责其中包含的分析。在任何情况下，收到本研究报告的任何美国投资者，不得直接与分析师直接联系，也不得通过 HSIPL, HTIRL 或 HTIJKK 直接进行买卖证券或相关金融工具的交易。本研究报告中出现的 HSIPL, HTIRL 或 HTIJKK 分析师没有注册或具备 FINRA 的研究分析师资格，因此可能不受 FINRA 第 2241 条规定的与目标公司的交流，公开露面和分析师账户持有的交易证券等限制。投资本研究报告中讨论的任何非美国证券或相关金融工具（包括 ADR）可能存在一定风险。非美国发行的证券可能没有注册，或不受美国法规的约束。有关非美国证券或相关金融工具的信息可能有限。外国公司可能不受审计和汇报的标准以及与美国境内生效相符的监管要求。本研究报告中以美元以外的其他货币计价的任何证券或相关金融工具的投资或收益的价值受汇率波动的影响，可能对该等证券或相关金融工具的价值或收入产生正面或负面影响。美国收件人的所有问询请联系：

Haitong International Securities (USA) Inc.  
340 Madison Avenue, 12th Floor  
New York, NY 10173  
联系人电话：(212) 351 6050

#### DISTRIBUTION AND REGIONAL NOTICES

Except as otherwise indicated below, any Recipient wishing to discuss this research report or effect any transaction in any security discussed in HTI's research should contact the Haitong International salesperson in their own country or region.

**Notice to Hong Kong investors:** The research report is distributed by Haitong International Securities Company Limited (“HTISCL”), which is a licensed corporation to carry on Type 1 regulated activity (dealing in securities) in Hong Kong. This research report does not constitute a solicitation or an offer of securities or an invitation to the public within the meaning of the SFO. This research report is only to be circulated to “Professional Investors” as defined in the SFO. This research report has not been reviewed by the Securities and Futures Commission. You should not make investment decisions solely on the basis of the information contained in this research report. Recipients of this research report are to contact HTISCL salespersons in respect of any matters arising from, or in connection with, the research report.

**Notice to U.S. investors:** As described above, this research report was prepared by HTIRL, HSIPL or HTIJKK. Neither HTIRL, HSIPL, HTIJKK, nor any of the non U.S. HTISG affiliates is registered in the United States and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This research report is provided for distribution to “major U.S. institutional investors” and “U.S. institutional investors” in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended. When distributing research reports to “U.S. institutional investors,” HTI USA will accept the responsibilities for the content of the reports. Any U.S. recipient of this research report wishing to effect any transaction to buy or sell securities or related financial instruments based on the information provided in this research report should do so only through Haitong International Securities (USA) Inc. (“HTI USA”), located at 340 Madison Avenue, 12th Floor, New York, NY 10173, USA; telephone (212) 351 6050. HTI USA is a broker-dealer registered in the U.S. with the U.S. Securities and Exchange Commission (the “SEC”) and a member of the Financial Industry Regulatory Authority, Inc. (“FINRA”). HTI USA is not responsible for the preparation of this research report nor for the analysis contained therein. Under no circumstances should any U.S. recipient of this research report contact the analyst directly or effect any transaction to buy or sell securities or related financial instruments directly through HSIPL, HTIRL or HTIJKK. The HSIPL, HTIRL or HTIJKK analyst(s) whose name appears in this research report is not registered or qualified as a research analyst with FINRA and, therefore, may not be subject to FINRA Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. Investing in any non-U.S. securities or related financial instruments (including ADRs) discussed in this research report may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to U.S. regulations. Information on such non-U.S. securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect within the U.S. The value of any investment or income from any securities or related financial instruments discussed in this research report denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related financial instruments. All inquiries by U.S. recipients should be directed to:

Haitong International Securities (USA) Inc.  
340 Madison Avenue, 12<sup>th</sup> Floor  
New York, NY 10173  
Attn: Sales Desk at (212) 351 6050

**中华人民共和国的通知事项：**在中华人民共和国（下称“中国”，就本报告目的而言，不包括香港特别行政区、澳门特别行政区和台湾）只有根据适用的中国法律法规而收到该材料的人员方可使用该材料。并且根据相关法律法规，该材料中的信息并不构成“在中国从事生产、经营活动”。本文件在中国并不构成相关证券的公共发售或认购。无论根据法律规定或其他任何规定，在取得中国政府所有的批准或许可之前，任何法人或自然人均不得直接或间接地购买本材料中的任何证券或任何实益权益。接收本文件的人员须遵守上述限制性规定。

**加拿大投资者的通知事项：**在任何情况下该等材料均不得被解释为在任何加拿大的司法管辖区内出售证券的要约或认购证券的要约邀请。本材料中所述证券在加拿大的任何要约或出售行为均只能在豁免向有关加拿大证券监管机构提交招股说明书的前提下由 Haitong International Securities (USA) Inc.（“HTI USA”）予以实施，该公司是一家根据 National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations（“NI 31-103”）的规定得到「国际交易商豁免」（“International Dealer Exemption”）的交易商，位于艾伯塔省、不列颠哥伦比亚省、安大略省和魁北克省。在加拿大，该等材料在任何情况下均不得被解释为任何证券的招股说明书、发行备忘录、广告或公开发行。加拿大的任何证券委员会或类似的监管机构均未审查或以任何方式批准该等材料、其中所载的信息或所述证券的优点，任何与此相反的声明即属违法。在收到该等材料时，每个加拿大的收件人均将被视为属于 National Instrument 45-106 Prospectus Exemptions 第 1.1 节或者 Securities Act (Ontario) 第 73.3(1) 节所规定的「认可投资者」（“Accredited Investor”），或者在适用情况下 National Instrument 31-103 第 1.1 节所规定的「许可投资者」（“Permitted Investor”）。

**新加坡投资者的通知事项：**本研究报告由 Haitong International Securities (Singapore) Pte Ltd（“HTISSPL”）[公司注册编号 201311400G] 于新加坡提供。HTISSPL 是符合《财务顾问法》（第 110 章）（“FAA”）定义的豁免财务顾问，可（a）提供关于证券，集体投资计划的部分，交易所衍生品合约和场外衍生品合约的建议（b）发行或公布有关证券、交易所衍生品合约和场外衍生品合约的研究分析或研究报告。本研究报告仅提供给符合《证券及期货法》（第 289 章）第 4A 条项下规定的机构投资者。对于因本研究报告而产生的或与之相关的任何问

题, 本研究报告的收件人应通过以下信息与 HTISSPL 联系:

Haitong International Securities (Singapore) Pte. Ltd

50 Raffles Place, #33-03 Singapore Land Tower, Singapore 048623

电话: (65) 6536 1920

**日本投资者的通知事项:** 本研究报告由海通国际证券有限公司所发布, 旨在分发给从事投资管理的金融服务提供商或注册金融机构 (根据日本金融机构和交易法 (“FIEL”) ) 第 61 (1) 条, 第 17-11 (1) 条的执行及相关条款)。

**英国及欧盟投资者的通知事项:** 本报告由从事投资顾问的 Haitong International Securities Company Limited 所发布, 本报告只面向有投资相关经验的专业客户发布。任何投资或与本报告相关的投资行为只面对此类专业客户。没有投资经验或相关投资经验的客户不得依赖本报告。Haitong International Securities Company Limited 的分支机构的净长期或短期金融权益可能超过本研究报告中提及的实体已发行股本总额的 0.5%。特别提醒有些英文报告有可能此前已经通过中文或其它语言完成发布。

**澳大利亚投资者的通知事项:** Haitong International Securities (Singapore) Pte Ltd, Haitong International Securities Company Limited 和 Haitong International Securities (UK) Limited 分别根据澳大利亚证券和投资委员会 (以下简称“ASIC”) 公司 (废除及过度性) 文书第 2016/396 号规章在澳大利亚分发本项研究, 该等规章免除了根据 2001 年《公司法》在澳大利亚为批发客户提供金融服务时海通国际需持有澳大利亚金融服务许可的要求。ASIC 的规章副本可在以下网站获取: [www.legislation.gov.au](http://www.legislation.gov.au)。海通国际提供的金融服务受外国法律法规规定的管制, 该等法律与在澳大利亚所适用的法律存在差异。

**印度投资者的通知事项:** 本报告由从事证券交易、投资银行及证券分析及受 Securities and Exchange Board of India (“SEBI”) 监管的 Haitong Securities India Private Limited (“HTSIPL”) 所发布, 包括制作及发布涵盖 BSE Limited (“BSE”) 和 National Stock Exchange of India Limited (“NSE”) (统称为「印度交易所」) 研究报告。

本项研究仅供收件人使用, 未经海通国际的书面同意不得予以复制和再次分发。

版权所有: 海通国际证券集团有限公司 2019 年。保留所有权利。

**People's Republic of China (PRC):** In the PRC, the research report is directed for the sole use of those who receive the research report in accordance with the applicable PRC laws and regulations. Further, the information on the research report does not constitute “production and business activities in the PRC” under relevant PRC laws. This research report does not constitute a public offer of the security, whether by sale or subscription, in the PRC. Further, no legal or natural persons of the PRC may directly or indirectly purchase any of the security or any beneficial interest therein without obtaining all prior PRC government approvals or licenses that are required, whether statutorily or otherwise. Persons who come into possession of this research are required to observe these restrictions.

**Notice to Canadian Investors:** Under no circumstances is this research report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by Haitong International Securities (USA) Inc., a dealer relying on the “international dealer exemption” under National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations (“NI 31-103”) in Alberta, British Columbia, Ontario and Quebec. This research report is not, and under no circumstances should be construed as, a prospectus, an offering memorandum, an advertisement or a public offering of any securities in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon this research report, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. Upon receipt of this research report, each Canadian recipient will be deemed to have represented that the investor is an “accredited investor” as such term is defined in section 1.1 of National Instrument 45-106 Prospectus Exemptions or, in Ontario, in section 73.3(1) of the Securities Act (Ontario), as applicable, and a “permitted client” as such term is defined in section 1.1 of NI 31-103, respectively.

**Notice to Singapore investors:** This research report is provided in Singapore by or through Haitong International Securities (Singapore) Pte Ltd (“HTISSPL”) [Co Reg No 201311400G. HTISSPL is an Exempt Financial Adviser under the Financial Advisers Act (Cap. 110) (“FAA”) to (a) advise on securities, units in a collective investment scheme, exchange-traded derivatives contracts and over-the-counter derivatives contracts and (b) issue or promulgate research analyses or research reports on securities, exchange-traded derivatives contracts and over-the-counter derivatives contracts. This research report is only provided to institutional investors, within the meaning of Section 4A of the Securities and Futures Act (Cap. 289). Recipients of this research report are to contact HTISSPL via the details below in respect of any matters arising from, or in connection with, the research report:

Haitong International Securities (Singapore) Pte. Ltd.

10 Collyer Quay, #19-01 - #19-05 Ocean Financial Centre, Singapore 049315

Telephone: (65) 6536 1920

**Notice to Japanese investors:** This research report is distributed by Haitong International Securities Company Limited and intended to be distributed to Financial Services Providers or Registered Financial Institutions engaged in investment management (as defined in the Japan Financial Instruments and Exchange Act (“FIEL”) Art. 61(1), Order for Enforcement of FIEL Art. 17-11(1), and related articles).

**Notice to UK and European Union investors:** This research report is distributed by Haitong International Securities Company Limited. This research is directed at persons having professional experience in matters relating to investments. Any investment or investment activity to which this research relates is available only to such persons or will be engaged in only with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this research. Haitong International Securities Company Limited’s affiliates may have a net long or short financial interest in excess of 0.5% of the total issued share capital of the entities mentioned in this research report. Please be aware that any report in English may have been published previously in Chinese or another language.

**Notice to Australian investors:** The research report is distributed in Australia by Haitong International Securities (Singapore) Pte Ltd, Haitong International Securities Company Limited, and Haitong International Securities (UK) Limited in reliance on ASIC Corporations (Repeal and Transitional) Instrument 2016/396, which exempts those HTISG entities from the requirement to hold an Australian financial services license under the Corporations Act 2001 in respect of the financial services it provides to wholesale clients in Australia. A copy of the ASIC Class Orders may be obtained at the following website, [www.legislation.gov.au](http://www.legislation.gov.au). Financial services provided by Haitong International Securities (Singapore) Pte Ltd, Haitong International Securities Company Limited, and Haitong International Securities (UK) Limited are regulated under foreign laws and regulatory requirements, which are different from the laws applying in Australia.

---

**Notice to Indian investors:** The research report is distributed by Haitong Securities India Private Limited (“HSIPL”), an Indian company and a Securities and Exchange Board of India (“SEBI”) registered Stock Broker, Merchant Banker and Research Analyst that, inter alia, produces and distributes research reports covering listed entities on the BSE Limited (“BSE”) and the National Stock Exchange of India Limited (“NSE”) (collectively referred to as “Indian Exchanges”).

This research report is intended for the recipients only and may not be reproduced or redistributed without the written consent of an authorized signatory of HTISG.

Copyright: Haitong International Securities Group Limited 2019. All rights reserved.

<http://equities.htisec.com/x/legal.html>

---