Fastmarkets RISI Global Containerboard & Boxboard Outlook

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Agenda

• Global overview
• Containerboard: Regional demand and supply outlook
• Boxboard: Asian demand and supply projections
• Risks
Key factors driving global developments

Changing RCP policies
China’s changing RCP policies are having a dramatic effect on the global packaging markets, especially on trade flows and investment decisions.

E-commerce
E-commerce has been an important factor propelling demand in recent years, but its influence may be moderating, especially in larger markets.

Environmental concerns: Paper vs. plastics
We are starting to see an endorsement in some regions for a reduction in overpackaging and some push away from plastics because of their longevity and impact on the environment.

Global economy growing unevenly, risks heightened

Economic headwinds and rising uncertainty
Global economies entered 2019 in a less optimistic position. Trade war escalating?
Just how large is the boost from e-commerce?

**US BOX SHIPMENTS WOULD HAVE BEEN UP 4.5% FROM THE 2014 LOW JUST FROM GROWTH IN NONDURABLES**

- E-commerce had added an estimated 3.2% or 23 billion square feet to US demand by 2017
- But the boost from e-commerce was not discernable in 2018

**E-COMMERCE CONTINUES TO RISE RAPIDLY IN CHINA**

- Key contributor to growth in recent years
- Likely moderated in 2018 due to pressure to reduce footprint and higher prices

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Global containerboard demand growth saw dramatic drop in 2018

**DRIVEN BY ASIA AND ESPECIALLY CHINA**

- Chinese demand fell 3%
- Asian demand was flat in 2018

**GROWTH IN MOST OTHER REGIONS ALSO DECELERATED**
Global containerboard demand dominated by Asia

GLOBAL DEMAND REACHED 173 MILLION TONNES IN 2018 WITH ASIA ACCOUNTING FOR 83 MILLION TONNES

Asian containerboard outlook
Snapshot of 2018 Asian containerboard demand and supply

Chinese demand fell an estimated 3% in 2018
- Deceleration in economic growth
- Some substitution from paper to plastics
- E-commerce working to reduce its packaging footprint
- Significant uncertainty in the level of decline

Rest of Asia saw fairly steady growth at 3.8% in 2018
- Compared to average of 4.0% per year in 2016-2017

Chinese output tumbled while net imports soared
- Chinese production fell an estimated 5% or 2.5 million tonnes
- Net imports jumped almost 1.1 million tonnes
- Rest of Asia supplied much of this with net imports climbing 800,000 tonnes

Entering 2019, demand conditions have been sluggish
- Economic weakness and effects of lingering US-China trade war

China’s economy decelerated in 2018, 2019 should see gradual improvement

ECONOMIC GROWTH SLOWED OVER COURSE OF 2018
- Government actions to address high debt levels
- Trade war with USA
- Reduced consumer confidence

GOVERNMENT TAKING ACTION TO BOLSTER GROWTH IN 2019
- Policies to encourage lending
- Infrastructure investment
- VAT and other tax reductions
- Trade war resolution?
Containerboard prices in East China lost momentum in 2018

2018 HELD BACK BY
• Weaker demand
• Better import planning

MARGINS DETERIORATED BY YEAR END

Chinese linerboard imports jumped in 2018
Chinese corrugating medium imports also rose in 2018

Chinese RCP policies are changing the way companies are operating

Constrained fiber supplies driving up imports and reducing production

- RCP imports fell from 25.7 million tonnes in 2017 to 17.0 million tonnes in 2018.
- Expected to fall to 10-12 million tonnes in 2019 and then 5-6 million tonnes in 2020 before total ban goes into effect in 2021.

Large companies are making investments in light of the new policies

- Numerous projects in the works in Vietnam, Malaysia, Laos and India

Previously planned projects apparently being delayed

- Due to economic weakness and effects of lingering US-China trade war
China’s containerboard market adjusting to new RCP policies

DEMAND WILL DROP AGAIN IN 2019 AND THEN MOVE UP IN 2020
- Weak economy
- Dictated by fiber balance

PRODUCTION WILL FALL AND NET IMPORTS WILL CLIMB
- Output constrained by fiber
- Market attractive to other Asian suppliers
- But can imports continue to climb that much?

OPERATING RATES ARE TUMBLING
- Level dependent on capacity assumptions

Demand growth in rest of Asia will weaken in 2019 and rebound in 2020

2019 GROWTH AFFECTED BY
- Weaker regional economies
- Export-oriented economies affected by slower global performance

INDIA AND PARTS OF SOUTHEAST ASIA EXPECTED TO REMAIN RELATIVELY HEALTHY
- Supported by rising incomes and growth in FMCG

TOTAL GAIN, 2019-2020
- 2.1 million tonnes

RISKS
- Slower regional/global economic growth
- Trade wars
US manufacturing confidence took a hit in late 2018…

ISM® PMI® CONTINUES TO INDICATE GROWTH IN MANUFACTURING
This led to a brief contraction in industrial production in the key packaging end-use markets.

North American containerboard producers are taking economic downtime to address slower demand growth.
Operating rates to rebound strongly once downtime ends

North American net exports also not supportive of operating rates this year
Western European containerboard outlook

Supply is outpacing demand in Western Europe
Kraftliner demand will slowly grow due to imports, capacity will stay fairly stable until late 2020

Recycled containerboard is expecting a lot of capacity, but will projects actually happen?
Asian boxboard outlook

Snapshot of 2018 Asian boxboard demand and supply

**Chinese demand fell an estimated 6% in 2018**
- Similar factors as containerboard, including decelerating economic growth and substitution
- Shift in low-wage manufacturing to other locations
- We believe demand for all subgrades fell, with coated duplex significantly worse than ivoryboard
- Many important end-use markets apparently weak
- Significant uncertainty in the level of decline

**Rest of Asia saw fairly steady growth at 3.7% in 2018**
- Led by India and much of Southeast Asia

**Chinese output and net exports both declined**
- Chinese production fell an estimated 7% or 1.6 million tonnes
- Net exports decreased 270,000 tonnes
- Rest of Asia saw stable net imports as growth in exports kept pace with imports
Coated duplex prices in East China have been drifting lower since mid-2018

2018 AFFECTED BY
- Weaker demand
- But supply reductions muted the slide

IVORYBOARD PRICES HURT BY OVERSUPPLY

Asian boxboard demand will be hurt by ongoing weakness in China
Chinese boxboard net exports dipped slightly in 2018

Chinese boxboard production remains weak in 2019-2020

DEMAND WILL DROP AGAIN IN 2019 AND THEN MOVE UP IN 2020
- Weak economy

PRODUCTION AND NET EXPORTS WILL FALL
- Output constrained by fiber
- Coated duplex capacity closing
- Ivoryboard capacity rising in already oversupplied market

OPERATING RATES WILL DIP THEN REBOUND
- Assumes some shifts between subgrades
Boxboard capacity expansion starts to outpace demand growth

Conclusions and what to watch

- **GLOBAL PACKAGING DEMAND GROWTH WILL REMAIN SUBDUED IN 2019 BEFORE ACCELERATING IN 2020**
  - Inventory shifts a factor as well as assumed rebound in economic growth in some parts of the world

- **ONGOING CHANGES TO RCP POLICIES**
  - Will other Asian countries also implement stricter import policies?
  - Will more severe fiber shortages surface in China in the second half of this year?

- **GLOBAL ECONOMIC PERFORMANCE**
  - Will the Chinese government successfully right the ship?
  - US-China trade war resolution?

- **TIMING/CHANGES TO ANNOUNCED CAPACITY INVESTMENTS**