RAILROAD WEEK IN REVIEW

February 17, 2017

"Mean reversion is the theory suggesting that prices and returns eventually move back toward the mean or average. This mean or average can be the historical average of the price or return, or another relevant average such as the growth in the economy or the average return of an industry. -- Investopedia

"If you bet the market is efficient and hold the market portfolio, you'll earn the market's return. But if you bet against it and are wrong, the consequences could be painful. -- John C. Bogle, 2002 Morningstar conference

Current price should not be more than 15 times trailing 12-months EPS and no more than 1½ times the book value last reported. As a rule of thumb, we suggest that the product of the price-earnings ratio times the ratio of price to book value should not exceed 22.5, and the fair price equals the square root of the EPS times book value." — Benjamin Graham, The Intelligent Investor, chapter 14

I worry about railroad share prices vs. the compound annual growth rate of railroad carloads. All the Class Is are trading right around twice fair value (GWR is low man at 1.23x) and PEs are all within a point or two either side of 20.

The table shows how far in excess railroad share prices are above the "Graham Number" fair value. Follow the math: (price/earnings)*(price/book)=22.5; Price^2= 22.5*earnings*book; price = SQRT (22.5*earnings*book).

Tick	Price	Eps 2016	Bk/sh	P/E	P/B	PE*PB	Eps*bk	Fair Value	Price/ fair Val
CNI	$ 70.54	$3.58	$13.52	19.7	4.91	96.75	$ 48.40	$33.00	$2.14
CP	$ 147.88	$8.16	$41.42	18.1	3.57	64.70	$ 337.99	$87.20	$1.70
CSX	$ 47.77	$1.81	$11.17	26.4	4.28	112.87	$ 20.22	$21.33	$2.24
GWR	$ 74.19	$3.74	$43.27	19.8	1.71	34.01	$ 161.83	$60.34	$1.23
KSU	$ 85.80	$4.43	$37.85	19.4	2.27	43.90	$ 167.68	$61.42	$1.40
NSC	$ 121.12	$5.62	$40.36	21.6	3.00	64.68	$ 226.82	$71.44	$1.70
UNP	$ 107.87	$5.07	$24.58	21.3	4.39	93.37	$ 124.62	$52.95	$2.04

Benjamin Graham determined the average PE for a basket of stocks was 15 times and that share prices averaged 1.5 times book, and, yes, I know Graham did this works eons ago, and that

number probably ought to be increased. By what, I don't know, so I continue to use 15 and 1.5 until something better comes along. So far, in railroad-land at least, it hasn't.

Yardini Research just last week published a series of charts covering railroad share price performance over the last 20 years. In 1995 railroad shares traded at 11 times earnings, and up until mid-2016 traded in a range between 11 and 15 times earnings. Thus I'm comfortable using the 15 multiple as the mean eps, but am not happy with the book value multiples, which are about as overvalued as the shares.

My argument stands: at these levels railroad shares are over-priced, and I hold that a regression to the mean of 15 times earnings and 1.5 times book is in order. Let's face it: the biggest driver of earnings growth is revenue growth, and the biggest driver of revenue growth is the revenue unit. And yet total railroad revenue units in the US, per the AAR's January 2017 *Rail Time Indicators,* has total revenue units 2011-2016 off 1.7% CAGR.

Merchandise carloads (everything but intermodal and coal, including automotive from parts to finished vehicles) have fared a little better. *Rail Time Indicators* for the same period shows the carload CAGR actually up 1.1%, suggesting gains in intermodal and merch carload have roughly absorbed the loss in coal traffic.

For further corroboration of this theme, GE Transportation's RailConnect Index of short line traffic shows total shortline carloads 2011-2016 increased 9.8%; merch carloads increased 3.1%, after backing out coal and intermodal. So… if virtually all shortline cars are interlined with Class Is, and merch carloads for the Class Is are showing a net gain of just 1.1%, and short lines are up three times that, it follows that shortline gains could be masking Class I losses.

The argument here and elsewhere for years is that shortlines are closer to the customer, and as a result know how supply chains for their customers — and their customers' customers — are supposed to work. Small, frequent shipments are preferred in non-unit train moves, yet the Class Is keep running fewer, bigger trains. Keep this up and even short lines will lose that competitive edge as it takes longer to get between shortline interchange points.

That's why I'm saying the tea leaves point to even lower Class I share prices as volumes shrink. There's only so much you can do to boost earning-per-share with share repurchases and "inflation-plus pricing" if revenue unit volumes continue to head south, short lines notwithstanding.

Headcount changes invariably come up on nearly every earnings call, but never in any particular context. The thought occurs that since revenue ton-miles is what you get paid for, it makes sense to see how many RTMs you generate for each employee. I'm taking the year-end employee counts and full-year RTMs from the Q4 conference call materials, BNSF excluded because they don't report either RTMs or employe-counts.

Not surprisingly, CP leads the pack with 11.5 million RTMs per employee; NS brings up the markers at 6.8 million with CSX at eight million even. UP and CN check in at 9.8 and 9.6 respectively. KCS does 7.3 million RTMS per employee.

I mention this because cutting headcount is perceived as a Hunter Harrison trait, and with his sights trained on CSX, how much room is there to take the headcount down? I argue CP is a lot different than CSX with its longer hauls and relatively fewer local freights hunting and gathering. However, I also argue that CSX has a huge branchline network and many light density lines that could easily be bolted onto neighboring short lines. Doing so would invariably have the desired effect of raising RTMs per employee.

A WIR subscriber of many years and former Class I commercial VP writes:

> The subject of self-driving trucks is scary stuff! In the past ten years railroads have had to suffer through the loss of coal, oil trains, and now it looks like their intermodal business is under threat. For CSX and NS, I would also add to this the loss of millions of dollars of auto parts business that went to now-closed assembly plants. Makes you wonder if railroad management is ever going to realize that they have to get back into the carload freight business. Sorry to say, but I think too many years of dependence on hook and drag freight like coal and intermodal have dulled their ability to compete.
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> Back in the day, I managed a Class I commodity group bringing in $300 million of revenue with an average 1.8 revenue-variable cost ratio, making ours the most profitable large - volume business other than chemical. Yet we were regularly attacked by our transportation department for running a scheduled network that was designed to meet customer supply chain requirements but did not meet transportation's preferred metrics.
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> Our trains typically ran 50-60 high-cube cars, easily out-weighing longer trains of smaller cars. Transportation didn't see it this way and considered it a short train as they measured train length by 50-foot cars. They wanted us to tell our customers that we would only run the train five days a week instead of six in order to increase the car count.
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> That wouldn't work because plants were operating six days a week and that they kept no inventory. Happily, our team prevailed and we kept the six-day schedule. But the confrontation showed clearly what happens when transportation is graded by train size and the commodity groups are graded on margins. Is it safe to say this has changed?

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