Stable Tie Demand Expected In Face Of Recession & Labor Woes

By Petr Ledvina

Recession fears were aroused by the FED's moves to combat inflation, as it tightened monetary policy in an attempt to curtail consumer demand. The FED had some success in this endeavor, with signs that the housing market is cooling down.

Though prices are still going up, the rate of increase has slowed considerably. From June 2020 to June 2022, the S&P/Case-Shiller U.S. National Home Price Index rose by 40.24 percent, which is about 1.43 percent per month. In the last two months, the index rose by 1.25 percent and 0.33 percent, respectively. In addition, the housing inventory is up significantly, although permits and starts have been on the decline for several months (more on the Business Trends page). Mortgage applications dropped by 23 percent from last year, as higher interest rates discourage many buyers. Also, Redfin reported that for the first time in many months that the average home sold slightly below the asking price (Sept. 1, 2022, Housing Market Update).

The housing market cooldown, together with increased softwood sawmill capacity, had an impact on softwood and some hardwood pricing. Construction lumber prices declined significantly from a recent peak in March (Figure 1). Also, green #2A 4x4 red oak and also red oak flooring prices declined (Figure 2). This in turn gave some sawmill capacity back to tie production, which has incrementally improved. However, the demand for other industrial lumber remains strong, mainly due to supply chain issues and the war in Ukraine.

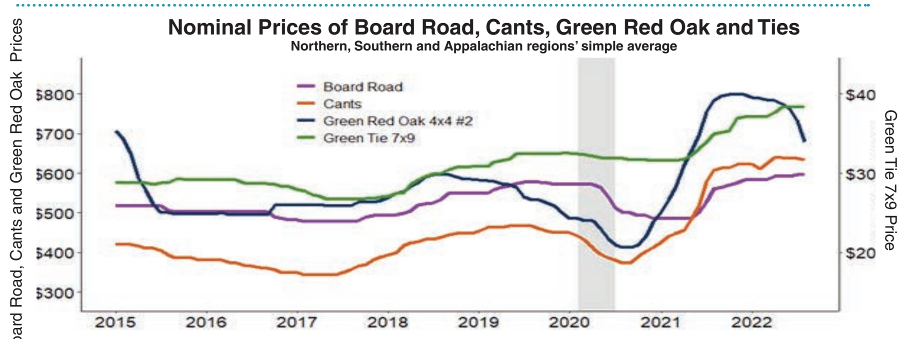
Another sign of FED's success is the recent return of many workers to the labor force. As was explained in May/June *Crossties*, lower stock values due to rapidly rising interest rates, together with rising prices and a decreased fear of COVID, have brought significant numbers of people back from the sidelines. The Employment Situation Report released on Sept. 2, 2022, indicated that over 0.6 million people rejoined the labor force, significantly contributing to the increase in the labor force participation rate from 62.1 percent to 62.4 percent (BLS). The same report stated that an additional 800 truck drivers joined the economy last month, making it 5.3 percent above the February 2020 reading. This is indeed a positive development, but more is needed to prevent inflation from sticking around.

In fact, the supply of labor is not only important for keeping wage growth reasonable, but it is also one of the tools for unlocking supply chains. Unfortunately, labor shortages are still prevalent across some parts of the economy. One of those sectors is railroad (RR) transportation. From the Class I second-quarter conference calls,

Figure 1

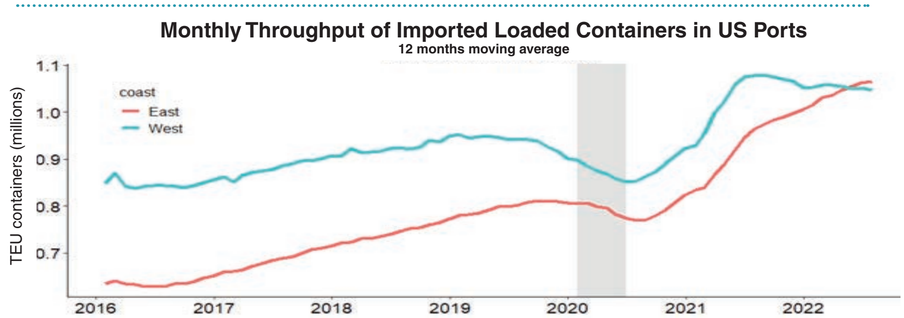
Source: nasdaq.com; RTA calculations

Figure 2



Source: Hardwood Market Report; RTA calculations

Figure 3



Source: Los Angeles, Long Beach, Oakland, Seattle, NY, Savannah, Virginia, South Carolina and Houston Port Authorities; RTA calculations. (Houston added to the East) it is clear that RRs still do not have enough employees to satisfy all of the demand. According to the conference calls, trucking is becoming more competitive as prices drop, most likely due to better availability of truck drivers. At the same time, the RRs were able to solve some problems with inland container congestion by adding more storage. Despite these positive developments, supply chain issues persist and more fluidity is needed.

Meanwhile, the situation has improved at ports on the Pacific coast. For example, in Los Angeles, the number of ships at anchor decreased from above 100 in January to less than 20 in August (Port of Los Angeles August 2022 Cargo News Briefing). However, on the Atlantic and Gulf Coasts, exactly the opposite situation exists. As of Aug. 19, there was a backlog of container ships at ports in New York, Houston and Savannah, the latter being the most congested, with a backlog of 40 ships (*Wall Street Journal*).

There are two major reasons for the switch between the coasts. First, U.S. companies ordered more and earlier this year, expecting similar delays to last year. However, this year, shipments are on schedule. Second, companies diverted some of the containers from the West Coast to the East Coast because the Los Angeles and Long Beach ports were formerly so congested. Analysis of data for the relevant ports clearly shows the inbound loaded container throughput on the West Coast has remained basically flat during the last 12 months, while the volume on the East and Gulf coasts has been increasing significantly. (Figure 3)

Unfortunately, due to congestion at the ports, the availability of pallets continues to be restricted. This was also echoed on a conference FY22 Results Presentation call by Brambles Limited, a parent company to CHEP, which has about 33 percent of the market share of pallets in Europe and about 45 percent in the United States. The report also stated that the lower velocity of pallet circulation has been the result of higher customer and retailer inventory holdings intended to de-risk supply chains.

The availability of wooden pallets has been affected as well by the war in Ukraine. About 10 million cubic meters (4,237 MBf) of timber from the East has failed to reach customers in Western Europe. This has caused pallet prices to remain stubbornly high across Europe. While far away, this has an effect on the U.S. hardwood lumber market. The *Hardwood Market Report* noted that U.S. exports in Q2 2022 were the highest in four years, and exports of hardwood to the European Union (EU) and the United Kingdom (UK) have not been at this level since 2007. As a result, the prices of cants and pallets in the United States remain high and also contribute to inflationary pressures (Figure 2).

Another contributor to high inflation is the high price of energy. Again, while the war in Ukraine is far away, sanctions against Russian energy have had a detrimental effect on prices in the EU, and unquestionably cause a worsening economic outlook. Eurostat reported the year-over-year inflation in August was 9.1 percent, to which energy contributed by an increase of 38 percent. To make things worse, Russians turned off the Nord Stream I Pipeline for "repairs" on Sept. 3 for an unknown length of time.

This is bad news for the EU, and especially for Germany. Though Germany's storage capacity is about 84 percent full, this does not mean they can get through the coming winter (BBC, Al Jazeera). To help the economy, Germany is about to provide 65B euros in assistance to consumers and businesses, which is on top of the 60B euros already provided. Regardless, rising prices are causing social unrest, and workers are demanding higher pay across Europe—in Ireland, Poland and the Czech Republic, for example. Also, the strike in the UK, which involves rail and port workers, is a response to similar pressures. (Reuters, Bloomberg). This in turn will have negative effects on supply chains and on inflation across the globe. Unfortunately, natural gas prices should stay elevated until 2025/26 because of the lack of export capacity. This also has an impact on U.S. energy markets and inflation.

As long as these inflationary pressures remain, the FED is unlikely to stop raising rates anytime soon, even though this increases the chance of recession in the United States. Fortunately, however, slowing the U.S. economy should not cause a decline in crosstie demand for now.

There are several reasons for this. The low crosstie inventory-to-sales ratio is not expected to improve any time soon. In addition, the RRs expect freight to pick up in the second half of 2022, as a good grain crop in Canada, high demand for coal exports, chip availability for cars, and increased demand for fracking sand should all contribute to offsetting any slowdown in consumer demand. Increased or stable RR revenue translates into a similar CapEx budget for next year, and with it, upkeep of the tracks.

Based on our model and analysis, RTA predicts a stable outlook for tie demand in 2022 and 2023 (Table 1).

Table 1 - New Wood Crossties (in thousands)

Year	Real GDP	Class 1 Purchases	Small Market Purchases	Total Purchases	Pct
2019	2.3%	14,471	4,105	18,575	-13.0%
2020	-3.4%	15,309	3,175	18,483	-0.5%
2021	5.7%	14,813	3,948	18,761	1.5%
2022	2.4%	14,706	4,062	18,768	0.0%
2023	1.6%	14,704	4,272	18,977	1.1%

Table 2

Crossties Laid In Replacement Or in Addition - 2020				AAR Checks and Comparison				Rail Laid In Replacement Or In Addition - 2020		
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. Spend Per Tie*	New Rail Laid (Tons)	Relay Rail Laid (Tons)	Avg. Weight Rail (lbs/yd)
Eastern District										
CSX Transportation	2,576,895	158	0	4.5	91.7	$4,800.4	$129.3	113,671	11,692	135.9
Grand Trunk Corp. (CN)	878,709	825	5,067	3.1	96.2	$5,651.8	$154.9	17,918	10,728	135.3
Norfolk Southern	1,967,334	704	48,361	3.9	71.6	$4,365.2	$146.1	99,725	9,534	136.0
Total Eastern Dist.	**5,422,938**	**1,687**	**53,428**	**4.0**	**83.7**	**$4,712.4**	**139.6**	**231,314**	**31,954**	**135.9**
Western District										
BNSF	2,752,045	34,661	0	3.0	69.8	$6,739.7	$153.6	121,516	186	134.9
KCS	292,771	0	0	2.4	73.5	$7,860.8	$209.0	8,260	1,490	130.9
Soo Line Corp. (CP)	297,725	0	0	3.1	63.1	$3,886.1	$116.8	9,317	5,079	128.3
UP	3,992,272	66,123	0	3.1	93.0	$6,906.9	$119.9	130,022	6,756	135.9
Total Western Dist.	**7,334,813**	**100,784**	**0**	**3.1**	**80.6**	**$6,713.9**	**135.9**	**269,115**	**13,511**	**135.0**
Total U.S.	**12,757,751**	**102,471**	**53,428**	**3.5**	**81.9**	**$5,735.5**	**137.5**	**500,429**	**45,465**	**135.4**

Source: Association of American Railroads (AAR). 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.

Table 3 - Railway Tie Association Annual Survey
Estimated Crosstie Requirements • Class I Railroads 2021-2023 Inclusive

Authorized Crossties for 2022											
	Total Track		New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
District and Railroad	Route Miles	Track Miles	Hardwood	Softwood	Crossties	Concrete	Steel	Other	Wood	Other	Units
Eastern U.S.	35,500	56,279	5,100,000	0	95,000	0	0	0	280,000	0	60,000
Western U.S.	51,627	87,530	6,515,000	300,000	8,500	300,000	5,000	4,800	195,000	0	50,000
Canada	28,835		1,300,000	0	0	500	0	0	24,000	0	2,500
TOTAL	**115,962**	**143,809**	**12,915,000**	**300,000**	**103,500**	**300,500**	**5,000**	**4,800**	**499,000**	**0**	**112,500**
Authorized Crossties for 2023											
	Total Track		New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	35,500	39,300	5,000,000	0	95,000	0	0	0	230,000	0	60,000
Western U.S.	51,627	98,723	3,400,000	400,000	500	45,000	0	10,000	100,000	0	25,000
Canada	28,835		1,200,000	0	0	7,000	0	0	30,000	0	4,000
TOTAL	**115,962**	**170,523**	**9,600,000**	**400,000**	**95,500**	**52,000**	**0**	**10,000**	**360,000**	**0**	**89,000**
Authorized Crossties for 2024											
	Total Track		New Wood Crossties		Wood Relay	New Non-Wood Crossties			Switch Ties (Units)		Bridge Timbers
Eastern U.S.	35,500	39,300	5,000,000	0	95,000	0	0	0	230,000	0	60,000
Western U.S.	51,627	98,723	6,175,000	400,000	8,500	220,000	5,000	11,000	200,000	0	50,000
Canada	28,835		1,200,000	0	0	7,000	0	0	3,000	0	4,000
TOTAL	**115,962**	**170,523**	**12,375,000**	**400,000**	**103,500**	**227,000**	**5,000**	**11,000**	**433,000**	**0**	**114,000**

Table 4 - Short Line Survey Summary 2021

Tie Categories	2021 Usage	2022 Projected	2023 Projected	2024 Projected
New 6" and 7" Ties	3,911,968	2,343,611	1,969,111	1,959,477
Relay 6" and 7" Ties	26,952	22,732	14,533	14,533
Grand Total All Wood Ties	**3,938,920**	**2,366,342**	**1,983,644**	**1,974,009**
Switch Ties	72,086	37,548	34,209	34,315
Bridge Timbers	146,381	88,776	88,833	88,751
Concrete Ties	0	0	0	0
Steel Ties	16,971	4,670	4,899	1,633
Composite/Plastic Ties	79,635	413	0	0

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Track Miles Reporting	**29,089.40**	**17,560.73**	**19,735.06**	**28,079.87**	**21,907.50**	**26,899.65**	**23,232.00**	**20,620.29**	**24,964.00**	**25,390.69**	**18,217.32**	**21,116.19**	**26,696.00**	**15,116.00**
Total Track Miles	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**47,500**	**46,823**	**46,823**
% Reporting	61.24%	36.97%	41.55%	59.12%	46.12%	52.15%	45.04%	39.97%	48.39%	49.22%	35.32%	40.94%	52.49%	29.72%
Total Roads Reported	**234**	**151**	**185**	**234**	**188**	**223**	**206**	**176**	**197**	**192**	**157**	**185**	**191**	**117**
Total Short Lines	**603**	**603**	**603**	**603**	**603**	**558**	**558**	**558**	**558**	**572**	**572**	**572**	**572**	**572**
% Reporting	38.81%	25.04%	30.68%	38.81%	31.18%	39.96%	36.92%	31.54%	35.30%	33.57%	27.45%	32.34%	33.39%	20.45%