

Seminar 68

Freight Market Outlook

The Cure for Low Prices

February 23, 2023

Tim Denoyer, VP, Senior Analyst

- Industry Analyst, Transportation Equipment
 - Freight forecasting, DAT & Cass partnerships
 - Used truck price forecasting
 - Carrier databases
 - Project work
- 5+ years with ACT, following 15 years covering US industrial economy in the investment community, mostly as an ACT client



Agenda

- Overview – The Bottoming Stage of the Freight Cycle
 - Ocean / Rail / Trucking freight environment
- Trucking Supply / Demand Balance
 - Freight volume outlook
 - Labor & equipment factors
- Rate cycle outlook
 - Heading to a tighter market



Freight Overview: Soft Patch Persists

Trucking:
flattened by
inflation

- Substitution back to services, destocking
- Volumes flat to down slightly – not a sharp downturn
- Supply chain pressure & inflation easing

Ocean:
empty containers
stacking up

- Imports down sharply, container ship queues gone
- Historic west to east shift
- Spot rates portend big ocean cost savings in '23

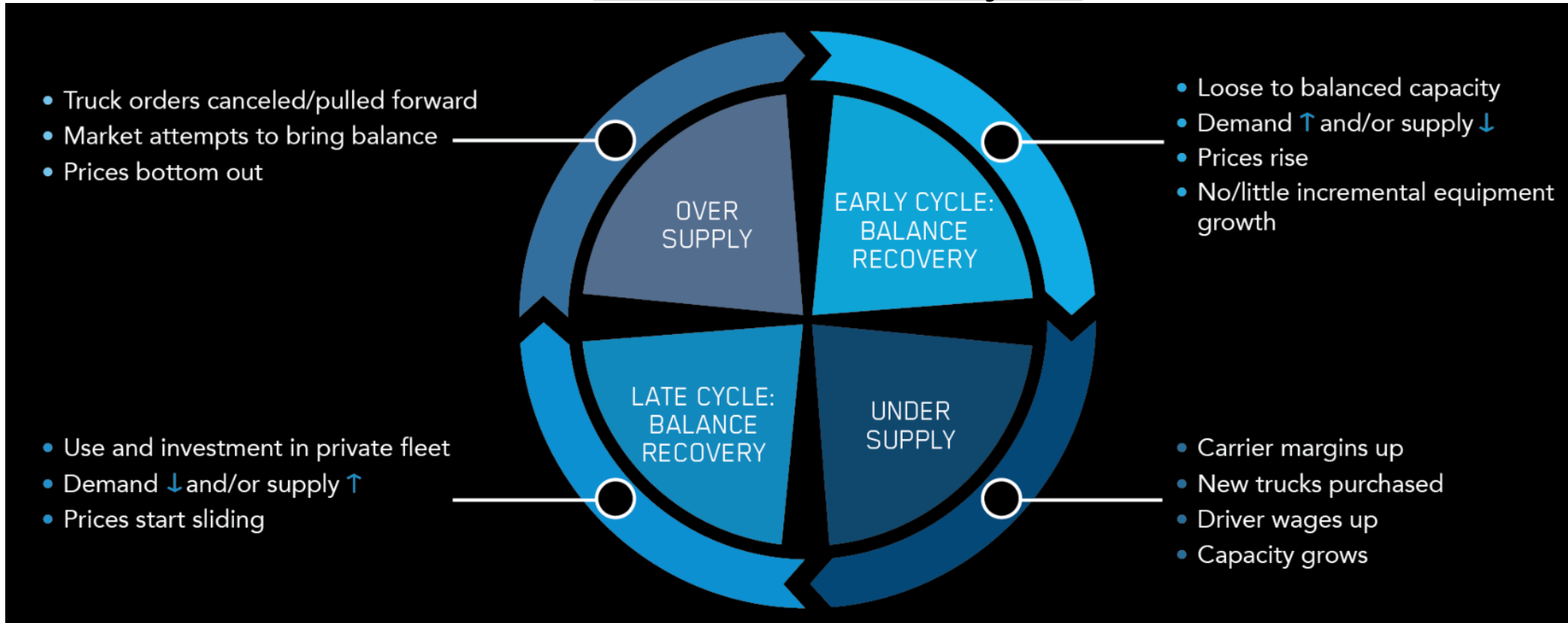
Rail / Intermodal:
slow going

- Losing share to TL amid network changes
- Spot rates trending down with truckload



Where are we in the cycle?

Classic Truck Cycle



- **Late cycle / oversupply, heading to early cycle**

Source: CH Robinson, ACT Research Co.

Container Spot Rates & Imports Splash Down

Freightos Baltic Index (FBX) Global Container Index
FBX Global Container Freight Index

10-Feb-23 / \$2,005

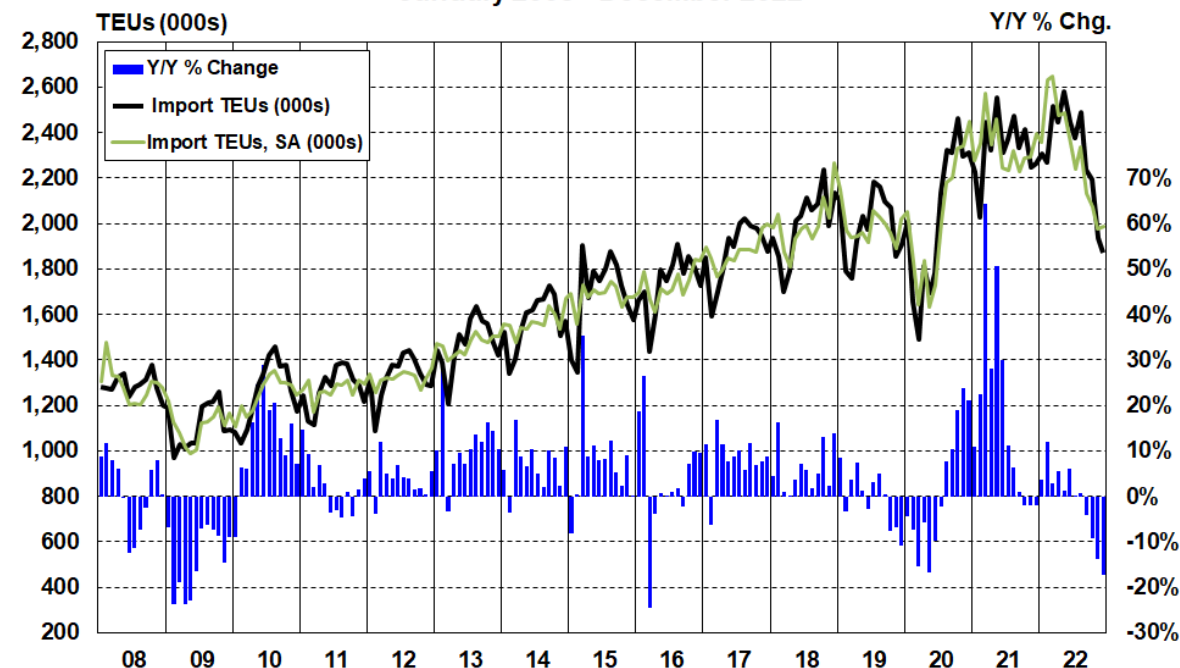


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fbx.freightos.com

N.A. Ports: Inbound Loaded Containers

January 2008 - December 2022



Note: Port of Vancouver added in 2013 and Lazaro Cardenas added in 2015. Y/Y changes are adjusted to normalize.

Source: ACT Research Co. © 2023

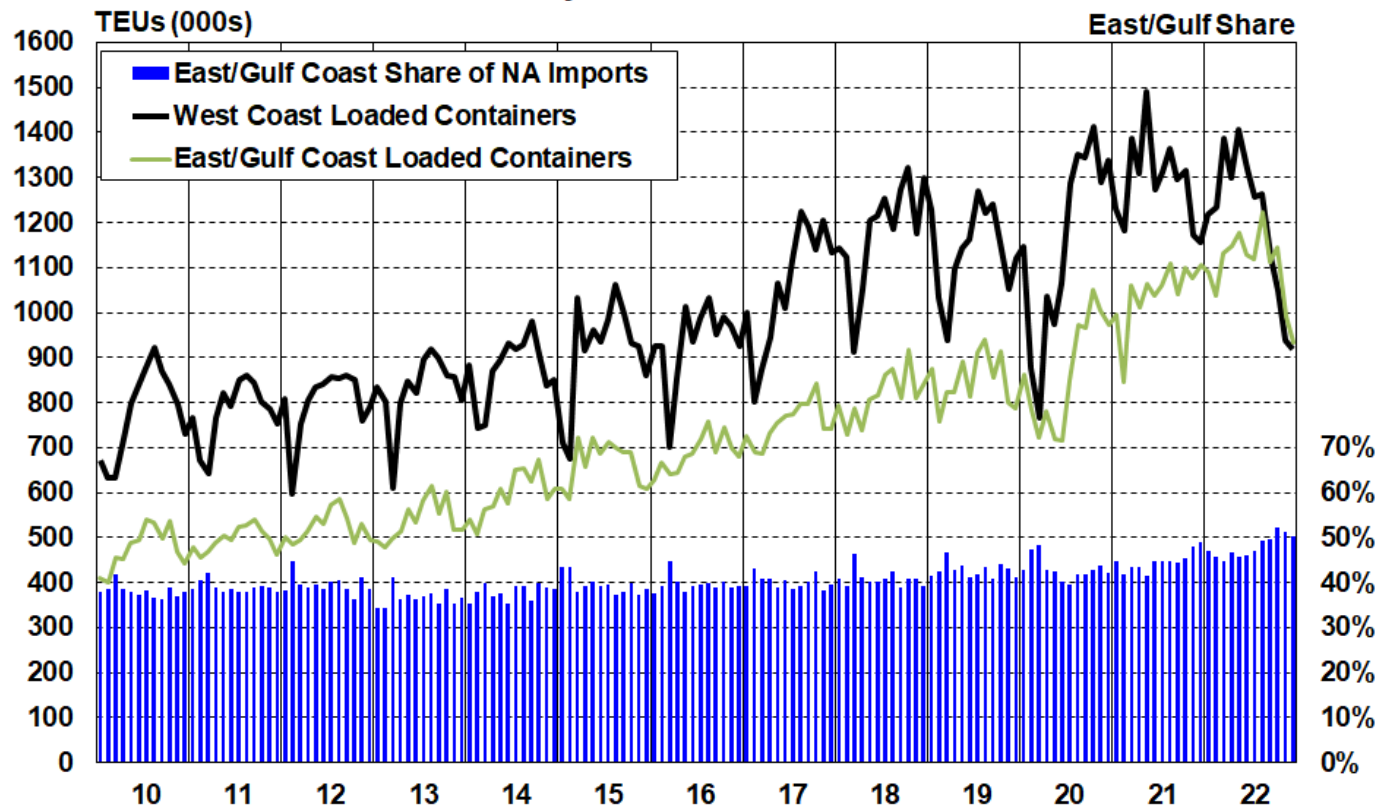
Near full reversal of pandemic surge

Ship backlogs largely cleared

Historic Shift from West to East

N.A. Ports: Loaded Container Imports

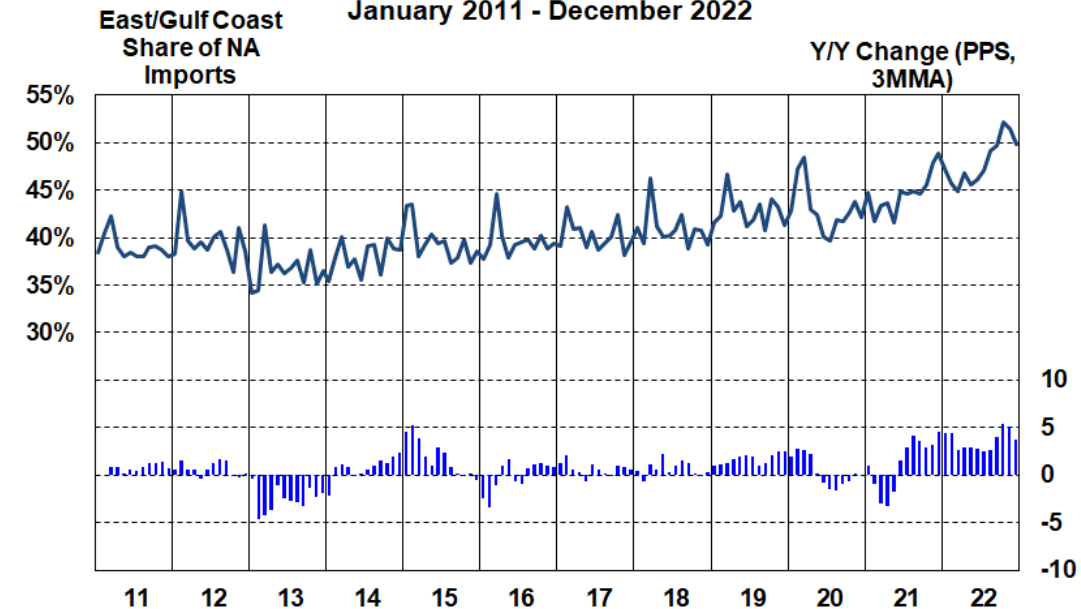
January 2010 - December 2022



Source: ACT Research Co. © 2023

All-Water Shipping to US East/Gulf Coasts

January 2011 - December 2022



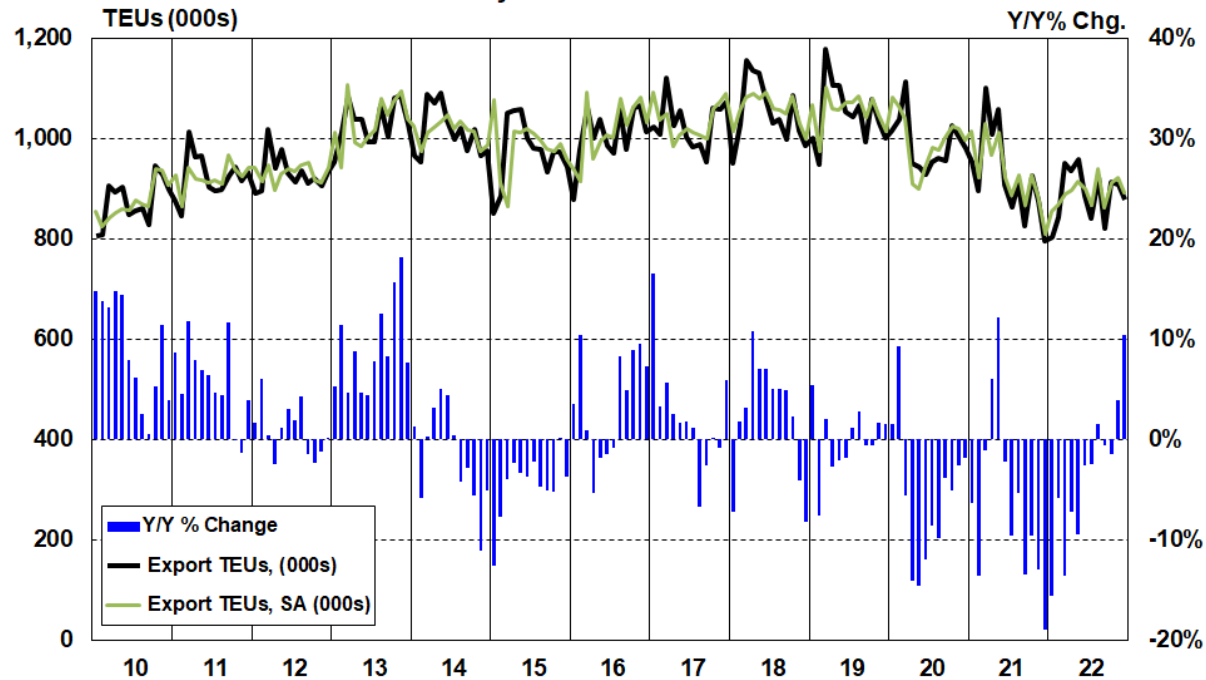
Source: ACT Research Co. © 2023

East/Gulf Coast ports >half of NA imports in Q4
- 3.3pps share gained in 2022, ~500k TEUs

Exports Bottoming?

N.A. Ports: Outbound Loaded Containers

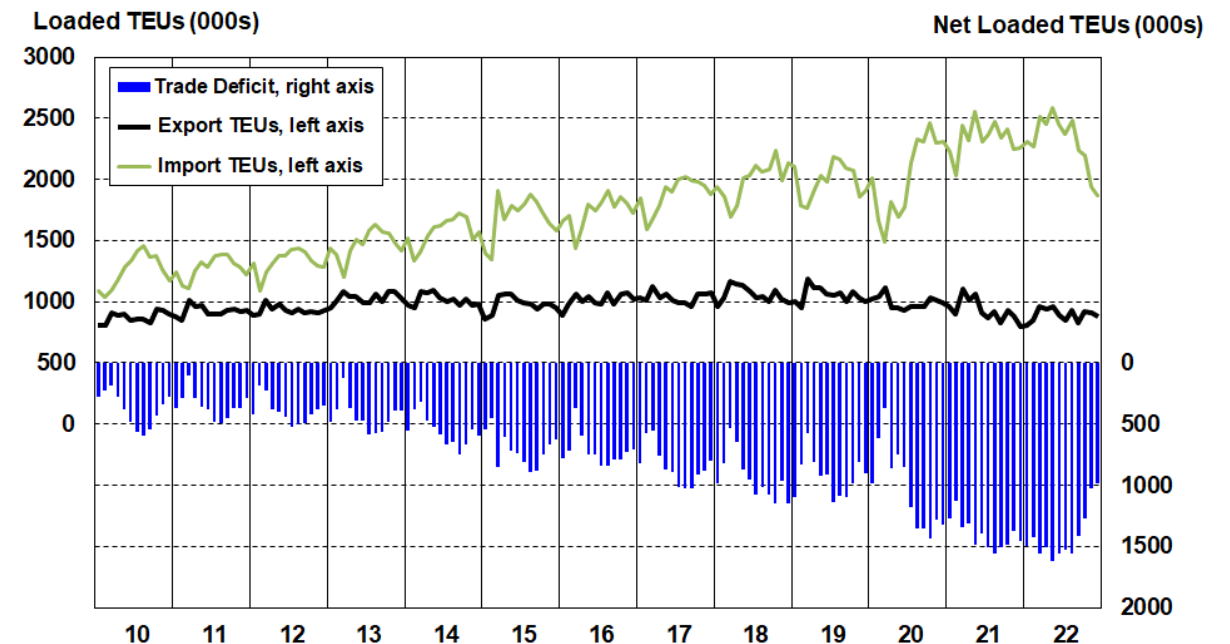
January 2010 - December 2022



Note: Port of Vancouver added in 2013 and Lazaro Cardenas added in 2015. Y/Y changes are adjusted to normalize.
Source: ACT Research Co. © 2023

N.A. Ports: Container Trade Deficit

January 2010 - December 2022



Note: Port of Vancouver added in 2013 and Lazaro Cardenas added in 2015.
Source: ACT Research Co. © 2023

Exports up on easy comps
Stable imports + falling exports = smaller trade deficit

Railroad Overview

North American Class I Rail Volumes

	y/y % change								
	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22	Q1'23
Intermodal	13.6%	22.9%	-1.3%	-10.2%	-6.1%	-3.5%	-0.6%	-2.5%	-6.7%
Chemicals	-3.1%	14.2%	4.8%	3.7%	5.0%	-0.2%	-0.3%	-8.4%	-5.0%
Metals	-1.4%	32.6%	28.0%	8.2%	-0.8%	-1.2%	-6.4%	-4.3%	5.6%
Automotive	-8.1%	134.5%	-25.4%	-18.8%	-7.6%	9.3%	20.8%	11.4%	13.9%
Petroleum	-18.9%	16.5%	13.3%	-3.9%	-11.5%	-2.3%	-1.8%	1.6%	9.0%
Minerals/Sand	-9.0%	12.4%	11.7%	7.7%	8.2%	3.7%	4.1%	3.5%	10.1%
Paper/Lumber	0.9%	11.2%	5.8%	1.0%	-2.4%	-0.6%	-1.1%	-6.7%	-4.4%
Grain/Food	13.2%	8.9%	-9.9%	-7.3%	-5.6%	-5.0%	5.2%	5.6%	9.2%
Coal	-5.3%	33.6%	17.5%	7.5%	13.3%	-0.4%	3.4%	1.1%	2.0%
Total	4.5%	22.6%	1.7%	-5.2%	-2.5%	-2.1%	0.7%	-2.4%	-0.9%
Carloads, ex-Intermodal	-3.3%	22.3%	4.8%	0.0%	1.0%	-0.7%	2.1%	-2.2%	4.5%

Source: Company reports; ACT Research Co. © 2023

Intermodal down on network changes

Carloads up in Q1 on autos, grain, & energy

Railroad Detail

Weekly North American Rail Volumes by Segment

	y/y % change										
Week ending:	12/3/22	12/10/22	12/17/22	12/24/22	12/31/22	1/7/23	1/14/23	1/21/23	1/28/23	2/4/23	2/11/23
Intermodal	-4.1%	-4.3%	-6.3%	-8.7%	-1.5%	-8.2%	-4.9%	-6.4%	-6.4%	-4.1%	-8.6%
Chemicals	-17.3%	-11.8%	-11.0%	-8.7%	-18.7%	-11.6%	-5.3%	-0.9%	-7.4%	-1.9%	-2.8%
Metals	-1.7%	2.5%	-3.0%	-4.9%	-9.9%	0.1%	3.1%	9.1%	3.4%	6.3%	11.1%
Automotive	4.0%	8.7%	10.7%	11.9%	5.7%	15.0%	17.0%	18.4%	9.6%	21.6%	5.9%
Petroleum	5.0%	-5.7%	2.7%	-1.6%	8.0%	14.2%	6.6%	13.2%	8.6%	9.0%	2.6%
Minerals/Sand	-0.3%	7.8%	-1.4%	2.4%	-11.6%	6.7%	12.5%	19.9%	8.0%	10.3%	8.0%
Paper/Lumber	-4.3%	-3.2%	-8.6%	-8.5%	-17.7%	-5.5%	-3.6%	-5.0%	-2.7%	-1.1%	-8.3%
Grain/Food	8.0%	7.7%	7.1%	1.6%	-0.2%	8.8%	22.6%	6.8%	6.1%	9.0%	1.5%
Coal	3.7%	10.6%	-5.8%	-20.0%	-9.3%	21.8%	6.4%	4.3%	0.8%	-9.5%	-3.1%
Total	-2.1%	-0.6%	-4.1%	-6.8%	-4.8%	-0.8%	1.8%	0.6%	-1.6%	-0.3%	-3.6%
Carloads, ex-Intermodal	-0.4%	2.8%	-2.0%	-5.1%	-7.5%	6.0%	8.1%	7.2%	2.8%	3.2%	1.1%

Source: Company reports; ACT Research Co. © 2023

Weekly North American Intermodal Volumes by Railroad

	y/y % change										
Week ending:	12/3/22	12/10/22	12/17/22	12/24/22	12/31/22	1/7/23	1/14/23	1/21/23	1/28/23	2/4/23	2/11/23
BNSF	-11%	-12%	-13%	-18%	-10%	-17%	-14%	-17%	-15%	-13%	-16%
UP	-3%	-3%	-1%	7%	22%	-5%	-1%	-2%	-4%	8%	-3%
West	-7%	-7%	-7%	-6%	6%	-11%	-8%	-9%	-9%	-2%	-10%
CSX	-8%	-3%	-8%	-8%	-10%	-6%	-8%	-9%	-8%	-2%	-6%
NS	-6%	0%	-4%	-2%	0%	-6%	0%	5%	1%	1%	-6%
East	-7%	-2%	-6%	-5%	-5%	-6%	-4%	-2%	-4%	-1%	-6%
CN	9%	-8%	-10%	-22%	-9%	-10%	-9%	-12%	-9%	-9%	-15%
CP	18%	9%	13%	-18%	15%	11%	12%	-1%	7%	-11%	-9%
Canada	13%	1%	2%	-20%	3%	0%	2%	-6%	-1%	-10%	-12%
KCS	0%	4%	-5%	7%	1%	-2%	12%	3%	-5%	-7%	12%
Total	-4%	-4%	-6%	-9%	-1%	-8%	-5%	-6%	-6%	-4%	-9%

Source: Company reports; ACT Research Co. © 2023

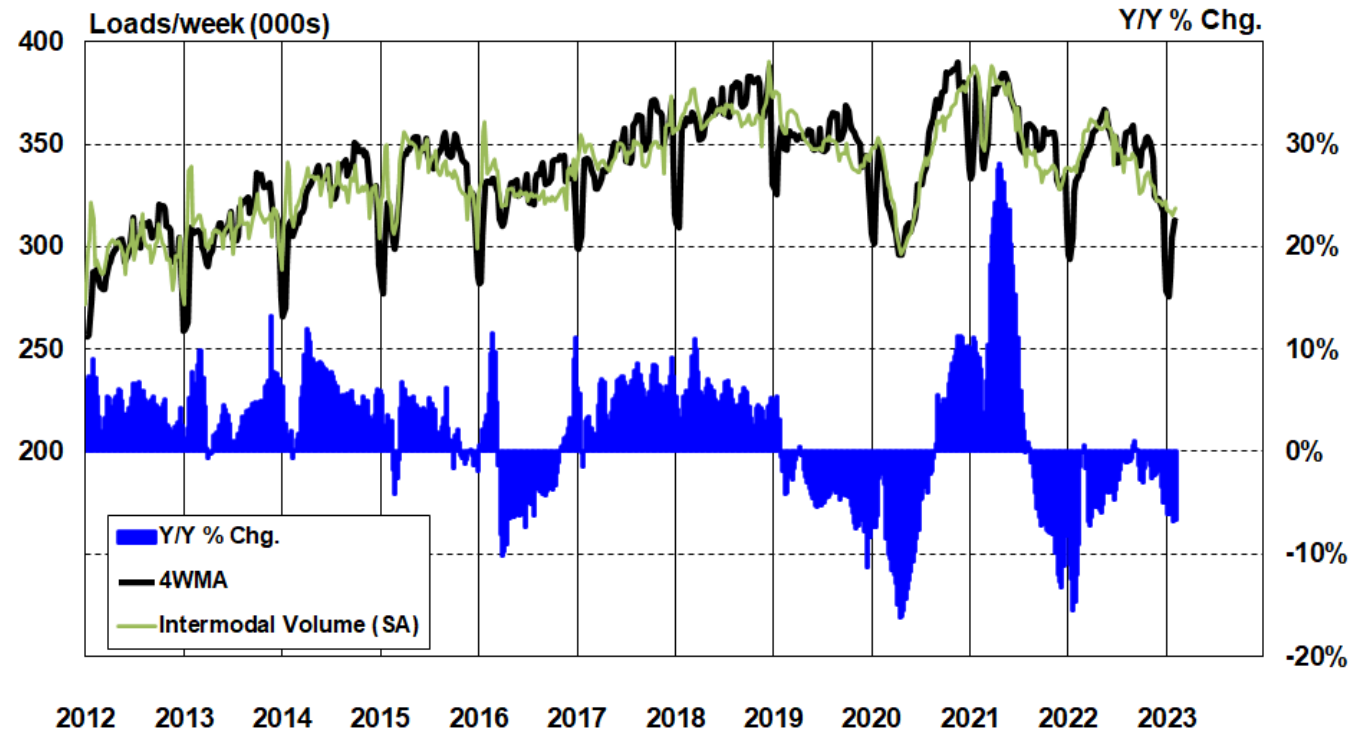
January comps were easy vs last year's weather & Omicron

Intermodal challenges center on western network changes

Intermodal Volume Sliding Again

N.A. Rail: Intermodal Traffic 4-Week Moving Avg

January 2010 - February 2023
(02/11/2023)

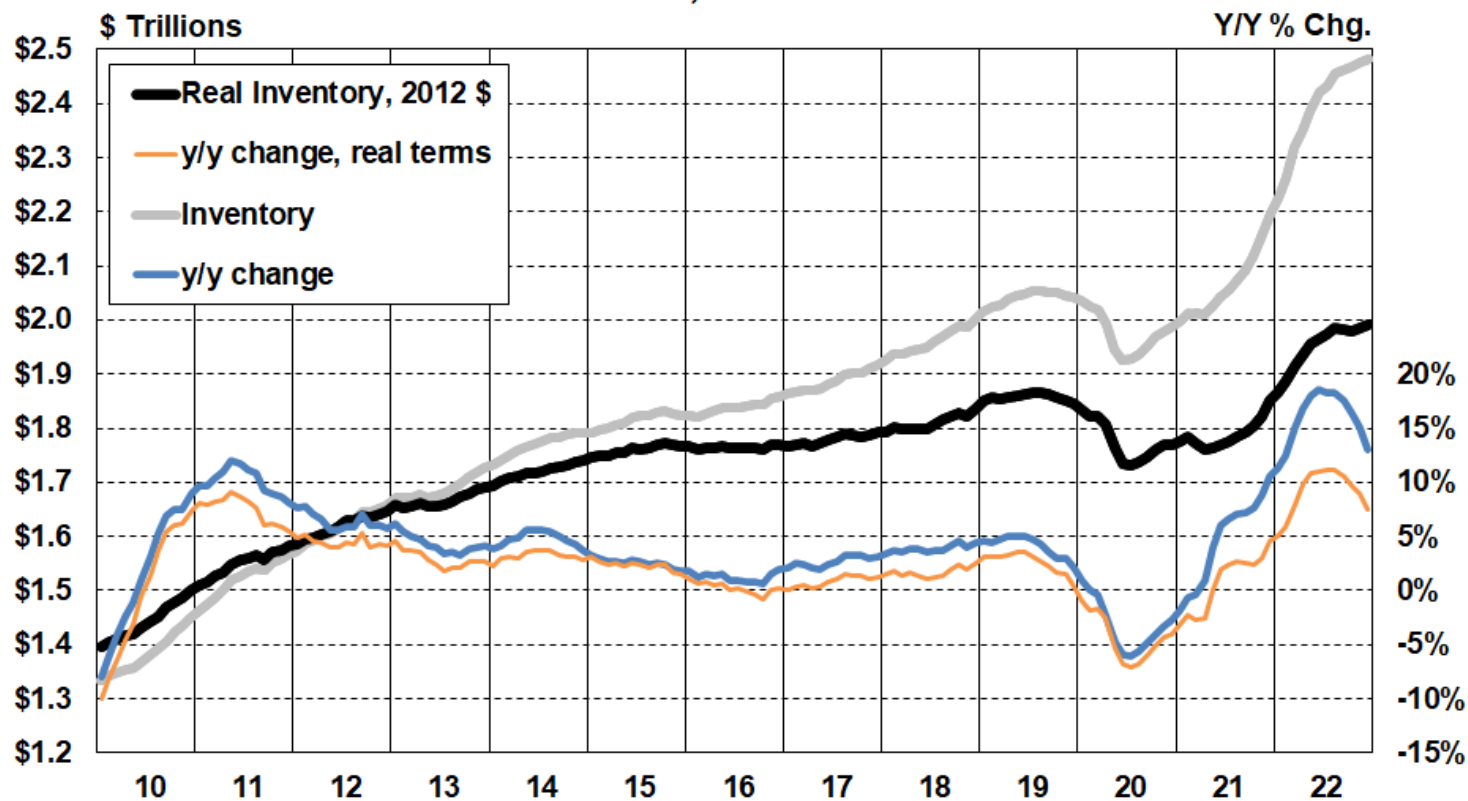


Source: Association of American Railroads, ACT Research Co. © 2023

**If it isn't one thing....
Demand issues more
than supply now**

Is \$2.5 Trillion of Inventory Too Much?

Inventories: Total Business
January 2010 - December 2022
Billions of Dollars, End of Period - SAAR



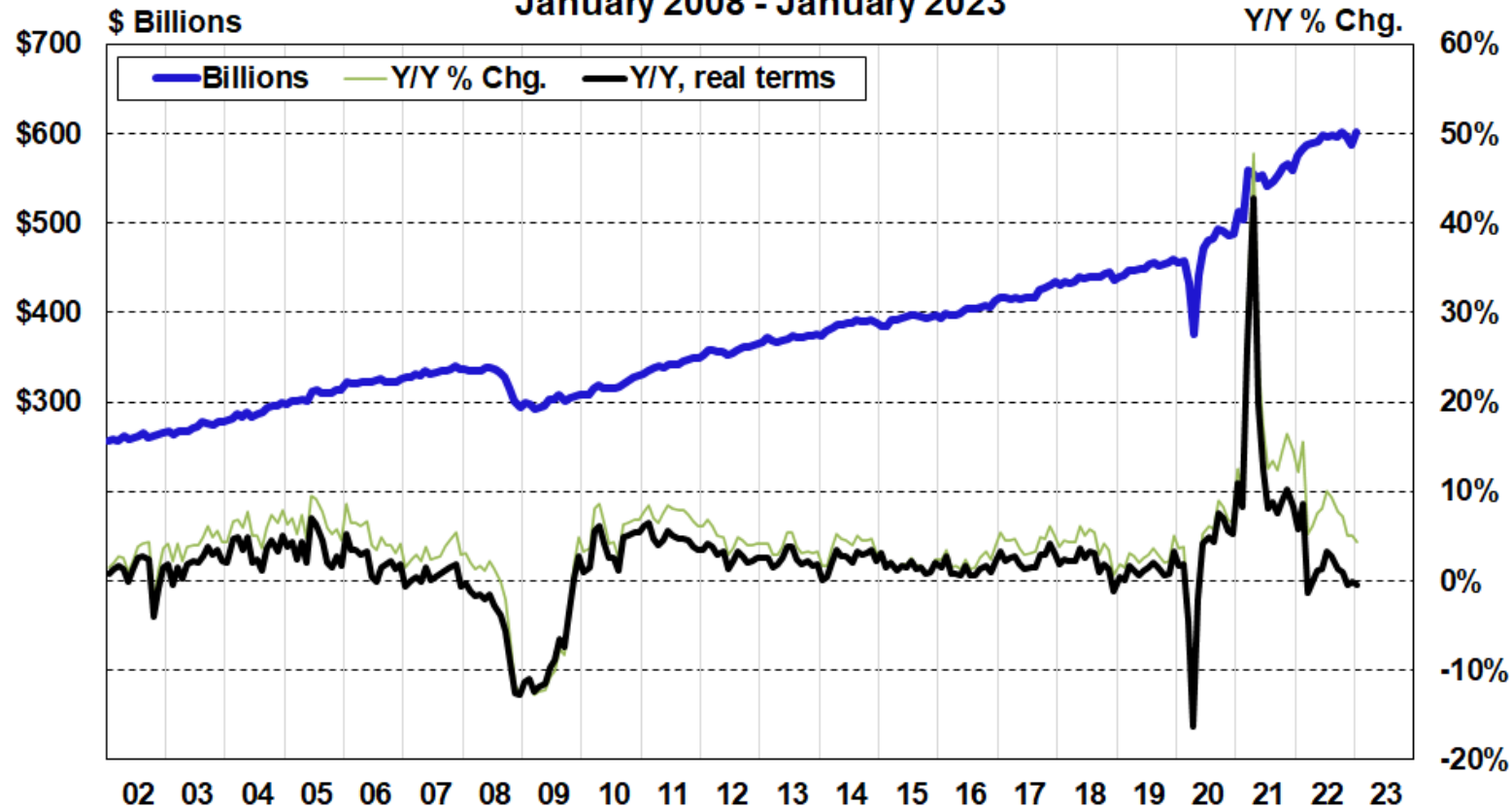
Source: Census Bureau, ACT Research Co. © 2023

**Slowdown from
record growth**

**Early- to mid-
innings of destock**

Real Retail Sales Flattish

US Retail Sales
Billions of Dollars - SAAR
January 2008 - January 2023



2022 holiday sales ~flat

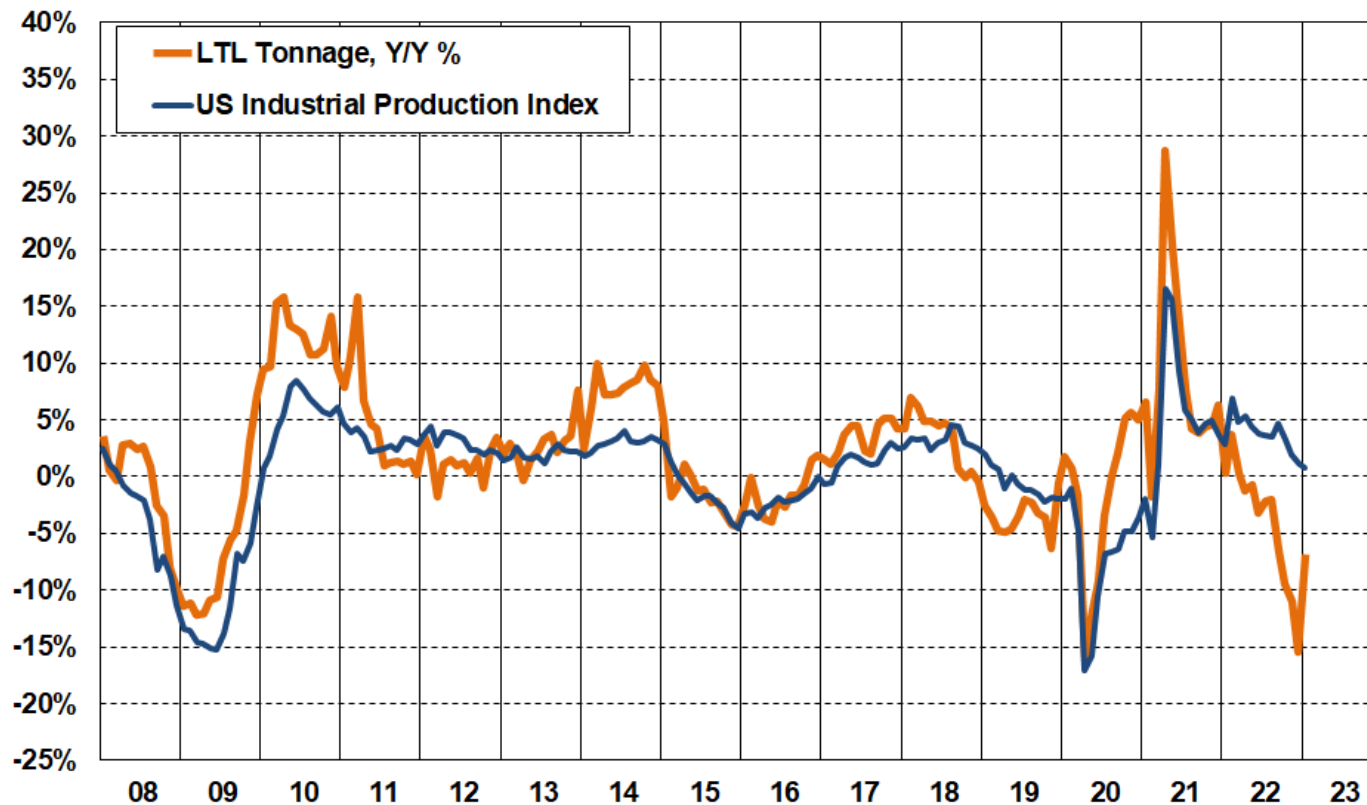
Jan better m/m, but
worse y/y in real terms

Source: US Census Bureau, ACT Research Co. © 2023

Industrial Production Softening

LTL Tonnage and U.S. Industrial Production Index

January 2008 - November 2022



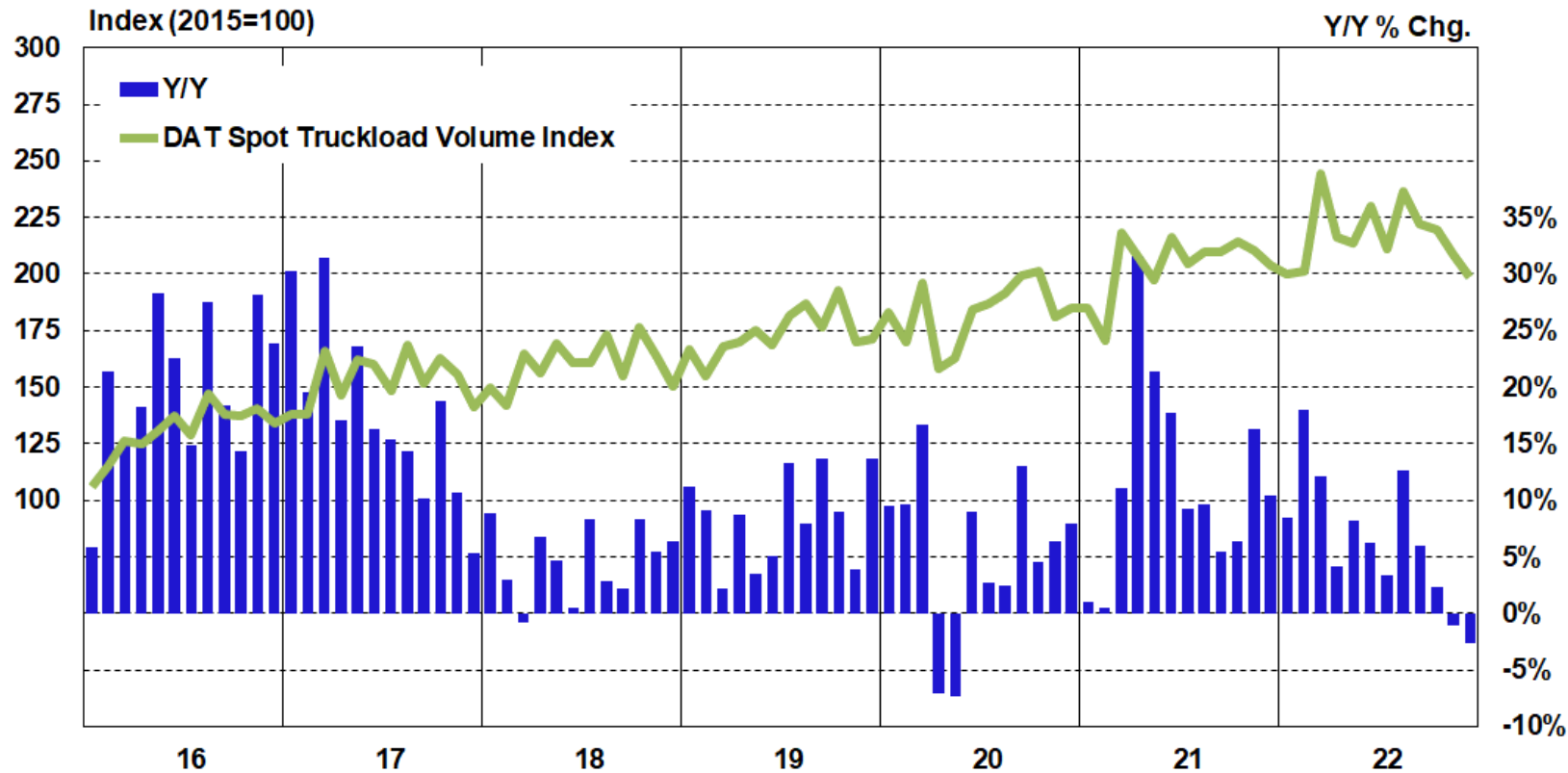
Source: Federal Reserve, Company reports, ACT Research Co. © 2023

IP set to turn down soon
LTL cyclicalty due to
retail & restructuring

Even Spot Freight Volume is Down

DAT Truckload Spot Volume Index

January 2016 - December 2022

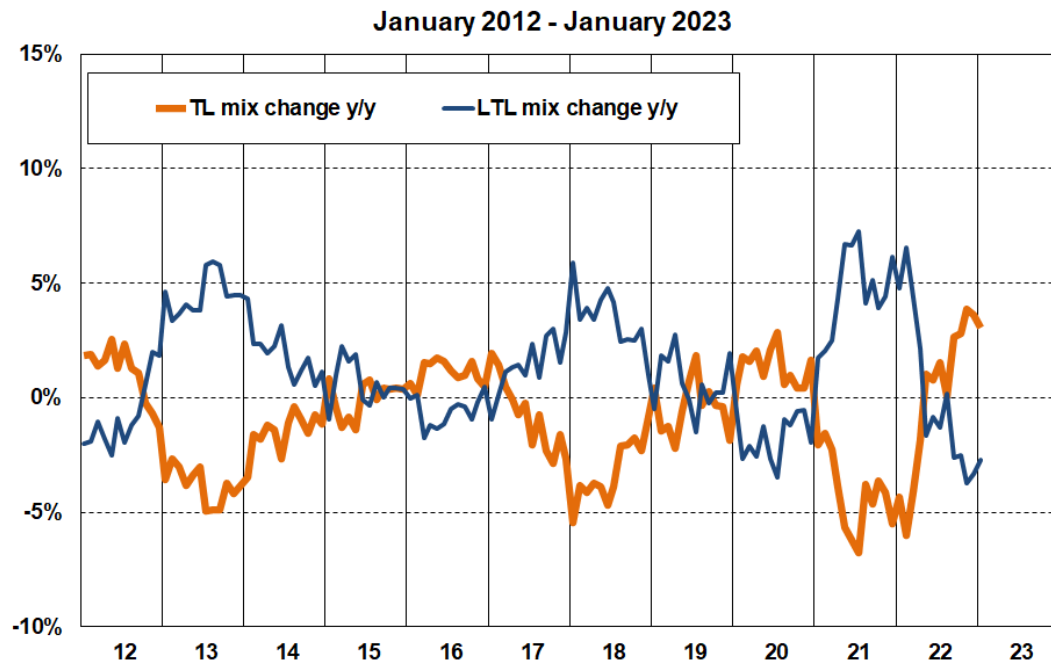


Declines in this index are rare

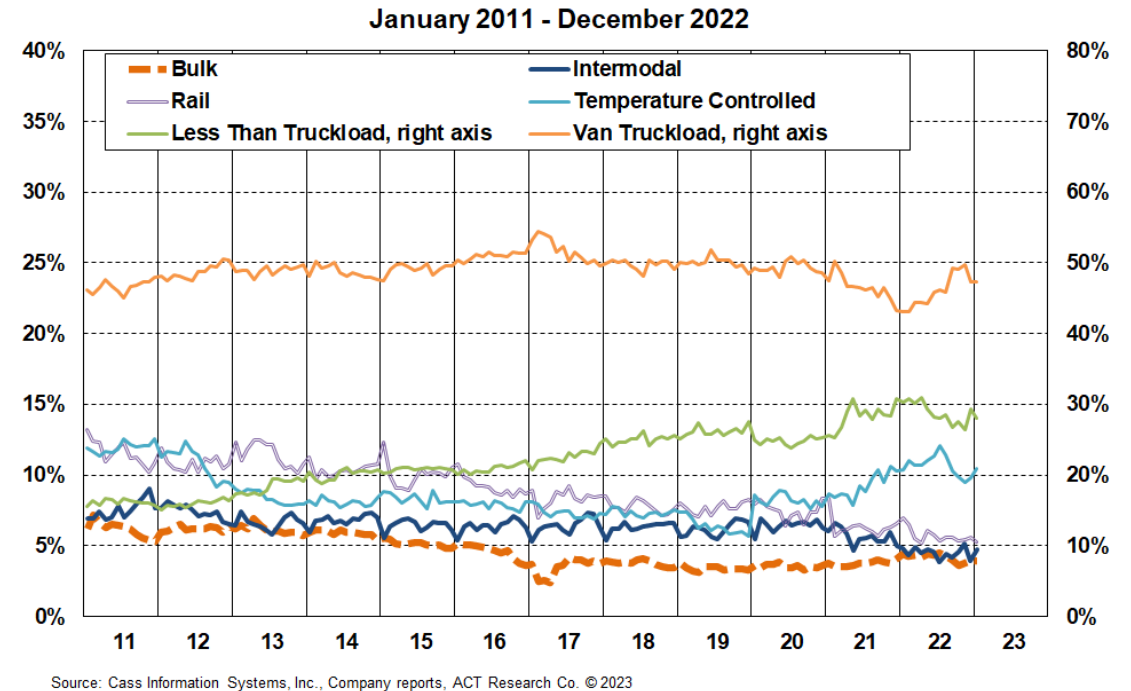
Source: DAT Freight & Analytics, ACT Research Co. © 2023

Modal Shift to Truckload

Cass Freight Index® - Shipments by mode



Cass Freight Index® - Spend by mode



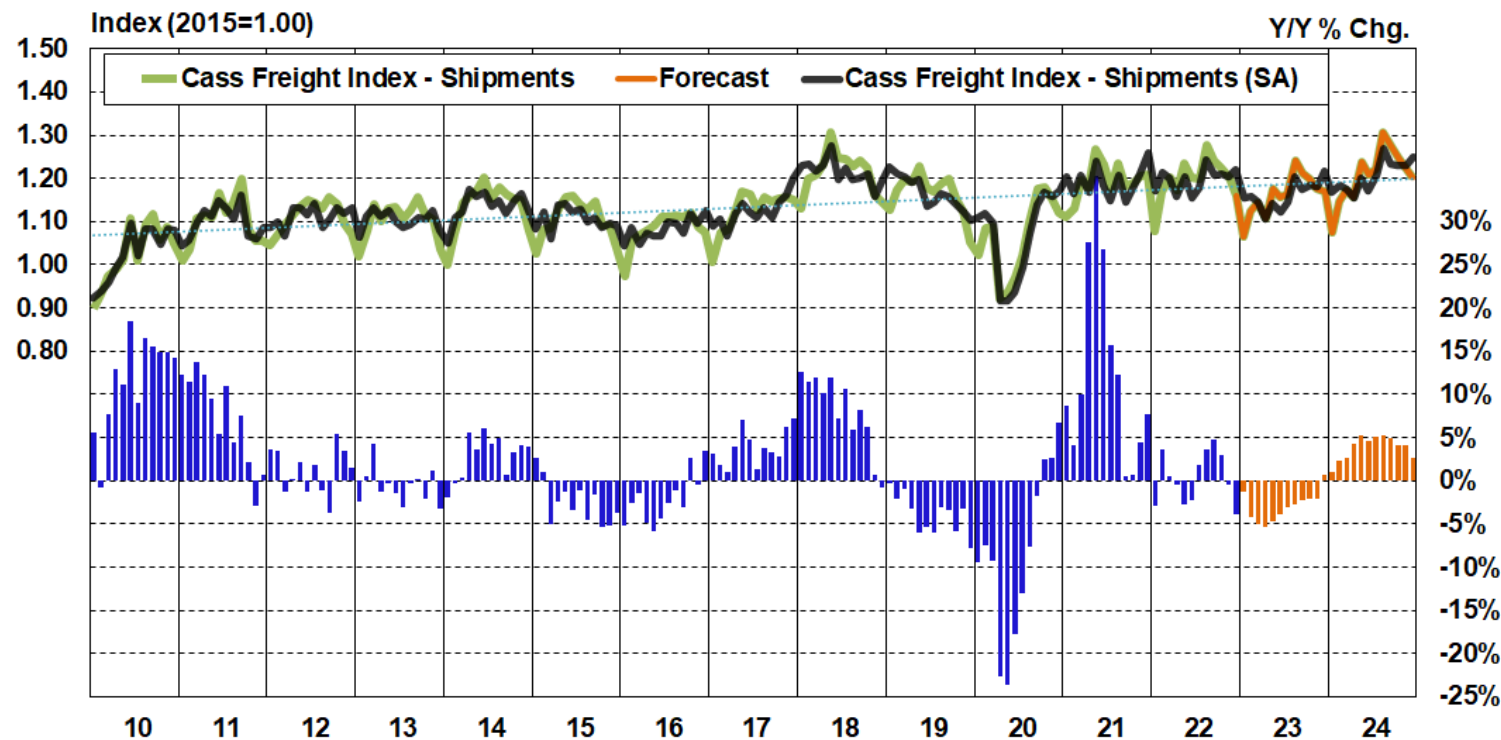
- Shift to TL taking share from LTL and intermodal
- Within TL, shift from spot to contract & dedicated



US Freight Volume Outlook: Down, then Up

Cass Freight Index® - Shipments

January 2010 - December 2024 Forecast



Source: Cass Information Systems, Inc., ACT Research Co. © 2023

Trucking (TL/LTL) Demand Outlook

Late cycle soft patch due to:

- Substitution back to services
- Inflation
- Higher interest rates
- Inventory overstock
- Private fleet growth impacting for-hire demand

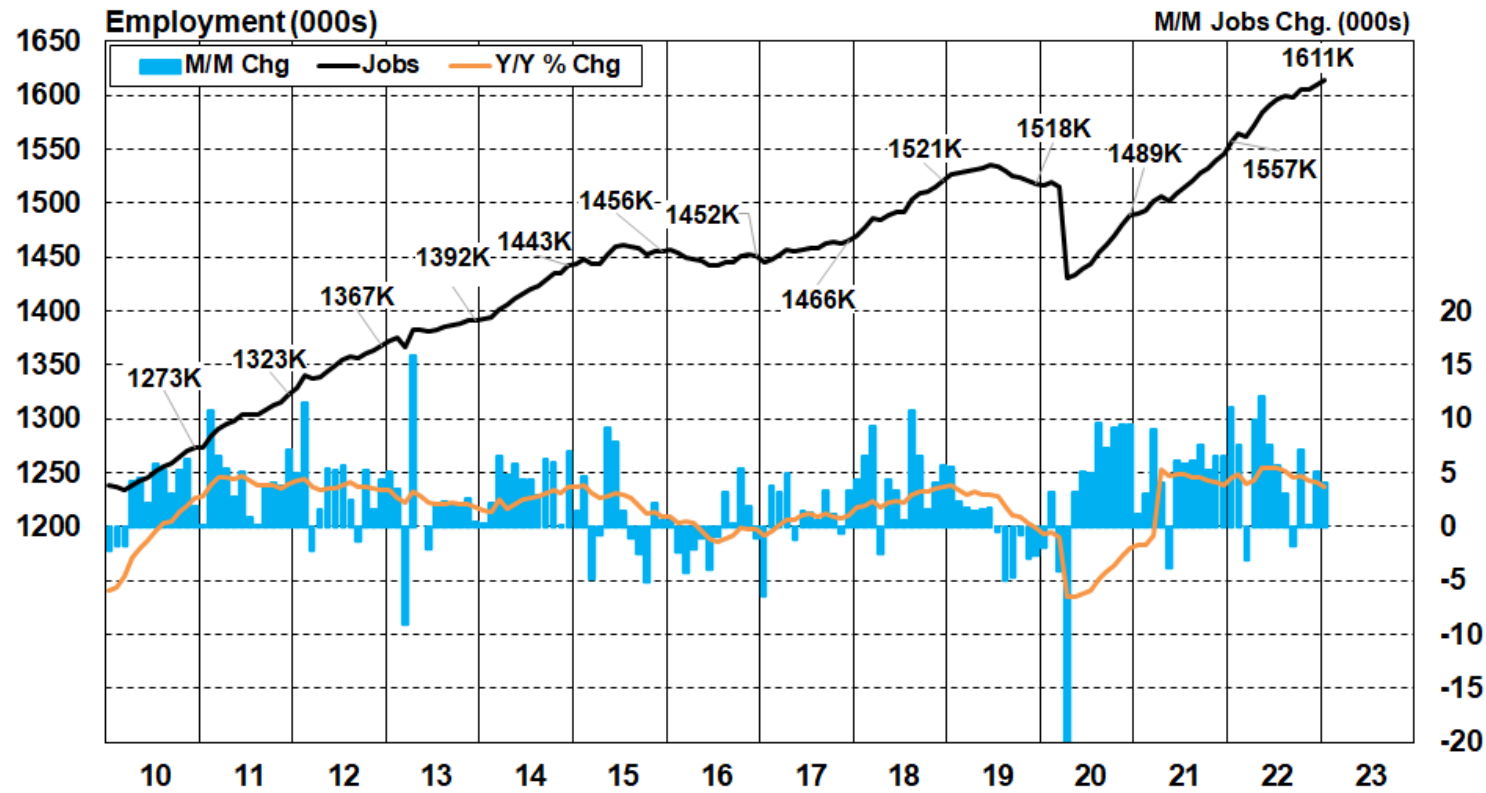
Modest freight recession in 22/23 returning to growth in 24/25

- Consumer, inventory, and industrial production cycles support return to growth

Labor Supply Starting to Slow?

Truck Transportation Employment

January 2010 - January 2023 (SA)



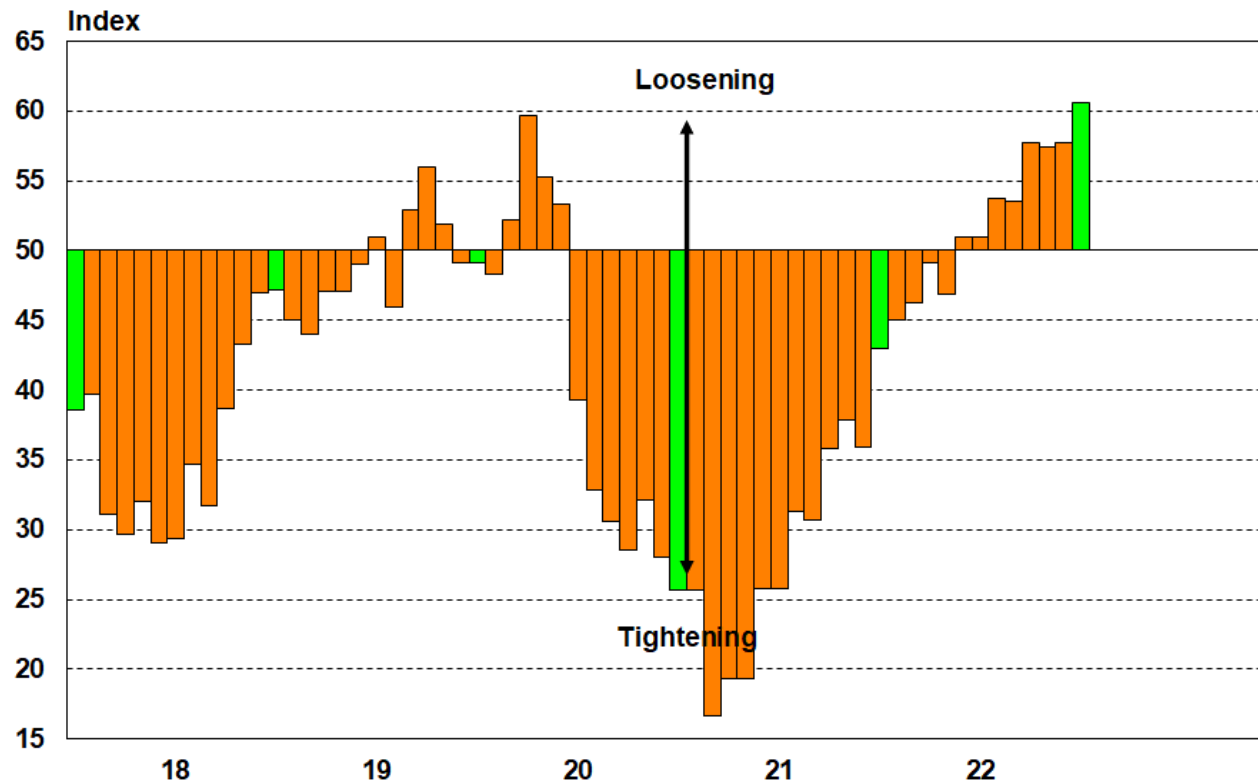
Source: BLS, ACT Research Co. © 2023

- Inversely correlated with rates
- Trajectory change in 2H'22
- Slowdown supports spot rate bottoming process

Driver Availability Key to Truckload Cycle

ACT For-Hire Trucking Index: Driver Availability

January 2018 - January 2023

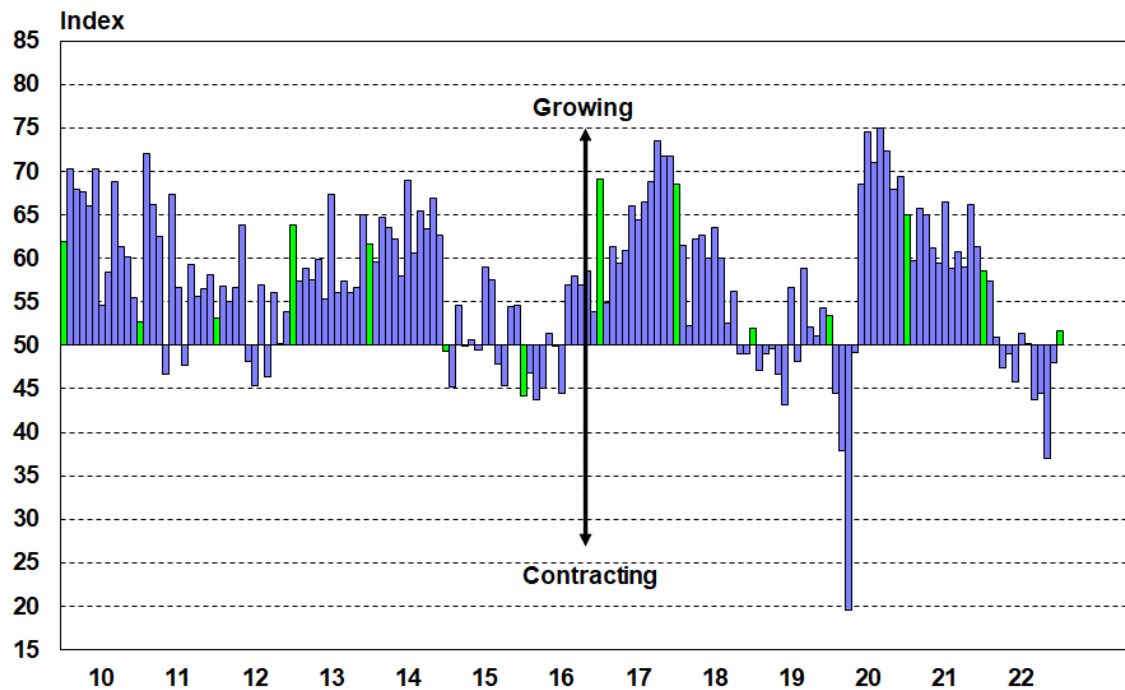


Source: ACT Research Co. © 2023

- 4.5-year average: 39.7
- January: 60.6

Demand Down, Supply Up

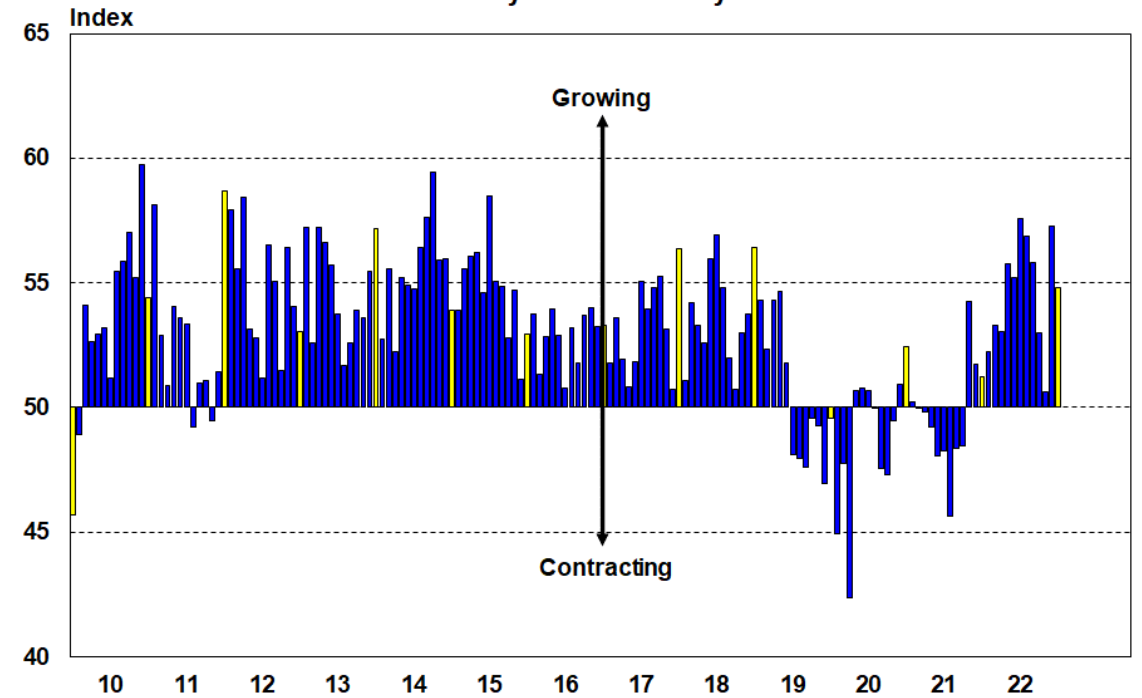
ACT For-Hire Trucking Index: Volumes
(Seasonally Adjusted)
January 2010 - January 2023



Source: ACT Research Co. © 2023

Volumes closer to the end than the start of a typical downcycle

ACT For-Hire Trucking Index: Fleet Capacity
(Seasonally Adjusted)
January 2010 - January 2023



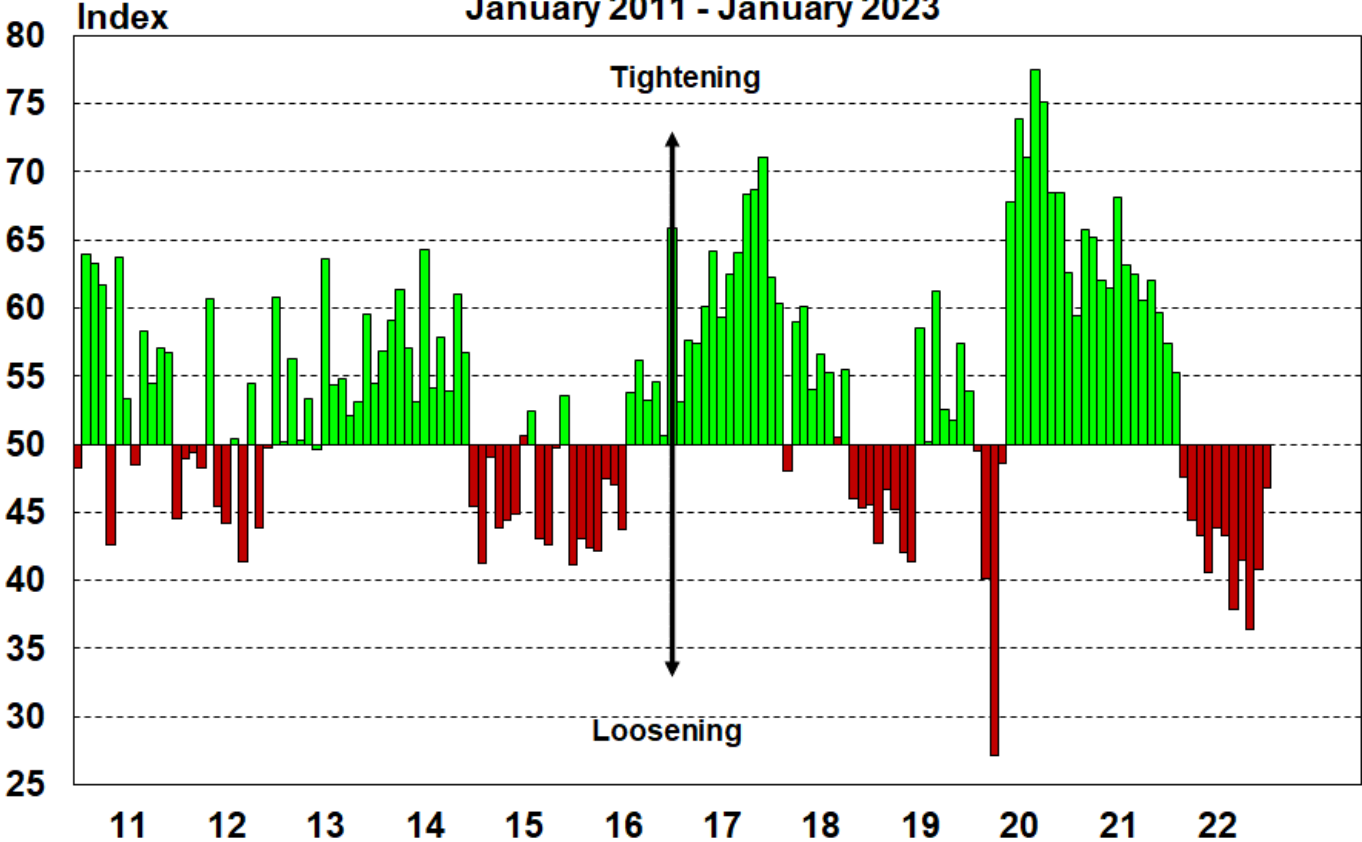
Source: ACT Research Co. © 2023

Capacity starting to slow



Bottoming Phase

ACT For-Hire Trucking Survey: Supply-Demand Balance
Freight (Demand) Index Less Capacity (Supply) Index
 (Seasonally Adjusted)
 January 2011 - January 2023

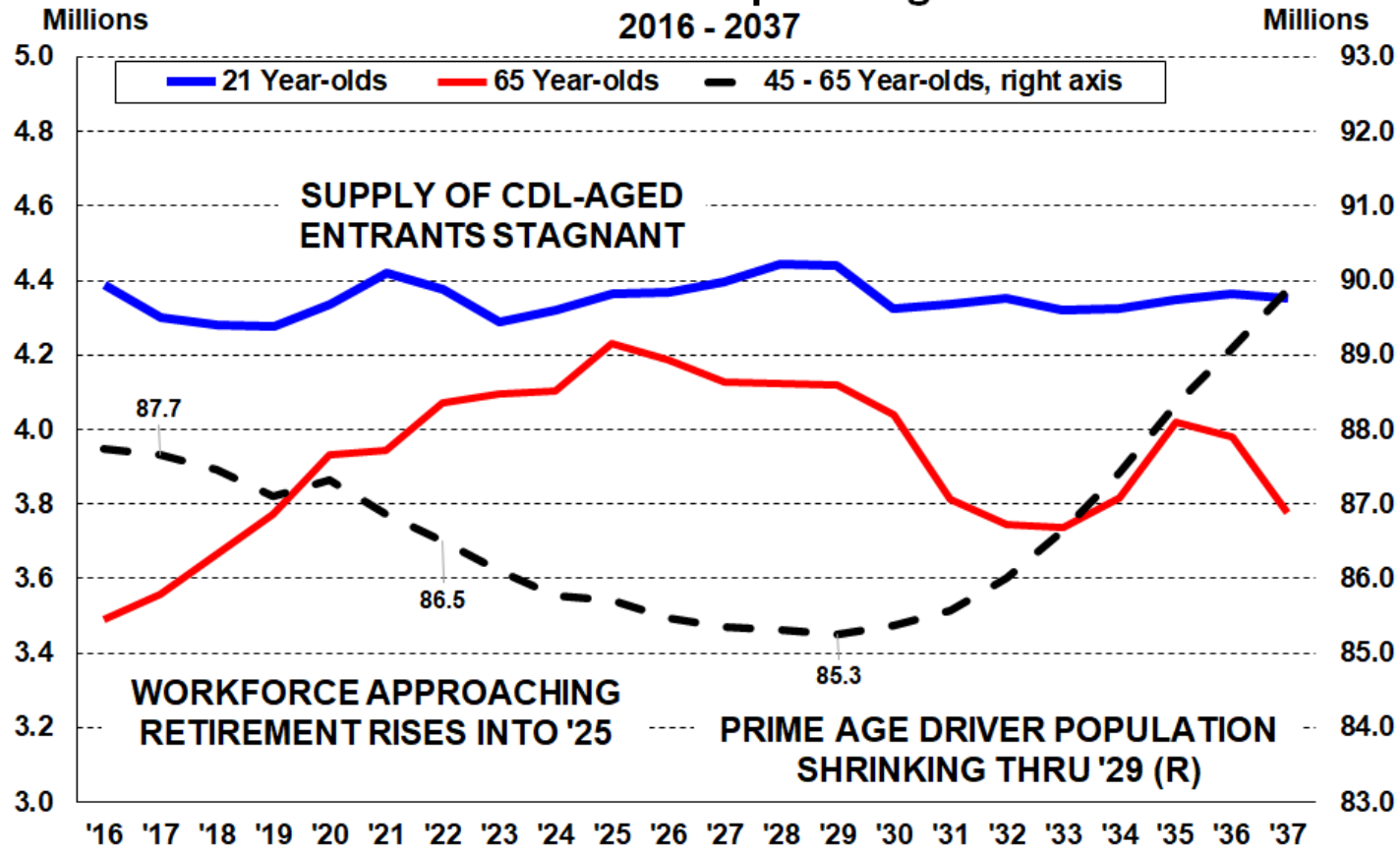


Less worse



Boomer Wave to Cut Trucking Workforce Until '29

U.S. Demographics
Potential Hirees & Impending Retirees
2016 - 2037

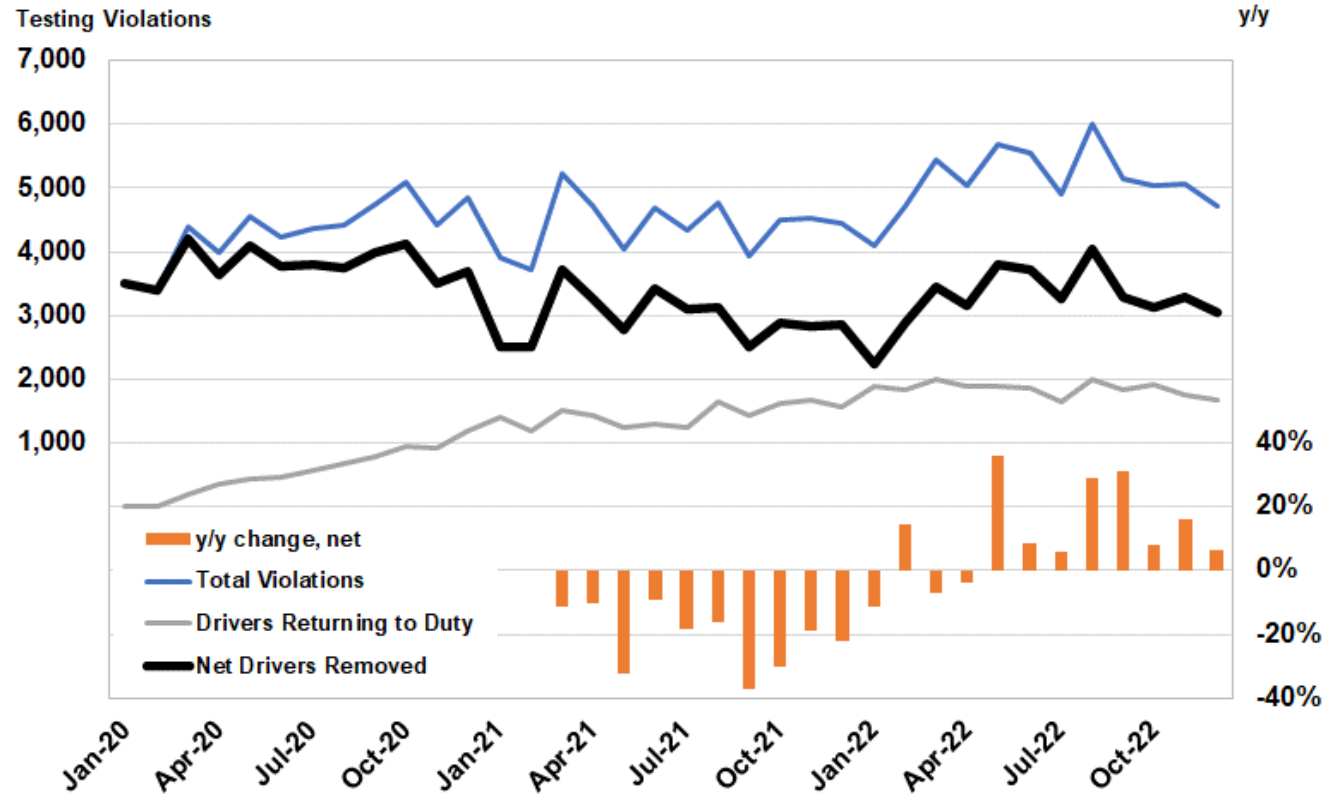


Source: U.S. Census Bureau, ACT Research Co. © 2022

Sharpening the edges of
truckload rate cycles

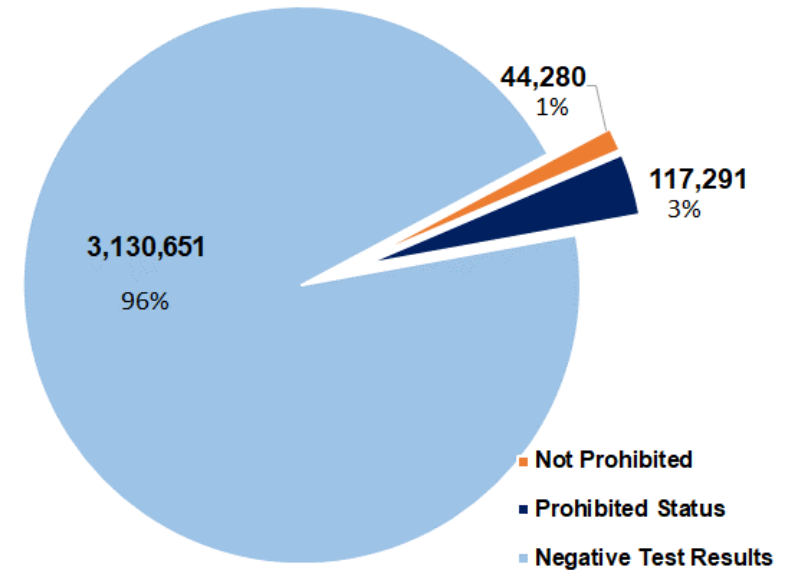
D&A Clearinghouse a New Constraint on Supply

FMCSA Drug & Alcohol Clearinghouse Violations



Source: FMCSA, ACT Research Co. © 2023

Drivers by Clearinghouse Operating Status



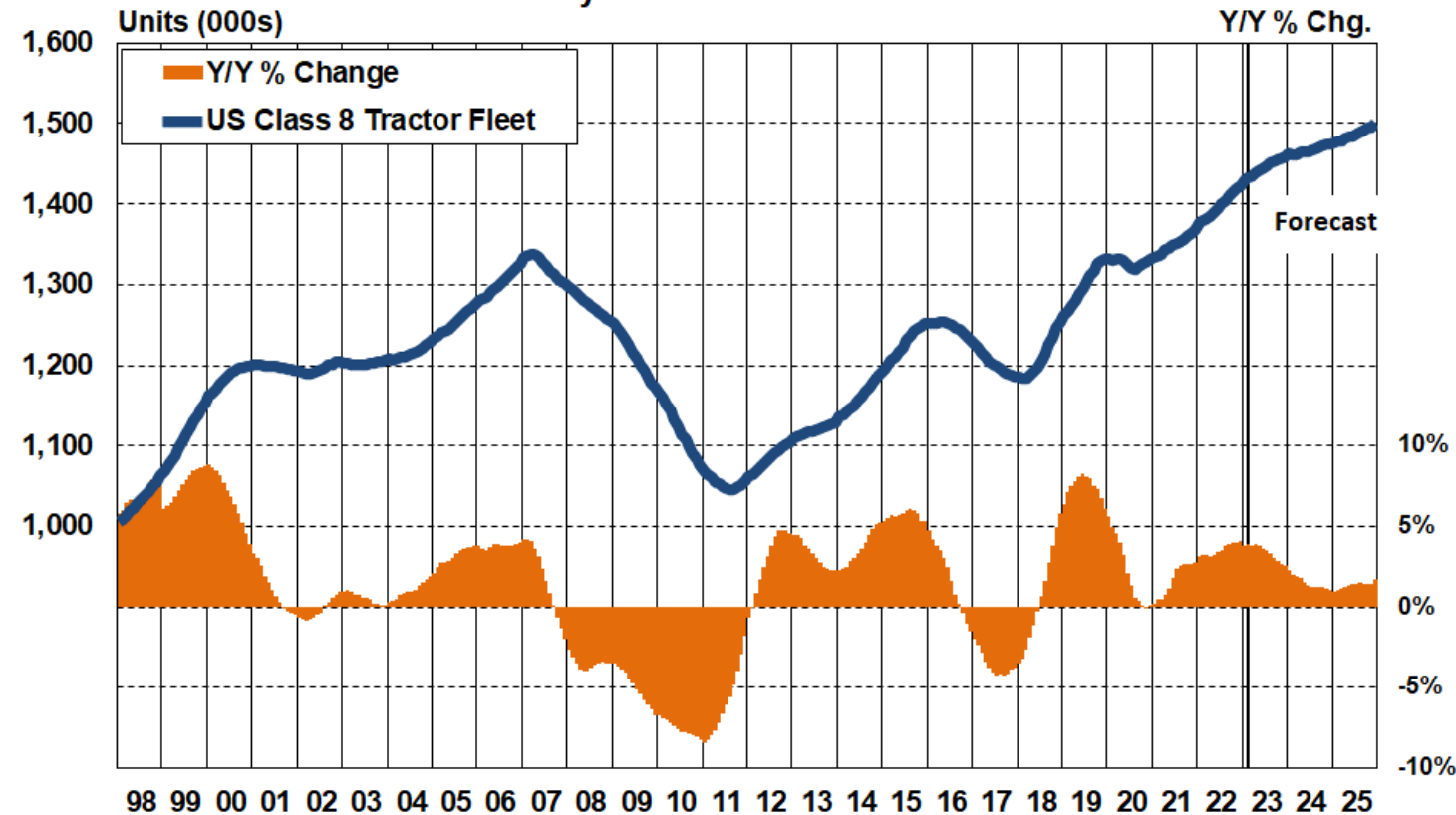
Source: FMCSA, ACT Research Co. © 2023

Long-term uptrend with summer seasonality?

Capacity Additions Set to Slow?

U.S. Class 8 Active TL & LTL Tractor Population

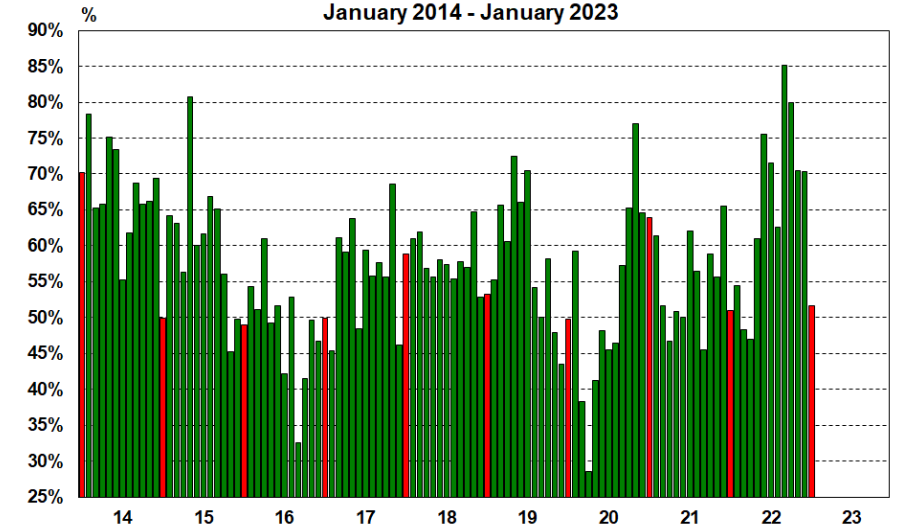
January 1998 - December 2025



Source: ACT Research Co. © 2023

- OEM capacity constraints easing
- 4% growth problematic amid soft demand, but 2020/2021 constraints argue for shorter downturn
- Slowdown in 2H'23?

ACT For-Hire Trucking Index: % Respondents Buying Equipment Next 3 Months (Seasonally Adjusted) January 2014 - January 2023

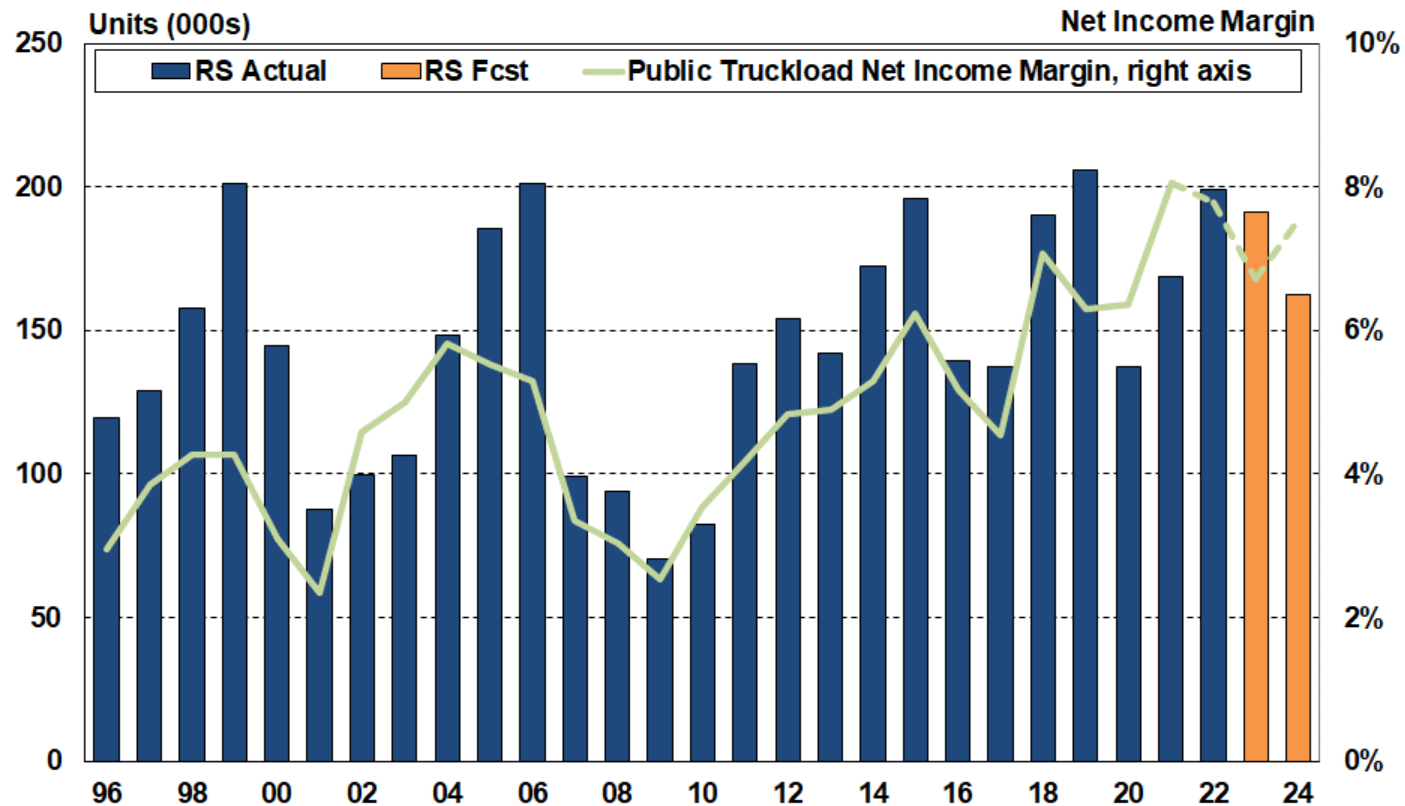


Source: ACT Research Co. © 2023

Profits Drive Vehicle Demand

U.S. Class 8 Tractor Retail Sales

1996 - 2024E



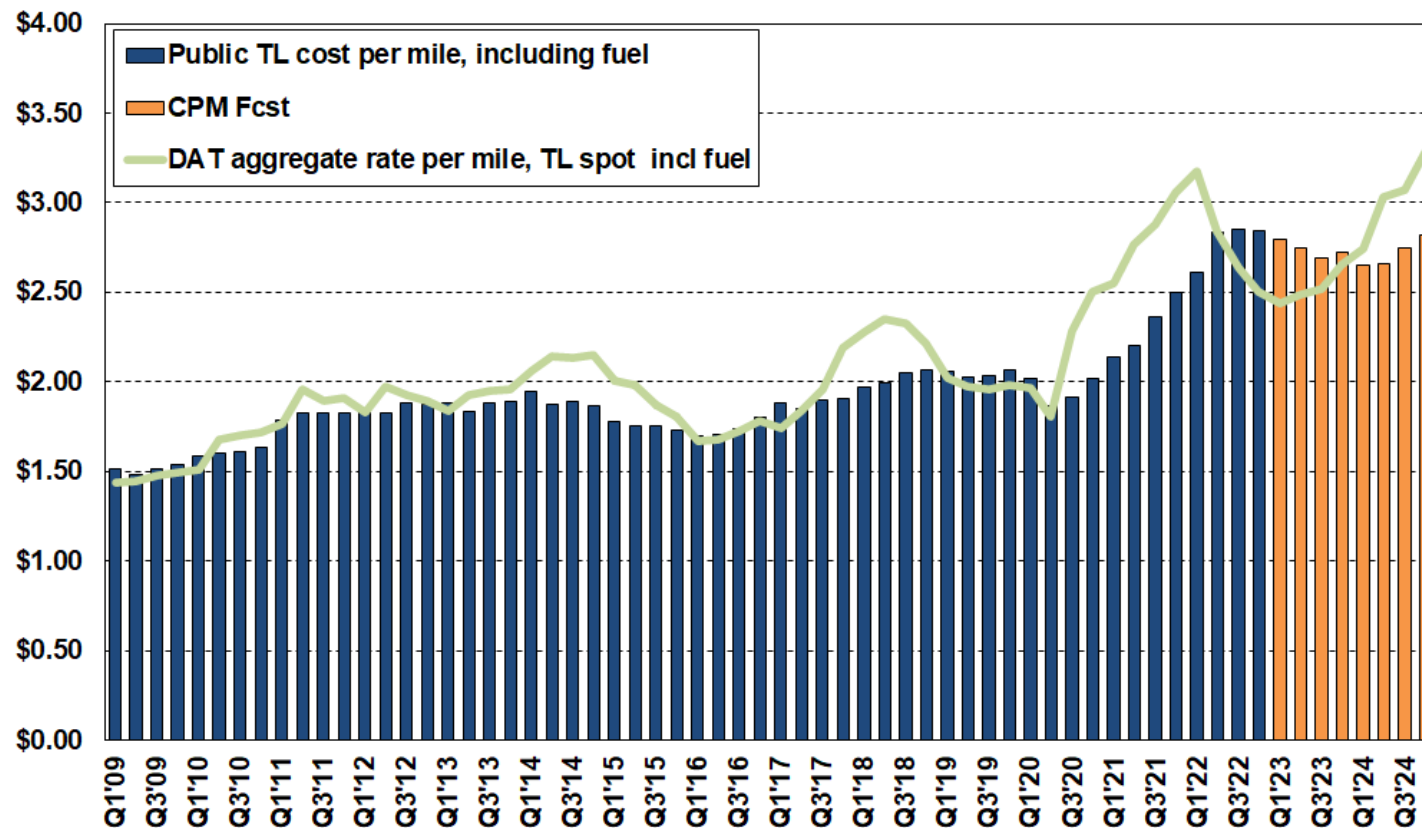
Source: ACT Research Co. © 2023

Largest drop in TL margins since 2007 expected for 2023, but only to 4th or 5th best level ever

Failures Inbound – Sharper, but Shorter

Spot Rates Vs Cost Per Mile

2009 - 2024E



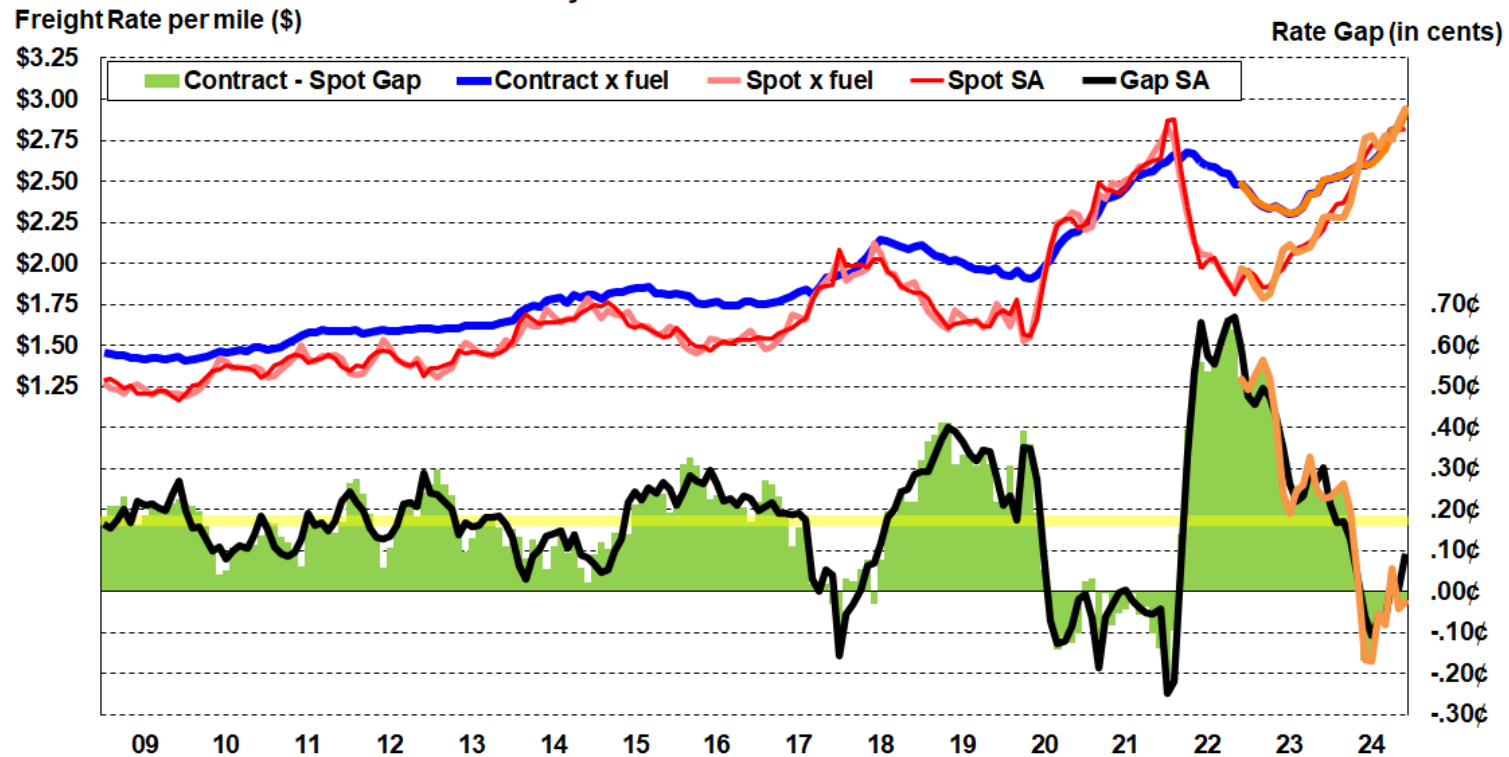
Source: ACT Research Co. © 2023

- Current operating losses ~15% in Q1'23, from record 13% in Q4'22
- Losses will slow capacity – key force behind bottoming process
- The cure for low prices is low prices

Tightening Spread Supports Bottoming

DAT Aggregate Truckload Spot / Contract Rate Spread

January 2009 - December 2024 Forecast

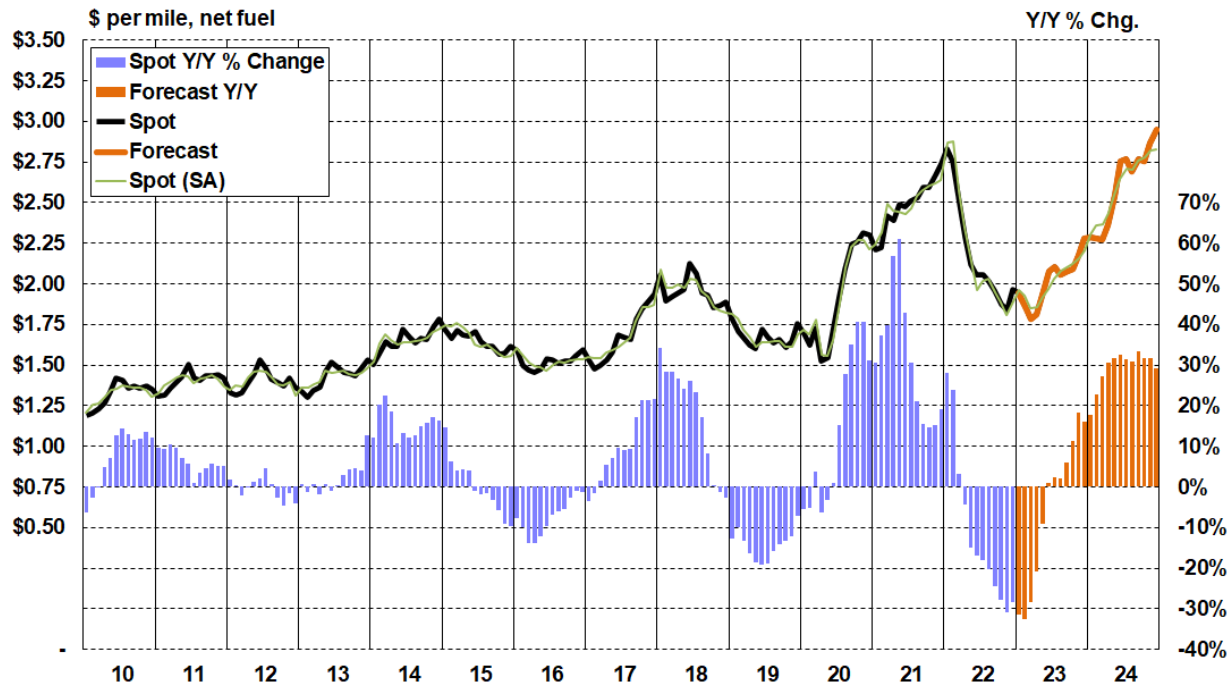


Source: DAT Freight & Analytics, ACT Research Co. © 2023

Freight Rate Trough Nearing

DAT Trendlines Spot Rates: Aggregate

January 2010 - December 2024 Forecast

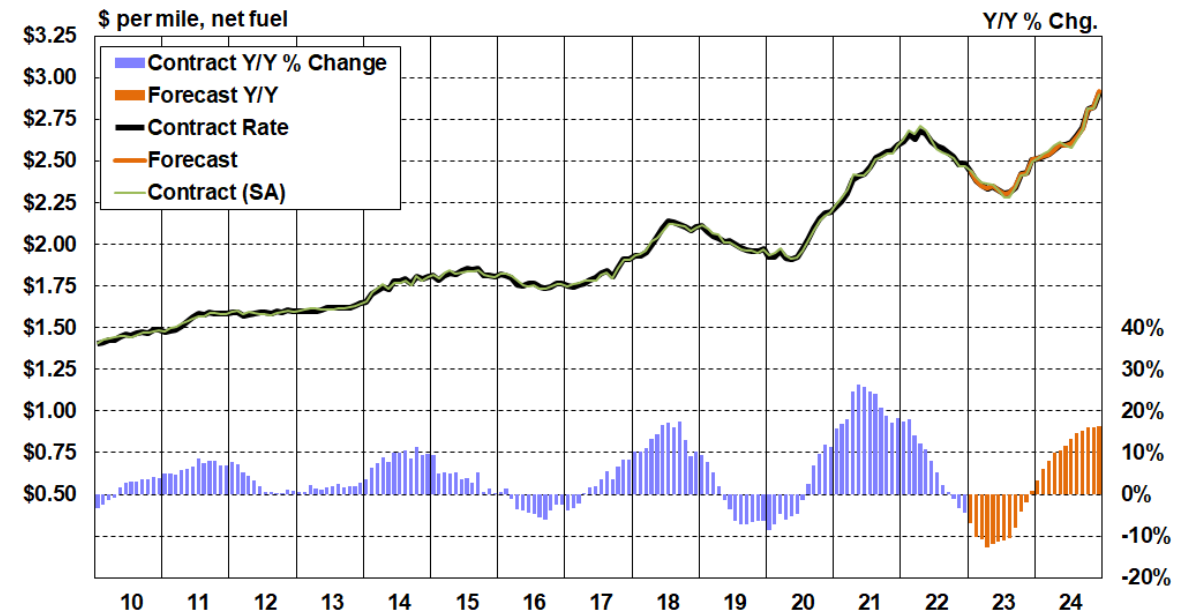


Source: DAT Freight & Analytics, ACT Research Co. © 2023

- Sharper, but shorter downcycle due to costs / demographics / capacity
- Quicker bottoming process with spot rates so far below costs
- Slowing capacity and demand recovery in late 2023 set up cycle into 2025

DAT Contract Rates: Aggregate Truckload

January 2010 - December 2024 Forecast



Source: DAT Freight & Analytics, ACT Research Co. © 2023

Summary

- Freight market loose but bottoming, transition to early cycle by Q4
- OEM supply improving, but labor supply slowing
- Truckload rate downcycle sharper, but shorter
 - Freight soft patch projected to persist into 2H'23
 - Cost economics and demographic shifts hasten next tight driver market
 - Absence of equipment overbuying is a major “different-this-time” factor
- Best recession ever (if tail risks don't bite)
 - Strong balance sheet sets up mild recession with recovery in '24 and '25
 - “No landing” absurd and concerning





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2

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