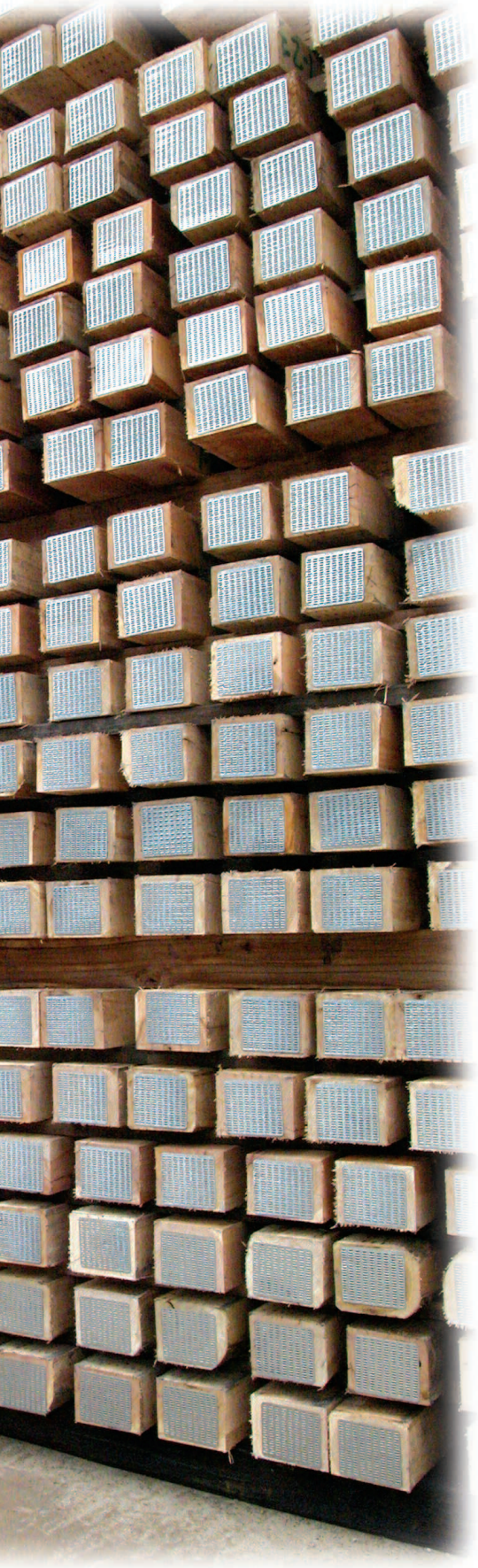
CROSSTIE MARKET IN 2007



Hot Today, Cooling Tomorrow

By Fred Norrell

Hot today and cooling tomorrow. That's the weather report for the crosstie market. During the 12-month time period ending September 2006, the volume of new wood crossties purchased topped 21 million. This is the highest total for any 12-month time period in the past 20 years—a very hot market.

Yet this may be the peak of growth, as indicated by this year's forecast. The reason? The economy is cooling. This article discusses first the economy, then the RTA econometric model for crosstie purchases, and finally the model's results: a crosstie purchases forecast out to 2009. A companion article (*see page 11*) supplements these model results with more marketplace information.

The U.S. Economy

The officers of the Federal Reserve System have been repeatedly expressing concern over potential inflation—a concern not shared by many on Wall Street, as shown by low long-term bond yields. One reason for this is that wage and salary rates will likely increase by more than 6 percent this year, as reported by National Income Accounts. Employee compensation impacts inflation with far more power than oil prices. Accordingly, the Fed is steering a conservative course, causing interest rates to rise. So far, housing and autos have taken the brunt of tighter monetary policy, but this could spread. Consumer confidence is wavering, and retail stores are reporting weak sales. Real GDP decelerated to 2.6 percent in the second quarter, and to 2 percent in the third. Normal historical growth has been from 3 to 3.5 percent.

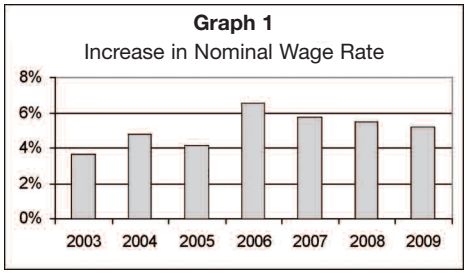
Thus, a close look at forecasts of the economy was in order. The Railway Tie Association (RTA) turned to three sources. The primary forecast used in previous examinations is Yale University's Fair Model; this is compared to projections from the Organisation for Economic Cooperation and Development and from a survey of economists, published in *The Economist* magazine. The major direction of this forecast depends on the economy.

Forecasts of Real Gross Domestic Product (GDP)			
	Fair	Economist	OECD
2007	2.4%	2.3%	2.4%
2008	2.7%	—	2.7%
2009	2.8%	—	—

There appears to be consensus on the prospect of an economic slow-down.

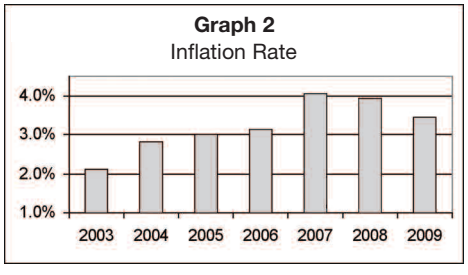
During recent years, wage increases have been held in check by competitively priced imports. As the dollar weakens, so does the strength of this check; rising import prices leave more room for wage increases. The wage forecast calls for relatively large wage increases (*Graph 1*). This is likely to be exacerbated by a new, higher minimum wage.

Graph 1
Increase in Nominal Wage Rate



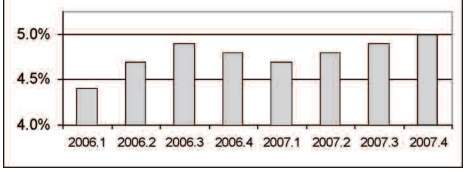
Increasing labor costs are predicted to feed inflation, which sees an up-tick starting in 2007 (*Graph 2*).

Graph 2
Inflation Rate

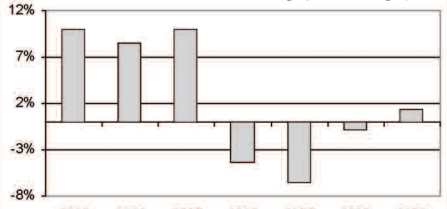


The Fair model responds to these developments according to a monetary policy rule. As the graph below shows, the slowdown is accommodated during the next six months, and tightening begins in the second quarter of 2007. The yield on three-month Treasuries increases through 2007, holds in 2008, and relaxes slightly in 2009 (*Graph 3*). Long-term yields follow suit, and residential investment takes a hit (*Graph 4*).

Graph 3
Yield on 3-month Treasuries

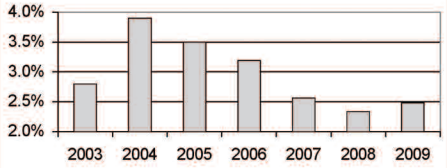


Graph 4
Real Investment in Housing (% change)



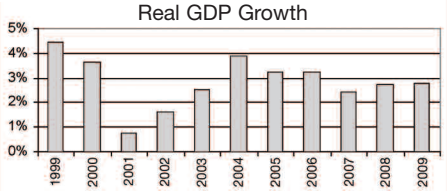
But since consumers' balance sheets are heavy with debt, weakness spreads to overall spending. Growth rates below 3 to 3.5 percent are considered low (*Graph 5*).

Graph 5
Real Consumer Spending (% change)



Real GDP also slows, but as graph 6 below illustrates, the damage to the economy is not nearly as severe as that during the 2001 recession. A "softer" landing may thus occur.

Graph 6
Real GDP Growth



The RTA Model Of Crosstie Purchases

This is important because real GDP is one of the main drivers in the model for crosstie purchases. The other main driver is the real price of diesel fuel; this latter forecast is provided by the Department of Energy (DOE) since Fair does not forecast diesel price. Together, the two main drivers are used to forecast other variables, including railroad coal shipments (tons originated), railroad freight (ton-miles), and non-durable manufactures (real value).

By using two forecasts, however, an issue of consistency arises. DOE assumes real GDP grows about 0.5 percent faster (per year) than in the Fair forecast; thus, the question is: what would the diesel price forecast be if DOE assumed slower real GDP growth? However, recent experience indicates the U.S. economy has, to a significant degree, insulated itself from the adverse effects of high fuel prices. Energy use per real dollar of GDP has decreased dramatically during the last three decades. Thus, the consistency issue may not be a problem. Another judgment call is made regarding Class 1 railroad track, which is assumed to hold steady in 2006, then decline 1 percent each year, in keeping with the recent trend.

The crosstie market is segmented into North American Class 1 railroads and the "small market," which is every other purchaser. This year's Class 1 purchases depend on U.S. Class 1 freight moved this year and the previous year, as well as miles of track owned. As track or freight increases so do purchases.

As *Table 1* indicates, increases in freight outweigh decreases in track, and Class 1 purchases increase in each of the next three years. Note, however, that freight growth slows down. In the model, freight depends on real GDP (which slows), change in coal shipments (which diminishes), and the real price of diesel fuel. As diesel gets more expensive, freight shifts from trucks to rail. Even though diesel prices are forecast to drop, they are still quite high by historical standards, thus encouraging shipping by rail. The last piece of the Class 1 model is railroad coal shipments. According to the model, as real GDP increases, so do coal shipments; also, as the real price of diesel goes up, so does coal. Slowing GDP exerts a moderating influence during the next few years, and coal shipments slow down, despite relatively high diesel prices.

The small market model postulates that crosstie purchases depend on non-durable manufacturing, change in real diesel prices, change in Class 1 track, and change in Class 1 coal shipments. The main driver is the real value added by U.S. non-durable manufactures; ▶

Table 1 — North American Class 1 Railroad Purchases

Year	Real GDP	Real Price of				New Wood Tie Purchases	PCT
		Diesel	Coal	Freight	Track		
2003	2.5%	26.3%	-0.1%	2.9%	169	13,578	0.6%
2004	3.9%	24.0%	1.0%	7.0%	167	14,007	3.2%
2005	3.2%	43.2%	1.6%	2.2%	164	14,729	5.2%
2006	3.2%	12.4%	5.3%	6.6%	164	15,669	6.4%
2007	2.4%	-4.5%	2.6%	1.6%	162	16,300	4.0%
2008	2.7%	-11.2%	1.6%	1.8%	161	16,388	0.5%
2009	2.8%	-11.2%	1.3%	2.0%	159	16,537	0.9%

Note: Estimated purchases do not precisely match installations.

this has been relatively lifeless over the past several years, growing at an average of about 0.5 percent per year. In *Table 2*, when GDP slows down in 2007 and after, non-durables stop growing. Research suggests short line railroads include past fuel prices into today's rates, so as diesel prices fall, short lines experience some financial relief and purchase more crossties. The model indicates that when Class 1 railroads shed track, short lines acquire it and purchase more crossties for maintenance. The forecast assumption is that with the recent introduction of the tax credit, short line railroad resources will go into maintenance; thus, track acquisition will fall off. Lastly, the model posits that as Class 1 coal shipments increase, so do those of the short lines, and more crossties are purchased. The model results indicate an elevated level of small market purchases compared to recent years, yet this does not include any specific variable representing changes in tax credits.

Table 2 — Small Market Purchases

Year	Non-Durable Manufactures	Real Price of Diesel	US Class 1 Track Acquired	Coal	New Wood Tie Purchases	PCT
2003	-1.2%	26.3%	-1.0	-0.1%	2,907	-20.3%
2004	2.7%	24.0%	-1.8	1.0%	4,000	37.6%
2005	1.6%	43.2%	-3.5	1.6%	4,090	2.3%
2006	2.6%	12.4%	0.0	5.3%	4,677	14.3%
2007	-0.5%	-4.5%	0.0	2.6%	4,515	-3.5%
2008	0.0%	-11.2%	0.0	1.6%	4,596	1.8%
2009	0.1%	-11.2%	0.0	1.3%	4,579	-0.4%

Table 3 — Forecast Summary
(thousands of new wood ties)

Year	Class 1 Purchases	Small Market Purchases	Total Purchases	PCT
2003	13,578	2,907	16,485	-3.8%
2004	14,007	4,000	18,006	9.2%
2005	14,729	4,090	18,819	4.5%
2006	15,669	4,677	20,345	8.1%
2007	16,300	4,515	20,815	2.3%
2008	16,388	4,596	20,984	0.8%
2009	16,537	4,579	21,116	0.6%

The Crosstie Forecast

Table 3 shows both market segments—Class 1 and the small market—and a market total. Note that 2006 purchases are shown to be only 20.3 million crossties, whereas, recent reports put actual purchases at 21 million. Thus, it looks as if the crosstie purchases forecast will be low for the current year. While a 3.5 percent miss is not good news to a forecaster, a more important point is that projected market growth in subsequent years demonstrates a slow-down; it flows through the economy and finds its way into the crosstie market. Thus, as the growth rate of the economy weakens, we can expect the same to happen to the growth rate in crosstie purchases. §