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New Rec: Trinity Industries	(TRN: \$86.49)	June 2, 2014
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Position: Sell

Target: \$51.75

\$ooo	Q114	Q214e	Q314e	2013	2014E	2015E	2016E
Rev	1,167	8,536	8,547	4,307	5,134	4,845	4,709
EPS *	\$1.23	\$1.35	\$1.40	\$4.38	\$5.85	\$4.91	\$4.35
EPS	\$2.66	\$1.50	\$1.55	\$4.63	\$7.51	\$5.53	\$4.56
Y/Y	40%	30%	25%	62%	34%	-16%	-11%
PE *	n/a	n/a	n/a	19.7	14.8	17.8	20.1
PSR	n/a	n/a	n/a	2.1	1.7	1.8	1.9
Cons.	n/a	n/a	n/a	n/a	7.40	n/a	n/a

*Excludes gains on sales of lease assets

Shares Out: 78.3M

Market Cap: \$6.8B

FYE: December

Concept:

1. TRN is benefitting from a boom in NA demand for railcars designed to transport crude oil.

The majority of its recent production growth has come from high-priced, high-margin tank cars for transport of Bakken crude oil.

2. The development of substantial new pipeline capacity should displace a significant amount of demand for crude oil tank cars in the US. Evidence suggests this has already begun. Transporting oil by pipeline is considerably less expensive than shipping by rail.

3. TRN shares are trading at a rich multiple of peak earnings. $P/TBV = 2.6x$. Prior railcar cycles for coal and ethanol have followed the same trajectory as TRN and both ended badly despite the absence of a direct competitive alternative (no pipelines to carry either product).

4. Crude tank cars have a useful life of ~40 years. This creates an environment apt for overproduction and future losses in manufacturing and reductions in lease rates.

5. TRN is selling railcars from its existing lease fleet and booking gains on sales. This is an action suggestive of a market peak. Insiders have been aggressive sellers for the past 2 years.

Summary: TRN is the largest manufacturer of railcars in North America and has the 6th largest railcar leasing business. It also manufactures barges, highway crash cushions, wind towers and construction aggregates. The majority of TRN's profit is from the railcar businesses, the focus of this report.

Although TRN shares appear to be inexpensive, at 11.5x FTM EPS, they are at a rich multiple of peak earnings. Moreover, EPS has been enhanced by the recent boom in demand for crude oil shipped by railcar, a trend we see as unsustainable. EPS has also been boosted by non-recurring gains on the sale of TRN's existing lease fleet. The company has delivered impressive earnings and has beaten guidance over the past several quarters. Investors have responded by marking up the shares as if TRN were a non-cyclical enterprise – TRN shares are up fourfold in less than 2 years and have more than doubled in just the past 9 months. However, TRN is predominantly a cyclical company with significant operating leverage in its business model, and earnings are likely approaching a peak. EPS last peaked in 2007 at \$3.42, only to decline progressively and bottom at \$0.77 in 2010. We think 2014 should represent the peak in recurring EPS at \$5.85. If we are correct, TRN shares are being valued at ~15x peak EPS.

Crude oil production in the Bakken Shale (ND) has exploded since 2011, while constraints on NA pipeline capacity have driven enormous demand for rail shipments of crude oil, mostly from the Bakken. No company has benefitted more than TRN, which has the dominant position in tank cars used to transport crude. Importantly, tank cars (vs. freight cars) carry the highest price tag and margins. We estimate that tank cars account for ~60% of TRN's current railcar deliveries (historically they have been ~25% of industry shipments) and ~75% of the gross profit in TRN's railcar manufacturing segment. Thus, when TRN's product mix shifts back to normal, earnings should decline markedly.

There is evidence that the supply of crude tank cars may exceed potential demand. Based on the current backlog and near-term delivery schedule, industry supply is scheduled to reach ~71,000 crude carrying tank cars by the end of 2014 (vs. 16,000 in 2011). That is enough capacity to transport 2.6M barrels of oil per day (bpd). However, based on available data for crude-by-rail shipments, we estimate that current demand for crude-by-rail should equal 1.3M bpd by yearend. It also appears that demand has been relatively flat over the past 9 months. This is clearly an unsustainable situation. Either demand for oil shipped by rail needs to spike over the next several quarters, or the demand for tank cars will collapse. We think the latter scenario is far more probable.

If the crude tank car market is in a bubble, then TRN is behaving rationally, because it cannot control the cycle. Management is maximizing manufacturing production (mostly expensive crude tank cars) and is generating strong profits and margins. It is also selling off parts of its existing leasing fleet at attractive valuations, and booking one-time gains (as we discuss in the report). A portion of sale proceeds are being deployed to acquire non-railcar businesses. TRN insiders have been consistent sellers of shares for nearly two years (at as low as \$27/share). TRN management apparently understands the cliff that lies ahead.

Adding superfluous supply near a market peak is not unusual. Temporary supply/demand mismatches have often led railcar buyers to order more railcars than are needed, eventually resulting in cancelled orders. It is important to note that tank cars have an average life of 40+ years, making it easy to create an oversupply situation during good times. In the past decade alone, a similar railcar story played out with both the coal and ethanol booms. Freightcar America (RAIL), which we recommended as a short in 2006, experienced a similar run based on orders for coal hopper railcars. RAIL's EPS peaked at \$10 in 2006 (vs. initial consensus of \$6.50). However, as it worked through a large backlog, EPS plummeted to \$2.25 in 2007, culminating in a loss of \$1.33 in Q407. RAIL shares peaked at \$73 in Q106 only to drop to \$44 by Q306 and to \$18 by Q308.

Investors appear to be hoping that a surge in regulatory-driven replacement demand, following a flurry of recent tank car accidents, will forestall the inevitable collapse in demand. We think investors are misinterpreting the situation. We expect there to be increased demand for new, safer railcars, which would be phased in over the next 4-7 years. However, we think most of the potential benefit is already discounted into TRN's valuation. Moreover, we think that a meaningful portion of the increased demand is already reflected in the existing backlog. We also view the demand spike as more of a non-recurring multi-year event that

should pull future demand forward. Most importantly, as we discuss in the report, a meaningful % of any potential benefit to TRN would be offset by the adverse impact to its lease segment, which owns 7,500 below-standard railcars.

Some investors might believe that TRN can “beat the cycle” by diversifying into non-rail businesses. We disagree. Although TRN is currently enjoying a very favorable environment (on multiple levels), the downside of the cycle could be painful. Due to the high fixed-cost nature and complexity of the railcar manufacturing business, a downturn in orders should also result in declining prices and operating margins. Moreover, leasing rates would also decline, which would negatively impact TRN’s large leasing fleet. While the railcar manufacturers are projecting confidence, the major railcar lessors, which are sophisticated operators, appear to be far more cautious about the current tank car environment. There has been heavy insider selling at market lessor GATX.

A part of our thesis entails the looming increase in NA oil pipeline capacity, which is a superior alternative rail. In our view, rail was used to bridge a temporary gap, and that created a sudden burst of demand for tank cars. However, following several years of outbound pipeline constraints at the main WTI trading hub (Cushing, OK) additional pipeline capacity out of Cushing and other locations has begun to come online, and a significant amount of new capacity is scheduled to come on-stream in the US and Canada over the next 2 years. According to industry data, transporting Bakken crude to the Gulf by rail costs ~\$15/barrel compared to \$6/barrel by pipeline. Thus, as pipeline capacity increases, we expect demand for rail capacity to be displaced, negatively impacting demand for tank cars. We note there was no such alternative during the coal and ethanol booms.

Another consequence of additional pipeline capacity has been the narrowing of the spread between the price of Brent Crude and West Texas Intermediate (WTI) oil. The Brent/WTI spread peaked at ~\$26/barrel in 2011-2012 and more recently at \$18 in Q413. It is currently \$6.50. Historically, Brent and WTI have traded at similar prices. According to our contacts, producers need a ~\$10 spread to justify the economics of shipping crude by rail from the Bakken to the Gulf refineries and other distant locales. However, the spread has been below \$10 since January. If this trend persists, it should lead to further weakening of demand for tank cars, especially as existing profitable rail contracts roll off.

Crude by rail has become a popular theme among investors, and TRN is one of the obvious ways to participate. Analysts and investors have been chasing the stock higher with new justifications for their optimism. However, they are

mistakenly capitalizing peak demand levels at peak margins on assets that have a 40+ year useful life. TRN remains a highly cyclical company with earnings that peak on average every 5-7 years and a share price that typically begins to decline well in advance of a sustained downturn in earnings.

Using what we think are conservative assumptions, which we discuss in the report, we estimate TRN could earn ~\$3.60 in mid cycle. If we apply a 12.75x multiple for a cyclical industrial manufacturer, it implies a stock that is fairly valued at \$45.90. To be conservative, we give the company credit for another year of strong earnings including the benefit from replacement demand for non-compliant crude railcars. As a result, our initial price target is \$51.75, which would imply a potential gain of 40%. TRN shares traded at this level just 5 months ago. A broader industry decline or an equity market correction could also derail TRN shares before our thesis plays out. We think TRN earnings are probably approaching a peak. Importantly, given the substantial increase in the share price over the past year, we think that potential further upside is limited (10%-15%), thus creating an attractive risk-reward situation.

Background:

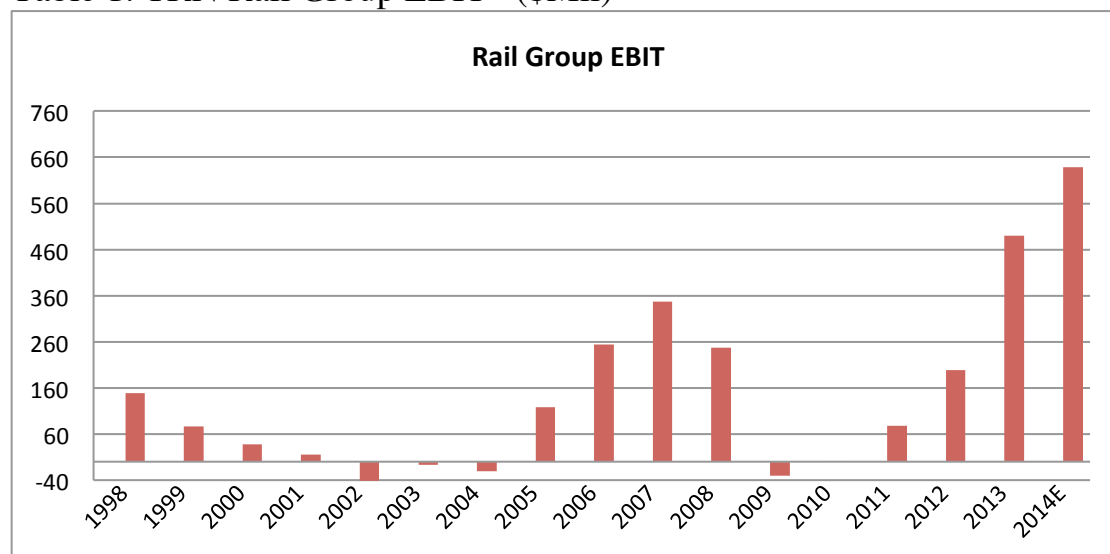
Trinity Industries (TRN) is a diversified manufacturing company that operates in five segments. The Rail Group is a leading manufacturer of freight and tank railcars for the NA market. TRN is also a leading provider of railcar leasing and management services with a current fleet of 73,000 units. The Inland Barge Group manufactures barges for use on the U.S. inland waterway. The Energy Equipment Group produces structural wind towers and propane tanks. The Construction Products Group manufactures highway guardrail and crash cushions and lightweight concrete aggregates. TRN is headquartered in Dallas, TX and has ~ 18,500 employees in the US and Mexico. 2013 total revenues were \$4.36B.

Discussion:

1. The railcar manufacturing business is characterized by cyclical orders and deliveries that result in volatile operating margins due to high fixed costs and significant operating leverage. As we show in Table 1, TRN's Rail Group profits appear to be near a cyclical peak (as are its EBIT margins). Moreover, current profits are being augmented by what may be a temporary boom in the demand for tank railcars used specifically to transport crude oil in NA. Profits are being further magnified by the fact that tank cars carry the highest price tag and margins. Finally, since TRN is running its production facilities full out, it is currently

achieving maximum operating leverage, which further enhances its profit margin. Based on discussions with industry contacts, we think that TRN is currently generating a 25% EBIT margin on tank cars compared to a more normal rate of 10%-15%. Non-tank (freight-car) margins are estimated to be 9%-12%.

Table 1: TRN Rail Group EBIT* (\$Mil)



*Before intercompany eliminations

We think the recent boom in domestic oil production combined with constrained pipeline and refinery capacity has resulted in a temporary bubble in the demand for tank railcars. No company has benefitted more than TRN, which had the flexibility to quickly shift its manufacturing base to capture the lion's share of these highly profitable units. As evidence, TRN's average rev/railcar delivered was \$118,000 in 2013 vs. \$90,600 in 2011 – reflecting the surge in tank car deliveries since Bakken oil production began to ramp. However, when the demand for crude railcars eventually recedes, there should be a disproportionately adverse impact on TRN's earnings, and we think investors will abandon the shares. We recognize that an earnings decline could take some time to develop.

In Table 2, we have attempted to calculate the EPS of each of TRN's operating segments. In deriving our estimates, we make conservative estimates for the allocation of corporate expenses, non-leasing interest expense and minority interest. We note the shares are set to split 2:1 in June.

As the table demonstrates, there has been an enormous surge in the profits of the railcar manufacturing business, while the leasing business has also grown, but at a much slower rate. On a combined basis, the net earnings of the non-rail

businesses (inland barge, construction, and energy products) have actually declined over the past 5 years. Our future estimates assume that these “other” segments (aided by acquisitions) can grow at 5%-10% annually over the next several years even though they possess cyclical characteristics. We note that TRN has been a rumored acquirer of ABB’s steel structures business. However, we don’t think acquisition driven diversification will offset much of the decline that we foresee in the railcar manufacturing business over the next 1-3 years.

Table 2: EPS by segment

	2008	2009	2010	2011	2012	2013	2014e
Railcar Group	\$0.92	(\$0.82)	(\$0.56)	\$0.03	\$0.84	\$2.32	\$3.42
Railcar Leasing	\$0.37	\$0.40	\$0.49	\$0.51	\$0.54	\$0.85	\$0.84
Gain on sale of leased cars	\$0.29	\$0.17	\$0.06	\$0.21	\$0.49	\$0.25	\$1.61
Barge/Construction/Energy	\$1.99	\$1.73	\$0.86	\$1.00	\$1.28	\$1.21	\$1.58
Total reported EPS	\$3.57	\$1.49	\$0.85	\$1.74	\$3.15	\$4.63	\$7.46
EPS - excluding gains	\$3.28	\$1.31	\$0.79	\$1.53	\$2.66	\$4.38	\$5.85

Most importantly, we think 2014 should represent a peak in the earnings of the Railcar segment and for overall EPS. Excluding expected gain-on-sale income, TRN is trading at 15x our estimated 2014 EPS, a multiple far in excess of the historical average peak multiples in the industry. The combination of the extended valuation and exuberant sentiment has created an ideal backdrop for a sale of TRN.

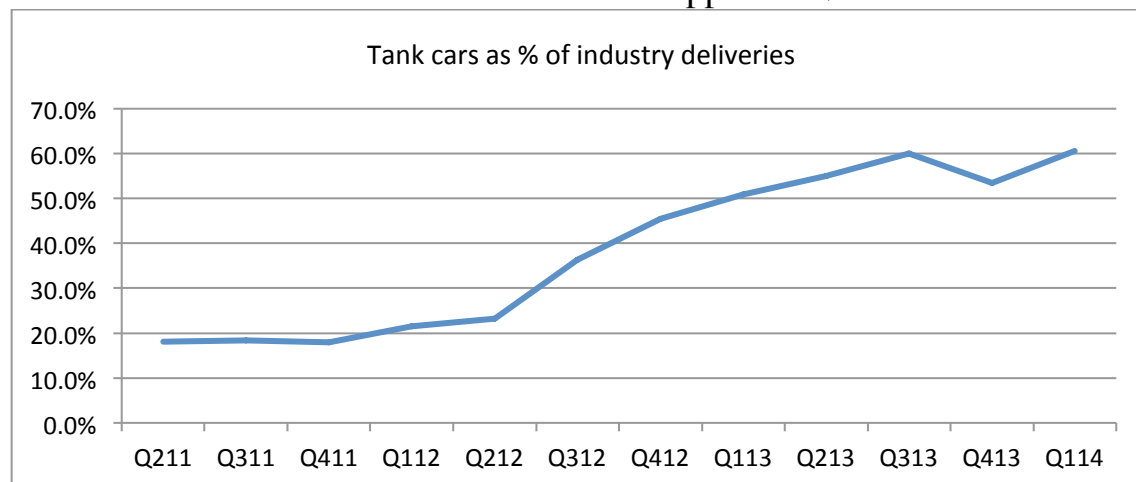
To further boost reported earnings, TRN has been increasing the sale of railcars from its existing leasing fleet and booking one-time gains into income. We think railcar leasing is a good business for TRN, as it partially offsets the deep cyclicity of the core manufacturing operation. Thus, it seems odd that the company would sell off parts of its fleet, which has generated solid earnings. In our view, this would only make sense if management believed that the market was at or near a cyclical peak. Gains on fleet sales are expected to add ~\$1.61 to EPS in 2014 and are included in the company’s 2014 guidance, which was raised in the most recent quarter to a range of \$7.10 - \$7.50. In the 5 years prior to 2014, fleet sale gains added an average of \$0.25 to annual EPS.

2. Since much of TRN’s recent earnings growth has come from the sale of tank cars to ship crude oil, any reduction in demand for crude tank cars should have an adverse impact on earnings. TRN continues to manufacture and ship new tank cars, which generate extremely high profits. On the surface, all seems well. However,

we have identified a number of developing factors that point to a marked shift in the market in the not too distant future.

Demand for crude by rail arose mainly from a ramp up in production in the Bakken Shale at a time when there was insufficient takeaway capacity to move the oil by pipeline to key refineries. We note that an estimated 85% of US crude by rail volume originates in the Bakken. Other basins that have adequate pipelines do not use rail. Although additional pipeline capacity was added in the Bakken, most of it was linked to the major trading hub at Cushing, OK, which lacked sufficient outbound pipeline capacity to transport the rapidly increasing crude volume. This resulted in a substantial rise in crude inventories at Cushing, which in turn led to low prices for WTI crude vs. the international Brent benchmark. In response, Bakken producers shifted to rail to ship their crude to other locations (Albany, Philadelphia, Virginia, and CA). This was possible because their netbacks were attractive, despite the high cost of rail. With a rapidly growing production volume in the Bakken, this created an enormous burst of demand for railcars capable of transporting crude oil. In Table 3, we show the trend in tank car shipments.

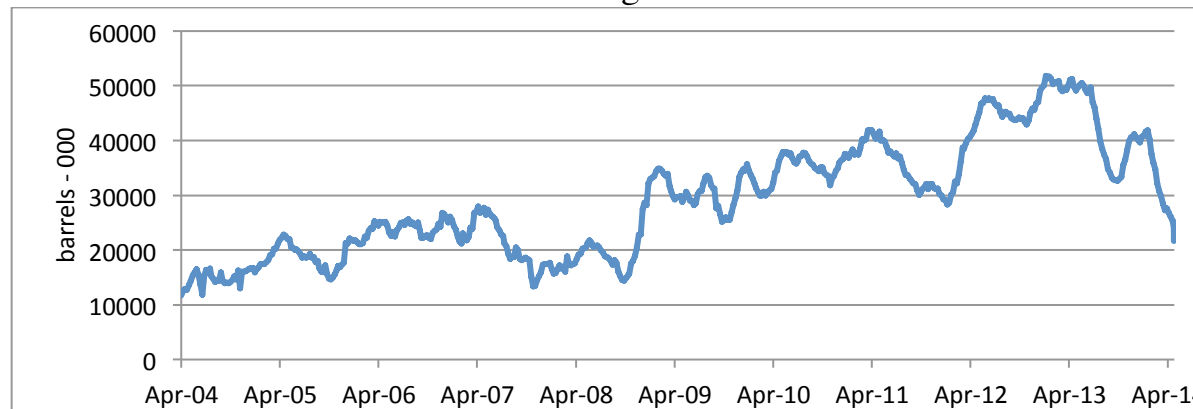
Table 3: Tank cars as a % of total railcars shipped in NA.



A number of near-term catalysts could reduce the demand for crude by rail. Most importantly, outbound pipeline capacity has come on-stream at Cushing and additional capacity is on the way. In mid-January 2014, the southern leg of the Keystone pipeline began shipping crude from Cushing to the Gulf Coast refinery complex. Almost immediately, the bottleneck began to moderate, as we show in Table 4. More specifically, since the Keystone South began operating, Cushing inventories have declined 48% to a recent 21.9M barrels. When fully ramped (mid-year), this new pipeline will transport 830k barrels/day.

Within the next two months, Enbridge’s Seaway Pipeline expansion should begin operating, adding an additional 450k bpd of capacity from Cushing to Freeport, TX. On a combined basis, the Seaway and Keystone expansions will add 1.3M bpd of capacity, which is the equivalent of 31k railcars (A standard tank car can carry 685 barrels or ~38 barrels/day assuming a roundtrip of ~18 days from the Bakken to Cushing). We estimate that the industry delivered 23k crude tank cars in 2013 and is expected to deliver a similar amount in 2014.

Table 4: Crude Oil Inventories at Cushing



As the bottleneck at Cushing dissipates, additional pipeline capacity around the Bakken is likely to be utilized. However, we expect that sending crude by rail to the East and West coasts will continue to be a viable option given that current lack of pipeline infrastructure and the added flexibility of rail. While not a key part of our thesis, there are also more pipelines expected to come on over the next several years. Most notably, if the Keystone XL (the northern section) is eventually approved, that would add another 830k bpd of capacity. In addition, the Energy East project will convert 3k KM of a Canadian pipeline from gas to oil and add 1,500 km of new pipeline. It is expected to transport 1.1M bopd to Eastern Canadian refineries in 2018.

3. One consequence of the improving Cushing bottleneck has been a marked narrowing of the spread between Brent crude and WTI crude, which we highlight in Table 5. Brent is the benchmark for international oil while WTI is more representative of the price that producers receive in the US. The two crude stocks are of similar quality and theoretically should be priced very closely as they have been over time. However, coinciding with a surge in US oil production that began around 2011, the WTI-Brent spread widened to as high as \$28/barrel and remained within a range of \$10-\$20 through mid-2013. The current spread is ~\$6.55. We display a longer-term chart of the spread in Table 6.

The WTI-Brent spread is critical for shippers of crude by rail due to the much higher cost of rail vs. pipeline. According to industry sources, it takes a ~\$10 spread to justify shipping by rail. We note that the spread has been below \$10 since mid-January, right about the time the Keystone South began to run. If this spread remains below \$10 or even moves toward its longer term average (near parity), it could cripple the economics of shipping crude by rail. In the latest issue of the Petroraill Report, it was noted that “tighter rail economics have recently prompted some shippers to move crude via the cheaper pipeline option.” We also note that greater regulatory scrutiny has recently begun to increase the variable costs (tank car inspections, etc.) for the E&P companies that ship by rail.

Table 5: WTI-Brent Spread (1 Year)

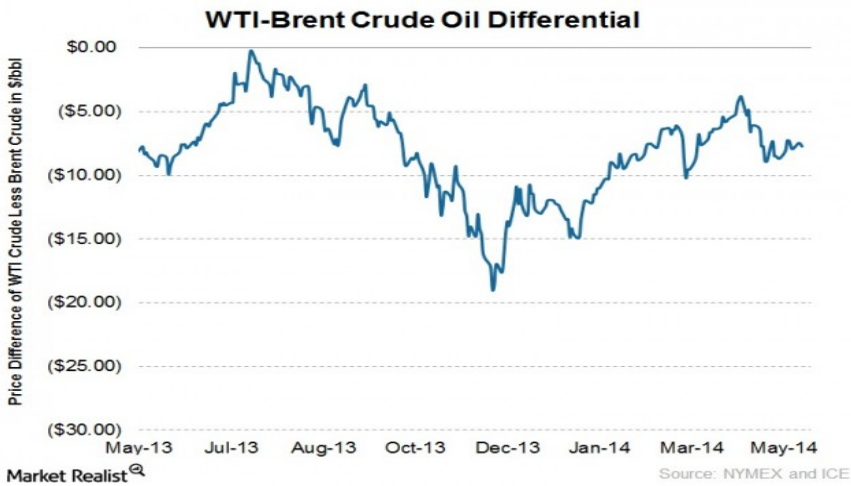
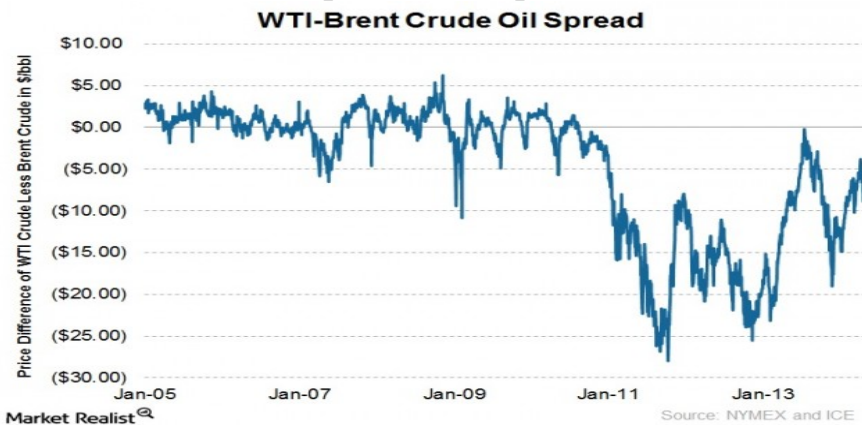


Table 6: WTI-Brent Spread (2005-present)



Source: Market Realist; US Energy Information Administration

4. We think there is a considerable imbalance between supply and demand developing in the tank railcar business. In Tables 7 and 8, we detail recent trends in rail carload originations in both the US and Canada. It's evident from these graphics that demand growth has slowed dramatically over the past several quarters, which has continued through Q114. Note that we estimate Q114 using weekly statistics published by the AAR. We also point to the decline in carloads in Q313 – just as the WTI-Brent spread had narrowed markedly.

Table 7: Rail Carload Originations

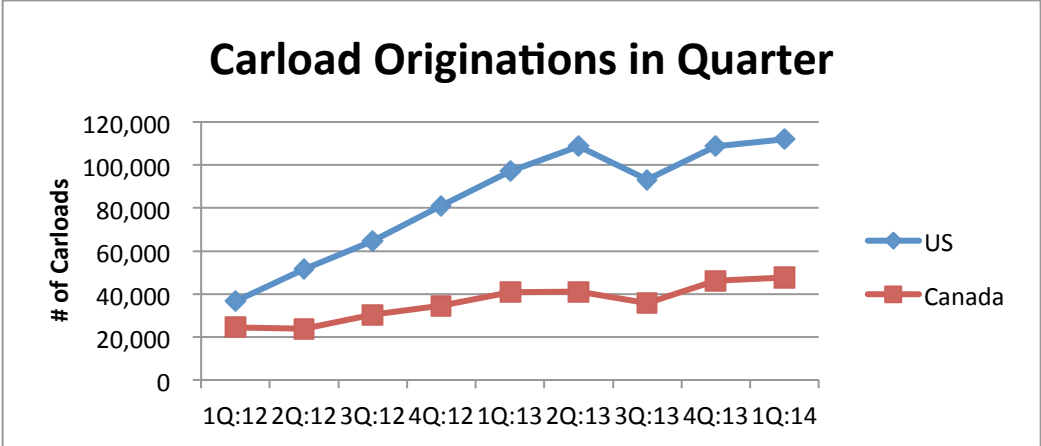
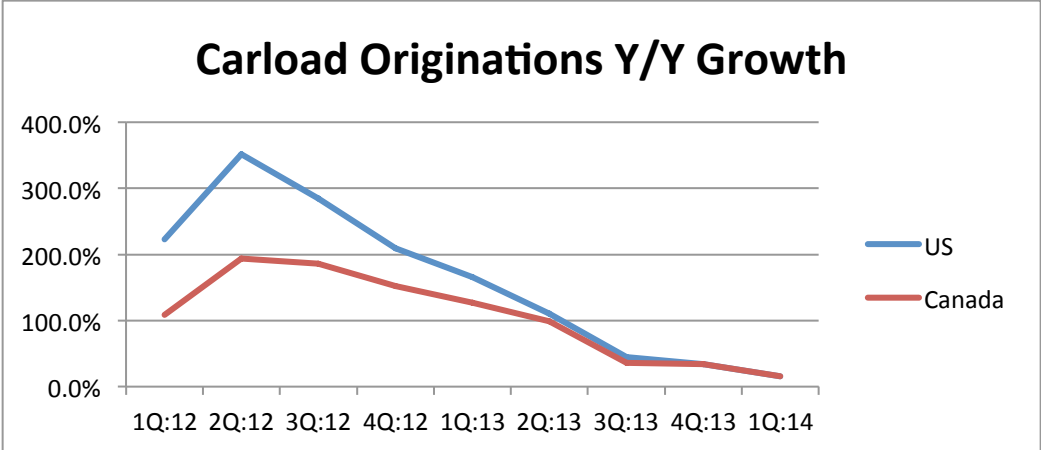


Table 8: Y/Y % change in rail carloads

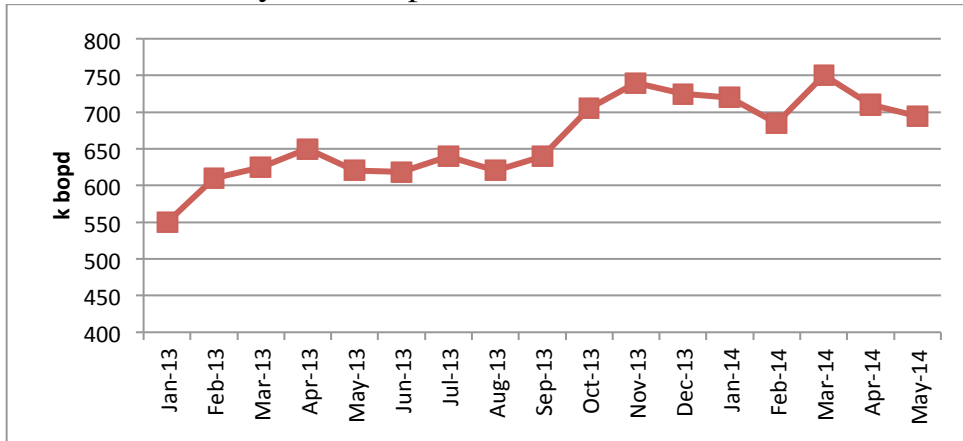


Source: US Surface Transportation Board; Statistics Canada

The North Dakota Pipeline Authority reports crude by rail volumes (in thousands of barrels per day) out of the Bakken with a delay. However, real time volumes can be obtained via private subscription services. We highlight Bakken crude volumes in Table 9. Looking at this chart, it becomes evident that crude by rail shipments have been relatively flat over the past 6 months.

Using our base assumptions – 685 barrels/railcar with an 18-day average turnaround (38 bls/car/day) – we can back into the demand for crude by rail in the US based on the aforementioned carload data. We highlight our demand estimates in Table 10. Our assumptions are based on calls with industry sources as well as publicly available industry estimates.

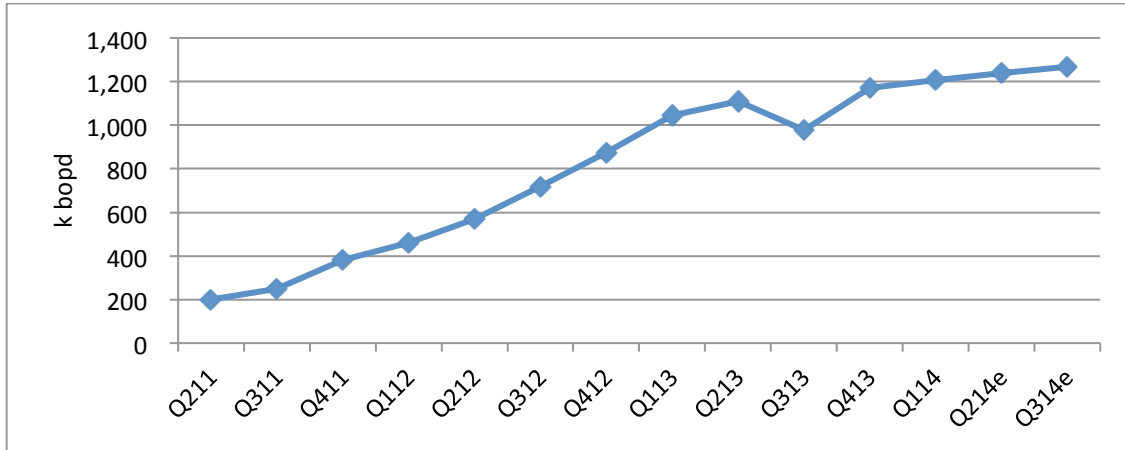
Table 9: Crude by Rail Shipments from Bakken



Source: ND Pipeline Authority; the Genscape Petro Rail Report

Although demand for crude by rail is slackening, tank car supply is growing rapidly. To capitalize on the current boom, tank car manufacturers have ramped up production. At the end of Q114, there were an estimated 50,000 crude tank cars in service in NA compared to just 16,500 at the end of 2011. Moreover, based on the near-term delivery rates, industry supply is scheduled to reach ~71,000 units by the end of 2014 – enough capacity to transport 2.6M barrels of oil per day (bpd). This is far in excess of our estimated demand of 1.3M bpd that we highlight in Table 10. Moreover, it appears that this demand has been relatively flat over the past 6-9 months. This looks to be an unsustainable situation, as we delineate in Table 11.

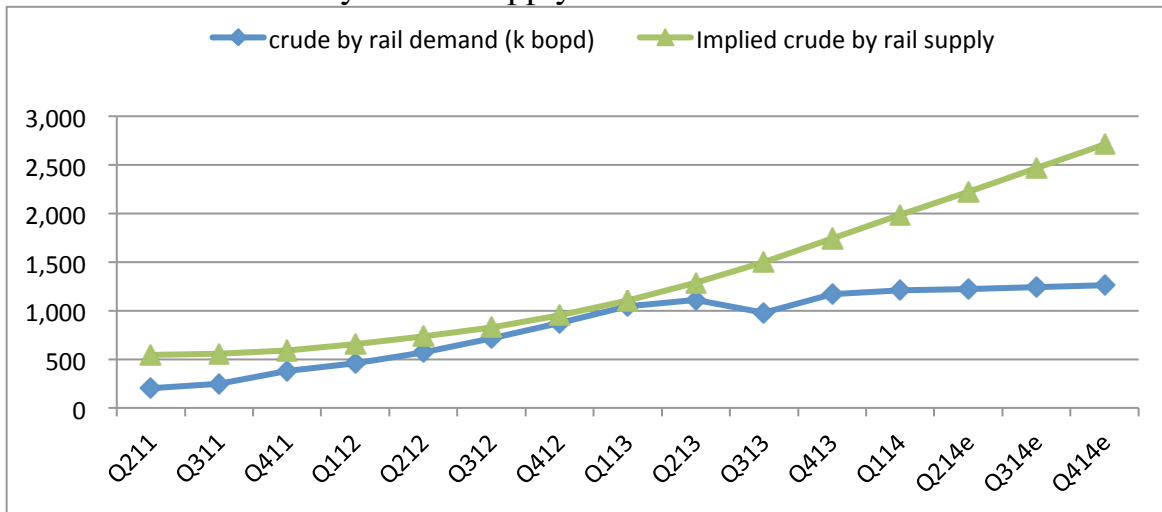
Table 10: Implied Demand for Crude Shipped by Rail – N. America



Source: OWS estimates; ND Pipeline Authority

Therefore, either demand for oil shipped by rail needs to explode over the next 6-12 months, or the demand for tank cars should collapse. We think the latter scenario is far more probable. Below we also discuss the potential demand for replacement of older cars based on increased safety concerns.

Table 11: NA Crude by Rail – Supply/Demand Curve



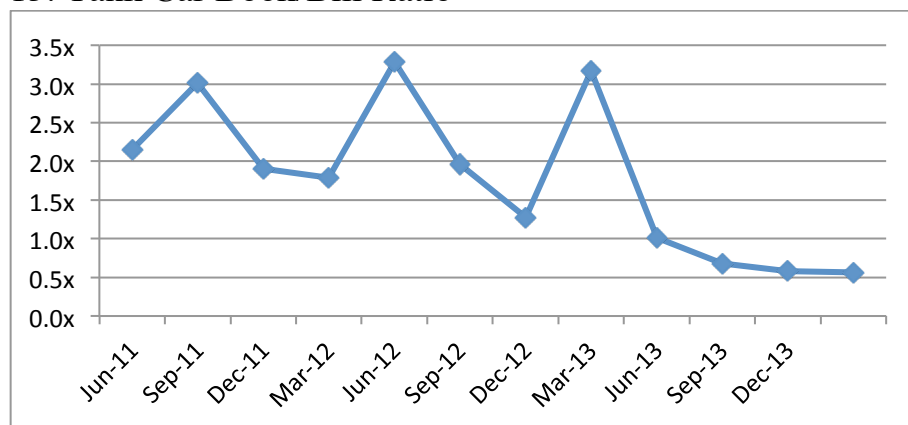
The existing North American tank railcar fleet is 335,000 units, and it is estimated that crude tank cars are 50,000 or about 15% of the fleet. As shown in Table 12, industry tank car orders have been trending down after peaking in Q113 at 19,267 units. In fact, orders for Q413 and Q114 (average 4,800) were the lowest tank car orders since Q211. This should not be surprising given the apparent deterioration in the supply/demand balance for crude by rail.

Table 12: NA Tank Railcar Market

	Q112	Q212	Q312	Q412	Q113	Q213	Q313	Q413	Q114
Industry tank car orders	6,479	13,727	8,832	6,839	19,267	6,944	5,149	4,916	4,769
Total tank car deliveries	3,625	4,175	4,492	5,374	6,080	6,887	7,589	8,440	8,451
Book/Bill Ratio	1.8	3.3	2.0	1.3	3.2	1.0	0.7	0.6	0.6
Backlog	32,843	42,371	46,705	48,206	61,293	61,350	58,910	55,386	50,489
backlog in quarters	9.1	10.1	10.4	9.0	10.1	8.9	7.8	6.6	6.0

As tank car deliveries continue to ramp and orders decline, the backlog coverage is deteriorating as is evident in the chart in Table 13. Based on the current quarterly delivery rate of 8,500 tank cars and manufacturer visibility into 2015, the market is setting up for a major over-supply situation, because the demand for tank railcars to ship NA crude is barely growing. In Table 14, we estimate the growing supply of crude tank cars based on a conservative (high) estimate of 2,000 non-crude tank car deliveries per quarter and 110 crude tank cars leaving the fleet.

Table 13: Tank Car Book/Bill Ratio



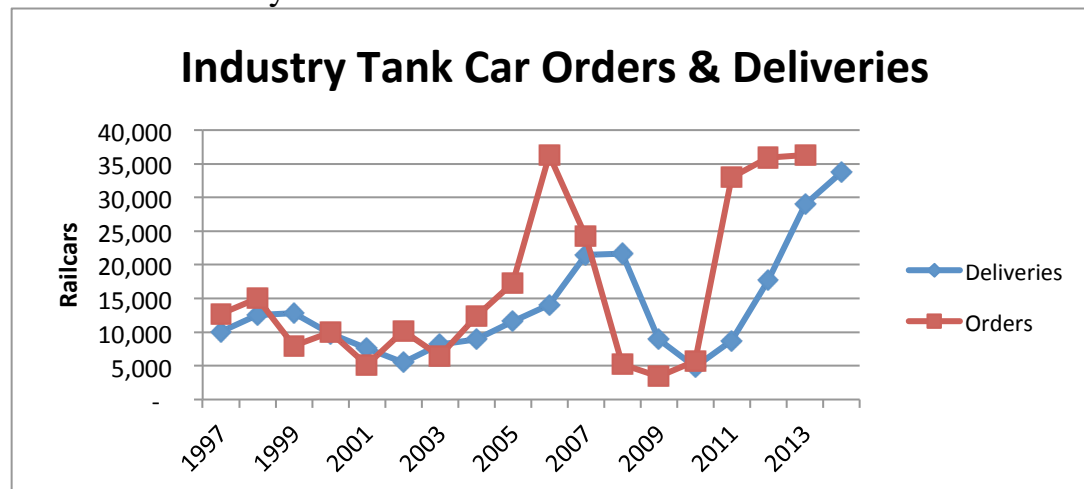
Source: Railway Supply Institute

Table 14: NA Crude Tank Car Supply

	Q313	Q413	Q114	Q214e	Q314e	Q414e
Crude tank cars-beg	33,524	39,003	45,333	51,674	58,164	64,554
Total tank car deliveries	7,589	8,440	8,451	8,600	8,500	8,400
est. non-crude tank deliveries	(2,000)	(2,000)	(2,000)	(2,000)	(2,000)	(2,000)
Crude tank replacement	(110)	(110)	(110)	(110)	(110)	(110)
Crude tank cars - ending	39,003	45,333	51,674	58,164	64,554	70,844

Source: Railway Supply Institute; OWS estimates

Table 15: Industry orders vs. deliveries – Tank railcars



In Table 15, we display a long-term chart of industry tank car orders and deliveries. It can be seen from this chart that whenever industry orders move ahead of deliveries for any sustained period of time, subsequent orders eventually decline until the market moves back into balance. Investors should also consider that the CBR tank car market was essentially created from scratch in 2011, despite the fact that there is an economically superior alternative (pipeline).

5. There is a perceived offset to the impending tank car decline in the form of replacement orders for older tank cars. There has been a rash of major accidents/derailments involving trains carrying oil from the Bakken, which has led to calls for stricter safety standards on tank cars. The US DOT recently singled out Bakken crude as being particularly dangerous (it contains high levels of combustible gases) and subject to extra precautions. Canada recently mandated the phase out of older tank cars over the next three years. The oil industry naturally disagrees and has pointed to the railroads as needing better track maintenance. However, regulators are seeking to increase safety standards for tank cars that carry crude oil and ethanol, which are flammable and highly volatile materials. The primary focus has been on DOT-111 tank cars built before October 2011 – these were not built to the latest industry standard (CPC-1232).

Although a marked increase in crude related rail incidents could ultimately prove to be negative for the business, investors have become hopeful that the replacement of the older DOT-111 cars will drive earnings at TRN for a few more years. According to the bulls, this could elongate the cycle and enable TRN to maintain peak-type earnings post 2014 – for perhaps another 1-2 years. Although there undoubtedly will be some replacement demand, we think there are several

flaws to the bullish case. First, we think a meaningful % of potential replacement demand might be included in the current backlog of 50,600 units. We note that the industry delivered an average of 12,500 tank cars annually over the past 16 years and is expected to deliver ~34,000 in 2014 – following a record 29,000 in 2013.

Another flaw in the bull case is that a large % of the DOT-111 cars are more likely to be retrofitted vs. being scrapped or repurposed. A tank car has a useful life of ~40 years. Thus, railcar owners (mostly lessors) will compare the current value of each railcar with the cost of retrofitting to meet the newer standards. If the depreciated book value of a railcar were meaningfully higher than the cost of a retrofit, a retrofit is the likely result. Moreover, for the cars that are scheduled to be replaced, the precedent is for a 5-10 year grace period for phase-out. We assume a 4-year phase out (2015-2019). To quote the CEO of Greenbrier in its recent earnings call, “we think there’s going to be a lot of demand for tank car repair.”

According to several major railcar lessors as well as the AAR, the average cost to retrofit a DOT-111 to meet the more stringent standards would be about \$37,000. Given the long useful life of a tank car, only the oldest cars (>10 years) would likely be scrapped. It is important to note that during the recent ethanol boom, there were ~30,000 tank cars added to the ethanol fleet in 2005-2008. This corresponds with industry data showing that of the 80,000 large general purpose tank car fleet (used primarily to carry crude/ethanol), 57,000 are less than 11 years old. Based on industry data, these cars were likely purchased at ~\$85k-\$90k, before the crude by rail boom drove up the price of a new tank car to \$130k+. Using 40-year depreciation, the current book value of the younger fleet would be ~\$70,000/unit, well in excess of the cost of a retrofit. Moreover, new tank cars have recently sold for in excess of \$135,000. Thus, even if we use aggressive retrofit assumptions, few if any of these newer cars are likely to be scrapped.

Therefore, we estimate that out of the 80,000 existing DOT-111 cars, there are ~23,000 (80k-57k) that should be considered for phase-out. As we detail in Table 16, if we assume that all 23k cars plus another 5% of the newer population are replaced with new orders (the most positive outcome for TRN), the EPS benefit to TRN would be ~\$2.24, spread over a 4 year timeframe. It’s important to understand that this does not represent a recurring stream of income but essentially a one-time benefit that would extend the current cycle a bit longer but also add new (40+ year life) railcars to the market. It is also likely that a portion of these cars are already candidates for replacement in the next several years regardless of regulatory changes. Thus, TRN would be pulling forward some normal future replacement demand. And finally, consider that a meaningful % of DOT-111s

could easily be re-purposed to transport a multitude of non-flammable petrochemical products – putting pressure on future orders for non-crude tank cars. Industry insiders are also concerned that such a complicated transition could result in severe disruption to business.

While investors appear to be excited by the prospect of additional earnings, they should consider that TRN’s leasing business would need to upgrade a portion of its fleet. According to the company, TRN has ~7,500 legacy tank cars that carry crude/ethanol. In Table 16 (right-hand column), we detail our assumptions for the potential cost to TRN. We assume that TRN retrofits all of these cars internally at a cost of \$37k/car and is able to charge an additional \$17/month from lease customers for every \$1,000 of retrofit work – this is the high end of what industry sources have estimated. We further estimate the average remaining lease duration of retrofitted railcars to be 40 months. This suggests TRN would recoup 68% of the total upgrade cost. The result is a cost to TRN of \$89M or ~\$0.74 to EPS.

Thus, the overall net impact would be a \$1.52 benefit to EPS, spread over a 4-year period. While this could cushion the eventual down cycle for a few quarters, it hardly seems a reasonable basis for a meaningful increase in TRN’s valuation. TRN’s market value has increased by \$2.5B YTD (+57%) within a flat overall market. It’s interesting to note that in the 2013 10K, TRN stated that it isn’t certain whether new regulations would be net positive or negative for the company.

Table 16: Assumed Net EPS Impact of Increased Regulations

Impact on TRN - new orders		Impact on TRN - retrofit expense	
DOT-111 tank cars carrying crude/ethanol	92,000	TRN's DOT-111 cars in flammable service	11,500
Large purpose crude/ethanol tank cars	80,000	# requiring retrofit	7,500
of which are 0-10 years old	57,000	Cost per retrofit	\$37,000
Railcars most likely to be replaced	25,850	Implied expense (\$mil)	277.5
TRN market share - tank cars	40.0%	\$17/mo/car/\$1K spent - amt. recouped/car	25,160
Potential TRN new tank car orders	10,340	Assumed remaining lease term - months	40
ASP	\$132,000	% recouped	68.0%
Incremental revenue	\$1,365	\$ recouped from customers (\$mil)	188.7
EBIT margin	20.0%	Net impact to TRN	(88.8)
EBIT	\$273	after tax	(57.7)
EPS impact	\$2.26	EPS impact	(\$0.74)
Net impact to TRN	\$1.52		
Assumed implementation period	4		
Average accretion to EPS - 2015-2018	\$0.38		

There have also been suggestions of potential rail demand due to the delay in the Keystone XL Pipeline. While we believe this is mostly political posturing by

TransCanada (TC), it is likely that a temporary rail option has been considered for some time, since the Keystone was not expected to be operational before mid-2016. If TC is ultimately forced to use rail to ship crude, we would expect a temporary increase in tank car demand, but not nearly enough to absorb the massive current backlog. Moreover, it's costly to ship heavy oil from the tar sands (requires coiled heated railcar with moving element) to the Gulf. According to recent traders' reports, the economics remain unfavorable with insufficient differential between Western Canadian Select and Maya crude. Moreover, there are several large (approved) Canadian pipelines scheduled to come on in 2016-2019 capable of transporting Canadian heavy oil from the West to East coast of Canada.

6. In an effort to diversify away from some of the deep cyclical risk of the railcar manufacturing business, TRN has built a substantial railcar leasing operation over the past decade. At Q114, the leased fleet was comprised of 73,000 railcars. In 2013, we estimate that TRN earned an after-tax profit of \$65M from its leasing operation – excluding gains it booked on the sale of railcars. This equates to \$0.85 in EPS, which is a record for TRN. According to our calculations, from 2007-2012, TRN averaged ~\$0.48 in annual EPS from its core (ex-gains) leasing business. Interestingly, TRN's core lease income peaked in the 2006-2007 period at the top of the last cycle and was at virtually the same level in 2012. This coincides with our thinking that the leasing business, while considerably steadier vs. railcar manufacturing, is still characterized by cyclical tendencies and should experience declining profits during the coming downturn. In other words, TRN's core leasing profits will not be able to offset the marked decline in profits that we foresee in the rail manufacturing segment, especially since it continues to sell its fleet.

There are warning signs in the railcar leasing business. According to one CEO, there has been aggressive investment by certain banks, which are using low cost funds to win business. This is driving up asset prices, making it more difficult for lessors to grow their fleets. Moreover, tank car leasing rates have soared to \$1,500-2,000 from \$500 in early 2011. Cars that haul fracking sand are getting \$650/month, up 60% y/y. We note that soaring demand for ethanol led to a glut of tank cars in 2006/2007, after which lease rates declined to \$300/month.

According to GATX, aggressive investment by new entrants is a key sign that the tank car leasing market may be peaking. The company has been selling tank cars and booking gains into profits. To quote the CEO, "In today's strong market, we can also use the aggressive behavior of new entrants to sell them cars from our fleet – often realizing a higher price from the sale than from continuing to

hold the cars. The key to managing the overheated tank car market successfully is to understand the value of railcars over the long term, which is something GATX does very well.” In addition, it has been signing longer leases and locking in record lease rates. Furthermore, management has been aggressive sellers of GATX shares. GATX has a long history as an experienced operator and we think management realizes that the tank railcar market is at a peak. Lastly, we wonder to what extent the leasing business has been supported by artificially low interest rates and how the economics of railcar leasing might change in a rising rate environment.

7. There are a number of risks to a short position in TRN. The key risk, in our view, is the potential that new regulations would require the phase out of a broader population of older tank cars instead of just those carrying crude and ethanol. In addition, tank car owners could elect to scrap (vs. retrofit) a larger % of the older fleet than we have forecast. Both of these scenarios could result in a longer cycle for TRN, which would likely garner a meaningful share of any new orders.

Another risk is that TRN could use proceeds from the sale of railcars (from its leasing fleet) to make accretive acquisitions outside of the railcar business. Depending on the acquisitions, this could make TRN a less cyclical company. Lastly, TRN could use similar sale proceeds to repurchase shares. While we would view repurchases anywhere near today’s valuation as foolish and value-destroying, such activity could nonetheless support TRN shares.

8. In the most recent quarter, Q114, TRN reported revenue of \$1.16B, up 25% y/y. This was driven mostly by a 37% increase in revenue from its Railcar Group, which had a 32% increase in units delivered with a 5.6% increase in average price/unit. Railcar revenue was \$857M (\$608M after eliminations). The Leasing business generated an 11.7% increase in operating revenue to \$150M in Q114, driven by a 1% increase in the fleet and higher leasing rates. In the non-railcar businesses, total revenue increased 13% to \$484M, or \$409M net of intercompany eliminations. Acquisition related increases in construction and energy products were partially offset by a decline in revenue from the Inland Barge segment.

Reported EBIT (before gain on sale profits) increased 57% to \$168M. This was driven almost entirely by the Railcar Group, which delivered a 65% increase in EBIT (net of intercompany eliminations), to \$118M with a 19.5% EBIT margin (vs. 16.5% in Q113). In the Railcar leasing segment, pretax income increased to \$26.7M. In the three non-railcar businesses (before corporate expenses), EBIT increased to \$54.7M vs. \$44.3M in Q113 (this excludes an \$11.2M one-time gain on a land sale that management oddly included in its prior guidance).

In Q114, TRN reported a \$166M gain on the sale (GOS) of leased railcars to Element Financial. This contributed \$1.42 to reported EPS. To put this in perspective: between 2001 and 2013, TRN's gains on lease sales contributed an average of \$0.18 per year to EPS. We do note that the previous peak occurred in 2007, at the top of the prior cycle, when GOS added \$0.42 to EPS. TRN expects GOS to Element to contribute ~\$1.70 to 2014 EPS.

In Q114, TRN reported EPS of \$2.85. This included \$0.09 from a land sale, \$0.13 from a lower tax rate, and the aforementioned \$1.42 from leasing GOS. Thus, on an operating basis, recurring EPS was \$1.23 vs. \$0.87 in Q113. This was a solid quarter and what we would generally expect at or near the top of the railcar cycle. We think this suggests peak EPS in the range of \$5.50 - \$6.00. At 3/31/14, TRN had total debt of \$3B and cash and marketable securities of \$789M. This does not include off-BS debt related to partially owned subsidiaries.

9. Financial assumptions

For 2014, we estimate the Railcar manufacturing segment will deliver 28,675 total railcars, an increase of 17.8% y/y. We estimate rev/car at \$121,534, +3.1% y/y. This translates into segment revenue of \$3.48B. Railcar EBIT should increase to a record \$649M (18.6% margin) vs. \$490M in 2013. For Railcar Leasing, we estimate revenue to increase 3.6% to \$608M on a slight decline in the average utilized fleet to 73,630 units. Core pretax income for the leasing business should increase 1.3% to \$116M. For the non-railcar businesses, we estimate 2014 revenue to increase 17% to \$2.17B, driven by previous acquisitions and mid-single digit organic growth. Non-railcar EBIT should increase to \$255M (11.8% margin) vs. \$196M (10.6%) in 2013. Net interest expense is estimated at \$180M (-1% y/y). Applying a 34.5% tax rate and subtracting for intercompany railcar eliminations, minority interest and unvested share participations, we arrive at recurring EPS of \$5.85 vs. \$4.38 y/y. In addition, we expect TRN to book a \$200M gain on the sale of leasing assets, primarily to Element. This should add \$1.66 to 2014 EPS.

For 2015, we estimate the Railcar segment will deliver 24,500 total railcars, a decline of 14.5% y/y. We forecast a marked decline in deliveries for crude tank railcars given the current oversupply in the industry. Non-tank cars should increase by 2% following a strong 2014. We estimate rev/car at \$116,000 (-4.6% y/y) as TRN's delivery mix shifts away from the highly profitable tank cars. This translates into an 18% decline in segment revenue to \$2.7B. Railcar EBIT (before intercompany eliminations) should decline to \$480M from \$649M due to the decline in revenue combined with reduced margins (16.9% vs. 18.6%). For Railcar

Leasing, we estimate revenue to decline 2.0% to \$597M on a flat average utilized fleet (73,532 units). Pretax income for the leasing business should decline 3% to \$112M. For the non-railcar businesses, we estimate 2015 revenue to increase 5.7% to \$2.3B, driven by bolt-on acquisitions and low-single-digit organic growth. Non-railcar EBIT should increase 5% to \$267M (11.6% margin) vs. \$255M in 2014.

This translates into total 2015 net revenue of \$4.85B, a decline of 5% y/y. Net interest expense should decline to \$176M from \$180M. Using a 35% tax rate and subtracting minority interest and other deductions, we arrive at 2015 recurring EPS of \$4.97 vs. \$5.85 in 2014. In addition, we expect TRN to book a gain of \$75M on the sale of leasing assets, which should add \$0.63 to reported EPS.

For 2016, we expect further declines in railcar deliveries and manufacturing margins. We also forecast a 4% decline in pretax income from the railcar leasing business offset by a 10% increase in non-railcar EBIT. The net result is 2016 recurring EPS of \$4.45 vs. \$4.97 in 2015.

10. We recommend that investors sell TRN as an attractive risk-reward proposition. The valuation is expensive from a price/peak EPS basis. We think the company is benefitting disproportionately from a bubble in the manufacture of tank railcars for transporting crude oil from the Bakken, a situation that is unsustainable. This trend should reverse within the next 4 quarters as orders fail to keep up with the current run rate. Given the extremely rich prices/margins and operating leverage that TRN is achieving for tank cars, we expect earnings to decline at a much higher rate relative to our forecasted revenue decline.

As we discussed in the report, we do not think that incremental orders for replacement tank cars will be sufficient to offset the decline in overall tank car orders. Although we do expect some benefit from regulatory-driven new orders, we think a meaningful part of the benefit will be offset by the resulting negative impact on TRN's leasing business, which will face increased retrofit costs. Moreover, we think any regulatory benefit and any anticipated incremental demand from Canada are largely reflected in the current backlog and share price.

We think TRN's leasing business will also be negatively impacted by a decline in tank car shipments, although to a much lesser extent. TRN has been selling off pieces of its leasing fleet, which suggests management thinks the business is near a top. Furthermore, despite management's efforts to offset the impending cliff by making bolt-on acquisitions outside of the railcar space, we think TRN's overall EPS will decline markedly as the cycle inevitably turns.

TRN is a cyclical company that has historically experienced a series of booms and busts in its railcar manufacturing business. As a result, we think the most appropriate way to value TRN shares is to use an estimate of mid-cycle EPS and to apply a multiple suitable to a cyclical industrial manufacturer. In deriving our mid-cycle forecasts, we studied TRN's business by segment from 2001 to 2014. We derived averages for the entire period (including 2014, which should be a record year in the railcar segments) and compared those to the current levels in each business. We did this for railcar orders, deliveries, revenues, margins, per-car prices, leasing rates and FCF. We also observed the cyclical peaks and troughs of the railcar business. Lastly, we looked at current trends and any exceptional circumstances in the businesses and factored those into our forecasts. Interestingly, from 2003 through 2014e, average FCF (ex-leasing) was \$200M or \$2.50.

It's important to note that we do not have to make heroic assumptions to reach the conclusion that TRN shares are overvalued. In fact, in deriving our mid-cycle forecast, we erred on the side of conservatism. More specifically, we have given TRN the benefit of the doubt regarding the growth and margins of its non-rail businesses. We also assume that TRN's leasing rates decline only slightly over the next 2 years. Finally, we assume TRN maintains a higher than average railcar unit delivery volume with above cycle-average margins. As we detail in Table 17, our estimated mid-cycle EPS is \$3.60. If we apply a multiple of 12.75x – a normal mid-cycle multiple of an industrial manufacturing enterprise – to our EPS forecast, we arrive at a valuation of \$45.90 for TRN. We also give TRN credit for another year of strong earnings and some potential near-term acquisition activity. Thus, we have established an initial price target of \$51.75. This would value TRN at ~1.5x TBV. We note that TRN shares traded at our target price as recently as 5 months ago. Lastly, short sellers get a free call option on disappointing Bakken production, declining oil prices and rising interest rates.

Table 17: Mid-cycle Assumptions

RAIL CAR MANUFACTURING:		RAIL CAR LEASING:	
Industry railcar shipments	49,500	Total rail fleet	75,000
TRN shipments	19,228	Utilization	98.8%
TRN market share	38.8%	Utilized fleet	74,133
Revenue (\$mil)	\$2,096	Leasing revenue	583.8
Rev/car	\$109,000	Rev/utilized car	\$7,875
EBIT	224.3	Leasing EBIT (ex - GOS)	251.0
EBIT/car	\$11,663	EBIT per car	\$3,386
EBIT margin	10.7%	EBIT margin	43.0%
Eliminations from EBIT	(35.9)	Interest expense	150.3
Net railcar EBIT	188.4	Pretax income	100.7
Net interest expense	18.0	Leasing Group EPS	\$0.84
Pretax income	170.4		
EPS - railcar	\$1.42		
NON-RAILCAR OPERATIONS:			
Revenue	2,250.3		
EBIT	256.5		
% margin	11.4%		
Corporate EBIT	(73.0)		
Other EBIT eliminations	0.0		
Non-railcar net EBIT	183.5		
Interest expense	6.0		
Pretax income	177.5		
Non-rail EPS	\$1.48		
Min. Interest/other	(\$0.14)		
COMBINED MIDCYCLE EPS	\$3.60		

11. Financial Projections

a. Annual projections	2011	2012	2013	2014e	2015e	2016e
Railcar Manufacturing	1,274.7	2,013.0	2,867.5	3,485.0	2,842.0	2,376.2
Railcar Leasing	492.7	528.5	586.9	608.0	597.4	587.7
Other	1,673.2	1,829.1	1,853.7	2,170.0	2,293.4	2,434.3
Eliminations	(424.8)	(647.1)	(1,001.3)	(1,129.0)	(880.0)	(625.0)
Total Revenue	3,015.8	3,723.5	4,306.8	5,134.0	4,852.8	4,773.1
EBIT	378.4	517.8	743.3	941.4	819.0	737.5
Interest expense, net	187.8	189.1	182.4	179.2	176.2	171.2
Pretax income	190.6	328.7	560.9	762.2	642.8	566.4
Income tax	66.7	115.0	196.3	266.8	225.0	198.2
Minority interest	3.5	(1.5)	16.9	25.0	16.0	12.0
Unvested share participation	4.7	8.2	12.0	16.0	12.0	6.0
Net income - before gain on sale	115.7	207.0	335.7	454.4	389.8	350.1
Core EPS	\$1.49	\$2.67	\$4.38	\$5.85	\$4.97	\$4.45
Average shares - FD	77.7	77.4	76.6	78.3	78.5	78.7
Gains on lease sales	29.4	58.3	29.5	199.4	75.0	25.0
EPS from GOS	\$0.25	\$0.49	\$0.25	\$1.66	\$0.63	\$0.21
Reported EPS	\$1.74	\$3.17	\$4.63	\$7.51	\$5.59	\$4.66
Railcar units delivered	14,065	19,360	24,335	28,675	24,500	21,216
Rev/unit delivered	\$90,629	\$103,977	\$117,834	\$121,534	\$116,000	\$112,000
Y/Y % change						
Railcar Manufacturing	144.1%	57.9%	42.4%	21.5%	-18.5%	-16.4%
Railcar Leasing	6.8%	7.3%	11.1%	3.6%	-1.7%	-1.6%
Other	13.9%	9.3%	1.3%	17.1%	5.7%	6.1%
Total Revenue	40.1%	23.5%	15.7%	19.2%	-5.5%	-1.6%
EBIT	29.9%	36.8%	43.5%	26.6%	-13.0%	-9.9%
Interest expense, net	3.0%	0.7%	-3.5%	-1.8%	-1.7%	-2.8%
Pretax income	75.2%	72.5%	70.6%	35.9%	-15.7%	-11.9%
Income tax	75.2%	72.5%	70.6%	35.9%	-15.7%	-11.9%
Net income - before gain on sale	89.9%	78.9%	62.2%	35.4%	-14.2%	-10.2%
Core EPS	88.2%	79.6%	63.9%	33.5%	-15.1%	-10.4%
Average shares - FD	0.9%	-0.4%	-1.0%	2.2%	0.3%	0.3%
Railcar units delivered	195.5%	37.6%	25.7%	17.8%	-14.6%	-13.4%
Rev/unit delivered	-17.4%	14.7%	13.3%	3.1%	-4.6%	-3.4%

% of Rev	2011	2012	2013	2014e	2015e	2016e
EBIT	12.5%	13.9%	17.3%	18.3%	16.9%	15.5%
Interest expense, net	6.2%	5.1%	4.2%	3.5%	3.6%	3.6%
Pretax income	6.3%	8.8%	13.0%	14.8%	13.2%	11.9%
Income tax	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
MI/Other	0.3%	0.2%	0.7%	0.8%	0.6%	0.4%
Net income - before gain on sale	3.8%	5.6%	7.8%	8.9%	8.0%	7.3%

(amounts in \$000, except ratios)

Current debt	2,940,200
Current Equity	2,969,900
Current tangible BV	2,609,600
Current market value	6,813,750
Current cash	788,600
Current DSO	33
Current DIO	71

FYE December	2013	2014e	2015e
EBIT	743,300	941,375	812,472
EBITDA	954,800	1,168,875	1,047,472
Free cash flow	72,000	240,000	190,000
Surplus cash flow (NI+D&A - capex)	(183,815)	70,725	110,107
Capex	731,000	615,000	510,000
EV/EBITDA	9.2	7.6	8.8
EV/(EBITDA-capex)	39.5	16.3	17.2