

Transport Tracker

Issue #1114, week ending Feb. 28, 2024; Rail Equip. Finance Conf kicks off Mar 4th

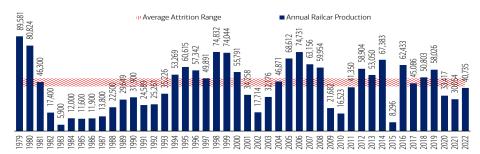
Industry Overview

Hoexter's Thought of the Week Rail Equip. Finance conf preview: Demand still challenged

We are set to attend the Rail Equipment Finance Conference next week in La Quinta, CA on March 4-6. The event will host leading railcar (Greenbrier, Trinity) and rail locomotive (Wabtec, Cummins, Progress Rail) manufacturers, equipment lessors (GATX), Class I rails (Union Pacific, Canadian Pacific) and short line carriers (Genesee Wyoming, Sierra Railroad), and rail shippers, as well as industry experts. US Rail OEMs are increasingly focused on finding new avenues for growth given the muted domestic demand backdrop. North American railcar deliveries remained below annual attrition of 42,000 to 50,000 units a year 2019-2022 and are not expected to inflect higher in 2024. New North American locomotive deliveries have also been constrained, remaining below annual replacement level of 500 units/year since 2020 given rising availability of locomotive modernization programs. The increase in carrier efficiency following rails' adoption of precision-scheduled railroading has led to increased asset turns. Rail capex peaked in 2017, leading rail OEMs to pivot to higher return ops such as aftermarket services and new avenues of recurring revenue growth, such as equipment leasing.

Exhibit 1: North America Annual Railcar Deliveries

North American railcar deliveries have been below replacement (42,000-50,000 per year) for 3 years.



Source: BofA Global Research and UMLER.

Rail equipment manufacturers aim to increase penetration in global transit and freight markets, as well as service and maintain their installed base. Policy and safety standards could be an additional focus given regulatory scrutiny on rail safety following the Feb '23 East Palestine derailment. A sudden revival of the shelved Rail Safety Act could lead to upside for railcar manufacturers. We also expect railcar and locomotive manufacturers to focus on growth opportunities in refurbishment and modernization projects, which enables a refresh on equipment age, while improving reliability and fuel efficiency. Additionally, progress in alternate propulsion technology (with battery solutions such as FLXDrive by Wabtec or hydrogen propulsion such as H2OEL by CPKC) will be another focal point as we close in on Class I 2030 ESG deadline to achieve ~30% greenhouse gas emission reduction targets. Wabtec highlighted its ability to have alt fuels reverse to diesel loads on the go, enhancing early adoption. We should also hear about development and future deployment of Rail Pulse, a GPS and telematics solution developed by a coalition of railcar owners and manufacturers to geolocate all railcars.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 32 to 34. 12665391

28 February 2024

Equity **United States** Transport/Infrastructure

Ken Hoexter Research Analyst +1 646 855 1498 ken.hoexter@bofa.com

Adam Roszkowski, CFA Research Analyst +1 646 855 5498 adam.roszkowski@bofa.com

Nathan Ho, CFA Research Analyst BofAS +1 646 855 3599 nathan.m.ho@bofa.com

Key Data This Week:

- Week 8 Rail Carloads: Up 2.9% Y-Y vs Week 7: +1.8% Y-Y (Fourth consecutive uptick)
- Dry Van spot rates ex-fuel = \$1.36/mile vs \$1.41 last week. down 3% from \$1.41 on Dec 31, 2023. Spot rates with fuel were \$1.85 vs. \$1.89 last week, and down 3% from \$1.91 on Dec. 31, 2023.
- DAT Load to Truck Ratio 0.99 for the week of Feb. 25, down 13% seq. from 1.16 last week. (Lowest historic level)

Exhibit 2: Airfreight & Surface Transportation

Rails, Trucks, Airfreight, Other Transports Summary Valuation Table

		Price	Mkt Cap.	P/E	1-Wk	Price Perf
Rating Rails:	Company	02/28/24	(\$ bil.)	'24e EPS	Perf	YTD %
B-2-7	Canadian National Railway (CNI)	129.75	83.1	21.8x	1%	3%
B-1-7	Canadian Pacific Kansas City (CP)	84.92	79.2	26.6x	-1%	7%
B-1-7	CSX Corp. (CSX)	37.68	73.8	18.8x	2%	9%
RSTR	Norfolk Southern Corp. (NSC)	253.55	57.3		-2%	7%
B-1-7	Union Pacific Corp. (UNP)	253.99	154.9	22.8x	1%	3%
NR	Grupo México Trans (GMXT*MM)(3)	MXN 38.48	9.8		0%	1%
	Rail Avg (ex GMXT for P/E)			22.5x	0%	6%
Interm	odal / Container Lessors:					
B-1-7	J.B. Hunt Transport Svcs (JBHT)	205.20	21.2	25.2x	1%	3%
NR	Hub Group (HUBG)	43.42	2.7	19.5x	-1%	-6%
NR	Textainer (TGH)	50.14	2.1		1%	2%
	Intermodal Average			22.4x	0%	0%
l ess-th	an-Truckload (LTL) Carriers:			22.17	0 70	0 ,0
C-3-7	ArcBest Corp. (ARCB)	139.80	3.3	12.9x	1%	16%
B-1-7	Old Dominion Freight Line (ODFL)	432.90	47.1	34.2x	2%	7%
B-1-9	Saia Inc. (SAIA)	562.59	15.0	34.7x	3%	28%
B-1-3 B-2-7	TFI International (TFII)	144.96	12.3	18.8x	0%	7%
	, ,					
C-1-9	XPO, Inc. (XPO)	117.74	13.7	32.3x	-1%	34%
T	LTL Average			25.2x	1%	19%
<u>1 гискіо</u> В-1-7	Ad (TL) Carriers:	EE 90	0.0	22.4x	-3%	-3%
	Knight-Swift Transportation (KNX)	55.89 23.27	9.0 4.1	22.4x 21.2x	-3% -2%	-3% -9%
B-2-7	Schneider National (SNDR)				-2% -3%	-9% -7%
B-3-7	Werner Enterprises (WERN)	39.40	2.5	18.8x		
NR	Covenant Logistics (CVLG)	49.28	0.6	11.6x	-5%	7%
NR	Heartland Express (HTLD)	12.91	1.0	253.1x	4%	-9%
NR	Marten Transport (MRTN)	18.73	1.5	21.8x	-3%	-119
NR	P.A.M. Transport (PTSI)	18.20	0.4	16.5x	-2%	-129
NR	Universal Logistics Holdings (ULH)	33.41	0.9		3%	19%
	TL Average			52.2x	-1%	-3%
	mous trucks					
Autono NR	Aurora Innovation (AUR)	2.61	4.0		-6%	-40%
NR	Aurora Innovation (AUR) Autonomous trucks Average	2.61	4.0		-6% -6%	-40% -40%
NR Airfreig	Aurora Innovation (AUR) Autonomous trucks Average tht Companies:			 12 0v	-6%	-40%
NR Airfreig B-1-7	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX)	244.37	61.1	13.8x	-6% 1%	-40% -3%
NR Airfreig B-1-7 B-2-7	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS)	244.37 147.77	61.1 126.0	13.8x 17.6x	-6% 1% 0%	-40% -3% -6%
NR Airfreig B-1-7	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2)	244.37	61.1	17.6x 	-6% 1% 0% 0%	-40% -3% -6% -4%
NR Airfreig B-1-7 B-2-7 NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average	244.37 147.77	61.1 126.0		-6% 1% 0%	-40% -3% -6% -4%
NR Airfreig B-1-7 B-2-7 NR Freight	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics:	244.37 147.77 € 43.19	61.1 126.0 58.0	17.6x 15.7x	-6% 1% 0% 0% 0%	-40% -3% -6% -4%
NR Airfreig B-1-7 B-2-7 NR NR Freight B-3-7	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW)	244.37 147.77 € 43.19	61.1 126.0 58.0	17.6x 15.7x 26.6x	-6% 1% 0% 0% 0% 0%	-40% -3% -6% -4% -4%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9	Aurora Innovation (AUR) Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO)	244.37 147.77 € 43.19 74.39 20.44	61.1 126.0 58.0 8.7 2.4	17.6x 15.7x 26.6x 90.8x	-6% 1% 0% 0% 0% 3% -4%	-40% -3% -6% -4% -4% -14% -12%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW)	244.37 147.77 € 43.19	61.1 126.0 58.0	17.6x 15.7x 26.6x	-6% 1% 0% 0% 0% 0%	-40% -3% -6% -4% -4% -14% -12% -1%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR	Aurora Innovation (AUR) Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77	61.1 126.0 58.0 8.7 2.4 6.8 17.1	17.6x 15.7x 26.6x 90.8x	-6% 1% 0% 0% 0% 3% -4% 0% 1%	-40% -3% -6% -4% -4% -14% -12% -1% -7%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR)	244.37 147.77 € 43.19 74.39 20.44 190.96	61.1 126.0 58.0 8.7 2.4 6.8	17.6x 15.7x 26.6x 90.8x 28.8x	-6% 1% 0% 0% 0% 3% -4% 0%	-40% -3% -6% -4% -4% -14% -12% -1% -7%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR NR B-2-8	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77	61.1 126.0 58.0 8.7 2.4 6.8 17.1	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x	-6% 1% 0% 0% 0% 3% -4% 0% 1%	-40% -3% -6% -4% -14% -12% -1% -7% 2%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR NR B-2-8 B-1-7	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2%	-40% -3% -6% -4% -4% -14% -12% -7% 2% -8%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR NR B-2-8 B-1-7 NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x	-6% 1% 0% 0% 0% -4% 0% 1% 2% -4%	-409 -3% -6% -4% -4% -149 -129 -1% -7% 2% -8% -389
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR NR B-2-8 B-1-7 NR NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DO) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -4% -1%	-40% -3% -6% -4% -4% -14% -12% -7% 2% -8% -38% -2%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR NR B-2-8 B-1-7 NR NR	Aurora Innovation (AUR) Autonomous trucks Average HedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Aifreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina AVS (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 2% -12%	-409 -3% -6% -4% -149 -129 -196 -7% 2% -8% -389 -2% -319
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average Autonomous trucks Average EndEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x	-6% 1% 0% 0% 0% -4% 0% 1% -2% -1% 2% -12% 5%	-40% -3% -6% -4% -4% -14% -12% -1% -7% 2% -8% -38% -2% -31% 21%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -4% -1% 5% 4%	-40% -3% -6% -4% -4% -149 -129 -1% -7% 2% -8% -38% -2% -319 21% 9%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina AVS (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg.	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x	-6% 1% 0% 0% 0% -4% 0% 1% -2% -1% 2% -12% 5%	-40% -3% -6% -4% -4% -14% -12% -1% -7% 2% -8% -38% -2% -31% 21%
NR Airfreig B-1-7 B-2-7 NR B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina AVS (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg.	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.1x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 5% 4% -12%	-409/ -3% -6% -4% -149/ -129/ -7% -8% -389/ -2% -319/ 219/ 99%
NR Airfreig B-1-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. Lipment: The Greenbrier Companies (GBX)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x	-6% 1% 0% 0% 0% -4% 0% 1% 2% -1% 2% -12% 5% 4% -1% 2%	-409 -3% -6% -4% -14% -129 -1% -7% -28% -389 -219 -219 -79 -79 -79 -79 -79 -79 -79 -7
NR Airfreig B-1-7 B-1-7 NR B-2-8 B-3-7 NR NR NR B-2-8 B-1-7 NR NR NR NR R B-3-7 NR	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. Lipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x 13.2x 60.2x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 5% 4% -1%	-409 -3% -6% -4% -14% -12% -7% -2% -319, -219, 99, -7% 12% -111111111111111111111111111111111111
NR Airfreight B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR B-3-7 Rail Equ	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. Lipment: The Greenbrier Companies (GBX) Freightar America Inc. (RAIL) GATX Corporation (GATX)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x	-6% 1% 0% 0% 0% -4% 0% 1% -4% -1% 2% -12% -1% -1% -1%	-409 -3% -6% -4% -149 -129 -1% -7% -8% -389 -2% -319 21% 9% -7% 12% 11% 4%
NR Airfreight B-1-7 NR B-2-7 NR B-3-7 C-2-9 NR NR NR B-2-8 B-1-7 NR	Aurora Innovation (AUR) Autonomous trucks Average th Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. sipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL) GATX Corporation (GATX) Koppers Holdings Inc. (KOP)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74 49.67 3.01 125.19 57.07	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x 13.2x 60.2x 16.6x 12.4x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 2% -12% -1% 2% 11%	-409 -3% -6% -4% -149 -129 -196 -389 -2% -389 -2% -319 21% -319 -219 -319 -219 -319 -496 -1196
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR NR R-3-7 Rail Eq C-3-7 NR NR NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. Lipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL) GATX Corporation (GATX) Koppers Holdings Inc. (KOP) Trinity Industries Inc. (TRN)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74 49.67 3.01 125.19 57.07 24.40	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.1x 13.2x 60.2x 16.6x 12.4x 17.4x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 2% -12% 5% 4% -1% 2% -1% -1% -2% -1% -2% -11% -8%	-40% -3% -6% -4% -4% -14% -129 -1% -8% -389 -2% -319 21% 99% -7% -12% -14% -14% -14% -14% -14% -14% -14% -14
NR Airfreight B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR B-3-7 Rail Equ	Aurora Innovation (AUR) Autonomous trucks Average th Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. sipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL) GATX Corporation (GATX) Koppers Holdings Inc. (KOP)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74 49.67 3.01 125.19 57.07	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x 13.2x 60.2x 16.6x 12.4x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 2% -12% -1% 2% 11%	-40% -3% -6% -4% -149 -129 -1% -7% -8% -389 -2% -319 21% 99% -7%
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR NR R-3-7 Rail Eq C-3-7 NR NR NR	Aurora Innovation (AUR) Autonomous trucks Average Autonomous trucks Average FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Aifreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. sipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL) GATX Corporation (GATX) Koppers Holdings Inc. (KOP) Trinity Industries Inc. (TRN) Wabtec Corp. (WAB)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74 49.67 3.01 125.19 57.07 24.40	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.1x 13.2x 60.2x 16.6x 12.4x 17.4x	-6% 1% 0% 0% 0% 3% -4% 0% 1% 2% -1% 2% -12% 5% 4% -1% 2% -1% -1% -2% -1% -2% -11% -8%	-40% -3% -6% -4% -4% -14% -129 -1% -8% -389 -2% -319 21% 99% -7% -12% -14% -14% -14% -14% -14% -14% -14% -14
NR Airfreig B-1-7 B-2-7 NR Freight B-3-7 C-2-9 NR NR B-2-8 B-1-7 NR NR NR NR R-3-7 Rail Eq C-3-7 NR NR NR	Aurora Innovation (AUR) Autonomous trucks Average tht Companies: FedEx Corp. (FDX) UPS (UPS) Deutsche Post (DHL GY) (2) Airfreight Average Forwarders / Logistics: C.H. Robinson Worldwide (CHRW) RXO (RXO) Landstar System (LSTR) Expeditors International (EXPD) Kuehne + Nagel Int'l (KHNGF) (2) DSV Panalpina A/S (DSV DC) (2) Forward Air Corp. (FWRD) Ryder System, Inc. (R) Air Transport Services Group (ATSG) Fortress Transportation (FTAI) World Kinect (WKC) Freight Forwarder Avg. Lipment: The Greenbrier Companies (GBX) Freightcar America Inc. (RAIL) GATX Corporation (GATX) Koppers Holdings Inc. (KOP) Trinity Industries Inc. (TRN)	244.37 147.77 € 43.19 74.39 20.44 190.96 118.77 CHF 294.50 DKK 1,085.5 39.15 112.78 12.19 55.92 24.74 49.67 3.01 125.19 57.07 24.40	61.1 126.0 58.0 8.7 2.4 6.8 17.1 38.5 34.1 1.0 5.0 0.8 5.6 1.5	17.6x 15.7x 26.6x 90.8x 28.8x 25.0x 29.8x 2.6x 9.1x 9.6x 14.1x 25.3x 14.1x 25.1x 13.2x 60.2x 16.6x 12.4x 20.7x	-6% 1% 0% 0% 0% -4% 0% 1% 2% -1% 2% -12% 5% 4% -1% -1% -1% -1% -1% -1% -3% -3%	-409 -3% -6% -4% -4% -149 -129 -1% -8% -389 -2% -319 9% -7% 11% -4% -11% -8% -10%

Source: BofA Global Research estimates, Bloomberg, and First Call Estimates (for stocks not covered by BofA Global Research).

Covered by: (2) Muneeba Kayani, (3) Carlos Peyrelongue - NR: Not Rated.

BofA GLOBAL RESEARCH

Exhibit 3: Marine Matters

Crude, Product, Container, Dry Bulk, LNG, Jones Act Summary Valuation Table

<u>Marine</u>	<u>Matters</u>	Price	Mkt Cap.	P/E	1-Wk	Price Peri
Rating	Company	02/28/24	(\$ bil.)	'24e EPS or Yield	Perf	YTD
Tanker	Companies			Yield		
C-1-7	Teekay Tankers, Ltd. (TNK)	55.10	1.9	0.0%	-5%	109
NR	Teekay Shipping Corp. (TK)	7.50	0.7		-9%	5%
NR	Euronav (EURN)	€ 16.36	3.9	8.1%	0%	2%
NR	DHT Maritime (DHT)	10.76	1.7	14.7%	-1%	109
NR	Frontline Ltd. (FRO)	22.74	5.1	12.7%	-1%	139
NR	Tsakos Energy Navigation (TNP)	23.78	0.7		-2%	7%
NR	Nordic American Tanker (NAT)	4.14	0.9	10.9%	0%	-1%
NR	Ship Finance Limited (SFL)	13.41	1.7	8.0%	4%	199
NR	KNOT Offshore Partners (KNOP)	5.55	0.2		0%	-49
	Tanker Average			9.1%	-2%	7%
	<u>t Tankers</u>					
C-2-7	Scorpio Tankers (STNG)	66.80	3.6	2.9%	0%	109
NR	Capital Products (CPLP)	17.29	1.0	3.5%	-4%	229
NR	Ardmore Shipping (ASC)	16.02	0.7	6.7%	-1%	149
	Product Tankers Average			4.4%	-2%	159
LNG / L	<u>PG</u>			<u>Yield</u>		
NR	Golar LNG (GLNG)	21.21	2.2		-2%	-89
NR	Dynagas LNG Partners (DLNG)	2.91	0.1	13.7%	-5%	4%
NR	StealthGas (GASS)	6.20	0.2		-5%	-49
	LNG / LPG Average			13.7%	-4%	-39
	ner Ship Lessors	11.50	1.4	4.00/	40/	110
NR	Costamare (CMRE)	11.52	1.4	4.0%	4%	119
NR	Danaos (DAC)	72.22	1.4	4.4%	0%	-29
NR	Global Ship Lease (GSL)	20.23	0.7	7.4% 5.3%	1% 2%	2% 3%
Dry Bul	Container Average			5.5% EBITDA	2%	3%
NR	Navios Maritime L.P. (NMM)	34.11	1.1	3.7x	4%	229
NR	Safe Bulkers, Inc. (SB)	4.60	0.5	6.6x	6%	179
NR	Diana Shipping (DSX)	3.06	0.3	6.0x	5%	3%
NR	Eagle Bulk Shipping (EGLE)	61.33	0.7	11.2x	6%	119
NR	Golden Ocean Group (GOGL)	34.11	1.1		4%	220
C-1-7	Pacific Basin Shipping (PCFBF)(1)	12.72	2.6	12.5x	13%	309
,	U.S. Dry Bulk Average	HKD 2.14	1.4	5.2x	-5%	-17
Jones A	ct Carrier/Other			P/E		
B-1-9	Kirby Corp. (KEX)	87.09	5.1	17.8x	2%	119
NR	Matson Inc. (MATX)	107.88	3.7	12.8x	-6%	-29
NR	Tidewater Inc. (TDW)	70.37	3.7	12.9x	0%	-29
	Jones Act Carrier/Other Average			14.5x	-1%	2%
	ner Shipping / Diversified Companies					
B-2-8	AP Moeller-Maersk (AMKBF) (2)	DKK 10,085	25.4		-3%	-179
B-1-8	COSCO Shipping Holding Co (CICOF)(1)	HK\$8.44	7.6		-1%	8%
C-3-8	K-Line (KAKKF)(1)	¥6,901.00	10.9	12.3x	-4%	149
B-3-8	Mitsui O.S.K. Lines (MSLOF)(1)	¥5,090.00	12.2	7.3x	-4%	139
B-3-8	NYK Line (NYUKF)(1)	¥4,718.00	16.0	9.8x	-3%	8%
NR	Wan Hai Lines (WHILF)	TWD 48.10	4.3		-2%	-13
NR	Yang Ming Marine (YMGXF)	TWD 48.55	5.4		0%	-59
C-2-8	Evergreen Marine Corp (EVGQF)(2)	TWD 159.50	10.8	1.4x	3%	119
NR	Hapag Llyod ADR (HLAG GY))(2)	€ 133.30	25.4	37.3x	0%	-19
C-3-9	ZIM Integrated Shipping Svcs (ZIM)	12.45	1.5		0%	269
	Container & Diversified Average			9.8x	-2%	4%
	Shipping Mkt Cap / Shipping Avg		126.3		0%	6%
	S&P 500	5,067.49		23.5x	2%	6%

Source: BofA Global Research estimates, Bloomberg, (for stocks not covered by BofA Global Research) Covered by: (1) Nathan Gee , (2) Muneeba Kayani NR: Not Rated.

BofA GLOBAL RESEARCH

Airfreight and Surface Transportation Weekly Movers

Best: KOP (+11%) FTAI (+5%) WKC (+4%) Worst: ATSG (-12%) TRN (-8%) AUR (-6%)

Marine Transportation Weekly Movers

Best: GOGL (+13%) EGLE (+6%) SB (+6%) Worst: TK (-9%) MATX (-6%) GASS (-5%)



Upcoming Calendar of Events

Feb 28-29 Southeast Association of Rail Shippers Spring Meeting, Atlanta Mar 3-6 Rail Equipment Finance (REF) Conference, La Quinta

TPM'24 – Transpacific Maritime Conference. Long Beach

Mar 13 World Kinect Corp (WKC) Investor Day, NYC Mar 14 Aurora Analyst & Investor Day, Pittsburgh

Mar 19-21 BofA Global Industrials Conference (featuring **CNI and WAB**), London

Mar 26 UPS Investor & Analyst Day, Louisville

Apr 30-May 2 National Assoc of Rail Shippers (NARS) Ann Mtg, Chicago

May 14-16 BofA's 31st Annual Transport, Airline, & Industrials Conf, NYC

BofA Global Research Reports

Title: Subtitle	Primary Autho	or Date Published
WAB.: Largest pipeline in 5 yrs sets up well; PO \$156	Ken Hoexter	28 February 2024
KNX: Changes in CEO and CFO; Moves aids in rebuilding cred into upture	nKen Hoexter	27 February 2024
Railroads: 4Q Review in Charts: Volume growth flips positive	Ken Hoexter	27 February 2024
Trucking: Survey Says: Demand view 2nd highest in 80 wks	Ken Hoexter	23 February 2024
WKC: Aviation yields better-than-tgts.; Macro pressures persist; PO \$23	Ken Hoexter	22 February 2024
TNK: Rates fall short of tgts. yet accl. in 1Q; Debt-free by March; PO \$6.	5Ken Hoexter	22 February 2024
Transport Tracker: Issue #1113, week ending Feb. 21, 2024	Ken Hoexter	21 February 2024

Company News

Knight Swift Transportation named CFO Adam Miller as CEO, replacing prior CEO Dave Jackson. It also named EVP of M&A Andrew Hess as CFO. Dave Jackson had served as CEO since Jan 1, 2015.

World Kinect posted 4Q23 adj. EPS of \$0.54, above our \$0.43 target and Street's \$0.44. The beat was led by Aviation Gross profit at \$131 million in 4Q, up 19% y-y and \$17 mil above our target. Those gains were partially offset by higher-than-expected Operating Expenses (-\$0.06/sh) and Interest Expense (-\$0.06/sh). Gross Revenues were \$12 billion, down 14% y-y, but \$370 million above our target. Adj. Gross Profit was \$280 mil, down 1% y-y, but \$18 mil above our target. Adj. Operating Income was \$74 mil, down 8% y-y, but \$12 mil above our target, for a Net Operating Margin of 26.2%, 290 bps better than our target. Aviation Gross Profit/Gallon was up 20% y-y, above our +1% target. Land Gross Profit was \$105 mil, down 9% y-y and \$4 mil below target. Land was impacted by an erroneous bid in the Finnish power market, leading to a \$49 mil one-time charge (-\$0.61/sh).

Union Pacific plans to invest \$3.4 billion in 2024, with \$1.9 billion for upgrading and replacing infrastructure (rail, ties, and ballasts) and \$0.6 billion toward locomotives and equipment.

Flexport launched The Convoy Platform, a digital global supply chain solutions provider based in San Francisco that offers small carriers access to freight, while offering shippers and brokers real-time competitive rates, shipment visibility and on-time performance. Flexport acquired Convoy's technology and IP in November.

Textainer Group Holdings Ltd 's shareholders approved the acquisition of Textainer by Stonepeak, an alternative investment firm specializing in infrastructure and real assets. Upon closing, Textainer's shareholders will receive \$50/common share in cash.

CSX Corp's Board of Directors and the Compensation & Talent Management Committee of the Board reviewed compensation levels for CEO Joseph Hinrichs and determined that increases to the annual base salary, target annual bonus opportunity and target long-term incentive opportunity for Mr. Hinrichs were appropriate.

Koppers Holdings Inc. agreed to acquire the assets of Brown Wood Preserving Company, Inc. for approximately \$100 million in cash. Brown Wood manufactures and sells pressure-treated wood utility poles. The transaction is expected to close in 2Q24.



FedEx Corp. ended its naming rights agreement on the stadium of Washington's NFL franchise (currently FedEx Field). The agreement was set to expire in 2026. The company had struck a \$205 million deal in 1999 to have its name on the stadium.

Autonomous Trucking

Apple cancelled its project to build an autonomous electric car. The car project still had 1400 employees working on it, some of whom will be shifted to Apple's Gen Al projects, while others will have 90 days to find reassignment or be let go. Apple began working on the project, originally called Project Titan, in 2014, and at one point had 5,000 dedicated workers to the effort.

Shipping

Scorpio Tankers signed a non-binding Memorandum of Understanding to install the Fowe Eco Solutions Ltd. fuel emulsion systems across its entire fleet, which will result in an overall reduction of at least 3% in fuel costs and 100,000 tons of carbon emissions annually.

Teekay Tankers posted 4Q23 adj. EPS of \$2.88, below our \$3.90 target and Street's \$3.42. Revenues were \$313 million, down 15% year-year, and \$30 million below our target. Net Vessel Revenues were \$195 million, down 17% year-year and \$32 million below our target. Operating income was \$113 million, down 27% year-year, and \$23 million below our target, resulting in an operating margin of 36.0%, a 600 bps y-y decline. 4Q23 time-charter equivalent (TCE) rates had a spot fleet average of \$41,000/day, below our \$51,000/day target as it pulled forward its bookings earlier in the quarter. 1QTD TCEs have accelerated 25% sequentially to \$50,000/day with 70% of revenue days booked as voyage re-routings due to Red Sea disruptions led a surge in ton-mile demand. Teekay Tankers will repurchase \$137 million in vessel sale leasebacks in 1Q24, lowering its total debt to zero. This effectively completes its capital strategy set in 1Q23 where it highlighted its deleveraging focus. It anticipates lowering its breakeven TCE by approx \$500/day following the completion of its debt repayment, to approximately \$15,500/day/vessel.

KNOT Offshore Partners LP reported a net loss in 4Q23 of \$(5) million, compared to net income of \$6 million a year ago. Revenues were \$73 million, up 2% year-year. Operating income was \$18 million, down 7% year-year, driven by higher vessel operating expenses (\$26 mil in 4Q23 vs \$20 mil in 4Q22), resulting in an operating margin of 24.7%, a 260 bps y-y decline.

DHT Holdings, Inc. contracted to build four large VLCCs for \$128.5 million for delivery between April and December 2026. The contracts include options for an additional four vessels that can be delivered during 1H27. The ships will be fitted with Exhaust Gas Cleaning Systems, be Tier III compliant, and hold class ready notations for multiple fuels. The company plans to finance the acquisitions with cash-flows from operations, available liquidity, and new mortgage debt.

Diana Shipping Inc. reported 4Q23 EPS of \$0.06, down 77% year-year. Time charter revenues were \$60 million, down 21% year-year due to decreased average charter rates. The average time charter equivalent (TCE) rate in 4Q23 was \$15,161 compared to \$21,100 in 4Q22. Operating income was \$16 million, down 52% year-year, for an operating margin of 26.4%, down from 44.1% a year ago.

Dividends Declared

	Amount	Record Date	Payable Date
DSX	\$0.07	03/05/24	03/12/24
HUBG	\$0.12	03/08/24	03/27/24



Week 8 Rail Carload Data: Up 2.9% Y-Y

Key Takeaways - Up 2.9% (from +1.8% last week): Total carloads for Week 8 of 2024 were up 2.9% year-year, to 611,628 (BNSF has not reported yet), improving from last week's 1.8% increase (or 603,055 carloads). Carloads were up for the fourth consecutive week. Growth was above the past 10-week average of +1.2%, while the full 1Q24 Carloads compares against a 0.8% decrease in 1Q23 (BNSF not incl.) Coal was down (-7.2% year-year), in line with last week's 7.3% decrease. This was the seventh downtick in eight weeks. Nat Gas prices were up (+2%) to \$1.62/MMBtu from \$1.58/MMBtu last week. Coal's absolute level of carloads were 55k, above the 54k last week, and the 10-week avg of 53k. Chemical volumes were up 4.8% year-year, reversing last week's 1.3% decrease. Chemicals were up for the fifth time over the last six weeks. Grain (+9.9%) was up, improving from last week's 2.3% increase. Grain carloads were up for the fourth consecutive week. Petroleum (+6.2%) was up, moderating from last week's 8.3% increase. This was the 19th uptick over the last 20 weeks for Petroleum. Intermodal (+5.1%) was up, improving from last week's 4.1% increase. Intermodal was up for the 12th time over the last 15 weeks, while absolute volumes were 278k, above 273k last week, and above the 259k past 10-week avg. Auto (+5.5%) was up, moderating from last week's 9.3% increase. It was up for the fourth consecutive week.

Overall Carloads: Week 8 carloads were up 2.9% year-year, as increases at CN (+4.8%), CSX (+4.0%), UP (+3.3%), and NS (+2.3%) more than offset a decrease at CPKC (-0.8%). Quarter-to-date, carloads are down 1.9% year-year, as decreases at CPKC (-5.9%), CN (-3.8%), and UP (-2.4%) more than offset increases at CSX (+0.4%) and NS (+0.6%). The 1Q24 carload trend of -2.7% (NSC not incl.) is below our -0.7% full quarter target for the Class I rails on average. The avg. carrier is trending below our target (-170 bps), with UNP the best at -50 bps vs. our tgt. (-2.4% vs. our -1.9%), vs CPKC the worst at -400 bps (-5.9% vs. our -1.9%).

Revenue Ton Miles: Week 8 RTMs: CN's RTMs are down 2.3% y-y 1QTD. CPKC's RTM are down 2.0% y-y 1QTD.

Specifics: Intermodal carloads (45.6% of total) were up 5.1% year-year, as increases at NS (+7.8%), CSX (+7.2%), UP (+5.0%), and CN (+3.7%) more than offset a decrease at CPKC (-2.2%). **Coal carloads (9.0% of total)** were down 7.2% year-year, as decreases at CN (-25.1%), NS (-13.5%), and UP (-5.6%) more than offset increases at CPKC (+2.7%) and CSX (+4.3%). **Chemical carloads (9.6% of total)** were up 4.8% year-year, as increases at CN (+8.9%), UP (+8.7%), NS (+6.6%), and CSX (+0.5%) more than offset a decrease at CPKC (-3.4%). **Grain carloads (4.4% of total)** were up 9.9% year-year, as increases at CN (+32.8%), CPKC (+29.4%), and UP (+8.4%) more than offset decreases at CSX (-12.4%) and NS (-25.4%). **Petroleum carloads (3.9% of total)** were up 6.2% year-year, as increases at UP (+23.1%), CPKC (+6.4%), CN (+6.3%), and CSX (+4.0%) more than offset a decrease at NS (-20.4%). **Auto carloads (5.3% of total)** were up 5.5% year-year, as increases at CSX (+19.2%), UP (+5.1%), CPKC (+4.4%), and NS (+0.3%) more than offset a decrease at CN (-5.3%).

Exhibit 4: Carloads Week 8 2024 vs. 2023 and 1QTD volumes Week 8 Rail Carload Data: Up 2.9% Y-Y

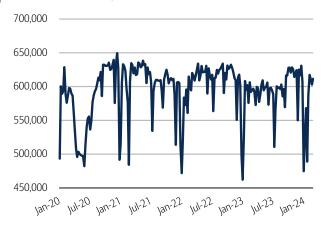
	% of total	2024 Wk 8	2023 Wk 8	% Δ	1Q24 QTD	% Δ
Intermodal	45.6%	278,597	265,059	5.1%	2,104,154	0.8%
Coal	9.0%	55,106	59,362	-7.2%	427,287	-10.2%
Chemicals	9.6%	58,967	56,263	4.8%	442,956	1.6%
Auto	5.3%	32,259	30,588	5.5%	224,529	-2.5%
Grain	4.4%	26,706	24,311	9.9%	197,649	-8.7%
Forest Prod.	3.5%	21,262	21,256	0.0%	164,910	-1.6%
Petrol. Prod.	3.9%	23,928	22,524	6.2%	<u>187,498</u>	3.3%
Total Carloads		611,628	594,378	2.9%	4,610,017	-1.9%

Source: BofA Global Research and AAR.



Exhibit 5: Total Weekly Carload Volumes

Total volumes were 611,628 for Week 8



Source: BofA Global Research and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 6: Total Weekly Carload Growth Y-o-Y

Total volume growth was +2.9% y-y for Week 8



Source: BofA Global Research and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 7: Total Quarterly Carload Growth Y-o-Y

Total Carloads Forecast Down 0.7% in 1Q24

	4Q19a	1Q20a	2Q20a	3Q20a	4Q20a	1Q21a	2Q21a	3Q21a	4Q21a	1Q22a	2Q22a	3Q22a	4Q22a	1Q23a	2Q23a	3Q23a	4Q23a	1Q24e
BNSF	-2.5%	-5.2%	-17.9%	-8.3%	2.6%	4.8%	24.5%	4.4%	-3.1%	-3.3%	-5.6%	-5.0%	-9.2%	-10.3%	-11.1%	-4.8%	3.8%	
CNI	0.4%	-5.9%	-15.9%	-5.9%	7.1%	7.2%	13.5%	-0.9%	-10.0%	-5.9%	0.3%	2.9%	2.5%	0.5%	-7.1%	-9.7%	-1.4%	-1.0%
CPKC						-1.1%	19.6%	-0.5%	-5.7%	-4.0%	0.1%	10.1%	7.5%	5.7%	-2.3%	-4.9%	1.7%	-1.9%
CSX	-5.3%	-1.1%	-20.5%	-3.0%	3.9%	1.0%	26.6%	2.7%	-1.8%	-2.0%	0.2%	1.5%	-1.8%	-0.8%	-3.0%	-2.3%	1.2%	1.9%
NSC	-5.8%	-11.4%	-25.6%	-7.0%	-1.2%	2.9%	25.5%	-0.3%	-3.6%	-4.5%	-3.3%	-2.1%	-1.3%	-0.1%	-5.6%	-2.2%	7.0%	
UNP	-8.1%	-7.0%	-19.6%	-4.0%	2.9%	-0.7%	21.9%	0.0%	-3.9%	4.1%	-1.4%	3.2%	0.8%	-1.4%	-1.8%	-2.7%	3.4%	-1.9%
Total	-4.1%	-1.2%	-16.2%	-1.9%	6.9%	2.5%	22.3%	1.2%	-4.4%	-2.4%	-2.1%	0.8%	-1.5%	-2.2%	-5.6%	-4.3%	2.9%	-0.7%

Source: BofA Global Research and Association of American Railroads.

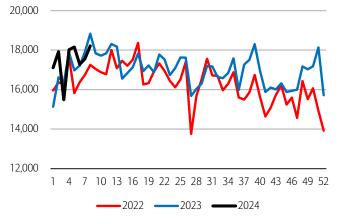
Note: The total for 1Q24 is an average of the estimates; CPKC Reinstated data from 2020

BofA GLOBAL RESEARCH

Selected Segments Weekly Carloads

Exhibit 8: Metal Carloads

Metal Carloads were 18,211 in Week 8, down 3.3% Y-Y

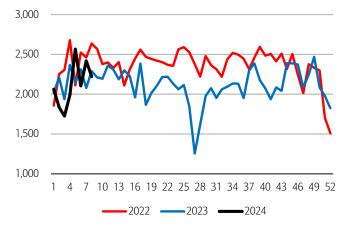


Source: BofA Global Research and Company data.

BofA GLOBAL RESEARCH

Exhibit 9: Forest Product Carloads

Forest Product Carloads were 2,220 in Week 8, down 3.0% Y-Y



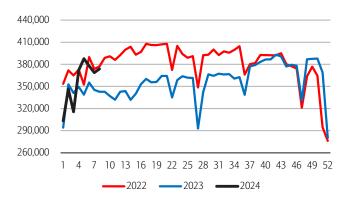
Source: BofA Global Research and Company data.



Selected Segments Weekly Carloads

Exhibit 10: Intermodal Carloads

Intermodal Carloads were 373,766 in Week 8, up 9.0% Y-Y

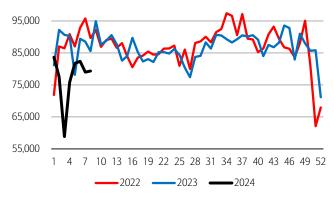


Source: BofA Global Research and Company data.

BofA GLOBAL RESEARCH

Exhibit 11: Coal Carloads

Coal Carloads were 79,344 in Week 8, down 7.3% Y-Y

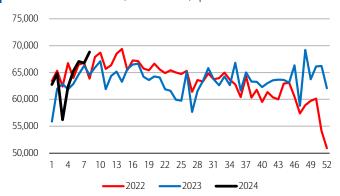


Source: BofA Global Research and Company data.

BofA GLOBAL RESEARCH

Exhibit 12: Chemical Carloads

Chemical Carloads were 68,824 in Week 8, up 6.6% Y-Y

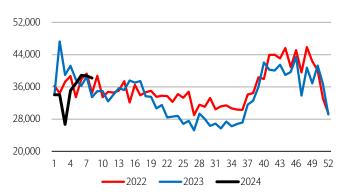


Source: BofA Global Research and Company data.

BofA GLOBAL RESEARCH

Exhibit 13: Grain Carloads

Grain Carloads were 38,207 in Week 8, up 14.2% Y-Y

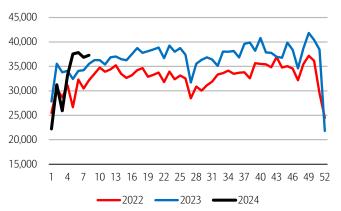


Source: BofA Global Research and Company data

BofA GLOBAL RESEARCH

Exhibit 14: Auto Carloads

Auto Carloads were 37,284 in Week 8, up 5.0% Y-Y

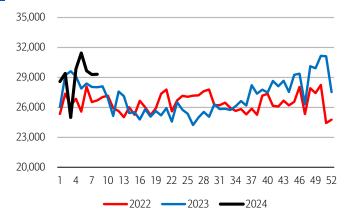


Source: BofA Global Research and Company data.

BofA GLOBAL RESEARCH

Exhibit 15: Petroleum Products Carloads

Petroleum Products Carloads were 29,316 in Week 8, up 4.6% Y-Y



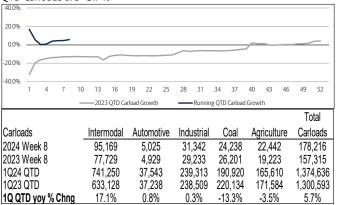
 $\textbf{Source:} \ \mathsf{BofA} \ \mathsf{Global} \ \mathsf{Research} \ \mathsf{and} \ \mathsf{Company} \ \mathsf{data}.$



Selected Segments Weekly Carloads

Exhibit 16: BNSF Carloads

QTD Carloads are +5.7%

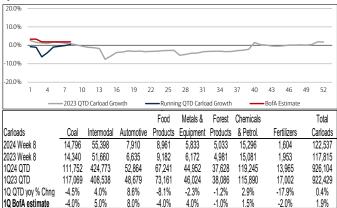


Source: BofA Global Research estimates, Association of American Railroads, and Company reports

BofA GLOBAL RESEARCH

Exhibit 18: CSX Carloads

QTD Carloads are +0.4% vs. BofAe +1.9%

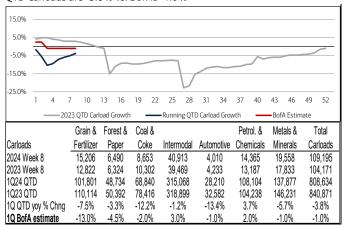


Source: BofA Global Research estimates, Association of American Railroads, and Company reports

BofA GLOBAL RESEARCH

Exhibit 20: CNI Carloads

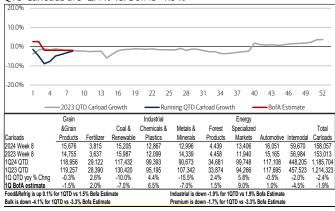
QTD Carloads are -3.8% vs. BofAe -1.0%



Source: BofA Global Research estimates, Association of American Railroads, and Company reports

Exhibit 17: Union Pacific Carloads

QTD Carloads are -2.4% vs. BofAe -1.9%

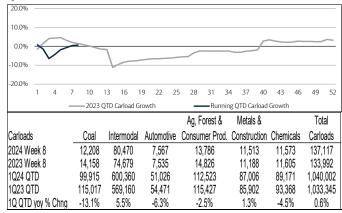


Source: BofA Global Research estimates, Association of American Railroads, and Company reports

BofA Gl OBAL RESEARCH

Exhibit 19: NSC Carloads

QTD Carloads are +0.6%

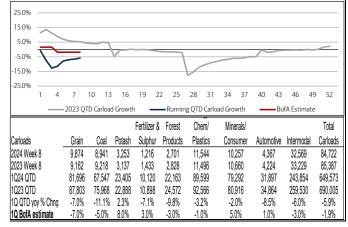


Source: BofA Global Research estimates, Association of American Railroads, and Company reports

BofA GLOBAL RESEARCH

Exhibit 21: CPKC Carloads

QTD Carloads are -5.9% vs. BofAe -1.9%



Source: BofA Global Research estimates, Association of American Railroads, and Company reports

BofA GLOBAL RESEARCH



Diesel Fuel Prices: -1.2% Sequentially

Diesel fuel prices declined 1.2% from last week, at \$4.06 for week 8 of 2024. Prices remain above \$4.00 for the third consecutive week after nine weeks below, while posting the first downtick in five weeks. The 1Q24 average for on-highway diesel is \$3.94/gallon, down 11% y-y from \$4.41 in 1Q23, and down 8% sequentially from 4Q23's \$4.26.

WTI crude oil futures closed at \$78.87, up 0.9% from last week's \$78.18. WTI was up for the seventh time over the past 8 weeks. The 1Q24 average is \$75.02, down 1% from 1Q23's \$76.12 average, and down 4% from 4Q23's \$78.44. We target \$77 and \$80 for 1024 and 2024.

Brent crude oil futures closed at \$83.65, up 1.6% from last week's \$82.34. The 1Q24 average is \$80.20, down 2% from 1Q23 average of \$82.16, and down 3% from 4Q23's average of \$82.80.

The Brent to WTI gap is \$4.78, up 15% from last week's \$4.16. The current spread is down 21% from the 1Q23 avg. of \$6.04.

Natural Gas futures closed at \$1.62 on February 27th, up 2% from \$1.58 last Tuesday. Nat Gas trends below \$2.00 for the third consecutive week, but this was the first uptick in seven weeks. The 1Q24 average is \$2.23, down 21% from the 1Q23 average of \$2.83.

Exhibit 22: Fuel surcharges

Weekly and Monthly surcharges table

	Week 8	Week 9	Week 10
	<u>2/14/24</u>	<u>2/21/24</u>	<u>2/28/24</u>
ARCB - LTL	33.8%	33.8%	33.3%
XPO - LTL	32.8%	35.3%	35.3%
ARCB - TL	67.6%	67.6%	66.6%
XPO - TL	65.6%	70.5%	70.5%
FDX - Express	17.25%	17.50%	17.50%
UPS - Express	20.50%	21.00%	21.00%
FDX - Ground	15.25%	16.00%	16.00%
UPS - Ground	15.50%	16.00%	16.00%
	<u>Dec-23</u>	<u>Jan-24</u>	<u>Feb-24</u>
UP (standard)	\$0.49	\$0.44	\$0.38
y-y % change	-22%	-31%	-28%
UP (coal)	\$0.49	\$0.44	\$0.38
y-y % change	-22%	-31%	-28%
CSX	\$0.63	\$0.57	\$0.50
y-y % change	-22%	-30%	-26%
CPKC	\$0.60	\$0.53	\$0.46
y-y % change	-22%	-32%	-29%

Source: BofA Global Research and company reports.

BofA GLOBAL RESEARCH

Exhibit 23: National Diesel Fuel Prices Diesel fuel prices: \$4.06 for week 8 of 2024

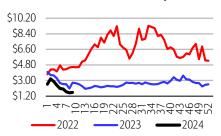
\$5.90 \$5.30 \$4.70 \$4.10 \$3.50 \$2.90

Source: BofA Global Research, DOE, Bloomberg

2022

2023

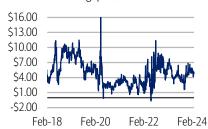
Exhibit 24: US Nat Gas Price Per MMBtu. Futures closed at \$1.62 on February 27th



Source: BofA Global Research, DOE, Bloomberg BofA GLOBAL RESEARCH

Exhibit 25: Brent to WTI Spread

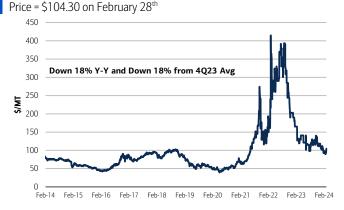
The Brent to WTI gap is \$4.78



Source: BofA Global Research, DOE, Bloomberg BofA GLOBAL RESEARCH

\$2.30

Exhibit 26: Thermal Coal, Europe Coal 6000kcal CIF ARA Forward



Source: BofA Global Research and Bloomberg.

BofA GLOBAL RESEARCH

Exhibit 28: Class 8 Truck net orders

Prelim. January Class 8 Net Orders at 27,000 vs 26,352 in December



Source: BofA Global Research estimates and American Commercial Transportation Research (ACT)

BofA GLOBAL RESEARCH

Exhibit 29: Class 8 Truck net orders

January's Final Class 8 Net Orders at 27,125 (Preliminary was 27,000)

CLASS 8 NET	ORDERS					
	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
JAN	16,105	17,204	42,307	21,041	18,624	27,125
FEB	16,854	14,040	44,190	21,006	23,790	
MAR	15,783	7,632	40,049	21,301	19,010	
APR	14,859	4,251	33,353	15,820	12,016	
MAY	10,886	6,690	23,072	14,081	15,623	
JUN	12,979	16,010	25,824	15,444	16,773	
JUL	10,298	20,359	25,876	11,025	15,573	
AUG	11,119	19,389	37,096	20,892	19,513	
SEP	12,692	30,768	27,323	53,271	36,974	
OCT	21,864	39,089	23,391	42,359	32,287	
NOV	17,483	52,104	9,902	32,630	41,732	
DEC	20,073	50,760	20,651	30,623	26,352	
Year Total	180,995	278,296	353,034	299,493	278,336	27,125

Source: American Commercial Transportation Research (ACT)

BofA GLOBAL RESEARCH

Exhibit 27: Australian Premium Coking Coal Futures



Source: BofA Global Research and Bloomberg.

BofA GLOBAL RESEARCH

Prelim. January Class 8 Net Orders at 27,000 (from 26,352 in December)

January Class 8 Final Net Orders 27,125



Exhibit 30: Class 8 Truck production

Class 8 Truck Production at 26,926 in January



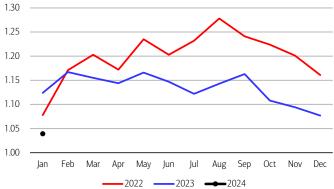
Source: BofA Global Research estimates and American Commercial Transportation Research (ACT) BofA GLOBAL RESEARCH

Class 8 Truck Production at 26,926 Up 3% Sequentially

Cass Freight Index: -7.6% Y-Y, -3.5% M-M

Exhibit 31: Cass Freight Shipments Index

January's Cass Freight Index: -7.6% Y-Y, -3.5% M-M

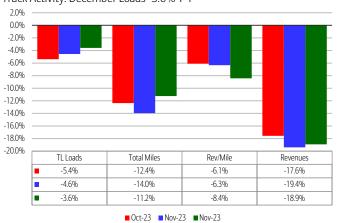


Source: Cass Information Systems, Inc.

BofA GLOBAL RESEARCH

Exhibit 32: Truck Activity

Truck Activity: December Loads -3.6% Y-Y



Source: American Trucking Association

BofA GLOBAL RESEARCH

December Total Truck Loads: -3.6% Y-Y



Exhibit 33: Historical ATA Truck Tonnage Index

Preliminary January Truck Tonnage: -4.7% Y-Y, -3.5% M-M



Source: American Trucking Association

BofA GLOBAL RESEARCH

Exhibit 34: Historical ATA Truck Tonnage Index

December Truck Tonnage: -0.8% Y-Y, +1.2% M-M

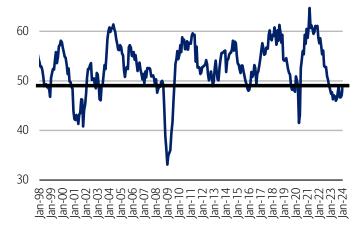
	2017	2018	2019	2020	2021	2022	2023
JAN	103.0	109.1	115.6	116.2	114.1	115.0	116.5
FEB	104.1	111.7	115.9	116.8	112.2	115.6	117.7
MAR	103.4	112.7	115.9	116.9	113.8	117.5	114.5
APR	104.1	111.4	117.5	107.0	114.1	117.1	113.4
MAY	104.9	113.3	117.2	109.5	113.2	117.1	114.2
JUN	103.8	113.9	117.4	111.4	111.4	117.8	114.0
JUL	106.9	113.4	119.0	114.0	110.9	116.2	114.8
AUG	108.4	114.0	120.2	111.6	110.7	118.0	114.9
SEP	109.0	114.8	117.4	111.1	112.6	118.9	114.2
OCT	109.3	116.2	118.0	111.2	113.2	117.6	114.6
NOV	110.1	117.0	117.2	112.2	114.2	115.3	113.6
DEC	111.7	114.9	116.3	113.2	114.9	115.9	115.0
Avg.	106.5	113.5	117.3	112.6	112.9	116.8	114.8

Source: American Trucking Association

BofA GLOBAL RESEARCH

Exhibit 35: ISM Manufacturing Index

January ISM Manufacturing Index 49.1, +2.0 pts.



Source: BofA Global Research and Bloomberg.

BofA GLOBAL RESEARCH

Prelim. January Truck Tonnage: -4.7% Y-Y, -3.5% M-M

December Truck Tonnage: -0.8% Y-Y, +1.2% M-M

ISM Manufacturing Index 49.1, +2.0 pts.



Exhibit 36: BofA Truckload Diffusion Indicator

Demand Indicator at 54.1 from 50.5 (bi-weekly Issue #303 on Feb 22nd)



Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 37: Shippers' 6-12 months outlook for freight demand

L-T Demand Indicator at 57.6, down 2% sequentially



Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 38: BofA Truck Shipper Demand Indicator vs ISM Manuf.

Demand Indicator has a 0.81 leading correlation to ISM PMI.



Source: BofA Global Research estimates, ISM.

BofA GLOBAL RESEARCH

BofA TRUCK SHIPPER SURVEY Survey Says: Demand (54.1)

This week, our proprietary bi-weekly BofA Truckload Demand **Indicator** for shippers' 0- to 3-month freight demand outlook increased to 54.1 from 50.5 last survey, its 2nd highest level in 80 weeks (40 surveys). The Demand Indicator has been at- or above-50 for 5 consec. issues and 8x over the past 13. This positive stretch follows a period at or below 50 for 21 of the prior 25 issues (since Feb 2023). The Indicator matches the 54.2 avg during the '12, '15, '19 Freight Recession periods, after 13 issues below, highlighting a somewhat improving backdrop. The Demand Indicator was up 13% year-year, its 12th yr-yr uptick in the past 13 issues. Rail carloads rose 2% year-year this week, its 3rd week of upticks. Dry van spot rates ex-fuel were \$1.41/mile, down from \$1.46/mile last week. Of the respondents, 26% had a positive short-term demand outlook, in line with 27% last survey; neutral outlooks were 60%, up from 47% last survey, and negative outlooks were 14%, down from 27% last survey. In the week of February 22nd, we surveyed 43 shippers for views on truckload demand, supply, pricing, and inventory.

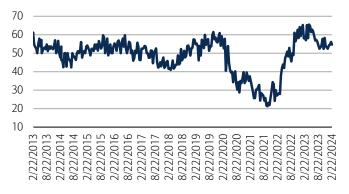
Capacity ticks lower; Inventory view down

The Rate Indicator, or shippers' view on truck rates, increased to 50.0 from 49.0 last issue, up 2% sequentially. **The Inventory Indicator** decreased to 54.7 from 56.1 last issue, down 3% sequentially, as inventories move closer to the 49 historical average. **Truck Capacity Indicator**, which gauges shippers' views of available truck capacity, decreased to 58.1 from 59.2 last survey, its lowest level in 12 surveys as capacity continues to tighten.

Our Demand Indicator has a 0.8 leading correlation to ISM Manufacturing PMI.

Exhibit 39: Shippers' view of inventory levels

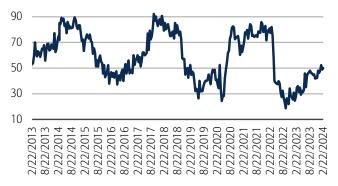
Inventory Indicator at 54.7, down 3% from last issue.



Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 40: Shippers' view of Trucking rates over the next 3 months Rate Indicator at 50.0, +2% sequentially



Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Exhibit 42: BofA Truckload 0-3 month Demand (Diffusion) Indicator Diffusion indicator month-by-month levels

	2020		:	2021		2022		2023		2024
Jan	1/2	52.3	1/14	63.8	1/13	75.0	1/12	47.5	1/11	51.6
	1/16	54.1	1/28	63.8	1/27	70.0	1/26	51.3	1/25	52.8
Feb	1/30	54.6	2/11	67.5	2/10	69.5	2/9	45.1	2/8	50.5
	2/13	53.1	2/25	68.8	2/24	71.9	2/23	47.6	2/22	54.1
Mar	2/27	51.3	3/11	72.9	3/10	70.3	3/9	46.9	3/8	
	3/12	46.1	3/25	68.8	3/24	69.2	3/23	48.3	3/22	
Apr	3/26	43.5	4/8	73.0	4/7	64.1	4/6	49.5	4/5	
	4/9	37.2	4/22	75.7	4/21	58.0	4/20	44.4	4/19	
	4/23	33.3	5/6	77.6	5/5	57.5	5/4	49.5	5/3	
May	5/7	37.8	5/20	78.3	5/19	55.0	5/18	44.3	5/17	
	5/21	46.2	6/3	78.3	6/2	58.5	6/1	42.6	5/31	
Jun	6/4	54.6	6/17	78.1	6/16	54.0	6/15	47.9	6/14	
	6/18	56.4	7/1	75.7	6/30	55.5	6/29	49.4	6/28	
Jul	7/2	59.3	7/15	70.9	7/14	50.9	7/13	47.1	7/12	
	7/16	62.5	7/29	74.3	7/28	53.9	7/27	50.0	7/26	
Aug	7/30	59.1	8/12	73.0	8/11	50.0	8/10	55.2	8/9	
	8/13	63.5	8/26	73.0	8/25	54.5	8/24	51.0	8/23	
Sep	8/27	71.1	9/9	73.6	9/8	51.6	9/7	52.4	9/6	
	9/10	75.8	9/23	75.0	9/22	50.0	9/21	50.0	9/20	
Oct	9/24	78.1	10/7	69.4	10/6	47.6	10/5	48.9	10/4	
	10/8	73.3	10/21	68.3	10/20	45.6	10/19	52.5	10/18	
	10/22	70.0	11/4	76.6	11/3	42.4	11/2	47.7	11/1	
Nov	11/5	72.5	11/18	67.7	11/17	50.4	11/16	44.4	11/15	
	11/19	69.9	12/2	69.7	12/1	47.8	11/30	49.0	11/29	
Dec	12/3	63.8	12/16	68.6	12/15	47.2	12/14	49.0	12/13	
	12/17	66.3	12/30	66.7	12/29	49.4	12/28	52.4	12/27	
	12/31	67.7								

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Rates view up

With respect to rates, 12% of shippers expect rates to fall, down from 22% last issue, 77% expect pricing to be flat, up from 57% last issue, and 12% expect rates to rise, from 20% last issue. On capacity, 28% expect capacity to rise, vs 31% last issue, 60% expect capacity to stay flat, from 57% last issue, 12% expect capacity to be lower, flat with last issue. **SHIPPER COMMENTS:** An Industrial Shipper noted that truck capacity is tightening regionally due to a lack of back haul opportunities. A Logistics Shipper highlights everything it is hearing and seeing suggest we have hit a bottom rates-wise yet have not seen the exodus of trucking companies it normally sees this time in the cycle. (See survey for additional commentary).

Exhibit 41: Shippers' view of Capacity over the next 3 months Capacity Indicator at 58.1, down 2% sequentially

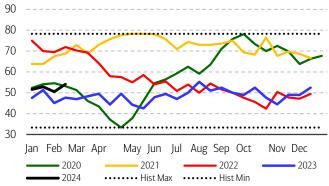


Source: BofA Global Research estimates.

BofA GLOBAL RESEARCH

Exhibit 43: Demand (Diffusion) Indicator for 0–3-month demand outlook on stack basis (2020-2024)

Demand Indicator to 54.1 (bi-weekly Issue #303 on February 22nd)



Source: BofA Global Research estimates

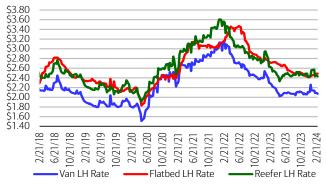
BofA GLOBAL RESEARCH

Disclaimer: The indicator identified as BofA Truckload Diffusion Indicator in this report is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark.



Exhibit 44: Month-to-Date Run Rate

Van Rate = \$2.07 Flatbed Rate = \$2.49 & Reefer Rate = \$2.43

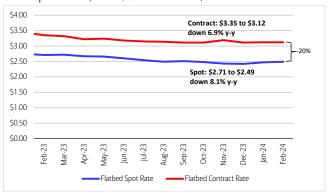


Source: DAT (Dial-A-Truck)

BofA GLOBAL RESEARCH

Exhibit 46: Monthly Flatbed Spot Rate vs. Contract Rate

Flatbed Spot Rate = \$2.49 & Contract Rate = \$3.12

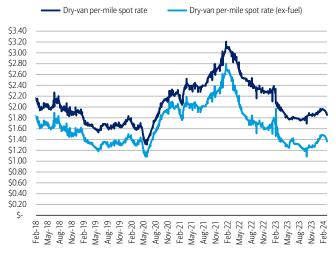


Source: DAT (Dial-A-Truck)

BofA GLOBAL RESEARCH

Exhibit 48: Truckstop.com Spot Rates

Dry-Van Spot = \$1.85 Dry-Van (ex-fuel) = \$1.36

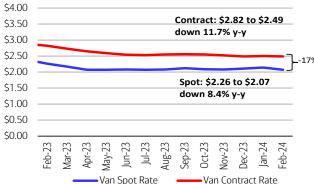


Source: Truckstop.com, Bloomberg

BofA GLOBAL RESEARCH

Exhibit 45: Monthly Van Spot Rate vs. Contract Rate

Van Spot Rate = \$2.07 & Contract Rate = \$2.47

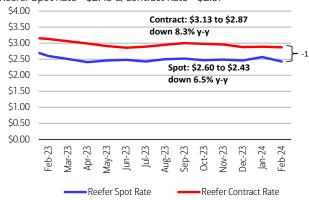


Source: DAT (Dial-A-Truck)

BofA GLOBAL RESEARCH

Exhibit 47: Monthly Reefer Spot Rate vs. Contract Rate

Reefer Spot Rate = \$2.43 & Contract Rate = \$2.87



Source: DAT (Dial-A-Truck)

BofA GLOBAL RESEARCH

TruckStop Spot Rates: Dry-Van Spot = \$1.85, Dry-Van (ex-fuel) = \$1.36

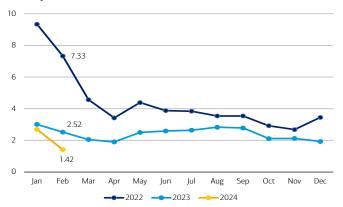
Truckstop.com's Dry van spot rates ex-fuel were \$1.36/mi for the week ending February 28, from \$1.41/mi the prior week (February 21) and are down 3% YTD (from \$1.41/mi on Dec 31).

Truckstop.com's Dry van spot rates (fuel included) were \$1.85/mi for the week ending February 28, from \$1.89/mi the prior week (February 21) and are down 3% YTD (from \$1.91/mi on Dec 31).

Fuel represented \$0.49/mi, up from last week's \$0.48/mi and down from \$0.50 on Dec 31.

Exhibit 49: Van Load to Truck Ratio

February Load-to-Truck Ratio at 1.42, down 47% M-M



Source: DAT (Dial-A-Truck), Bloomberg

BofA GLOBAL RESEARCH

Exhibit 50: Top 10 US Ports Loaded Volumes

Top 10 Ports in December: +11% Y-Y, LA/LB +15% Y-Y

Top 10 U.S. Ports	2023 TEU's	2023 YTD Chg.	Nov-23 Y-Y %	Dec-23 Y-Y %	Nov-23 TEU's	Dec-23 TEU's
Los Angeles (18%)	5,733,326	-7%	25%	8%	496,374	486,236
Long Beach (16%)	5,086,796	-12%	21%	22%	464,137	437,017
Total LA/LB						
(35% of total US)	10,820,122	-9%	23%	15%	960,511	923,253
New York (17%)	5,275,292	-14%	-5%	6%	436,302	430,690
Savannah (13%)	3,738,450	-11%	-3%	-1%	318,679	321,579
Houston (11%)	3,175,543	0%	-10%	11%	254,027	270,618
Norfolk (9%)	2,627,523	-6%	6%	-1%	230,047	213,388
Seaport Alliance (6%)	1,667,451	-8%	2%	19%	138,832	156,423
Charleston (7%)	1,923,450	-6%	1%	-3%	157,512	162,100
Oakland (5%)	1,575,077	-10%	1%	15%	132,648	142,148
Maryland (1%)	793,060	2%	0%	5%	61,962	67,655
Total Top 10					2,690,52	
(91.5% of US)	31,595,968	-6.7%	5.4%	11%	0	2,687,854
Vancouver	2,355,940	-7%	4%	42%	213,457	215,153
Prince Rupert	494,713	-26%	-10%	-20%	41,679	44,340

Source: Ports of Los Angeles, Long Beach, New York, Savannah, Norfolk, Oakland, Houston, Charleston, Vancouver, Maryland, and BofA Global Research estimates

BofA GLOBAL RESEARCH

Canadian Dollar and Mexican Peso FX Rates

DAT Spot Dry-Van Load/Truck Ratio = 0.99

Weekly Update: DAT's (Dial-a-Truck) dry-van spot load-to-truck ratio was 0.99 for the week ended February 25th, down from 1.16 (-15%) the prior week (February 18), and down from 2.29 (-57%) a year prior. The Ratio posted three consecutive historic lows.

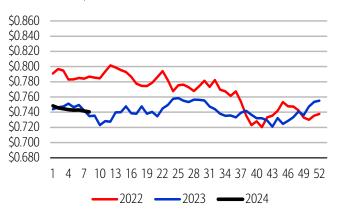
Monthly Update: DAT's (Dial-a-Truck) dry-van spot load-to-truck ratio is at 1.42 for the month of February, down from 2.69 in January, and down from 2.52 (-44%) a year prior. In January, the Ratio was down year-year for the 24^{th} consecutive month.

Top 10 Ports in December: +11% Y-Y, LA/LB +15% Y-Y



Exhibit 51: Price of 1 Canadian Dollar in US\$

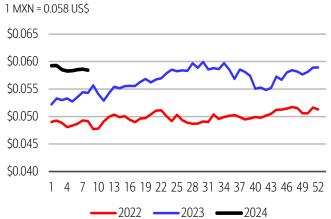
1 CAD = 0.741 US\$



Source: Bloomberg

BofA GLOBAL RESEARCH

Exhibit 52: Price of 1 Mexican Peso in US\$



Source: Bloomberg



Exhibit 53: IATA Volume year-over-year growth

IATA Freight Vols: +10.8% Y-Y in December, North America +2.0%



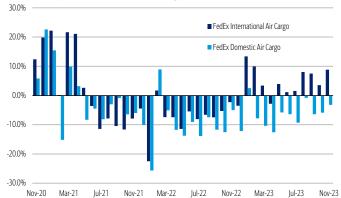
Source: International Air Transport Association

BofA GLOBAL RESEARCH

IATA Freight Vols: +10.8% Y-Y in December, North America +2.0%

Exhibit 54: FedEx Air Cargo Volumes at Memphis International Airport

Memphis Airport FDX Domestic Air Cargo Volumes in November: -3.2 % Y-Y



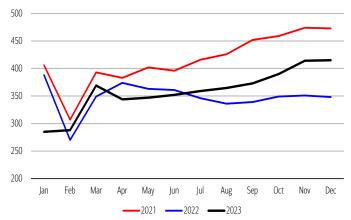
Source: BofA Global Research and Memphis International Airport Statistics

BofA GLOBAL RESEARCH

Memphis Airport FDX Air Cargo Volumes in November: -3.2% Y-Y

Exhibit 55: Hong Kong Airport cargo (000 tons)

HKIA in December: +19.3% Y-Y, +0.2% M-M



Source: Hong Kong International Airport

BofA GLOBAL RESEARCH

Hong Kong Airport (HKIA): +19.3% Y-Y, +0.2% M-M



Rail Performance Measures

Overall Takeaway: The 3 main service level metrics for Class I Rails had a mixed performance on a sequential basis this week, as Velocity and Dwell Time deteriorated, while Cars-On-Line slightly improved. At the same time, all 3 metrics posted upticks on a year-over-year basis for the fourth consecutive week, as Velocity, Cars-On-Line and Dwell Time improved. CNI (+2.1%) led the group in velocity this week, reversing last week's 2.1% decline. CPKC (-4.6%) trailed the group this week, reversing last week's 1.0% increase. BNSF has not reported yet.

Velocity (avg. speed of rail network, faster is better): Deteriorated sequentially (-1.0%) and Improved year-over-year (+0.4%).

Cars-on-Line (fewer cars-on-line is better): Improved sequentially (-0.1%) and improved year-over-year (-1.3%).

Terminal Dwell (lower is better): Deteriorated sequentially (+0.3%) and Improved year-over-year (-5.3%).

Exhibit 56: Rail Performance Metrics

Service levels improved year-over-year, but were mixed sequentially

Rail Performance Measures

Velocity (avg. speed of rail network, faster is better)

	2024	2024	2023		
(miles per hour)	Week 8	Week 7	Week 8	% Seq Chg	% y-y Chg
CNI	19.4	19.0	19.6	2.1%	-1.0%
CPKC	18.5	19.4	16.7	-4.6%	10.8%
CSX	17.9	18.2	18.7	-1.6%	-4.3%
NSC	20.7	20.9	20.7	-1.0%	0.0%
UNP	23.8	23.8	24.2	0.0%	-1.7%
BNSF (1)	25.4	25.4	26.0	0.0%	-2.3%
Average	20.1	20.3	20.0	-1.0%	0.4%

% Seq Chg		% y-y Chg
	_	
Slower		Faster
-1.0%		+0.4%

Cars On Line (fewer cars-on-line is better)

	2024	2023	2023	•	
(no. of cars)	Week 8	Week 7	Week 8	% Seq Chg	% y-y Chg
CNI	84,390	85,140	86,294	-0.9%	-2.2%
CPKC	89,558	89,272	100,200	0.3%	-10.6%
CSX	126,310	125,671	126,025	0.5%	0.2%
NSC	169,749	169,267	169,539	0.3%	0.1%
UNP	309,806	311,549	308,167	-0.6%	0.5%
BNSF (1)	260,471	261,258	252,313	-0.3%	3.2%
Average	155,963	156,180	158,045	-0.1%	-1.3%

Better	
-0.1%	

er	Bette
%	-1.3%

Terminal Dwell Time (lower is better)

	2023	2023	2023		
(time in hours)	Week 8	Week 7	Week 8	% Seq Chg	% y-y Chg
CNI	6.9	7.0	7.5	-1.4%	-8.0%
CPKC	9.6	9.2	11.9	4.3%	-19.3%
CSX	9.9	9.9	8.9	0.0%	11.2%
NSC	24.4	24.3	25.8	0.4%	-5.4%
UNP	23.1	23.3	23.9	-0.9%	-3.3%
BNSF (1)	26.9	27.5	27.4	-2.2%	-1.8%
Average	14.8	14.7	15.6	0.3%	-5.3%

Worse +0.3%



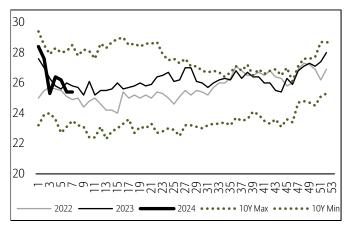
(1): Due the BNSF reporting schedule the reported data is delayed by one week and not included on the averages.

Source: BofA Global Research, company reports

Weekly Rail Velocity Monitor

Exhibit 57: BNSF Velocity

BNSF velocity was 25.4 mph for week 7

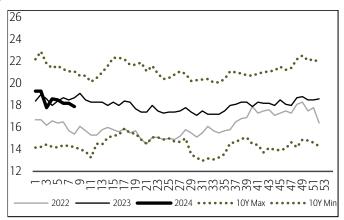


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 59: CSX Velocity

CSX velocity was 17.9 mph for week 8

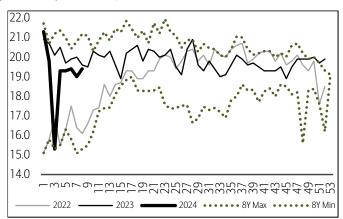


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 61: Canadian National Velocity

CNI velocity was 19.4 mph for week 8



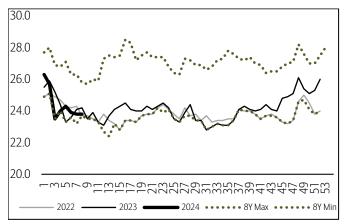
Source: Company reports, and Association of American Railroads.

CNI restated performance metrics, historical data available from 2017

BofA GLOBAL RESEARCH

Exhibit 58: Union Pacific Velocity

UNP velocity was 23.8 mph for week 8



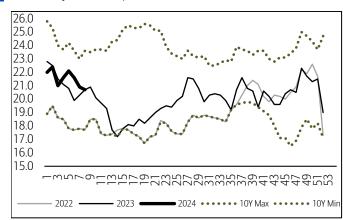
Source: Company reports, and Association of American Railroads.

UNP restated performance metrics, historical data available from 03/24/17

. BofA GLOBAL RESEARCH

Exhibit 60: Norfolk Southern Velocity

NSC velocity was 20.7 mph for week 8

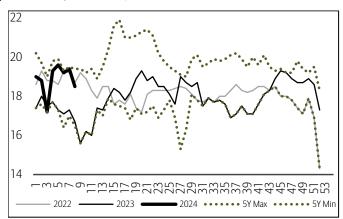


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 62: Canadian Pacific Kansas City Velocity

CPKC velocity was 18.5 mph for week 8



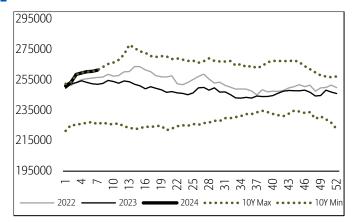
Source: Company reports, and Association of American Railroads. CPKC restated performance metrics, historical data available from 2020



Weekly Cars On-Line Monitor

Exhibit 63: BNSF Cars-On-Line

BNSF cars on line were 260,471 for week 7

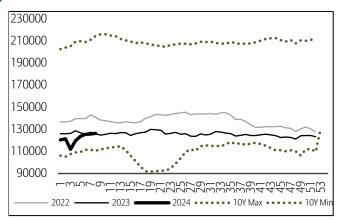


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 65: CSX Cars-On-Line

CSX cars on line were 126,310 for week 8

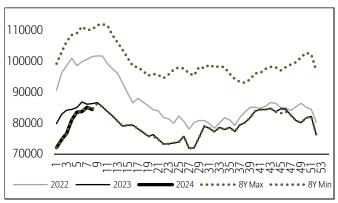


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 67: Canadian National Cars-On-Line

CNI cars on line were 84,390 for week 8



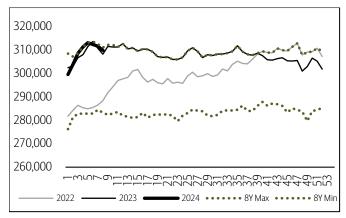
Source: Company reports, and Association of American Railroads.

CNI restated performance metrics, historical data available from 2017

BofA GLOBAL RESEARCH

Exhibit 64: Union Pacific Cars-On-Line

UNP cars on line were 309,806 for week 8



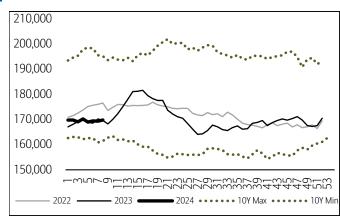
Source: Company reports, and Association of American Railroads.

UNP restated performance metrics, historical data available from 03/24/17

BofA GLOBAL RESEARCH

Exhibit 66: Norfolk Southern Cars-On-Line

NSC cars on line were 169,749 for week 8

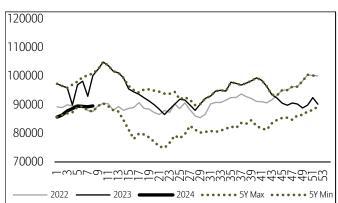


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 68: Canadian Pacific Kansas City Cars-On-Line

CPKC cars on line were 89,558 for week 8



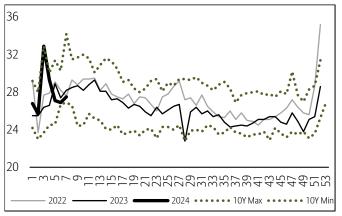
Source: Company reports, and Association of American Railroads. CPKC restated performance metrics, historical data available from 2020



Weekly Dwell Time Monitor

Exhibit 69: BNSF Dwell Time

BNSF dwell time was 26.9 hrs for week 7

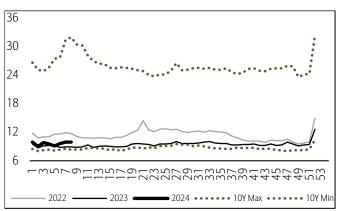


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 71: CSX Dwell Time

CSX dwell time was 9.9 hrs for week 8

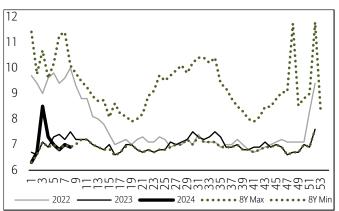


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 73: Canadian National Dwell Time

CNI dwell time was 6.9 hrs for week 8



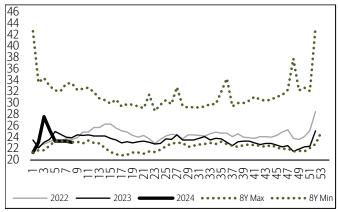
Source: Company reports, and Association of American Railroads.

CNI restated performance metrics, historical data available from 2017

BofA GLOBAL RESEARCH

Exhibit 70: Union Pacific Dwell Time

UNP dwell time was 23.1 hrs for week 8



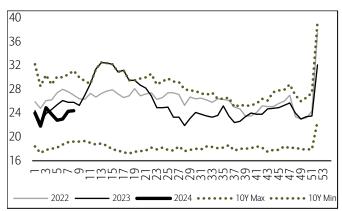
Source: Company reports, and Association of American Railroads

UNP restated performance metrics, historical data available from 03/24/17

BofA GLOBAL RESEARCH

Exhibit 72: Norfolk Southern Dwell Time

NSC dwell time was 24.4 hrs for week 8

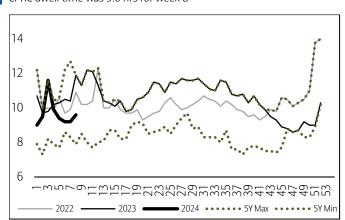


Source: Company reports, and Association of American Railroads.

BofA GLOBAL RESEARCH

Exhibit 74: Canadian Pacific Kansas City Dwell Time

CPKC dwell time was 9.6 hrs for week 8



Source: Company reports, and Association of American Railroads. CPKC restated performance metrics, historical data available from 2020



Less-than-Truckload Data Update and Rail Employment

Exhibit 75: Less-than-Truckload Tons/Day Y-Y%

LTL Tons/Day is down 5.2% on avg y-y in Jan. (among peers that disclose)

	ODFL	YELL	ARCB	SAIA	XPO
Jan-23	-7.8%	-17.2%	1.6%	-3.7%	2.8%
Feb-23	-12.4%	1.3%	2.1%	-7.6%	-2.0%
Mar-23	-15.8%	-16.9%	4.3%	-5.2%	-5.5%
Apr-23	-14.5%	-16.4%	1.3%	-1.1%	-2.0%
May-23	-14.4%	-16.3%	2.0%	-2.0%	-2.3%
Jun-23	-13.3%	-18.3%	-0.2%	-2.2%	-4.0%
Jul-23	-11.1%		-5.2%	3.4%	4.2%
Aug-23	-6.0%		-7.1%	6.8%	3.3%
Sep-23	-3.7%		-6.6%	9.7%	2.2%
Oct-23	-1.9%		-4.0%	7.8%	2.5%
Nov-23	-2.3%		-10.0%	9.2%	-0.5%
Dec-23	-2.3%		-8.3%	6.8%	3.6%
Jan-24	-5.0%		-18.0%	3.3%	-1.1%

No data provided (BofA quarterly average)

Source: BofA Global Research estimates and company reports

Note: ODFL's January Tons are preliminary

BofA GLOBAL RESEARCH

Exhibit 77: Less-than-Truckload Shipments/Day Y-Y%

Shipments/Day is up 0.5% on avg y-y in Jan. (among peers that disclose)

	ODFL	YELL	ARCB	SAIA	XPO	FDX
Jan-23	-5.9%	-18.1%	7.1%	-4.0%	5.0%	-10.0%
Feb-23	-10.1%	-2.5%	9.5%	-7.6%	1.1%	-14.0%
Mar-23	-12.9%	-19.3%	7.3%	-9.4%	-0.5%	-19.0%
Apr-23	-11.8%	-15.4%	4.7%	-5.7%	3.1%	-17.0%
May-23	-11.4%	-13.8%	2.0%	-4.2%	1.8%	-17.0%
Jun-23	-11.2%	-16.4%	5.4%	-1.8%	0.9%	-16.0%
Jul-23	-8.5%		1.4%	6.0%	8.8%	-14.0%
Aug-23	-1.2%		2.1%	14.2%	8.3%	-8.0%
Sep-23	1.0%		0.9%	16.3%	6.6%	-6.0%
Oct-23	-8.5%		3.7%	18.0%	6.2%	-5.0%
Nov-23	-1.2%		-5.0%	18.9%	3.7%	-4.0%
Dec-23	1.0%		-1.9%	16.5%	6.6%	
Jan-24	-2.3%		-9.0%	11.8%	1.4%	

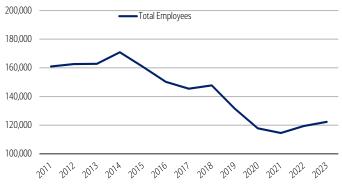
No data provided (BofA quarterly average)

Source: BofA Global Research estimates and company reports

BofA GLOBAL RESEARCH

Exhibit 78: STB employment data

December STB employment: 122,343, up 2.5% Y-Y

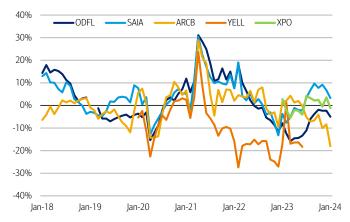


Source: STB

BofA GLOBAL RESEARCH

Exhibit 76: Less-than-Truckload Tons/Day Y-Y%

LTL Tons/Day is down 5.2% on avg y-y in Jan. (among peers that disclose))



Source: BofA Global Research estimates and company reports

BofA GLOBAL RESEARCH

Exhibit 79: STB quarter to date data vs BofAe labor estimates

Data as of December 2023

	2023 4Q Avg #	4Q Avg. chg. %	BofAe	Diff	4Q Vols
UNP	33,020	0.2%	1.5%	-1.3%	3.4%
CSX	19,216	6.0%	3.3%	2.7%	1.2%
NSC	20,759	7.1%			7.0%
CN	6,561	3.2%	4.6%	-1.4%	-1.4%
CP	2,912	1.1%	1.0%	0.1%	1.7%
KSU	2,927	-0.6%	-	-	-
BNSI	36,968	2.2%	-	-	-
Tota	l 122,364	3.0%	-	-	-

Note: Monthly average quarter-to-date; 4Q Volumes are estimates

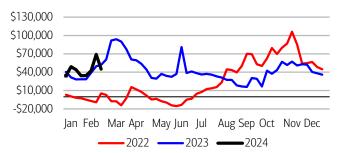
Source: STB, BofA Global Research estimates



Weekly Shipping Rates

Exhibit 80: VLCC Spot Rates

VLCC Spot Rates at \$45,070 as of 02/23/2024

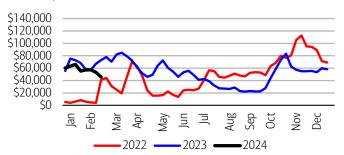


Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 82: Suezmax Spot Rates

Suezmax Spot Rates at \$45,794 as of 02/23/2024

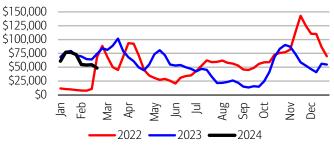


Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 84: Aframax Spot Rates

Aframax Spot Rates \$48,428 as of 02/23/2024

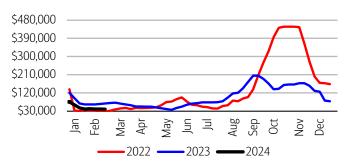


Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 86: LNG TFDE Spot Rates

LNG TFDE Spot Rates at \$39,000 as of 02/23/2024

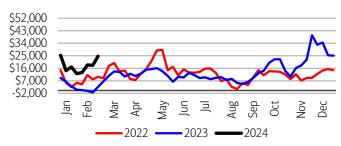


Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 81: Capesize spot Rates

Capesize Spot rates at \$24,597 as of 02/23/2024



Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 83: Panamax Spot Rates

Panamax Spot Rates at \$12,872 as of 02/23/2024

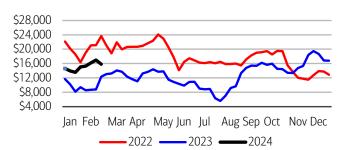


Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 85: Supramax Spot Rates

Supramax Spot Rates at \$15,829 as of 02/23/2024



Source: BofA Global Research and Clarksons

BofA GLOBAL RESEARCH

Exhibit 87: Yearly and Quarterly Gas Carrier Rate Data

LNG Carrier Rate is down 1QTD and YTD

Gas Carrier	1QTD Average	2024 YTD Avg.	Orderbook % of Fleet
LNG TFDE	\$47,500	\$47,500	76%
% chg. Y-Y	-34%	-51%	

Source: Clarkson



Exhibit 88: Yearly and Quarterly Tanker Rate Data

Tanker Rates are down 1QTD, but up YTD

	1QTD	2024 YTD	Orderbook
Tanker	Average	Avg.	% of Fleet
VLCC	\$44,062	\$44,062	2%
% chg. Y-Y	-20%	2%	
Suezmax	\$57,280	\$57,280	5%
% chg. Y-Y	-19%	7%	
Aframax	\$62,384	\$62,384	11%
% chg. Y-Y	-19%	12%	
Source: Clarkson			

BofA GLOBAL RESEARCH

Exhibit 90: Baltic Dry Index

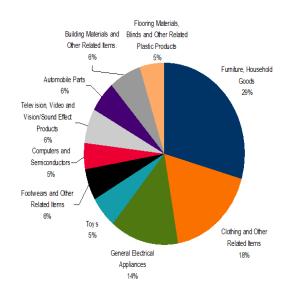
Baltic Dry Index is at 1,866 as of 02/23/2024



BofA GLOBAL RESEARCH

Exhibit 92: Container Breakdown by Commodity

Furniture, Household & Goods represents almost 30%



Source: OOCL, BofA Global Research estimates

Exhibit 89: Yearly and Quarterly Dry Bulk Rate Data

Dry Bulk Rates are up 1QTD and YTD

	1QTD	2024 YTD	Orderbook
Dry Bulk	Average	Avg.	% of Fleet
Capesize	\$17,855	\$17,855	5%
% chg. Y-Y	211%	44%	
Panamax	\$12,204	\$12,204	9%
% chg. Y-Y	22%	2%	
Supramax	\$15,182	\$15,182	8%
% chg. Y-Y	37%	22%	

Source: Clarkson

BofA GLOBAL RESEARCH

Exhibit 91: Shipping Rates

Shipping Rates are mixed year-over-year

	Current Wk 02/23/24	Prior Wk 02/16/24	YOY Wk 02/24/23	Seq % Change	YOY % Change
Vessel Type				•	•
VLCC	\$45,070	\$69,077	\$51,903	-34.8%	-13.2%
Suezmax	\$45,794	\$53,222	\$72,917	-14.0%	-37.2%
Aframax	\$48,428	\$54,475	\$74,123	-11.1%	-34.7%
LNG TFDE	\$39,000	\$40,000	\$67,500	-2.5%	-42.2%
Baltic Dry Index	1,866	1,610	883	15.9%	111.3%
Source: Bloomba	ra and Clarkson				

BofA GLOBAL RESEARCH

Exhibit 93: Container Rates – Shanghai Containerized Freight Index (SCFI)

Shanghai – LA and Shanghai – Rotterdam are up significantly year-over-year



Source: Chinese Shipping, and BofA Global Research

Exhibit 94: Railroads Comp Sheet

Data as of 02/28/2024

								EP:	>										
		Share	Shares	Mkt Cap	Net Debt	t EV	BofA	BofA	BofA	Cons.	Fe	orward F	P/E	EB	ITDA (\$	bil)	Forwa	rd EV/EI	BITDA
	QRQ		Out.																
Company Ticke	er	Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)	2022a	2023e	2024e	2024e	2022a	2023e	2024e	2022a	2023e	2024e	2022a	2023e	2024e
Canadian National CNI	B-2-7	\$129.75	641	\$83.1	\$13.4	\$96.6	\$5.75	\$5.43	\$5.94	\$5.92	22.6x	23.9x	21.8x	\$6.61	\$6.27	\$6.76	14.6x	15.4x	14.3x
Canadian Pacific CP	B-1-7	\$84.92	932	\$79.2	\$16.9	\$96.1	\$2.89	\$2.86	\$3.20	\$3.22	29.4x	29.7x	26.6x	\$4.92	\$5.03	\$5.50	19.5x	19.1x	17.5x
CSX Corporation CSX	B-1-7	\$37.68	1,959	\$73.8	\$17.1	\$90.9	\$1.91	\$1.84	\$2.00	\$1.98	19.7x	20.5x	18.8x	\$7.42	\$7.13	\$7.43	12.3x	12.8x	12.2x
Union Pacific UNP	B-1-7	\$253.99	610	\$154.9	\$31.5	\$186.4	\$11.23	\$10.29	\$11.15	\$11.15	22.6x	24.7x	22.8x	\$12.26	\$11.47	\$12.23	15.2x	16.3x	15.2x
											23.6x	24.7x	22.5x				14.7x	15.5x	14.8x

	2024	Q1EPS						Reve	nue	2023Q4	Net	ROIC								
	е	st.	Δto		EPS Grov	vth	YoY	Grov	wth	Op.	Debt/	KOIC		Total Re	eturn (v	v/reinve	sted div	idends)	Divid	dend
Company	BofA	Cons.	Street	1yr	3yr	5yr	1Q2024	1yr	5yr	Ratio	EBITDA	1yr	_	1 week	YTD	1yr	3yr	5yr	Annual	Yield
Canadian National	\$1.20	\$1.28	-7%	-3%	20%	19%	-2%	-2%	4%	59%	2.2x	10.4%		1%	3%	16%	8%	11%	\$3.39	1.9%
Canadian Pacific	\$0.69	\$0.71	-2%	-5%	6%	15%	-5%	4%	17%	58%	3.5x	5.6%		-1%	7%	13%	7%	17%	\$0.76	0.7%
CSX Corporation	\$0.46	\$0.45	2%	-1%	110%	44%	-1%	-1%	4%	64%	2.5x	10.8%		2%	9%	25%	9%	11%	\$0.48	1.3%
Union Pacific	\$2.45	\$2.51	-3%	-7%	11%	6%	-3%	-3%	2%	61%	2.9x	11.4%		2%	4%	25%	10%	11%	\$5.20	2.0%
										62%	3.0x	9.3%	•	0%	6%	19%	7%	12%		

Source: BofA Global Research estimates, Company reports, Bloomberg (for stocks not covered by BofA Global Research)

BofA GLOBAL RESEARCH

Exhibit 95: Intermodal/Container Lessors Comp Sheet

Data as of 02/28/2024

									CF	3										
		QRQ	Share	Shares Out.	Mkt Cap	Net Debi	EV .	BofA	BofA	BofA	Cons	Fo	orward F	/E	EE	SITDA (\$	bil)	Forwa	rd EV/EI	BITDA
Company	Ticker		Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)	2022a	2023e	2024e	2024e	2022a	2023e	2024e	2022a	2023e	2024e	2022a	2023e	2024e
J.B. Hunt																				
Transp.	JBHT	B-1-7	\$205.20	103	\$21.2	\$1.5	\$22.7	\$9.79	\$7.20	\$8.15	\$7.79	21.0x	28.5x	25.2x	\$2.06	\$1.78	\$1.99	11.0x	12.7x	11.4x
Textainer Gro	oup TGH	n/a	\$50.14	41	\$2.1	\$4.7	\$6.8	n/a	\$4.55	n/a	\$4.91	8.2x	11.0x	10.2x	\$0.75	\$0.65	\$0.65	9.1x	10.4x	10.4x
Hub Group In	ic HUBG	n/a	\$43.42	62	\$2.7	\$0.4	\$3.1	n/a	\$2.68	n/a	\$2.22	8.2x	16.2x	19.5x	\$0.62	\$0.40	\$0.40	5.0x	7.8x	7.8x
												12 Г.,	10 (10 2				0.4	10 2	0.0

	2024	Q IEPS						Keve	nue	2023Q4	- Net	DOLC							
	e	st.	Δto		EPS Grov	wth	YoY	Grov	wth	Op.	Debt/	ROIC	Total R	eturn (w/reinve	sted div	idends)	Divid	dend
Company	BofA	Cons.	Street	1yr	3yr	5yr	1Q2024	1yr	5yr	Ratio	EBITDA	1yr	1 week	YTD	1yr	3yr	5yr	Annual	Yield
J.B. Hunt																			
Transp.	\$1.59	\$1.61	-1%	-22%	18%	19%	-13%	-13%	8%	92%	1.1x	12.9%	1%	3%	15%	13%	15%	\$1.72	0.8%
Textainer Group	n/a	\$1.12		-25%	95%	48%	-11%	-5%	4%	59%	7.2x	5.0%	1%	2%	57%	27%	38%	\$1.20	2.4%
Hub Group Inc	n/a	\$0.41		-49%	63%	30%	-21%	-21%	1%	97%	1.0x	7.4%	-1%	-6%	-5%	15%	15%	\$0.50	1.2%
										83%	3.1x	8.4%	0%	0%	22%	18%	22%		

Source: BofA Global Research estimates, Company reports, Bloomberg (for stocks not covered by BofA Global Research)

BofA GLOBAL RESEARCH

Exhibit 96: Less-than-Truckload (LTL) Comp Sheet

Data as of 02/28/2024

									EP	S									
		QRQ	Share	Shares Out.	Mkt Cap	Net Deb	t EV	BofA	BofA	BofA Cons.	F	orward	P/E	EB	ITDA (\$	bil)	Forw	ard EV/E	BITDA
Company	Ticker		Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)	2022a	2023e	2024e 2024e	2022a	2023e	2024e	2022a	2023e	2024e	2022a	2023e	2024e
Arcbest Corp	ARCB	C-3-7	\$139.80	24	\$3.3	\$0.0	\$3.3	\$13.63	\$7.88	\$10.85 \$10.21	10.3x	17.7x	12.9x	\$0.58	\$0.37	\$0.47	5.6x	8.8x	6.9x
Old Dominion	ODFL	B-1-7	\$432.90	109	\$47.1	(\$0.4)	\$46.8	\$12.18	\$11.26	\$12.65 \$12.94	35.5x	38.4x	34.2x	\$2.10	\$1.97	\$2.17	22.3x	23.8x	21.6x
Saia Inc	SAIA	B-1-9	\$562.59	27	\$15.0	(\$0.2)	\$14.8	\$13.40	\$13.27	\$16.20 \$16.20	42.0x	42.4x	34.7x	\$0.63	\$0.64	\$0.78	23.6x	23.1x	18.9x
TFI Int'l	TFII	B-2-7	\$144.96	84	\$12.3	\$1.9	\$14.1	\$1.74	\$1.71	\$2.20 \$7.49	83.2x	84.8x	65.9x	\$1.14	\$0.91	\$1.09	12.5x	15.5x	13.0x
XPO, Inc.	XPO	C-1-9	\$117.74	116	\$13.7	\$3.7	\$17.4	\$3.53	\$2.93	\$3.65 \$3.47	33.4x	40.2x	32.3x	\$0.66	\$0.66	\$0.87	26.3x	26.2x	20.0x
											40.9x	44.7x	36.0x	_			18.0x	19.5x	16.1x

	2024Q1EPS						Revo	enue	2023Q		DOLC							
	est.	Δ to	E	PS Grov	vth	YoY	Gro	wth	4 Op.	Net Debt/	ROIC	Total R	eturn (v	v/reinves	ted divi	dends)	Divid	dend
Company	BofA Cons.	Street	1yr	3yr	5yr	1Q2024	1yr	5yr	Ratio	EBITDA	1yr	1 week	YTD	1yr	3yr	5yr	Annual	Yield
Arcbest Corp	\$1.91 \$1.58	21%	-39%	70%	n/a	-17%	-15%	9%	93%	0.3x	10.5%	1%	16%	46%	34%	33%	\$0.48	0.3%
Old Dominion	\$2.74 \$2.72	1%	-9%	29%	20%	-6%	-6%	8%	72%	-0.1x	28.7%	2%	7%	28%	27%	34%	\$2.08	0.5%
Saia Inc	\$3.39 \$3.40	0%	-1%	40%	35%	3%	3%	13%	85%	-0.2x	18.3%	3%	28%	108%	41%	53%		
TFI Int'I	\$1.57 \$1.47	7%	-17%	47%	130%	-15%	-15%	20%	90%	1.7x	12.8%	0%	7%	20%	29%		\$1.60	1.1%
XPO, Inc.	\$0.71 \$0.67	7%	-7%	89%	n/a	0%	0%	-10%	92%	4.3x	9.6%	-1%	34%	253%	43%	47%		
									86%	1.2x	16.0%	1%	19%	91%	35%	42%		

 $\textbf{Source:} \ \textbf{BofA Global Research estimates, Company reports, Bloomberg (for stocks not covered by BofA Research)}$



Exhibit 97: Airfreight Comp Sheet

Data as of 02/28/2024

		OPO	Share	Share Out.	Mkt Cap	Net Deb	: EV	BofA	BofA	BofA	Cons.	F	orward P	/E	EB	ITDA (\$ b	il)	Forwa	rd EV/EB	ITDA
Company	Ticker	QRQ	Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)	2022a	2023e	2024e	2024e	2022a	2023e	2024e	2022a	2023e	2024e	2022a	2023e	2024e
Fedex Corp	FDX	B-1-7	\$244.37	250	\$61.1	\$13.8	\$74.9	\$14.96	\$17.70	\$20.85	\$17.61	16.3x	13.8x	11.7x	\$9.55	\$11.60	\$11.60	7.8x	7.1x	6.5x
United Parcel-B	UPS	B-2-7	\$147.77	727	\$126.0	\$19.1	\$145.1	\$12.95	\$8.78	\$8.40	\$8.28	11.4x	16.8x	17.6x	\$16.97	\$12.88	\$12.88	8.6x	11.1x	11.3x
												13.9x	15.3x	14.7x				8.2x	9.1x	8.9x
	2	02401EB	C				Dovonuo	202204	Not											

	ZUZ I QILF3						reve	illue	2023Q-	+ MCL	ROIC							
	est.	Δ to	Е	PS Grov	vth	YoY	Gro	wth	Op.	Debt/	ROIC	Total	Return (w/reinves	ted divide	ends)	Dividend	
Company	BofA Cons.	Street	1yr	3yr	5yr	1Q2024	1yr	5yr	Ratio	EBITDA	1yr	1 week	YTD `	1yr	3yr	5yr	Annual Yield	
Fedex Corp	\$3.13 \$3.55	-12%	-7%	94%	11%	-4%	-7%	5%	94%	3.3x	5.6%	1%	-3%	23%	0%	8%	\$5.04 2.1%	
UPS	\$1.61 \$1.58	2%	-35%	267%	n/a	-9%	-9%	5%	89%	1.5x	14.4%	0%	-5%	-16%	1%	10%	\$6.52 4.4%	
									91%	2.4x	10.0%	0%	-4%	4%	1%	9%		

Source: BofA Global Research estimates, Company reports, Bloomberg.

Note: FedEx fiscal calendar ends May 31. Fiscal year 2024 goes from June 1, 2023 - to - May 31, 2024. Quarter estimates correspond to 3Q24, and year metrics correspond to fiscal years 2023, 2024, and 2025.

BofA GLOBAL RESEARCH

Exhibit 98: Truckload Carriers Comp Sheet

Data as of 02/28/2024

		QRQ	Share	Shares Out.	Mkt Cap	Net Debt	: EV		BofA	BofA	BofA	Cons.	F	orward P	/E	EBI	TDA (\$	bil)	Forwa	ard EV/E	BITDA
Company	Ticker		Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)		2022a	2023e	2024e	2024e	2022a	2023e	2024e	2022a	2023€	2024e	2022a	2023e	2024e
Knight Transportatio	n KNX	B-1-7	\$55.89	161	\$9.0	\$2.8	\$11.8	_	\$5.10	\$1.72	\$2.50	\$2.49	11.0x	32.5x	22.4x	\$1.77	\$1.10	\$1.39	6.7x	10.8x	8.5x
Schneider National	SNDR	B-2-7	\$23.27	93	\$4.1	\$0.3	\$4.4		\$2.63	\$1.36	\$1.10	\$1.14	8.8x	17.1x	21.2x	\$0.97	\$0.68	\$0.67	4.5x	6.4x	6.5x
Werner Enterprises	WERN	B-3-7	\$39.40	63	\$2.5	\$0.6	\$3.1		\$3.71	\$1.93	\$2.10	\$1.98	10.6x	20.4x	18.8x	\$0.61	\$0.48	\$0.50	5.1x	6.4x	6.1x
Covenant Transport	CVLG	n/a	\$49.28	11	\$0.6	\$0.2	\$0.9		n/a	n/a	n/a	\$4.27	8.4x	11.9x	11.6x	\$0.15	\$0.12	\$0.12	5.9x	7.3x	7.3x
Heartland Express	HTLD	n/a	\$12.91	79	\$1.0	\$0.3	\$1.3		n/a	n/a	n/a	\$0.05	9.1x	331.0x	253.1x	\$0.25	\$0.23	\$0.23	5.2x	5.8x	5.8x
Marten Transport	MRTN	n/a	\$18.73	81	\$1.5	(\$0.1)	\$1.5		n/a	n/a	n/a	\$0.86	14.1x	20.9x	21.8x	\$0.25	\$0.21	\$0.21	5.8x	7.0x	7.0x
Pam Transport	PTSI	n/a	\$18.20	22	\$0.4	\$0.1	\$0.5		n/a	n/a	n/a	\$1.10	4.2x	12.5x	16.5x	\$0.20	\$0.11	\$0.11	2.6x	4.6x	4.6x
Universal Logistics	ULH	n/a	\$33.41	26	\$0.9	\$0.4	\$1.2		n/a	n/a	n/a	n/a	5.2x			\$0.32			3.8x		
													8.9x	63.8x	52.2x	_			5.0x	6.9x	6.6x

FΡS

	2024	2024Q1EPS						Reve	enue	2023Q4	l .	DOLC	Tota	l Returr	ı (w/rei	nveste	d		
	е	st.	Δto	Е	PS Grov	vth	YoY	Gro	wth	Op.	Net Debt/	ROIC		divi	dends)			Divid	lend
Company	BofA	Cons.	Street	1yr	3yr	5yr	1Q2024	1yr	5yr	Ratio	EBITDA	1yr	1 week	YTD	1yr	3yr	5yr	Annual	Yield
Knight Transportation	\$0.39	\$0.38	2%	-66%	7%		-4%	-4%	8%	98%	2.6x	3.4%	-3%	-3%	-1%	10%	12%	\$0.64	1.1%
Schneider National	\$0.19	\$0.16	19%	-50%	19%	-3%	-17%	-17%	2%	98%	0.3x	6.8%	-2%	-9%	-16%	1%	4%	\$0.38	1.6%
Werner Enterprises	\$0.26	\$0.31	-16%	-52%	1%	-6%	0%	0%	5%	95%	1.3x	5.3%	-3%	-7%	-14%	-2%	6%	\$0.56	1.4%
Covenant Transport	n/a	\$0.78		-44%			-9%	-9%	1%	95%	0.0x	15.6%	-5%	7%	44%	40%	17%	\$0.44	0.9%
Heartland Express	n/a	(\$0.09)		-84%	-2%	-16%	25%	25%	24%	96%	1.2x	2.2%	4%	-9%	-20%	-9%	-7%	\$0.08	0.6%
Marten Transport	n/a	\$0.16		-40%	6%	0%	-10%	-10%	7%	94%	-0.3x	8.4%	-3%	-11%	-14%	7%	12%	\$0.24	1.3%
Pam Transport	n/a	\$0.10		-74%	92%	37%	-14%	-14%	8%	100%	1.2x	3.1%	-2%	-12%	-37%	8%	8%		
Universal Logistics	n/a	n/a		-45%	47%	33%	-18%	-18%	1%	91%	1.3x	11.2%	3%	19%	14%	14%	11%	\$0.42	1.3%
-										0.00/	1.0.	7.00/	1.0/	20/	Ε0/	00/	00/		

 $\textbf{Source:} \ \textbf{BofA Global Research estimates, Company reports, Bloomberg (for stocks not covered by BofA Global Research)}.$

BofA GLOBAL RESEARCH

Exhibit 99: Freight Forwarding Comp Sheet

Data as of 02/28/2024

									EP	S										
		QRQ	Share	Shares Out.	Mkt Cap	Net Deb	t EV	BofA	BofA	BofA	Cons.	F	orward	P/E	EBI	ITDA (\$	bil)	Forw	ard EV/EE	SITDA
Company	Ticker		Price	(mil.)	(\$ bil.)	(\$ bil.)	(\$ bil.)	2022a	2023e	2024e	2024e	2022a	2023e	2024e	2022a	2023e	2024e	2022a	2023e	2024e
CH Robinson	CHRW	B-3-7	\$74.39	117	\$8.7	\$1.4	\$10.1	\$6.29	\$7.50	\$3.22	\$3.22	9.9x	23.1x	26.6x	\$1.38	\$0.7	\$0.59	7.3x	15.5x	17.1x
RXO Inc	RXO	C-2-9	\$20.44	117	\$2.4	\$0.4	\$2.7	\$1.43	\$1.59	\$0.30	\$0.23	12.9x	68.1x	204.4x	\$0.31	\$0.1	\$0.11	8.9x	20.4x	24.5x
World Kinect	WKC	B-3-7	\$24.74	60	\$1.5	\$0.6	\$2.1	\$1.36	\$2.04	\$1.95	\$2.22	12.1x	12.7x	10.5x	\$0.38	\$0.4	\$0.42	5.4x	5.3x	5.0x
Landstar System	LSTR	n/a	\$190.96	36	\$6.8	(\$0.4)	\$6.4	n/a	n/a	\$11.76	\$6.64	16.2x	25.9x	28.8x	\$0.63	\$0.4	\$0.40	10.2x	15.9x	15.9x
Expeditors Intl	EXPD	n/a	\$118.77	144	\$17.1	(\$1.0)	\$16.1	n/a	n/a	\$8.83	\$4.75	13.4x	23.1x	25.0x	\$1.98	\$1.0	\$1.03	8.2x	15.6x	15.6x
Forward Air Corp	FWRD	n/a	\$39.15	26	\$1.0	\$0.3	\$1.3	n/a	n/a	\$14.24	\$4.29	2.7x			\$0.32	\$0.2	\$0.22	4.1x	6.0x	6.0x
												11.2v	30.6v	59 1v	-			7 3v	13.1v	14 Ov

											11.27	, JU.UA	JJ. 1 A				7.5	13.17	17.07
Company	2024Q1EPS est. BofA Cons.	Δ to	E 1yr	PS Grov 3yr	vth 5yr	YoY 1Q2024	Gro		2023Q ² Op. Ratio	4 Net Debt/ EBITDA	ROIC 1yr	Total Re 1 week	eturn (w YTD	reinves/ 1yr	sted div 3yr	idends) 5yr		Divid Annual	lend Yield
CH Robinson	\$0.55 \$0.65	-16%	-61%	8%	-11%	-29%	-29%	3%	98%	2.5x	12.8%	3%	-14%	-24%	-4%	-2%	•	\$2.44	3.3%
RXO Inc	(\$0.04) (\$0.03)	60%				-18%			98%		5.4%	-4%	-12%						
World Kinect	\$0.58 \$0.49	19%	-34%	-10%		-19%	-19%	16%	99%	2.6x	6.3%	4%	9%	-8%	-5%	-1%		\$0.56	2.3%
Landstar System	n/a \$1.30		-38%	27%	7%	-29%	-29%	5%	94%	-1.0x	22.9%	0%	0%	7%	8%	14%		\$1.32	0.7%
Expeditors Intl	n/a \$1.07		-39%	21%	16%	-46%	-46%	10%	91%	-1.0x	21.3%	1%	-7%	15%	10%	11%		\$1.38	1.2%
Forward Air Corp	n/a \$0.78		-32%	124%	13%	19%	-12%	6%	96%	0.9x	19.7%	-1%	-38%	-62%	-22%	-9%		\$0.96	2.5%
									96%	0.8x	14.7%	0%	-10%	-14%	-3%	3%			

Source: BofA Global Research estimates, Company reports, Bloomberg (for stocks not covered by BofA Research)



Exhibit 100: CSX forward P/E

CSX Forward P/E is 18.8x

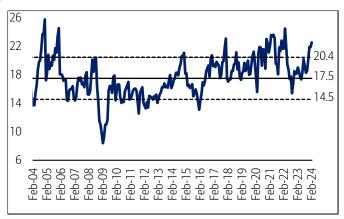


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 102: UNP forward P/E

UNP Forward P/E is 22.8x

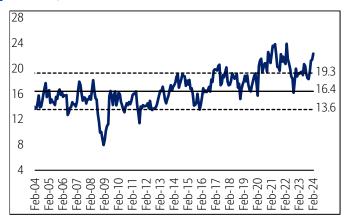


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 104: Rails Average forward P/E

Rails Average Forward P/E is 22.5x

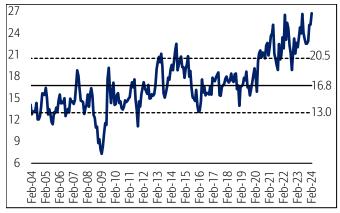


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 101: CP forward P/E

CP Forward P/E is 26.6x

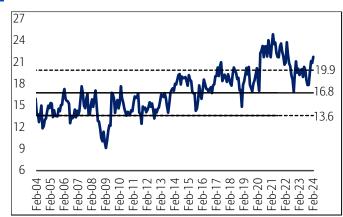


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 103: CNI forward P/E

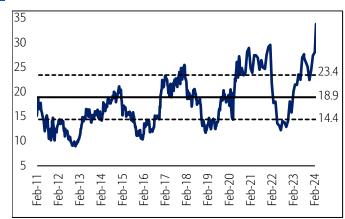
CNI Forward P/E is 21.8x



Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

Exhibit 105: SAIA forward P/E

SAIA Forward P/E is 34.7x



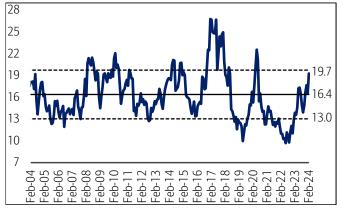
Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH



Exhibit 106: WERN forward P/E

WERN Forward P/E is 18.8x

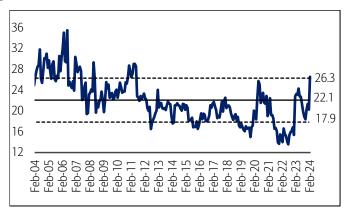


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 108: CHRW forward P/E

CHRW Forward P/E is 26.6x

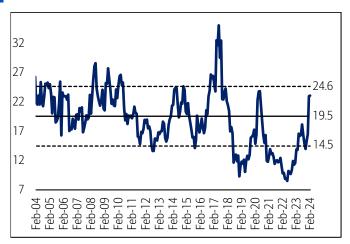


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 110: KNX forward P/E

KNX Forward P/E is 22.4x

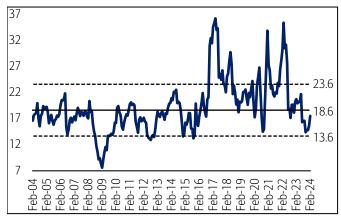


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 107: KEX forward P/E

KEX Forward P/E is 17.8x

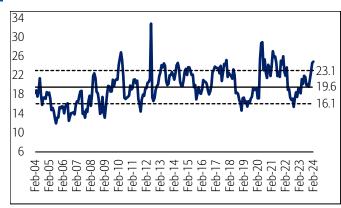


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 109: JBHT forward P/E

JBHT Forward P/E is 25.2x

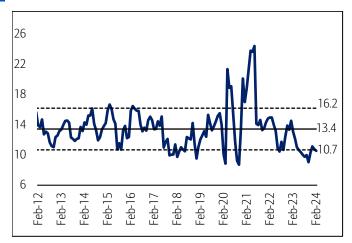


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 111: WKC forward P/E

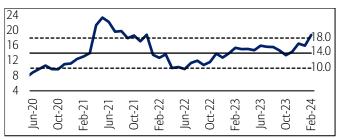
WKC Forward P/E is 10.5x



Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset
BofA GLOBAL RESEARCH

Exhibit 112: TFII forward P/E

TFII Forward P/E is 18.8x



Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 114: ODFL forward P/E

ODFL Forward P/E is 34.2x

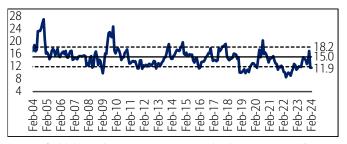


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 116: FDX forward P/E

FDX Forward P/E is 11.7x

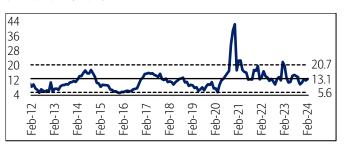


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 118: GBX forward P/E

GBX Forward P/E is 13.2x



Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 113: SNDR forward P/E

SNDR Forward P/E is 21.2x

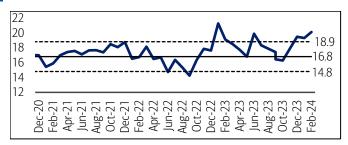


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 115: WAB forward P/E

WAB Forward P/E is 20.7x

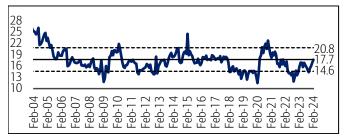


Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Exhibit 117: UPS forward P/E

UPS Forward P/E is 17.6x



Source: BofA Global Research estimates, company reports, Bloomberg, Reuters, First Call, Factset.

BofA GLOBAL RESEARCH

Special Disclosures

BofA Securities is currently acting as Financial Advisor on potential Activism Defense assignment to Norfolk Southern Corp (NSC).



Disclosures

Important Disclosures

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster^{R1}

Buy ≥ 10% ≤ 70% Neutral ≥ 0% ≤ 30% Underperform N/A ≥ 20%

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. Coverage Cluster is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments. Refer to BofA Global Research policies relating to conflicts of interest.

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA), BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudential et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch (Hong Kong): Merrill (Hong Kong): Merr (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Mexico): Merrill Ly de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch (I Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch (SA. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of



R1 Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information. In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities. Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public inform

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.



All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

