Survey Says?

The World Is Flat For Tie Demand (...at the moment)

By RTA's Economic Team

Prologue

Mother Nature and a 3T (topsy-turvy-tariff) world have created an environment eerily familiar yet seemingly impossible given the pains that 2013-2014 visited upon the tie community and railroads.

Readers may recall between 2013 and 2015 ties were in such short supply that many problems arose. Why then does the industry find itself facing the same (if not worse) inventory-to-purchases imbalance just 3 years hence?

Before getting to the surveys, a review of RTA member-reported data (see sidebar on exciting changes coming to the format of the monthly reports) for production and inventory sets the table for what may be served up next.

RTA members' reported monthly inventory and production data is used to calculate a 'purchases estimate' and an Inventory-to-Sales Ratio (ISR). This is done by measuring the change in inventory from month-to-month vs. the incoming production of ties at treating plants, concentration yards and railroads.

Since 2016, RTA has calculated the purchases and ISR from the change in the three-month moving average (3MMA) of inventory levels. This is done to smooth the data plus account for any inventory adjustments that may arise from quarterly physical counts. Although there shouldn't be much variance from these counts, when it does happen it skews interpretation of the month-to-month data. A 3MMA helps those reviewing the data not get caught up in micro-analysis.

Resolving that concern, however, also requires readers to assess the information from a slightly different perspective.

Since April 2017, RTA has reported 17 consecutive months of negative inventory change (through August 2018 data). With this in mind, think about how inventory change is calculated using a 3MMA, and then consider the effect on ISR based on that moving average. With so many inventory drawdown months, it's hard to imagine how ISR won't continue edging down.

During that same time period, the 12-month moving average (12MMA) of tie purchases moved only a little bit. The tie purchases annual rate is down only 1.9 percent based on 12MMA.

Even with demand declining some, ISR at 0.66, is now within shouting distance of historic lows—lows not seen since 1997.

One reason behind this, 2016 and early 2017 saw too much white and black tie inventory built. Tie procurement and treating remained at a torrid pace beyond the point in 2015 when the market became sated. Couple that with a lower normalized level of demand and ISR skyrocketed to 0.99 in March of 2017—a level seen only twice in the last 30 years.

So, it stands to reason an adjustment was in store. But has the adjustment gone too far? Or rather, perhaps asking how the adjustments were implemented is a better question. If action had been taken earlier, would the result have led to a softer landing sooner for the railroads, suppliers and tie inventories?

Water under the bridge.

However, the fear now is that inventory has swung past a tipping point and the industry may have found itself right back in the middle of a 2013-2014 like crisis, pursuing material from a sawmill base less prepared to be quite so resilient this time. This worry is hard to quantify. It's dicey, though, to count on ties springing forth with a flick of a switch under the current circumstances mills now face.

So how could future demand expectations affect the situation?

Tie Demand Expectations

In the 2017 surveys, Class 1s predicted that 2018 new wood installs would be 15,250,000. It's encouraging that in this year's survey (see Table 2) results indicated 2018 will end up with installs of 15,650,000.

Even this small increase in demand could add to tie inventory angst. And, with improved economic activity, and suppliers enjoying a better second half in shipments than they did in the first two quarters of this year (August purchases up by 16.8 percent over July, for example), inventories seem likely to continue their descent.

The same 2018 surveys predict that 2019 installs will exceed this year to 15.9 million, bolstered mainly by expected increases from Canada. Plus, there could also be some increase in the eastern U.S.—but only if supply can match up.

Stories from the field and the surveys suggest that the western roads final 2019 programs are fluid. That's not to suggest indecisiveness, only that an inflection point could be on the horizon, even if it is only temporary. Maybe by the time of the RTA's 100th Annual Conference, modifications, if any, will come more into focus.

Given the state of inventory, however, it's only a coin-toss if increased installs can occur. Final increased tallies in installa-

RTA Updates Look Of Statistical Reports

As RTA looks to step into its second century of service to the treated hardwood crosstie industry and its suppliers and customers, our Economic Team is hard at work preparing a refresh of its statistical reports.

Commentary and graphical representation of the data will receive a significant makeover and will be available in PDF format for download. The underlying data will be still available as an Excel file, though, possibly, slightly reshaped format for readability.

Look for a preview of the first edition in the November/December issue of *Crossties*. The full report will be available as a separate link on RTA.org/statistics as soon as the October monthly data is received from producers. ■

tions will only accrue if supply matches the need—2019 installs could thus be a wash versus 2018 due to supply woes once again.

A review of August data provides additional fodder for this concern. Not only did actual inventories decline 250,000 ties, but also the 3MMA is down another 552,000 ties.

In addition, if black tie shipments continue to increase throughout the fall, and with only a couple of more ideal months of procurement ahead, a real inventory and concurrent 3MMA slide seems to have further to go.

And that doesn't even take into consideration multiple other factors that play their part.

One of these is increasing traffic and the demand for future maintenance needs this portends. AAR reported that August traffic was up 4.5 percent compared to August 2017. Overall, Class 1s are up 2 percent YTD and short lines report a 2.7 percent YTD increase through the end of August.

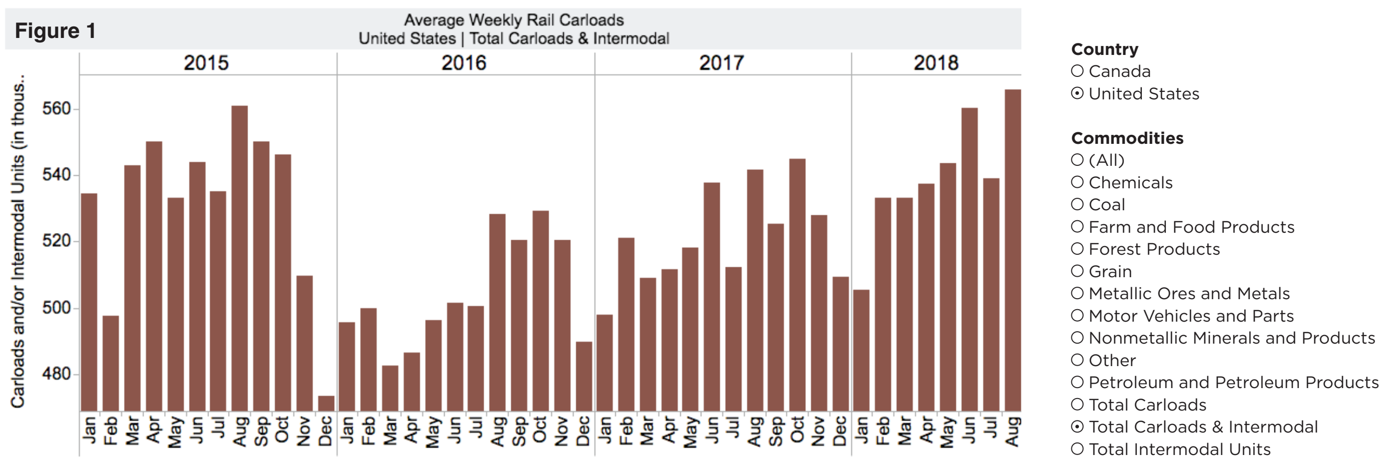
Add to this that the AAR monthly traffic data table (Figure 1) shows every month in 2018 rail traffic increased over the same months in 2017. And growth in shipments appears to be accelerating.

This most recent jump in traffic could be the result of the "front-loading" effect of already imposed and future potential tariffs. Because of this, it is fair to note that shipments could moderate and freight traffic growth decelerate into 2019 as some have speculated. The questions for railroads surrounding tariffs and NAFTA impacts could further moderate any decision to announce increases in programs.

Yet, if traffic is on a sustainable path of slow and steady growth, it would be a precursor for increasing maintenance demands, with the potential for further pressure on supply.

Commercial Markets

The words are robust to very robust. The only drag on demand right now is supply, the recurring theme here. It's interesting to note that some buyers who don't review the complete data set in context and rely only on snippets of information, executive summaries or headlines for understanding,



*Canada - Figures for Canada include the U.S. operations of Canadian railroads.
**United States - Figures for the U.S. excludes the U.S. operations for Canadian railroads.
Source: Association of American Railroads

Table 1

Crossties Laid In Replacement Or in Addition - 2017				Track Operated by Reporting RR			Rail Laid In Replacement Or In Addition - 2016		
District & Railroad	New Wood Ties	New Ties (Other than Wood)	Second-Hand Ties (All Types)	Miles Occupied	Crossties Per Mile	Avg. Spend Per Tie*	New Rail Laid (Tons)	Relay Rail Laid (Tons)	Avg. Weight Rail (lbs/yd)
Eastern District									
CSX Transportation	2,908,131	62,824	0	29,786	99.7	$110.5	121,985	4,487	135.9
Grand Trunk Corp. (CN)	753,254	164	997	9,275	81.3	144.0	37,037	17,141	135.1
Norfolk Southern	2,250,034	38,388	143,270	28,471	85.4	112.3	110,120	13,480	136.0
Total Eastern Dist.	**5,911,419**	**101,376**	**144,267**	**67,532**	**91.2**	**115.3**	**269,142**	**35,108**	**136.0**
Western District									
BNSF	3,683,460	138,933	0	40,140	95.2	$117.1	190,338	2,160	135.2
KCS	488,438	30,404	0	4,043	128.3	165.3	14,950	805	134.0
Soo Line Corp. (CP)	311,508	0	0	4,478	69.6	180.7	7,445	4,172	132.0
UP	4,064,245	418,502	15,695	43,454	103.5	128.2	178,189	22,597	136.0
Total Western Dist.	**8,547,651**	**587,839**	**15,695**	**92,115**	99.3	127.5	**390,922**	**29,734**	135.4
Total U.S.	**14,459,070**	**689,215**	**159,962**	**159,647**	**95.9**	**122.6**	**660,064**	**64,842**	135.6

Source: Association of American Railroads
*** Installed Costs**

may not give proper weight to the fact that supply woes will affect actual shipments of black ties—down the road.

Simply said, you can't ship what you don't have (no matter the demand level) and that could be becoming more of a problem daily especially for the smaller customers.

With markets remaining strong and lead times being extended, it adds to the longer-term pressures—will there be a 2013-2015 *déjà vu* moment ahead?

The survey of the short lines (see Table 3), the largest part of what is commonly referred to as the commercial markets, offers a little, if incomplete, assistance. The same roads that show a projected 2.4 million tie demand for 2018 said they installed 2.0 million in 2017. That certainly reinforces the robust market reports.

But, with demand for pallet material driving prices to near all-time highs and other markets such as flooring and crane mats remaining strong, the squeeze is on from the other industrial timber markets and the lower end of the low-grade lumber market.

Not only are 7-inch IG ties tight, pressure is also on 6-inch and reportedly growing. And there really isn't any place to hide for suppliers. The top end of the grade tie market isn't keeping pace already, so what do suppliers do? The answer is ship it later—that is, if and when possible.

Table 2—Railway Tie Association Annual Survey

Estimated Crosstie Requirements • Class I Railroads
2018-2020 Inclusive

Authorized Crossties for 2018

	Total Track	New Wood Crosstie		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.	49,286	4,900,000	0	0	0	0	0	130,000	0	30,000
Western U.S.	98,723	7,200,000	300,000	25,000	425,000	15,000	1,000	290,000	125	70,000
Canada	32,500	3,550,000	0	0	80,000	1,000	0	85,000	0	18,500
TOTAL	**180,509**	**15,650,000**	**300,000**	**25,000**	**505,000**	**16,000**	**1,000**	**505,000**	**125**	**118,500**

Authorized Crossties for 2019

	Total Track	New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	49,286	5,300,000	0	170,000	0	0	0	160,000	0	54,000
Western U.S.	98,723	6,970,000	400,000	25,000	425,000	5,000	5,000	180,000	125	45,000
Canada	32,500	3,600,000	0	0	70,000	1,000	0	90,000	0	20,000
TOTAL	**180,509**	**15,870,000**	**400,000**	**195,000**	**495,000**	**6,000**	**5,000**	**430,000**	**125**	**119,000**

Authorized Crossties for 2020

	Total Track	New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	49,286	5,250,000	0	170,000	0	0	0	130,000	0	54,000
Western U.S.	98,723	6,920,000	400,000	25,000	425,000	5,000	5,000	180,000	125	45,000
Canada	32,500	3,600,000	0	0	77,500	1,000	0	90,000	0	20,000
TOTAL	**180,509**	**15,770,000**	**400,000**	**195,000**	**502,500**	**6,000**	**5,000**	**400,000**	**125**	**119,000**

Table 3 - Short Line Survey Summary 2018

Tie Categories	2017 Usage	2018 Projected	2019 Projected	2020 Projected
New 6" and 7" Ties	1,872,067	2,350,094	2,134,682	1,966,607
Relay 6" and 7" Ties	124,819	50,519	53,858	53,208
Grand Total All Wood Ties	**1,996,887**	**2,400,613**	**2,188,541**	**2,019,815**
Switch Ties	51,639	60,948	46,423	42,965
Bridge Timbers	48,201	70,629	59,431	60,775
Concrete Ties	434	0	8,673	0
Steel Ties	499	6,483	1,323	2,168
Composite/Plastic Ties	0	0	0	0

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Track Miles Reporting	21,908	26,900	23,232	20,620	24,964	25,391	18,217	21,116	26,696	15,116	14,966	28,516	19,924	17,663	30,648	29,913	23,883
Total Track Miles	47,500	51,584	51,584	51,584	51,584	51,584	51,584	51,584	50,859	50,859	50,859	50,000	50,000	47,889	50,000	50,000	45,002
% Reporting	46.12%	52.15%	45.04%	39.97%	48.39%	49.22%	35.3%	40.9%	52.5%	30%	29%	57%	40%	37%	61%	60%	53%
Total Roads Reported	188	223	206	176	197	192	157	185	191	117	116	139	130	115	170	111	114
Total Short Lines	603	558	558	558	558	572	572	572	572	572	306	455	633	633	633	533	575
% Reporting	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%	20%

The Weather Channel

If the above isn't enough to think about, have you been watching the Weather Channel lately?

Gordon soaked a number of tie producing states. Florence hit a part of the eastern tie production regions that Gordon missed. Flo's effects have yet to be fully felt in log procurement as rain continues to march across all these regions.

In addition to the Atlantic, if the Gulf of Mexico storm machine activates further, worry, not just about the coast, but also the inland effects on tie procurement.

Why is this important? Figure 2 illustrates that after August, the two largest procurement months for green ties are historically September and October. If that holds true, but Eastern sawmills log decks zero out for any length of time, it's going to be a long winter and very tight spring for tie buyers.

Figure 2

Average Monthly Pattern Of Production			
January	8.0%	**July**	8.3%
February	7.5%	**August**	9.3%
March	8.4%	**September**	8.8%
Apr	8.0%	**October**	9.2%
May	8.3%	**November**	7.9%
June	8.65%	**December**	7.6%
			100.0%

And The Biggest Worry For The Hardwood Industry?

China. No, not logs to China. With the tariffs and phytosanitary requirements, that's old news.

The Chinese economy is slowing. Not only is hardwood lumber demand softening for that reason, but also as much as 20-30 percent of the value of U.S. hardwood lumber exported there has been sucked out of that market since spring. With mills now facing proposed 25 percent tariffs effective Oct. 1, what's next?

Higher-grade lumber is what pays the bills for U.S. hardwood sawmills. Given the sharp declines in hardwood lumber sales volumes and values to China, as well as the potential effects from the impending tariffs, business health and resiliency is at further risk for hardwood sawmills. One recent mill equipment sale came about because the owner was simply fed-up with the entire business model.

U.S. flooring manufacturers are still buying lumber in a few regions, and their business outlook for product demand seems favorable even if their market share in U.S. homes continues to decline. This market sector has absorbed some of the volume pushed back from China. But only some. As these remaining lumber customers' inventories reach target levels, the interest and ability to purchase lumber displaced by the Chinese marketplace will diminish, if not cease.

One recent conversation with an analyst suggested that not only will some capacity be idled but also some capacity could evaporate. Lenders are rather keen on being paid back. Capital borrowed for capacity and facility upgrades is capital (plus interest) that comes due. If the money isn't there, then it's uncertain what may become of less fortunate mills.

Idled or non-existing capacity can't be tapped for building air-dry tie inventories.

Conclusion

The potential silver lining, and it's a thin one, is if the world is really flat for tie demand, as the surveys suggest, inventories may stabilize a little sooner. That is not only in doubt, but also doesn't provide much solace even if true.

ISR and inventories are likely to decrease further. Plus, sawmills seem likely to face further disruption by competing products, log availability, sawmill output capacity and timber acquisition at a price that makes sense. The effects of tropical events, and the weather in general, from September throughout the winter is an unexpected wild card, which if played at an inopportune time for mills, increases the potential turbulence.

Flat does not mean there won't be waves. ■