China:
CTD Supply/Demand Balance

Monthly Focus Topic

VERSO

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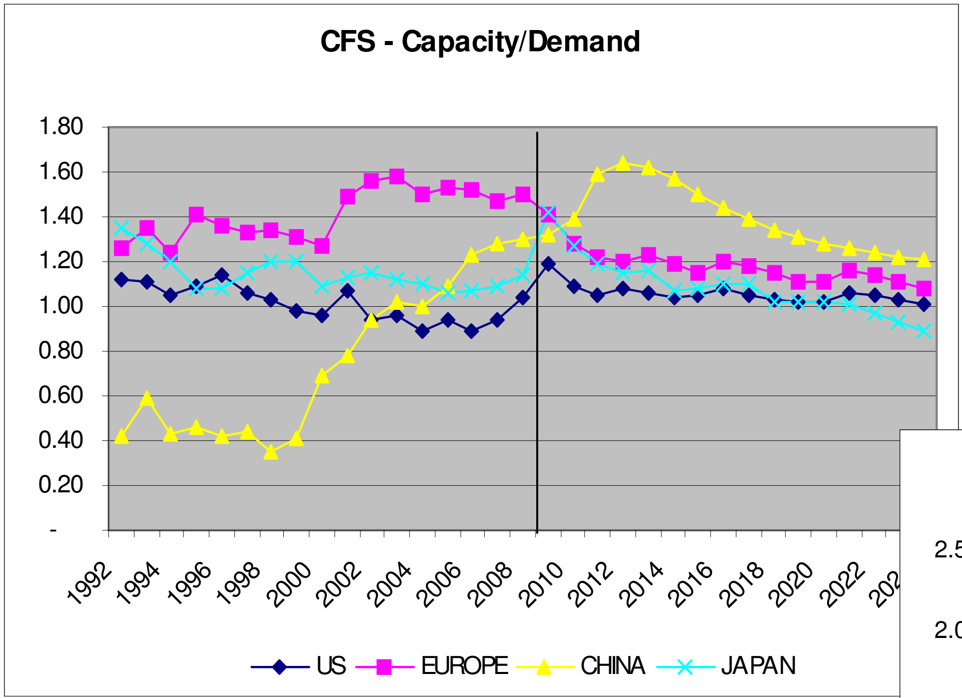
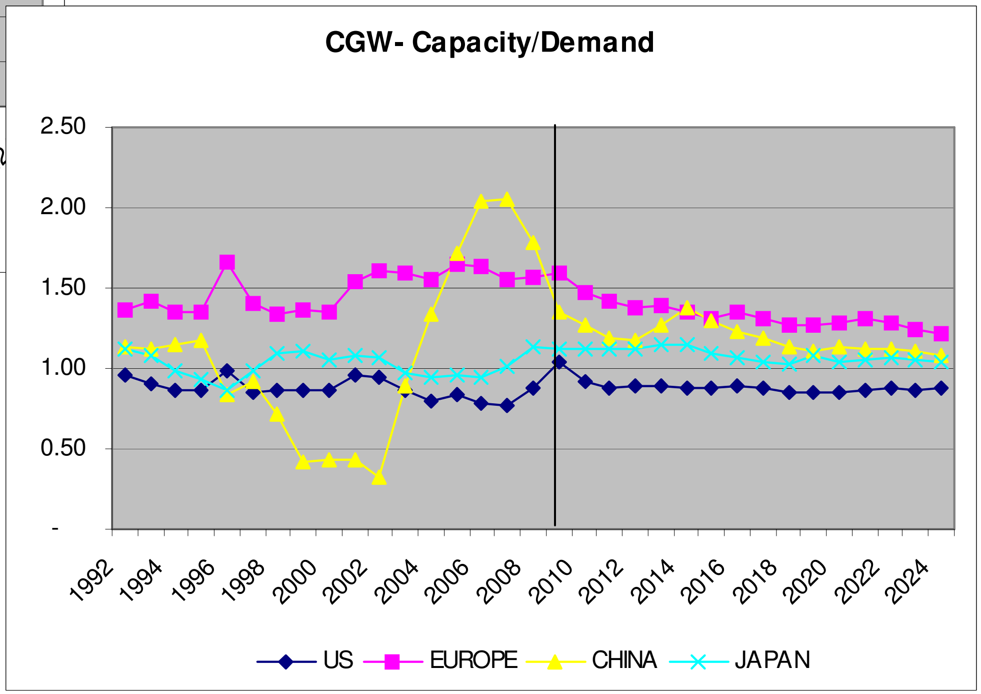
Major region capacity surplus for CFS and CGW past and future



For CFS the ratio of capacity to demand continues its decline for producers in the European region while it ramps up dramatically in China over the next few years before tapering off.

China is currently in the midst of capturing the top spot of capacity surplus from Europe

For CGW Europe will remain the largest region in this study relative to supply surplus. Although there is a slight downward trend forecasted, RISI expects Western Europe to remain above 20% overcapacity for the period studied.



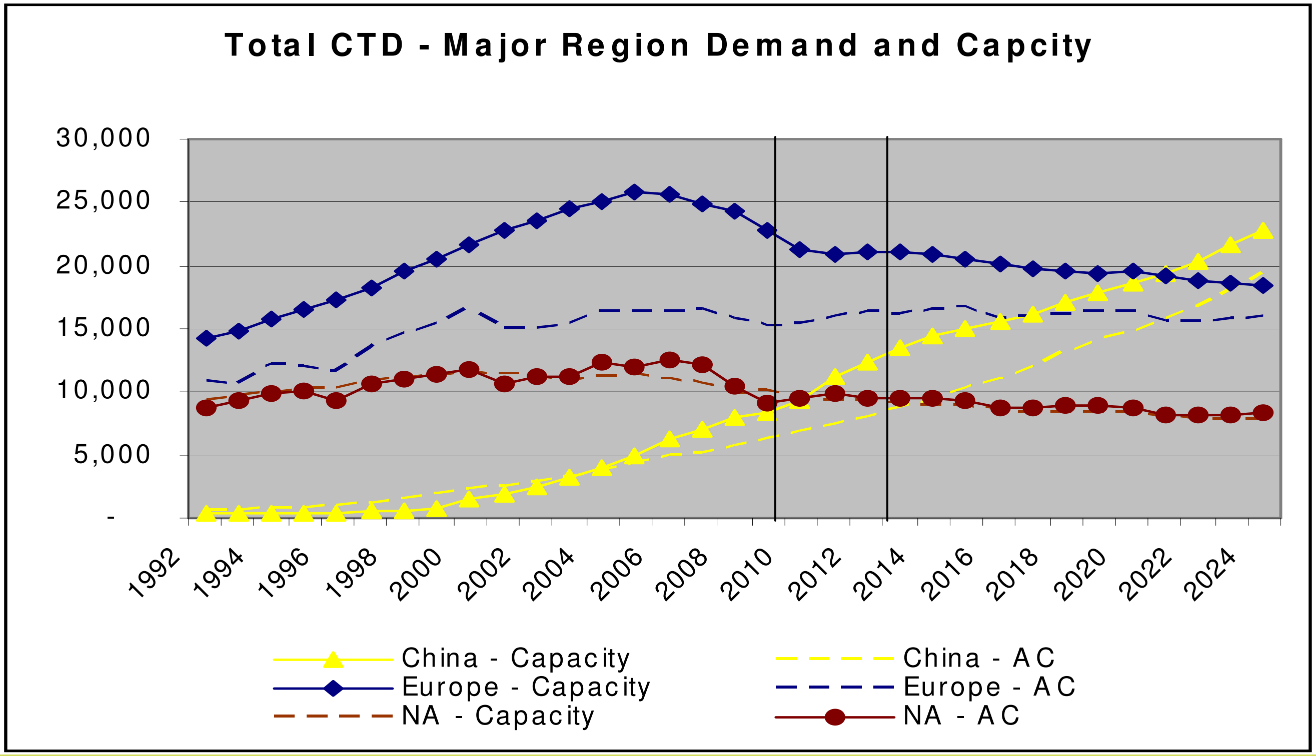
China will continue to grow substantially in supply and demand of Total CTD papers

1992 – 2008: European capacity increases outpaced that of demand. NA capacity and demand were relatively flat. China swung from a net importer to a net exporter

2009 – 2011: China's capacity is forecasted to significantly outpace the demand with startups resulting from local government stimulus package. Europe's surplus shrinks.

2012 – 2024: China's demand will exceed NA then Europe while the installed capacity remains in excess by a significant amount

In China, CFS is the dominant grade consumed over CGW by nearly a 5:1 ratio



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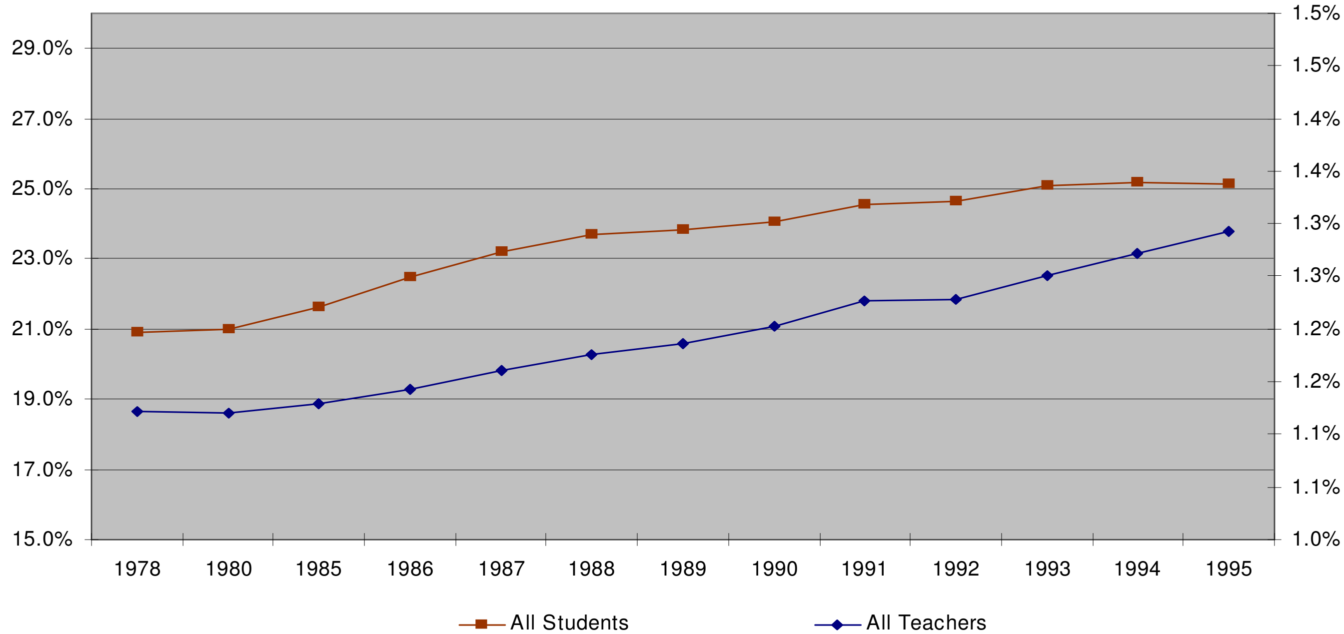
SOURCE: RISI

What are the factors which shape the future of China's CTD paper trade balance?

Factors having positive influence on China's CTD paper Demand

+ Local - Print media will remain an important form of communication and advertising.
+ Local - Rising consumer incomes and increasing population will lead to growth in GDP. Improving GDP has historically had a strong positive correlation to usage of CTD paper for all regions studied.
+ Rising Literacy rate's will fuel consumption of paper. Literacy rates for China for 2009 are stated to be 90.9% as compared to the US which is 99.0%. The percentage of population in China that are enrolled as students and teachers is climbing – see below

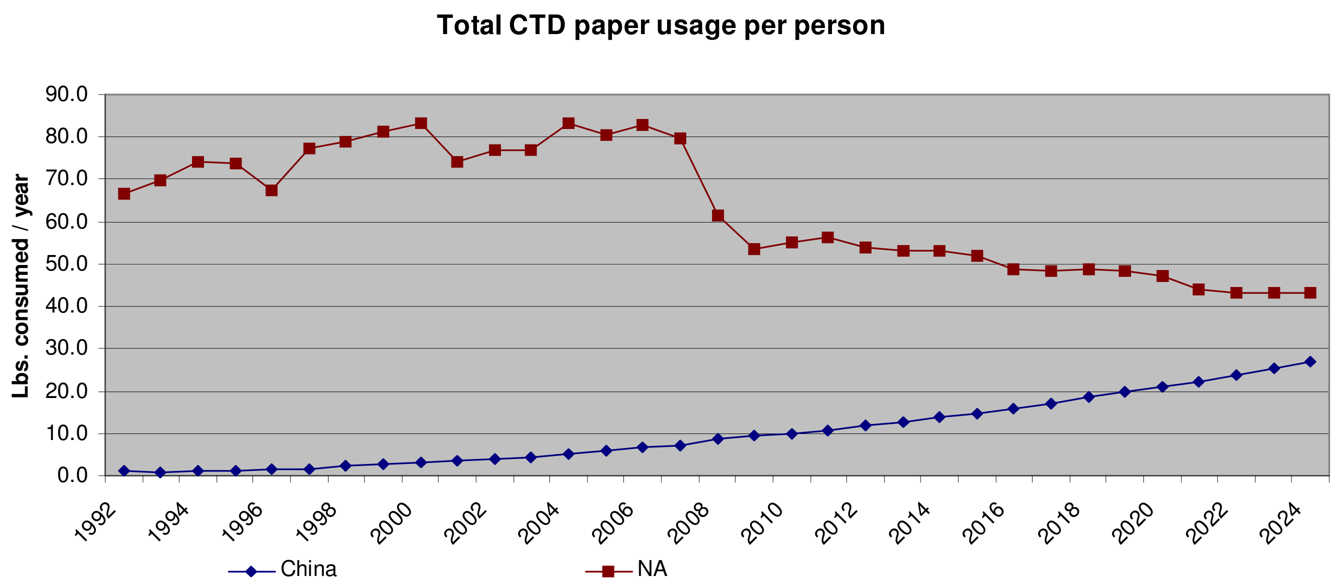


SOURCE: CIA World Fact Book

What are the factors which shape the future of China's CTD paper trade balance?

Factors having a negative influence on China's CTD demand

- Local - Electronic media is sure to continue to make in roads and take share of traditional paper based communications. The graph below shows RISI is forecasting the impact of electronic substitution to have a significant and permanent impact on NA CTD consumption per person. A corresponding sharp decline in usage is not evident and is not forecasted for China but remains a potential negative influence.



- Export demand – Many believe the run up in pulp demand over the past few quarters is not sustainable and that it was fueled by low pulp pricing and that exports markets have not improved at a pace to consume the sudden rise in Chinese output.

What are the factors which shape the future of China's CTD paper trade balance?

Factors leading to an increase in China's CTD paper capacity

+ Short Term – As part of China's stimulus plan earlier this year Chinese banks lent out a whopping RMB 7.37 trillion during the first half of the year. Paper producers borrowed massive amounts of capital to complete large projects (totaling >2.2MM tons of CFS over next several months)

Company	Location	Annual Net Change (Short Tons)	Effective Date	Grade
(APP) Jinhai Pulp & Paper	Hainan, China	992,000	H1 2010	CFS
Sun Paper	Shandong, China	385,000	Q1 2010	UFS / CFS
Oji	Nantong, Jiangsu, China	440,000	Oct'10	UFS / CFS
Shandong Huatai	Shandong, China	880,000	2010	CFS

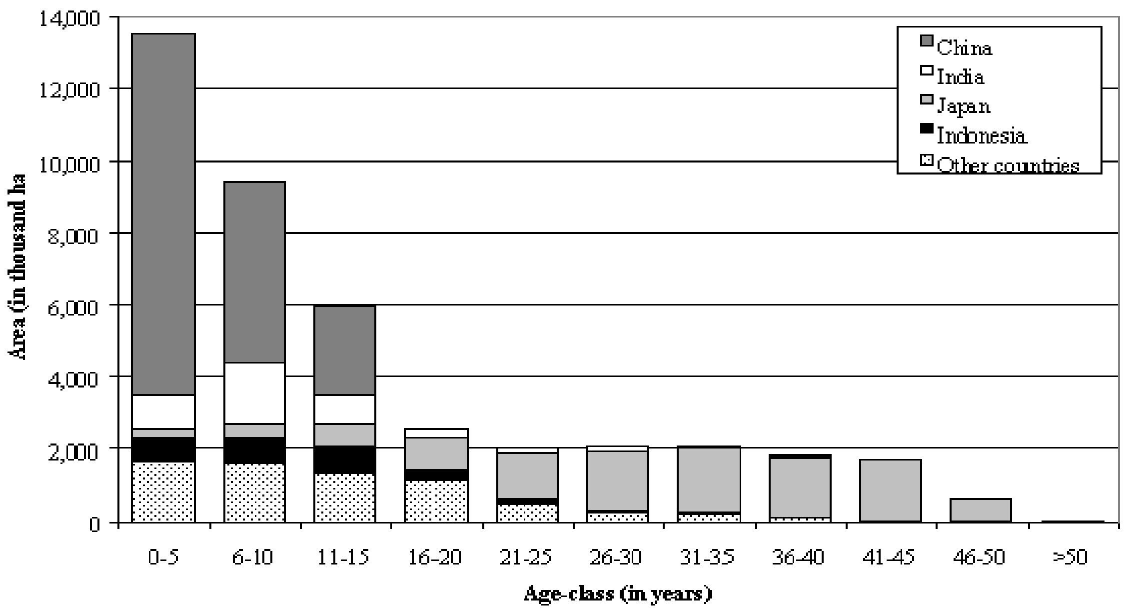
+ Long Term – Manufacturing cost relative to the rest of the world will remain low

SOURCE: RISI

What are the factors which shape the future of China's CTD paper trade balance?

Factors suppressing further increase of China's CTD paper capacity

- Long Term – Ability to secure fiber needed to produce forecasted amounts of paper is yet to be seen. China has rapidly accelerated it's industrial forest plantation in recent years. As can be seen in graph below, over the past 15 years nearly 18MM hectares of timber plantations were established, of which 2.5 million hectares were fast growing and high yield timber plantations.



- Long term – Environmental awareness has led to the shutter of over 7,000 pulp mills in China. The exact capacity is not known but has been estimated by RISI to be 1MM tonnes with another 1MM tons rumored to shut in 2011.

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SOURCE: Food and Agricultural Organization of the United Nations, RISI, Jaakko Poyry