US Intermodal Savings Index: 2Q19

An Analysis of the Domestic Intermodal and Truckload Markets

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Ari Ashe
Associate Editor, Journal of Commerce

Journal of Commerce | **Insight**

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US Intermodal Savings Index

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Ari Ashe, Associate Editor, Journal of Commerce

Each quarter, the Journal of Commerce (JOC) will provide an in-depth analysis into the intermodal market to facilitate conversations between shippers and logistics providers about modal choices.

How to Read Our Index

The *Domestic Spot Intermodal Savings Index* ("Spot Index" or "Spot ISI") and the *Domestic Contract Intermodal Savings Index* ("Contract Index" or "Contract ISI") is measured with 100 as a base level.

Values greater than 100 mean that intermodal is cheaper, values less than 100 indicate truckload is cheaper. Index values are linked to percentages:

- 105 = Intermodal 5 percent cheaper
- 110= Intermodal 10 percent cheaper
- 95= Truckload 5 percent cheaper
- 90= Truckload 10 percent cheaper

For an in-depth review of the Spot and Contract Index, please read our "Methodology" in the back.

Executive Summary

The Spot ISI and Contract ISI shows that domestic intermodal doesn't save shippers nearly as much money as in prior years. Although Class I railroads have pointed to the weak trucking market in 2019 as a catalyst, our data shows that this trend began in 2018. As truckload spot market rates rocketed upward, so did intermodal. The spot intermodal market rose 40 percent year over year in Sept. 2018 compared with a peak of 30 percent in the truckload sector.

Intermodal rates shot up so high that the Spot ISI dropped below 100 nationally between Aug. 2018 and Oct. 2018, then was 100 in the final two months.

This year the Spot ISI has hovered between 105 and 107, although there was a bump to 111.0 in June 2019 due to seasonal uptick in truckload rates. Nevertheless, the Spot ISI trails the five-year average.

Since Jan. 2015, the Spot ISI shows an average intermodal savings of 13.9 percent (113.9). Since Jan. 2018, though, the average is only 5.3 percent (105.3).

Table of ISI values

3 Month, 6 Month, 12 Month Average, High-Lows.

3 Month ISI	6 Month ISI	12 Month ISI
107.3	106.7	103.0

12 Month High	12 Month Low
111.0	95.0
JUNE 2019	SEPT. 2018

Source: IHS Markit ©2019 IHS Markit

There are several key findings we will discuss more in detail in this report.

- A shift in markets where truckload has become cheaper than rail such as Charlotte to Chicago.
- Truckload has become increasingly competitive on lanes under 2,000 miles. The rolling 12-month average in on lanes between 800 and 1,200 miles was 109.6 in Jan. 2016, today the number is 92.7.
- Finally, there are a few major cities where shippers should pay close attention. Outbound from Atlanta, inbound into Dallas and all points south in Texas.

Although we haven't launched a Contract ISI yet, our internal data shows the year-to-date Index value is between 110 and 115. Last year, it was likely between 120 and 125.

In the following pages, we will take a more detailed look at the historical Spot ISI data, why certain lengths of haul are becoming more truck competitive, and which lanes are hot and cold right now.

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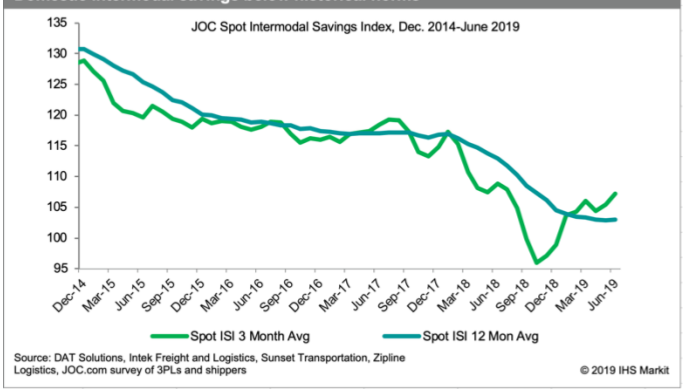
Historical Perspective

As you can see below, there has been a steady decline in the average intermodal savings since 2015 when the full year average was 120.1. In 2016, the total slips to 118.9, then to 116.9 in 2017, and to 104.6 in 2018.

Domestic intermodal savings below historical norms

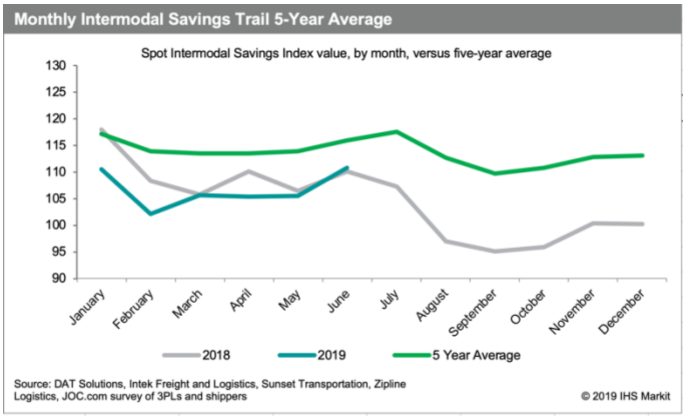


The dwindling of intermodal savings is confirmed by our conversations with logistics providers, which acknowledge the price delta continues to narrow.

"We like to say that 'price gets you through the door, service keeps you there'. You won't get past the door if you can't win on price," InTek Freight and Logistics CEO Rick LaGore told JOC.com.

As you see below, the Spot ISI is well below the five-year averages in the prior 18 months. It's harder to get through the door, and shippers should ensure they win on price and service in this market.

Monthly Intermodal Savings Trail 5-Year Average

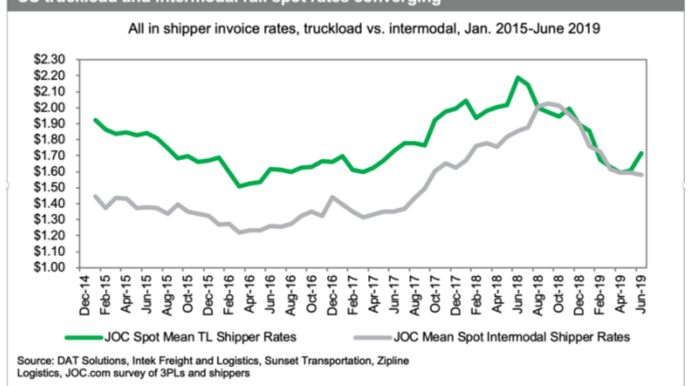


The Crater of Late 2018

Notice (top) the large V in the Spot ISI registers in the Fall 2018. The dip began last August when the ISI dropped sequentially from 107.3 to 97.0. It fell again to 95.0 in September and was 95.9 in October.

When we plot the spot truckload all-in shipper rate against the spot intermodal all-in shipper rate (below), we see they are synchronous until last summer. Suddenly the intermodal shipper rates overtake the truckload market and have been unable to recreate the same historical separation since. Capacity was so tight in early 2018 that perhaps railroads wanted to raise rates enough to discourage spot shipments. Railroads may have also misjudged how quickly the truckload market flipped going in 2019.

US truckload and intermodal rail spot rates converging



Major Markets Felt the Crater

Even major shipper lanes weren't unscathed last year.

- Los Angeles to Chicago: Spot ISI averaged 126.1 between Jan. 2015 and July 2018. It was 88.9 last fall.
- Los Angeles to Atlanta: Spot ISI averaged 129.3 between Jan. 2015 and July 2018. It was 95.6 between Aug. and Oct. 2018.

The outbound Spot ISI from the Southwest, which includes Los Angeles, averaged 112.3 between Jan. 2015 and July 2018 compared with 84.7 between August and December 2018. The outbound Midwest ISI was 117.1 before the dip, then 99.8 afterwards.

These two regions account for more than 50 percent of domestic intermodal traffic, according to the Intermodal Association of North America (IANA).

Intermodal savings have begun to stabilize this year but have not returned to the historical norms yet.

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The Distance Discussion

Length of haul is an important component to any modal discussion because intermodal becomes increasingly more attractive with distance. Like any transportation provider, Class I railroads have fixed costs that they pass onto the shipper. Let's assume the expense is $200 per container. Shippers are far less likely to notice this charge if the invoice is $4,500 from Los Angeles to Miami (2,740 miles) than a $950 bill from Miami to Chicago (1,350 miles).

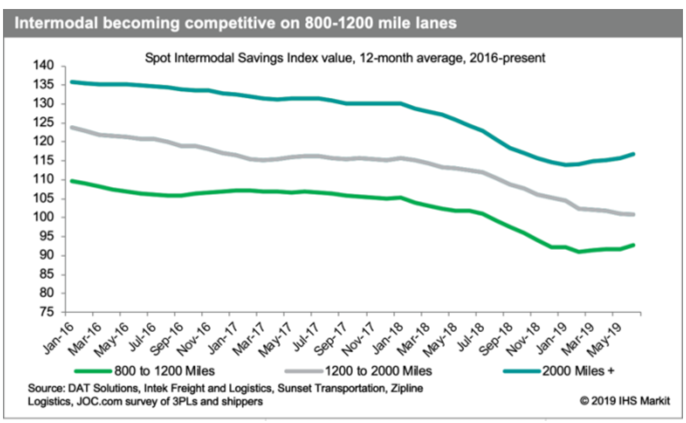
Less than 700 Miles

We have only recently begun tracking lanes less than 800 miles, such between Atlanta and Orlando, Chicago and Chambersburg, Pennsylvania, and Baltimore to Chicago. However, our early ISI totals confirm the general rule of thumb. The 3-month average is well below 100: hovering between 80 and 85. At best, intermodal breaks even with a truck but is slower.

800 to 1,200 Miles

The Spot ISI charts show that intermodal savings are dwindling historically on all distances, but the 800- to 1,200-mile segment is perhaps the most noticeable.

In the chart below, a rolling 12-month average of Spot ISI by distance, you will see the value of the green line (800 to 1,200 miles) was 109.6 in Jan. 2016. It fell below 100 in Aug. 2018 and troughed at 91 in Feb. 2019 before ending at 92.7 in June.



Several major lanes in this segment have contributed to the slow decline, including Atlanta to Linden (Elizabeth, New Jersey), Chicago to Dallas, Chicago to Houston, and Seattle to Los Angeles.

Charlotte to Chicago is about 770 miles, so while it isn't counted in this segment, it follows a similar trend. The Spot ISI averaged 102.9 between Jan. 2016 and Aug. 2018, since it has fallen to 85.7.

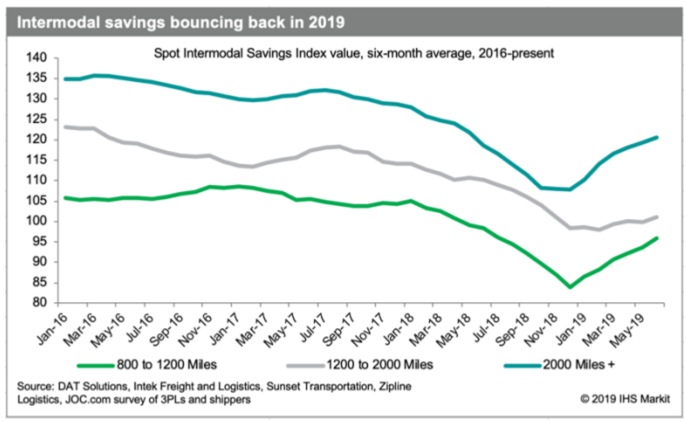
1,200 to 2,000 Miles

The 1,200- to 2,000-mile segment (gray line) is 123.7 in Jan. 2016; today it's 100.9. Laredo to Chicago, nearly 1,400 miles, is an example of why. The Jan. 2016 to Aug. 2018 average was 116.7; it is only 71.3 since then. Los Angeles to Houston, about 1,550 miles, was consistently higher than 100 in 2015 through 2017 but has only topped the base level once since Feb. 2018. Even our contract data shows neither lane is pro-intermodal with average intermodal rates $1.67 per mile in both lanes and trucks are usually equal or less all in.

The Recent Rebound

There are two positives for the intermodal sector. Lanes greater than 2,000 (teal line), transcontinental hauls, remain firmly pro-intermodal, so the majority of the pricing pressure is on the shorter lengths of haul.

On a rolling six-month basis, the trend is upwards.



This is because the rolling average is beginning to replace last autumn's crater with stronger 2019 values. Large intermodal marketing companies such as Hub Group believe intermodal savings will return to historical norms as the trucking market recovers. Nevertheless, we recommend shippers with freight traveling less than 1,200 miles to close examine options with logistics providers.

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The Market Breakdown

In this section, we take a more in-depth look at which markets are pro-intermodal, pro-trucking, and which are up in the air. We encourage shippers to use this as a beginning — not an end — to a larger discussion about intermodal. Please don't make any decisions solely on what you read here.

Like a traffic light, green means go — strong spot intermodal savings. Yellow means slow down — truck is competitive. Red means stop — no spot intermodal savings. Each is based on a rolling 12-month average.

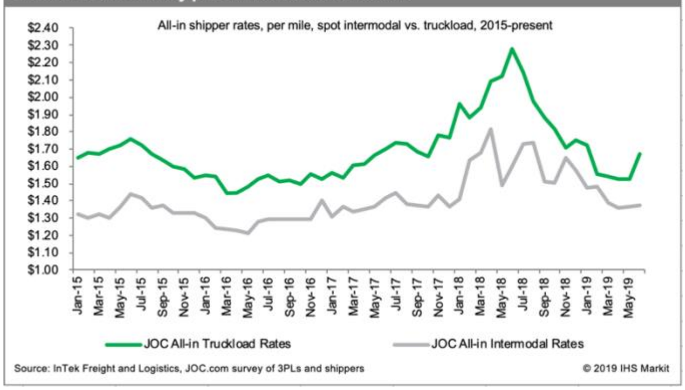
GREEN	YELLOW	RED
Index value is greater than 110	**Index value is between 100 and 110**	**Index value is less than 100**
These are pro-intermodal lanes in which shippers should feel comfortable they are receiving a good value.	Shippers should have a deeper discussion on these lanes with logistics providers because although they are saving some money, truck rates are competitive.	These are pro-trucking lanes.
Atlanta-Chicago	Chicago-Seattle	Atlanta-Dallas
Atlanta-Los Angeles	Chicago-Oakland	Atlanta-Linden
Atlanta-Oakland	Dallas-Atlanta	Chicago-Dallas
Atlanta-Seattle	Dallas-Chicago	Chicago-Denver
Chicago-Atlanta	Dallas-Linden	Chicago-Houston
Chicago-Linden (NJ)	Denver-Chicago	Denver-Los Angeles
Dallas-Los Angeles	Houston-Los Angeles	Houston-Chicago
Dallas-Seattle	Los Angeles-Chicago	Laredo-Chicago
Linden-Chicago	Los Angeles-Miami	Linden-Atlanta
Linden-Los Angeles		Linden-Dallas
Los Angeles-Atlanta		Los Angeles-Dallas
Los Angeles-Linden		Los Angeles-Denver
Oakland-Linden		Los Angeles-Houston
Seatttle-Chicago		Los Angeles-Seattle
Seattle-Dallas		Oakland-Atlanta
Oakland-Linden		Oakland-Chicago
Worcester-Chicago		Seattle-Los Angeles

Source: IHS Markit ©2019 IHS Markit

What's Hot

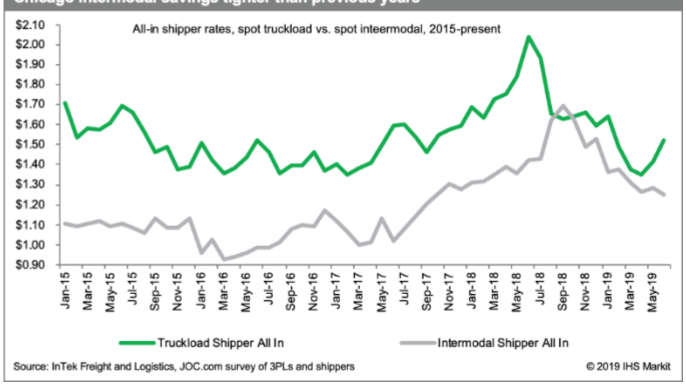
Outbound Dallas lanes have held up even during the crater of 2018. The reason is many of these routes are backhaul lanes. Truck rates are typically 20 to 30 cents per mile greater than intermodal.

Outbound Dallas firmly pro-intermodal backhaul lane



Inbound Chicago lanes felt the impact in late 2018. Right now Los Angeles to Chicago intermodal contracts are about $2400-$2600. Truck rates were identical this winter, but they are rising higher than intermodal this summer.

Chicago intermodal savings tighter than previous years



What's Not

Inbound Dallas lanes have always been trucking competitive. The truckload market will tell us a lot going forward, particularly from Chicago to Dallas and Los Angeles to Dallas. Intermodal contracts are around $1,650 and $3,000, respectively.

Shippers should also pay close attention to Atlanta to Chicago and Atlanta to Dallas.

Shippers should keep abreast of truckload rates and determine whether intermodal saves enough for the longer transit. Truck rates out of Atlanta were low enough in late 2018 and early 2019 to make intermodal a hard sell. Rates have since climbed this summer out of Georgia.

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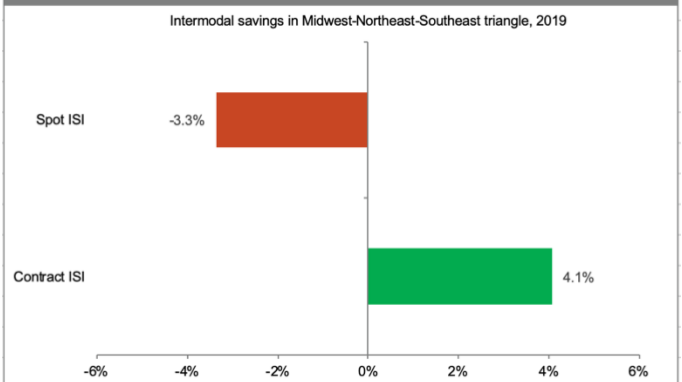
Eastern US Network

Much of the US domestic eastern intermodal network volume travels within a triangle of Chicago, New York, and Atlanta. This area encompasses Pennsylvania, Ohio, Indiana, and Kentucky, all major warehousing hubs.

It's an important triangle because they are shorter lengths of haul which are less resistant to truckload pricing pressures than transcontinental routes.

On a monthly basis about 125,000 domestic loads travel within this triangle, according to IANA. This represents more than half the total volume originating in the three regions.

Intermodal doesn't save much in Eastern US rail network



Source: DAT Solutions, InTek Freight and Logistics, Inteermodal Association of North Ameerica, Sunset Transportattion, Zipline Logistics

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Intermodal rates tend to be advantageous into Chicago, saving between 10 and 20 percent both on spot and contract hauls. Trucks, however, are about 10 to 20 percent cheaper between Chicago and Charlotte. The same is true between Chicago and Chambersburg, Pennsylvania, a major CSX hub.

Rates from Chicago to Atlanta are close to even between the modes.

The average of nine lanes shows neither contract nor spot intermodal rates offer shippers much cost savings in 2019 (see above).

Factor in some New England and Florida, and intermodal contract savings rise to upper single-digits but spot remains negative.

Contract Intermodal Index

Although we have yet to introduce a Contract ISI, we have enough data to make some general observations based on an additional 75 lanes that closely correlate to J.B. Hunt's earnings reports on average length of haul and revenue per load. J.B. Hunt is the largest asset-owning US intermodal marketing company.

Our data shows contract intermodal saves about 15 percent against truckload — double that of spot intermodal. Rail saves 20 percent on transcontinental hauls and 10 percent or less on shorter hauls.

J.B. Hunt reports average per-miles were $1.436 for the first six months of 2019, the data we use to make our estimates shows the average as $1.444. We believe our data is highly accurate, but we will continue to build our information in the coming months.

The Contract ISI is crucial for a complete picture of intermodal because more than 90 percent of business is done under contracts.

Methodology

The Journal of Commerce monitors more than 115 lanes each month using a variety of rating sources and tools. For the purposes of the Spot and Contract ISI, we provide estimates to a group of third-party logistics providers and shippers under non-disclosure agreements. A few sources have agreed to be named, but most participate on the condition of anonymity.

We provide estimates of all-in shipper rates on a per-mile basis for 45 lanes to our sources. Our estimates include fuel surcharges and margins but not one-time accessorials such as detention or demurrage. Our data contributors review their invoices to provide us all-in billed rates for the previous month.

JOC takes those responses and compiles the data to calculate intermodal and truckload per mile averages.

The base value is 100. A value of 100 means intermodal and truckload rates are identical. Values greater than 100 signify intermodal is cheaper. Values less than 100 signify truckload is cheaper. If intermodal rates are 20 percent cheaper, then the value is 20 percent higher than 100 (or 120). If truck rates

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are 20 percent cheaper, then the value is 20 percent lower than 100 (or 80).

JOC calculates a regional Index value for the Midwest, Mountain, Northeast, Northwest, Southeast, South Central, and Southwest US.

A national number is then calculated on a weighted basis by using 53-foot equipment flow data from IANA. Each month the weighting differs based on small market share shifts in regional breakdowns. The sum of the weighted values becomes the national ISI.

Acknowledgements

Although we cannot disclose the identities of most contributors to the Index, we would like to formally thank them for their participation. Your input is critical to provide accurate insights for shippers to make informed modal decisions with logistics partners.

Three names we can share as data contributors are Transfix, Sunset Transportation and Zipline Logistics. We appreciate their information and support. Transfix allows us to bring a digital brokerage outlook to the issue.

We would like to thank Rick LaGore of InTek Freight and Logistics for providing weekly intermodal spot data on more than 115 lanes. We make slight variations to InTek’s data based on asset-owning intermodal marketing companies, which can offer slightly lower rates. We also thank IANA for tracking the equipment flows of all types of containers and trailers on the rails. Without this key data, our weighted national ISI and market-by-market analysis would be impossible. Both InTek and IANA provide a valuable service to the transportation industry.

DAT Solutions also played a key role before our official launch to help fill some of the gaps in our data in the Pacific Northwest in 2015 and 2016 where our sources didn't have as much historical information.

Finally, we would like to thank our parent company IHS Markit for their continued support of JOC.

Quotes from Earnings Calls

“In our intermodal service line, net revenues decreased 33.8% in the second quarter. Intermodal volumes declined 30.5% as a combination of lane reductions related to precision-scheduled railroading and a decline in truckload pricing drove industry volume shifts from intermodal to truckload.” -Bob Biesterfeld, CEO of C.H. Robinson.

“From a pricing perspective, I would say the spread in the east certainly is tightening. We still think from a market in total, the [pricing] gap is somewhere around 20 percent. But when you get into those shorter haul lanes, it can get down to around 10 percent. But we've also heard with some of the more recent bids and aggressive truckload pricing that is around the intermodal price. We think that's short-lived though. We don't see that continuing for the long-term, especially if we continue to see the economy perform well,” -Phil Yeager, chief commercial officer, Hub Group.

“There is some cyclicality in the truck market, and you can find some lanes where the spot rate is under intermodal. However, we're not going to chase that. We're going to continue to price long term to the value of our product and we've got long-term relationships with our channel partners. They understand that.” -Alan Shaw, chief marketing officer, Norfolk Southern Railway.

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Contacts

Ari Ashe
Associate Editor, Journal of Commerce
ari.ashe@ihsmarkit.com

IHS Markit Customer Care:

CustomerCare@ihsmarkit.com
Americas: +1 800 IHS CARE (+1 800 447 2273)
Europe, Middle East, and Africa: +44 (0) 1344 328 300
Asia and the Pacific Rim: +604 291 3600

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