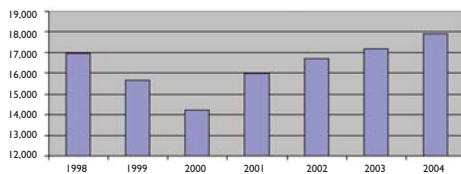


# Tied Up: Brief Respite In Surging Market Possible

By Fred Norrell

Wood crosstie purchases have been on the upswing. After a couple of sub-par years ending in 2000, customers of Railway Tie Association (RTA) member companies have increased purchases by an astonishing 25 percent.

Total Purchases From RTA Members



Other than brief periods in 1988 and 1998, purchases are currently higher than at any time recorded by RTA. What is driving the growth?

RTA has developed econometric models to explain the market mechanics and to help make forecasts. The market has been segmented into two groups of crossties buyers: Class 1 and "small market" buyers. The Class 1 group is made up of U.S. Class 1 railroads, Canadian National and Canadian Pacific, while the small market is composed of North American local and regional railroads, industrial buyers, contractors and other buyers. Models for both market groups have been developed.

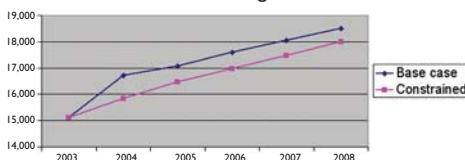
## The Class 1 Model

The Class 1 model consists of two equations. The first equation states that freight (in ton-miles) depends on U.S. real Gross Domestic Product (GDP), changes in coal shipments, and the real price of diesel fuel. As any of these variables increases, so does freight. GDP and coal represent volume of business. When diesel price goes up, some freight shifts from highways to rail. Taking the fair model forecast of GDP, and making some assumptions about coal and diesel, we can assemble a freight forecast, presented below.

Year	Real GDP	Coal	Real Price of Diesel	Freight	Constrained Freight
2003	3.0%	-1.6%	26.9%	0.3%	0.3%
2004	3.9%	3.0%	9.1%	10.6%	4.8%
2005	3.3%	0.0%	-1.0%	2.0%	4.0%
2006	3.1%	0.0%	-1.0%	3.2%	3.0%
2007	2.5%	0.0%	-1.0%	2.5%	3.0%
2008	2.5%	0.0%	-1.0%	2.6%	3.0%

Freight growth in 2004 was noted to be excessive. There may be demand to support this, but recent news indicates some railroads cannot serve the surge in new freight business. The Association of American Railroads reports that year-to-date ton-miles of freight have increased 4.8 percent over last year. The freight forecast in the column "Constrained Freight" has been modified and is illustrated below.

US Class 1 Freight



The next equation in the Class 1 model states that tie purchases depend on the miles of U.S. Class 1 track owned and the amount of freight moved on those tracks. As either of these two variables increases, so does Class 1 purchases of ties. RTA's forecast is presented below.

Year	Freight	Track	Purchases	%
2003	0.3%	169	13,578	0.9%
2004	4.8%	169	14,315	6.6%
2005	4.0%	169	15,235	6.3%
2006	3.0%	169	15,952	4.6%
2007	3.0%	169	16,691	4.6%
2008	3.0%	169	17,452	4.5%

Note that freight growth is constrained and track (shown in thousands of miles) is stable. This follows years of rationalizing, which resulted in shedding track of little or no value. In fact, this phenomenon marks a turning point for rail transport and its supporting industries; Class 1's appear to have reached an end to downsizing. With this variable stabilized, future economic growth will drive freight expansion, which in turn should drive up tie purchases. Thus, Class 1 purchases, which have exhibited little growth in recent years, take a new, expansionary path.

On a somewhat technical note, the purchases shown in the forecast above are not quite calendar year numbers; they are made in preparation for calendar year tie installations. The RTA analysis of market data suggests that about 83 percent of ties are purchased in the year of installation, while the remainder are purchased in the prior year.

## The Small Market Model

The Small Market model consists of one equation stating that tie purchases depend on non-durable manufacturing (the level of real GDP originating in the sector) and the real price of diesel fuel. Non-durable manufacturing has grown slowly during the past decade, and the RTA analysis indicates it should in the future. Thus, the positive driving force for the small market is limited in its prospects.

Increasing diesel prices appear to hurt small market participants who then purchase fewer ties. This is in contrast to the Class 1 model and suggests that Class 1 buyers hedge effectively against fuel prices, while small market buyers do not—or do so with less effectiveness. Additionally, Class 1 fares may include fuel "adders," which are more efficient than those of small market shippers.

The RTA outlook assumes little relief from high fuel prices because, in contrast to past price spikes caused by supply disruptions, current prices are thought to be the result of quickly increasing world demand for fuels. Yet, the model appears to overreact to fuel prices. Three hundred thousand tie purchases have been added to the model forecast, with the results shown below.

Year	Non-Durable Manufacturing	Real Price of Diesel	Tie Purchases	%
2003	2.0%	26.9%	2,888	-20.5%
2004	2.4%	9.1%	3,072	6.4%
2005	0.5%	-1.0%	3,136	2.1%
2006	0.0%	-1.0%	3,160	0.8%
2007	-1.0%	-1.0%	3,104	-1.8%
2008	-0.5%	-1.0%	3,091	-0.4%

## All Together Now

Combining the Class 1 and small market buyer segments is like mixing hot with cold. Class 1's are stretching to provide service and buying ties to support the freight movement, while small market buyers are serving a slower growth segment of the freight market and are hurt by fuel expenses. The picture that emerges is presented below. >>

Year	Class 1	Small Market	Total	%
2003	13,578	2,888	16,465	
2004	14,315	3,072	17,387	5.6%
2005	15,235	3,136	18,371	5.7%
2006	15,952	3,160	19,113	4.0%
2007	16,691	3,104	19,796	3.6%
2008	17,452	3,091	20,543	3.8%