



Europulp/Utipulp Seminar

Barcelona

17th September 2015

Agenda



- Regional market pulp demand & drivers
- Short-term market summary, macro- and micro- price drivers
- Supply-side dynamics
 - New capacities, impact from dissolving pulp
 - Impact of Brazilian devaluation
- Concluding remarks

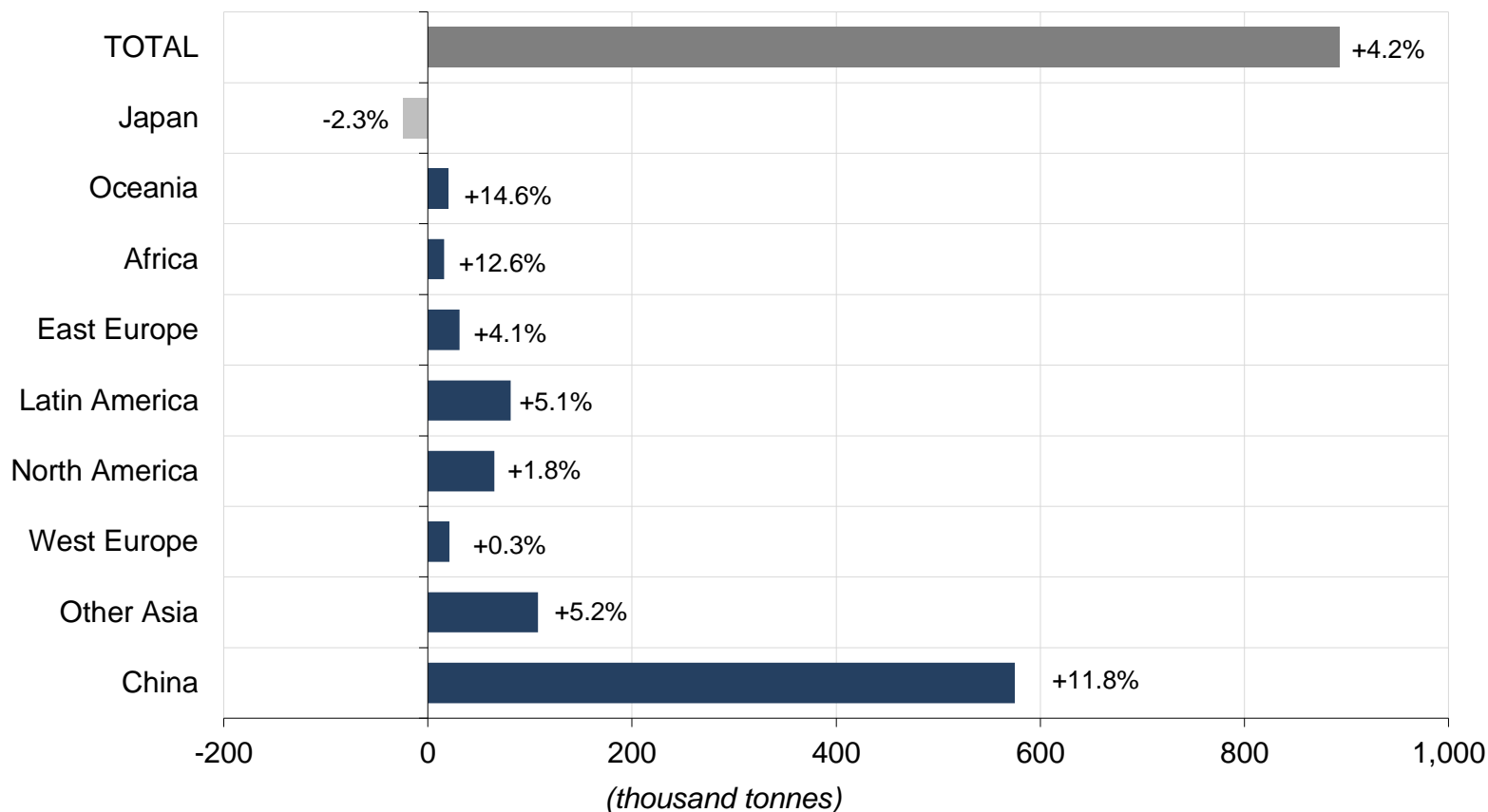
Strong pulp shipments so far this year...

Growth is entirely accounted for by eucalyptus. BSKP and other hardwoods are flat



World-20 BCP Shipments, by region, 6 months 2015 v 2014

thousand tonnes and %

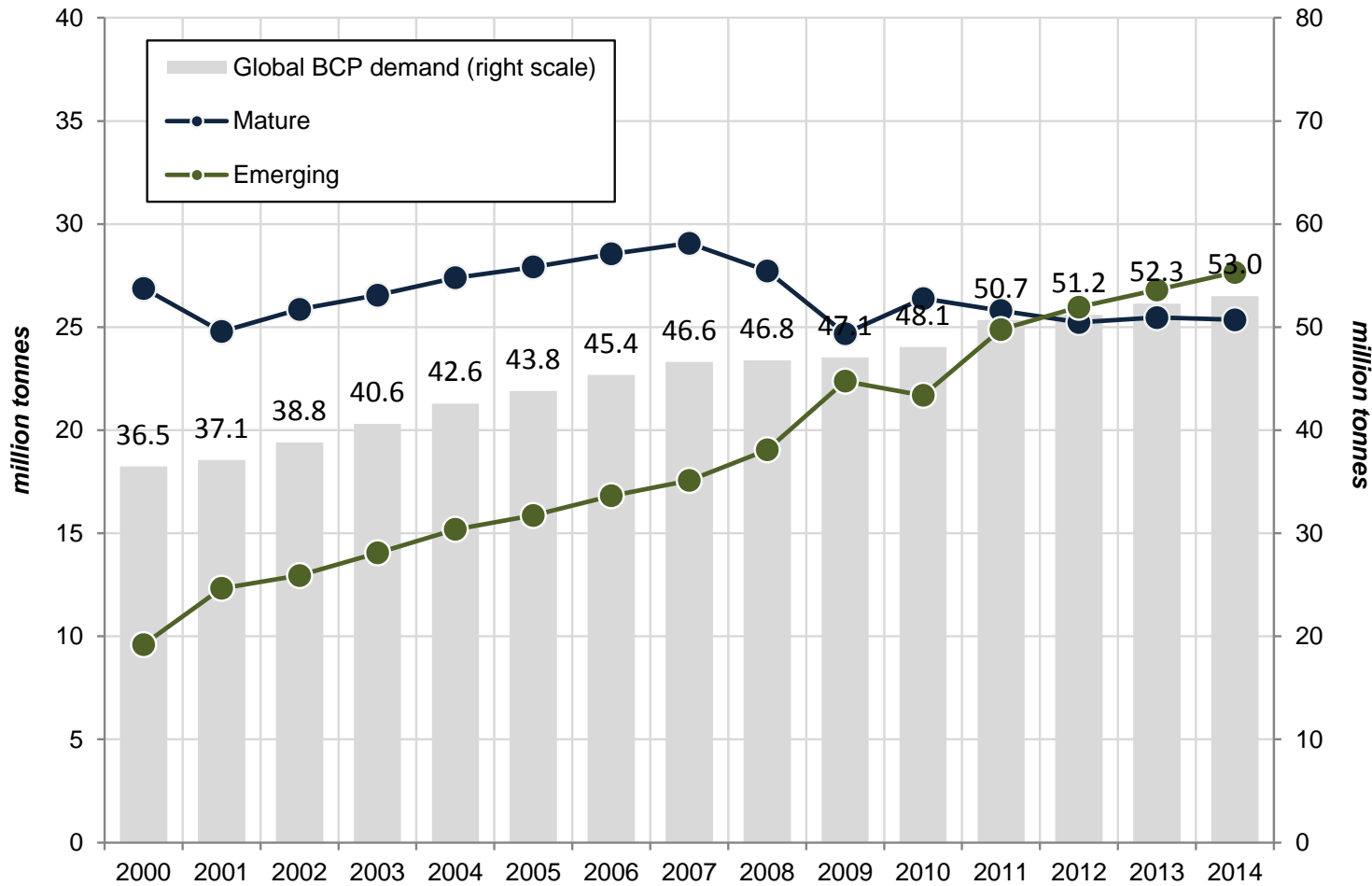


Source: PPPC

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...more than double trend rate of past two years

Global shipments average +0.8 million in 2014 and 2013



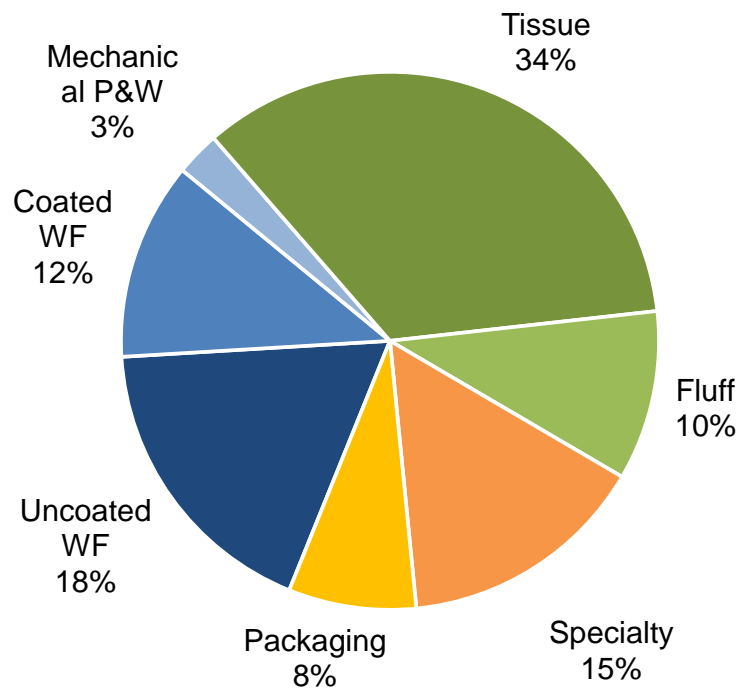
Source: Hawkins Wright

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Bleached kraft market pulp demand: by end use sector

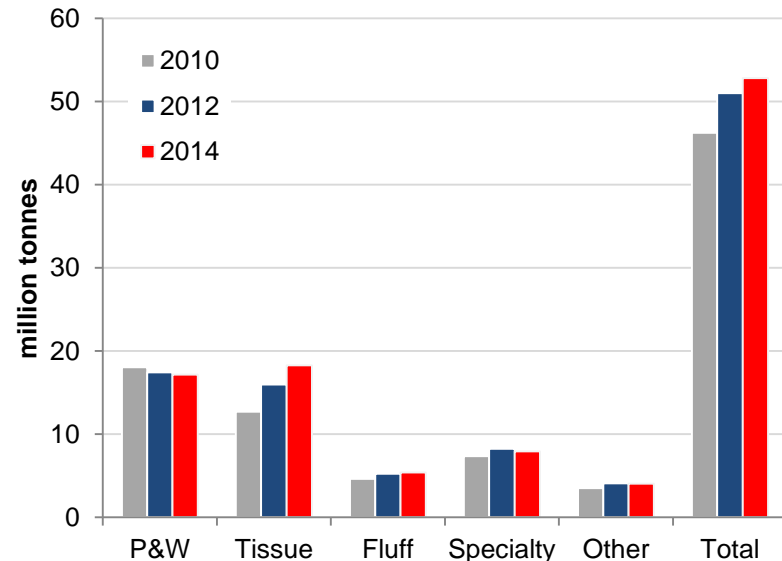


Global BKP shipments 53 million t in 2014,
split as follows:



Source: End use report published August 2015

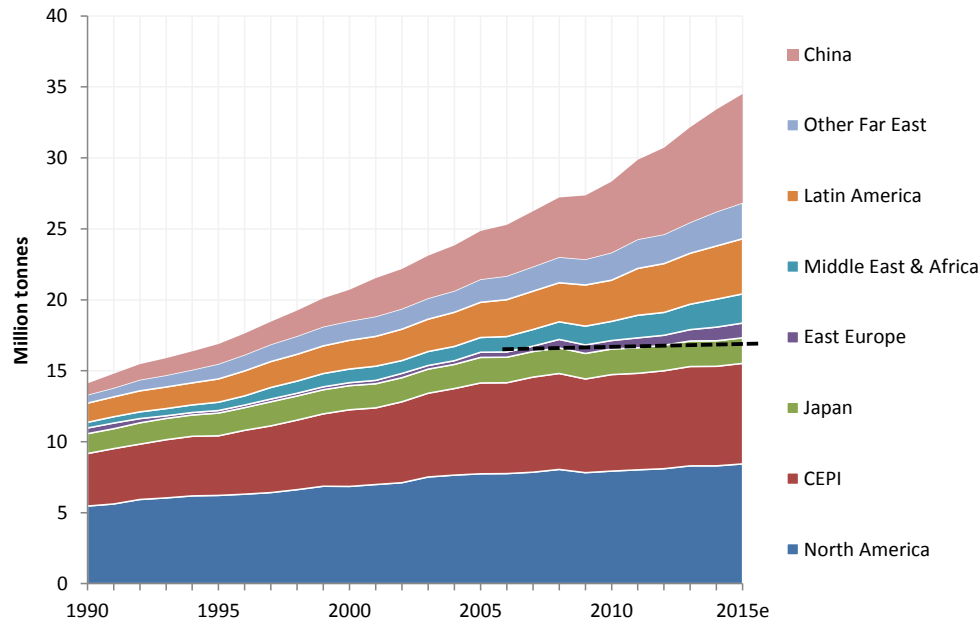
- The importance of the printing and writing sector has diminished both in percentage and absolute terms. Nevertheless, the sector remains an important consumer of market pulp, particularly in Europe, China, and others like Korea.
- The tissue sector has grown in both percentage and absolute terms. Growth in fibre demand from the tissue sector over the past four years exceeds that implied by tissue production due to substitution for other fibres, and stock-building as capacity rises.



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Production



Capacity growth (confirmed projects)

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- Tissue production remains very much dependent on emerging market growth. In three years 2011-14, tissue production grew by around 3.5 million tonnes.
 - NA, CEPI, Japan combined accounted for just 0.4Mt
 - China 1.6Mt
 - Other emerging 1.5Mt, whilst India remains on the side-lines
- Nevertheless, investment in new capacity is not restricted to emerging markets

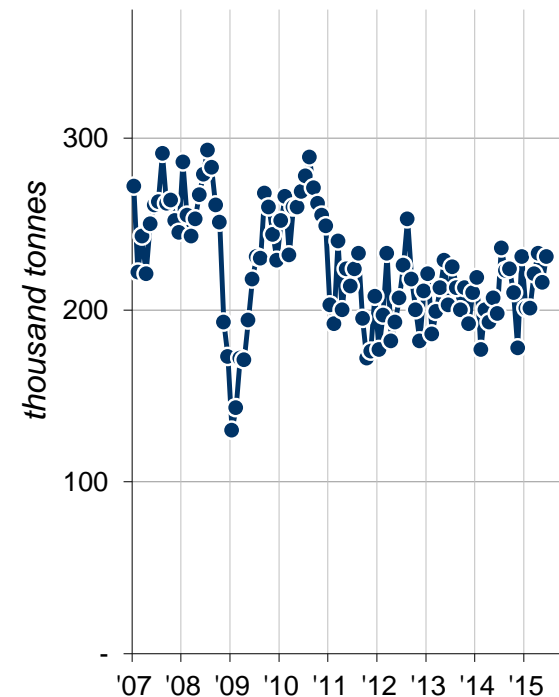
European pulp demand



- Given contractions in P&W production (-2.3mt since Jan 2013) and high euro prices, demand is remarkably resilient.
 - UWF output has been stable, strong export performance
- Eucalyptus is displacing other grades.

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West Europe
Woodfree Paper Exports



Source: Eurograph

Recycled fibre displacement?



CEPI Utilisation of Paper for Recycling by Sector in 2014

'000 Tonnes Paper Sector	Grades of Paper for Recycling							E:G Utilisation Rate ² %
	A Mixed Grades	B Corrugated and Kraft	C Newspapers & Magazines	D High Grades	E Total Use of Paper for Recycling	F Usage by Sector ¹ %	G Total P&B Production	
Newsprint	25	0	7,163	55	7,244	15.2	7,594	95.4
Other Graphic Papers	154	18	2,766	706	3,643	7.7	29,328	12.4
Total Newsprint + O.G.P.	179	18	9,929	761	10,887	22.9	36,922	29.5
Case Materials	4,829	18,551	265	835	24,480	51.5	26,204	93.4
Carton Board	1,725	533	157	855	3,270	6.9	8,546	38.3
Wrappings, Other Pack.	1,858	1,932	150	473	4,413	9.3	8,501	51.9
Total Packaging Papers	8,412	21,017	572	2,163	32,163	67.6	43,251	74.4
Sanitary and Household	298	103	582	1,916	2,899	6.1	7,001	41.4
Other Paper & Board	255	1,049	126	166	1,597	3.4	3,892	41.0
Total Paper & board	9,144	22,187	11,208	5,006	47,546	100.0	91,067	52.2
Share of Total	19.2%	46.7%	23.6%	10.5%	100.0%			

CEPI: Utilisation of high grades since 2009

	2009	2010	2011	2012	2013	2014	2009 v 14
Graphic	0.5	0.9	0.6	0.6	0.6	0.8	0.3
Packaging	2.0	2.3	2.0	2.1	2.1	2.2	0.2
Tissue	2.1	2.2	2.1	2.1	1.9	1.9	-0.2
Other	0.3	0.2	0.3	0.1	0.2	0.2	-0.1
Total high grades	4.8	5.6	5.1	4.9	4.8	5.0	0.2

Collections of high grades have fallen 250,000t/y since 2011

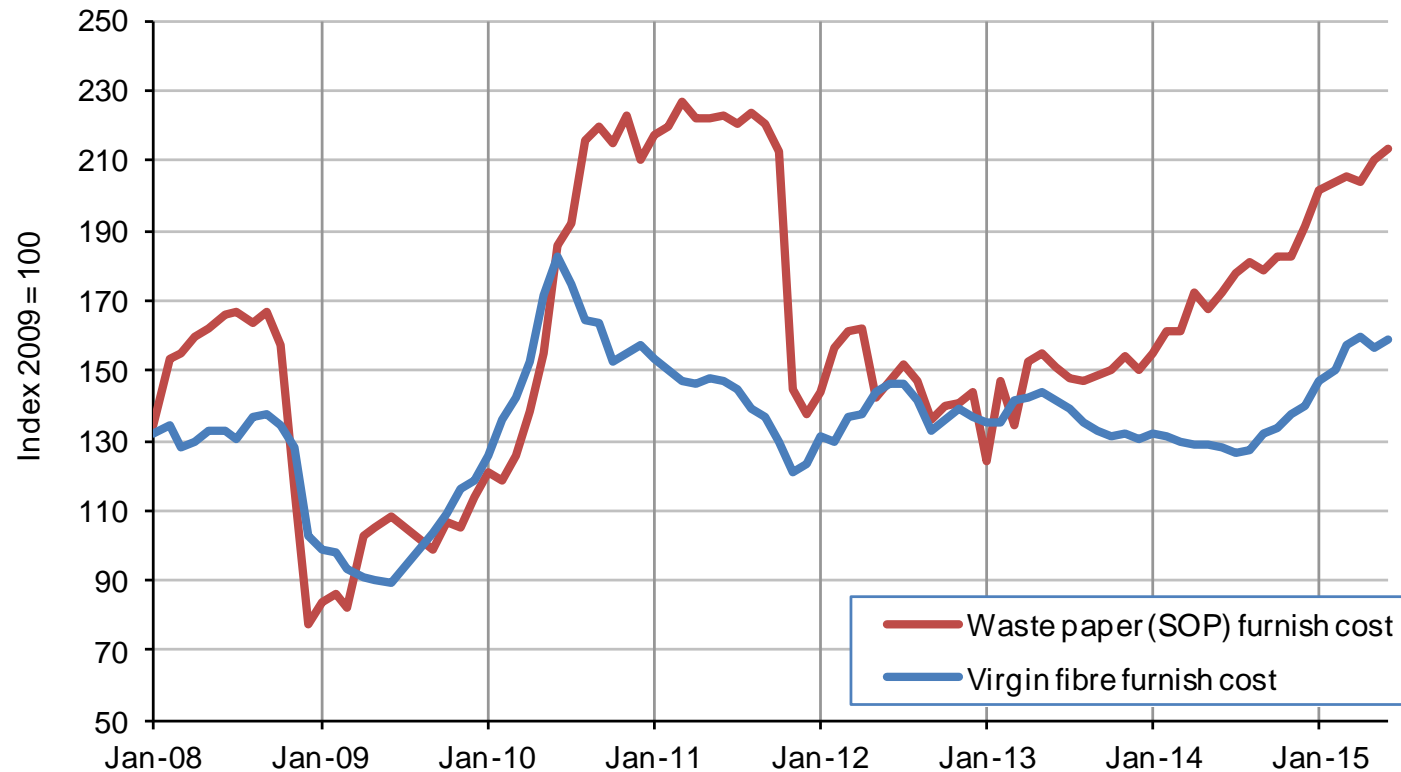
Tissue production grew by 0.4Mt since 2009

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SOP costs rising faster than virgin fibre



**Fibre costs for one tonne of tissue produced using virgin fibre vs. SOP
West Europe, expressed as an index (2009=100), in € terms**



Source: Hawkins Wright

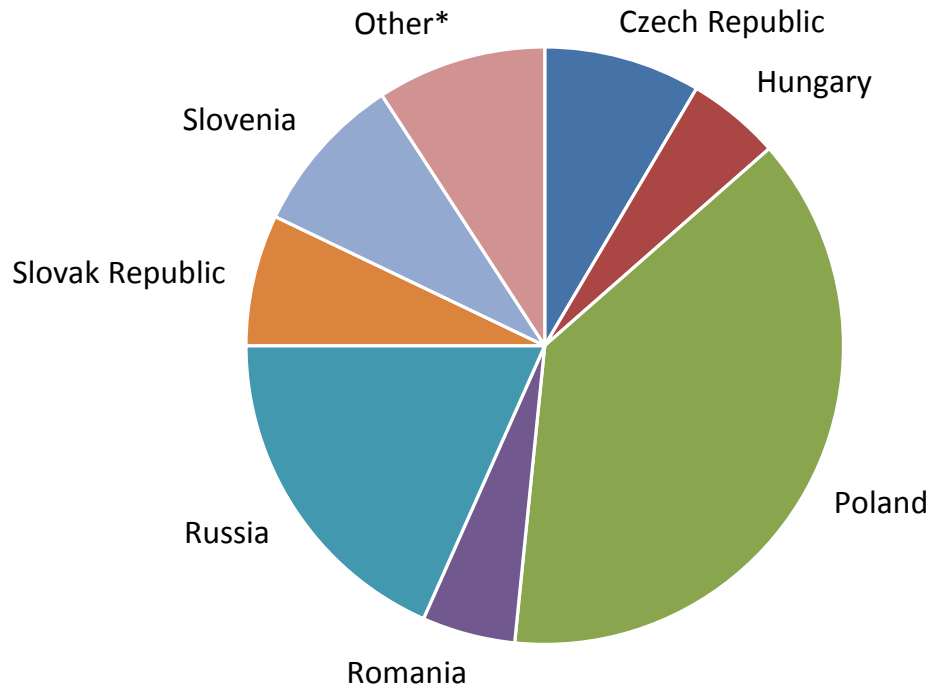
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East European pulp demand



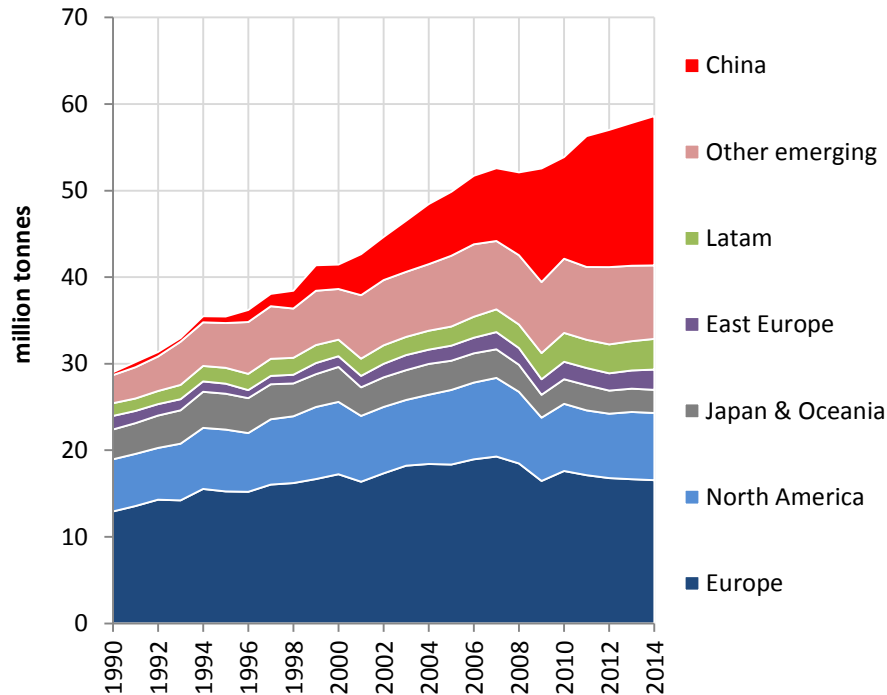
- Strong growth in both BSKP and BHKP since 2011, though from a relatively small base – around 100,000tpa growth
- 55-60% consumed by tissue and fluff
- Aside from Russia, most of these countries are members of CEPI

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Total market pulp demand, by region



- Chinese imports have increased by 1 million tonnes over the first 7 months of 2015 (0.4Mt BSKP, 0.5Mt BHKP, 0.1Mt BCTMP)
 - Long-term average ~0.9Mt per year
- Paper demand has slowed significantly and almost all sectors remain severely over-supplied.
 - Communication papers following the west?
 - Export sector has contracted by 1.3% Jan-July, which negatively impacts packaging
 - Clamp down on corruption and ostentatious consumption
 - Décor paper hit by property slow-down
- Tissue also over-supplied, but underlying demand continues to grow strongly and the leading suppliers of branded products continue to report good results.
 - Nevertheless, capacity plans have been scaled back dramatically since a year ago

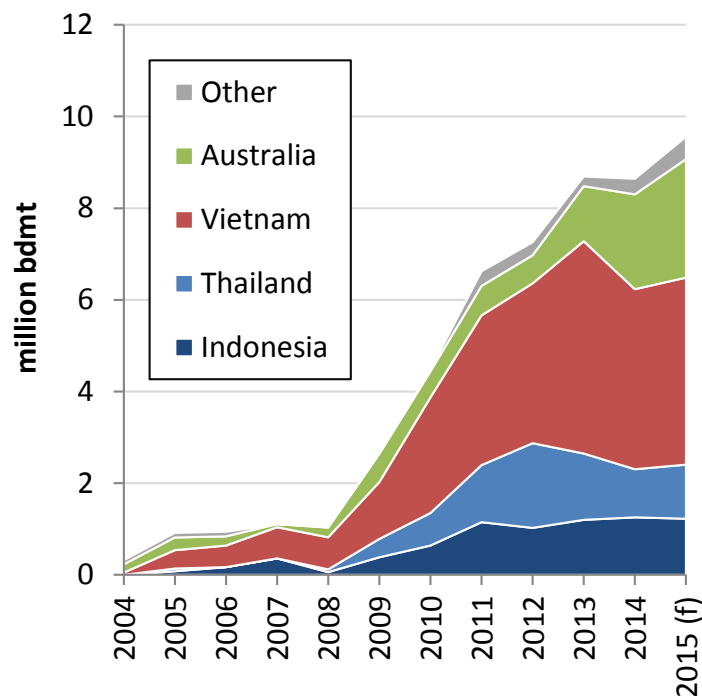
- New board and P&W machines are being installed, but pace of restructure and rationalisation has accelerated
- There is a general trend to higher quality products, and stricter environmental regulations also support demand for imported pulp

China pulp production remains dependent on imported fibre



Chinese wood chip imports

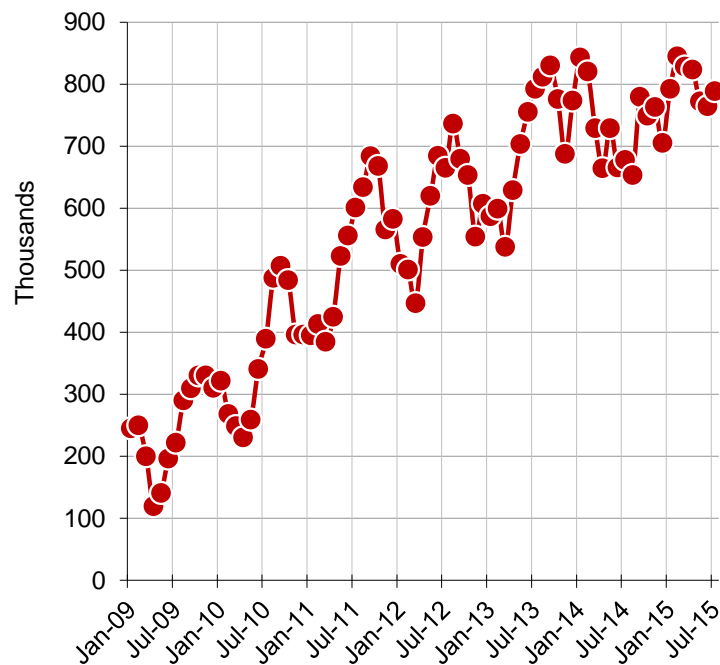
(2015 based on Jan-July data)



Source: Customs data

Chinese hardwood chips imports by month

3 month moving average



Source: Customs data, Hawkins Wright

No new Chinese pulp capacity since Oji Nantong last year, but certain dissolving-kraft “swing” mills have an influence (of which more later)

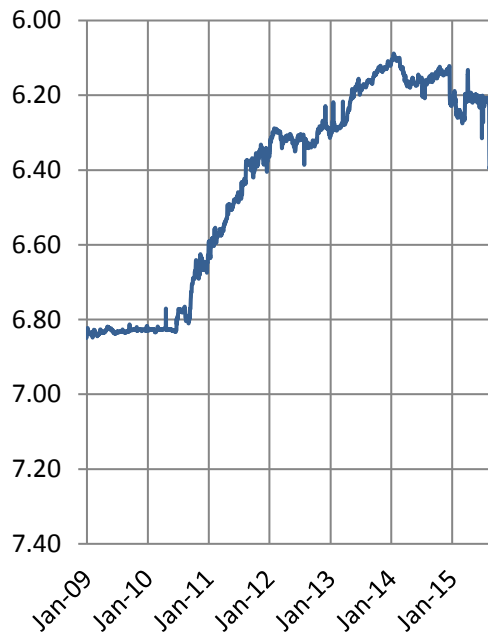
China



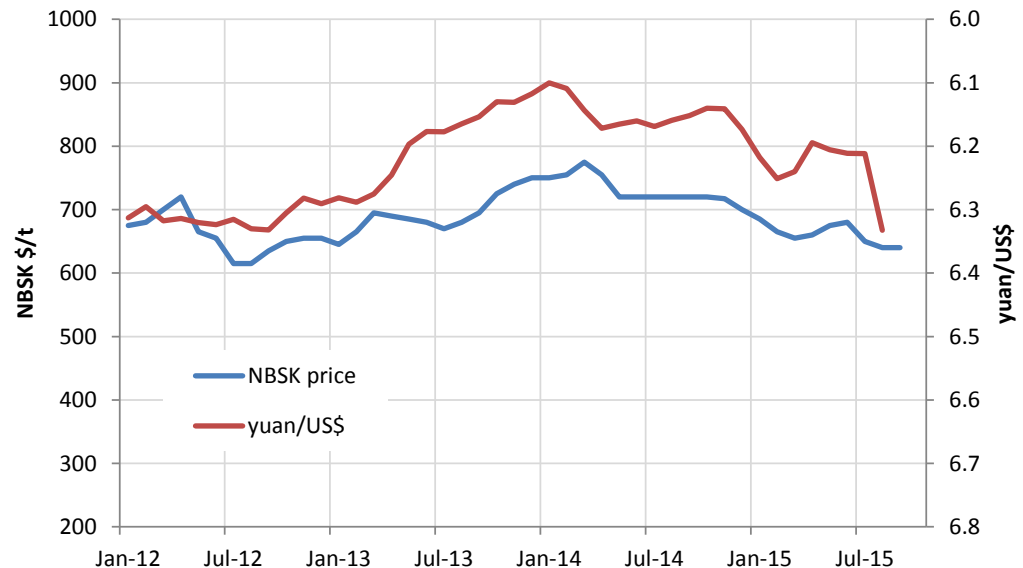
- In spite of strong pulp import performance, confidence is low. Many indicators suggest GDP growth less than official estimate.
- The devaluation may not have done much to impact export competitiveness or help paper prices. Instead it has heaped further pressure on paper-makers and pulp traders in particular. Traders dominate the softwood market.

China

Exchange rate: RMB/USD



NBSK \$ price v renminbi exchange rate



Source: Google Finance, Hawkins Wright

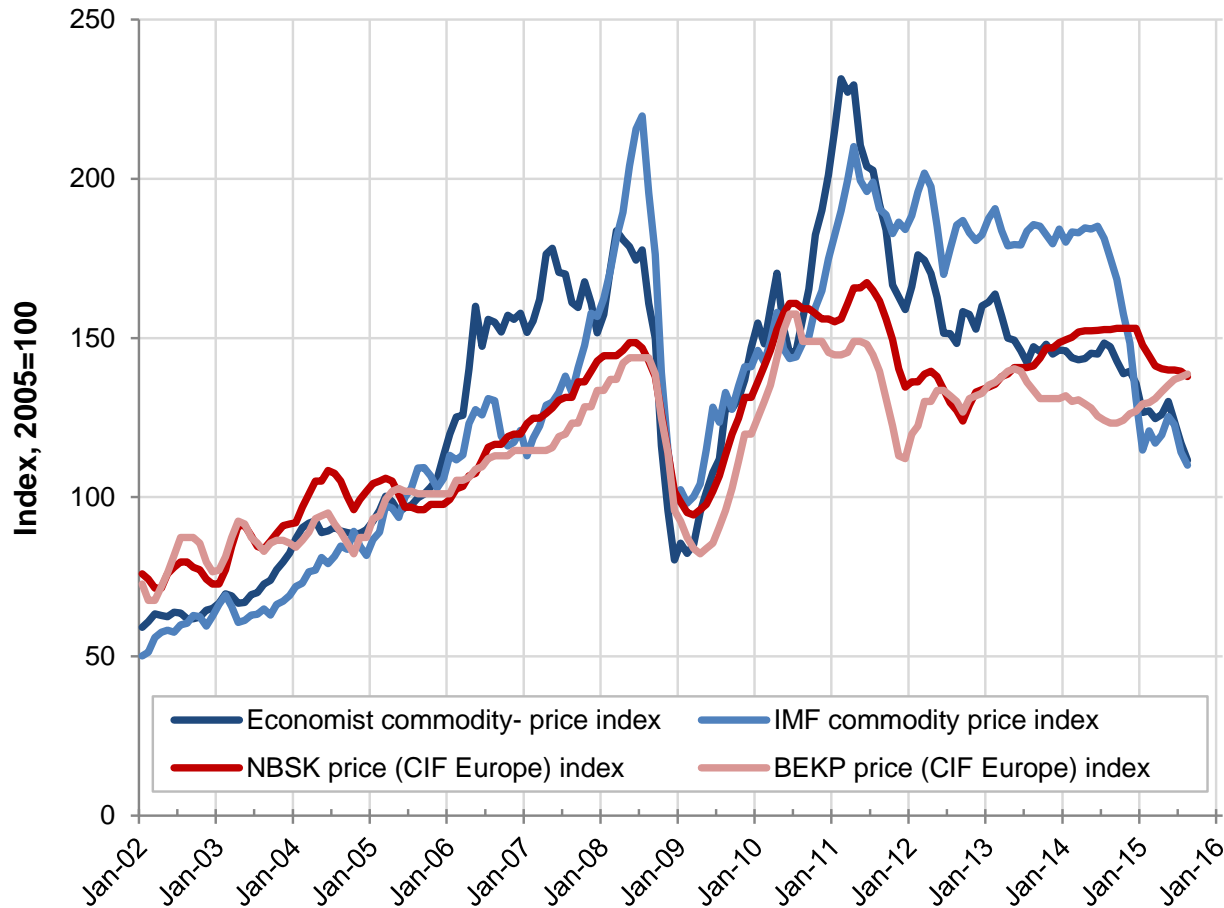
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Market summary



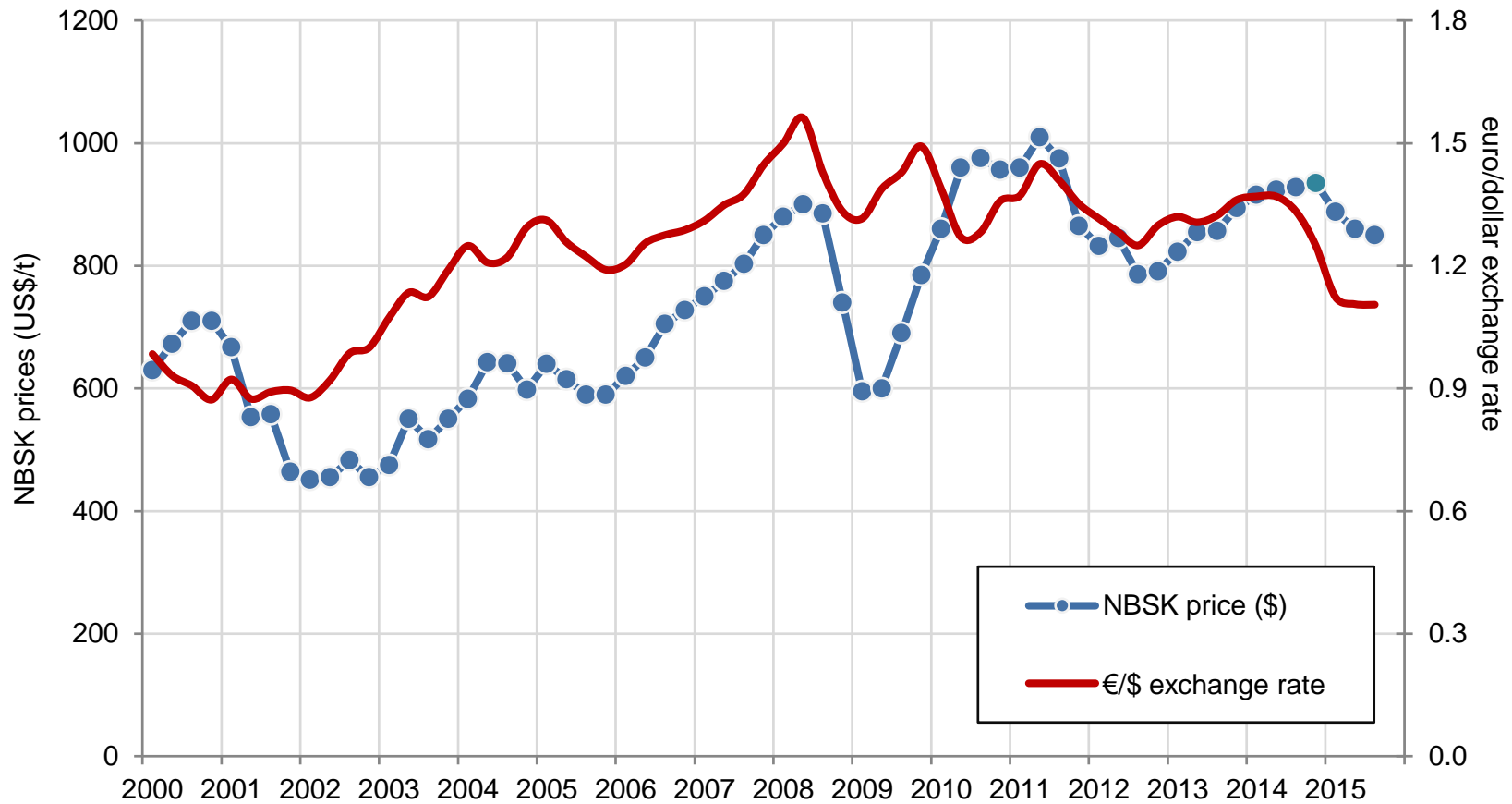
- Pulp prices have enjoyed relative stability through summer months, despite the turbulence in China and most other commodity markets.
- Hardwood (HW) sector continues to perform better than softwood (SW), but prices of both grades remain above marginal cost.
- Producer stocks rose by 2 days in July (HW figure estimated) but appear balanced and there have been price increase announcements for September orders for both SW (in China) and HW (globally).
- However, reports from China suggest SW hikes were not fully supported, and this will make it difficult to implement HW increases, all other things equal.

Pulp prices v other commodities

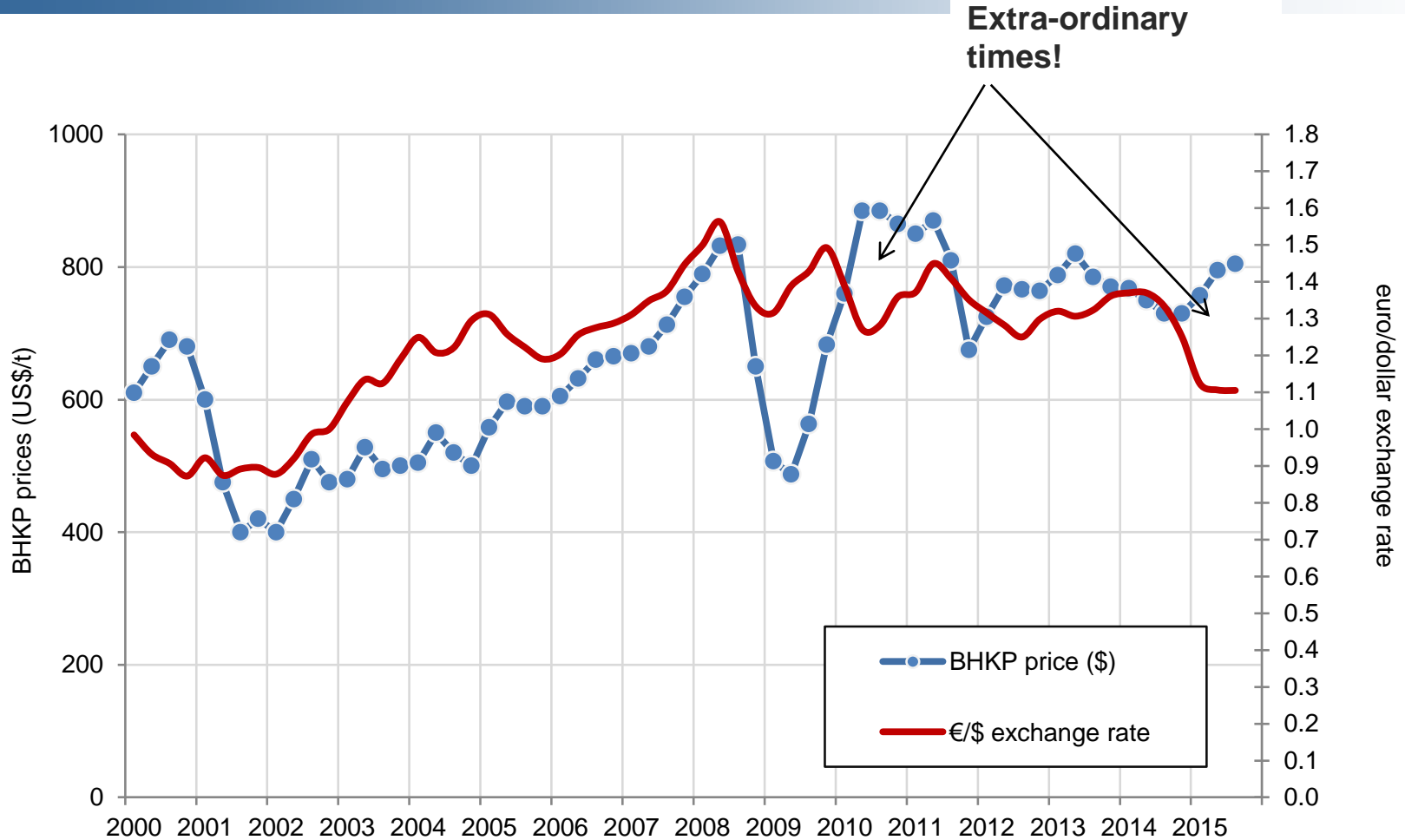


SW prices have suffered a mild correction compared to other commodities, whilst HW prices have clearly outperformed...China's rebalancing has some positive impact on pulp demand in terms of both consumerism and environment

Impact of exchange rates - softwood



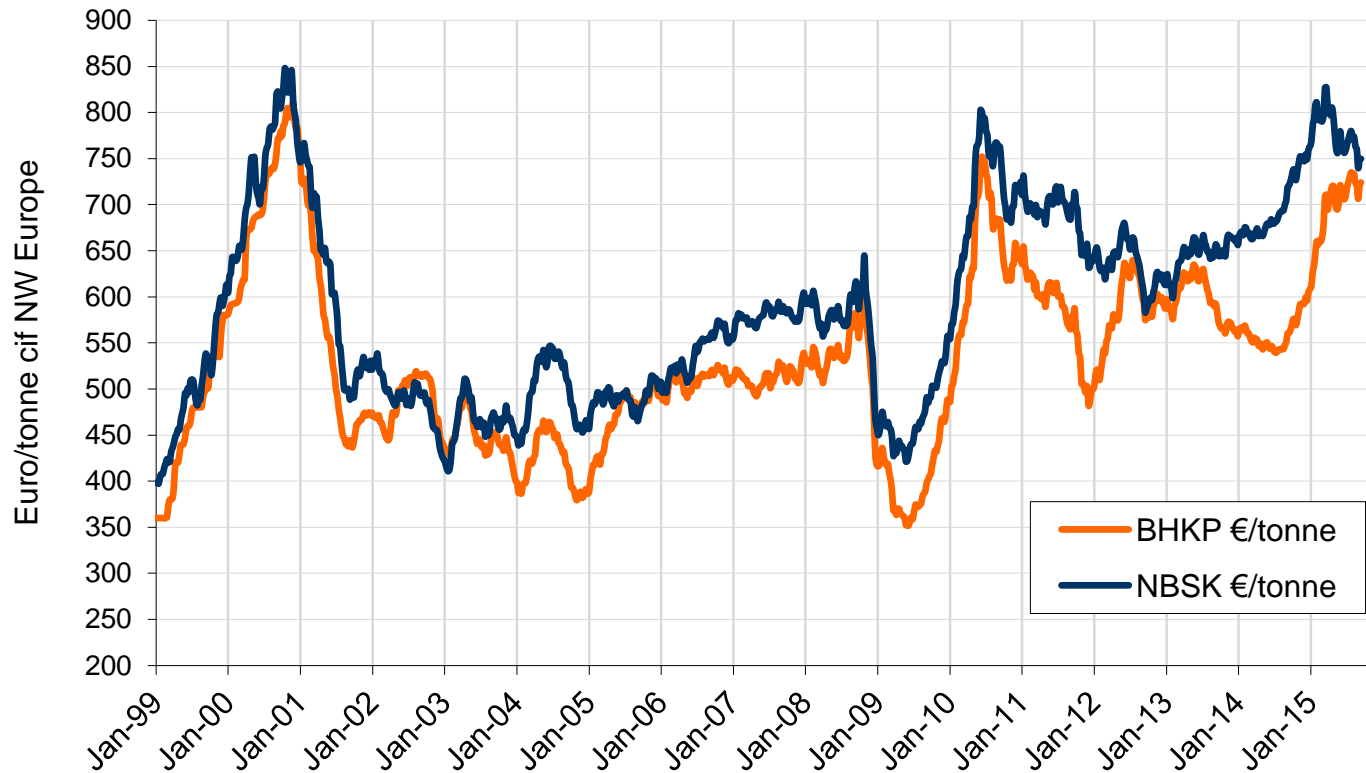
Impact of exchange rates - hardwood



Pulp prices in euros

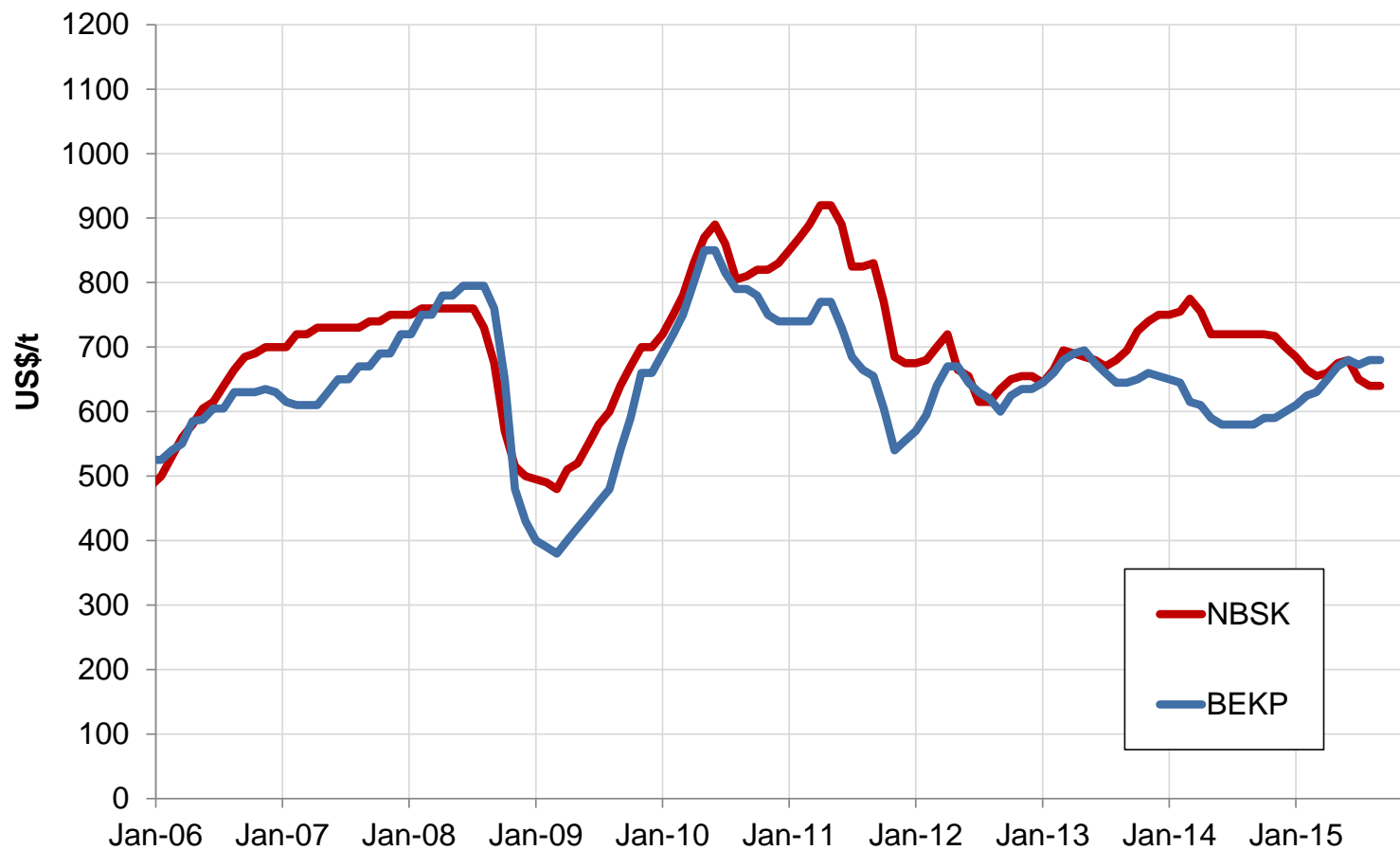


PIX indices for NBSK and BHKP, in €



Source: FOEX, Hawkins Wright

NBSK & BEKP prices, cif China



Source: Hawkins Wright

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Markets are cyclical



There is a temptation to look at markets in isolation, but substitution is a key factor, increasingly on the supply side as much as the demand side

NBSK v BHKP list price differential

European PIX



Source: FOEX, Hawkins Wright

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Substitution...

Growth in BSKP/BHKP, 2013 v 2014



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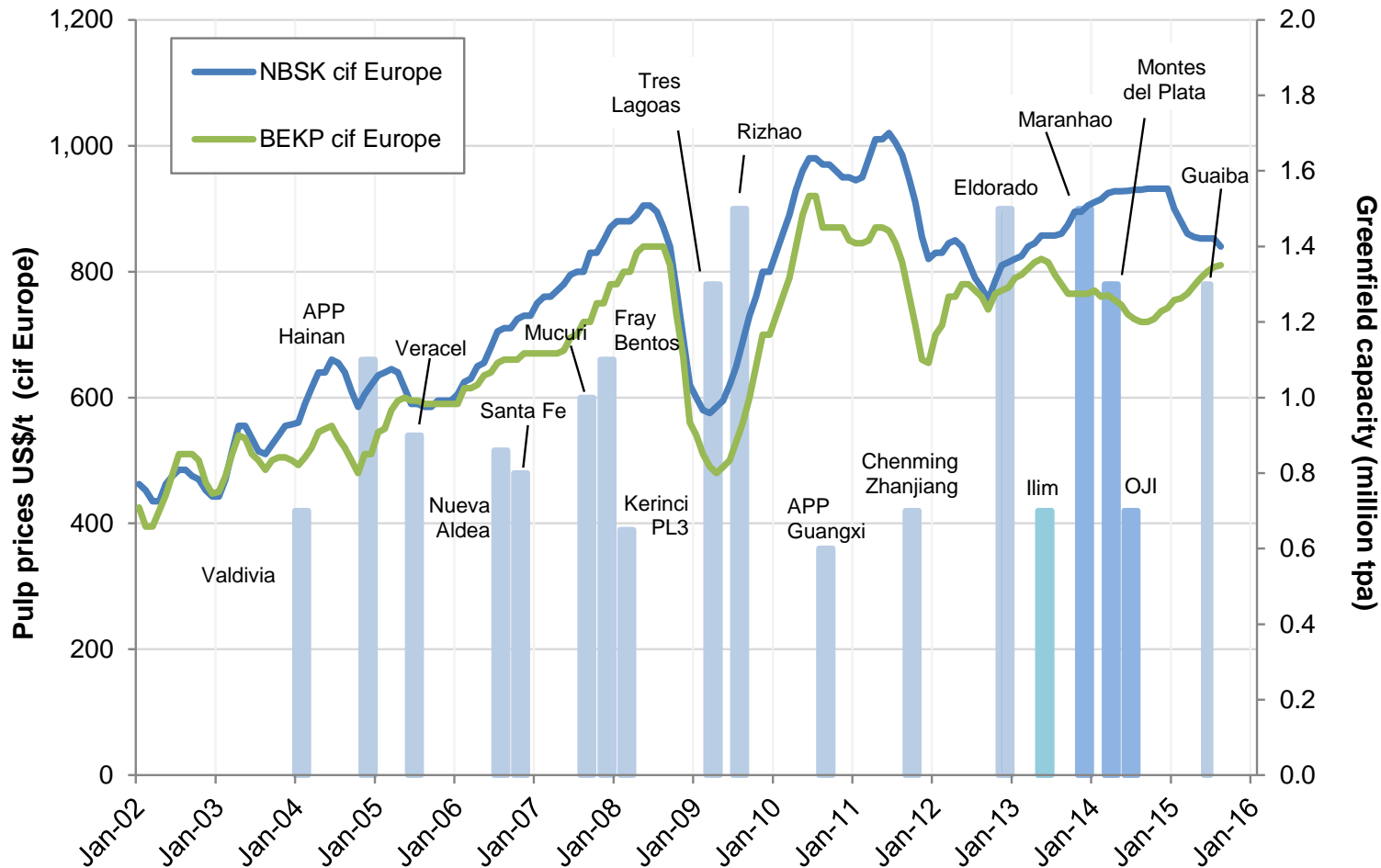


Comments on substitution

- Softwood shipments declined -0.8% in 2014, and were flat over the first six months of this year. Hardwood shipments rose by 1 million tonnes in 2014, and have increased by a further 1 million tonnes in first seven months of 2015.
- Expectation that substitution will begin to reverse due to the current discount for SW. However, it is impossible to measure and there are reasons to think less flexibility (technically and commercially) than in the past which explains the larger cycles and over-correction.
- Supply-side has also reacted...existing HW capacity has been revised down, and projections for softwood capacity have increased dramatically over the past 12 months.
 - UPM, Svetlogorsk, Klabin, Domtar, IP, Sodra, Metsa, SCA all with major SW investments
 - >2.6 million t/y in 2016-18

Greenfield start-ups vs. pulp prices

Macro-drivers and cyclical factors must also be considered



Source: Hawkins Wright

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Outlook for chemical market pulp supply



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Source: Hawkins Wright

Includes: Äänekoski, Bratsk, Eldorado, Montes del Plata, Maranhao, CMPC Guaiba, Klabin, OKI, Fibria Tres Lagoas 2, Eldorado Tres Lagoas 2

Excludes: all projects that have not yet satisfied all of their preconditions (e.g. financing, final board room approval etc).

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Further displacement inevitable



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Market pulp mill closures, and conversions



Closures

Conversions to dissolving

Year	Company	Mill/line	Country	Impact on mkt pulp	Grade	Date of closure
2014	ENCE	Huelva	Spain	-420	BEKP	Q4 2014
2013	Sodra Cell	Tofte	Norway	-400	NBSK/BEKP	Q3 2013
	Domtar	Kamloops	Canada	-120	BSKP	Q1 2013
	Continental Invest	Baikal	Russia	-100	BSKP	Q4 2013
	Solombalsky	Arkhangelsk	Russia	-200	UKP	Q1 2013
	Cellulose du Maroc	Sidi Yahia	Morocco	-160	BHKP	Q2-2013
2012	Resolute Forest Products	Fort Frances	Canada	-200	BSKP	Q4 2012
2011	K-C	Millicent	Australia	-30	BSKP	Q4 2011
2010	Sappi	Usutu	Swaziland	-190	UKP	Q1 2010
2009	Pastguren	Pastguren	Spain	-75	BHKP	Q4 2009
	Botnia	Kaskinen	Finland	-450	BSKP/BHKP	Q1 2009
	CMPC	Laja	Chile	-110	BSKP	Q1 2009
	Rottneros	Miranda	Spain	-150	BHKP	Q1 2009
	Marathon Pulp	Marathon	Canada	-200	BSKP	Q1 2009
	Boise Inc.	St. Helens	USA	-85	BSKP	Q1 2009
2008	Evergreen Pulp	Samoa	USA	-200	BSKP/UKP	Q4 2008
	International Paper	Bastrop	USA	-100	BSKP/fluff	Q4 2008
	Smurfit	Pontiac	Canada	-200	BHKP	Q4 2008
	UPM-Kymmene	Tervasaari	Finland	-210	BSKP	Q4 2008
	Stora Enso	Norrsundet	Sweden	-300	BSKP	Q4 2008
	Catalyst Paper	Elk Falls	Canada	-190	BSKP	Q4 2008
	Stora Enso	Kemijärvi	Finland	-120	BSKP	Q2 2008
	Rottneros	Utansjö	Sweden	-180	BCTMP	Q2 2008

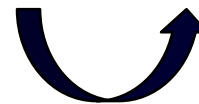
Year	Company	Mill	Country	Impact on mkt pulp	Converted from	Date of conversion
2016-17	Arauco	Valdivia	Chile	-550	BSKP	Q1 2017
	AV Birla	AV Terrace Bay	Canada	350	NBSK	2016-17
2013	Buckeye Technologies	Perry	USA	-40	Fluff	Q1 2013
	Schweighofer Group	Hallein	Austria	-160	Sulphite	Q1 2013
	Lenzing	Paskov	Czech Rep	-280	Sulphite	Q1 2013
	Jari	Monte Dourado	Brazil	-420	BHKP	Q1 2013
	SAPPI	Cloquet	USA	-450	BHKP	Q2 2013
	Rayonier	Jesup	USA	-260	Fluff	Q3 2013
	SAPPI	Ngodwana	South Africa	-235	BSKP	Q3 2013
	SCG Paper	Nam Phong	Thailand	-110	BHKP	Q4-2013
2012	Altri	Caima	Portugal	-115	Sulphite	Q1 2012
	Sun Paper	Yanzhou	China	-300	BHKP	Q1 2012
	Stora Enso	Enocel	Finland	-200	BSKP	Q1 2012
	Sodra Cell	Morrum	Sweden	-200	BHKP	Q1 2012
2011	Fortress Paper	Thurso	Canada	-250	BHKP	Q4 2011
	Fortress	Lebel-sur-Quévillon	Canada		NBSK	n/a
	Paper Excellence	Prince Albert	Canada		NBSK	n/a
TOTAL 2011-2017				-3,020		

Swing capacity



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Source: Hawkins Wright Estimates

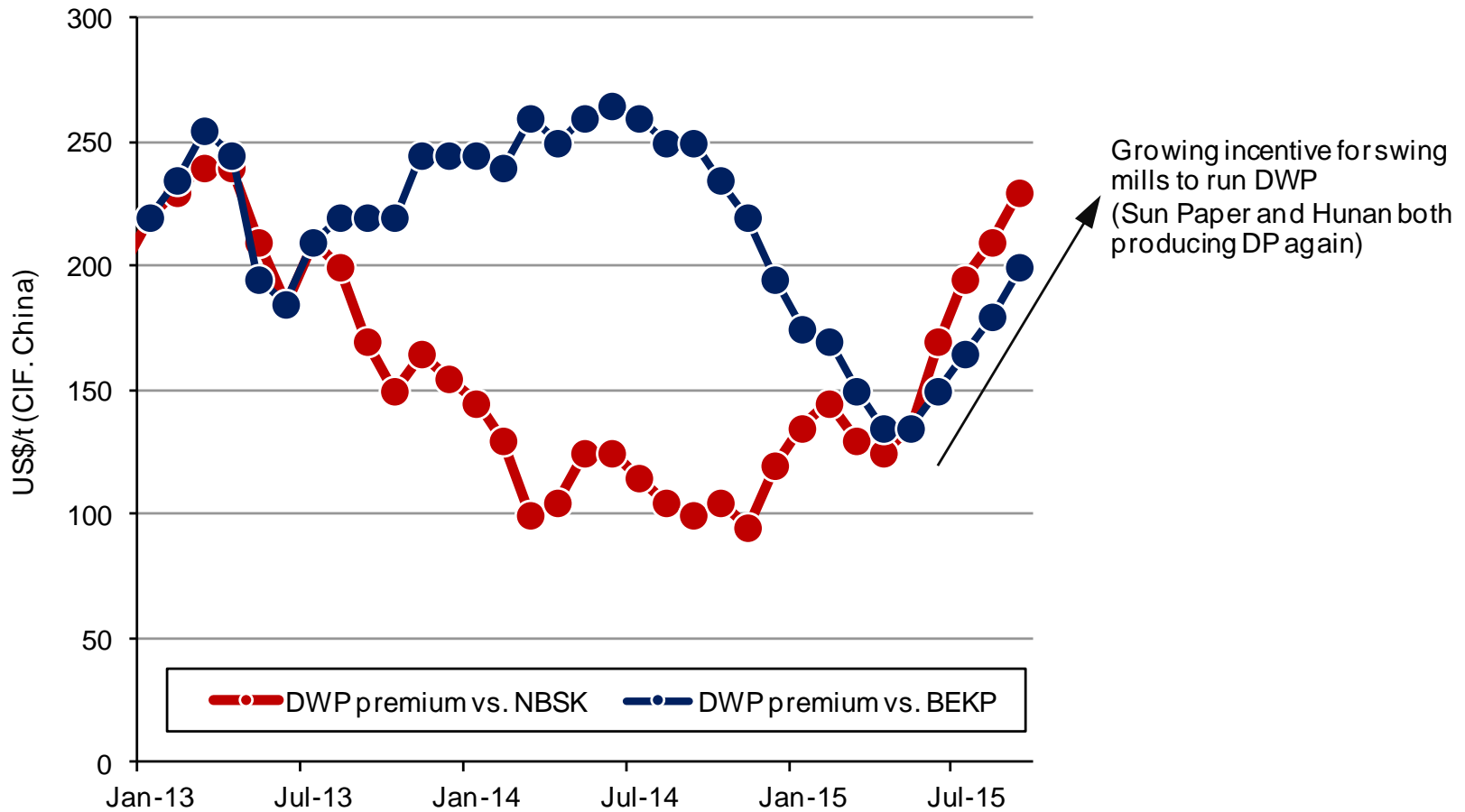


**0.9 million t of underutilised swing
capacity in 2016?**

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So much depends on swing capacity

BHKP vs. DWP Price differential



Source: Hawkins Wright Estimates

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Brazilian real/US\$ exchange rate



S&P downgraded Brazil to junk last week after 8 eights of investment grade...real dropped further to ~R3.83

Brazil and Uruguay BCP, 2015-2019



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Confirmed:

- **CMPC:** Guaiba, +1.3 million t/y BEKP, in Q2/2015
- **Klabin** (Paraná), flex mill 1.5 million t/y BEKP/BSKP/Fluff 2016
- **Fibria** Tres Lagoas 2, 1.75 million t/y BEKP 2017
- **Eldorado** Tres Lagoas 2, 2 million t/y BEKP 2018

Unconfirmed post 2016:

- Veracel 2
- Lwarcell
- Arauco MAPA
- Many others

Consolidation becomes less likely in the current climate

Summary remarks



- Above trend pulp demand in recent months is attributable to tissue production in emerging markets and capacity growth almost everywhere, combined with cyclical and structural changes.
 - Wood pulp displacing recycled and non-wood fibre in some areas.
- In spite of robust demand, capacity growth is more than double trend, and we expect production to over-take shipments before long.
 - The temporary closure of Rizhao was perfectly timed to balance the market. For now Rizhao is back and CMPC Guaiba is ramping up.
- Nevertheless, wildcards remain, and past twelve months teaches us to expect the unexpected...
- APP has had a major influence on Asian markets over the past twelve months. OKI project is looming, but when and how much?
- Current prices encourage production, with the exception of high-yield (BCTMP). How sustainable?