

Intermodal Savings Index

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Intermodal Savings Index

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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, and shippers for review.

- The index has a base value of 100, meaning truck and rail rates are equal. An index value greater than 100 indicates shipper savings when using intermodal, while a value of less than 100 indicates savings using trucking. If intermodal is 20% cheaper than trucking, then the index would be 120. If trucking is 20% cheaper, the index would be 80.
- “Pro-trucking” lanes are defined as those where trucking is cheaper.
- “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.

It is important to note that intermodal rail may not always provide cost savings. The *Journal of Commerce* Intermodal Savings Index aims to identify which origin and destination combinations are most and least cost-effective.

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
115.2	125.9	115.0	126.5	113.5	128.4

Source: S&P Global

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II. Executive Summary

The bottom line: Domestic intermodal volume fell in the first quarter, leaving no doubt that there are too many containers available to haul too few loads as inventory stockpiles in warehouses.

Introduction: In the first quarter of 2023, North American intermodal volume — i.e., goods hauled by trains and trucks — decreased 8.6% compared to the same three months last year, according to the Intermodal Association of North America (IANA). Domestic intermodal volume — i.e., goods hauled in 53-foot containers — declined 8.5%. 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 J.B. Hunt Transport Services and others have pointed out that container purchases are made based on long-term growth projections, it’s clear that there is an inventory glut in the short term. J.B. Hunt has stacked 12,000 to 19,000 boxes, while Schneider has stacked 3,500 to 4,000 boxes, or roughly 15% of the overall 53-foot container fleet.

Intermodal service and speed: Generally speaking, when intermodal volume decreases, service quality increases, and the first quarter of 2023 was no exception. Intermodal networks resembled a wide-open highway on a Sunday morning, a stark change from the last two years, which have resembled a Monday rush hour with bumper-to-bumper traffic. The average intermodal train among US railroads speed reached 31.2 miles per hour, up from 29.6 miles per hour in the first quarter of 2022 and the highest first-quarter figure since 2020, according to data submitted to the US Surface Transportation Board.

Intermodal Savings Index (ISI): The *Journal of Commerce* Contract ISI averaged 125.8 in the first quarter, representing a 25.8% savings on intermodal compared with truckload contracts (Chart 2A). The Spot ISI averaged 115.2 in the first quarter, a 15.2% savings compared with spot truckload rates. The contract ISI began the first quarter weaker than in past years, but as intermodal providers caved on pricing, particularly in outbound Los Angeles lanes, savings recovered by March. Since 2018, the average monthly contract ISI value was 127.8 and the average spot ISI value was 114.7.

X. Frequently Asked Questions

Are fuel and margins included? Yes, the broker margins are added to our data on a floating scale that ranges based on the length of haul, and we attempt to keep our margins in line with industry standards on a gross and net basis. Fuel is also included. While no two shippers have the same fuel program, we calculate fuel on a percentage and per-mile basis based on the EIA weekly diesel prices. We are aware that services like Breakthrough Fuel use wholesale prices and tabulate based on fuel prices along the specific route of each load, but such a task would be nearly impossible for us to do each month. In general, intermodal providers use EIA and charge on a percentage or per-mile basis.

Are accessorial charges included? No, we do not include accessorial charges in general. We use a set number for equipment costs because rail-owned container users pay a per-day rental known as “per diem.” Shippers who use private container owners may not incur box detention if they load and unload cargo within free time, but they are assessed fees if they do not. Our number is a middle-ground number that considers the wide variety of shippers in the US. We do not include other one-off charges such as driver detention, rail storage fees, or other specialized services.

Is your index weighted? Yes, the ISI is weighted based on IANA’s 53-foot equipment flow data. Each month the weighting is recalculated for the small variations in share by origination. Each region gets a weighting based on the percentage of originations it generated. Index values and weightings are calculated for the Midwest, Mountain, Northwest, Southeast, South Central, and Southwest US.

What states are in each region? We use IANA’s map to define the states in each region. Please consult with IANA for a copy of their regional map.

You used the term “per workday” in the report. How is this calculated? For details, please read Lawrence Gross of Gross Transportation Consulting. He attempts to assign a weighting to every day of the week because the amount of volume on a Wednesday, for example, is different than on a Sunday. Some months also have 30 days, others 31 days. Some months have fewer weekdays and more weekends. Our per workday number from Gross attempts to adjust for these variations.

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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About Journal of Commerce

The *Journal of Commerce*, part of S&P Global, provides daily authoritative analysis of international containerized transportation and logistics offered on a subscription basis and organizes industry-leading annual conferences, including TPM, that provide immersive information and networking experiences. Information produced by a team of specialized subject matter expert journalists supports tactical and strategic decision making among corporate logistics teams and senior management at container shipping lines, logistics firms, truckers, railroads, marine terminals, port authorities, truckers and others participating along end-to-end international supply chains.

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