do with the improvement in the trade balance in forest products. The factors in the increase in United States exports over time include strong foreign demand as economic growth in the rest of the world has been greater than the US since 1950s, a weakened US dollar in the recent decade, an increased effort by US manufacturers to access foreign markets during time of falling domestic demand, and free trade.

Timber resources are important. In the 10 to 15 years following the decision to list the northern spotted owl as an endangered species, US forest-products exports fell precipitously. Fortunately, US forest resources have increased steadily since the Second World War. However, the existence of a trade surplus in forest products between 2009 and 2014, after the United States pulled out of its recent recession, suggests that other factors may help improve the US trade balance in forest products. Perhaps there is a structural change in the competitiveness of US forest industry.

US trade policies, another likely factor, include trade agreements, such as the North America Free Trade Agreement, and trade actions against foreign products, such as US trade actions against Canadian lumber imports and Chinese paper-products imports. Another trade policy—the implementation of the Lacey Act Amendment of 2008 (which in part bans imports of illegally harvested wood products)—may have slowed down US imports of some forest products from particular countries.

Of all these factors, the exchange rate and purchasing power are still the main factors that have altered the US forestproducts trade balance. Thus, the depreciation of the US dollar since 2002 and the high growth rate of foreign purchase power in the last two decades are important factors. If the US dollar strengthens continuously and if the rate of world economic growth falters, we could see the US forest-products trade return to a deficit in the near future.

Zhang is Alumni & George W. Peake Jr. Professor of Forest Economics and Policy, School of Forestry and Wildlife Sciences, Auburn University and chair of the SAF Economics, Policy and Law Working Group (E1). Contact him at 334-844-1067; zhangd1@ auburn.edu.

Working Group Contributions

The Forestry Source welcomes articles from working groups that are of interest to the broader SAF membership. Length: up to 1,200 words. Articles may include up to two photos or other graphics. Authors are encouraged to contact their working group officers and the editor prior to writing an article. For information, contact Steve Wilent, Editor, 503-622-3033, wilents@safnet.org.

Nine Predictions for Global Wood Consuming Industries in 2016

By Pete Stewart

ere are my predictions for woodconsuming industries in 2016. For a look at how my predictions for panned out, see tinyurl.com/gw5v9og.

1. US pulp and paper producers will experience some tightening as exports wane. Most of the growth in demand for pulp and paper products will come from the non-Western world. Demand in both North America and Europe will be flat to lower, while Africa, Asia Pacific, Latin America, and the Middle East will all see upticks. Overall, the strongest growth categories will be for market pulp, packaging, tissue and towels and specialties.

The US dollar will remain strong compared to other currencies, however, and as a result, US producers will struggle to compete in global markets, because exports from the US will be 20 percent more expensive than end products from other countries.

2. Expect domestic long fiber (conifer) supply will remain tight, keeping prices elevated. Demand for pine fiber will increase; growth in OSB production (a result of the slow recovery in housing), pulp and paper production (a result of global demand), and industrial wood pellet production (a result of new capacity coming online and more biomass-to-coal conversions coming online in the UK) will exert pressure on the demand side. On the supply side, the reduction in sawtimber harvests due to the slow housing recovery has reduced the amount of pulpwood available to the market. A combination of these demand and supply pressures will keep prices elevated throughout 2016.

3. Abundant softwood sawtimber inventory will keep log prices in check in the US South; in the Northwest, log prices are due for a reset. Due to the combination of oversupply in pine sawtimber that built up in US South forests during the recession and lackluster demand, softwood sawtimber prices will remain low. This is likely to be the case for the next decade.

In the Northwest, however, high log prices coupled with waning demand from Asian markets has placed so much pressure on sawmills that more closures are likely to take place in 2016. A sawlog price reset will be needed in order for sawmills in the region to be competitive.

4. Domestic lumber markets will continue to be capped by a slow housing recovery (1.0-1.2 MM starts); new construction will continue to be weighted heavily to multifamily as millennials still opt to rent in urban areas. In short, 2016 will not be a break out year for the US housing market. Millennials—the population cohort in their prime home buying years—would like to purchase homes, though fewer (compared to the historic trend) have the resources to do so. Instead, they will continue to opt for rentals in urban areas in 2016.

Still, we are on the leading edge of growth, tenuous though it may be. Unemployment is at 5 percent, the number of people rejoining the workforce is trending higher, and we started to see some wage inflation in late 2015 as well. Together with the Fed's recent hike in the interest rate, these indicators all point to a stronger economy.

Market participants are reacting to these signs, especially in the South, where log prices are low and likely to remain so. In 2016, new lumber capacity will be announced, and we expect the trend in foreign investment in southern sawmills will continue as well. Full recovery of the housing market is still in the future, however.

5. Industrial wood pellet capacity in the US will plateau as EU targets are being fulfilled. New pellet plants will be developed, but not at same pace as 2014 and 2015. The total production capacity of operating and under-construction industrial wood pellet mills will be 7.4 million metric tons in 2016. Demand from three coal-to-biomass conversions in the UK (a total of 5 million metric tons) and projects in the Netherlands (3.5 million metric tons-the cap on biomass co-firing set by the government) will likely mean additional production capacity will be necessary, but at the current market share for the US South of 40 percent, this will represent another 3.4 million metric tons of production capacity that will need to be added beyond 2016. Fewer new projects will break ground as a result.

6. Brazil's domestic sawnwood markets will struggle as the recession continues, though exports will remain strong. Overall, Latin America will keep growing. Hard times will persist in Brazil in 2016. GDP will contract 2 to 3 percent. Pulp exports will continue strong as the weak Real is a boon on the revenue side, especially versus the US Dollar and Euro.

Economies in other Latin American countries—Peru, Colombia, Ecuador, and Chile, to name a few—continue to grow and contribute to the rising demand for pulp and paper products.

7. European lumber/solid wood4. Domestic lumber markets willtinue to be capped by a slow hous-
recovery (1.0-1.2 MM starts); newstruction will continue to be weighted
rily to multifamily as millennials still7. European lumber/solid wood
markets will struggle mightily as Eu-
rope enters a low- or no-growth year.
EU traders will not be able to push enough
volume to the Middle East to make up the
difference.

In response to weak demand in their traditional markets in the UK and France, much of the lumber being produced in Scandinavia has been diverted to the Mid-



Pete Stewart

dle East, where it is reasonably competitive in price. Political turmoil throughout the region has led to supply and demand disruptions in 2015; this turmoil will only intensify in 2016, causing more consternation for Scandinavian sawmills. Because this will be coupled with the difficulties EU currency countries have competing with non-EU currency countries like Poland and Belarus, Scandinavian sawmills will face significant challenges in 2016.

8. Biofuels will develop to the next level as pilot plants come on line. The commitments made by 195 countries at COP21 to limit the warming of the earth to "well below" 2 degrees, a feat that would require the entire world to be completely off fossil fuels by 2050, provide confidence for investors in biofuels. Low-carbon renewable transportation fuels will gain traction as a result. Several promising technologies are going through the Energy Department funding process and at least one has been approved as an advanced biofuel that will receive government subsidies. The degree of impact the Clean Power Plan will have on biofuel investment remains to be seen. It is safe to say, however, that the passage of the CPP will spawn more investment, not less, in biofuels.

9. Corporate sustainability efforts will lead more and more companies to substitute wood for fossil fuels, and companies will focus on biochemicals as a result. Corporations producing chemicals and plastics are turning to biomaterials as a renewable substitute for fossil fuels in their manufacturing processes. Companies will make this move in response to consumer preference for end products that are greener and more sustainable despite low oil prices. This nascent industry will start "feeling its oats" in 2016, not enough to move markets, but enough to draw attention.

Pete Stewart is founder, president and chief executive officer of Forest2Market Inc. (www.forest2market.com). This article, first published on the company's blog (tinyurl .com/zhmdznm), appears here with Stewart's permission.