RAILROAD WEEK IN REVIEW

April 14, 2017

"The Unemployment Rate is now at its lowest level since May '07, the U-6 Under-employment rate is at its lowest level since Dec '07, and the Labor Participation Rate is at its highest level since Mar '14." — Randy Frederick, Director of Trading and Derivatives, Schwab Center for Financial Research.

AAR North American revenue units for the first quarter increased 4% over last year's Q1, about two points better than I'd expected. As I look down the list of commodities in the AAR report, coal — 13% of total volume — stands out as the major driver. Excluding the Canadian roads, where coal is never a big factor, UP, BNSF, and NS all saw respectable double-digit gains; CSX lagged at only 5% up.

The reasons are several: the western roads carry low-sulfur PRB coal, which is more acceptable than the "dirtier" eastern coal. Eastern coal's demise came as the result of environmental regulation and the advent of plentiful and low-cost per BTU natural gas for electric utilities. Finally, NS has twice the export coal volume of CSX and brings in a fair amount of PRB coal for some big customers. Yet coal is generally on its way out; I'm doubtful the surge is sustainable.

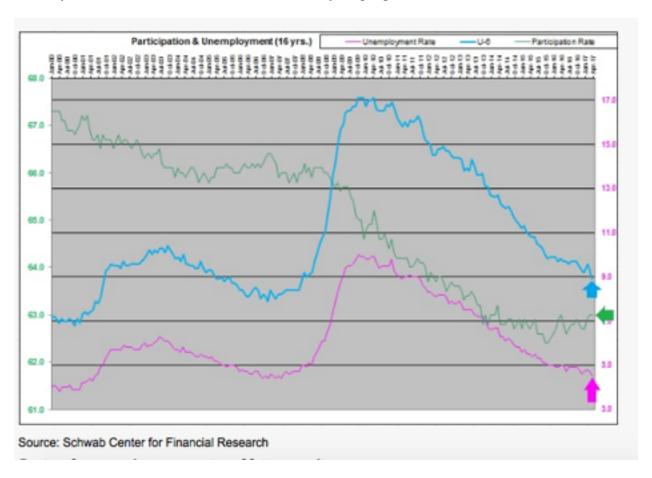
The bloom off may be off the intermodal rose as well, growing at about the same rate as the economy as a whole. Auto sales are taking a hit as dealers are discounting deeply to move cars and the used car buyers are defaulting in droves. Most encouraging is the merchandise sector, a third of the total railroad traffic base, and up 4% for the quarter.

AAR Class Is	NA Rails			
Commodity	2016	2015	Delta	Pct Tot
Total Units	8,873,298	8,482,873	4.4%	100.0%
Intermodal	4,321,838	4,226,758	2.2%	48.7%
Auto	353,967	365,294	(3.2%)	4.0%
Coal	1,189,298	1,007,335	15.3%	13.4%
Merch Carloads	3,008,195	2,883,486	4.3%	33.9%
Source: AAR Weekly Rail Traffic April 1				

March was when it all started coming back. U.S. railroads were up 7.3%, with 13 of the AAR's 20 carload commodity categories posting year-over-year gains. Aggregates including frac sand are up 12.5% and grain is up 10.6%. We already expected the auto sector to be off (down 5.3% in fact); seeing petroleum off 8.1% is no surprise. But industrial chems and ferts down a point is a surprise. I suspect this too won't last.

The AAR's John Gray provides some useful color for the mix. "This was the best first quarter ever for U.S. railroad intermodal volume. Roughly half of intermodal is international trade, but it's not just intermodal that's associated with international trade. At least two-fifths of all US revenue units and a third of all railroad revenue are directly associated with international trade." He adds that some 50,000 railroad jobs — more than \$5.5 billion in annual wages and benefits, depend directly on international trade.

And that's a good thing, because it segues beautifully into what Schwab's Randy Frederick has to say about the employment situation in his April 7 "Weekly Trader" column. He writes, "The headline Unemployment Rate (pink line) is now at its lowest level since May '07, the U-6 Under-employment rate (blue line) is at its lowest level since Dec '07, and the Labor Participation Rate (green line) is at its highest level since Mar '14." Good news indeed, and it can only bode well for rail traffic volumes as the year progresses.



The time it takes a merchandise freight car to get from pull to place continues to be a mystery. <u>USRailDesktop.com</u> repeatedly tells us transit times between some OD pairs are so slow one could almost walk it before the car arrives. Classification yards and interchange points are the biggest causes of train delay, outside of what Oliver Wyman's Rod Case calls "unplanned events" — hold-outs when receiving yards are full, crews going "on the law," locomotive road failures, etc.

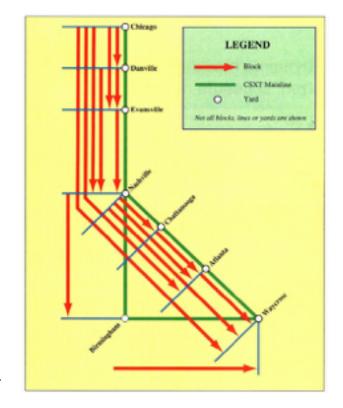
One way to eliminate delays, therefore, is to minimize the times a given car has to change trains. And short lines can help by pre-blocking. I've been beating the "block for the distant node" drum for some time, yet every time I'm in a yard and ask about skipping the hump to take pre-blocked cars straight from the receiving yard to the departure yard, people start studying their shoes or suddenly have an urgent appointment elsewhere. That's unfortunate.

Blocking for the distant node seems to say, get the car straight to the last yard before the customer — without changing trains in route. Not a bad idea, given the typical merch carload rides on as many as five trains from origin dock to destination dock. But what if the train to the distant node is full? Typically, the car gets held for the next distant-node train with space. Dynamic Car Scheduling can work, as Chip Kraft, Director of Operations, Transportation Economics & Management Systems, explains in a *Railway Age* News Wire offering:

If a preferred train is over capacity, but other trains moving in the same general direction still have room, a dynamic car scheduling system could change the car blocking to allow the extra cars to ride on those trains instead. It is true that not all car-rerouting alternatives make sense; so the option of holding a car until the next day's train always remains available. Dynamic Car Scheduling decides what to do based on the projected time and costs of each available alternative, as well as delivery time constraints associated with each rail car.

CSX gets a car in Chicago waybilled to Waycross. Ideally, it would go in the next Waycross train and run through. If that train us full, block it as far as you can ASAP and get it out of town, rather than wasting a day waiting for the next Waycross train.

One solution is to put it in the Nashville block out of Chicago, and the Waycross block from there.



Dynamic car scheduling selects the best blocks to move the car the furthest without changing, thus increasing transit time predictability and reducing variability from plan. Every train Runs to Plan with up to the maximum tonnage allowed for the train and route. And it all can start with short lines pre-blocking everything they put on the interchange.

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