**Tie Demand Outlook In Uncertain Times**

By Petr Ledvina

Based on the 2019 stock market performance, one might think everything was hitting on all cylinders in the economy. Events that concern railroads and the tie industry were also positive. First and foremost, the 45G Tax Credit was extended. Second, the trade ceasefire with China was signed. And third, U.S. economic growth was relatively strong with low unemployment, tepid inflation, marginally improving real wages and low interest rates.

Despite these positive factors, the U.S. manufacturing index drifted lower throughout the year, declining about 1 percent. As a consequence, capacity utilization across the industry was not much better, declining about 3 percent. The overall wood-manufacturing sector declined as well.

Among the reasons for these declines were trade tensions and a strong U.S. dollar.

The phase one deal with China brought with it some glimmer of hope. However, the trade deal did not abolish most of the tariffs imposed prior to the agreement. Before the agreement, the tariffs were applicable to $550B of Chinese goods and $185B of U.S. goods with only a short list of exempt products.

As a result of the deal, the U.S. administration scrapped the portion that went into effect in December 2019 ($160B) and committed to lower the duties from 15 percent to 7.5 percent on $120B of products that went into effect on Sept. 1, 2019. However, 25 percent levies on $250B will remain for now.

From the Chinese perspective, there is no word on the status of tariffs placed on U.S. goods, although China has agreed to purchase $200B worth more of U.S. products and services over the next two years. This includes $78B in manufacturing, $54B in energy (oil, coal, NG, etc.), $32B in farm products and $38B in services. Both Chinese and the U.S. tariffs will remain in place unless modified in phase two of the agreement (china-briefing.com, thefederalist.com).

One thing is certain, China will need pork. Those who follow the development of wide-spread African swine disease already know that it decimated about 50 percent of hog herds in China and that Chinese imports of pork have increased by more than 40 percent, which is about 1.5 million tons (CNN.com). While the expectation is that by the end of 2020, the hog herds should recover to about 80 percent of pre-epidemic levels, the Food and Agriculture Organization of the UN (FAO) reports that the spread of the disease is not limited to China. There have also been cases reported in both Americas, Vietnam, the Philippines, Laos, Mongolia, Indonesia and a few other Asian countries. Hence, these countries may be unlikely sources of pork exports to China.

In addition to African swine flu, the new coronavirus has one of the possible global health crises that will affect the global and U.S. economies. Thus far, oil prices have taken a hit as the Chinese government imposed travel restrictions, and the stock market lost some steam.

On a much brighter note, the 45G Tax Credit was signed into law. After treading water in two separate House bills (H.R.510 and H.R.3301) for a year, with wide support in the House and Senate, the tax credit was incorporated into H.R.1865 at the end of 2019 and passed relatively quickly in both chambers. It has a retroactive effect to recover to about 80 percent of pre-epidemic levels, the Food and Agriculture Organization of the UN (FAO) reports that the spread of the disease is not limited to China. There have also been cases reported in both Koreas, Vietnam, the Philippines, Laos, Mongolia, Indonesia and a few other Asian countries. Hence, these countries may be unlikely sources of pork exports to China.

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So what is in store for 2020 and 2021 tie demand?

After three years of very solid GDP growth of 2.4 percent, 2.9 percent and an estimated 2.3 percent for 2019, the predictions point to lower growth in the next two years as the boost from the tax reform winds down. The growth rate is expected to be 1.9 percent in 2020 and 1.8 percent in 2021. In 2019, coal production declined sharply by 8.7 percent, though not as much as originally forecasted. Nonetheless, this was one of the main drivers of lower railroad freight. The forecast for 2020 points to even lower production, with a decline of 13.5 percent followed by a decline of 2.7 percent in 2021. However, it needs to be pointed out that exports may be stronger than anticipated due to the China trade deal.

In addition, as stockpiling of inventories from 2018 is easing, so is the railroads’ intermodal traffic, as was theorized in the March/April 2019 Crossties article.

These may provide a drag for railroad freight and consequently for tie demand. Nonetheless, the 45G Tax Credit should offset the headwinds posed by the economy. The model predicts a slight increase in demand for ties in 2020, and the outlook for 2021 is even more positive.

### New Wood Crossties (in thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP</th>
<th>Class 1 Purchases</th>
<th>Small Market Purchases</th>
<th>Total Purchases</th>
<th>Pct</th>
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<tbody>
<tr>
<td>2017</td>
<td>2.3%</td>
<td>15,929</td>
<td>7,400</td>
<td>23,329</td>
<td>-4.1%</td>
</tr>
<tr>
<td>2018</td>
<td>2.9%</td>
<td>15,489</td>
<td>5,872</td>
<td>21,361</td>
<td>-8.4%</td>
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<tr>
<td>2019</td>
<td>2.3%</td>
<td>15,263</td>
<td>4,682</td>
<td>19,945</td>
<td>-6.6%</td>
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<tr>
<td>2020</td>
<td>1.9%</td>
<td>15,302</td>
<td>5,203</td>
<td>20,504</td>
<td>2.8%</td>
</tr>
<tr>
<td>2021</td>
<td>1.8%</td>
<td>15,414</td>
<td>5,957</td>
<td>21,371</td>
<td>4.2%</td>
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