

BEFORE THE
SURFACE TRANSPORTATION BOARD

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RAILROAD COST OF CAPITAL - 2019) EP 558 (Sub-No. 23)

**REPLY STATEMENT
OF THE WESTERN COAL TRAFFIC LEAGUE**

WESTERN COAL TRAFFIC LEAGUE

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Dated: May 11, 2020

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Pursuant to the notice that the Surface Transportation Board (“STB” or “Board”) served in EP 558 (Sub-No. 23) on February 27, 2020, the Western Coal Traffic League (“WCTL”)¹ replies to the opening statement that the Association of American Railroads (“AAR” or “Railroads”) filed on April 20, 2020.

WCTL’s review of the AAR’s filing and the associated workpapers does not reveal any mathematical or associated data errors. Moreover, the AAR’s cost of capital (“COC”) figure of 9.34% for 2019 represents a substantial (23.6%) decrease from the 12.22% figure that the Board determined in EP 558 (Sub-No. 22) for the 2018 COC.

However, the above is not sufficient to establish the accuracy or reliability of the AAR’s calculated values. To the contrary, the AAR’s calculations continue to suffer from the same infirmities as the previous AAR submissions and Board decisions applying the Board’s existing COC methodology.

¹ WCTL is a voluntary association, whose regular membership consists entirely of shippers of coal mined west of the Mississippi River that is transported by rail. WCTL members currently ship and receive in excess of 90 million tons of coal by rail each year. WCTL’s members are: Ameren Missouri, Arizona Electric Power Cooperative, Inc., Austin Energy (City of Austin, Texas), CLECO Corporation, CPS Energy, Entergy Services, Inc., Evergy, Lower Colorado River Authority, MidAmerican Energy Company, Minnesota Power, Nebraska Public Power District, and Western Fuels Association, Inc.

1. THE INSTABILITY AND MSDCF GROWTH RATE PROBLEMS THAT THE BOARD NOTED IN EP 664 (SUB-NO. 4) REMAIN

First, the size of the COC decrease, and its source primarily in the reduction in the analyst growth rates utilized in the Multi-Stage Discounted Cash Flow model (“MSDCF”) to calculate the cost of equity (“COE”), confirm the continued existence of the same problems that the Board noted and sought to address in its pending notice of proposed rulemaking in EP 664 (Sub-No. 4), *Revisions to the Board’s Methodology for Determining the Railroad Industry’s Cost of Capital* (STB served Sept. 30, 2019). The substantial decrease in 2019, like the substantial increase in 2018, unaccompanied by similar movement in other industry cost of capital benchmarks or fundamental change in the risk profile of the industry or the economy as a whole, indicates that the Board’s methodology is not reliable and instead remains prone to instability and distortions.

2. THE COST OF CAPITAL REMAINS OVERSTATED

Second, notwithstanding the substantial reduction from 2018, the 2019 COC values remain substantially overstated relative to reliable benchmarks. In particular, Morgan Stanley continued to publish cost of capital values in the 7% range during December 2019 and early January 2020 (before year-end 2019 financial data became available). Attached as Exhibit A are excerpts from Morgan Stanley’s reports on the transportation industry dated December 16, 2019, and January 6, 2020. Both reports specify the same railroad costs of capital, *i.e.*, 7.4% for CSX, 7.1% for KSU, 7.5% for NSC, and 7.0% for UNP. (Morgan Stanley’s values in recent years have been very similar and thus stable.) Using the same weights that the AAR developed for its MSDCF

analysis (Verified Statement of AAR Witness John Gray (“Gray VS”) at Table No. 16 on page 48), the weighted average cost of capital for the composite sample is 7.2%:

Table 1		
Weighted Average of Morgan Stanley Cost of Capital Values for 2019		
Carrier	Weight	Cost of Capital
CSX	22.876%	7.40%
KSU	6.174%	7.10%
NSC	20.548%	7.50%
UNP	50.401%	7.00%
Average		7.20%

The calculation is presented in WCTL’s e-workpaper at “Table 1.”

In addition, WCTL has previously introduced information from Institutional Shareholder Services Inc. (“ISS”), <https://www.issgovernance.com/>, the Wall Street proxy and investment research firm, showing railroad costs of capital around 6%. The ISS figures, like Morgan Stanley’s, have been stable over the last five years, further confirming that the AAR’s values are systemically overstated as well as unstable.

3. MORGAN STANLEY’S ~ 7% COC CAN BE CLOSELY APPROXIMATED USING THE DOMINANT CAPM AND STANDARD INPUTS

Third, the 7.2% COC figure can be readily and closely approximated by using the AAR’s COC inputs, with two simple, mainstream adjustments. The first is to replace the “hybrid” methodology for calculating the COE with the Capital Asset Pricing Model (“CAPM”), which is the standard and overwhelmingly dominant methodology for calculating the COE. The second is to apply the CAPM using a current market-risk premium (“MRP”) that reflects the premium perceived by today’s investors, rather than the historical MRP dating back to 1926, which predates the Great Depression.

One respected source for the current MRP is Duff & Phelps, the AAR’s chosen source for the historical MRP.² For this purpose, WCTL uses the 5.0% MRP that Duff & Phelps recommended as of December 19, 2019 through at least the end of 2019. Using these values produces a COC of 7.06%:

Table 2				
Derivation of Cost of Capital for Industry Composite Sample Using Only CAPM with Duff & Phelps Current Market Risk Premium				
CAPM Cost of Equity		Industry Cost of Capital		
Risk-Free Rate	2.40%	Component	Weight	Cost
Market-Risk Premium	5.00%	Debt	18.54%	3.48%
Beta (Composite Sample)	1.0941	Equity	81.46%	7.87%
Cost of Equity	7.87%	Average COC		7.06%

The calculation is shown on WCTL’s electronic workpaper, Tab “Table 2.”

4. THE CONVERGENCE OF THE MORGAN STANLEY AND MATT ROSE VALUES, THE EASE OF REPRODUCIBILITY WITH THE CAPM, AND THE STABILITY OF THE CAPM VALUES ALL CONFIRM THE 7%

Fourth, the CAPM-only COC of 7.06% is virtually identical to the 7.0% figure that outgoing BNSF Chairman Matt Rose endorsed on March 5, 2019, little more than a year ago.³ The convergence of the Morgan Stanley and Matt Rose COC figures, the ease of reproducing those figures using the dominant CAPM methodology and

² The Duff & Phelps MRP can be found at <https://www.duffandphelps.com/-/media/assets/pdfs/publications/valuation/coc/us-erp-corresponding-risk-free-rate-2008.pdf?la=en&hash=EC56A197BF962279D44CCC15193DAB9A96BE9C6C>. Similar MRP values are available from other sources, although some, such as Professor’s Damodaran’s implied MRP, may reflect shorter-term (and typically lower) risk-free rates.

³ Mr. Rose’s comments are reported and discussed at <https://www.commtrex.com/tony-hatch-articles/gwr-seeks-gold-in-high-valuations-rail-meetings-in-the-southwest-swars-ref/takeaways>, and <https://www.railwayage.com/financeleasing/matt-rose-at-ref-2019-its-about-growth-not-cutting/>.

standard inputs, and the stability of the Morgan Stanley and CAPM figures over time (*see* WCTL’s Opening Comments in EP 664 (Sub-No. 4)), as contrasted with the instability of the AAR/Board figures, particularly as analyst growth rates fluctuate, all demonstrate that the Morgan Stanley/CAPM/Matt Rose values are credible and reliable, and that the Board’s hybrid methodology is substantially flawed, yields overstated values, and should not be utilized as presently configured.

5. OPERATING LEASES SHOULD BE TREATED AS DEBT IN THE CAPITAL STRUCTURE

Fifth, the AAR did not treat operating leases as debt for purposes of the capital structure, even though it acknowledged that (a) “Generally Accepted Accounting Principles [GAAP] now call for operating leases longer than 12 months to be recorded on the balance sheet as liabilities,” and (b) “[t]he railroads that make up the composite railroad account for such leases as other liabilities on the balance sheet.” AAR Comments at 9. The AAR’s position appears to be: (a) operating leases are a balance sheet liability, but still not actual debt, and/or (b) operating leases cannot be treated as debt, no matter what GAAP says, until the Board revises its rules. Neither explanation justifies excluding operating leases from the debt-equity calculation for 2019.

FASB ASU 2016-02, a part of GAAP that took effect no later than reporting year 2019, requires companies to list operating leases of more than a year as liabilities on their balance sheets, whereas they were previously generally treated as off-balance sheet items. For example, the UNP balance sheet (Consolidated Statement of Financial Position), at page 48 of its 10-K for 2019, lists “Operating lease liabilities”

directly under “Debt due after one year,” without any corresponding balance sheet value for 2018.⁴ Moreover, UNP determined the amount of operating lease liability by applying a weighted-average discount rate, *i.e.*, an implied interest rate, of 3.7%. *Id.* at 76. UNP used the same procedure to value its capital leases (now called finance leases) on its 10-K. Both types of leases are included as non-current liabilities on the UNP balance sheet, and there is no sound basis on which to include capital leases in the capital structure, while excluding operating leases, particularly when UP’s operating leases have more than three times the dollar value of the capital leases. *Id.*⁵ The total value of operating leases for the composite sample approaches \$2.5 billion (*see* e-workpaper, Tab “Operating Lease Summary”), whereas Equipment Trust Certificates, included in debt, amount to less than \$1 billion (Gray VS at 14). If railroads did not enter into operating leases, they would need to enter into capital leases for the covered assets or purchase them with cash obtained from issuing additional debt, both of which would result in additional debt on the balance sheet.

The Board previously excluded operating leases from debt based on GAAP, and nothing else. *E.g.*, *Railroad Cost of Capital—2011*, EP 558 (Sub-No. 15) (STB served Sept. 13, 2012), at 17 (noting § 11161 “instructs the Board to conform its

⁴ UNP did include operating leases in its calculations of its Return on Invested Capital as Adjusted in earlier years, stating “[w]e believe this measure is important to management and investors in evaluating the efficiency and effectiveness of our long-term capital investments.” *E.g.*, UNP 2019 10-K at 32

⁵ The AAR grouped capital leases together with other non-modeled debt, including discounts and unamortized issuance costs, and derived a negative value overall. Gray VS at 17. The AAR’s approach of including capital leases and other miscellaneous debt, but not operating leases, thus has the effect of *increasing* the overall COC for 2019.

accounting principles to GAAP to the maximum extent practicable,” and stating “[w]e see no reason to depart from GAAP here, and will reevaluate our current methodology if there are relevant (not just contemplated) changes to GAAP”). The Board has never disagreed substantively with WCTL’s assertions that the financial and investment community views operating leases as debt.⁶ Now that GAAP has changed, and operating leases are recognized on the balance sheet, the Board’s treatment should change as well.

The AAR’s other counter is procedural, that the Board has not (yet) revised its approach to debt in this proceeding or an associated rulemaking. AAR Comments at 9. The Board should thus make such a revision, particularly as it has stated that it has been aware of the GAAP revision for some time. *Railroad Cost of Capital—2015*, EP 558 (Sub-No. 19) (STB served Aug 5, 2016), at 4-5. WCTL’s comments earlier this year in EP 664 (Sub-No. 4) also addressed the issue and referenced ASU 2016-02.

Significantly, the Board has demonstrated its ability to alter its approach to such matters expeditiously, as when it first waived the requirement that railroad holding companies included in the composite sample be listed only on the NYSE or AMEX, and then waited until the next annual cost of capital proceeding was pending to propose a formal amendment to its rules. *Railroad Cost of Capital—2015*, EP 558 (Sub-No. 19)

⁶ E.g., WCTL Reply Statement in *Railroad Cost of Capital--2011*, EP 558 (Sub-No. 15), filed May 10, 2012, citing, *inter alia*, Pepa Kraft, *Rating Agency Adjustments to GAAP Financial Statements and Their Effect on Ratings and Bond Yields* (originally posted 2008). Under the Modigliani-Miller theorem, the overall cost of capital of a firm is independent of the capital structure, as more (cheaper) debt translates into a higher COE for the reduced equity. Accordingly, the measured COE reflects the market’s treatment of operating leases as debt, and calculating the COC without recognizing the associated debt results in a mismatch that overstates the COC.

(STB served March 10, 2016); *Revisions to the Cost-of-Capital Composite Railroad Criteria*, EP 664 (Sub-No. 3) (STB served April 12, 2017). The Board is plainly able to act pragmatically and quickly to address such changes. It should do so here.

Furthermore, the Board's has previously departed from GAAP to reflect larger realities. *E.g.*, *Railroad Revenue Adequacy—2017 Determination*, EP 552 (Sub-No. 22) (STB served Dec. 6, 2018), at 8 (disregarding the impact of tax cuts on deferred tax liabilities). Here, the operating leases look like a debt liability on the balance sheet, swim like a debt liability in terms of representing a financial obligation to be paid to use an asset and are viewed as such by the financial and investment community, and quack like debt in that the balance sheet value is calculated by applying an implied interest rate. Therefore, it should be treated as debt for capital structure purposes.

6. THE AAR'S CHARACTERIZATIONS OF THE HISTORICAL MARKET RISK PREMIUM AND RAILROAD BETA LACK SUPPORT

WCTL also wishes to respond to two specific assertions by Mr. Gray. First, Mr. Gray refers to "the well-regarded and widely-accepted Ibbotson Equity Risk Premium" and its Morningstar and Duff & Phelps successors. Gray VS at 29-31. WCTL accepts that the data is well-regarded and accepted as a source of the historical risk premium. However, it is a very different thing to imply or represent that railroad investors, or railroads themselves, rely heavily on the 1926-based historical risk premium, when the available information indicates that they do not, as WCTL has demonstrated at length in its prior submissions. Even Duff & Phelps recommends something other than its own historical MRP to determine the current COE.

Second, Mr. Gray asserts that even though the 2019 beta “is the lowest since 2009 ... this is the eleventh consecutive year that the railroad beta has been above 1.0, further demonstrating that railroad stocks are consistently more volatile and are regarded as having more risk than does the market generally.” Gray VS at 35. His claim that the beta is above 1.0 rests on an oversimplification.⁷ Even if his observation were accurate, it would not prove his broader conclusions.

Eleven years ago refers to 2009, when financial and economic conditions were very unusual and in flux. Performance starting 2009 may thus not be fully representative, particularly as the Board’s railroad beta was 0.8604 just three years earlier. Also, the Board uses a rolling five-year period to measure beta. Since only one of the five years changes annually, sudden changes from year-to-year are unlikely, and a consecutive streak is not as remarkable as it might first appear. Recent railroad betas hit their peak in 2013 at 1.3499, and have now decreased six years in a row, suggesting that further declines are at least possible. In particular, the levered beta for UNP, responsible for about half of the market cap of the composite sample, has been 0.98, 0.99, and 0.95, measured based on the most recent three years, two years, and one year, respectively. See <https://www.infrontanalytics.com/fe-EN/30444NU/Union-Pacific-Corporation/Beta>. Yahoo!Finance also reports that Canadian National (with a market cap larger than the members of the composite sample other than UP) has a five-year beta, measured on a

⁷ The AAR derives a standard error of 0.076 for its beta, Gray VS, Appendix I, which means that there is a 95% probability that the actual railroad beta is between 0.94 and 1.24 (two times the standard error plus/minus the estimated beta of 1.094). *E.g.*, Brealey, Myers and Allen, *Principles of Corporate Finance* (10th ed. 2011), at 217-18.

monthly basis, of 0.65. *See* <https://www.infrontanalytics.com/fe-EN/30444NU/Union-Pacific-Corporation/Beta>. Being a railroad thus does not guarantee a beta in excess of 1.0.

CONCLUSION

The lack of mathematical error does not establish the accuracy of the AAR's calculations. Instead, there is abundant evidence that the Board's existing methodology does not produce accurate or mainstream results and instead yields a COC that remains substantially overstated, and has done so since its adoption. To the extent that the objective is accuracy, the Board should instead adopt a railroad cost of capital of for 2019 of 7%.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of May 2020, I have caused true and accurate copies of the foregoing Reply Statement of the Western Coal Traffic League to be served upon all parties on the service list in EP 558 (Sub-No. 23) by first class mail, postage prepaid, or by more expeditious means.

/s/ Robert D. Rosenberg

EXHIBIT A

Excerpts from Morgan Stanley Reports
on the Transportation Industry
Dated December 16, 2019, and January 6, 2020

December 16, 2019 05:02 AM GMT

Freight Transportation | North America

Fast Lane: Old Navy Partners with Postmates, NY Introduces Cargo Bikes as the Last-Mile Race Intensifies

Last week, Old Navy announced a partnership with Postmates for last mile holiday deliveries while NY introduced a cargo bike program which ups the omnichannel game. Parcels appear in the spotlight this week following our insight into AMZN's logistics network.

Old Navy announced a partnership with last mile startup Postmates to offer same-day delivery this holiday season. The two partners will offer same-day delivery to customers in 4,000 cities across the United States from Dec. 21-23, for a flat fee of \$8.99 (see [here](#)). This behavior is in line with the growing competition from retailers to match same day delivery guarantee of companies like Amazon, Walmart and Target (see their peak season prep [here](#)). Old Navy has been offering same-day "buy online, pick up in stores" since last year. Now, when customers select that option at checkout, they can tap a Postmates driver to deliver the merchandise to an address within 24 hours. "Partnering with Postmates to provide same-day, on-demand delivery creates an even deeper convenience proposition during the bustling holiday shopping season" said Jamie Gersch, Old Navy Global CMO. Even as pressure mounts on all retailers to match AMZN's promise of speed and variety, we believe using last-mile delivery startup partners to do ship-from-store is a viable alternative for brick-and-mortar retailers. This announcement is another example of this synergy which includes [Target buying Shipt](#), [WMT teaming up with Nuro](#), [Best Buy teaming up with Deliv](#) and more. We continue to believe the race for faster delivery will disintermediate legacy Parcels as the omnichannel race shifts supply chain networks away from nationwide delivery capabilities and towards last mile logistics with more new entrants coming in. Speaking of new entrants – please see our Insight report from last week deconstructing AMZN's logistics network [here](#).

New York introduced a new city program allowing cargo bikes to park in commercial loading zones without paying a meter fee. It will be the first time the city has specifically promoted cargo bikes as an alternative environmentally friendly transportation mode to delivery trucks. **As many as 100 pedal-assisted cargo bikes operated by Amazon, UPS and DHL will be allowed to park in hundreds of existing commercial loading areas that are typically reserved for trucks and vans.** Of the 100 bikes that are part of the program, 90 are deployed

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Freight Transportation

North America
IndustryView

Cautious

Please see links below to other research we published last week:

[Freight Transportation: 'Freight-ening Headwinds': Part 2 \(13 Dec 2019\)](#)

[Freight Transportation and Internet: Amazon Logistics: What Happens after the First 2 Billion Packages? \(12 Dec 2019\)](#)

[Big Debates 2020: Key Investor Debates Likely to Drive Stocks in the Coming Year \(11 Dec 2019\)](#)

[Freight Transportation: Truck Stop/TLFI: Let It Go! \(Up\) \(11 Dec 2019\)](#)

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For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report.

Exhibit 14: Morgan Stanley Transportation Coverage Universe: MS Valuation Case Summary

Morgan Stanley Transportation Coverage Universe: MS Valuation Case Summary							Valuation Methodology
12/12/2019 Ticker	MS Rating	Current Price	Price Target	TMF Upside %	Rank	PT Multiples MSe TMF P/E	
Rails - Analyst: Ravi Shanker							
CNR	OW	\$119.32	\$119	0%	10	20.8	We use a 10-year DCF assuming 6.7% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 10.0x). Our DCF valuation implies a fwd P/E of 19.2x, which is above CNR's 5-year average, reflecting our view that CNR is t
CP	OW	\$329.24	\$299	-9%	11	19.4	We use a 10-year DCF assuming 6.9% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 10.0x). Our DCF valuation implies a fwd P/E of 17.9x, which is relatively inline with CP's 5-year average.
CSX	UW	\$72.28	\$55	-24%	19	13.7	We use a 10-year DCF assuming 7.4% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 9.0x). Our DCF valuation implies a fwd P/E of 13.4x, which is below CSX's historical average.
KSU	EW	\$151.86	\$130	-14%	12	20.0	We use a 10-year DCF assuming 7.1% WACC and terminal cash flow perpetual growth rate of 2.5% (implying an exit EBITDA multiple of 9.0x). Our DCF valuation implies a fwd P/E of 16.9x, which is below KSU's historical avg. given our cautious outlook on rail
NSC	UW	\$190.51	\$127	-33%	24	12.9	We use a 10-year DCF assuming 7.5% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 8.0x). Our DCF valuation implies a fwd P/E of 12.0x, which is below NSC's historical avg. given our cautious outlook on rail
UNP	UW	\$175.22	\$136	-22%	17	16.6	We use a 10-year DCF assuming 7.0% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 10.0x). Our DCF valuation implies a fwd P/E of 15.2x, which is relatively inline with UNP's historical 5-year avg.
Average				-17%		17.2	
Parcel/Airfreight - Analyst: Ravi Shanker							
FDX	EW	\$164.89	\$111	-33%	22	9.3	We use a 10-year DCF assuming 7.1% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 6.0x). Our DCF valuation implies a TMF PE of 18.0x, which is below historical average given competitive secular threats.
UPS	UW	\$116.95	\$78	-33%	23	10.6	We use a 10-year DCF assuming 7.0% WACC and terminal cash flow perpetual growth rate of 1.8% (implying an exit EBITDA multiple of 9.0x). Our DCF valuation implies July 2020e TMF PE of 11.6x, which is below historical average given competitive secular thr
Average				-33%		9.9	
Logistics - Analyst: Ravi, Shanker							
CHRW	UW	\$77.98	\$59	-24%	20	12.9	We use a 10-year DCF assuming 6.9% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 11.0x). Our DCF valuation implies July 2020e TMF PE of 14.0x, which is below CHRW's historical avg. given structural headwind
ECHO	EW	\$19.78	\$22	11%	6	13.4	We apply a 13.8x multiple to our July 2020 TMF EPS est. to generate a price target of \$22. Our July 2020 TMF P/E multiple is below ECHO's historical avg. given structural headwinds. Our valuation is supported by our DCF which assumes a 7.7% WACC and 2%
EXPD	EW	\$76.32	\$61	-20%	15	17.5	We apply a 16.7x multiple to our July 2020 TMF EPS est. to generate a price target of \$59. Our July 2020 TMF P/E multiple is below EXPD's historical trading range. Our valuation is supported by our DCF which assumes a 7.3% WACC and 1.5% perpetual growth
HUBG	EW	\$50.42	\$42	-17%	13	17.7	We apply a 12.9x multiple to our July 2020 TMF EPS est. to generate a price target of \$42. Our July 2020 TMF P/E multiple is below HUBG's historical trading range. Our valuation is supported by our DCF which assumes a 8% WACC and 2% perpetual growth rat
JBHT	EW	\$112.45	\$86	-24%	18	15.7	We apply a 16.6x multiple to our July 2020 TMF EPS est. to generate a price target of \$88. Our July 2020 TMF P/E multiple is below JBHT's historical trading range. Our valuation is supported by our DCF which assumes a 6.8% WACC and 2% perpetual growth ra
LSTR	UW	\$112.82	\$90	-20%	16	14.8	We apply a 15.2x multiple to our July 2020 TMF EPS est. to generate a price target of \$91. Our July 2020 TMF P/E multiple is in line with LSTR's historical trading range. Our valuation is supported by our DCF which assumes a 8.4% WACC and 1.5% perpetual
XPO	EW	\$83.48	\$84	1%	8	NM	We use a 10-year DCF assuming 8.6% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 7.0x). Our DCF valuation implies July 2020e TMF E/EBITDA of 8.0x, which is a 50:50 asset-light to asset-heavy transportatio
Average				-13%		15.3	
Truckload - Analyst: Ravi Shanker							
HTLD	UW	\$21.09	\$17	-19%	14	18.2	We use a 10-year DCF assuming 8.5% WACC and terminal cash flow perpetual growth rate of 1.0% (implying an exit EBITDA multiple of 5.0x). Our DCF valuation implies a TMF P/E of 15.8x, which is inline with historical trading range
KNX	OW	\$38.06	\$50	31%	3	20.8	We use a 10-year DCF assuming 8.0% WACC and terminal cash flow perpetual growth rate of 1.5% (implying an exit EBITDA multiple of 6.0x). Our DCF valuation implies a TMF PE of 20.1x, which is inline with the historical peer average
SNDR	OW	\$22.38	\$32	43%	2	22.2	We use a 10-year DCF assuming 7.7% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 6.0x). Our DCF valuation implies a fwd P/E of 20.9x, which is inline with the historical peer average.
USX	OW	\$5.04	\$9	79%	1	10.3	We use a 10-year DCF assuming 8.2% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 4.0x). Our DCF valuation implies a fwd P/E of 15.7x, which is below historical peer average.
WERN	OW	\$37.28	\$44	18%	5	18.6	We use a 10-year DCF assuming 7.8% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 5.0x). Our DCF valuation implies a fwd P/E of 16.7x, which is inline with historical peer average.
Average				30%		18.0	
Less-Than-Truckload - Analyst: Ravi Shanker							
ARCB	EW	\$28.44	\$36	27%	4	11.1	We use a 10-year DCF assuming 10.0% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 4.0x). Our DCF implies April 2020e TMF PE of 11.3x, which is below ARCB's historical avg. given its size and lagging operati
ODFL	EW	\$187.48	\$200	7%	7	26.5	We use a 10-year DCF assuming 6.8% WACC and terminal cash flow perpetual growth rate of 2.5% (implying an exit EBITDA multiple of 9.0x). Our DCF valuation implies April 2020e TMF PE of 18.1x, which is inline with ODFL's historical average.
SAIA	UW	\$94.49	\$70	-26%	21	16.7	We use a 10-year DCF assuming 7.1% WACC and terminal cash flow perpetual growth rate of 2.0% (implying an exit EBITDA multiple of 7.0x). Our DCF implies April 2020e TMF PE of 12.5x, which is below SAIA's historical avg. reflecting its mid-pack status amon
Average				2%		18.1	

Source: Company data, Thomson Reuters, Morgan Stanley Research. See notes on pg. 4

January 6, 2020 05:30 AM GMT

Freight Transportation | North America

4Q19 Preview/2020 Outlook:
New Challenges for a New
Decade

The Freight Transportation sector will probably be glad to turn the page on a tough 2019 but 2020 looks set to bring more challenges, particularly in the areas of regulation, technology disruption and rapidly changing supply chains. Answers to these questions will matter more than 4Q results.

Closing the Book on a Challenging 2019. We expected [2019 to be a 2016-like freight recession](#) and that is pretty much what we got with consensus top-line declines of ~1.9% and 13 of our 23 stocks under coverage expected to report negative revenue growth. Yet, the group traded well last year (up ~20%), though comfortably short of the S&P up ~29%. **While it may be tempting for investors to follow the easy trade and "buy the easy comps" in 2020, we strongly caution against doing this across the board.** The cyclical outlook remains murky with trade tensions, Brexit and an election year, and we expect 2020 guidance issued over the next 4 weeks to be muted. **More importantly, we believe 2020 will be the year that secular/structural disruption moves front and center for investors, driven by regulation, technology and changing business models.**

We see three major debates in Freight Transportation for 2020. (1) TLs: Spot rates have rebounded off the bottom and our recent TLFI and TLSS have been coming up green in recent weeks. While this may not help 4Q results (KNX has already pre-announced negatively) or even 1Q, **we think the biggest story in Transportation in 2020 will be whether TL rate expectations have significant room to the upside, as a result of the five regulatory catalysts that go into effect early in 2020.** See our deep dive on this topic [here](#) – we see potential for a 2018-like rate surge in 2020 as well. **(2) Rails/IMCs:** One of the biggest stories of 2019 was the continued deterioration of Rail volumes through the year even as truck data points started to see second-derivative and absolute improvements. Every rail has seen carloads trend more negative in 4Q than 3Q – **this raises the question as to whether the Rail volume declines are cyclical or structural.** We're skeptical of a sharp volume inflection into 2020, with structural issues remaining in US Energy, Automotive, Intermodal, and Coal (which contributed ~80% to the 2019 Rail vol decline). While investors remain more focused on OR, we wonder how much dry powder rails have left following significant cuts (particularly in headcount) if volume *does* recover. **(3) Tech disruption:** It appears relatively clear that rising spot rates with falling contract rates will likely pressure Broker margins in 4Q/1Q but the main overhang on the

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Freight Transportation

North America
IndustryView

Cautious

WHAT'S CHANGED? FROM: TO:

Expeditors International of Washington I (EXPD.O)

Price Target \$61.00 **\$62.00**

ArcBest Corp (ARCB.O)

Price Target \$36.00 **\$35.00**

XPO Logistics, Inc. (XPO.N)

Price Target \$84.00 **\$81.00**

Werner Enterprises (WERN.O)

Price Target \$44.00 **\$42.00**

Canadian Pacific Railway Ltd. (CP.TO)

Price Target C\$301.00 **C\$303.00**

Schneider National Inc. (SNDR.N)

Price Target \$32.00 **\$30.00**

Landstar System Inc (LSTR.O)

Price Target \$90.00 **\$85.00**

C.H. Robinson Worldwide Inc. (CHRW.O)

Price Target \$59.00 **\$57.00**

Saia, Inc. (SAIA.O)

Price Target \$70.00 **\$69.00**

CSX Corporation (CSX.O)

Price Target \$55.00 **\$52.00**

Union Pacific Corp. (UNP.N)

Price Target \$136.00 **\$139.00**

Please see price target changes in Exhibit 1.

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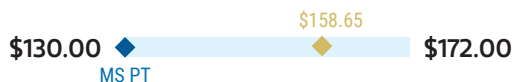
Risk Reward – Kansas City Southern (KSU.N)

Top US Rails Pick: Mexico Growth Story with Sustainable PSR Approach

PRICE TARGET \$130.00

We use a 10-year DCF assuming 7.1% WACC and terminal cash flow perpetual growth rate of 2.5%. Our DCF valuation implies a fwd P/E of ~16.4x, which is below KSU's historical avg. given our cautious outlook on rails.

Consensus Price Target Distribution

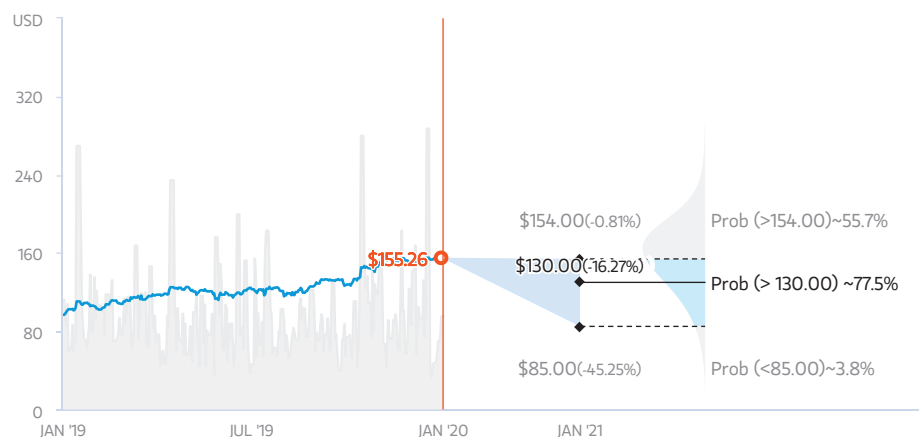


Source: Thomson Reuters, Morgan Stanley Research

EQUAL-WEIGHT THESIS

KSU's growth opportunity in Mexico is one of the best secular themes in Rails though we are somewhat concerned about macro and geopolitical risks in the region. We continue to like KSU's PSR approach best – where PSR is one of the tools at their disposal and not the end-all of the company's strategy. Operating quality has been somewhat of a mixed bag in the last few years and KSU's premium multiple vs. peers has narrowed significantly from its historical level.

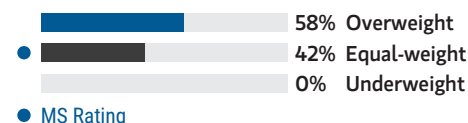
RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



Key: — Historical Stock Performance ● Current Stock Price ◆ Price Target

Source: Thomson Reuters, Morgan Stanley Research, Morgan Stanley Institutional Equities Division. The probabilities of our Bull, Base, and Bear case scenarios playing out were estimated with implied volatility data from the options market as of 03 Jan, 2020. All figures are approximate risk-neutral probabilities of the stock reaching beyond the scenario price in either three-months' or one-years' time. View explanation of Options Probabilities methodology, [here](#)

Consensus Rating Distribution



Source: Thomson Reuters, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Negative*
Share Gain: *Negative*
Out of consensus: *Negative*

View descriptions of Risk Rewards Themes, [here](#)

BULL CASE

\$154.00

18.5x Bull Case on NTM EPS

Underlying fundamentals at the four most challenged end markets improve and overall industry volume growth accelerates as the economy picks up momentum. Pricing exceeds expectations. Given volume and pricing growth, KSU is able to generate operating leverage beyond expectations.

BASE CASE

\$130.00

16.4x Base Case on NTM EPS

Structural headwinds at the four most challenged end markets will not only pressure industry volumes, but will also challenge inflation plus pricing. We believe the rails with the best op. metrics and least exposure to at-risk markets will have the most potential to expand margins.

BEAR CASE

\$85.00

12.0x Bear Case on NTM EPS

In addition to the four most challenged end markets, other end markets face structural pressures and economic growth decelerates, driving volume declines and core pricing below inflation. Rails see significant deceleration in productivity as cost control slips in the face of lackluster volumes. Investor concerns drive multiples lower.

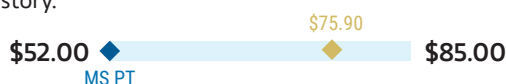
Risk Reward – CSX Corporation (CSX.O)

Bearish Eastern Rails: Challenged End Markets and Potentially Unsustainable OR

PRICE TARGET \$52.00

We use a 10-year DCF assuming 7.4% WACC and terminal cash flow perpetual growth rate of 1.5%. Our DCF valuation implies a fwd P/E of ~12.8x, which is below CSX's historical average. We believe US rails deserve to trade at discounts to historical valuation due to structural growth and pricing headwinds relative to history.

Consensus Price Target Distribution



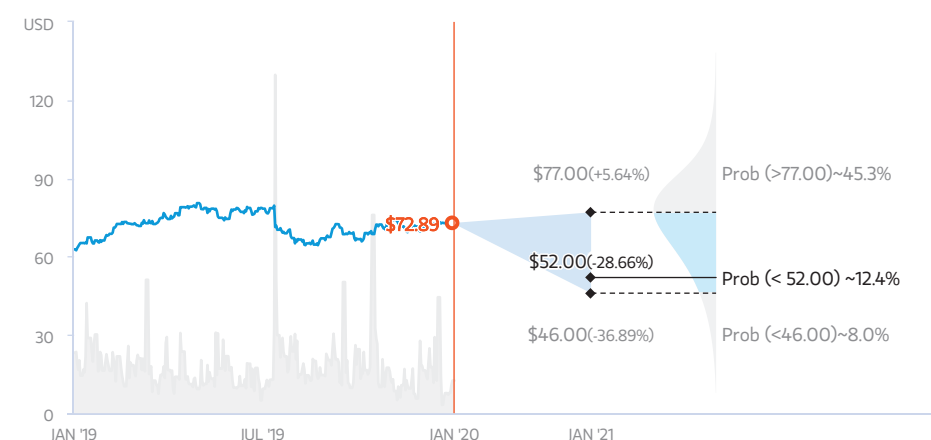
Source: Thomson Reuters, Morgan Stanley Research

◆ Mean ◆ Morgan Stanley Estimates

UNDERWEIGHT THESIS

We believe the current backdrop for CSX's turnaround is difficult as several key end markets face cyclical and secular threats (auto, coal, intermodal), pricing gains are decelerating, low hanging cost opportunities may have already been taken, **OR may be potentially unsustainable** (currently boosted by real estate gains, demurrage and export coal), and shipper scrutiny and investor expectations are high. We believe risk reward is skewed to the downside from here.

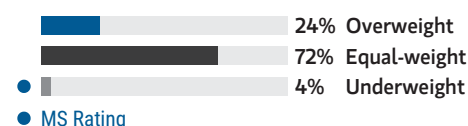
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Consensus Rating Distribution



Source: Thomson Reuters, Morgan Stanley Research

Risk Reward Themes

Out of consensus: *Negative*
Regulation: *Negative*
Secular Growth: *Negative*

View descriptions of Risk Rewards Themes, [here](#)

BULL CASE

\$77.00

17.0x Bull Case on NTM EPS

Underlying fundamentals at the four most challenged end markets improve, pricing exceeds expectations and new mgmt helps improve OR toward industry-leading levels. CSX is able to generate operating leverage beyond expectations.

BASE CASE

\$52.00

12.8x Base Case on NTM EPS

Structural headwinds at the four most challenged end markets will not only pressure industry volumes but will also challenge inflation plus pricing. We believe the rails with the best op. metrics and least exposure to at-risk markets will have the most potential to expand margins. Turnaround is more difficult than originally expected.

BEAR CASE

\$46.00

12.0x Bear Case on NTM EPS

In addition to the four most challenged end markets, other end markets face structural pressures and economic growth decelerates, driving volume declines and core pricing below inflation. Rails see significant deceleration in productivity as cost control slips in the face of lackluster volumes. Investor concerns drive multiples lower. Mgmt sees roadblocks in the turnaround story driving de-rating in the stock.

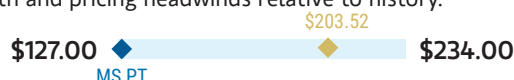
Risk Reward – Norfolk Southern Corp. (NSC.N)

Top Rail UW: Cyclical and Secular Topline Risk Face High PSR Expectations

PRICE TARGET \$127.00

We use a 10-year DCF assuming 7.5% WACC and terminal cash flow perpetual growth rate of 1.5%. Our DCF valuation implies a fwd P/E of ~12.0x, which is below NSC's historical avg. given our cautious outlook on rails. We believe US rails deserve to trade at discounts to historical valuation due to structural growth and pricing headwinds relative to history.

Consensus Price Target Distribution



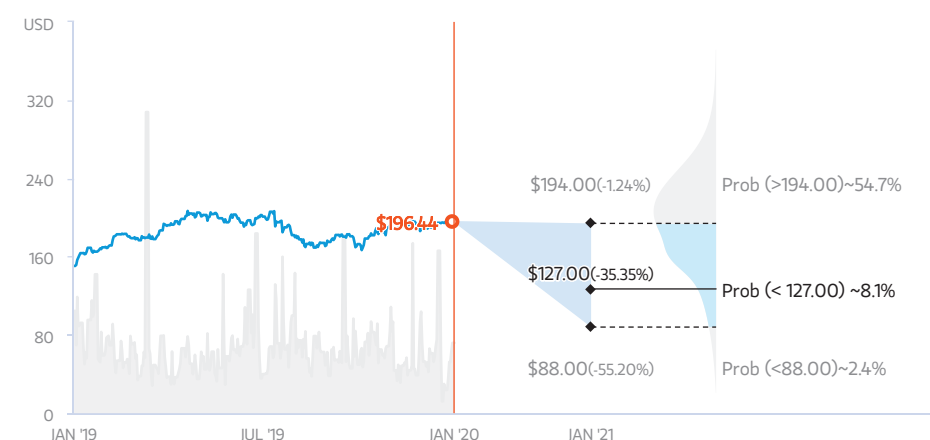
Source: Thomson Reuters, Morgan Stanley Research

◆ Mean ◆ Morgan Stanley Estimates

UNDERWEIGHT THESIS

We believe NSC has a topline issue instead of a cost issue, with revenues significantly eroded by the decline of coal and a highly competitive IM market in the East. We expect the revenue headwinds to continue. The market is focused on PSR cost gains but we believe consensus expectations may be too high for NSC, esp. given the need to grow topline to deliver PSR gains.

RISK REWARD CHART AND OPTIONS IMPLIED PROBABILITIES (12M)



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Consensus Rating Distribution



Source: Thomson Reuters, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Negative*
Share Gain: *Negative*
Out of consensus: *Negative*

View descriptions of Risk Rewards Themes, [here](#)

BULL CASE

\$194.00

16.0x Bull Case on NTM EPS

Underlying fundamentals at the four most challenged end markets improve and overall industry volume growth accelerates as the economy picks up momentum. Pricing exceeds expectations. Given volume and pricing growth, NSC is able to generate operating leverage beyond expectations. Premium multiple due to potential activism.

BASE CASE

\$127.00

11.9x Base Case on NTM EPS

Structural headwinds at the four most challenged end markets will not only pressure industry volumes, but will also challenge inflation plus pricing. We believe the rails with the best op. metrics and least exposure to at-risk markets will have the most potential to expand margins.

BEAR CASE

\$88.00

10.0x Bear Case on NTM EPS

In addition to the four most challenged end markets, other end markets face structural pressures and economic growth decelerates, driving volume declines and core pricing below inflation. Rails see significant deceleration in productivity as cost control slips in the face of lackluster volumes. Investor concerns drive multiples lower.

Risk Reward – Union Pacific Corp. (UNP.N)

Stock Priced for PSR Perfection, But We See Cyclical and Secular Challenges

PRICE TARGET \$139.00

We use a 10-year DCF assuming 7.0% WACC and terminal cash flow perpetual growth rate of 1.5%. Our DCF valuation implies a fwd P/E of ~14.8x, which is relatively inline with UNP's historical 5-year avg. We believe US rails deserve to trade at discounts to historical valuation due to structural growth and pricing headwinds relative to history.

Consensus Price Target Distribution



Source: Thomson Reuters, Morgan Stanley Research

◆ Mean ◆ Morgan Stanley Estimates

UNDERWEIGHT THESIS

We have a bearish outlook on several end markets including intermodal and coal. We also worry about PSR implementation during a potential macro slowdown. While UNP's mgmt. team is highly accomplished, we need to see sustainable and clean financial improvement before giving the company full PSR credit. Given our cycle concerns, long term secular competitive concerns about Rails, and the high expectations and execution risk around PSR, we believe UNP should trade closer to its historical average multiple.

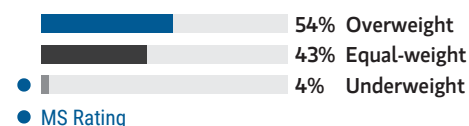
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Consensus Rating Distribution



Source: Thomson Reuters, Morgan Stanley Research

Risk Reward Themes

Secular Growth: *Negative*
Share Gain: *Negative*
Out of consensus: *Negative*

View descriptions of Risk Rewards Themes, [here](#)

BULL CASE

\$182.00

17.5x Bull Case on NTM EPS

Underlying fundamentals at the four most challenged end markets improve and overall industry volume growth accelerates as the economy picks up momentum. Pricing exceeds expectations. Given volume and pricing growth, UNP is able to generate operating leverage beyond expectations.

BASE CASE

\$139.00

14.8x Base Case on NTM EPS

Structural headwinds at the four most challenged end markets will not only pressure industry volumes, but will also challenge inflation plus pricing. We believe the rails with the best op. metrics and least exposure to at-risk markets will have the most potential to expand margins.

BEAR CASE

\$107.00

12.0x Bear Case on NTM EPS

In addition to the four most challenged end markets, other end markets face structural pressures and economic growth decelerates, driving volume declines and core pricing below inflation. Rails see significant deceleration in productivity as cost control slips in the face of lackluster volumes. Investor concerns drive multiples lower.

Table 1
Average of Morgan Stanley
Cost of Capital Values for 2019

Carrier	Weight	Cost of Capital
CSX	22.876%	7.40%
KSU	6.174%	7.10%
NSC	20.548%	7.50%
UNP	50.401%	7.00%
Average		7.20%

Table 2

Derivation of COC for Composite Sample Using Only CAPM and Current MRP

CAPM Cost of Equity		Industry Cost of Capital		
Risk-Free Rate	2.40%		Weight	Cost
Market-Risk Premium	5.00%	Debt	18.54%	3.48%
Beta	1.0941	Equity	81.46%	7.87%
Cost of Equity	7.87%	Average		7.06%

Source: Inputs taken from AAR filing, except for Market-Risk Premium is taken from Duff & Phelps as of the end of 2019.

Carrier	10-K page reference	Value (\$000s)
CSX	74	\$493
KCS	51	\$85.70
NSC	K54	\$441
UNP	48	\$1,471
Total		\$2,491