

2013 Global forest, paper, and packaging trend watch

A changing landscape: South America's influence on global markets



This report by the Deloitte Touche Tohmatsu Limited (DTTL) Global Manufacturing Industry group examines the global forest, paper, and packaging (FP&P) industry through the supply and demand activity of South America. In the coming decade, South America is set to have a profound influence on international FP&P markets, with dramatic expansions in pulp capacity and growing domestic demand. To address the short- and medium-term market possibilities, FP&P Sector Leaders across Deloitte member firms offer consideration points for industry watchers: what effects are producers likely to see and how they may respond in their investment decisions, geographic positioning, pricing, and export and import activity. The report sets a framework toward understanding current indicators and upcoming influential trends.

South America as producer

South American pulp and paper companies are currently proceeding with planned expansions to add between 20 million and 30 million metric tons of chemical pulp to the global market through 2020.¹ Seven million to eight million metric tons from five particular South American producers are expected to come online through 2014, targeted mainly for the export market.² Ripple effects should be felt worldwide across various product subsectors, influencing strategic investments by producers.

A significant pulp overcapacity will likely result, at a time when overall worldwide demand lags. With the European recession ongoing, that region could see thin growth or contraction through 2013.³ Europe being a primary trading partner for the United States, the former's recession and resulting decrease in demand could challenge the at-best modest economic recovery anticipated in North America.⁴ The one bright spot may be the positive year-over-year growth of the lumber and building-products sector

globally.⁵ Meanwhile, slowed momentum in Asia halted previous double-digit growth in China, with predictions through 2013 now in the 7 percent to 8 percent range.⁶

The South American capacity expansion is enabled by a confluence of factors extending beyond consensus or coincidence among producers, including agricultural productivity and internal demand. Among South American countries, ample arable land mass is being used strategically with short-rotation eucalyptus and shorter-rotation pine unavailable in colder climates.

Depressed pulp and paper demand in the U.S. and in Europe (the latter, despite more than 2.7 million tons of paper capacity shut down in Eastern Europe alone since July 2011) heightens the risk of global pulp oversupply due to South America's production activity.⁷ As China's domestic fiber deficit increases that country's dependency on exports, the global pulp oversupply will likely see South America looking to cater to China's increased pulp consumption in the next years.⁸ In expectation of this oversupply (see Figure 1), global pulp prices started to decline from the second quarter of 2012, and market analysts forecast that prices will continue on a downward trend in 2013 and likely 2014 (see Figure 2).⁹

South America as consumer

South America's reliance on paper imports to satisfy growing demand is expected to continue; nevertheless, the net import share of total demand could fall slightly, likely due to shifts in consumption patterns and trade protectionism. Paper trade within the region is anticipated to grow, met by a slight increase in Brazilian exports, which currently account for 21 percent of Brazilian paper production and 59 percent of Brazilian pulp production.¹⁰

1 United Nations Economic Commission for Europe (UNECE) Timber Committee, *Timber Committee Statement on Forest Products Markets in 2012 and 2013*, 18 October 2012, www.unece.org/fileadmin/DAM/timber/meetings/20121015/TC2012-market-statement-final-approved.pdf; *Pulp and Paper World*, "Pulp and paper industry investment picking up," accessed 8 February 2013, www.pulp-paperworld.com/ex1/item/768-abtcp.html.

2 DTTL Global Manufacturing Industry group November 2012 analysis of data from Santander, *Chilean Pulp & Paper Sector: The Short-Term Illusion of Pulp Prices; Downgrading Copec and CMPC*, 28 March 2012.

3 European Commission, Eurostat, *Euro area GDP down by 0.2% and EU27 GDP down by 0.1%*, press release, 15 November 2012, www.epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-15112012-AP/EN/2-15112012-AP-EN.PDF; International Monetary Fund (IMF), *World Economic Outlook October 2012: Coping with High Debt and Sluggish Growth*, 2012, accessed 15 November 2012, www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf

4 IMF, *World Economic Outlook October 2012: Coping with High Debt and Sluggish Growth*, 2012, accessed 15 November 2012, www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf

5 Food and Agriculture Organization of the United Nations (UNFAO), *Forest products industry slowly recovers from recession*, press release, 18 December 2012, www.fao.org/news/story/en/item/166938/icode/.

6 IMF, *World Economic Outlook October 2012: Coping with High Debt and Sluggish Growth*, 2012, accessed 15 November 2012, www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf; Observations by the DTTL Global Manufacturing Industry Group, November 2012.

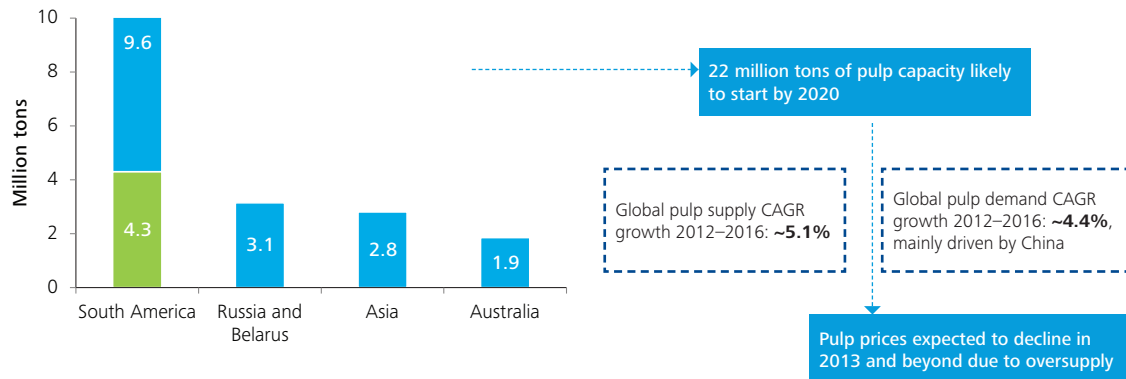
7 UNECE and UNFAO, *Forest Products Annual Market Review: Paper, Paperboard and Woodpulp Markets, 2011–2012*, accessed 15 November 2012, www.unece.org/fileadmin/DAM/timber/publications/FPAMR_2012.pdf.

8 DTTL Global Manufacturing Industry group November 2012 analysis of data from Santander, *Chilean Pulp & Paper Sector: The Short-Term Illusion of Pulp Prices; Downgrading Copec and CMPC*, 28 March 2012.

9 DTTL Global Manufacturing Industry group November 2012 analysis of data from Bloomberg database terminal, Santander, Itau BBA, FOEX, and Hawkins Wright, accessed 20 November 2012.

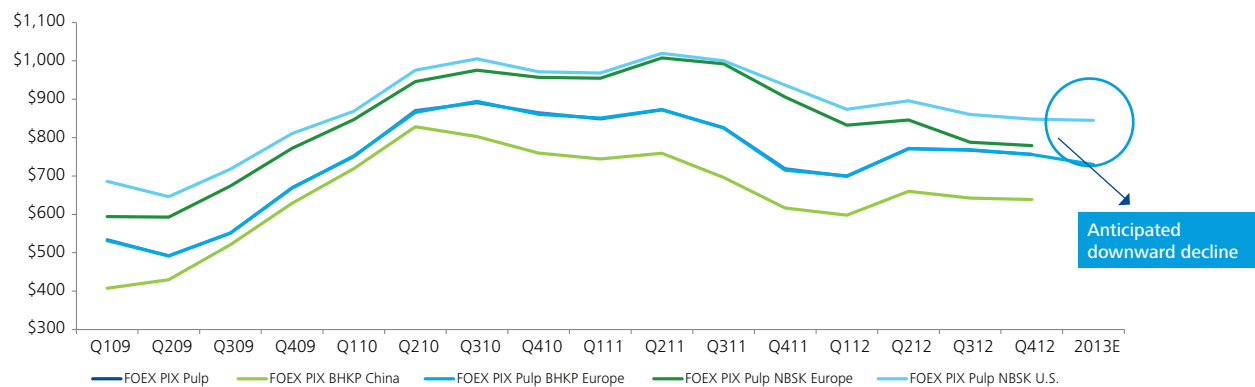
10 Bracelpa Associao Brazilian Pulp and Paper Association, accessed September 2012, www.bracelpa.org.br/bra2/?q=en

Figure 1: Estimated global pulp capacity additions by 2020



Source: DTL Global Manufacturing Industry group November 2012 analysis of data from Santander, *Chilean Pulp & Paper Sector: The Short-Term Illusion of Pulp Prices; Downgrading Copec and CMPC*, 28 March 2012

Figure 2: Pulp prices (US\$/ton)



Source: DTL Global Manufacturing Industry group November 2012 analysis of data from Bloomberg database terminal, Santander, Itau BBA, FOEX, and Hawkins Wright (accessed 20 November 2012)

Exacerbating supply pressures within the country, Argentina's trade barriers are having expected effects on other nations' export activity. As much as half of the total consumption in paper and packaging in Argentina is imported, and as much as one million tons in pulp production capacity will be needed to address current consumption needs.¹¹ Government mandates in effect from the end of 2011, requiring external companies to

obtain permission from Argentina's tax-authority body before converting local currency to foreign currency, persist as a de facto practical restriction on foreign capital investment—a chill likely to continue until a reversal or modulation of the practice.¹² In the face of these restrictions, in-country producers are positioning themselves to meet demand as best they can.

11 Observation by the DTL Global Manufacturing Industry group, November 2012.

12 *Export.gov. Argentina: Trade Regulations, Customs, and Standards*, accessed 18 November 2012, www.export.gov/argentina/doingbusinessinargentina/argentinacountrycommercialguide/traderegulationsandstandards/index.asp.

Within Brazil, paper demand is increasing but largely in trade on the local markets.¹³ Previous currency over-evaluations of the Brazilian real have hampered Brazil's competitiveness, but productivity gains are maintaining the country's position. The government is implementing policies to lower interest rates, provide tax breaks on certain consumer goods, and check the appreciation of the currency.¹⁴ This may counter both complexities and ongoing changes in tax regulations that complicate compliance, and a lack of recent investment in infrastructure and non-pulp capacity.¹⁵

In Brazil, vertical integration may likely prove a means of meeting demand internally. As example, major Brazilian paper company Klabin is blurring conventional segmentation between pulp producers and paper producers, having invested in a US\$3.4 billion pulp mill in the country to supply the company's own paper-production stream. Due online in 2014, the plant has a planned annual capacity of 1.4 million tons of hardwood (eucalyptus) and softwood (pine) pulp.¹⁶ It remains to be seen whether Argentinian or other South American companies will follow Klabin's lead in such vertical integration investments.

Imports, versus expanded domestic production, have largely filled South American demand for coated free sheet. The inflection point seems to have passed at which returns on investment into coated free sheet production capacity would be favorable. Uncoated free sheet may see the same fate on the continent: supply and demand for uncoated free sheet are currently balanced, but if and as demand outstrips supply quickly enough, without sufficient investments into South American production capacity, reliance on imports for uncoated free sheet may result.

South America as investment opportunity

Certain Europe-based FP&P companies made significant investments in South America. A joint venture between Chilean company Arauco and Finland's Stora Enso will see a 1.3-million-ton-per-year state-of-the-art pulp mill come online mid-year 2013, in Punta Pereira, Uruguay.¹⁷ Such activity is likely to continue until the gap lessens between European production capacity and European demand; Brazil, Uruguay, and Chile have proven attractively robust markets in this regard.

Meanwhile, production streams of coated free sheet from European mills are being diverted to higher-demand markets, including South America, with Europe-based companies setting up South American sales offices and distribution facilities.

Given favorable labor rates, appealingly short crop-rotation time frames for pine and eucalyptus both, and general availability of low-cost energy, South America may continue to be a competitively attractive region for infrastructure investment (though Venezuela remains a perceived riskier climate for some investors¹⁸). Brazil, plagued with high energy costs, has recently reduced certain taxes in the energy segment in order to spur foreign investment.¹⁹

13 Observation by the D TTL Global Manufacturing Industry group, November 2012.

14 D TTL Global Manufacturing Industry group, *2013 Global Manufacturing Competitiveness Index*, November 2012, www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Manufacturing/dttl_2013%20Global%20Manufacturing%20Competitiveness%20Index_11_15_12.pdf

15 Ibid.

16 Datamark Market Intelligence Brazil, *Klabin intends to invest \$6.8 billion in PR*, 23 March 2012, www.datamark.com.br/en/news/2012/3/klabin-intends-to-invest-6-8-billion-in-new-factory-in-pr-126219; *EUWID Pulp and Paper*, "Brazil's Klabin plans to build a new pulp mill in Paraná," 27 March 2012, www.euwid-paper.com/news/singlenews/Artikel/brazils-klabin-plans-to-build-a-new-pulp-mill-in-parana.html.

17 Stora Enso, *Stora Enso's and Arauco's Montes del Plata joint-venture finalises project financing*, press release, 30 September 2011, www.storaenso.com/media-centre/press-releases/2011/09/Pages/stora-ensos-and-araucos-montes.aspx.

18 Observation by the D TTL Global Manufacturing Industry group, November 2012.

19 D TTL Global Manufacturing Industry group, *2013 Global Manufacturing Competitiveness Index*, November 2012, www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Manufacturing/dttl_2013%20Global%20Manufacturing%20Competitiveness%20Index_11_15_12.pdf

South America as exporter

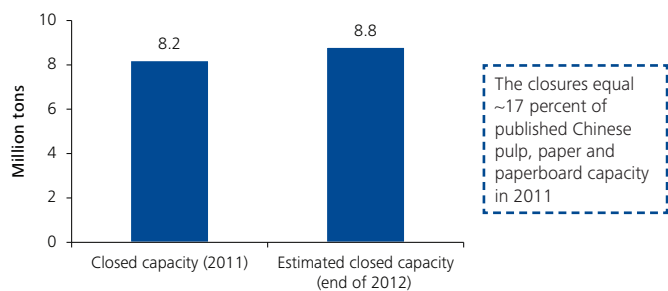
With overall global demand light, South America's export-competitiveness might be tied to its significant trading partner, China, in the years to come. China remains the largest global consumer of chemical pulp.²⁰ Despite the country's downgraded growth projections from previous years, the Chinese government will likely continue to pursue an expansionary policy.²¹ To modernize its industry, the Chinese government ordered closure of 8.8 million metric tons of pulp and paper capacity in 2012 (following an 8.2-million-ton shuttering in 2011 that brought FP&P capacity shutdowns to 25 million tons since 2007;²² see Figure 3). The policy is primarily to improve production efficiencies and reduce emissions and effluents. Impacts of this policy decision will be greatest for smaller producers,

who are more likely to have outdated, less efficient production infrastructures and to lack the requisite capacity for compliance. This mandatory shutdown will also aid in the needed consolidation of a highly fragmented supply market.

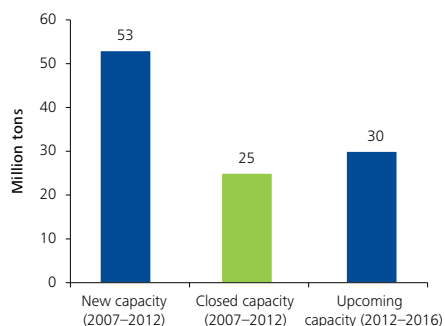
China's paper market has experienced a capacity surplus, following large-scale capacity-expansion projects from 2010 through 2012, which is tightening margins industry-wide in the country. Nonetheless, stalled progress in timber plantations and waste-paper recycling streams is contributing to demand for imported pulp and the potential for China to consume the new capacity being brought on in South America.

Figure 3

China pulp and paper capacity closures, 2011–2012 (million tons)



China pulp and paper capacity changes (million tons)



Source: D TTL Global Manufacturing Industry group November 2012 analysis of data from RISI, *China offers further details on this year's pulp and paper capacity closure plan*, 11 July 2012; UNECE and UNFAO, *Forest Products Annual Market Review: Paper, paperboard and woodpulp markets, 2011–2012*

20 UNECE and UNFAO, *Forest Products Annual Market Review: Paper, Paperboard and Woodpulp Markets, 2011–2012*, accessed 15 November 2012, www.unece.org/fileadmin/DAM/timber/publications/FPAMR_2012.pdf.

21 D TTL Global Manufacturing Industry group, *2013 Global Manufacturing Competitiveness Index*, November 2012, www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Manufacturing/dttl_2013%20Global%20Manufacturing%20Competitiveness%20Index_11_15_12.pdf

22 *Pulp & Paper International*, "China mandates mill closures to improve pollution," 22 November 2011, www.risiinfo.com/techchannels/environment/Mandated-mill-closures-in-China.html; Sappi Limited, *Paper Globe*, "Has the Chinese Tiger lost its roar?" August 2012, www.sappi.com/regions/is/Newsletter%20downloads/sappi_english.pdf; UNECE and UNFAO, *Forest Products Annual Market Review: Paper, Paperboard and Woodpulp Markets, 2011–2012*, accessed 15 November 2012, www.unece.org/fileadmin/DAM/timber/publications/FPAMR_2012.pdf.

The slowing Chinese economy is feeling the effects of the overall global economic performance, while appreciation of the yuan is dampening China's export market. Meanwhile, Chinese companies recognize the need to reduce reliance on imported pulp. To buoy the country's paper resource capabilities, China is considering preferential policies to encourage large producers to establish production bases abroad (in areas, such as Laos, rich in forest and pulp resources).²³ Labor arbitrage here becomes relevant; as China's labor costs increase, markets in South America and Indonesia now offer more-attractive labor rates for producers.²⁴ Regional labor costs are projected to be an important consideration for non-China regions in capital investment decisions going forward.

Accordingly, in August 2012, South Africa-based Sappi Limited divested its shares in a fine-paper joint venture with China's Shandong Chenming Paper Holding Company and other smaller Chinese partners,²⁵ as Sappi and other South African producers take measures to focus on high-growth businesses and core capabilities. The South African market continues to face electricity supply shortages, issues of labor unrest, albeit largely in the mining industry, that are dissuading investment, and higher oil costs²⁶; to counter these factors and position itself for competitiveness in the near-term global market, the country is harnessing its similar ecology to South America's, with a concerted push to eucalyptus plantations. South Africa continues to export some volumes of wood chips to the East from smaller cooperative producers, feeding the anticipated fiber demand shortage in China and keeping chemical cellulose a focus for Sappi as a principal producer.

A more significant factor in the global distribution of FP&P products may be Russia's recent joining of the World Trade Organization (WTO), which required the country to reduce export tariffs.²⁷ In the longer term, Russia's WTO status

may increase wood and lumber supplies to Europe, as well as provide a means for companies with operations in both Russia and China to move feedstock materials into Asia.

South America as alternative fuel producer

Black liquor has traditionally been harnessed by pulp mills to augment the value chain through recovery of pulping chemicals and to generate (low-efficiency) syngas power. Higher-energy-efficiency biofuels and biobased chemicals from wood residues are being pursued, but despite advances in cellulosic-energy production technologies, no commercial-scale wood-based bioenergy or biochemicals volumes have yet been achieved; required capital investments are lacking, supportive government subsidies have not materialized, and established end markets are unclear.

Should wood-based (and other cellulosic) bioenergy reach commercial-scale production, South America, with its current investments into state-of-the-art production facilities, could well stake a competitive position in global markets (though non-South American countries may preferentially draw from their own domestic bioenergy streams as nations' concerns over energy-security increase). Any developments in cellulosic biofuels through the next decade seem likely to be research-phase or demonstration-scale achievements, given that current research into forest-products-based energy is acknowledging the necessity and absence of, economic viability to date. United States military interest in platforms for wood-to-jet fuel, for example, is assessing commercial feasibility, and certain university research has focused on the business case for conversion of paper sludge to biobased fuels and chemicals.²⁸

23 DTL Global Manufacturing Industry group, *2012 Global forest, paper, and packaging sector outlook*, March 2012, www.deloitte.com/assets/Dcom-Global/Local%20Assets/Documents/Manufacturing/dttl_2012%20FPP%20Outlook_3_12.pdf

24 Observation by the DTL Global Manufacturing Industry group, November 2012.

25 Sappi Limited, *Sappi Limited exits Chinese joint venture as part of strategic focus on high growth investments and debt reduction*, press release, 8 August 2012, www.sappi.com/regions/is/service/news/Pages/Sappi-Limited-exits-Chinese-Joint-Venture-as-part-of-Strategic-Focus-on-High-Growth-Investments-and-Debt-Reduction.aspx.

26 *Sowetan*, "Power shortages stifle economic growth," 9 October 2012, www.sowetanlive.co.za/news/business/2012/10/09/power-shortages-stifle-economic-growth; Agence France-Presse, "3,600 sacked as S. Africa labour unrest deepens," 9 October 2012, www.za.news.yahoo.com/3-600-sacked-africa-labour-unrest-deepens-171246253.html; Republic of South Africa Energy Department, "Petrol price archive," accessed January 2013, www.energy.gov.za/files/esources/petroleum/petroleum_arch.html

27 Finnish Forest Industries Federation, *Russia's WTO membership opens fresh opportunities for the forest industry of Finland*, press release, 23 July 2012, www.forestindustries.fi

fi/juurinyt2/tiedotteet/Pages/Russiaswtomembershipopensfreshopportunitiesfortheindustryoffinland.aspx.

28 *Biofuels Journal*, "University of Maine researchers work to develop biomass jet fuel for U.S. military," 18 May 2012, www.biofuelsjournal.com/articles/University_of_Maine_Researchers_Work_to_Develop_Biomass_Jet_Fuel_For_U_S_Military_-122983.html; ReachNC, "Low cost conversion of industrial papermaking sludges to ethanol," grant detail, accessed 30 November 2012, www.experts.scival.com/reachnc/grantDetail.asp?t=ep1&id=22517&o_id=&n=Richard+A+Venditti&u_id=374; *Ethanol Producer*, "Ethanol production from paper industry sludge examined," 30 October 2012, www.ethanolproducer.com/articles/9171/ethanol-production-from-paper-industry-sludge-examined.

Insofar as Brazil's global leadership in sugarcane ethanol production has opened commercial streams for (non-FP&P) biobased ethanol, South America may find itself at some competitive advantage if and when commercial cellulosic ethanol becomes viable, simply by virtue of having biofuel-ready automotive fleets and necessary biofuel-distribution streams in place.

Co-energy production for companies' own operations and even as a revenue stream in supplying to the grid may increasingly be a cost-management option, particularly for countries like Brazil that face high energy costs (though Brazilian tax policies on domestic energy production will determine the viability of this going forward). In practice, new mill constructions often continue to incorporate power-generating capability, regardless.

Conclusion: Synopsis

The global FP&P sector will likely continue to be constrained by regional economic pressures, with overall lags in demand and oversupplies in 2013. Given continued uncertainties and anticipated at-best modest gains in most sectors, the most notable influence on global FP&P markets in the coming year may well radiate from South America. The continent is proceeding with significant capacity expansions in pulp largely intended for worldwide distribution, through investments into state-of-the-art production facilities. Within the continent, certain countries are making efforts to encourage investments through reduced energy costs, which may counter dissuasions on investments in other South American countries (including perceived unfavorable political climates and trade restrictions).

Open markets, renewed European and North American consumption, and the return to previously forecasted Chinese demand are needed to support global FP&P industry health. Should these come to pass, South America may find itself competitively well positioned, having already invested in the newest, largest-capacity mills and latest technology and benefitting from favorable labor rates, agricultural productivity, and lower energy costs. The potential is there for South America to steadily emerge as a significant influential force, with other regions summoned to adapt accordingly.

Contacts



John Dixon
Global FP&P Sector Leader
Deloitte Touche Tohmatsu Limited
+1 704 887 2013
jodixon@deloitte.com



Mikael Paul
Partner
Deloitte Finland
+35 82 0755 5348
mikael.paul@deloitte.fi



Roy Campbell
Partner
Deloitte South Africa
+27 11 806 5580
rcampbell@deloitte.co.za



Sally Sun
Partner
Deloitte China
+ 86 21 6141 1011
ssun@deloitte.com.cn



Daniel Alberto Lucca
Partner
Deloitte Argentina
+54 11 4320 2749
dlucca@deloitte.com



Paulo Marcio Vitale
Partner
Deloitte Brazil
+55 11 5186 6208
pvitale@deloitte.com

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