RAILROAD WEEK IN REVIEW

May 13, 2016

"Railroads persisted as a fundamental part of the US freight transportation system in the twentieth century more than they succeeded financially… Yet the greatest threat to their ability to survive is new calls for old-style bureaucratic regulation — Gallamore and Meyer, American Railroads.

Berkshire Hathaway's First Quarter 10-Q and the 2015 *Chairman's Letter* provide important insights regarding BNSF and the railroad business in general. BNSF "maintains a very large investment in capital assets and will regularly make significant capital expenditures in the normal course of business." BNSF did $880 million in the quarter of 2016, and expects that "future capital expenditures are to be funded from cash flows from operations and debt issuances." Moreover,

> BNSF's outstanding debt was approximately $21.5 billion as of March 31, 2016, relatively unchanged from December 31, 2015… Berkshire does not guarantee the repayment of debt issued by BNSF and is not committed to provide capital to support BNSF.

We also get a glimpse of the Union Tank Car and Procor leasing business, part of Berkshire's Marmon Group holdings. Transportation equipment leasing revenues, including XTRA intermodal boxes, were up 14 percent ($85 million) thanks mainly to an increase in cars on lease and increased sales of railcars. The increase is due largely to Berkshire acquiring the GE Railcar Services fleet at the end of the third quarter of 2015, partially offset by lower utilization rates.

By way of background, the 2015 *Chairman's Letter* tells us

> Marmon's rail fleet expanded to 133,220 units by year end, a number significantly increased by the company's purchase of 25,085 cars from General Electric on September 30. At year end, 97percent of our railcars were leased, with about 15-17 percent of the fleet coming up for renewal each year. Though "tank cars" sound like vessels carrying crude oil, only about 7 percent of our fleet carries that product; chemicals and refined petroleum products are the lead items we transport. If our fleet was connected to form a single train, the engine would be in Omaha and the caboose in Portland, Maine.

Also in the *Chairman's Letter,* readers are reminded that

> In 1947, shortly after the end of World War II, the American workforce totaled 44 million. About 1.35 million workers were employed in the railroad industry. The revenue ton-miles of freight moved by Class I railroads that year totaled 655 billion. By 2014, Class I railroads carried 1.85 trillion ton-miles, an increase of 182 percent, while employing only 187,000

> workers, a reduction of 86 percent since 1947. (Some of this change involved passenger-related employees, but most of the workforce reduction came on the freight side.) As a result of this staggering improvement in productivity, the inflation-adjusted price for moving a ton-mile of freight has fallen by 55 percent since 1947, a drop saving shippers about $90 billion annually in current dollars.
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> Another startling statistic: If it took as many people now to move freight as it did in 1947, we would need well over three million railroad workers to handle present volumes. (Of course, that level of employment would raise freight charges by a lot; consequently, nothing close to today's volume would actually move.)
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> Our own BNSF was formed in 1995 by a merger between Burlington Northern and Santa Fe. In 1996, the merged company's first full year of operation, 411 million ton-miles of freight were transported by 45,000 employees. Last year the comparable figures were 702 million ton-miles (plus 71 percent) and 47,000 employees (plus only 4 percent). That dramatic gain in productivity benefits both owners and shippers. Safety at BNSF has improved as well: Reportable injuries were 2.04 per 200,000 man-hours in 1996 and have since fallen more than 50 percent to 0.95.

Worth keeping in mind next time your airplane seat-mate starts quizzing you about the sorry state of railroads.

I certainly got more mileage than expected out of last week's comments on the railroads' automotive business. A reader who's in the business of making railroad networks work writes that there is definitely a squeeze going on. The average age of cars on the road is now north of ten years, and many owners of the older cars can ill-afford to replace them, short of turning to the sub-prime debt market. No sub-prime debt, no new car.

But what happens if there is no new car? How will students burdened with student loans — who can't afford a car, much less a house —get to work? They find jobs in a city and use public transportation. The suburbs are out because public transit is far less available. And city living obviates the need for the privately-owned vehicle. [*A bike, your own feet, the city bus, and, in a pinch, a taxi, plus the occasional rental or car-share, will do just fine. Living in downtown Philadelphia, I walk this talk and have for 20+ years. - rhb*]

Then come fleet sales, which, being less lucrative to auto-makers , will eventually diminish as a percent of sales, thereby cutting into the volume of used cars that lower-income individuals rely on when the present car needs replacing. The millennials see the writing on the wall: levered up with student loans, living in cities with walk-to everything, many don't even worry about getting a driver's license. Enter the shared asset model — first public transit, and then Uber.

Finally, one must consider the return on asset equation. My correspondent writes, I would guess today the average vehicle gets driven for only one or two hours a day. (My car is close to about 2 hours/day). This won't get close to 24 hours in the end game (unless we all decide to start working and sleeping on different shifts). But what if you doubled this number from two hours to four hours? You might need only half the cars. My car usually only has me in it. What if due to sophisticated software we could coordinate/consolidate demand and averaged driving two people at once? The number of cars goes even lower.

Stir these themes together in a pot and you get a greater number of people sharing assets either by choice or because they have to. This reduction in the demand for assets eventually becomes a lessened demand for moving large volumes of stuff from here to there. My friend asks, "How much will come to pass? Hard to say, but it's kind of scary to contemplate what might be."

The diminution of freight volume growth isn't new. Let's compare year-to-date revenue units for the 2016 Week 17 with its 2012 counterpart. Revenue units in North America are down 1.7

	2012	2016	Change
CN	1,599,879	1,651,783	3.1%
NS	2,290,715	2,326,401	1.5%
BNSF	3,065,541	3,045,651	-0.7%
CSX	2,104,650	2,080,199	-1.2%
AAR	13,190,449	12,966,715	-1.7%
KCS	361,711	355,517	-1.7%
CP	874,676	824,132	-6.1%
UP	2,893,277	2,683,032	-7.8%

percent, with only two roads in the positive column. Coal alone dropped from 2.4 million cars in 2012 to 1.5 million now, nearly a million cars. Intermodal risen to 6.0 million units from 5.7 million, up 300,000 units — less than 200,000 platforms if you average 1.7 boxes per platform. That's a carload-equivalent spread of some 800,000 units. If the rails grow revenue unit volume at two percent a year, it'll take four years to fill the gap. I'm not holding my breath.