From the capital market perspective
Trends and Opportunities in China's Aquaculture Industry

Presenter: Xiao Chen
1. Current situation and trends in China's aquaculture industry
2. Industry Chain Investment Analysis
3. China Aquaculture Chain Investment Map
1. Current situation and trends in China's aquaculture industry

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1.1 Chinese aquaculture industry: limited area + regional + seasonal

Aquaculture area by region (million hectares)

A large aquatic feed group’s quarterly share of feed sales by category in 2019

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Aquatic feed</th>
<th>Poultry feed</th>
<th>Pig feed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019Q1</td>
<td>19.6%</td>
<td>9.9%</td>
<td>21.4%</td>
<td>31.8%</td>
</tr>
<tr>
<td>2019Q2</td>
<td>24.2%</td>
<td>27.0%</td>
<td>23.1%</td>
<td>23.1%</td>
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<tr>
<td>2019Q3</td>
<td>30.1%</td>
<td>41.5%</td>
<td>27.0%</td>
<td>19.7%</td>
</tr>
<tr>
<td>2019Q4</td>
<td>26.1%</td>
<td>21.6%</td>
<td>28.5%</td>
<td>25.4%</td>
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<td>合计</td>
<td>100.0%</td>
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</tbody>
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Source: China Fisheries Statistical Yearbook, Tianfeng Securities Research Institute
1.1 Chinese aquaculture industry: limited area + regional + seasonal

**Current Status**
- Aquaculture water is difficult to increase
- Regional
- Seasonal

**Trends**
- Farming Efficiency (Agricultural supplies)
- Cold chain cross-regional (logistics)
- Warehouse deep processing (deep processing)
1.2 Consumption: internally driven, open industry space

- Outbreak of non-fever swine fever, significant depletion of hog production capacity, and expected reshaping of resident protein consumption structure

**Percentage of protein consumption per capita and growth rate of fish consumption in China (right axis)**

Source: National Bureau of Statistics, Tianfeng Securities Research Institute

**Protein consumption structure of Taiwan residents in China (growth rate right axis)**

Source: Council of Agriculture, Executive Yuan, Taiwan, China, Tianfeng Securities Research Institute
1.2 Consumption: internally driven, open industry space

Who is consuming? Where is it consumed? Why are they consuming?

Consumer crowd, consumer scene, consumer culture
1.2 Consumption: internally driven, open industry space

Pickled fish market size (billions of yuan) and growth rate (right axis)

3 years, 2.6x

Source: Jiumaojiu prospectus, Tianfeng Securities Research Institute

National crawfish production value (billion yuan) and growth rate (right axis)

3 years, 3.7x

Source: China Crawfish Industry Development Report, Tianfeng Securities Research Institute
### 1.2 Consumption: internally driven, open industry space

- Consumption upgrade is the core factor driving the change of upstream farming structure.

**Traditional domestic fish farming production (million tons) and growth rate (right axis)**

- Grass
- Carp
- Chub
- Bighead carp
- Tilapia
- Grass carp
- Chub yoy
- Carp yoy
- Bighead carp yoy
- Tilapia yoy

**Special freshwater fish farming production (million tons) and growth rate (right axis)**

- Pelteobagrus fulvidraco
- Snakehead
- Perch
- Mandarin fish

Source: wind, Tianfeng Securities Research Institute

Source: China Fisheries Statistical Yearbook, Tianfeng Securities Research Institute
1.3 Technology: the means to achieve the impossible

- Before 1992, domestic aquaculture production was still dominated by fishing; both freshwater and seawater resources were relatively limited.

- Aquaculture technology (including seed breeding, industrial aquatic material development, breeding technology) and other continuous breakthroughs, aquaculture continues to replace natural production, and by 2018 aquaculture has accounted for up to 77%.

Aquatic products seawater freshwater structure (million tons, accounting for the right axis)

Aquaculture fishing structure (growth rate left axis)

Source: National Bureau of Statistics, Tianfeng Securities Research Institute
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2.2 Aquatic track qualities: strong consumer attributes, different from livestock and poultry farming

- **Difference 1:** Aquatic biological characteristics, it is difficult to have economies of scale; farming concentration is low.

- **Difference 2:** many types of aquatic products, strong consumer attributes; livestock and poultry is a bulk product, strong cyclical properties.

- **Difference 3:** the highest degree of concentration in the aquatic industry chain is the feed, but also the most powerful node of the industry chain discourse; livestock and poultry industry chain is the highest degree of concentration is breeding.
2.2 Aquaculture industry: many varieties, long chains, many sub-sectors

- **Aquaculture industry**: numerous breeding species, significant consumer iterative properties, alternating cycles, growth

- **Industry chain**: longer, upstream and downstream investment logic is completely different, upstream look at product power and service, downstream look at consumer trends and brands.
2.3 Aquaculture: Finding the golden track

- Raw Material Trade
- Futures Financial Services
- General Aquatic Materials
- Aquatic Animal Protection
- Processsing
- Aquatic seedling
- Catering
- General Aquaculture
- Other Bait Supply
- Processing Equipment
- Sea bass feed
- Snakehead feed
- Eel feed
- White shrimp feed
- Pelteobagrus fulvidraco feed
- California perch feed
- Sea bass feed
- White shrimp feed
- California perch feed
- Pelteobagrus fulvidraco feed
- Eel feed
- Snakehead feed
- Sea bass feed
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3 China Aquatic Chain Investment Map

- **Focus on supply and demand leading indicators, volume, price and profit changes**
- **By aquatic species:** traditional domestic fish; mature category of special aquatic products (raw fish, sea bass, eel)
- **By industry chain:** traditional domestic fish farming, feed penetration rate of more than 90% of aquatic materials, raw materials trade
- **Investment strategy:** layout at the bottom, sell at the high

- **Focus on growth stability and sustainability; cross-species capability; changes in the competitive landscape; profitability**
- **By aquatic species:** multi-category special water (California perch, yellow catfish, white shrimp, crab, rhubarb, etc.)
- **By industry chain:** breeding, special aquatic feeds, seeds of species with sustained growth in consumption-driven breeding; aquatic animal protection; aquatic food and beverage
- **Investment strategy:** look for leaders; long-term allocation; time for space
Thanks for watching!