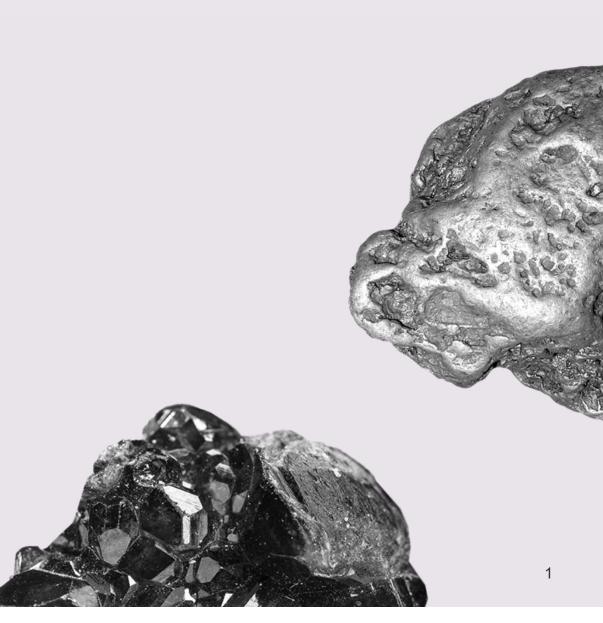


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Jornadas Celulósico Papeleras – Argentina 2019



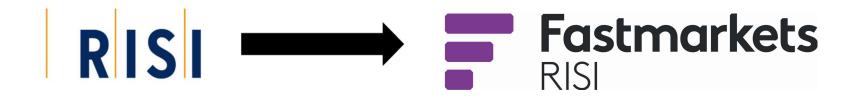
Agenda

Introductions Fastmarkets RISI Pulp market Printing & Writing Packaging Tissue

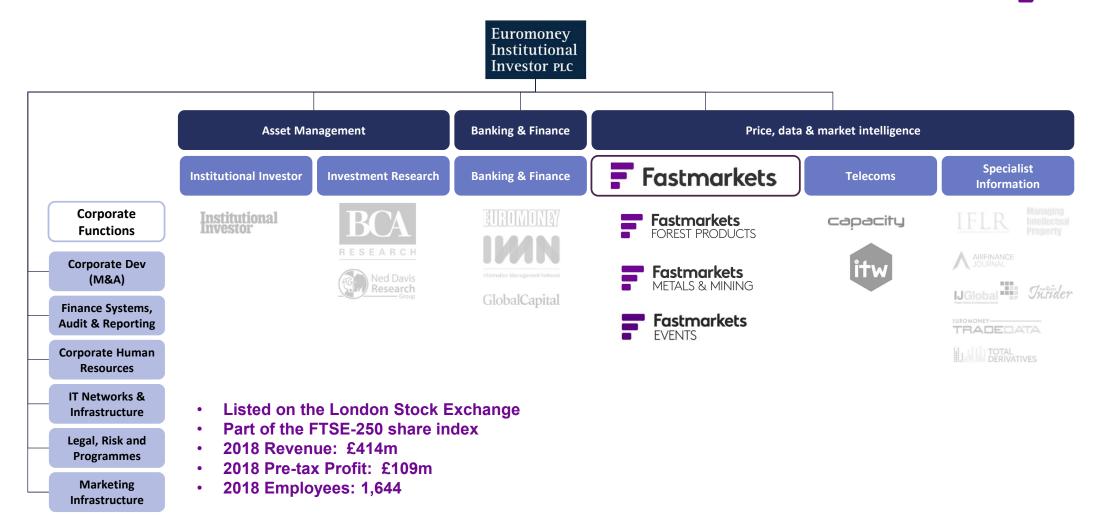
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Our new brand



We are part of Euromoney - a \$1b+ market cap FTSE-250 company



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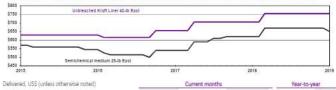
Fastmarkets in numbers



Fastmarkets

PPI Pulp & Paper Week

PRICE WATCH: Containerboard/ Kraft Papers Domestic





DOMESTIC OPEN MARKET PRICE Lingebrard (47.th unblagebod keatt)

Unercoard (42-10 undersched kran) East West High performance (35-36 lb) White top, East White top, West	sh. ton sh. ton sh. ton sh. ton sh. ton	\$750 - 760 750 - 760 770 - 780 970 - 980 980 - 990		150 - 760 150 - 760 170 - 780 170 - 980 180 - 990	\$750 - 760 \$700 - 710 71% 750 - 760 700 - 710 7.1 770 - 780 720 - 330 6.9 970 - 880 920 - 930 5.4 980 - 990 930 - 940 5.3
Corrugating Medium (26-Ib semichemical) East West	sh. too sh. too	645 - 655 655 - 665		65 - 675 65 - 675	PPI Pulp & Paper Week
Export linerboard (unbleached kraft) 175-g+ Southern Europe (CIF) 175-g+ China (CKF) ¹ 42-Ib Laredo border/ Mexico (FOB) 42-Ib Laredo border/ Mexico (FAS)	tonne tonne tonne sh. ton	€ 595 - 605 700 - 730 675 - 685 600 - 610		520 - 630 730 - 750 575 - 685 510 - 620	PRICE WATCH: B
KRAFT PAPERS					\$1,200
Unbleached Extensible multiwall sack, 50-lb Natural multiwall sack, 50-lb Grocery bag, 30-lb	sh. ton sh. ton sh. ton	1,320 - 1,340 1,165 - 1,175 1,350 - 1,370	1,1	120 - 1,340 165 - 1,179 150 - 1,370	5 \$1000
Bleached Grocery bag, 30-lb	sh. ton	1,640 - 1,650	a) 1,6	540 - 1,650	\$900

NOTES

*Decounting has been reported below price shown: 1. From Jenuwy 2018 the reference to knop Kong was removed. This is a change in location name, not in method 2. Share price increase semiconcers by major producer (c) but not reflected in current data.

Other containerboard grades and basis weights: Recycled Inerboard is currently selling for \$3,\$30/ton below unb Other containerboard Sizils weight differen 26 lb, up 300/ton 90 lb, up \$10/ton DISCLAIMER rd 42-lb (metboard in eastern U.S. 33-58 Br, 0-to up 520/ton 33-33 Br, up \$30-30/ton

PACKAGING BOARD

Prices are for domestic grades, RMB/tonne, East China⁷, including taxes. Containerboard prices are ex-mill and cartonboard prices are ex-major distributor's watehouse.

		current prices		year ago	current price - change! vs		
	basis weight	Jan 2019	Dec 2018	Jan 2018	month	year o	ago
Virgin fiber-based containerboard Kraftliner ¹	1/5g	\$700 - 780	725 - 800	740 - 760	-25		
Recycled containerboard	1.0.0						
Testliner	140g	RMB 4350 - 4520	4500 - 4400	4440 4580	+85	-125	-2.7%
Kraft-top liner	170g	4650 - 4900	4600 - 4800	4750 - 4980	+75	-90	-1.8%
White-top liner	140g	5450 - 5770	5450 - 5770	5690 - 5980	100	-725	-5.9%
High-strength corrugating medium	120g	3900 - 4260	3800 - 4210	3800 - 4200	+75	+80	+2.0%
Cartonboard							
Coated ivory board (premium)	250g	7000 - 7200	7200 - 7400	7400 - 7500	-200	-350	-4.7%
Coated ivory board (commodity)	250g	4950 - 5200	5000 - 5300	6600 - 6900	.75	1675	-24.8%
Grayback coated duplex board (premium)	250g	4700-5050	4700 - 5050	4950 - 5150		-175	-3.5%
Grayback coated duplex board (commodity)) 250a	4300 4650	4200 - 4650	4500 - 4200	+50	-25	-0.6%

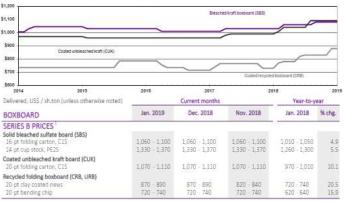
1 Changes calculated based on the midpoint of price ranges.

2 Fast China includes Zhejiang, Jiangsu, Ankui, Jiangsi and Shandang provinces, and Shanghai municipality. 3 Imported mainly from the US, Europe, Russia and Australasia. Prices are in \$/tonne CIF East China ports.

* Converting reels into sheets costs IOMB 100-150/tonne in China, and prices for the grades in sheets can therefore be worked out using prices for reels



CE WATCH: Boxboard



NOTES

* Discounting has been reported below price shown

Future price increase ennounced by major producer (t) but not reflected in current date. 1. Roshoard proces above and below these levels have been reported.

DISCLAIMER

While the information contained in this report has been obtained from sources believed to be reliable. Fastmarkets RISI does not warrant or guarantee the accuracy and completeness of the information. All prices are best estimates of prices, and are composite prices as opposed to median or average prices.

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US Containerboard Pilot Net Change Indices

CONFIDENTIAL

Linerboard

Index month: January 2019

Point-based calculation for weighted average net delivered price for performance-based* linerboard orders placed or received during the month of January 2019. Base month of September 2017 = 100.

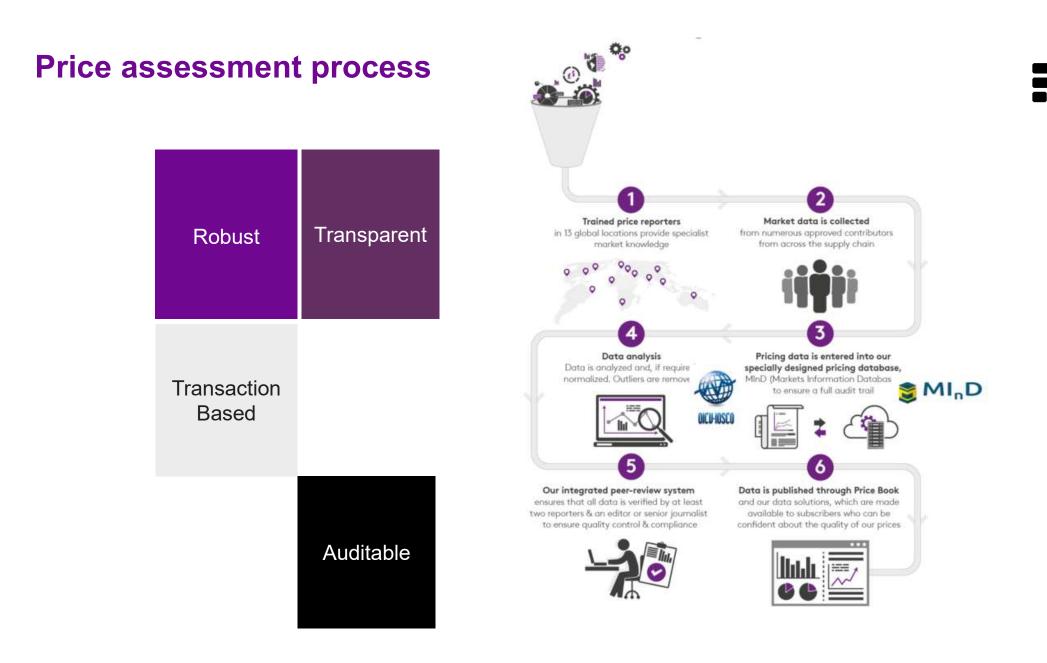
Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18 Dec-18 Jan-19 103.8 102.8 102.5 108.7 112.0 110.8 110.8 110.8 110.4 110.3 110.3 110.2 110.2 110.2 108.0



PRICE WATCH 2018: SOUTH KOREA

Prices are in Won/torne, unless otherwise noted, net after discounts, free delivered with payment terms of 90-100 days cash after delivery. Market pulp prices are in Shorne, CIF, Imported recovered pager prices are in Shorne, free delivered to customers' warehouse in containers. Domestic

5252527252525	Basis weight	4th quarter	3rd quarter	4th quarter	% change
GRAPHIC PAPER	(g/m²)	2018	2018	2017	2018/201
Newsprint (domestic)	48.8-g	720000-750000	720000-750000	650000-670000	11
	46-g	720000-750000	720000-750000	650000-670000	11
Uncosted mechanical					
Reels (domestic)	80-g	950000-1050000	950000-1050000	950000-1050000	0
Reels (domestic)	70-g	950000-1050000	950000-1050000	950000-1050000	0
Book paper reels (domestic)	80-g	1,080,000	1,080,000	1,080,000	0
Book paper reels (domestic)	60-g	1,320,000	1,320,000	1,320,000	0
Coated mechanical					
LWC reels	60-g	850,000	940,000	1,020,000	-7
Uncoated woodfree**					
Reels (domestic)	100-a	1,140,000	1,140,000	1.070.000	7
Reels (domestic)	80-g	1,150.000	1,150,000	1.080.000	6
Reels (domestic)	70-g	1,190,000	1,190.000	1,120,000	6
Coated woodfree	10.20.201				
Reeks (domestic)	100-g	1,130,000	1,130,000	1,060,000	7
Reels (domestic)	80-g	1.370.000	1.370.000	1.300.000	5
PACKAGING P&B					
Recycled containerboard					
Testliner (domestic)	210-a	570.000	570.000	530.000	-3
	180-g	550 000	550.000	510.000	3
Corrugating medium (domestic)	115-g	460.000	460.000	420.000	-3
Kraft paper					
Unbleached sack kraft (domestic)	80-g	880,000	880,000	750,000	1
Boxboard**					
Solid bleached board (domestic)	350-c	1.500.000	1.500.000	1.500.000	· 0
Coated duplex (whiteback)#	350-g	930.000	930.000	900.000	0 -1
Coated duplex (grayback) ²	350-g	740,000	740,000	760,000	-3



Pulp Overview Growing Uncertainty Leads to Cautious Optimism

Recent Market Conditions

Impact of Chinese import policies behind us for pulp

Review the latest policies implemented in China for recovered paper imports and their impact on global fiber markets

Supply disruptions ease, but risks remain

After the strong uptick in supply disruptions through much of 2018, markets adjust as supply normalizes

End-user margins squeezed by rising input costs

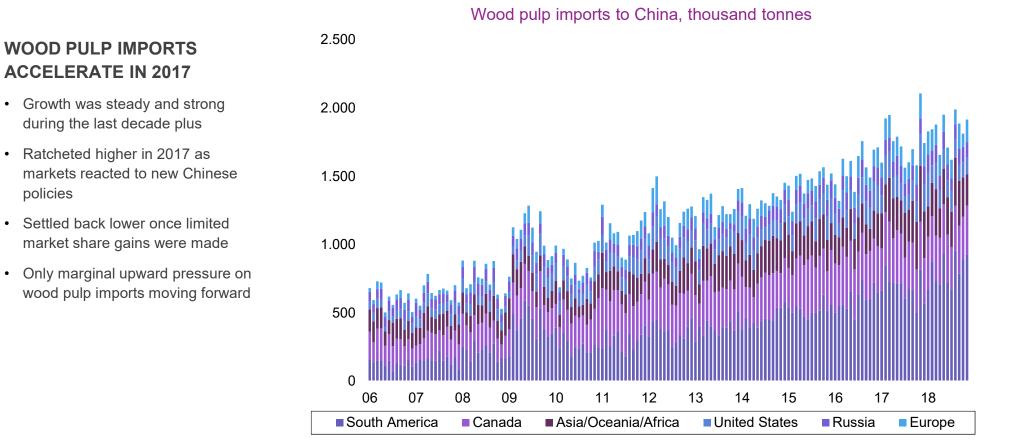
Rapid rise in pulp prices and other inputs drive margins for nonintegrated paper and board producers lower

Demand in China falters and prices plummet

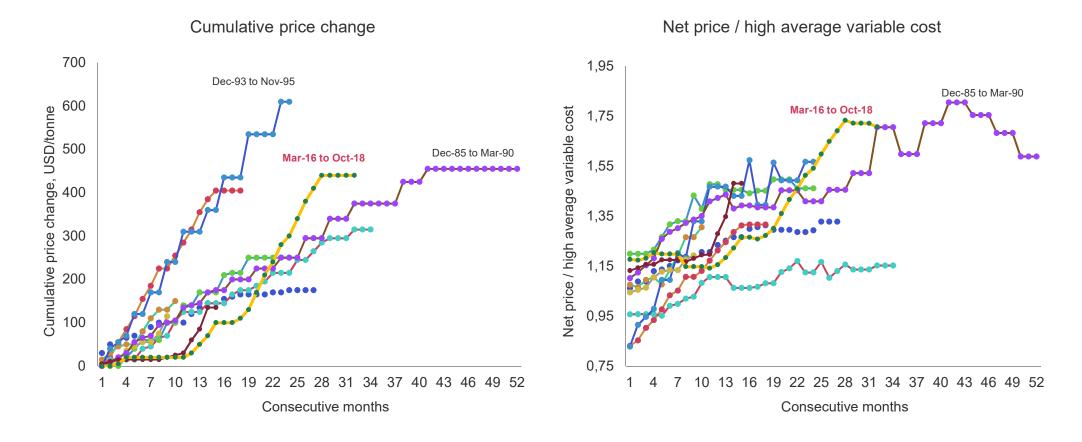
Absence of seasonal improvement in demand this fall, along with more normalized supply, pushes pulp prices lower

China wood pulp import growth slows

policies



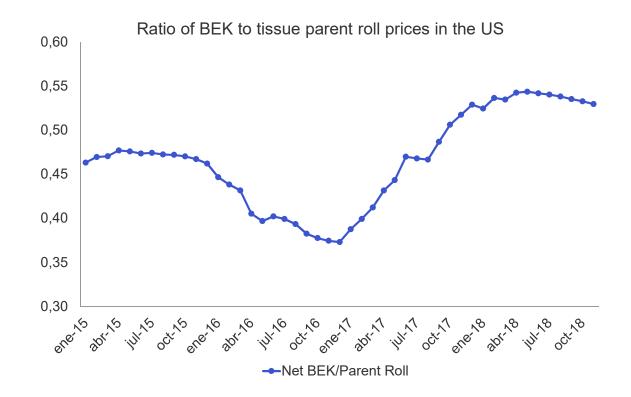
Pulp markets recently completed an historical run



Meanwhile, paper and board producers margins squeezed

PRODUCT PRICES NOT ABLE TO KEEP PACE WITH PULP

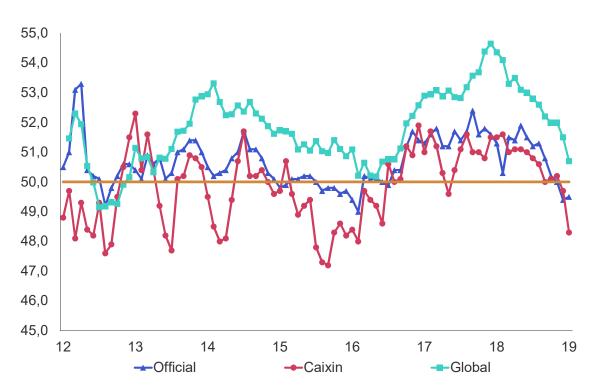
- Margins increasingly tight
- Some paper markets already weak due to oversupply
- Tissue producers especially challenged



China stalls as global economic growth slows

SYNCHRONIZED GLOBAL GROWTH DECELERATING

- Developed countries still growing, but at a slower rate
- This is not unexpected given the length of this business cycle
- New leaders, policies and the rise of protectionism have both stimulated growth and created headwinds
- The Chinese economy has decelerated markedly



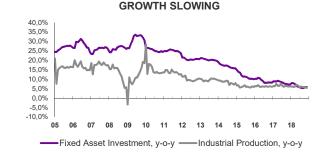
Purchasing manager's indices

China Macro Data Indicates Significant Slowing

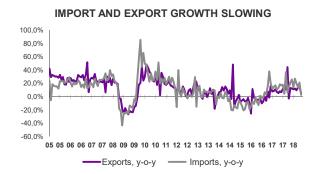
CHINA DECELERATING

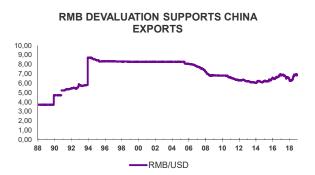
Chinese economy is hurt by trade war with US but also by issues related to the transition from investment based to consumption based economy.

- RMB devaluation against dollar helps on exports, but harms imports (energy, investment goods).
- RMB has strengthened recently
- Major risks related to the high amount of debt in the economy.
- Huge stimulus to support economy; both fiscal (lower RRR and taxes) and investment (6,800 km of new track in 2019).
- It is assumed that China "manipulates" GDP figures.

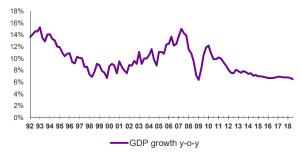


INDUSTRIAL PRODUCTION AND INVESTMENT









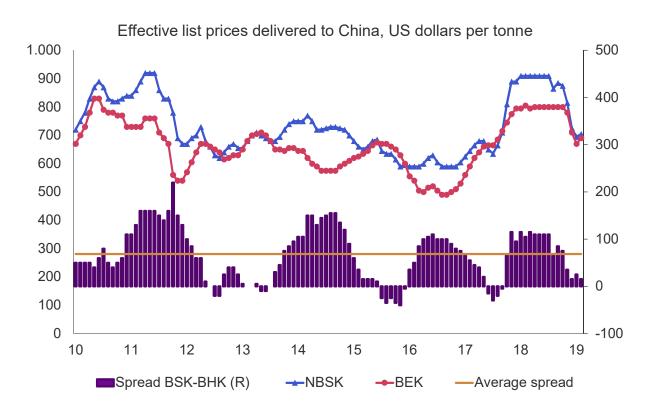
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14

NBSK premium to **BEK** falls as prices tumble

THE OUTSIZED SPREAD BETWEEN NBSK AND BEK HAS CORRECTED

- The large spread allowed BSK to fall harder and faster at first
- Spread is now below cash cost differential, making NBSK more attractive on the margin
- There is a chance that NBSK may firm and move higher before BEK if/when prices recover meaningfully



Outlook for market pulp

Growth in end-use markets is slow and steady

Production of paper and board expected to grow moderately, but the grades matter for type of fiber consumed and the impact on fiber demand

Minimal new capacity expected through 2020

Anticipation of new supply, which has since been delayed, resulted in dearth of projects ready to break ground

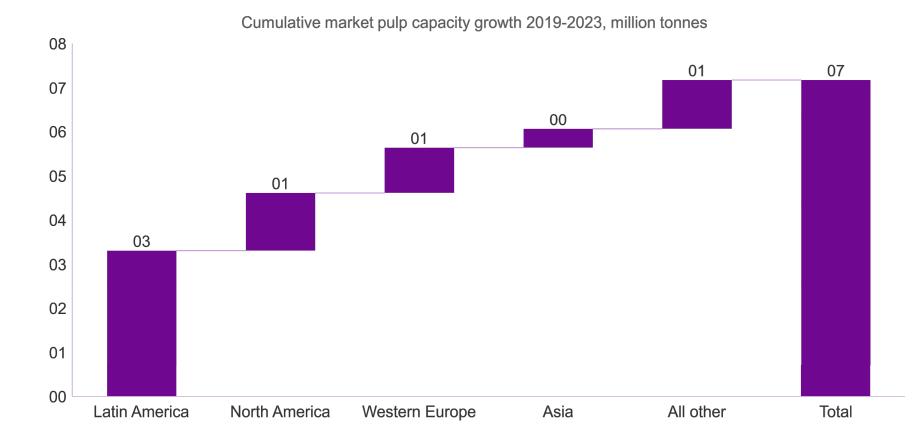
Many project announcements after price run

The list of proposed projects for the 2021-2022 time frame is growing, but only a few projects will end up moving forward

Tighter markets expected in the near term

Assuming China reaccelerates, the increase in demand against modest capacity gains should result in tighter markets, placing upward pressure on prices

Market pulp supply growth focused in Latin America



Little growth in BHK supply through 2020

Company	Mill	Country	Project	Capacity 000's Tonnes
Suzano	Maranhão	Brazil	Incremental growth, net of integration to tissue	90
ENCE, Altri, Navigator	Systemwide	Iberia	Incremental growth, net of integration to tissue	250
APRIL	Kerinci	Indonesia	Further conversion dissolving pulp, 2018-19	-500
UPM	Kaukas & Kymi	Finland	Debottleneck, 2017-18	150
Oji	Nantong	China	Debottleneck, 2018	70
Yongxin	Huatang	China	Conversion from nonwood, 2018	40
Sun Paper	Savannakhet	Laos	Greenfield BHK/DP, started 2018 Q2	300
Eldorado	Três Lagoas	Brazil	Additional environmental permit	55
Montes del Plata	Montes del Plata	Uruguay	Debottleneck, 2018	100
Chenming	Huanggong	China	Greenfield BHK/DP, started 2018 Q4	600
Net Total 2017-2020				1,155
Chenming	Shouguang	China	Integrated BHK to 1 mm MT UFS	1,200



Many more BHK projects expected after 2020

Company	Mill	Country		Capacity 000's Tonnes
llim	Koryazhma	Russia	Rebuild, 2020	100
Arauco	Horcones	Chile	Net gain from new line starting and old line closing, 2021	1,280
KaiCell	Paltamo	Finland	Greenfield, 2021	275
UPM	Paso de los Toros	Uruguay	Greenfield, 2021	2,100
APRIL	Lençóis Paulista	Brazil	New swing DP/BHK line, 2021	1,500
Sun Paper	Savannakhet	Laos	Conversion to DP, 2019	-300
Eldorado/ Paper Excellence	Três Lagoas	Brazil	New line, 2022 ?	2,300
Sveza	Vologda	Russia	Greenfield, 2022	800
Chenming	Huanggong	China	Conversion to DP, 2020-22	-600
Net Total 2021-2022				7,455

In Latin America, the list of potential projects grows

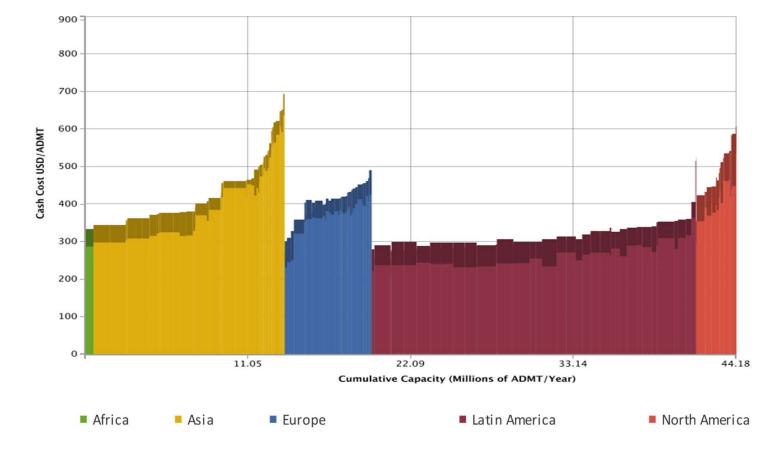
Project	Location	Country	Production	Capacity (tonnes/yr)	Date	Status
Eldorado Vanguarda 2.0	Três Lagoas, Minas Gerais	Brazil	BEK	2.5 million*	2019	Delayed
Arauco (MAPA project)	Biobío	Chile	BEK	1.5 million	2021	Earthworks; equipment purchased
UPM	Paso de los Toros	Uruguay	BEK	2 million*	2022/2023*	Planned; negotiatons with local authorities for infraestructure
Suzano	Mato Grosso do Sul/São Paulo	Brazil	BEK	2 million*	unknown	Not confirmed
CMPC	Rio Grande do Sul	Brazil	BEK	2 million*	unknown	Not confirmed
Euca Energy	Alto Araguaia, Mato Grosso	Brazil	BEK	2 million*	2023*	Planned; requiring envi- ronmental permit
CRPE	Ribas do Rio Par- do, Mato Grosso do Sul	Brazil	BEK	2.2 million*	unknown	Planned
Lwarcel	Lençóis Paulista, São Paulo	Brazil	BEK/DP	1.5 million*	2021	Planned; hosted public meetings
Duratex/Lenzing	Minas Gerais	Brazil	DP	450,000	2022	Planned
Jari	Pará	Brazil	DP	750,000*	unknown	Planned; seeking for partner

Note: *= estimated Source: PPI Latin America

BHK cash cost curve from cost benchmarking

LATIN AMERICAN PRODUCERS DOMINATE THE LOW END OF THE COST CURVE

- Latin American producers benefit from low-cost wood and the exchange rate
- Higher-cost facilities tend to be much smaller and located in Asia and the Northern Hemisphere



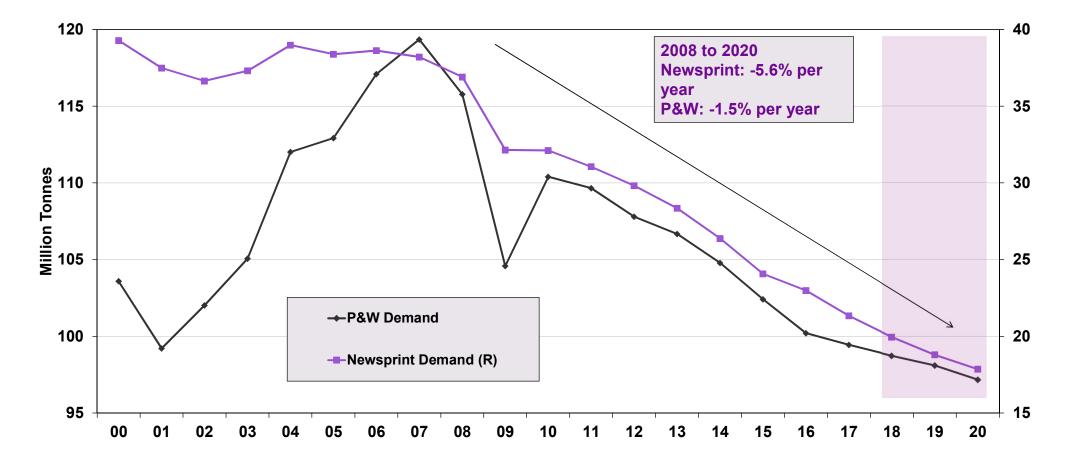
90.000 0,93 80.000 0,92 70.000 0,91 60.000 Thousand tonnes 0,9 50.000 40.000 0,89 30.000 0,88 20.000 0,87 10.000 0 0,86 11 12 14 13 15 16 17 18 19 20 Market pulp consumption Market pulp capacity ----Shipment/Capacity ratio (R)

Pulp market still expected to grow tighter



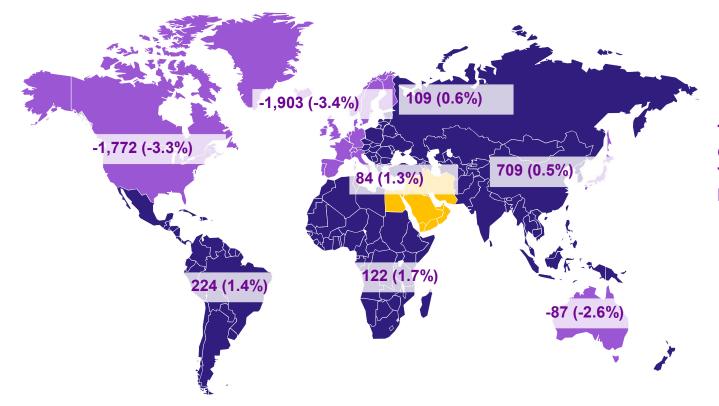
Printing & Writing Overview Growing Uncertainty Leads to Cautious Optimism

Global Demand for Printing & Writing Papers Started Declining in 2008, Newsprint in 2001



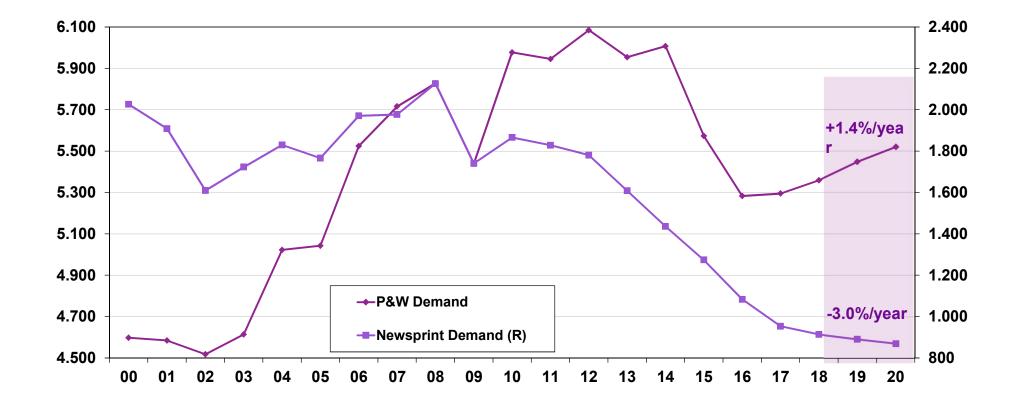
P&W DEMAND IN EMERGING MARKETS TO PARTIALLY OFFSET DECLINE IN DEVELOPED WORLD FOR 2018-2020

THOUSAND TONNES, PERCENTAGE PER YEAR



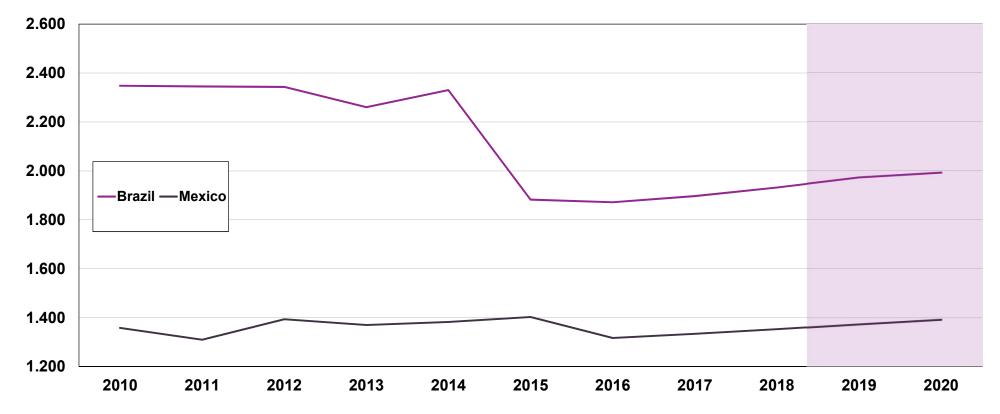
Three-year Total Global Growth: -2.504 million tonnes Three-year Average Percentage Change: -1.0%

Latin American Demand for Newsprint Continues to Fall, but Printing & Writing Stabilized in 2017 and Will Return to Growth Thousand Tonnes



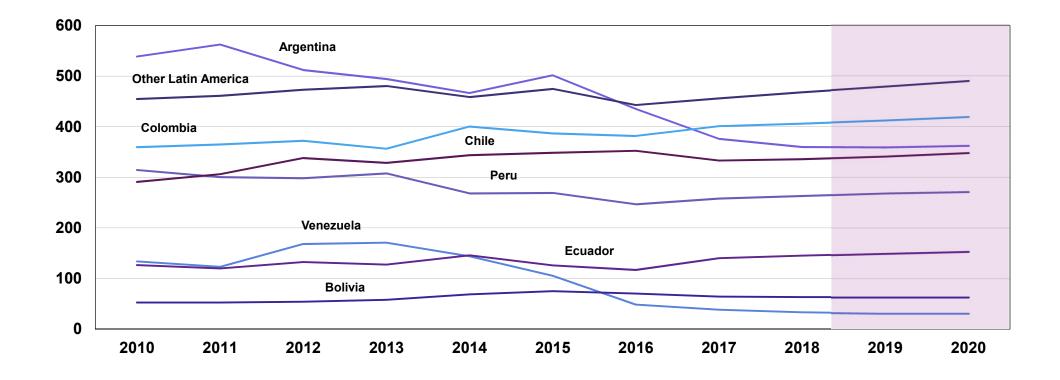
Printing & Writing Demand Declines in Brazil and Mexico Have Stopped, Growth Has Returned

Thousand Tonnes



Printing & Writing Demand in the Smaller Latin Countries Is Growing (Except Argentina and Venezuela)

Thousand Tonnes



Latin America Continues to Import a High Percentage of Its Demand Despite Low Costs and Ample Fiber

90% Ctd. Mechanical 80% Ctd. Freesheet **Unc.** Mechanical 70% Newsprint 60% 50% 40% **UWF Imports rising** 30% due to new capacity in Asia 20% **Unc. Freesheet** 10% 0% 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Net Imports as a Percentage of Demand

Global ADD/CVD Duties on Cut Size Copy Paper

Brazil is facing tariffs on exports to USA, Australia, Mexico and Pakistan

	ADD	Dates	Status		ADD	CVD	Dates	Status
<u>Australia</u>				<u>USA</u>				
Austria	21.6%	2018	Preliminary	Australia Paper	222%		2015	In place
Finland	16.9%	2018	Preliminary	· · ·	17%		2015	· .
Russia	4.2%	2018	Preliminary	Suzano			2015	<mark>In place</mark>
Slovakia	17.4%	2018	Preliminary	Portucel	8%		2015	In place
South Korea	34.2%	2018	Preliminary	APRIL	2%	4%	2015	In place
China	3.1% to 34.4%	2017	In place	Indonesia				
Indonesia	12.6% to 45.1%	2017	In place	APP Indonesia	17%	109%	2015	In place
Brazil	<mark>2.9%</mark>	<mark>2017</mark>	<mark>In place</mark>	Asia Symbol	84%	7%	2015	In place
Thailand	13.4% to 23.2%	2017	In place	APP China	149%	7%	2015	In place
<u>Pakistan</u>				UPM China	149%	177%	2015	In place
Japan	39.1%	2018	In place				2010	piece
Brazil	<mark>35.9%</mark>	<mark>2018</mark>	<mark>In place</mark>	Sun Paper China	149%	177%	2015	In place
China	21.9%	2018	In place	India				
Thailand	2%	2018	In place					
	10.62% to	0040		Indonesia			n/a	Under investigation
Indonesia	10.62% to 20.66%	2018	In place	Thailand			n/a	Under investigation
				Singapore			n/a	Under investigation

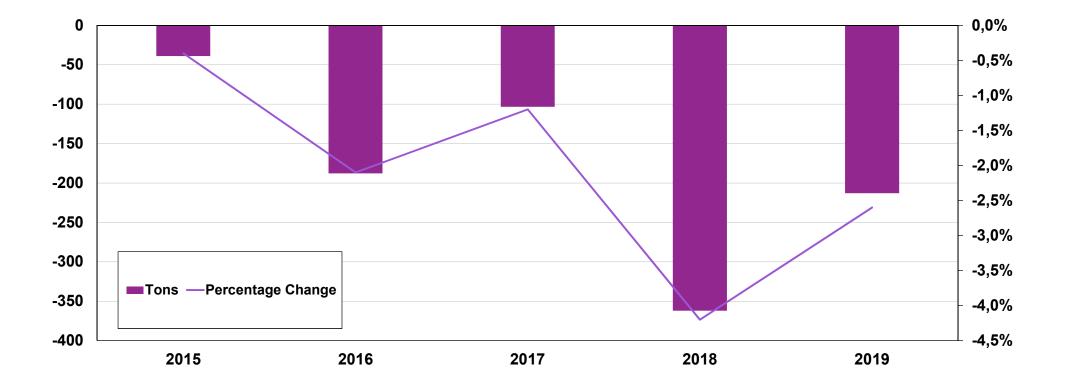
<u>Mexico</u> **Brazil**

<mark>2013</mark>

<mark>38%</mark>

Uncoated Freesheet Capacity Closures Picking Up Speed in North America

Thousand Tonnes, Percentage Change

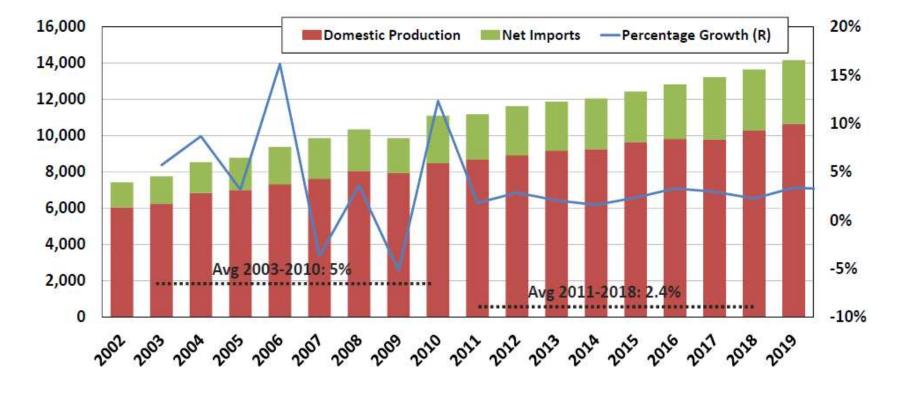


Containerboard

Giant projects in LatAm, will demand follow?

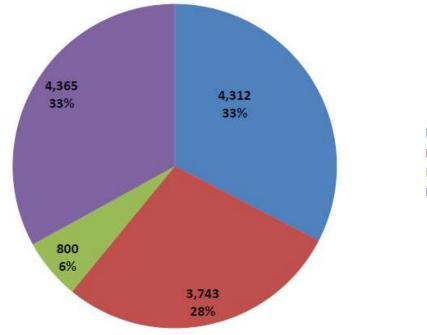
Containerboard Demand Growth in Latin America

Thousand Tonnes, Percentage Change



Latin American Containerboard Consumption

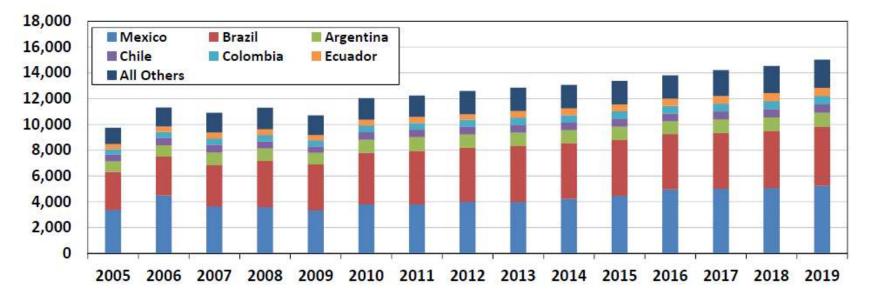
Thousand Tonnes, Percentage of Total Consumption, 2017





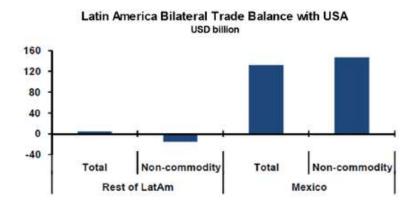
The Latin American Packaging Markets Are Far from Homogeneous

Latin American containerboard apparent consumption is concentrated in just a few countries

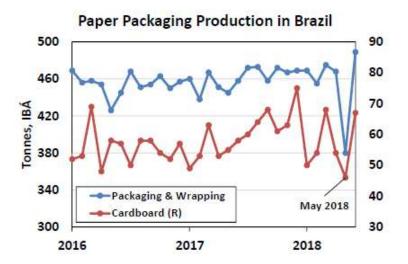


Downside Risks: Growth Momentum Worsened; Uncertainty Mount

World: Trade War

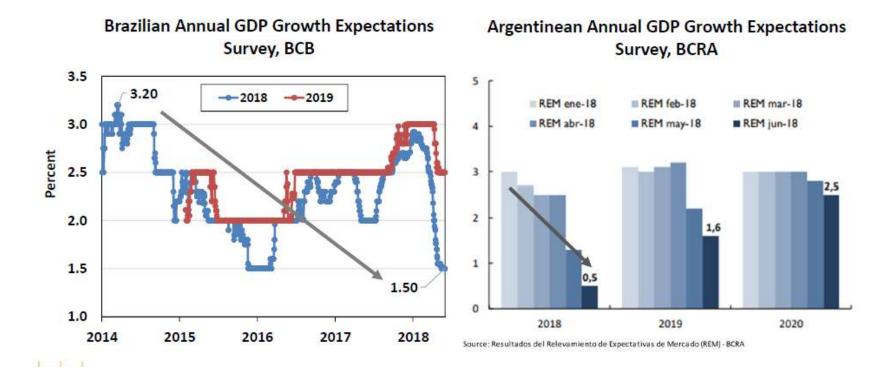


Brazil: Truckers' Strike



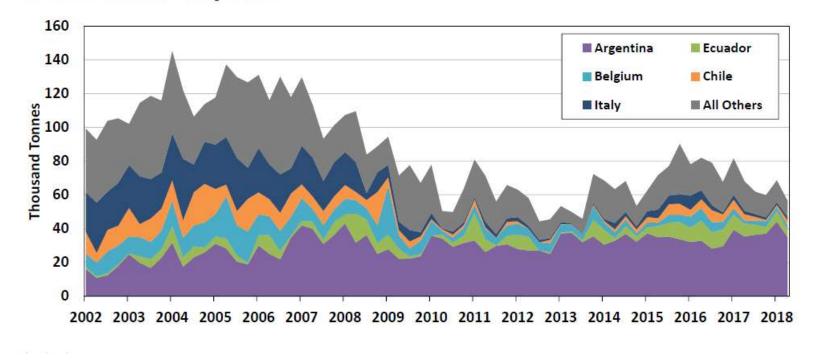
Source: National Sources, J.P. Morgan

Downside Risks: Growth Momentum Worsened in Brazil and Argentina



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Argentina Is the Largest Destination for Brazilian Kraftliner Exports



But in 2019 exports to Argentina are declining...

Brazilian kraftliner exports

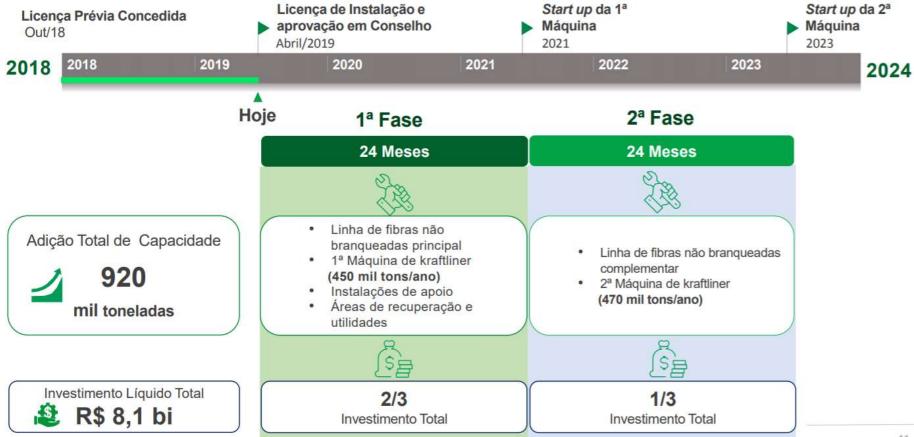
(tonnes)

	1Q19	1Q18	% chg. 2019/18
World	66,480	68,635	-3.1%
Argentina	35,564	44,233	-19.6%
Ecuador	8,645	6,404	35.0%
Chile	4,147	945	338.8%
Belgium	3,023	2,575	17.4%

Source: GTIS.

Note: The figures are subject to revision.

New Klabin project: PUMA II



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11





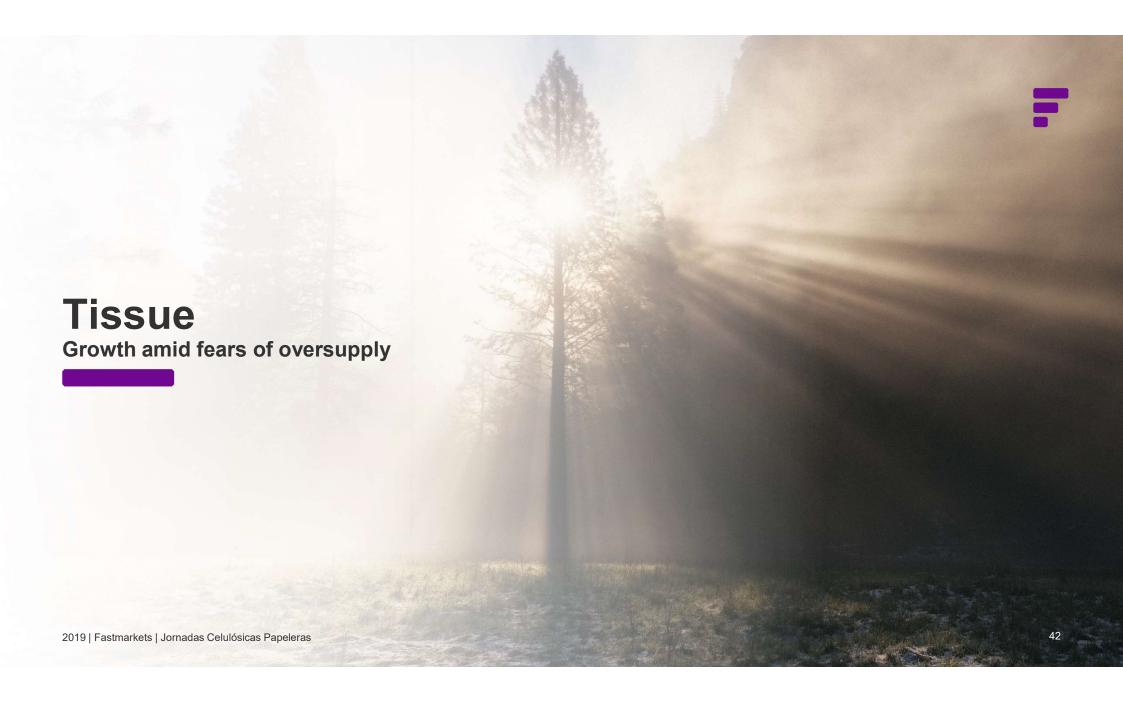
< SEARCH

WestRock announces \$345M investment to add 210,000 tonnes/yr of kraftliner capacity in Brazil

Edit this story

SAO PAULO, 6 November 2018 (PPI Latin America) - WestRock has announced a \$345 million investment at its Três Barras mill in southeast Brazil, including additional virgin pulping capacity, a new biomass power boiler, a new turbine generator and the debottlenecking of two paper machines (PMs). With the expansion, the mill will increase its current capacity of 520,000 tons/yr (470,000 tonnes/yr) to a new volume of 750,000 tons/yr (680,000 tonnes/yr). The construction works will begin in February 2019 and startup is planned for March 2021. ADVERTISEMENT





Latin American tissue capacity growth and utilization





Latin American tissue demand



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Major tissue paper capacity changes in Latin America. Thousand tonnes

Cia Canoinhas de Papel	Canoinhas, Santa Catarina	Brazil	30	2018:Q4	New Avantis 16 2.8 m trim, 2,000 m/min PM from Hergen; delayed from 2017
Blue Tissue SAPI	Apitaco, Tlaxcala	Mexico	30	2019:Mar*	New mill and 2.8 m trim PM from A.Celli Paper with an iDEAL ForgedYD
Celulosa Campana	Lima, Buenos Aires	Argentina	30	2019*	New 2.75 trim PM delivered by Recard; PM delivered but some components still missing
Confidential	Confidential	Bolivia	25	2019*	New 2.8 m trim, 1,600 m/min Crescent former EVO 16 PM from Hergen
Papelera Vinto	Unrevealed location	Ecuador	18	2019*	New 2.7 m trim, 1,100 m/min Smart Fit PM for a greenfield mill, supplier Hergen
Essity	Ciudad Sahagun, Tepeapulco Hidalgo	, Mexico	30	2019:Mid	New 2.75 m trim, 1,300 m/min TAD PM from Toscotec
Papelera Nicaragua (Grupo Vual)	Los Cardales, Pilar	Argentina	23	2019:Q3*	New 2.75 m trim, 1,300 m/min Toscotec PM with a steel-fabricated Yankee (PM5)
Papelera San Andrés de Giles	San Andrés de Giles	Argentina	34	2019:Q4*	New 2.8 m trim, 2,000 m/min PM from Valmet
Softys Argentina (former Papelera del Plata, CMPC Tissue)	Zárate, Buenos Aires	Argentina	54	2019:End	New PM from Valmet

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18

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Thank you for your attention

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