

Strong Tie Demand Still Raises Questions

By Fred Norrell

The first quarter saw disappointing reports of Real Gross Domestic Product (GDP), a decline at an annual rate of 2.1 percent. Second quarter reports brought an encouraging 4.6 percent bounce back with larger than expected growth. Standard & Poors predicts 2.2 percent for the year as a whole, which is below their January forecast of 2.8 percent. This softness appears to have dimmed S&P's expectations for economic growth prospects in subsequent years as well, for example in 2015 from 3.2 to 2.8 percent.

Railroad Freight

Mixed signals from the railroad community are visible in terms of freight traffic, as well. The RailConnect Index of short line activity indicates carloads were down 1 percent in the first quarter compared to year-ago levels (as the decline in GDP largely blamed on harsh winter). Second quarter showed no growth, but then the third quarter is on pace to beat year-ago levels by 14 percent. Class 1 traffic also reflected weakness in the first half of 2014 with Q1 Class 1 carloads growing only 1.4 percent over year-ago levels, while Q2 traffic grew only 1.2 percent. Yet, Q3 is poised to show 8-9 percent growth. Signs of improvement for the second half of the year are now in the mix.

Crosstie Purchases

This market was also rather unsteady, with new wood tie purchases declining 3.4 percent in the second quarter of 2014, as compared with second quarter 2013. Last year experienced healthy demand growth of 6.2

percent, and year-to-date August 2014 growth is now only at 4 percent. Considering the directions of GDP and freight, one would expect some acceleration during the second half of the year, but growth decelerated in August marginally.

New Construction

In order to serve gas and oil drilling production and transport sites new tracks are being laid. Alternate routes are being provided to move product to and from newly built transloading facilities. New connections are reaching out to main lines. Refineries are also adding tracks. In the background are reports of gas and oil activity in western Canada, said to be developing at a delayed time line compared to the US boom. This factor bodes well for track construction and tie purchases in later years.

Crosstie Forecast

RTA's econometric model predicts rapidly accelerating growth and to date the correlations with past performance are strong, making it very hard to dispute the

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model's output. However, the RTA forecasting team found it hard to believe the booming results. The primary issue

seems to be one of timing: as gas and oil production increases, tie purchases increase. But ties are needed at the outset of the process, and once laid, can possibly support further increases in oil production from a given site without laying duplicative track. It appears the model may be treating all oil production increases as new production sites that require new tracks construction, when that may not be the case. Thus the forecast team questions the durability of this oil production/tie purchases relationship. For this reason, RTA's forecast team decided to significantly lower the econometric model's forecast results, although the prospects for significant growth remain excellent.

Two major characteristics should be noted. First, the slow performance in both GDP and railroad freight can be seen in the lower tie purchases growth in 2014. Second, tie purchases in subsequent years picks up, in accord with economic growth and a continuing boom in gas and oil activity even with the forecast team's adjustments lower. ■

The prospects for significant growth remain excellent.

Forecast Summary
New Wood Crossties (in thousands)

Year approx.	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct.
2011	1.8%	16,525	5,363	21,888	11.8%
2012	2.8%	16,968	6,054	23,023	5.2%
2013	1.9%	17,131	7,317	24,448	6.2%
2014	2.2%	17,749	7,145	24,895	1.8%
2015	3.0%	18,325	8,117	26,442	6.2%
2016	3.1%	19,112	8,811	27,923	5.6%

Hate It When That Happens

By Jim Gauntt

Last year's September/October review of the state-of-the-industry revealed two opposite trends. On the one hand, predictions for a marketplace hungry for more ties going forward. On the other, the reality of tie supplies faltering, for a wide variety of reasons and just at the wrong time.

Forecasts for this pattern to continue for the foreseeable future were unavoidable based on the evidence that was available at the time. Since then, the markets have seen much of the same. And in this case, we just hate it when we turn out to be right.

Demand shows continued strength, up some 4.0 percent so far this year. Tie supplies are down an additional 9.6 percent. This is certainly not a sustainable situation as inventories are woefully low in some places as evidenced by an inventory-to-sales ratio of 0.64. That's 19 percent below the five-year average.

So, how is it playing out in the market place now and what may be in store going forward? Let's dig a little into that and explore the possibilities.

Current Situation

The good news is that a corner seems to have been turned in supply. Tie manufacturers are now reporting that production has stabilized and tie receipts

may increase between now and the end of the year. That is, if tie producing regions avoid an early and wet winter weather pattern.

This potential turnaround is due in part to a housing market that saw a 2014

predicted growth rate of some 20 percent fizzling into no growth at all. Also, China's seemingly insatiable desire for U.S. hardwoods hit the skids, presumably due to escalating premiums for many hardwood products. Some believe this pull back in ►

TABLE 1—For Calendar Year 2013
Crossties Laid In Addition Statistics For Class 1 Railroads In The U.S.

District & Railroad	Treated wooden crossties laid in addition (number)		New crossties laid in replacement other than wooden (number) (12)	Switch and bridge ties laid in addition (board ft.) (13)
	New Ties (10)	Second-hand ties (11)		
Eastern District				
CSX	76,983	0	45,157 (c)	281,593
Grand Trunk Western (CN)	0	0	0	0
Norfolk Southern	62,876	0	50,042 (s)	117,448
Total Eastern District	139,859	0	95,199	399,041
Western District				
Burlington Northern Santa Fe	67,045	0	87,662 (c)	217,850
Kansas City Southern	7,836	0	0	85,774
Soo Line (CPR)	2,507	4,707	0	15,396
Union Pacific	104,538	30	157,295 (d)	210,932 (e)
Total Western District	181,926	4,737	244,957	529,952
Total United States	321,785	4,737	340,156	928,993

***Source: R-1 Annual Reports to the Surface Transportation Board**

Footnotes: (c) Concrete ties (d) Includes 147,482 concrete ties and 9,813 steel ties (e) Includes 178,175 bd ft of wooden ties, plus 504 concrete ties assigned 65 board feet per tie (s) Steel ties

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purchases is only temporary, so this and the U.S. housing market bears careful monitoring going forward.

However, production increases have more to do with railroads beginning to raise prices for green ties, over a period of about six to eight months, to a point that enticed producers to turn some production back to ties. Some market analysts were predicting a supply problem as early as May/June of 2013, but the largest of the two major market-wide price increases didn't come until late March 2014.

Yet, it took until August for the ebb tide to show signs of turning back to shore. Hardwood markets can be a very large ship to turn when other demands for the hardwood log create rapidly rising premiums for the many other products that a tie log can be cut into.

Maybe, just maybe, tie production is now headed for a sustainable turnaround. This may be especially possible if a recently reported additional price increase, selectively

TABLE 3—The Railway Tie Association* 2013 Short Line Crosstie Survey

Tie Categories	2013 Usage	2014 Projected	2015 Projected	2016 Projected
New 6" & 7" Ties	2,430,107	2,973,844	2,714,462	2,689,498
Relay 6" & 7" Ties	430,860	250,954	286,062	293,939
Grand Total				
All Wood Ties	2,860,967	3,224,798	3,000,524	2,983,437
Switch Ties	62,931	73,704	47,471	76,095
Bridge Timbers	49,860	62,084	74,717	35,270
Concrete Ties	305	0	0	0
Steel Ties	40,632	88,886	8,613	8,613
Composite/ Plastic Ties	0	1,378	0	0

	2014	2013	2012	2011	2010
Track Miles Reporting	24,964	25,391	18,217	21,116	26,696
Total Track Miles	43,003	51,584	51,584	51,584	50,859
% Reporting	58.05%	49.22%	35.3%	40.9%	52.5%
Total Roads Reported	197	196	157	185	191
Total Short lines	558	572	572	572	572
% Reporting	35.3%	34.27%	27.4%	32.3%	33.4%

*In cooperation with the American Short Line and Regional Railroad Association.

Note: Calculation based on Survey responses from 197 roads representing 35.30% of operating trackage.

TABLE 2—Crossties Laid In Replacement Statistics For Class 1 Railroads In The U.S. In 2013

District & Railroad	Treated wooden crossties laid in replacement (#)		New crossties laid in replacement other than wooden (#)	Track maintained by reporting railroad		Crossties per mile (1967)	New crosstie replacement avg.		Switch and bridge ties laid in addition (board ft.)
	New Ties (1)	Second-Hand Ties (2)		Miles occupied by crossties (a) (4)	Total crossties (b) (5)		% renewal to all ties (7)	# laid per mile (8)	
Eastern District									
CSX	3,628,075	2,761	2,796 (c)	30,014	89,681,832	2,988	4.05%	121	8,364,514
Grand Trunk Corp. (CN)	700,382	0	17 (c)	9,346	29,486,630	3,155	2.38%	75	1,755,043
Norfolk Southern	2,406,152	236,017	1,116 (d1)	28,957	89,071,732	3,076	2.70%	83	6,879,469
Total Eastern District	6,734,609	238,778	3,929	68,317	208,240,194	3,048	3.24%	99	16,999,026
Western District									
Burlington Northern Santa Fe	3,699,240	0	140,717 (d2)	40,346	124,870,870	3,095	3.08%	95	6,462,300
Kansas City Southern	686,565	0	0	4,019	12,856,781	3,199	5.34%	171	177,018
Soo Line (CPR)	387,719	0	0	5,596	16,894,324	3,019	2.29%	69	791,936
Union Pacific	3,319,306	56,305	288,665 (d3)	43,208	128,759,840	2,980	2.80%	84	6,757,929 (e)
Total Western District	8,092,830	56,305	429,382	93,169	283,381,815	3,042	3.01%	91	14,189,183
Total United States	14,827,439	295,083	433,311	161,486	491,622,009	3,044	3.10%	95	31,188,209

*Source: R-1 Annual Reports to the Surface Transportation Board

General Notes

594 Second-Hand Other-Than-Wooden ties, not shown in the table above, were laid in replacement in 2013.

Footnotes (a) Total mileage operated at the end of year, excluding mileage under trackage rights. (b) Based on crossties per mile of track in 1967, the last year reported.

(c) Concrete ties (d1) No concrete ties and 1,116 non-wooden-non-concrete ties. (d2) 140,581 concrete ties and 136 non-wooden-non-concrete ties. (d3) 287,257 concrete ties and 1,408 non-wooden non-concrete ties. (e) Includes 6,749,739 bd ft of wooden ties plus 126 concrete or steel switch ties assigned 65 board feet per tie.

reaching out into the market for new production, is successful.

On the demand side, it is apparent that the rail industry is healthy. Class 1 tie demand is strong and the commercial markets also remain vibrant. There is likely to be significant unmet demand at the end of 2014, maybe as much as 1 million ties needed, but not supplied, this year. This pent-up pressure will add to the forecasted growth of tie demand for 2015 and keep suppliers hopping most of the year.

One reason is that air drying tie inventories have not yet been built back to healthy levels according to RTA member reports. That means much Boultonizing is still occurring, which also means that in many cases new green tie arrivals don't rest very long in treating plants before they are headed out the door to their track destinations.

But, for the first time in about 18 months there is significant reason for optimism that everything is now on a mainline track to recovery. How long to reach the destination for market balance is fluid. Best estimates are that improvement will be steady throughout 2015 with a target of the first or second quarter of 2016 seeing something close to an equilibrium being reached.

Of course, that's still a long time and much could happen one way or the other to affect the timeline. If weather is a bear that's bad for the timeline. If the economy starts to grow rapidly, creating more demand for all hardwood products that's bad for the timeline. If the economy has a hiccup that might be good for the timeline, but a recession of any sort is always bad for overall business interests.

RTA's econometric model has predicted a relative explosion in short line and regional railroad tie demand for 2014.

All of this points to the fact that the ➤
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industry is probably better off with the current state of affairs than if something were to negatively affect railroad demand. So be happy tie suppliers. Working toward the common goal of meeting each customer’s needs is a good thing, even if its still balls to the walls for a while.

RTA Surveys Reinforce Tie Demand

RTA conducts an exclusive and comprehensive tie demand survey of the railroad community each year. This is used to compare anecdotal evidence from the marketplace and the historical data to glean as much guidance for the next year as possible beyond the RTA econometric forecast model.

Class 1 Roads

Here is a look at the Class 1 historical data in Tables 1 (pg. 9) and 2 (pg. 10). Table 1

is new construction ties in 2013 and Table 2 illustrates what was reported by Class 1 roads for maintenance tie installations.

In 2013, wood ties combined to hold a 95.2 percent share of the Class 1 market in the United States. That market share dominance would be even higher if switch and bridge ties were included.

Short Lines & Regional Roads

These railroads are not required to report to the U.S. government in the R-1 reporting process. So, only RTA surveys help in looking at what is going on for these roads. Although survey response rates are very good (58.05 percent of track mileage represented), unfortunately, we can only guess as to whether the extrapolations capture all the activity. Survey results have, however, usually provided a very good indication of trends.

This year that is certainly the case. RTA’s econometric model has predicted a relative explosion in short line and regional railroad tie demand for 2014. The survey seems to bear this out with 35 percent increase in 2014 over 2013. And while that level of demand appears damped for 2015 and 2016, readers should reflect on the past and understand that these roads are loathe to be as certain about their future resources beyond the current year. That has almost always historically meant reduced survey based forecasts as they tend to be more cautious in longer-termed prognostications.

Prognosis for this sector, as one can see, is more than upbeat as the survey results reveal in Table 3 (pg. 10).

The final figure, Table 4, illustrates not only the total marketplace projections and how much timber is required to produce the wood products required for rail operations. ■

TABLE 4—Railway Tie Association Annual Survey

**Estimated Crosstie Requirements • Class 1 Railroads
2014-2016 Inclusive**

AUTHORIZED CROSSTIES FOR 2014

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	52,027	5,816,004	0	159,924	30,000	55,000	0	253,132	0	169,600
Western U.S.	86,153	7,475,000	1,025,000	65,000	600,000	15,000	5,000	330,000	125	85,000
Canada & Canadian Owned U.S. Track	34,900	3,185,000	56,000	0	72,000	2,000	0	90,000	0	28,500
TOTAL	173,080	16,476,004	1,081,000	224,924	702,000	72,000	5,000	673,132	125	283,100

AUTHORIZED CROSSTIES FOR 2015

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	52,027	5,716,004	0	159,924	30,000	50,000	100,000	253,132	0	169,600
Western U.S.	86,153	7,475,000	1,025,000	65,000	600,000	15,000	5,000	330,000	125	85,000
Canada & Canadian Owned U.S. Track	34,900	3,300,000	5,000	5,000	65,000	2,500	0	90,000	0	28,500
TOTAL	173,080	16,491,004	1,030,000	229,924	695,000	67,500	105,000	673,132	125	283,100

AUTHORIZED CROSSTIES FOR 2016

Region	Total Track Miles	New Wood Crossties		Wood Relay Crossties	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers Units
		Hardwood	Softwood		Concrete	Steel	Other	Wood	Other	
Eastern U.S.	52,027	5,616,004	0	159,924	30,000	50,000	200,000	253,132	0	169,600
Western U.S.	86,153	7,475,000	1,025,000	65,000	600,000	15,000	5,000	330,000	125	85,000
Canada & Canadian Owned U.S. Track	34,900	3,300,000	5,000	5,000	100,000	2,500	0	90,000	0	28,500
TOTAL	173,080	16,391,004	1,030,000	229,924	730,000	67,500	205,000	673,132	125	283,100

Notes: From CP: Demand for hardwood ties has increased in 2014 by almost 10% over 2013 due to change in specifications where hardwoods have replaced softwoods in most installations with demand expected to strengthen to levels not seen in many years in 2015 and beyond. From CN: Expect demand to be the same for wood cross and switch ties with greater use of concrete in coming years. From UP: Concrete tie warranty ties received/owed are not included in the estimated purchase quantities.