Slowing Traffic, No 45G Among Tie Demand Impacts

By Petr Ledvina

Any economic slowdown in the United States and globally has a negative effect on rail freight volume. Trade tensions affect economic growth in many ways. Weather events, especially this year, also cause disruption of rail shipments, including agricultural shipments. Even so, Class I railroads reported strong financial results on lower traffic volumes in Q2 2019.

In 2018, Congress did not extend the 45G tax credit for small railroad lines, which also had an impact the on the RTA tie demand forecast. A considerable amount of work has been needed to redevelop parts of the tie demand model, especially regarding small market demand, which includes Class II and III and commercial lines. As this effort continues, RTA is exploring several new projects on price sensitivity with regard to inventory volatility.

The article titled, *On the Subject of Modeling*, in May/June *Crossties* noted that the RTA economic team has been busy redeveloping some parts of the econometric model over the past few months.

Historical data for the small market is suboptimal for training and validating the model. Thus, reevaluation of the forecast equations is often necessary. Instead of relying on surveys or other industry estimates, RTA is now investigating secondary modeling options as a means of quantifying short line tie demand. Thus, reevaluation of the forecast equations is often necessary. The article also suggested that tie demand for 2019 would be about 21 million ties. However, the newest modeling efforts suggest slightly lower numbers. That applies to 2020 tie demand as well (Table 1).

U.S. GDP growth has been revised upwards from 2.2 percent to 2.5 percent for 2019, since last spring, and estimates for 2020 have risen by 0.1 percent to 1.8 percent. This usually would signal a positive environment for the tie industry. But, higher GDP seems to have been more than offset by a revised coal production forecast. As the secular shift from energy coal to natural gas continues, the latest EIA coal production forecast was revised downward by 3 percent for 2019. The spring forecast for 2020 has also been revised down by 7 percent.

Oil production forecasts have similarly been revised downward—0.4 percent for 2019 and only up 1.5 percent for 2020—even though current U.S. oil production is predicted to increase by 11.4 percent from last year and by another 8.1 percent in 2020. This should increase the transport of crude oil by rail (CBR) this year and next year. However, frack sand long haul shipment is in decline, as it is currently being sourced more from local sources than in the past.

Another drag for freight volume is in the agricultural sector. Crop yields are predicted to be lower for 2019 and 2020. Two main crops with lowered yields are soybeans and corn. Past 2020, the mid-term outlook is stable assuming three main factors: 1) the ➤

Table 1 - New Wood Crossties (in thousands)

Year	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2016	1.50%	16,531	7,788	24,319	-0.30%
2017	2.30%	15,929	7,400	23,329	-4.10%
2018	2.90%	15,489	5,872	21,361	-8.40%
2019	2.50%	15,794	4,886	20,680	-3.20%
2020	1.80%	15,751	5,050	20,800	0.60%

Table 2

	Crossties Laid In Replacement Or in Addition - 2018			Track Operated by Reporting RR				Rail Laid In Replacement Or In Addition - 2018		
District & Railroad	New Wood Ties	New Ties (Other than Wood)	Second-Hand Ties (All Types)	Tons of Rail Laid Per Mile	Crossties Per Mile	Avg. Spend Per Ton of Rail	Avg. Per Tie*	New Rail Laid (Tons)	Relay Rail Laid (Tons)	Avg. Weight Rail (lbs/yd)
Eastern District										
CSX Transportation	2,696,852	9,519	0	3.6	91.8	$5,401.9	$116.0	104,107	2,756	135.9
Grand Trunk Corp. (CN)	820,901	236	1,126	5.8	89.5	$4,157.9	$143.6	36,971	16,500	134.3
Norfolk Southern	2,129,405	8,340	109,947	3.5	79.0	$4,507.2	$134.0	88,429	11,068	136.0
Total Eastern Dist.	5,647,158	18,095	111,073	3.9	86.1	$4,803.3	$126.9	229,507	30,324	135.4
Western District										
BNSF	2,865,068	25,763	0	3.6	72.3	$6,499.3	$132.0	145,058	152	133.8
KCS	450,904	7,170	0	4.8	112.4	$8,821.5	$45.7	16,075	3,508	131.4
Soo Line Corp. (CP)	368,240	0	0	4.0	83.0	$5,060.2	$146.6	10,235	7,377	135.2
UP	4,057,527	227,640	0	4.1	98.5	$6,170.9	$116.8	172,927	3,585	135.7
Total Western Dist.	7,741,739	260,573	0	3.9	87.0	$6,393.9	$119.6	344,295	14,622	134.7
Total U.S.	**13,388,897**	**278,668**	**111,073**	**3.9**	**86.6**	**$5,715.6**	**$122.7**	**573,802**	**44,946**	**135.1**

Source: Associaton of American Railroads (AAR). Note: Rail laid and ties laid data for KCS were verified by KCS during May. They have an unusual relationship between capital expenditures and rail laid, and ties laid, which was said to be caused by the Work in Progress line in Schedule 330. The average weight of rail installed for CP's Soo Line Corp is an AAR estimate using data from the other railroads and CPSL spending data.


SOLAR POWERED
100% SUSTAINABLE & RENEWABLE
Here comes the sun. Forests soak in solar energy and act as a carbon trap for greenhouse gases to produce the foundation for our railroads — hard-working wood crossties. And when those ties' useful lives in track are over, they give their all one final time — as biomass fuel in energy cogeneration plants across the land. From the power of the sun to alternative fuel. Carbon-positive wood ties — what could be more replenishing than that?
CONTACT THE RAILWAY TIE ASSOCIATION WWW.RTA.ORG TO LEARN MORE ABOUT SOLAR-POWERED CROSSTIES.
RTA
CENTENNIAL CELEBRATION
Celebrating 100 Years in Service to the Wood Crosstie Industry and Railroads
115 COMMERCE DRIVE, SUITE C
FAYETTEVILLE, GA 30214
VOICE: (770) 460-5553 I FAX: (770) 460-5573
TIES@RTA.ORG I WWW.RTA.ORG
© 2019 The Railway Tie Association

Agricultural Act of 2014 remains in effect; 2) trade conditions do not worsen; 3) weather conditions are reasonable. Railroad freight may or may not get additional support from agricultural shipments. What are the odds that trade tensions ease, weather cooperates, and the United States will not be hit with a catastrophic event like this year's March flooding in the Midwest? While there is considerable uncertainty on these questions, *if* major disruptions are avoided, the outlook would be somewhat brighter for the tie industry in 2020.

Additional headwinds, however, still remain with the global economic outlook and inventories in general. The International Monetary Fund lowered its forecast for global GDP growth by 0.1 percent to 3.2 percent in 2019 and from 3.6 percent to 3.5 percent in 2020. U.S. manufacturing has been constrained by a strong dollar and the economic slowdown in China, Europe and elsewhere (see page 30).

Wholesalers' inventory-to-sales ratio is still increasing and may continue to do so as there is yet another tariff increase looming in December. July wholesalers' ISR was at 1.36, while in March the ratio was 1.33. A year ago, it was 1.27.

Business ISR has been rising as well,

Table 3—Railway Tie Association Annual Survey

Estimated Crosstie Requirements • Class I Railroads
2019-2021 Inclusive

Authorized Crossties for 2019										
	Total Track	New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
District and Railroad	Mileage	Hardwood	Softwood	Crossties	Concrete	Steel	Other	Wood	Other	Units
Eastern U.S.	39,500	5,400,000	0	100,000	5,000	2,000	1,000	250,000	15,000	50,000
Western U.S.	98,723	6,100,000	650,000	18,000	475,000	35,000	2,000	255,000	125	65,000
Canada	32,000	3,100,000	0	250,000	5,000	2,000	0	77,000	0	20,000
TOTAL	**170,223**	**14,600,000**	**650,000**	**268,400**	**541,000**	**38,000**	**3,000**	**582,000**	**15,125**	**135,000**
Authorized Crossties for 2020										
	Total Track	New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	39,500	5,400,000	0	250,000	5,000	2,000	5,000	250,000	15,000	50,000
Western U.S.	98,723	6,200,000	650,000	18,000	475,000	16,000	2,000	255,000	125	65,000
Canada	32,000	3,500,000	0	500	82,500	1,000	30,000	75,000	0	20,000
TOTAL	**170,223**	**15,100,000**	**650,000**	**268,500**	**562,500**	**19,000**	**37,000**	**580,000**	**15,125**	**135,000**
Authorized Crossties for 2021										
	Total Track	New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	39,500	5,400,000	0	250,000	5,000	2,000	5,000	250,000	15,000	50,000
Western U.S.	98,723	6,500,000	650,000	18,000	475,000	16,000	2,000	255,000	125	65,000
Canada	32,000	3,500,000	0	500	82,500	1,000	30,000	75,000	0	20,000
TOTAL	**170,223**	**15,400,000**	**650,000**	**268,500**	**562,500**	**19,000**	**37,000**	**580,000**	**15,125**	**135,000**

Table 4 - Short Line Survey Summary 2018

Tie Categories	2018 Usage	2019 Projected	2020 Projected	2021 Projected
New 6" and 7" Ties	2,101,418	2,390,144	2,128,376	2,147,922
Relay 6" and 7" Ties	95,028	87,964	104,616	103,532
Grand Total All Wood Ties	**2,196,446**	**2,478,109**	**2,232,992**	**2,251,454**
Switch Ties	82,136	76,646	81,319	84,673
Bridge Timbers	81,700	99,685	90,150	81,872
Concrete Ties	2,168	2,168	2,168	2,168
Steel Ties	2,277	2,548	3,599	2,277
Composite/Plastic Ties	2,168	2,710	2,277	2,277

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
Track Miles Reporting	**28,079.87**	**21,907.50**	**26,899.65**	**23,232.00**	**20,620.29**	**24,964.00**	**25,391**	**18,217**	**21,116**	**26,696**	**15,116**	**14,966**	**28,516**	**19,924**	**17,663**	**30,648**	**29,913**
Total Track Miles	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**46,823**	**46,823**	**46,823**	**46,018**	**46,018**	**43,990**	**45,847**	**45,847**
% Reporting	59.12%	46.12%	56.63%	48.91%	43.41%	52.56%	53.45%	38.4%	44.5%	57.0%	32%	32%	62%	43%	40%	67%	65%
Total Roads Reported	**234**	**188**	**223**	**206**	**176**	**197**	**192**	**157**	**185**	**191**	**117**	**116**	**139**	**130**	**115**	**170**	**111**
Total Short Lines	603	603	558	558	558	558	572	572	572	572	572	306	455	633	633	633	533
% Reporting	38.81%	31.18%	39.96%	36.92%	31.54%	35.30%	33.57%	27.4%	32.3%	33.4%	20.5%	38%	31%	21%	18%	27%	21%

though not so dramatically, and the retailers' ISR is at normal post-recession levels. Manufacturers' ISR is also elevated and rose from 1.35 to 1.38 over the last 12 months. While this may have had a positive effect on rail traffic, the impact may only be transitory.

Recent AAR weekly traffic and short line traffic reports show car traffic is decreasing measurably compared on a YTD basis with 2018 (see page 30). These reports indicate declines in most categories. Among the few bright spots are CBR and nonmetallic minerals.

Even on lower traffic volumes, however, Class I railroads reported very good financial results for the second quarter. This appears to be the result of improvements in efficiency and pricing power (Q2 earnings CSX, UP, CN, CP and BNSF). In addition, on average, Class I railroads' CapEx remains largely unchanged from 2018.

One contributing factor that isn't in question is that lowered tie demand in the forecast is due to the discontinuation of the short line tax credit. This in and of itself reduces the forecast by 800,000 to 1 million ties. Discussions to renew the 45G tax credit are ongoing, with wide support in both the U.S. House of Representatives and the Senate. In the House, there are 281 supporters of the bill, of which 19 signed on in September. In the Senate, 60 members of the chamber support this measure. This wide support would suggest that the short line tax credit may be resurrected and boost tie demand.

In all, there remains great uncertainty surrounding the forecast that cannot be modeled. The three major factors are the 45G tax credit, trade uncertainty and weather. Warm weather in late fall and early winter could provide railroads with the opportunity to install more ties. Should Congress pass the 45G tax credit bill, it would undoubtedly increase tie demand. On the other hand, lower rail traffic tends to predict lower tie demand even if only in the short term. The information gathered at the upcoming RTA 101st Annual RTA Conference may assist in refining the 2020 outlook even as the forecast model enhancements are explored. The next official update is scheduled for the January/February 2020 time period.