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## 库存周期的位置及行业差异

### 投资要点:

- **核心结论:** ①2000年以来我国经历了六轮完整库存周期,平均时长约40个月,收入增速拐点领先库存拐点约半年。②本轮库存周期持续时间已超过均值,稳增长政策落地+价格周期性修复有望推动库存周期在Q2-Q3见底回升。③各行业库存位置不同,中下游比上游更早进入补库,如中游机械设备、电子等,下游纺服、食饮等。
- **复盘:库存周期经验规律。** 企业收入是企业最直观感受市场需求情况的晴雨表,而库存周期启动往往由收入企稳触发,因此库存周期一般滞后于收入周期。此外,由于供应链间存在信息传导时滞,库存周期能够通过正反馈机制和乘数效应放大经济波动,增产补库以增加产业链其他环节的产品需求,从而放大经济复苏力度。我们通常用PMI产成品和工业企业产成品存货同比分别刻画企业收入和库存变化,来划分库存周期的四个阶段:被动去库存、主动补库存、被动补库存、主动去库存。回顾2000年以来我国完整的六轮库存周期,我国库存周期均值约40个月,库存底滞后收入拐点约半年。此外,历史上库存周期见底后均较快回升,不存在长期磨底的现象,即使在需求相对温和的13年,价格周期性的调整也能在供给端推动库存见底回升。
- **本轮库存周期走到哪了?** 本轮库存周期始于19/11,库存周期或补库周期持续时间较历史均值均已偏长。当前我国或已由主动去库切入被动去库阶段,按历史收入拐点领先库存拐点的规律来看,库存有望在Q2-Q3见底。此外,从库存的绝对增速和价格水平来看,当前库存和价格水平已处历史低位。稳增长政策推动需求复苏,叠加价格周期性修复,有望加快补库开启。从需求端视角看,Q2实际GDP增速为6.3%,较23Q1的4.5%有所增长,表明当前我国经济处在温和复苏中,下半年稳增长政策发力有望推动需求进一步回暖。从供给端视角看,当前我国PPI已运行至周期底部,部分上游资源品价格也已处在历史低位,伴随上游价格周期性修复或有望推动企业补库。
- **哪些行业有望率先复苏?** 工业企业不同行业去库存表现分化,当前上游行业整体工业企业盈利仍偏弱,库存去化仍需时日;多数中下游行业已在被动去库阶段,盈利已迎来持续改善,预计有望更快开启补库。分具体产业链位置来看,多数上游行业仍在主动去化末期,从行业利润和高频数据的印证情况来看,仅化工行业中化学纤维、塑胶制品步入被动去库阶段。中游多数行业已处被动去库阶段,如机械设备行业中通用设备、专用设备、仪器仪表,以及电子制造等行业,从行业利润来看,当前多数中游设备制造、公用事业行业利润率均已明显回升。多数下游行业基本面边际改善,受益于当前我国消费基本面已在复苏中,纺服、食品饮料、汽车等行业有望率先复苏。结合行业利润增速看,需求的回暖使汽车制造、纺织服饰等部分行业已迎来基本面的修复。
- **风险提示:** 稳增长政策落地进度不及预期,国内经济修复不及预期。

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近期市场对库存周期的讨论较多，当前企业库存已下行至低位，需求拐点也已确认，未来补库开启有望加大盈利修复的高度，因此我们判断整体和分行业的库存拐点具有重要意义。本文将复盘库存周期规律，分析当前库存周期进展到哪一步了，并从中挖掘基本面有望率先复苏的行业线索。

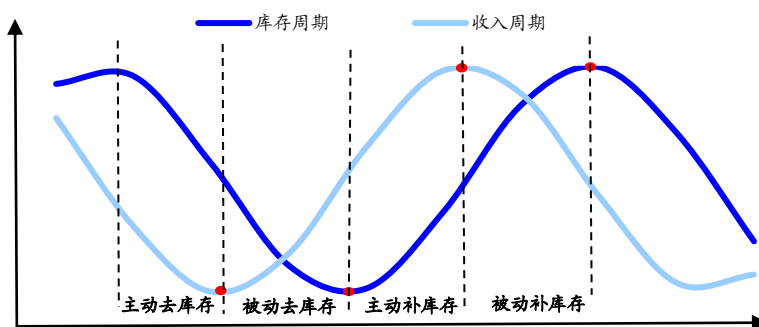
## 1. 复盘：库存周期经验规律

**库存周期启动往往由收入企稳触发，并通过正反馈机制放大周期波动。**从库存周期和经济周期的关系看，由于企业收入是企业最直观感受市场需求情况的晴雨表，企业再根据销售情况控制合意的库存比例，因此库存周期一般滞后于收入周期，收入企稳是企业开启补库的领先条件。而企业收入受价格和需求（量）两个维度影响，在经济上行期“量价齐升”催生企业累库的意愿，而在需求相对温和时主要由涨价带动企业补库行为。反过来看，由于供应链间存在信息传导时滞，库存周期也能够通过正反馈机制和乘数效应放大经济波动，带动企业增加生产补充库存，增加产业链其他环节的产品需求，从而放大经济复苏力度。

**库存周期的划分：**我们以梅茨勒库存周期理论为基础，用企业收入和库存变化划分了库存周期四个阶段：被动去库存-主动补库存-被动补库存-主动去库存。具体来看：①被动去库存：企业销售出现回升，但由于生产计划调整具有滞后性，因此在该阶段库存继续下降。②主动补库存：随着收入持续上行，企业确认了市场回暖，企业盈利预期进一步改善，产品生产加快，因此进入市场主动补库存阶段，在该阶段库存增速提高。③被动补库存：企业收入触顶后回落，但由于生产计划调整具有滞后性，产能利用率仍维持，企业库存仍在增加。④主动去库存：随着销售收入持续回落，企业进入主动去库存阶段，库存开始回落。

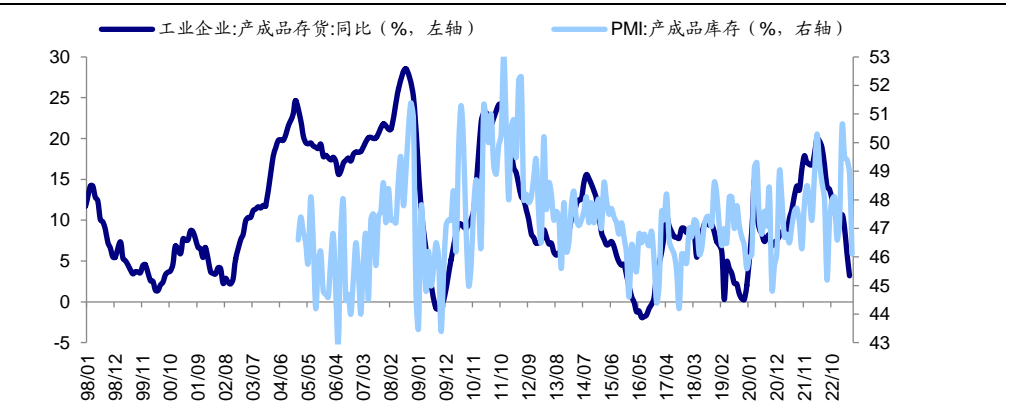
**库存周期常用刻画指标：**工业企业产成品存货同比、PMI 产成品。产成品存货是库存刻画的最常用指标，能够直观地反映工业制成品价值的变化。而 PMI 作为景气扩散指标，其走势与产成品库存同比具有一定的同步性，在中期维度可以作为库存周期定位的辅助工具。

图1 库存周期可划分为四阶段



资料来源：HTI

图2 库存周期常用刻画指标

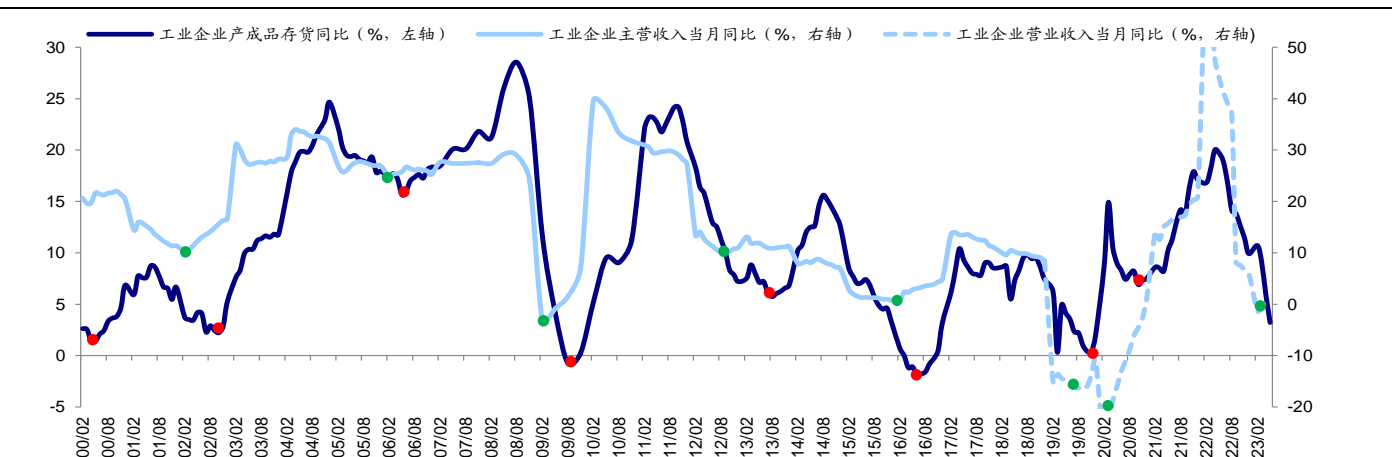


资料来源: Wind, HTI

00 年以来我国库存周期均值约 40 个月，库存底滞后收入拐点约半年。我们用工业企业营收累计同比刻画收入周期，用工业企业产成品存货同比刻画库存周期，00 年以来我国共经历完整的六轮库存周期，分别起始于 2000、2002、2006、2009、2013、2016 年，平均持续时间约 40 个月，库存去化时长在 20 个月左右，其中，主动去库存持续约 14 个月，被动去库存阶段平均持续约 6 个月，可见当收入拐点出现后，工业企业需要半年左右时间确认业绩拐点已至，并相应做出生产计划调整，此后企业库存自底部回暖。

历史上库存周期见底后均较快回升，不存在长期磨底的现象。回顾过去六轮完整库存周期，可以发现库存周期见底后均遵循周期性规律向上修复，即使是在需求相对偏弱的 13 年。具体来看，由于 13 年我国经济正经历由此前的高速发展向中高速过渡阶段，经济结构面临调整，传统产业正加速转型，终端需求较为平淡，13Q3 我国 GDP 同比增速由 Q2 的低点 7.6% 小幅回升至 7.9%。在此背景下本轮补库周期持续 12 个月，产成品存货同比由 13/08 的 5.7% 上升至 14/08 的 15.6%。本轮库存周期在农产品价格、铁矿石等部分上游产品价格上涨的带动下，相关产品补库贡献较大，其中农副产品加工贡献 1.4 个百分点，可见在需求相对温和时，价格周期性的调整也能在供给端推动库存见底回升。

图3 00 年以来经历六轮完整的库存周期



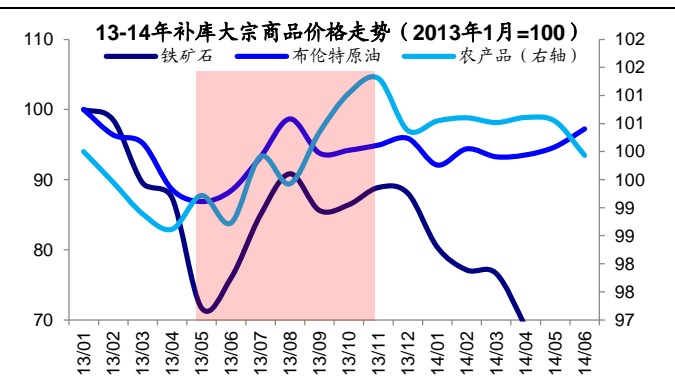
资料来源: Wind, HTI

表 1 历史六轮库存周期划分

库存周期	主动补库存	被动补库存	主动去库存	被动去库存	库存周期时长 (月)
第一轮	00/05-00/10	00/10-01/06	01/06-02/02	02/02-02/10	29
第二轮	02/10-04/04	04/04-04/12	04/12-06/02	06/02-06/05	43
第三轮	06/05-08/05	08/05-08/08	08/08-09/02	09/02-09/08	39
第四轮	09/08-10/02	10/02-11/10	11/10-12/09	12/09-13/08	48
第五轮	13/08-13/11	13/11-14/08	14/08-15/12	15/12-16/06	34
第六轮	16/06-17/03	17/03-17/04	17/04-19/08	19/08-19/11	41
本轮	19/11-20/03	20/03-20/10	22/04-23/02	23/02-至今	-
平均持续时长 (月)	11	8	14	6	40

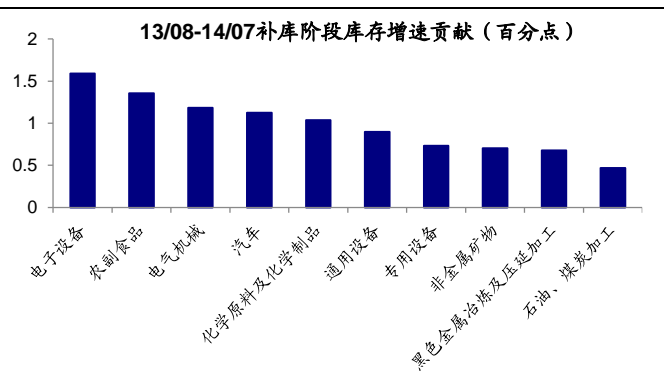
资料来源: Wind, HTI, 注: 19-20 年受疫情影响盈利两次筑底打乱补库节奏, 数据截至 2023 年 5 月

图 4 13 年补库阶段商品价格向上推动补库开启



资料来源: Wind, HTI

图 5 13/08-14/07 补库阶段行业贡献情况



资料来源: Wind, HTI

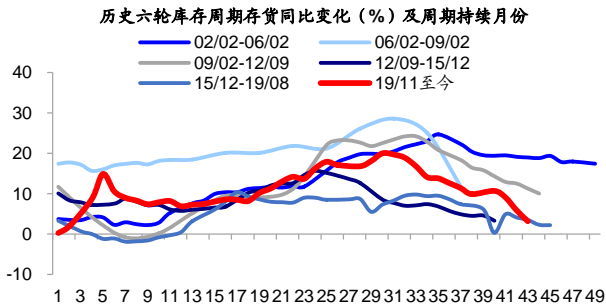
## 2. 本轮库存周期走到哪了?

本轮库存持续时间已偏长, 当前我国或已由主动去库切入被动去库阶段。本轮库存周期起始于 19/11, 由于疫情打乱了原本的补库节奏, 截至 22/05, 本轮库存周期已持续近 43 个月, 其中补库时间持续 29 个月, 已经超过了过去六轮库存周期均值 40 个月、补库均值 20 个月, 可见本轮库存周期受疫情影响下持续时间已经较长, 但主要是补库时间相对历史均值较长所致。

当前收入拐点或已出现, 库存周期已转向被动去库, 库存有望在 Q2-Q3 见底。本轮去库开启于 22/04, 工业企业产成品存货同比增速于 22/04 以来快速放缓, 截至 23/05 仍在回落, 工业企业营收累计同比增速在 23/02 回落至低位-0.3%后小幅回暖, 尽管当前营收增速在低位徘徊, 但企业收入底部已现, 我国或已从主动去库切入被动去库阶段。从收入拐点领先库存拐点的规律看, 历史上收入拐点领先库存拐点多在 3-8 个月, 均值为 6 个月, 因此按最小持续时间推算本轮库存周期最快有望在 Q2 见底, 按历史规律均值推算有望在 Q3 见底。

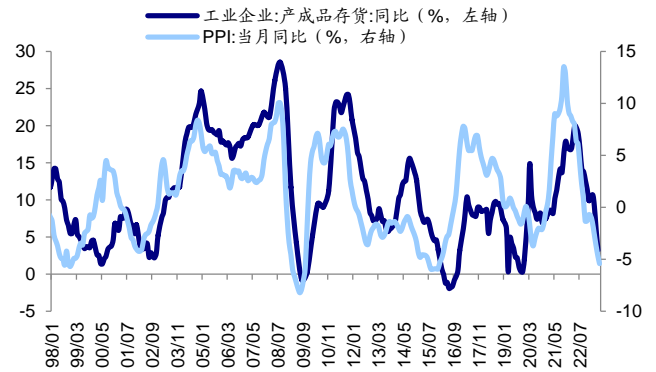
此外, 我们也可以从库存和价格水平辅助定位当前库存周期的位置。从库存的绝对增速和价格水平来看, 当前库存和价格水平已处历史低位。历史上去库存结束往往是工业企业产成品存货累计同比增速和 PPI 均下降至低位, 产成品累计同比增速低点一般在 5.7%至-1.9%区间, PPI 一般在 1.87%至-8.20%区间, 今年 5 月存货累计同比增速已降至 3.2%、处 00 年以来 13.1%, 6 月 PPI 同比增速降至-4.6%、处 6.8%分位, 当前工业企业整体库存和价格均已处过去六轮库存周期的低位。

图6 本轮库存周期已持续较长时间



资料来源: Wind, HTI

图7 本轮产成品库存和PPI均已回到历史低位



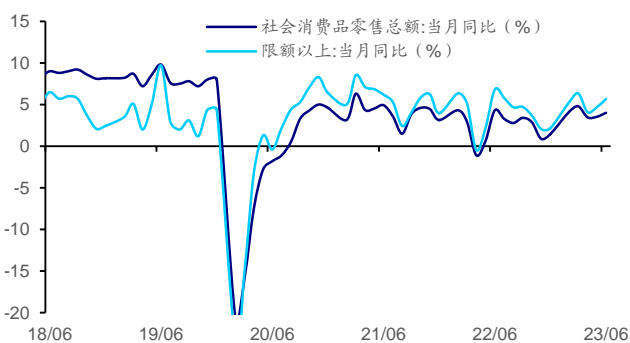
资料来源: Wind, HTI

**稳增长政策推动需求复苏+价格周期性修复有望加快补库开启。**需求端方面，当前我国经济处在温和复苏中，稳增长政策发力有望推动需求进一步回暖。23年上半年国内经济呈现温和修复趋势，Q2实际GDP增速为6.3%，较23Q1的4.5%进一步回升。从消费数据看，当前消费正在持续恢复中，1-6月社会消费品零售总额同比增长8.2%，剔除基数效应后，四年年化平均4.0%。

展望下半年，稳增长政策出台或将推动基本面明显改善。6月以来，货币政策已率先发力，6月13日央行调降7天逆回购利率10个BP，15日调降MLF利率10个BP，20日调降LPR利率10个BP。结合海通宏观观点，政策利率调整或打开新一轮稳增长的窗口，未来其他货币、财政、产业政策均有望逐步加码。6月29日召开的国常会通过《关于促进家居消费的若干措施》，通过促进家居消费带动居民消费增长和经济恢复，我们认为后续稳增长政策或已在途中，需求有望持续复苏。

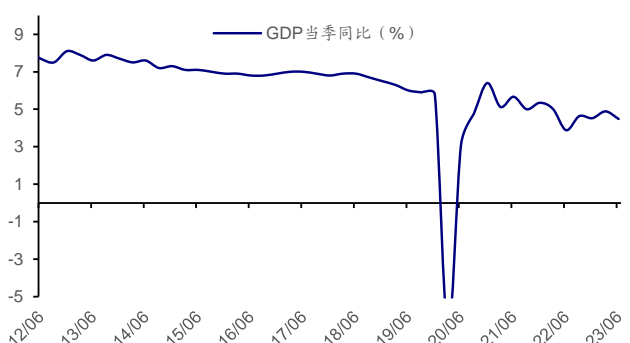
供给端方面，上游价格周期性修复或推动企业补库。我们在前文中提出，供给端价格周期性波动也是库存周期性波动的重要因素，当前我国PPI已运行至周期底部，部分上游资源品价格已处在历史低位，截至2023/7/14，我国大宗商品价格总指数周环比1.7%，较上周进一步回暖，其中煤钢等商品价格已触底回暖，或有望带动相关产业链补库，从而向产业链下游传导。

图8 我国消费温和复苏



资料来源: Wind, HTI

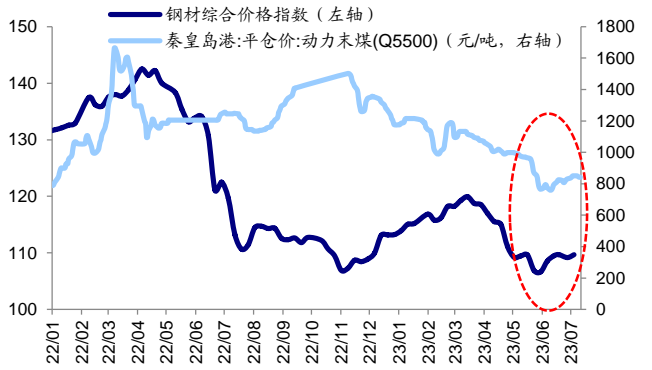
图9 我国经济正在温和复苏



资料来源: Wind, HTI

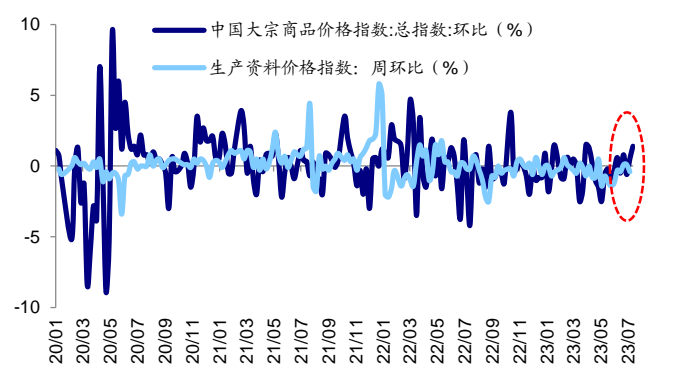


图10 煤钢价格有望自底部回暖



资料来源: Wind, HTI

图11 大宗商品和生产资料价格指数环比改善

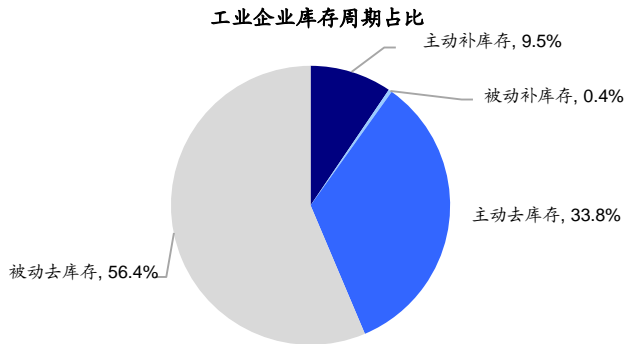


资料来源: Wind, HTI

### 3. 哪些行业有望率先复苏?

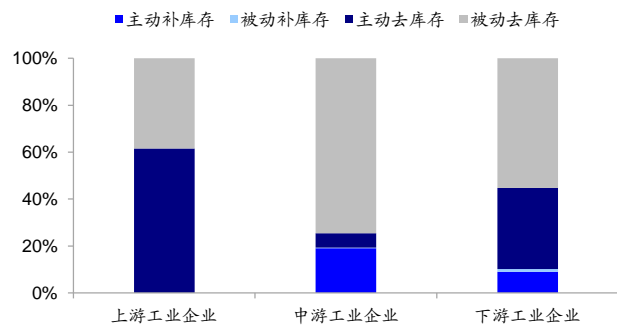
工业企业不同行业去库存表现分化，中下游较上游或更早进入补库。当前处于主动去库存、被动去库存阶段的占比分别为 33.8%、56.4%（截至今年 5 月，相关企业 12 月-MA 库存合计占 41 个工业企业总库存比重，下同），处于主动补库、被动补库存阶段的分别有 9.5%、0.4%。分产业链看，当前上游行业整体工业企业盈利仍偏弱，尽管多数上游行业库存增速已处在历史低位，但库存去化或尚需一段时间；中游行业库存去化进程较快，大多数中游行业已在被动去库阶段，盈利已迎来持续改善，预计有望更快开启补库；下游行业多数行业盈利已有所回暖，下游需求改善或将进一步加速去库进程。

图12 细分工业企业库存周期分布



资料来源: Wind, HTI, 数据截至今年 5 月

图13 上中下游库存周期分布情况

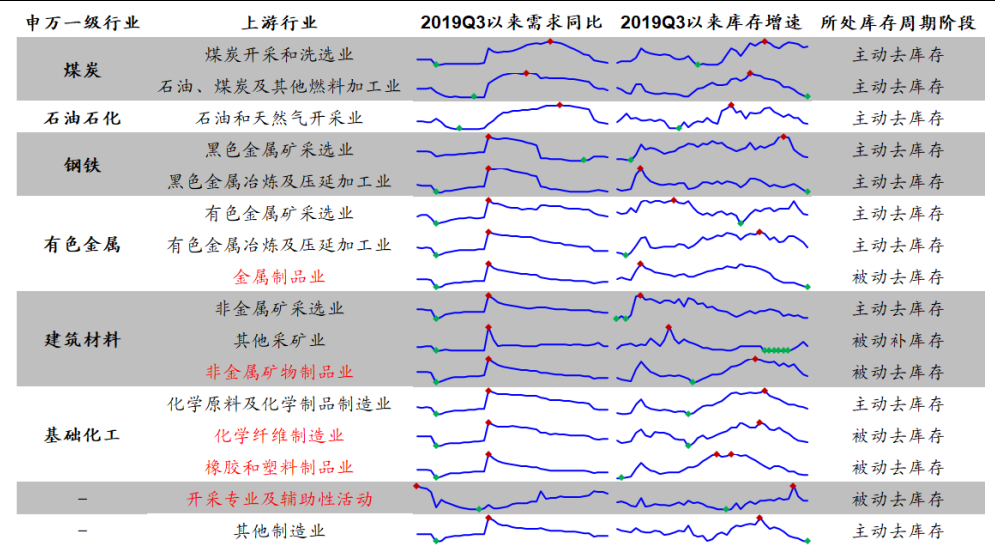


资料来源: Wind, HTI, 数据截至今年 5 月

多数上游行业仍在主动去化末期，化工行业步入被动去库。上游行业包括上游采矿业和冶炼加工业，由于上游行业景气度与宏观经济相关性较高，其库存周期持续时间大致与整体库存周期保持一致。从库存情况看，目前上游行业中近七成仍然处于主动去库存阶段的末期，其中，基础化工行业中化学纤维、塑胶制品已于今年 3 月左右进入被动去库阶段，目前库存同比增速自本轮库存周期开始 19/11 以来分位数水平分别为 7.8%和 5.2%，已处于历史较低位。

从行业利润情况看，5 月上游行业占工业企业整体利润占比下滑，取四年年化平均增速后，我们发现上游行业中仅有化工的利润同比增速边际回暖，由 4 月的-6%由负转正至 5 月的 7%，其他行业利润均在边际走低，可见化工行业有望率先复苏。化工行业高频数据也印证了化工相关行业基本面正迎来改善，截至 23/07/17，化学纤维中聚氨酯价格已从 5 月的低点逐渐修复，MDI 和 TDI 分别较低点上涨 8.5%、10.8%，塑料行业中聚丙烯 PP 价格较 6 月低点上涨 6.5%，上述行业盈利有望进一步提升。

图14 多数上游行业仍在主动去库阶段



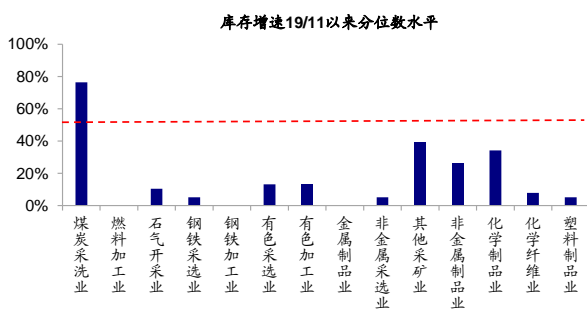
资料来源：Wind, HTI, 注：数据截至 2023 年 5 月

表 2 上游基本面有所改善的中观行业产品价格回升

种类	商品	今年以来最低价格	当前价格
化学纤维制造业	聚氨酯 (MDI, PM200)	14700 (元/吨)	15950 (元/吨)
	聚氨酯 (TDI)	15800 (元/吨)	17500 (元/吨)
	聚氨酯 (PTA)	5290 (元/吨)	5880 (元/吨)
	涤纶短纤	6950 (元/吨)	7400 (元/吨)
塑料制品业	聚丙烯 PP	6950 (元/吨)	7250 (元/吨)
	聚碳酸酯 PC	14500 (元/吨)	15200 (元/吨)
	聚苯乙烯 PS	8050 (元/吨)	8500 (元/吨)
	聚氯乙烯 PVC	5560 (元/吨)	5890 (元/吨)

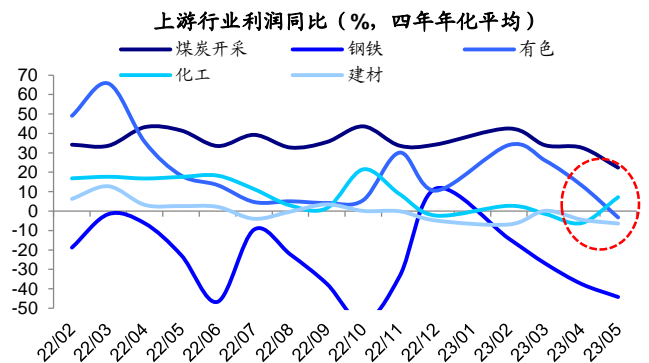
资料来源：Wind, HTI, 注：数据截至 23/07/17

图15 上游行业当前库存增速水平



资料来源：Wind, HTI, 截至 23 年 5 月

图16 上游行业中化工利润边际同比回暖



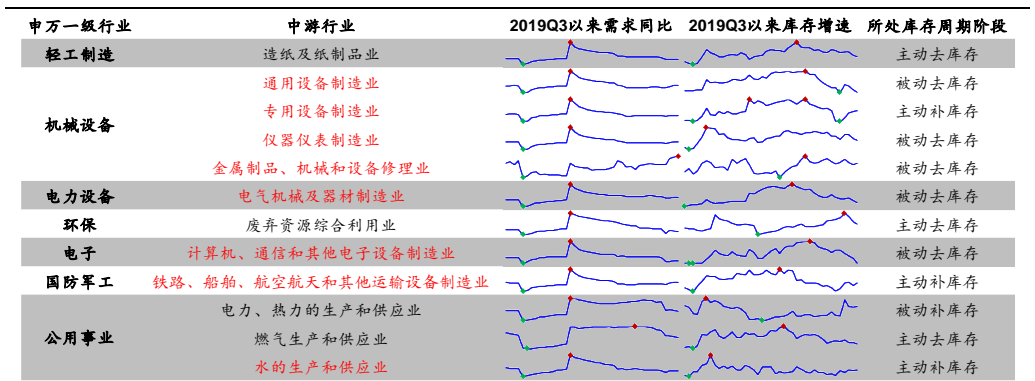
资料来源：Wind, HTI

中游行业多数行业已处被动去库阶段，如机械设备，电子等。当前中游设备制造业景气度已自底部回升，仅少部分行业仍在主动去化阶段，大多数已进入被动去库阶段，例如，机械设备中通用设备、专用设备、仪器仪表，以及电子制造等行业。具体来看，机械设备方面，通用设备于去年 4 月开启去库阶段，目前已持续 14 个月，当前库存增速为 19/11 以来 2.6%的分位，已处于低位水平。专用设备、仪器仪表当前库存增速历史分位数分别为 44.7%和 15.7%的位置，去库或仍将持续一段时间。电子制造方面，计算机、通信、及其他设备制造行业于去年 12 月开始库存增速持续下行，目前历史分位在 2.6%的位置，此外，从全球半导体周期看，半导体周期每 3-4 年一轮，而于 19 年

开启的本轮全球半导体周期有望在今年下半年见底，有望与我国电子库存周期形成共振。

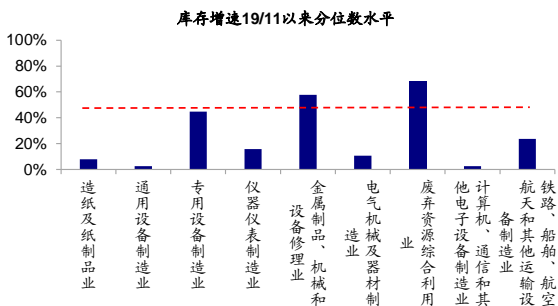
从行业利润看，中游设备制造业景气度对利润率的敏感性较高，当前多数中游设备制造业、公用事业行业利润率均已明显回升，其中通用设备由 23/02 的低点 4.8% 回升至 23/05 的 8.4%，同期专用设备由 5.8% 回升至 9.3%，电子设备由 0.9% 回升至 3.7%，利润率的提升或推动行业进一步加大资本开支，带动产业链基本面向上。

图17 多数中游行业已处于被动去库阶段



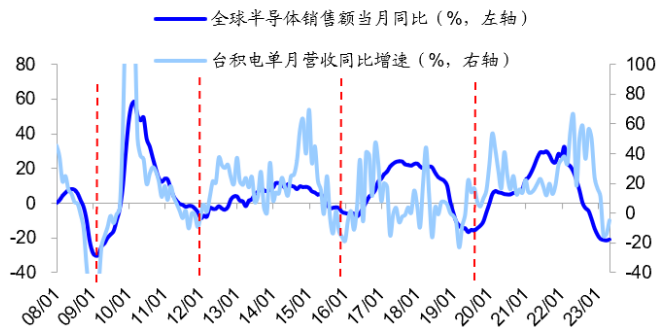
资料来源：Wind, HTI, 数据截至 2023 年 5 月

图18 中游行业当前库存增速水平



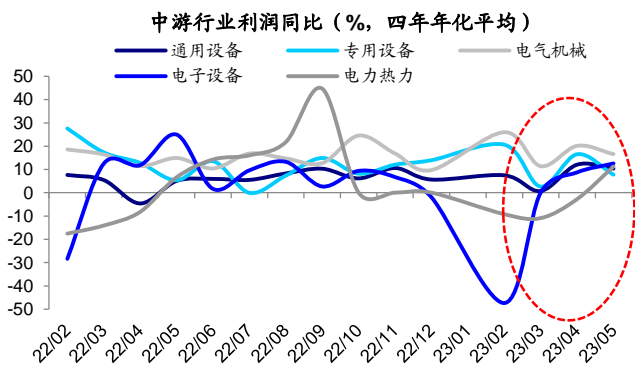
资料来源：Wind, HTI

图19 本轮全球半导体周期或将见底



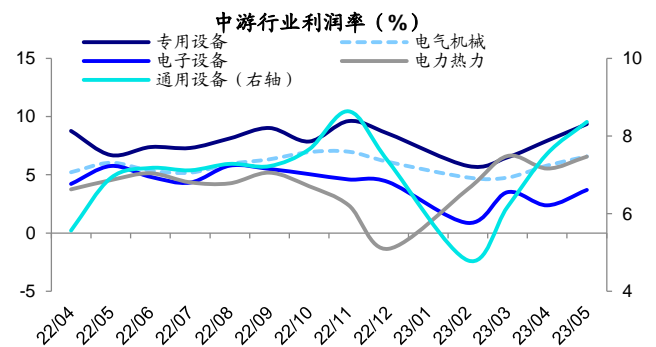
资料来源：Wind, HTI

图20 中游设备制造业多数行业盈利已自底部回升



资料来源：Wind, HTI

图21 中游行业利润率提升



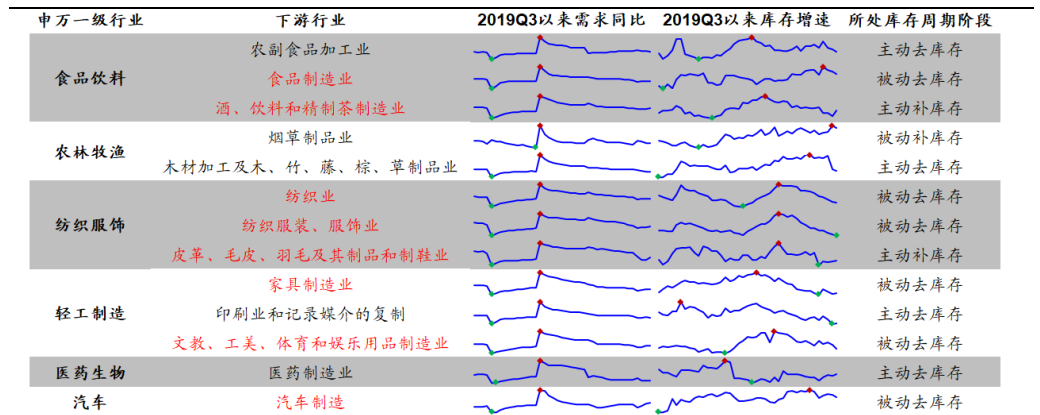
资料来源：Wind, HTI

多数下游行业基本面边际改善，纺服、餐饮、轻工等有望率先复苏。下游消费行业库存受终端需求影响更大，今年以来我国居民收入信心和消费意愿均有所恢复，政策方面促消费一直是目前政策关注的重点，实现稳增长目标需要扩内需等相关政策的支持。7月10日国家发展改革委主任郑栅洁在《学习时报》发文表示，充分发挥消费对经济增长的基础性作用，多渠道增加城乡居民收入，稳定汽车等大宗消费，培育壮大绿色消费、服务消费等消费新热点。当前我国消费基本面已在复苏中，已有部分行业进入被动

去库阶段。具体来看，食品制造和汽车制造于今年3月进入被动去库阶段，当前19/11以来库存增速分位数水平分别为76.3%和52.6%，仍高于历史中枢分位，预计去库存阶段仍将持续一段时间。而纺织服装业、皮革羽制品与制鞋业、文娱制造业早在去年3月左右便进入去库周期，目前已持续15个月，目前库存增速历史分位水平分别为0%、15.7%、21%，已处于历史低位水平。

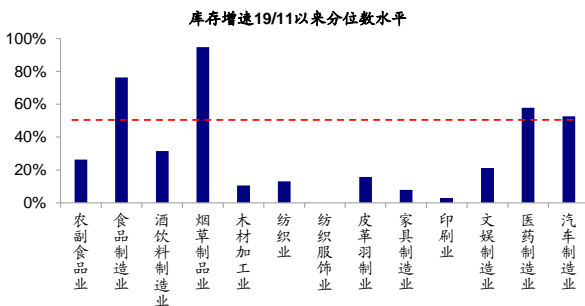
结合行业利润增速看，纺服行业利润同比增速由4月低点-11%回升至5月的0.6%，同期饮料由6.4%回升至12.3%，食品由5.0%回升至9.3%，需求的回暖使汽车制造、纺织服饰等部分行业已迎来基本面的修复。

图22 部分下游行业进入被动去库阶段



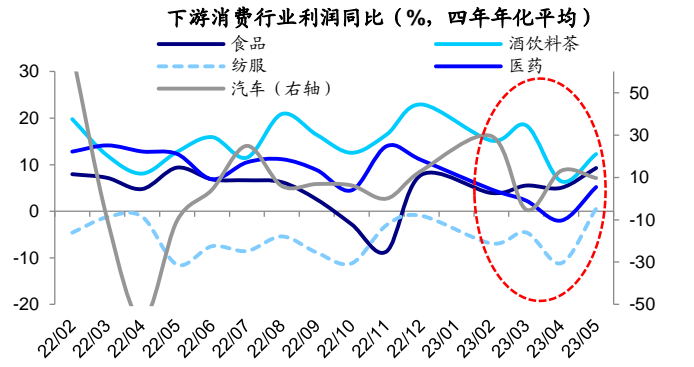
资料来源：Wind, HTI, 数据截至2023年5月

图23 下游行业当前库存增速水平



资料来源：Wind, HTI

图24 多数消费行业利润同比已回升



资料来源：Wind, HTI

**风险提示：**稳增长政策落地进度不及预期，国内经济修复不及预期。

## 附录 APPENDIX

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**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

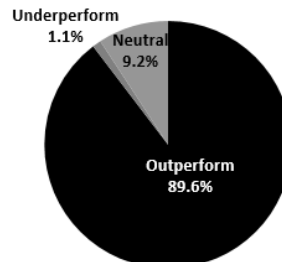
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### Ratings Definitions (from 1 Jul 2020):

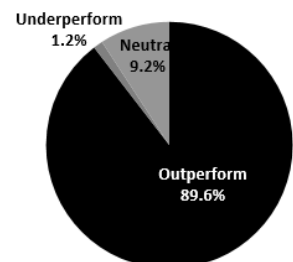
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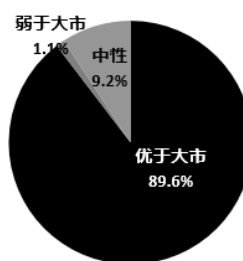
Most Recent Full Quarter



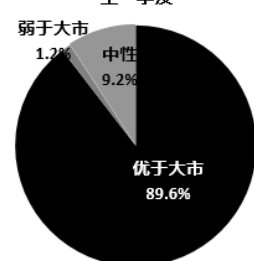
Prior Full Quarter



最新季度



上一季度



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 2023 年 6 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	89.6%	9.2%	1.1%
投资银行客户*	4.7%	5.6%	10.0%

\*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 Jun 30, 2023

	Outperform	Neutral (hold)	Underperform
HTI Equity Research Coverage	89.6%	9.2%	1.1%
IB clients*	4.7%	5.6%	10.0%

\*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.

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**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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