Global Graphic Paper Outlook

Key issues in global markets

GDP growth
The global outlook for 2019 is a bit weaker than in 2018, with softening in many regions followed by slight reacceleration in 2020. Risks abound, especially related to global trade.

Secular decline in paper demand
Rapid losses in paper demand seem to be spreading and possibly accelerating in some regions.

Shifting paper supply
Withdrawals and conversions of capacity to packaging grades are occurring in many regions, with a few projects announced for Asia.

Trade patterns
Traditional trade patterns are shifting both regionally and globally due to price differentials and supply cuts.
Global economy growing moderately, with heightened risks

Annual real GDP growth

Global demand for printing & writing papers began decline in 2008, newsprint in 2001

-1.9%
Annual decline for P&W papers in 2008-2020

-6.0%
Annual decline for newsprint in 2008-2020
P&W demand growth in 2019-2020

Two-year total global growth

-3.53 Million tonnes
-1.8% Average percent change

Percentage change in global demand by grade

GLOBAL P&W DEMAND DECLINING STEADILY

The largest drops are coming in the mechanical grades that are most exposed to mass-market publishing end-uses and mature economies.
Woodfree paper prices will see a mild recovery after falling over the second half of 2018

PRICES DECREASED IN THE SECOND HALF OF 2018
UNDER THE WEIGHT OF
- Supply/demand imbalances
- Declining pulp prices

RECENT RECOVERY ATTRIBUTABLE TO
- Low margins
- Better matching of output to demand
- Inventory restocking
Asian P&W demand will continue to slide in 2019-2020

NO BREAK FROM E-MEDIA COMPETITION
• And decelerating economy does not help

UNCOATED WOODFREE PAPER ONLY GRADE WITH POSITIVE GROWTH
• Supported by end uses, including copy paper and books/teaching supplies
• Is the dominant grade in markets still seeing growth

RISKS
• Slower regional/global economic growth
• Trade war

Across Asia, a few markets still growing, but mature markets continue to slide

CHINA CONTINUES TO SHRINK
• Only UWF growing, while other grades hurt by e-media competition

JAPAN RECOVERS FROM SHARP DROP IN 2018 BUT REMAINS WEAK
• UWF getting some support from printing related to the era change with the new emperor
• Other mature markets continue to retreat

INDIA AND OTHER LESS MATURE MARKETS SEE POSITIVE GROWTH
Asia’s uncoated woodfree paper market is in state of oversupply

**Year-to-year change and percent**

**IMBALANCE GREW IN 2018**
- A few projects and assumed grade shifts
- Weak demand

**SOME CAPACITY INCREASE IN CHINA IN 2019 WHILE DEMAND REMAINS WEAK**
- It's about the economy

**BALANCE SEES MODEST TIGHTENING**
- Dependent on capacity assumptions
- Changes in trade will not be a major factor

Following the upturn in Asian uncoated woodfree net exports in 2018, we will see a very modest gain in 2019-2020

**IMPORTS CONTINUE TO TRACK LOWER**
- Less demand

**EXPORTS HELD BACK BY**
- Weak global demand
- Capacity conversions in Indonesia

**SOME GAINS FOR CHINA DUE TO NEW CAPACITY**
Asian coated woodfree: A struggle to keep up with drop in demand

Year-to-year change and percent

DEMAND HAS INCREASED ONLY ONCE IN THE LAST FIVE YEARS

RAISING NET EXPORTS NOT AN OPTION

• Weak global demand
• Tariffs on shipments to US and EU for several suppliers

US printing & writing markets
Most end-use indicators in the US are on a downward trajectory

Real dollar sales for US commercial printing

BIG DECLINE IN 2017, WHILE BETTER PERFORMANCE IN 2018 HELPED TO MODERATE DECLINE IN PAPER DEMAND
North American demand for multi-purpose cut size business papers

-3.3%
Trend since 2006

-1.3%
Decline in 2018 after 6.7% drop in 2017

US printing & writing demand

DEMAND TO ACCELERATE DOWN AFTER SLOW DECLINE IN 2018

US P&W demand dropped only 2.4% in 2018 after falling 7.7% in 2017. Most grades are expected to decline more quickly in 2019/2020.

<table>
<thead>
<tr>
<th>DEMAND THOUSAND TONNES</th>
<th>2017</th>
<th>2017 %CH</th>
<th>2018</th>
<th>2018 %CH</th>
<th>FORECAST 2019</th>
<th>2019 %CH</th>
<th>FORECAST 2020</th>
<th>2020 %CH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coated woodfree</td>
<td>3,525</td>
<td>-4.5%</td>
<td>3,451</td>
<td>-2.1%</td>
<td>3,327</td>
<td>-3.6%</td>
<td>3,201</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Coated mechanical</td>
<td>2,118</td>
<td>-12.2%</td>
<td>2,115</td>
<td>-0.1%</td>
<td>2,016</td>
<td>-4.7%</td>
<td>1,885</td>
<td>-6.5%</td>
</tr>
<tr>
<td>Uncoated woodfree</td>
<td>6,991</td>
<td>-6.3%</td>
<td>6,900</td>
<td>-1.3%</td>
<td>6,720</td>
<td>-2.6%</td>
<td>6,545</td>
<td>-2.6%</td>
</tr>
<tr>
<td>Uncoated mechanical</td>
<td>2,596</td>
<td>-11.4%</td>
<td>2,473</td>
<td>-4.7%</td>
<td>2,328</td>
<td>-5.9%</td>
<td>2,174</td>
<td>-6.6%</td>
</tr>
<tr>
<td>Total P&amp;W</td>
<td>15,230</td>
<td>-7.7%</td>
<td>14,868</td>
<td>-2.4%</td>
<td>14,326</td>
<td>-3.6%</td>
<td>13,791</td>
<td>-3.7%</td>
</tr>
</tbody>
</table>
Western European printing & writing markets

Western European P&W demand will remain in the doldrums in 2019-2020

**ACCELERATED DECLINE IN 2018 AS ECONOMY WAS PAST PEAK**
- Also affected by higher prices

**SUBSTITUTION BETWEEN GRADES**
- LEFT MECHANICAL GRADES A LITTLE BETTER OFF THAN WOODFREE IN 2017-2018
- And slightly less cost pressure

**SIMILAR RATE OF DECLINE IN 2019-2020**
- Total volume drop of 1.8 million tonnes over the two years

Trade issues

Update of key graphic paper tariffs into USA

Coated freesheet in sheets from China and Indonesia, 2010
In place since 2010, no recent changes

SC Ume from Canada, 2015
US DOC revokes and refunds back to August 2015 after petition by Verso, the sole US producer. Verso received $42 million from Canadian mills in the settlement.

Uncoated freesheet cut size paper, 2015
Navigator wins battle in 2018 and sees tariff drop to less than 2% after a new investigation raised it from 8% to 37%. Ideal opportunity for Navigator to expand in the USA with GP moving out.

Newsprint and certain other Ume from Canada, 2018
US DOC nullified all tariffs and will refund all monies collected after ITC commissioners unanimously ruled no harm done to US industry by Canadian imports.
Tariffs on US imports of coated woodfree paper in sheets

PROHIBITIVELY HIGH TARIFFS ON MANY CHINESE PRODUCERS

Tariffs have shifted sources of US imports from China and Indonesia to South Korea and Europe. There are no tariffs on rolls, but imports of rolls are still modest.

<table>
<thead>
<tr>
<th></th>
<th>CVD</th>
<th>ADD</th>
<th>COMBINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP Indonesia</td>
<td>17.94%</td>
<td>20.13%</td>
<td>38.07%</td>
</tr>
<tr>
<td>APP China</td>
<td>19.46%</td>
<td>7.6%</td>
<td>27.06%</td>
</tr>
<tr>
<td>Sun Paper China</td>
<td>202.84%</td>
<td>135.73%</td>
<td>338.67%</td>
</tr>
<tr>
<td>All other China</td>
<td>19.46%</td>
<td>135.83%</td>
<td>155.29%</td>
</tr>
</tbody>
</table>

Tariffs on US imports of cut size copy paper

TARIFFS RANGE FROM 2% TO 326%

Effects of tariffs waning as US operating rates declined and imports from non-tariffs counties exploded in 2018. Because US prices remain high relative to other world regions, major capacity exits are scheduled for 2019, and Brazilian, Portuguese and Indonesian producers remain in the market, imports are likely to rise again.

<table>
<thead>
<tr>
<th></th>
<th>CVD</th>
<th>ADD</th>
<th>COMBINED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia Paper</td>
<td>222%</td>
<td>222%</td>
<td></td>
</tr>
<tr>
<td>Suzano</td>
<td>17%*</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Navigator</td>
<td>2%**</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>APRIL Indonesia</td>
<td>4%*</td>
<td>66.81%***</td>
<td>70.81%</td>
</tr>
<tr>
<td>APP Indonesia</td>
<td>109%</td>
<td>17%</td>
<td>126%</td>
</tr>
<tr>
<td>Asia Symbol (China)</td>
<td>7%</td>
<td>84%</td>
<td>91%</td>
</tr>
<tr>
<td>APP China</td>
<td>7%</td>
<td>149%</td>
<td>156%</td>
</tr>
<tr>
<td>UPM China</td>
<td>177%</td>
<td>149%</td>
<td>326%</td>
</tr>
<tr>
<td>Sun Paper China</td>
<td>177%</td>
<td>149%</td>
<td>326%</td>
</tr>
</tbody>
</table>

* Revised down April 2018.
** Revised down October 2018.
*** Revised up March 2019.
US offshore imports of P&W paper are supplying a growing share of US demand

**15%**
Share of US P&W demand supplied from offshore

**0%**
Decline in US offshore imports since the recession ended in 2009, despite numerous tariffs

**52%**
Share of US market for coated sheets supplied from offshore, despite tariffs on China and Indonesia

---

**EU coated mechanical exports**

- Overall exports rose by more than 10% in 2018
- US prices higher than European prices since weakening of the euro in 2014
- Exports rising, primarily to the United States, where closures have pushed operating rates close to 100%
- Tight market conditions in European publication markets limiting gains

---

**EU coated woodfree exports**

- Exports declined 85,000 tonnes in 2018
- Europe exporting more to North America due to high prices in the USA and more than 11% reduction in capacity in 2018
- All other regions in decline due to the weakening in the economy and higher paper prices
Paper supply and demand balance

No more safe havens

China no longer the growth engine it used to be

Packaging papers are becoming oversupplied

Tissue and specialty papers offer little volume for sufficient growth
Global P&W demand decline, cumulative 2018 to 2020
Thousand tonnes

EXPECTED COATED DEMAND DROP THROUGH 2020 ALREADY MORE THAN MATCHED BY ANNOUNCED CLOSURES!

- Massive 3.3 million tonne decline in coated paper demand vs 5.0 million tonnes of announced and expected shuts/conversions
- Many announcements in last two months

UWF BALANCE IS AT RISK

- Closures in US tightening market there
- But continued expansion of Asian UWF threatens global balance
- No significant announced closures globally in UME!! Some coming soon?

Global coated woodfree paper machine shuts/conversions, 2018-2020

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>MILL</th>
<th>COUNTRY</th>
<th>CAPACITY (TONNES/YR)</th>
<th>DATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheufelen</td>
<td>Lenningen</td>
<td>Germany</td>
<td>120,000 CWF</td>
<td>Q1 2018</td>
<td>Mill shift to packaging</td>
</tr>
<tr>
<td>SAPPI</td>
<td>Maastricht</td>
<td>Netherlands</td>
<td>160,000 CWF</td>
<td>Q1 2018</td>
<td>Shift to packaging</td>
</tr>
<tr>
<td>Arjowiggins</td>
<td>Besse-sur-Braye</td>
<td>France</td>
<td>275,000 CWF</td>
<td>Q1 2019</td>
<td>Mill closure</td>
</tr>
<tr>
<td>Arctic Paper</td>
<td>Grycksbo</td>
<td>Sweden</td>
<td>45,000 CWF</td>
<td>Q1 2019</td>
<td>Shut PM7</td>
</tr>
<tr>
<td>Feldmuehle</td>
<td>Unstraten</td>
<td>Germany</td>
<td>80,000 CWF</td>
<td>Q1 2018</td>
<td>Shut PM5 (2019)</td>
</tr>
<tr>
<td>Leipa</td>
<td>Condal</td>
<td>France</td>
<td>230,000 CWF</td>
<td>2019</td>
<td>Convert a PM to specialty</td>
</tr>
<tr>
<td>StoraEnso</td>
<td>Oulu</td>
<td>Finland</td>
<td>1,060,000 CWF</td>
<td>End of 2019-2020</td>
<td>Shut PM6, convert PM7 to CUK</td>
</tr>
<tr>
<td>Verso</td>
<td>Jay</td>
<td>USA</td>
<td>160,000 CWF</td>
<td>Q1 2018</td>
<td>Shift to specialties</td>
</tr>
<tr>
<td>SAPPI</td>
<td>Somanet</td>
<td>USA</td>
<td>135,000 CWF</td>
<td>Q2 2018</td>
<td>Shift to packaging</td>
</tr>
<tr>
<td>Verso</td>
<td>Luke</td>
<td>USA</td>
<td>408,000 CWF</td>
<td>Q3 2019</td>
<td>Shut mill, listed capacity incudes specialties</td>
</tr>
<tr>
<td>Indah Kal/APP</td>
<td>Mojokarto</td>
<td>Indonesia</td>
<td>245,000 CWF</td>
<td>Q2 2019</td>
<td>Shut PM10 to packaging</td>
</tr>
<tr>
<td>Tjiwi Kimia/APP</td>
<td>Mojokarto</td>
<td>Indonesia</td>
<td>50,000 CWF</td>
<td>H2 2019</td>
<td>Shut PM11 to packaging, but may be on hold</td>
</tr>
<tr>
<td>Nippon Paper Ind.</td>
<td>Atsugi</td>
<td>Japan</td>
<td>147,000 CWF</td>
<td>Q2 2018</td>
<td>Shut coater No. 1</td>
</tr>
<tr>
<td>Nippon Paper Ind.</td>
<td>Ishinomaki</td>
<td>Japan</td>
<td>86,000 CWF</td>
<td>Q2 2018</td>
<td>Shut coater No. 2</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td>Hachinohe</td>
<td>Japan</td>
<td>120,000 CWF</td>
<td>Q4 2018</td>
<td>Mill shut in November</td>
</tr>
<tr>
<td>Daiho Paper</td>
<td>Mihama</td>
<td>Japan</td>
<td>150,000 CWF</td>
<td>Q4 2019</td>
<td>PM N7 converting to Kraft paper and paperboard</td>
</tr>
<tr>
<td>Nippon Paper Ind.</td>
<td>Yufutsu</td>
<td>Japan</td>
<td>88,000 CWF</td>
<td>Q1 2020</td>
<td>Shut mill</td>
</tr>
</tbody>
</table>

3,579,000 CWF

Note: There are currently no major coated paper capacity expansions occurring globally.
## Global coated mechanical paper machine shuts/conversions, 2018-2020

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>MILL</th>
<th>COUNTRY</th>
<th>CAPACITY (TONNES/YR)</th>
<th>DATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burgo</td>
<td>Verzuolo</td>
<td>Italy</td>
<td>165,000 CME</td>
<td>Q1 2018</td>
<td>PM8 shut</td>
</tr>
<tr>
<td>Kabler &amp; Niethammer</td>
<td>Kriebstein</td>
<td>Germany</td>
<td>40,000 CME</td>
<td>2018</td>
<td>Shift to specialty grades</td>
</tr>
<tr>
<td>Arjowiggins</td>
<td>Bourray</td>
<td>France</td>
<td>73,000 CME</td>
<td>Q1 2019</td>
<td>Shut PM1</td>
</tr>
<tr>
<td>UPM</td>
<td>Piitaly</td>
<td>Germany</td>
<td>155,000 CME</td>
<td>Q3 2019</td>
<td>Shut PM10</td>
</tr>
<tr>
<td>Burgo</td>
<td>Verzuolo</td>
<td>Italy</td>
<td>400,000 CME</td>
<td>Q4 2019</td>
<td>PM9 conversion to containerboard</td>
</tr>
<tr>
<td>UPM/Blandin</td>
<td>Grand Rapids</td>
<td>USA</td>
<td>116,000 CME</td>
<td>Q1 2018</td>
<td>Idle PM5</td>
</tr>
<tr>
<td>ND Paper</td>
<td>Biron</td>
<td>USA</td>
<td>103,000 CME</td>
<td>Q3 2019</td>
<td>Shift PM25 to packaging</td>
</tr>
<tr>
<td>New-Indy</td>
<td>Catawba</td>
<td>USA</td>
<td>310,000 CME</td>
<td>NA</td>
<td>Potential conversion to packaging</td>
</tr>
<tr>
<td>Nippon Paper Ind.</td>
<td>Fugi</td>
<td>Japan</td>
<td>33,000 CME</td>
<td>2019</td>
<td>Shut PM11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,395,000 CME</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: There are currently no major coated paper capacity expansions occurring globally.

## Global uncoated freesheet machine startups, 2018-2020

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>MILL</th>
<th>COUNTRY</th>
<th>CAPACITY (TONNES/YR)</th>
<th>DATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ittihad Paper</td>
<td>Abu Dhabi</td>
<td>United Arab Emirates</td>
<td>325,000</td>
<td>Q4 2018</td>
<td>not started yet</td>
</tr>
<tr>
<td>Sun Paper</td>
<td>Yanzhou, Shandong</td>
<td>China</td>
<td>200,000</td>
<td>Q1 2018</td>
<td>Heavyweight grades including CFS, specialty</td>
</tr>
<tr>
<td>Shandong Chemning</td>
<td>Shouguang, Shandong</td>
<td>China</td>
<td>510,000</td>
<td>Q3 2018</td>
<td>Voith PM9 to focus on cut size</td>
</tr>
<tr>
<td>Shandong Bohui</td>
<td>Shandong</td>
<td>China</td>
<td>600,000</td>
<td>Q1 2019</td>
<td>PM 6 produces CM but can swing to UWF depending on demand and fiber availability</td>
</tr>
<tr>
<td>Shandong Bohui</td>
<td>Shandong</td>
<td>China</td>
<td>600,000</td>
<td>2020</td>
<td>PM ordered from Valmet</td>
</tr>
<tr>
<td>Sun Paper</td>
<td>Yanzhou, Shandong</td>
<td>China</td>
<td>450,000?</td>
<td>2020</td>
<td>Looking to place order</td>
</tr>
<tr>
<td>Malaysia Newsprint Industries</td>
<td>Mentakab</td>
<td>Malaysia</td>
<td>250,000</td>
<td>2018-2020</td>
<td>Conversion from newsprint machine</td>
</tr>
<tr>
<td>Sirpur Paper Mills</td>
<td>Auliabler</td>
<td>India</td>
<td>124,000</td>
<td>2019</td>
<td>Restart mill now owned by JK paper</td>
</tr>
<tr>
<td>DSG Paper</td>
<td>Bhanari</td>
<td>India</td>
<td>171,000</td>
<td>2019</td>
<td>New PM</td>
</tr>
<tr>
<td>Tan Mai</td>
<td>Kontum</td>
<td>Vietnam</td>
<td>200,000</td>
<td>2020</td>
<td>New pulp and paper mill</td>
</tr>
</tbody>
</table>

3,330,000 total excluding Shandong Bohui CM/UWF PM8
Global uncoated freesheet machine shuts and conversions, 2018-2020

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>MILL</th>
<th>COUNTRY</th>
<th>CAPACITY (TONNES/YR)</th>
<th>DATE</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPM</td>
<td>Nordland</td>
<td>Germany</td>
<td>200,000</td>
<td>Q3 2019</td>
<td>Convert PM2 to specialty</td>
</tr>
<tr>
<td>Flambeau River</td>
<td>Park Falls</td>
<td>USA</td>
<td>77,000</td>
<td>Q3 2018</td>
<td>Shut PM</td>
</tr>
<tr>
<td>PCA/Boise</td>
<td>Wicklitz</td>
<td>USA</td>
<td>70,000</td>
<td>Q2 2018</td>
<td>Convert to packaging</td>
</tr>
<tr>
<td>GP</td>
<td>Cenusa</td>
<td>USA</td>
<td>215,000</td>
<td>Q2 2018</td>
<td>Shut PM</td>
</tr>
<tr>
<td>GP</td>
<td>Port Hudson</td>
<td>USA</td>
<td>630,000</td>
<td>Q3 2019</td>
<td>Shut mill, exit UFS business</td>
</tr>
<tr>
<td>Ito</td>
<td>Selma</td>
<td>USA</td>
<td>215,000</td>
<td>2020</td>
<td>Delayed plans to convert to packaging</td>
</tr>
<tr>
<td>MONDI</td>
<td>Merebank</td>
<td>South Africa</td>
<td>75,000</td>
<td>Q3 2018</td>
<td>Shut PM</td>
</tr>
<tr>
<td>COPOMEX</td>
<td>Anahuac</td>
<td>Mexico</td>
<td>171,000</td>
<td>2019</td>
<td>Convert PM to containerboard</td>
</tr>
<tr>
<td>Shandong Bohui</td>
<td>Shandong</td>
<td>China</td>
<td>120,000</td>
<td>2019-2020</td>
<td>Shutting 12 old PMs when start new one</td>
</tr>
<tr>
<td>Pindo/Del/APP</td>
<td>Karawang</td>
<td>Indonesia</td>
<td>150,000</td>
<td>Q1 2019</td>
<td>Convert PM4 to packaging</td>
</tr>
<tr>
<td>Tjiwi/Kimai/APP</td>
<td>Mojokerto</td>
<td>Indonesia</td>
<td>30,000</td>
<td>Q2 2019</td>
<td>Convert PM10 to packaging</td>
</tr>
<tr>
<td>Tjiwi/Kimai/APP</td>
<td>Mojokerto</td>
<td>Indonesia</td>
<td>350,000</td>
<td>2019?</td>
<td>Convert PM11 to packaging, but may be delayed due to potential new RCP contaminant limits in Indonesia</td>
</tr>
<tr>
<td>NIPPON</td>
<td>Yufutsu</td>
<td>Japan</td>
<td>144,000</td>
<td>2020</td>
<td>Shut mill</td>
</tr>
</tbody>
</table>

2,445,000 total shuts
3,330,000 total expansions
885,000 net expansions

Closure of uncoated freesheet PM3 & PM4 at Port Hudson, LA

- Removal of 630,000 tonnes by mid-March
- Complete exit of GP from white paper
- GP was fourth-largest producer of UWF
- After GP exit, 71% of the North American industry will be controlled by three players

- The North American market will tighten briefly, but imports will pick up and exports will fall, while demand sinks 200,000-300,000 tonnes per year, quickly restoring the balance
- Europe will benefit from more exports to USA
Global newsprint demand continues to plunge in 2019-2020

Thousand tonnes

**ASIAN DECLINE ACCELERATED SHARPLY IN 2019**
- Impact of higher prices
- China and India both saw drops

**SLIDE MODERATES OVER NEXT TWO YEARS**
- Lower prices help
- Assumes better conditions in India and China, although demand will still decline in China
- But little evidence of this yet, so risk that demand is even weaker

* Percent change in global demand.
Asian newsprint prices falling sharply thus far in 2019

GLOBAL OVERSUPPLY DEVELOPED AS CAPACITY WITHDRAWALS DID NOT KEEP PACE WITH THE DROP IN DEMAND

The global market balance has shifted again
Year-to-year change and percent

TIGHTENING IN SUPPLIES TO ASIA IN 2018
• Local closures
• Rising demand from China
• Disruptions from antidumping case in the US

TIGHTNESS DISSIPATING
• Dramatic drop in global demand
• Less demand from China for now
Asian newsprint imports: Less from Asia, more from Rest of World, more to China

Share went from 21% to 37%

China's share at 18% in 2018

Take home points

01 Global graphic markets easing due to weakness in global economy

02 High paper prices have accelerated demand losses
   Globally, up to 1.0 million tonnes or an additional 1% of demand lost in 2018

03 No more safe havens
   China is no longer the growth engine of the world
   Packaging papers becoming oversupplied (slowing demand + large number of projects within the next three to five years)

04 Increased competition in export markets
   Producers using exports to limit losses in operating rates (newsprint in North America)
   Demand slowdown is reducing opportunities globally

05 Capacity closures will still be needed to compensate for production losses