Intermodal Savings Index

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Intermodal Savings Index

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Contents

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I. How The Data is Calculated

Calculation: The *Journal of Commerce* Intermodal Savings Index (ISI) is a proprietary calculation that measures the cost savings for shippers using trains instead of long-haul trucking for domestic freight. The ISI evaluates 120 lanes every month, sending rates to truckload brokers, intermodal marketing companies (IMCs) and shippers for review.

- *Broker margins and fuel surcharges are included, but accessorial charges such as detention/excessive per diem, demurrage ("storage fees"), late fees or other one-off charges are excluded.*
- *The index has a base value of 100, meaning truck and rail rates are equal. If intermodal saves 20 percent, then the index is 120. If trucking saves 20 percent, then the index is 80. A higher index value indicates greater intermodal savings for the shipper.*
- *Pro-trucking lanes are defined as those where trucking is cheaper, and pro-intermodal lanes are defined as those where rail saves more than the national average. "Truck competitive" lanes are defined as those where rail is cheaper, but one-off charges could still make trucking more cost-effective. In most cases, a truck competitive lane has an index value of 110 or fewer.*
- *Regional index values are calculated for the Midwest, Mountain, Northwest, Southeast, South Central and Southwest US. A national index value is calculated on a weighted basis using the Intermodal Association of North America's 53-foot equipment flow data and is reweighted each month.*
- *Volume is also broken down on a "per workday" basis. For more details on this issue, we encourage readers to read Lawrence Gross of Gross Transportation Consulting.*

It is important to note that intermodal rail may not always provide cost savings. The ISI aims to identify which origin and destination combinations are most and least cost-effective for shippers.

II. Executive Summary

The bottom line: Domestic intermodal service has improved significantly in the first half of 2023, but that improvement came as a result of weaker demand for intermodal services.

Introduction: In the second quarter of 2023, total North American intermodal volume — i.e., goods hauled by trains and trucks — decreased 10.4% compared to the same three months of 2022, according to the Intermodal Association of North America (IANA). Domestic volume — i.e., goods hauled in 53-foot containers — declined 7.6%. Intermodal providers added more than 35,000 containers to the national fleet in 2022, according to PIERS, a sister product of the *Journal of Commerce* by S&P Global, and Jason Hilsenbeck, president of Loadmatch.com. While this may be a sound long-term strategy, the additional inventory poses problems for intermodal providers in the short term. J.B. Hunt Transport Services, Schneider National and others have been forced to stack an estimated 18% of the overall domestic container fleet due to lack of demand.

Intermodal service and speed: Much like the first quarter, the second quarter of 2023 clearly illustrated that when intermodal volume decreases, service quality increases. With demand down, average intermodal train speeds among US railroads rose to 30.5 miles per hour, up from 28.3 miles per hour in the second quarter of 2022 and the highest second-quarter figure since 2020, according to data submitted to the US Surface Transportation Board (STB).

Intermodal Savings Index (ISI): The *Journal of Commerce* Contract ISI averaged 125.1 in the second quarter, representing 25.1% savings on intermodal contract rates compared with truckload contract pricing (Chart 2A). The Spot ISI averaged 112.8 in the second quarter, representing 12.8% savings on intermodal spot rates compared with truckload. The Contract ISI reading was just one point below its long-term average, indicating continued savings for shippers. The Spot ISI, however, was just a few points above the "danger" threshold of 110, at which point truckload rates become competitive on high-volume, long-haul routes. Since 2015, the average monthly Contract ISI value was 126.7 and the average Spot ISI value was 114.6.

CHART 2A

ISI values

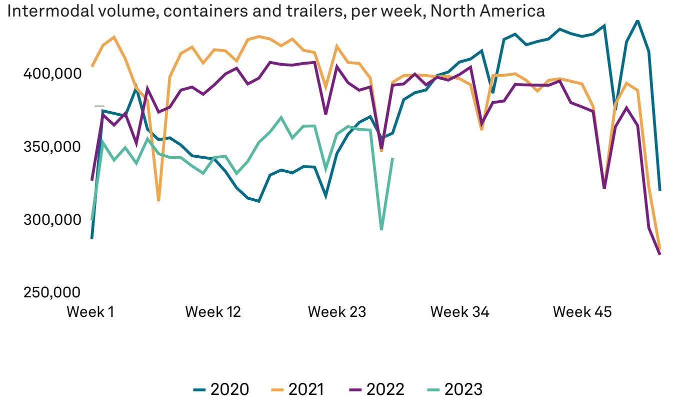
Contract and Spot ISI: 3 month, 6 month, 12 month rolling averages.

3 month ISI		6 month ISI		12 month ISI	
Spot	Contract	Spot	Contract	Spot	Contract
112.8	125.1	114.0	125.2	113.8	126.7

Source: S&P Global

CHART 3A

Intermodal volume weak in 2023
Intermodal volume, containers and trailers, per week, North America



Source: Association of American Railroads

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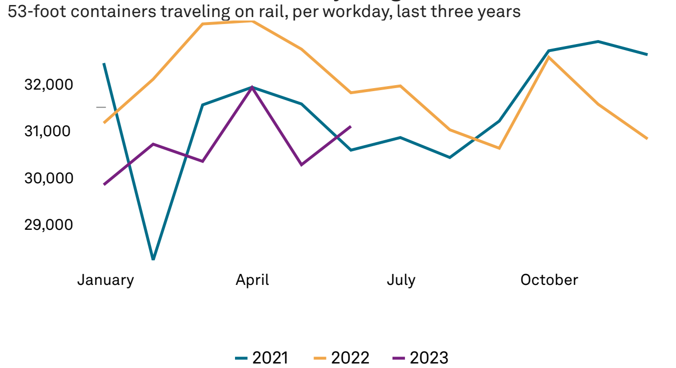
CHART 3B

Domestic container volume below year ago levels
53-foot containers traveling on rail, per workday, last three years



Notes: See Larry Gross of Gross Transportation Consulting for deeper analysis

Source: Intermodal Association of North America

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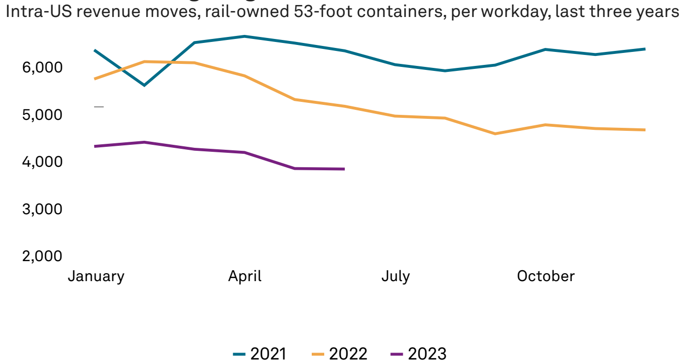
CHART 3C

Rail containers not getting much use in 2023
Intra-US revenue moves, rail-owned 53-foot containers, per workday, last three years



Notes: Read Intermodal In-Depth by Larry Gross for more.

Source: Intermodal Association of North America, Gross Transportation Consulting

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III. The Volume Picture

The bottom line: There were too many containers competing for too few loads in the second quarter, reducing equipment productivity.

AAR volume totals: Intermodal volume across all container and trailer sizes fell 10.8% year over year in the second quarter, according to the Association of American Railroads (AAR) (Chart 3A). North American railroads moved 4.62 million containers and trailers during the quarter, 559,322 fewer loads than in the same three months last year and the lowest second quarter volume since 2020, when businesses were shut down during the first wave of the COVID-19 pandemic. The AAR data is updated weekly in seven-day blocks, but it does not provide a monthly snapshot, nor does it separate the numbers by container size. The quarterly analysis covers a rolling 13-week average.

IANA volume totals: Monthly data from IANA, which is separated by container size, shows both domestic and international intermodal volumes softened during the second quarter. Trains moved 2.15 million domestic containers and trailers across North America between April 1 and June 30, the lowest for the second quarter since 2020, including 1.97 million 53-foot containers, also the lowest since 2020. Intermodal providers owned 32,000 more containers in June 2023 than in June 2022 but hauled 131,372 fewer loads over the same period.

Per workday: On a per-workday basis, container volume slid 3.6% year over year in June, 8.7% in May and 5.9% in April, according to IANA figures and Lawrence Gross, president of Gross Transportation Consulting, adjusted and weighted by day of the week (Chart 3B). For more details on the per-workday analysis, please read "Intermodal In-Depth" by Lawrence Gross.

> "Coming into the year, we relied heavily on customer forecasts, and they were largely all wrong, so we're still a little cautious on what we expect as the year goes on."
>
> — Darren Field, President of intermodal, J.B. Hunt Transport Services

Rail vs. private containers: Breaking down the intra-US volume into rail-owned EMP and UMAX containers and "private" boxes owned by Hub Group, J.B. Hunt or Schneider, rail-owned container volumes plummeted 23.7% year over year in the second quarter, while volume in private boxes slipped just 0.6%, according to IANA (Charts 3C and 3D). J.B. Hunt, Knight-Swift Transportation and Schneider hauled

XI. Acknowledgements

Although we are prohibited from disclosing the identities of many 3PLs, IMCs, and shippers contributing data to the *Journal of Commerce* Intermodal Savings Index (ISI), we thank them for participating.

We can identify Cargo Chief, InTek Freight and Logistics, Sunset Transportation and Zipline Logistics as valued ISI partners. Loadsmart provides data for the *Journal of Commerce* Shipper Spot Truckload Rate Index, tracking broker-to-shipper rates on more than 4,000 lanes, which we compared with the smaller ISI sample size.

Professor Jason Miller of Michigan State University provides a forward three-month forecast for the ISI using advanced statistical modeling.

Rick LaGore, CEO of InTek Freight and Logistics, provides intermodal spot market rates on more than 115 lanes. We average the InTek data with transactional rates published by Class I railroads and asset-owning IMCs to provide a complete view of the spot market and recently expanded the ISI to cover 120 lanes.

DAT Freight & Analytics provides broker-to-driver rates on all index lanes and gives guidance on how to convert those numbers into a broker-to-shipper invoice. We send those estimates to 3PLs and shippers for review on a monthly basis.

The Intermodal Association of North America provides monthly container data to properly weight the ISI based on origination. Our goal is to build upon the great work and industry expertise of the people and companies listed above. The data underlying the ISI is available to *Journal of Commerce* Gold-tier subscribers upon request. We encourage our readers to contact us or our data contributors with further questions.

Finally, we thank our parent company, S&P Global, for their continued support of the *Journal of Commerce*.

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