

Transportation - Trucking

1Q23 Preview: Spot rate drop from mid-Feb a reminder that softness remains

Price Objective Change

See 1Q TL pressures, lower ests; Does not change thesis

We lower our Truckload (TL) carrier 1Q23 EPS estimates 10% on average, as a rapid decline in trucking rates to \$1.35/mile from \$1.65/mile in mid-Feb reflects a softening demand backdrop, a lack of produce season, and weak freight levels at West Coast ports (although most carriers are dominated by contract freight, it highlights the decelerating backdrop). We reiterate our positive thesis on a late '23 truckload inflection (KNX, JBHT, SNDR, WERN), despite a weak current market as capacity is removed and demand begins to draw down high inventory levels. Given our more conservative outlook, we lower PO's at KNX -8% to \$70, JBHT -5% to \$197, SNDR -11% to \$31, WERN -7% to \$52.

LTL's see continued vol declines and some pricing nicks

Within Less-Than-Truckload (LTL) carriers, we lower our 1Q23 EPS estimates 9% on average, on volume declines and some sequential downticks on pricing, led by mix shift and lower fuel surcharge revenues. We remain neutral to negative on LTL's given falling volumes. We decrease our 1Q23 EPS estimates at ARCB, TFII and XPO by 14%, 15%, and 17%, respectively. XPO moves mainly on higher interest expense, while TFI sees risk to target results. We lower our PO's for ARCB (-6% to \$101), ODFL (-7% to \$355), SAIA (-4% to \$267), TFII (-5% to \$120), and XPO (-11% to \$33). Separately, we lower our CHRW 1Q23 EPS target 7%; we see challenger RXO gaining share. We lower our UPS 1Q23 EPS estimate slightly given volume and International margin pressure.

Softer truck demand balanced by improving capacity view

Dry-van spot rates ex-fuel averaged \$1.55/mile in 1Q23, down 39% year-year from \$2.55/mile (and down 7% from \$1.63 in 4Q22) as inventories remain high and consumer activity moderated. Our BofA Truck Shipper Survey Demand Indicator (see report), which has an 80% leading correlation to PMI, has been sub-50 for 12 of the past 13 issues and below the 54.2 average during the '12, '15, and '19 Freight Recessions as demand has yet to inflect. We expect weak demand to weigh on Over-The-Road contract renewals and Intermodal yields given more competitive spot pricing. Yield pressures are somewhat balanced by improving capacity (increased bankruptcies) as rates moved below cash costs of \$1.50-\$1.60/mile for smaller carriers. Carrier deactivations (less additions) topped 4,000 in January, highlighting the removal of excess capacity has begun. We believe this sets the stage for a late '23 truck cycle rebound.

Prefer early-cycle Truckload over Less-than-Truckload

For Less-than-Truckload (LTL) operators, freight volume outlook remains pressured from slowing industrial activity. The largest US LTL operator FedEx Freight noted shipment declines accelerated from -11% year-over-year in December to -14% in February (see FDX F3Q) as demand worsened. Poor weather in Jan-Feb also impacted volumes as select terminals suspended ops. While pricing remained stable given industry discipline, normalizing fuel prices are expected to be an overhang on yields as surcharges fall. Old Dominion Freight Line continues to highlight its nimble cost structure, which may be a relative differentiator vs. carriers adding less lucrative national or transactional freight (TFI International, ArcBest, XPO), which may impact margins.

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 10 to 13. Analyst Certification on page 9. Price Objective Basis/Risk on page 5. 12543184

Timestamp: 12 April 2023 06:05AM EDT

12 April 2023

Equity **United States** Road Transport/Trucking

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

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

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

Exhibit 1: PO and Multiple Changes

We lower our POs across TL, LTLs and raise PO for UPS (hold it at RXO, CHRW)

				P	<u>o</u>	Targe	et P/E
	Rating	QRQ	Price	New	Prior	New	Prior
JBHT	В	B-1-7	\$175.52	\$197	\$207	21.5x	21.5x
KNX	В	B-1-7	\$56.62	\$70	\$76	18.5x	18.5x
SNDR	В	B-1-7	\$26.55	\$31	\$35	14.5x	15.0x
WERN	В	B-1-7	\$46.55	\$52	\$56	16.5x	16.5x
ARCB	N	C-2-7	\$93.75	\$101	\$108	10.5x	10.5x
ODFL	N	B-2-7	\$339.99	\$355	\$380	29.0x	31.0x
SAIA	U	B-3-9	\$271.52	\$267	\$279	21.5x	22.0x
TFII	N	B-2-7	\$116.11	\$120	\$126	16.0x	16.0x
XPO	U	C-3-9	\$32.88	\$33	\$37	12.0x	13.0x
CHRW	U	B-3-7	\$95.69	\$88	\$88	20.5x	20.5x
RXO	В	C-1-9	\$19.03	\$25	\$25	29.0x	29.0x
UPS	N	B-2-7	\$192.45	\$204	\$196	16.0x	16.0x

B = Buy, N = Neutral, U = Underperform Source: BofA Global Research, Bloomberg BofA GLOBAL RESEARCH

Exhibit 2: EPS Estimate Changes

Lower 1Q23 EPS estimates 10% on average for TL carriers, 9% on average for LTL carriers

	1Q:	23e	20	23e	2024e			
Stock	New	Prior	New	Prior	New	Prior		
JBHT	\$2.05	\$2.25	\$9.15	\$9.60	\$10.15	\$10.75		
KNX	\$0.85	\$0.96	\$3.85	\$4.10	\$4.70	\$4.90		
SNDR	\$0.46	\$0.52	\$2.15	\$2.30	\$2.50	\$2.65		
WERN	\$0.74	\$0.81	\$3.10	\$3.35	\$3.50	\$3.65		
ARCB	\$1.85	\$2.15	\$9.70	\$10.20	\$11.20	\$11.65		
ODFL	\$2.74	\$2.74	\$12.25	\$12.25	\$13.85	\$13.85		
SAIA	\$2.69	\$2.73	\$12.40	\$12.70	\$13.90	\$14.20		
TFII	\$1.50	\$1.76	\$7.45	\$7.95	\$8.60	\$8.95		
XPO	\$0.48	\$0.58	\$2.75	\$2.85	\$3.20	\$3.20		
CHRW	\$1.00	\$1.07	\$4.30	\$4.30	\$4.90	\$4.96		
RXO	\$0.07	\$0.07	\$0.85	\$0.85	\$1.10	\$1.10		
UPS	\$2.24	\$2.25	\$11.45	\$11.50	\$12.45	\$12.50		

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

1Q Trucking Preview: Truckload Carriers

J.B. Hunt Transportation (JBHT): Intermodal and rate pressure hits 1Q

Lower 1 Q23 9%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 9%, 5%, 6%, and 4%, to \$2.05, \$9.15, \$10.15, and \$11.75 from \$2.25, \$9,60, \$10.75, and \$12.30, respectively, as we decrease our Intermodal volume and yield targets. We target 1.3x container box turns in 1Q23, deteriorating from 1.5x year-over-year, as a softer demand environment more than offset improving rail service. We target an 89.3% Intermodal operating ratio (from 88.5%) for 1Q23 as softer volume and accessorial fee declines remain as a headwind.

Lower PO to \$197: We reiterate Buy but lower our PO on JBHT's shares to \$197 (from \$207), holding our 21.5x 2023e EPS target multiple, given decelerating Intermodal demand. J.B. Hunt remains a leading Intermodal carrier and is well positioned into a 2H23 truck cycle rebound. Our target remains within its 16x-23x historical range as we see earnings rebounding from 2023 trough levels.

Knight Swift Transportation (KNX): US Xpress integration plans key

Lower 1Q23 12%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 12%, 6%, 4%, and 5%, to \$0.85, \$3.85, \$4.70, and \$5.15, from \$0.96, \$4.10, \$4.90, and \$5.40 respectively, as we move below management's \$4.00/share EPS floor given a late quarter worse-than-expected truck pricing environment. We expect its Truckload segment (which accounts for 64% of its operating income) to be challenged near-term as we estimate miles/tractor to fall 7.5% year-year in 1Q23 and revenue per tractor (exfuel to decline 8.0% year-year. The focus at 1Q23 earnings likely remains on its integration timeframe for US Xpress (see our KNX note), as the acquisition is set to expand its revenue base by ~30% following its merger completion in June.

Lower PO to \$70: We reiterate our Buy and US1 pick on KNX shares. However, we lower our PO to \$70 (from \$76), holding our 18.5x 2023e EPS multiple on our revised EPS estimates. Our 2024 estimates do not yet include the potential accretion benefits from US Xpress. We expect Knight-Swift to benefit from its acquisition as well as a 2H recovery in trucking rates as the best-in-class US truckload operator. Our target multiple remains within its 15x-25x historical range despite the lack of contribution from its USX acquisition in our estimates, highlighting the attractive valuation and upside potential from a robust integration.

Schneider National (SNDR): Shift to UNP offset by soft Intermodal demand **Lower 1Q23 12%**: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 12%, 6%, 6%, and 3%, to \$0.46, \$2.15, \$2.50, and \$2.85, from \$0.52, \$2.30, \$2.65, and \$2.95, respectively as we lower our volume and pricing targets given softer demand and fuel surcharge headwinds. We target 1.3x Intermodal box turns in 1Q23, flat to 1Q22 despite its switch to UNP from BNSF as the company highlighted soft demand offsetting its improved service. We expect yield headwinds at its One-Way segment as we target revenue per truck per week to decline 15% year-year in 1Q23 for its Network (For-Hire) business. We expect Dedicated rates to remain more resilient given contract terms, and target segment revenue/truck/week to increase a softer 2% year-year in 1Q23.

We reiterate our Buy on SNDR's shares, but lower our PO to \$31 (from \$35) on 14.5x 2023e EPS (from 15x) as we account for a more muted truck environment and slightly deeper trough than our prior target.

Werner Enterprises (WERN): Growth aided by M&A moves

Lower 1Q23 9%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 9%, 7%, 4%, and 4%, to \$0.74, \$3.10, \$3.50, and \$4.05, from \$0.81, \$3.35, \$3.65, and \$4.20, respectively, on a more muted pricing environment. We lower our 1Q23 revenue growth target to +16% year-year from +17% as the benefits from its 4Q22 Baylor acquisition (see <u>WERN-Baylor</u>) are balanced by moderating volumes. We target its One-Way miles per tractor per week to decline 5% year-year and One-Way revenue per mile to decline



4% year-year in 1Q23. We also expect Logistics revenues to increase 45% year-over-year in 1Q23 aided by its ReedTMS acquisition (see <u>WERN-ReedTMS</u>).

Lower PO to \$52: We reiterate our Buy on WERN's shares but lower our PO to \$52 (from \$56) as we hold our 16.5x 2023e EPS target multiple. Our target remains within its 13x-20x historical range despite EPS being somewhat depressed, which could support a continued increase in target range as trough EPS is confirmed.

1Q Trucking Preview: Less-than-Truckload Carriers

ArcBest Corp (ARCB): Transactional freight softens volume declines Lower 1Q23 14%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 14%, 5%, 4%, and 3%, to \$1.85, \$9.70, \$11.20, and \$13.35, from \$2.15, \$10.20, \$11.65, and \$13.80, respectively, given rising costs and fuel-related yield headwinds. We increased (deteriorated) our 1Q23 Less-than-Truckload (ABF Freight) operating ratio target to 90.8% from 89.4% as we expect margin pressure as freight demand weakens. We expect 1Q23 tons per day to be up 2% year-over-year as ArcBest engages more transactional freight to fill its excess capacity, which should negatively impact yields. We target a 1% year-over-year decline for its all-in revenue per hundredweight.

Lower PO to \$101: We reiterate our Neutral on ARCB's shares but lower our PO to \$101 (from \$108). We hold our 10.5x 2023e EPS target multiple given our more conservative view on earnings. This moves us closer to the bottom of its 10x-17x one standard deviation historical trading range.

Old Dominion Freight Line (ODFL): Remains focused on price and cost variability Hold 1 Q23 EPS: We hold our 1Q23, 2023, 2024, and 2025 EPS estimates at \$2.74, \$12.25, \$13.85, and \$15.50, respectively, as we expect leading LTL operator to win relative share from peers (particularly as Yellow and TFI International were losing 19% volumes last quarter) despite the ongoing freight downturn. We target a 200 bps sequential deterioration in operating ratio in 1Q23, to 73.2%, worse than historical seasonality (60 bps deterioration on average from 4Q to 1Q) given weather-related volume headwinds and soft demand. We expect tons/day to decline 11% year-year given challenging comps (1Q22 was its 3rd best quarterly tonnage performance) and revenue per hundredweight ex-fuel to increase 9% year-year.

Lower PO to \$355: We reiterate our Neutral on ODFL's shares, but lower our PO to \$355 (from \$380) on 29x 2023e EPS (from 31x) as we pull our target multiple closer to its historical 12x-26x range given rising volume pressures and slowing industrial demand.

Saia, Inc (SAIA): Volume declines a slight headwind for high quality carrier Lower 1Q23 1%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 1%, 2%, 2%, and 2%, to \$2.69, \$12.40, \$13.90, and \$15.30, from \$2.73, \$12.70, \$14.20, and \$15.70, respectively. We target a 20 bps sequential deterioration in its 1Q23 operating ratio, to 85.6%, in-line with historical seasonality (20 bps average over the past five years) as incremental softness in the LTL freight environment is partly balanced by weather-related impacts to 4Q22 performance. We target revenue per hundredweight to increase 7% year-year in 1Q23 (from +8%) as we see fuel-related headwinds to yields as diesel moderates. The company previously highlighted concessions to its 6.5% 2023 General Rate Increase (GRI) as volumes turn scarce in a decelerating freight environment.

Lower PO to \$267: We reiterate Underperform on SAIA's shares given its relative valuation and lower our PO to \$267 (from \$279) on 21.5x our 2023e EPS (from 22x). We move a bit more conservative on our multiple target given a muted LTL demand backdrop.



TFI International (TFI): Volume headwinds at US LTL and Logistics

Lower 1Q23 15%: We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 15%, 6%, 4%, and 3%, to \$1.50, \$7.45, \$8.60, and \$9.60, from \$1.76, \$7.95, \$8.95, and \$9.95, respectively, as we account for accelerating declines in its LTL and Logistics segments. We target its US LTL (TForce Freight, previously UPS Freight) tonnage to decline 20% year-year in 1Q23, more than offsetting a 7% year-year increase in revenue per hundredweight. We also target its Logistics & Last-Mile volumes to decline 15% year-year (from -1% previously) as the truck market loosens further. We target an 87.9% operating ratio in 1Q23 (from 86.5% prior) as we see impact from negative volume leverage.

Lower PO to US\$120: We reiterate our Neutral on TFII's shares, but lower our PO to US\$120 (from US\$126) and C\$162 for TFII CN (from C\$170), holding our 16x target multiple on our 2023 EPS estimate. Our target is toward the upper end of its 11x-17x historical range as it continues to focus on improving TForce Freight's margins and culling historical revenues.

XPO, Inc (XPO): Pricing growth lag given concessions; watch for Europe impact Lower 1Q23 18%: We lower our 1Q23 and 2023 EPS estimates 18% and 4%, to \$0.48 and \$2.75, from \$0.58 and \$2.85, respectively as we increased our financing/interest expense estimates and decreased our Europe earnings forecasts. We leave our 2024 and 2025 estimates unchanged at \$3.20 and \$3.65, respectively. We target tonnage to stay flat year-year and revenue per hundredweight to increase 1% year-year in 1Q23, underperforming LTL peers as it targets national accounts. We also target Europe revenues to decline 7% year-year given increased pressures on its trucking operations.

Lower PO to \$33: We reiterate Underperform on XPO's shares and lower our PO to \$33 (from \$37) on 12x our 2023e EPS (from 13x) on moderating pricing improvements negatively impacting earnings. Our 12x target multiple is slightly below the 15.5x midpoint of LTL carriers as we look for XPO to improve its operating ratio from 90% with its efficiency and growth targets prior to scaling our multiple target.

1Q Trucking Preview: Freight Brokerages

C.H. Robinson (CHRW): Margins pressured by decelerating volumes

Lower 1Q23 6%: We lower our 1Q23 EPS estimate 6%, to \$1.00 from \$1.07, yet hold our 2023 EPS estimate at \$4.30. We lower our 2024 and 2025 EPS estimates 1% and 2%, to \$4.90 and \$5.45, from \$4.96 and \$5.55, respectively. We target adjusted gross profits to decline 19% year-year as we see increased volume pressures from a loosening freight market. While its moves to shift to a more digital exposed carrier (we target personnel expense to decline 3% year-year) to increase its competitive position, we see it struggling to outpace market volume growth. We target a net operating margin of 24.2%, a 14 pt deterioration year-year. Key to the quarter will be update on the progress of its CEO search, and if there is the likelihood of Board member, and former UPS COO Jim Barber stepping into the role.

Hold PO at \$88: We reiterate Underperform and hold our PO at \$88, based on 20.5x our 2023 EPS estimate. We remain cautious given its inability to consistently outpace the market on volume gains and margin tightening. An overhang will remain until it names its new CEO (with prior CEO Bob Biesterfeld's departure in December), and as it continues to see share loss to brokerage challengers such as RXO.

RXO, Inc (RXO): Winning share in a freight market downturn

Hold 1Q23: We hold our 1Q23 and 2023 EPS estimates at \$0.07 and \$0.85, respectively. We expect RXO to buck industry trends and grow volumes at least 1% year-over-year in 1Q23 as it wins share. We target a 16.5% truck brokerage gross profit margin, deteriorating from 17.9% in 4Q22, yet remaining one of the best in the industry, given declining Transport pricing levels. We also target a 19.5% non-brokerage gross



profit margin, deteriorating from 20.5% in 4Q22, given negative impacts from declining volumes.

Hold PO at \$25: We reiterate Buy on RXO shares and hold our PO at \$25. Our target is based on 14.5x our 2023e EBITDA (which equates to 29x our 2023e EPS).

1Q Trucking Preview: Airfreighter UPS ahead of negots

UPS, Inc (UPS): Focus on sustainability of International margins at 20%+ **Lower 1Q23 1%:** We lower our 1Q23, 2023, 2024, and 2025 EPS estimates 1% each, to \$2.24, \$11.45, \$12.45, and \$13.55, from \$2.25, \$11.50, \$12.50, and \$13.65, respectively. We expect volumes to decline 5% year-year in 1Q23 as Amazon accelerates the move of freight onto its network (Amazon represented 11.3% of its 2022 revenues, or about 18% of UPS' domestic business if all moves in that segment). The focus into earnings will be on the progress of its Teamster union negotiations (contract ends July 31), if any has been made, and the sustainability of International margins near 20%+ (compared to high-teens pre-COVID, and 22.4% last year) as supply chain conditions normalize and belly space returns in Asian routes.

Raise PO to \$204: We reiterate our Neutral on UPS' shares, but raise our PO to \$204 (from \$196) on 17.5x 2023e EPS (from 17x), moving closer to the midpoint of its 15x-23x historical range. We believe its focus on margin improvement domestically (we target flattish post in 2023) will aim to offset the impacts of rising labor costs, falling international margins, and lost Amazon revenues. Nevertheless, concern will remain high on the ultimate cost impact of Teamster labor contract. We target Comp & Benefits expense will rise almost \$3 billion or 6% in 2024 and another 6% in 2025, to nearly \$53 billion (47.5%-48.5% of revenues).

Exhibit 3: EPS Estimate and PO Changes

We lower 1Q23 EPS estimates 10% on average for TL carriers and 9% on average for LTL carriers

				Price 0	bjective	Targe	et P/E		1Q23e			2023e		20:	24e	202	25e
Stock	Rating	QRQ	Price	New	Prior	New	Prior	New	Prior	Street	New	Prior	Street	New	Prior	New	Prior
JBHT	В	B-1-7	\$175.52	\$197	\$207	21.5x	21.5x	\$2.05	\$2.25	\$2.05	\$9.15	\$9.60	\$9.10	\$10.15	\$10.75	\$11.75	\$12.30
KNX	В	B-1-7	\$56.62	\$70	\$76	18.5x	18.5x	\$0.85	\$0.96	\$0.83	\$3.85	\$4.10	\$3.89	\$4.70	\$4.90	\$5.15	\$5.40
SNDR	В	B-1-7	\$26.55	\$31	\$35	14.5x	15.0x	\$0.46	\$0.52	\$0.46	\$2.15	\$2.30	\$2.15	\$2.50	\$2.65	\$2.85	\$2.95
WERN	В	B-1-7	\$46.55	\$52	\$56	16.5x	16.5x	\$0.74	\$0.81	\$0.73	\$3.10	\$3.35	\$3.18	\$3.50	\$3.65	\$4.05	\$4.20
ARCB	N	C-2-7	\$93.75	\$101	\$108	10.5x	10.5x	\$1.85	\$2.15	\$1.81	\$9.70	\$10.20	\$9.65	\$11.20	\$11.65	\$13.35	\$13.80
ODFL	N	B-2-7	\$339.99	\$355	\$380	29.0x	31.0x	\$2.74	\$2.74	\$2.69	\$12.25	\$12.25	\$11.90	\$13.85	\$13.85	\$15.50	\$15.50
SAIA	U	B-3-9	\$271.52	\$267	\$279	21.5x	22.0x	\$2.69	\$2.73	\$2.69	\$12.40	\$12.70	\$12.41	\$13.90	\$14.20	\$15.30	\$15.70
TFII	N	B-2-7	\$116.11	\$120	\$126	16.0x	16.0x	\$1.50	\$1.76	\$1.53	\$7.45	\$7.95	\$7.52	\$8.60	\$8.95	\$9.60	\$9.95
XPO	U	C-3-9	\$32.88	\$33	\$37	12.0x	13.0x	\$0.48	\$0.58	\$0.49	\$2.75	\$2.85	\$2.55	\$3.20	\$3.20	\$3.65	\$3.65
CHRW	U	B-3-7	\$95.69	\$88	\$88	20.5x	20.5x	\$1.00	\$1.07	\$1.01	\$4.30	\$4.30	\$4.63	\$4.90	\$4.96	\$5.45	\$5.55
RXO	В	C-1-9	\$19.03	\$25	\$25	29.0x	29.0x	\$0.07	\$0.07	\$0.07	\$0.85	\$0.85	\$0.75	\$1.10	\$1.10	\$1.35	\$1.35
UPS	N	B-2-7	\$192.45	\$204	\$196	16.0x	16.0x	\$2.24	\$2.25	\$2.23	\$11.45	\$11.50	\$11.41	\$12.45	\$12.50	\$13.65	\$13.55

Source: BofA Global Research estimates and Bloomberg

BofA GLOBAL RESEARCH

Price objective basis & risk

ArcBest Corporation (ARCB)

Our \$101 price objective is based on a 10.5x multiple on our 2023 EPS estimate. ArcBest shares have averaged 14x over the past 5 years and traded in a 7x-18x one-standard deviation range over the past 20 years on forward earnings. We believe a multiple below its historical average is appropriate given a turning macro environment, a shifting supply-demand balance in the trucking market, balanced with recent all time records in the LTL market, earnings improvement at ARCB from its integration plan and its focus on its asset-light segments, as well as structural gains at asset-based margins (even relative to non-union peers) as it benefits from the industry's focus on improved pricing for constrained capacity availability.



Downside risks to our price objective and estimates are a sustained economic downturn, a decline in fuel costs (LTLs make a profit on surcharges), a return to pricing competition among its peers, a significant recovery of its largest competitor, YRC Worldwide, and labor negotiations. Upside risks to our price objective and estimates include more resilient yield growth, a faster-than-expected recovery in LTL volumes, and accelerated reduction in costs.

C.H. Robinson (CHRW)

Our \$88 price objective is based on a 20.5x target multiple of our 2023 EPS estimate, moving near the top of its 10-year 17x-22x historical range, as we expect results to fall to trough levels post-COVID ramps, with forwarding results pulling back to nearly 2020 levels, truckload margins dropping to cyclical trough levels as spot pricing has rolled over in 2022 and contract rates should decline in 2023. We believe CHRW will see the peak impact of the decelerating freight environment in 2023 and it is launching an executive management overhaul. We believe the company should benefit from continued progress in its brokerage automation (Navisphere & Freightquote), which should enable further productivity improvement.

Upside risks include faster-than-expected advancement in its technology and digital integration as well as larger-than-expected cost reductions.

Downside risks to our price objective are the continued inability to pass along rate increases faster than capacity cost increases (or decreases for both), which would negatively impact margins. Also, a prolonged economic downturn, increased fuel headwinds, increased pricing pressure within the third party logistics industry, changes in the company's customer base due to consolidation, and changes in relationships with its truck, ocean, and air carriers could also impact returns, as well as its ability (or inability) to blend recent acquisitions.

J.B. Hunt Transport Services (JBHT)

Our \$197 price objective is based on a 21.5x target multiple of our 2023e EPS. Our target multiple is above the mid-pt of its 16x-23x one standard deviation trading band as earnings are expected to trough in '23. We expect pricing pressure to be somewhat countered with improved operational performance as supply chains improve fluidity. We forecast solid double-digit EPS gains over time, robust Intermodal performance, and potential for improved box turns as rail service improves. It also plans to grow its container fleet to 150k over 2-4 years as it scales growth on BNSF's network post competitors shift to UNP.

Risks to our PO are a slowing economic environment, an inability for the company to raise rates to offset rising costs (driver pay, insurance, depreciation, and fuel), a severe accident impacting costs or the company's image, or significant impacts (strikes, network outages) to BNSF or Norfolk Southern's rail network or J.B. Hunt's relationship with either of those carriers impacting intermodal operations. Additional risks are regulatory changes impacting the flow of freight from the highway to rail, or rapidly falling fuel prices that could encourage freight to stay on the highway, its occasional arbitration with BNSF over rail rates, a sustained loose capacity truckload market that may overhang Intermodal pricing, and inability to obtain labor.

Knight-Swift Transportation Holdings Inc (KNX)

Our \$70 price objective is based on a 18.5x target multiple on our 2023 EPS estimate. Our target multiple is above the bottom of its one-standard-deviation 22-year historical trading range of 15.5x-25x on year ahead estimates, as it nears trough earnings (led by pressure on economic growth and truck spot rate declines). We view downside as somewhat limited given its diversified model and strong operational performance, and a truckload market that is beginning to work out excess capacity (though recognize the pendulum can overswing on rate declines and cost pressures). Nevertheless, given its



diversification moves (LTL, Intermodal, Brokerage/Logistics, and Trucking/Dedicated) it looks to prove earnings will be more sustainable than in prior cycles.

Risks to our price objective are volatility at its truckload segment (particularly its historical SWFT segment, which is more exposed to large retail and project pricing), slower earnings growth from its LTL acquisitions of AAA Cooper and MME, weaker-than-expected economic conditions, an inability for the company to have trucking rates offset rising costs (driver pay, insurance, depreciation, and fuel), a severe accident impacting the company's image and finances, over-expanding (or acquiring assets) without maintaining its focus on cost controls, and a lack of growth opportunities, and the failure to complete its acquisition of US Xpress, which may affect its growth outlook.

Old Dominion Freight Line (ODFL)

Our \$355 price objective is based on a 29x target multiple on our 2023 EPS estimate. Our target is above the company's 20-year historical one-standard deviation range of 13x-27x forward earnings, adjusted for outlier periods, but within its 3-year range of 28x-34x. We move above its long term range as the deceleration in freight demand is countered by sustainable share gains, above inflation cost pricing, and a robust free cash flow yield. It continues to post superior operating performance relative to peers and the favorable dynamics of the LTL industry. However, shares (current multiple) remain somewhat elevated, which gives us pause near term.

Downside risks to our PO are weak freight demand and slow or negative industrial production growth. Additionally, increasing LTL competition could limit Old Dominion's ability to grow volume and increase market share, while also negatively impacting freight rates and pressuring profit margins. A return to industry pricing competition, last experienced en masse in the 2008 Great Recession, could weigh on investor views on the health of the industry, and thus OD's leading multiple. The less-than-truckload industry is competitive, with a large number of national and regional companies vying for business.

RXO, Inc. (RXO)

Our \$25 price objective is based on a 14.5x 2023E EV/EBITDA multiple. Its target EV/EBITDA multiple remains below peer C.H. Robinson despite its accelerating share gains and ability to grow volumes above that of its peers given its advanced technology.

Downside risks to our price objective are weaker than expected economic conditions resulting in more spot and less contract revenues, which could compress gross profit margins, it relies on third-party carriers to deliver customers freight (exposing it to service parameters it does not control, higher carrier prices which could decrease op income), fuel price volatility could impact results, unusual weather could impact operations (freight volumes), carriers status as independent contractors or labor disputes among its carrier base, risk to IT systems being compromised by cyberattacks, court decisions on insurance accident exposure from a 3rd party performance, ability to retain qualified employees, and cost initiatives may not prove fruitful (its target to eliminate some overhead costs).

Saia Inc. (SAIA)

Our \$267 price objective is based on a 21.5x target multiple on our 2023 EPS estimate. Our target is above the middle of its 14x-23x one-standard deviation trading range where it has traded over the past decade. Our target multiple is on the upper end given its leading service and ability to win share countered by a decelerating freight environment and rising yield pressures.

Downside risks to our PO are weak freight demand and slow or negative industrial production growth. Our price objective is also threatened by increasing competition, which could limit Saia's ability to grow volume and increase market share, while also

negatively impacting freight rates and pressuring profit margins. The less-than-truckload industry is competitive, with a large number of national and regional companies vying for business.

Upside risks are strength in the US economy, which could drive higher volume and pricing gains, as well as an improvement in margins, as the less-than-truckload (LTL) industry has high fixed costs, and consequently benefits from operating leverage.

Schneider National (SNDR)

Our \$31 PO is based on a 14.5x target multiple on our 2023 EPS estimate. Our target multiple is the mid-point of its 10x-19x historical range. It is at a discount to average of best-in-class peer targets, which include a blend of peer historical averages (50% of SNDR's revs are Truck, which peers trade low double digits, currently, 20% is Intermodal and its peer trade at 20x, 20% is Logistics which peers trade at upper-teens multiples, and 10% is other, or low double-digits), yielding a mid-teen fair value multiple target. SNDR's diverse base is countered by increasing concerns of decelerating economic and freight flows.

Risks to our price objective are a cyclical downturn impacting freight flows, higher-thanexpected costs from weather, driver pay, accident claims, fuel costs, and equipment prices. Given Schneider operates in a fragmented market, it may not have pricing power to adjust as costs rise in an improving market to offset an increased cost base. Additionally, the company is a 'controlled company' given A shares have 10:1 votes and are completely controlled by the Schneider family and trusts.

TFI International (TFII / YTFII)

Our US\$120 price objective (C\$162) is based on 16x our 2023 US\$ EPS estimate, within its 10-year one-standard deviation trading range of 11x-18x, as the company is transforming its North American LTL operations (post the acquisition of UPS Freight for \$800 million), countered with a decelerating economic backdrop. Our target multiple is in the middle of where LTL peers (10x-30x) and US Parcel peers (10x-16x) are trending toward.

Downside risks to our price objective are weaker-than-expected economic conditions resulting in a turnover in demand, an inability for the company to raise trucking rates to offset rising costs (driver pay, insurance, depreciation, and fuel), intensifying competition in brokerage and logistics and acquisition selection and integration risk.

Upside risks to our price objective are better-than-expected pricing, more accelerated M&A moves to drive inorganic growth, or higher-than-expected share repurchases.

UPS (UPS)

Our \$204 price objective is based on a 16.0x multiple on our 2023e EPS estimate, above the bottom of its 20-year one-standard deviation 15x-23x historical range, as it focuses on margin improvement ('laser focus'), to counter consumer volumes coming under increasing pressure, and as volumes are expected to remain negative in the near term. UPS continues to see pricing potential as the industry institutes improved surcharges and sees a shift in focus on margins with its Better and Bolder focus (from Better, Not Bigger).

Downside risks to our PO are a weaker-than-expected domestic or global economic performance, and external impacts to global trade (such as protectionism, trade wars, or tariffs), weather impacts, higher-than-expected fuel prices, increased ground delivery and price competition, disruptions with its employee-union relationships, and external disruptions to its cargo facilities or aircraft. Continued pressure on margins from growth of e-commerce vol given its lower delivery density. Additionally, sustained impacts from COVID-19 shutdowns in China could pressure results. Upside risks to our PO are



stronger-than-expected pricing growth, a faster-than-expected rebound in freight volumes, and margin improvements from accelerated cost reductions.

Werner Enterprises (WERN)

Our \$52 price objective is based on an 16.5x target multiple on our 2023 EPS estimate. Our target multiple is at the midpoint of its 13x-20x historical trading range, as 2023 appears to be WERN's earnings trough as demand bottoms and pricing finds a floor. Werner continues to focus on operational improvements, led by CEO Derek Leathers, which it targets to drive margin improvement.

Downside risks to our price objective are an economic (or freight) downturn, trade of fleet growth for reduced incremental margins, a sustained rise in fuel prices which could increase costs, inability of the company to raise rates, a severe accident, rapidly rising costs (driver pay, insurance, claims, etc.), and larger-than-expected impact from regulatory changes (hours of service, CSA safety rules, electronic on board recorder enforcement, drug and alcohol clearinghouse limitations on drivers, which continue to cull the driver population).

XPO, Inc. (XPO)

Our \$33 price objective is based on a 12x P/E multiple on its 2023e EPS, in line with peers at 6x-24x. The company has finished its move to break itself into two core pure-play entities, LTL and Digital Brokerage. The company is now focused on core improvement at its LTL segment, which is seeing rapidly decelerating volumes on softening freight demand. We expect XPO to trade at a discount to leading LTL operators such as Old Dominion Freight Lines and Saia Inc given XPO's cyclical exposure to Europe.

Downside risks to our price objective are a downturn in the global economy, which could reduce volume and pressure margins, while also potentially having a disproportionate impact on XPO's earnings given its leveraged capital structure. Continued inability to secure a sale of its Europe operation may also be a downside risk to our price objective. Upside risks to our price objective are better than expected LTL operating performance. Any updates on its sale of its Europe operation is also an upside risk as it unlocks excess value for shareholders.

Analyst Certification

I, Ken Hoexter, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.



US - Transportation Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
BUY				
	Canadian National	CNI	CNI US	Ken Hoexter
	Canadian Pacific Railway	CP	CP US	Ken Hoexter
	CSX Corporation	CSX	CSX US	Ken Hoexter
	FedEx Corp.	FDX	FDX US	Ken Hoexter
	J.B. Hunt Transport Services	JBHT	JBHT US	Ken Hoexter
	Kirby Corp	KEX	KEX US	Ken Hoexter
	Knight-Swift Transportation Holdings Inc	KNX	KNX US	Ken Hoexter
	Norfolk Southern	NSC	NSC US	Ken Hoexter
	RXO, Inc.	RXO	RXO US	Ken Hoexter
	Schneider National	SNDR	SNDR US	Ken Hoexter
	Scorpio Tankers Inc.	STNG	STNG US	Ken Hoexter
	Union Pacific	UNP	UNP US	Ken Hoexter
	Werner Enterprises	WERN	WERN US	Ken Hoexter
	World Fuel Services	INT	INT US	Ken Hoexter
NEUTRAL				
	ArcBest Corporation	ARCB	ARCB US	Ken Hoexter
	Old Dominion Freight Line	ODFL	ODFL US	Ken Hoexter
	Teekay Tankers Limited	TNK	TNK US	Ken Hoexter
	TFI International	TFII	TFILUS	Ken Hoexter
	TFI International	YTFII	TFII CN	Ken Hoexter
	UPS	UPS	UPS US	Ken Hoexter
	Wabtec Corp.	WAB	WAB US	Ken Hoexter
UNDERPERFORM				
	C.H. Robinson	CHRW	CHRW US	Ken Hoexter
	Saia Inc.	SAIA	SAIA US	Ken Hoexter
	The Greenbrier Companies	GBX	GBX US	Ken Hoexter
	Triton International, Ltd	TRTN	TRTN US	Ken Hoexter
	TuSimple	TSP	TSP US	Ken Hoexter
	XPO, Inc.	XPO	XPO US	Ken Hoexter

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Transport/Infrastructure Group (as of 31 Mar 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	68	51.52%	Buy	38	55.88%
Hold	28	21.21%	Hold	15	53.57%
Sell	36	27.27%	Sell	18	50.00%

Equity Investment Rating Distribution: Global Group (as of 31 Mar 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1869	53.01%	Buy	1030	55.11%
Hold	827	23.45%	Hold	476	57.56%
Sell	830	23.54%	Sell	389	46.87%

⁸¹ Issuers that were investment banking dients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.



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). There are three investment ratings: 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. 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^{R2}

 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.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.

BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: ArcBest, C.H. Robinson, J.B. Hunt Trans, Knight-Swift, Old Dominion, RXO, Inc., Saia Inc., Schneider National, TFI International, United Parcel, Werner Enterpris, XPO, Inc.

BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: RXO, Inc, United Parcel, XPO, Inc.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: C.H. Robinson, J.B. Hunt Trans, Knight-Swift, RXO, Inc, Saia Inc, Schneider National, United Parcel, XPO, Inc.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: ArcBest Corp., C.H. Robinson, J.B. Hunt Trans, Knight-Swift, Old Dominion Freight, RXO, Inc, Saia Inc, Schneider National, TFI International, United Parcel, Werner Enterpris, XPO, Inc.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: ArcBest Corp., C.H. Robinson, J.B. Hunt Trans, Knight-Swift, Old Dominion Freight, RXO, Inc, Saia Inc, Schneider National, TFI International, United Parcel, Werner Enterpris, XPO, Inc.

BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: J.B. Hunt Trans, Knight-Swift, RXO, Inc, Schneider National, United Parcel. XPO. Inc.

BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: C.H. Robinson, J.B. Hunt Trans, Knight-Swift, RXO, Inc, Saia Inc, Schneider National, United Parcel, XPO, Inc.

BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: TFI International, United Parcel.

BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: ArcBest, C.H. Robinson, J.B. Hunt Trans, Knight-Swift, Old Dominion, RXO, Inc., Saia Inc., Schneider National, TFI International, United Parcel, Werner Enterpris, XPO, Inc.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: C.H. Robinson, J.B. Hunt Trans, Knight-Swift, Old Dominion Freight, RXO, Inc, Schneider National, TFI International, United Parcel, XPO, Inc.

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 Prudentiel 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 CBI; BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, 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; BofA Europe (Madrid): Bank of America Europe Designated Activity Company). Werrill Lynch (Australia): Merrill Lynch (Hong Kong): Merrill Lynch (Plong Kong): Merrill Lynch (Plo



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.

CV, Casa 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 Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): 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 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 in Germany and is regulated by Merrill Lynch (DIFC) is done so in accor

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 recipients of this information should contact Merrill Lynch (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.

BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at BofA ESGMeter methodology. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

Copyright and General Information:

Copyright 2023 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 information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

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.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

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.

