JOC Intermodal Savings Index

An Analysis of the Domestic Intermodal and Truckload Markets

Q4 2020

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Journal of Commerce | **Insight**

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US Intermodal Savings Index

An Analysis of the Domestic Intermodal and Truckload Markets

Ari Ashe, Senior Editor, Journal of Commerce

The Journal of Commerce (JOC) provides an in-depth quarterly report into the US intermodal market to facilitate conversations between shippers and logistics companies about modal decisions.

How to Read Our Index

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

Index values greater than 100 signify intermodal is cheaper; values less than 100 indicate truckload is cheaper. Index values are linked to percentages:

- 110 = Intermodal 10% cheaper
- 120 = Intermodal 20% cheaper
- 90 = Truckload 10% cheaper
- 80 = Truckload 20% cheaper

Rule of thumb: Higher numbers are good for intermodal. Lower numbers are good for trucking. For an in-depth review of the Spot and Contract Index, please read our "Methodology" on page 9.

Executive Summary

Domestic intermodal recorded a second consecutive quarter of volume growth, rebounding off the COVID-related swoon with a 9.8 percent increase year over year in the fourth quarter, according to the Intermodal Association of North America (IANA). It was the second consecutive quarter with a 9.8 percent year-over-year growth rate in domestic containers and trailers, the best performance since Dec. 2013. When excluding 53-foot trailers, the container market rose 8.7 percent year over year, the second strongest growth rate since Dec. 2013, only trailing the prior quarter (Q3 2020).

The number of 53-foot containers leaving the Southwest — Arizona, California, and Nevada — increased 10.3 percent year over year in the quarter.

Union Pacific Railroad instituted surcharges to curb demand and get equipment to contract customers. Small shippers are subject to a $5,000 surcharge in Southern California, $1,500 in Northern California, and $1,000 in Seattle on excess cargo.

As this report will show, record-breaking spot rates on the West Coast caused JOC's Spot Intermodal Savings Index to drop to below five-year averages in Q4.

JOC's Contract ISI was above historical norms to close the year because intermodal contract rates don't typically reset until after the New Year.

Table of ISI values

Contract and Spot ISI: 3 Month, 6 Month, 12 Month Rolling Averages.

	3 Month	6 Month	12 Month
Spot ISI	108.5	113.0	113.3
Contract ISI	130.2	127.3	122.7

Source: IHS Markit ©2021 IHS Markit

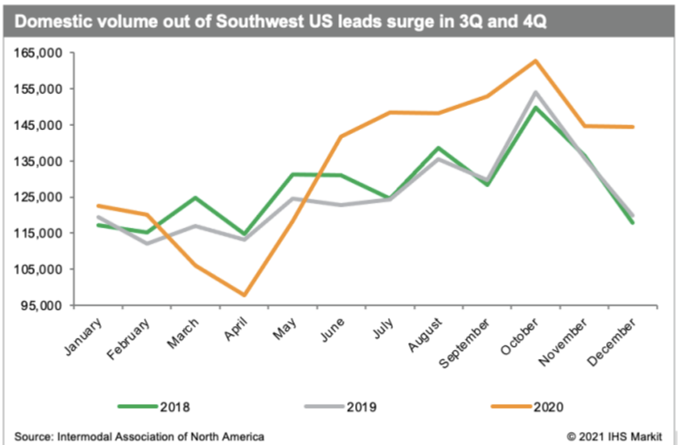
Since Jan. 2015, JOC's Contract ISI has averaged 123.9 (23.9 percent savings) and JOC's Spot ISI has averaged 115.1 (15.1 percent savings) on a rolling 12-month basis.

In the first quarter, shippers should expect JOC'w Contract ISI to decline from 130. How far the JOC Contract ISI will fall this quarter depends on whether the percentage intermodal contract rates rise will outpace truckload contracts, particularly on Los Angeles lanes.

Railroads will have to be careful on spot pricing because January's truckload spot rates fell sequentially. If dry-van spot rates has peaked, rail rates may need to decline too.

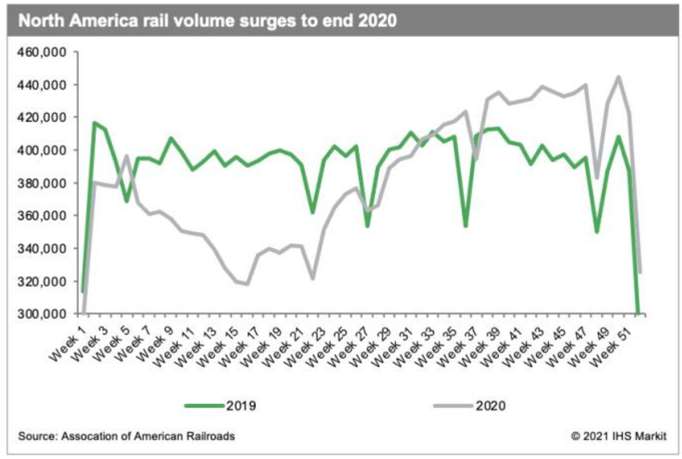
The Volume Picture

The beneficiaries of the California surge were the Midwest and Southcentral US. The 382,199 domestic 53-foot containers leaving the Southwest was a new Q4 record, according to IANA data. The 580,752 domestic containers arriving in the Midwest and 187,991 arriving in the Southcentral were also quarterly records. Intermodal volume terminating in the Midwest was up 7.5 percent on 53-foot containers and 19 percent on 40-foot containers year over year, according to IANA, which may explain network and terminal congestion in Chicago.



It was the Southwest, namely Los Angeles, that was the major catalyst to domestic intermodal growth in the second half of 2020, which is why the national and regional graphs correlate so closely.

Even viewing all intermodal moves on a weekly basis shows how busy the networks were in the fourth quarter. BNSF Railway, Canadian National Railway, Union Pacific Railroad, and CSX Transportation saw volume jump more than 10 percent year over year.



As the volumes rose on the West Coast, service deteriorated.

"California was particularly difficult during the quarter. We certainly believe the rail network faced some labor challenges at terminals and at locations where we believe our rail providers expect and will deliver better productivity in the future, certainly better than what we experienced in the quarter," said Darren Field, J.B. Hunt's executive vice president of intermodal, said on a Jan. 19 earnings call. "I make these comments primarily to highlight that we faced conditions in the fourth quarter that we can address and improve as we move out of the pandemic."

Field said J.B. Hunt re-routed loads to Phoenix and northern California that would have normally left from the Los Angeles. BNSF's intermodal volumes rose roughly 13 percent year over year in the fourth quarter.

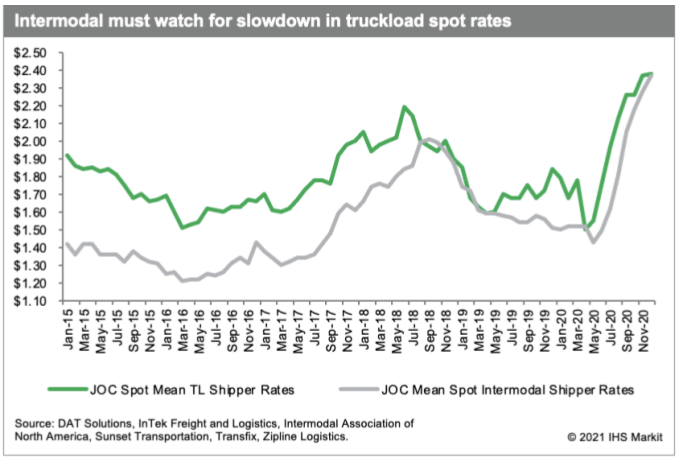
On the East Coast, there was a surge in 40-foot rail traffic but not 53-foot business. The discrepancy is likely that there is much more transloading on the West Coast. Transloading on the East Coast is a typically onto a truck to travel on Interstate 95.

Volume of 53-foot containers originating on the East Coast only grew 3 percent while 40-foot container surged 16.3 percent year over year, according to IANA.

The Rate Discussion

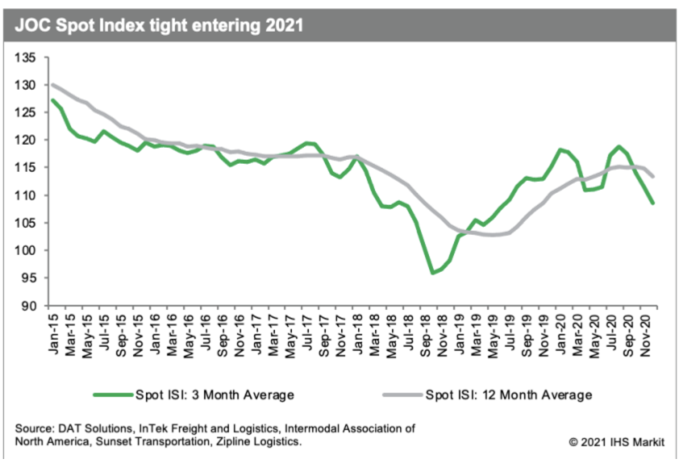
JOC's Spot Intermodal Savings Index

Last year was a turbulent year for JOC's Spot Index. Shippers saved less money on transactional hauls when freight plunged last spring. Spot truck rates dropped to the lowest point since 2016, making capacity cheap and abundant. Spot intermodal savings recovered briefly in the summer when businesses reopened.



In the fourth quarter, however, spot intermodal savings evaporated again because of record-high spot intermodal rates in Los Angeles. They were paper rates only because there was no available capacity.

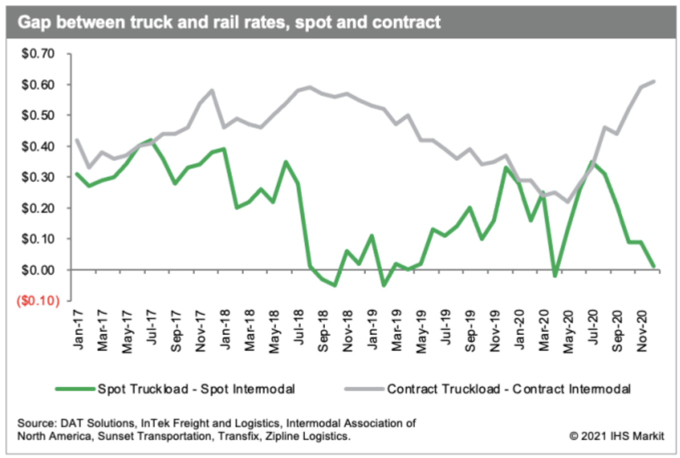
JOC's Spot ISI was only 105 in December, the third lowest index value in the last 24 months.



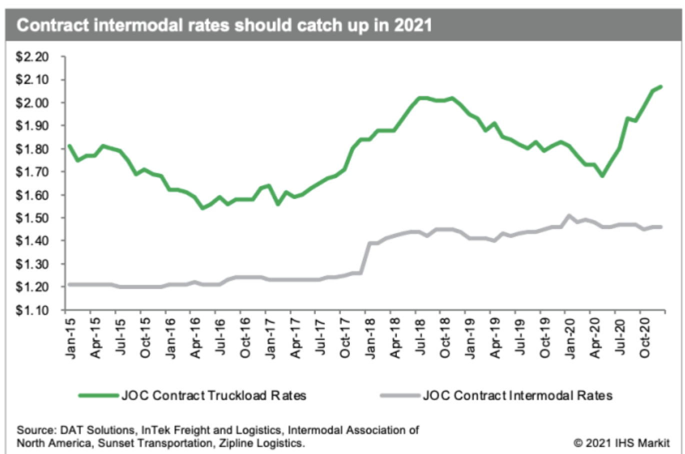
Railroads should pay close attention to spot dry-van rates, which fell nearly 3 percent sequentially in January to $2.64 nationally, according to preliminary data from digital broker Loadsmart.

JOC's Contract Intermodal Savings Index

Perhaps no graph better shows the divergence between the spot and contract markets were than the one below. While the gap between spot rates narrowed significantly, the gap in contract rates between the modes widened in Q4.



Shippers were so desperate to find available capacity when volumes surged last summer that they agreed to pay more to contract carriers to maintain routing guides for the holiday season. Intermodal contracts, however, are rarely adjusted mid-cycle.



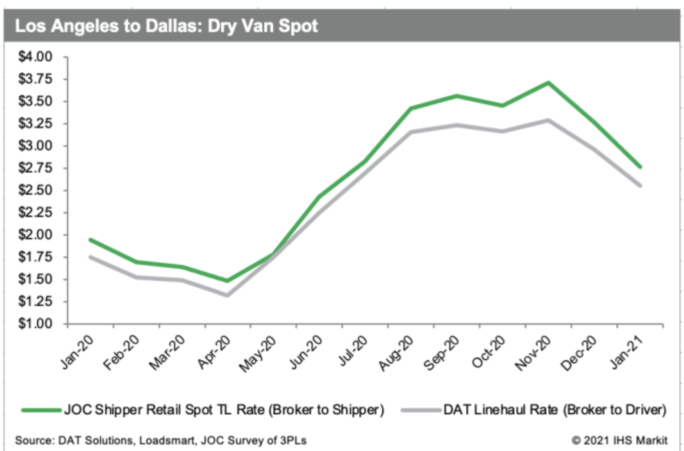
Shippers are now negotiating 2021 rail contracts, so expect the gap to narrow in Q1.

"There are markets where, yes, intermodal price [hikes] probably do need to outpace truckload rates," J.B. Hunt's Field said. "But there are markets where the intermodal prices can be at, maybe even below truckload market price changes. So, it's a little bit broad to make a statement that intermodal rates need to outpace truckload rates. I don't think they do. And I don't think they necessarily will throughout our entire network. But there are some key pockets where, yes, I absolutely think they will."

We will pay close attention to intermodal contract rates in Los Angeles because the Southwest accounts for 25 percent of JOC's national index value.

In lanes we classify as Green in *The Lane-by-Lane Breakdown* (page 7), intermodal contract rates could theoretically outpace truckload contract rate increases and still remain a good bargain. Shippers should pay close attention, however, to whether any Yellow lanes may become candidates for truckload conversion.

Los Angeles to Dallas is a Green lane. Shippers are paying between $3,500-$4,000 for a truck today, down from more than $5,000 in the fourth quarter. Shippers will save a lot of money if intermodal rates are below $3,000. Spot intermodal rates, however, have been more than $3,500 since last August.



The Distance Discussion

The length of haul is a key factor in modal decisions. Shippers benefit from lower fuel costs more on longer lengths of haul, especially when diesel prices are high.

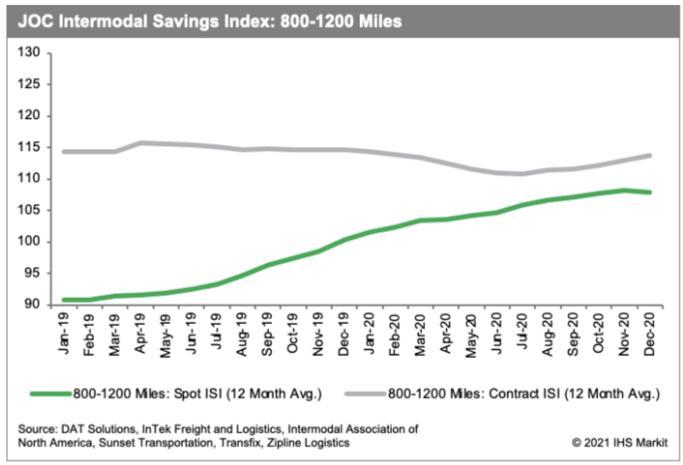
Less than 700 Miles

We track seven lanes in this distance. Through June, the Contract ISI was 100.9 and the Spot ISI was 96.1 on a rolling 12-month basis. Each of the seven lanes in this short-haul distance are either cheaper on truck or virtually the same price in both modes.

800 to 1,200 Miles

This distance has the most heated competition between trucking and intermodal. Most of these lanes connect the Midwest, Southeast, and Northeast.

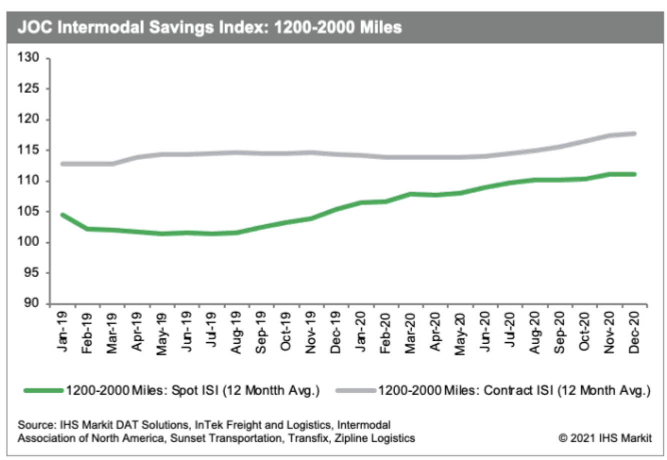
JOC's Contract ISI was 113.8 and the Spot ISI was 107.9 on a rolling 12-month basis. Both are lower than the long-term average savings nationally (see page 3).



1,200 to 2,000 Miles

JOC's Contract ISI was 117.7 and JOC's Spot ISI was 110.6 on a rolling 12-month basis through June.

This a bellwether number because busy origin-and-destination pairs such as Los Angeles and Dallas, Los Angeles and Kansas City, Dallas/Houston and Elizabeth, New Jersey, and St. Louis/Kansas City and Elizabeth, NJ fall into this segment.

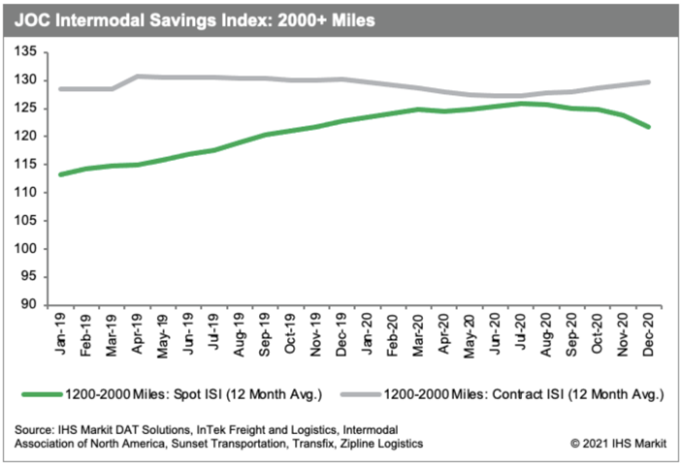


Pro-intermodal lanes in this distance are out of Houston, Kansas City, and Stockton-Lathrop. Dallas to Boston, Dallas to Los Angeles, and Dallas to Stockton are firmly pro-intermodal.

2,000 Miles+

Long-distance hauls are where the intermodal industry can deliver strong value to shippers. This segment also drives up our historical averages because the lanes tend to originate or terminate on the West Coast.

JOC's Contract ISI average was 129.7 and JOC's Spot ISI was 121.7 on a rolling 12-month basis through June.



Nearly every lane in this segment delivers at least 15 percent savings, and some as much as 50 percent. JOC's Spot ISI in this segment fell sequentially in the fourth quarter, however, since there are a number of Los Angeles outbound lanes on this list.

The Lane-by-Lane Breakdown

In this section, we examine which markets are pro-intermodal, pro-trucking, and *up for grabs*.

Please evaluate the next infographic like a traffic light.

Green means go — strong intermodal savings.
Yellow means slow down — truck is competitive.
Red means stop —no intermodal savings.

Given accessorial fees in rail, such as detention, per diem, and block and bracing, a **yellow** lane can easily flip **red** because we exclude this in our calculation.

GREEN:

Index value is greater than 110. These are pro-intermodal lanes in which shippers should feel comfortable they are receiving a good value.

ALLENTOWN TO DALLAS
ATLANTA TO CHICAGO
ATLANTA TO ELIZABETH, NJ
ATLANTA TO LOS ANGELES
BOSTON TO DALLAS
BOSTON TO LOS ANGELES
CHARLOTTE TO L.A.
CHARLOTTE TO STOCKTON
CHICAGO TO ATLANTA
CHICAGO TO JACKSONVILLE
CHICAGO TO LOS ANGELES
CHICAGO TO SEATTLE
COLUMBUS TO L.A.
DALLAS TO CHICAGO
DALLAS TO ELIZBETH, NJ
DALLAS TO LOS ANGELES
DALLAS TO SEATTLE
DENVER TO ALLENTOWN
ELIZABETH TO CHICAGO
ELIZABETH TO DALLAS
ELIZABETH TO DENVER
HOUSTON TO ALLENTOWN
HOUSTON TO LOS ANGELES
JACKSONVILLE TO CHICAGO
KANSAS CITY TO L.A.
L.A.TO CHICAGO
L.A. TO DALLAS
L.A. TO KANSAS CITY
L.A. TO MEMPHIS
MEMPHIS TO LOS ANGELES
MIAMI TO CHICAGO
OAKLAND TO ELIZABETH
PHILADELPHIA TO DALLAS
PHOENIX TO CHICAGO
PORTLAND TO CHICAGO
STOCKTON TO DALLAS
SEATTLE TO ATLANTA
SEATTLE TO CHICAGO
SEATTLE TO ELIZABETH
ST. LOUIS TO LOS ANGELES

YELLOW:

Index value is between 100 and 110. Shippers should have a deeper discussion on these lanes with logistics providers because although they are saving some money, truck rates are competitive.

BALTIMORE TO CHICAGO
BOSTON TO ORLANDO
CHARLOTTE TO CHICAGO
CHICAGO TO HARRISBURG
CINCINNATI TO L.A.
CINCINNATI TO STOCKTON
DENVER TO LOS ANGELES
EL PASO TO CHICAGO
ELIZABETH TO ORLANDO
ELIZABETH TO HOUSTON
HARTFORD TO DALLAS
HOUSTON TO FRESNO
JOPLIN TO LOS ANGELES
JOPLIN TO STOCKTON
KANSAS CITY TO FRESNO
LAREDO TO CHICAGO
LAREDO TO CLEVELAND
L.A. TO MINNEAPOLIS
LOS ANGELES TO SEATTLE
LOS ANGELES TO TACOMA
ORLANDO TO ELIZABETH
RENO TO DALLAS
SEATTLE TO DALLAS
SEATTLE TO LOS ANGELES
ST. LOUIS TO STOCKTON
SYRACUSE TO ORLANDO
TACOMA TO LOS ANGELES

RED:

Index value less than 100. These are pro-trucking lanes.

ATLANTA TO DALLAS
ATLANTA TO JACKSONVILLE
ATLANTA TO ORLANDO
BOSTON TO ORLANDO
CHARLESTON TO CHICAGO
CHARLOTTE TO MIAMI
CLEVELAND TO EL PASO
CLEVELAND TO LAREDO
DALLAS TO ATLANTA
DALLAS TO RENO
EL PASO TO CHARLOTTE
EL PASO TO COLUMBUS (OH)
HOUSTON TO CHICAGO
JACKSONVIILLE TO DALLAS
LAREDO TO STOCKTON
LOS ANGELES TO DENVER
LOS ANGELES TO LAREDO
ORLANDO TO BOSTON
ORLANDO TO ELIZABETH
SALT LAKE CITY TO L.A.

Source: IHS Markit
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There are 135 (72.2%) green lanes, 31 (16.6%) yellow lanes, and 21 (11.2%) red lanes in Q42020.

Seven out of 10 lanes historically deliver strong intermodal savings. The other three are either *too close to call* or cheaper via truck.

Regional Breakdown

Row Labels	Contract	Spot	Grand Total
Midwest	**119.81**	**119.00**	**119.49**
Mountain	118.15	101.82	109.99
Northeast	109.67	117.06	113.37
Northwest	135.22	127.26	131.93
Southcentral	105.71	113.58	108.70
Southeast	118.93	128.37	123.65
Southwest	124.36	119.89	122.91
Mountain	**115.55**	**105.29**	**110.90**
Midwest	131.28	116.65	123.97
Northeast	125.04		125.04
Southwest	95.86	93.93	94.89
Northeast	**125.36**	**120.15**	**123.05**
Midwest	122.61	121.02	121.70
Mountain	136.42	108.07	126.41
Northwest	147.09	133.55	140.02
Southcentral	122.89	103.37	119.72
Southeast	111.02	109.61	110.31
Southwest	142.35	136.49	139.42
Northwest	**126.08**	**101.90**	**113.99**
Midwest	137.72	119.58	128.65
Northeast	136.69	119.52	128.10
Southcentral	109.44	91.79	100.62
Southeast	124.40	114.32	119.36
Southwest	120.88	83.47	102.18
Southcentral	**119.20**	**114.33**	**118.13**
Midwest	106.55	109.44	107.57
Mountain	95.99		95.99
Northeast	127.40	115.57	126.15
Northwest	124.63	129.24	126.93
Southeast	89.78	98.24	93.16
Southwest	124.44	121.64	124.01
Southeast	**115.73**	**112.90**	**114.27**
Midwest	127.34	118.26	122.39
Northeast	94.66	107.02	101.28
Northwest	144.43	141.21	142.82
Southcentral	95.28	89.73	92.51
Southeast	84.82	71.73	76.25
Southwest	123.87	126.77	125.21
Southwest	**124.90**	**101.82**	**116.97**
Midwest	125.67	102.25	121.21
Mountain		70.27	70.27
Northeast	133.64	113.87	123.68
Northwest	118.83	83.62	101.23
Southcentral	119.16	95.16	115.51
Southeast	128.56	103.84	117.47
Weighted National ISI	**122.78**	**113.34**	**118.06**
Weighted National ISI	122.78	113.34	118.06
Grand Total	**121.33**	**113.25**	**118.07**

Quotes from Earnings Calls

"We recognize that we still have significant cost and velocity challenges in Southern California, and simply adding containers is not the only solution required to grow capacity in that key market. BNSF and J.B. Hunt are working together to find better capacity solutions for our customers, and our prices will reflect those efforts." — Darren Field, EVP of J.B. Hunt Intermodal.

"UPS peak was amazing. It was a big, big quarter…So some of our international traffic, that isn't as time-sensitive, may have taken a little longer to get off the port than we normally would to make sure we move the time-sensitive traffic. But going forward, I look at our numbers with respect to the intermodal side, 90% trip compliance or above is where we should be getting…And we're starting to see some of those numbers hit already as we've moved past some of that UPS peak," — Jim Foote, CSX CEO.

"All of the congestion that we're seeing in Chicago is largely outside of our intermodal gates and that's with the drayage community and with warehouses as they go through pandemic protocols and regularly have difficulty getting people to work because of COVID concerns. What that does is it slows down the turn of the assets, the chassis and the boxes." — Jim Squires, CEO of Norfolk Southern.

David Ross of Stifel: I was having a conversation with somebody in the industry the other day, who said that intermodal and PSR in his mind were incompatible, because intermodal is about accommodating and balances and surges, and PSR's goal is really to eliminate them. How do you think about intermodal and then your PSR goals, and is there friction there?

Jim Squires: I strongly disagree with that characterization of PSR is applied to an intermodal franchise. We believe that and we have applied PSR principles to our intermodal network and we'll continue to do so, while maintaining intermodal as a growth engine.

"We are going to benefit from the tight truck market and you're going to see that both in volume and in intermodal and in merchandise…What I've talked about is our long-term approach to markets and this is something that we've employed for years within our intermodal franchise; we don't want that level of volatility associated with the spot market to get into our rate structure. We do have a small portion of our intermodal business that's transactional and we are reassessing our rate plan to the positive there. However, for most of it, the rate increases unwind over time." — Jim Squires, CEO of Norfolk Southern.

Methodology

The Journal of Commerce evaluates nearly 190 lanes in our study of intermodal savings. We send estimates on 45 lanes to 3PLs and shippers under non-disclosure agreements.

Our estimates include margins and fuel but exclude accessorial fees such as detention, demurrage, per diem, lumper fees, blocking and bracing. Our contributors review transactions and provide broker-to-shipper invoice rates. Those responses are used to calculate the two indexes.

The base value is 100, which means rates are identical in both modes. If intermodal rates are 20 percent cheaper, then the value is 20 percent higher than 100, or 120. If trucking rates are 20 percent cheaper, then the value is 20 percent lower than 100, or a value of 80. Higher numbers are good for intermodal, lower numbers are good for trucking.

JOC calculates regional index values for the Midwest, Mountain, Northeast, Northwest, Southeast, South Central, and Southwest US.

A national number is then calculated on a weighted basis using 53-foot equipment flow data from IANA.

Acknowledgements

Although we are prohibited from disclosing the identities of most 3PLs and shippers contributing to the JOC Intermodal Savings Index, we thank them for participating. Your input is critical to provide accurate insights for shippers to make informed modal decisions with logistics partners.

We are permitted to identify InTek Freight and Logistics, Sunset Transportation, Transfix, and Zipline Logistics. Transfix is a digital online freight broker.

Loadsmart — a competitor to Transfix — provides data for our JOC Shipper Spot Truckload Rate Index, tracking broker-to-shipper rates on more than 4,000 lanes, which we compared with our smaller sample.

JOC 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 his data based on spot rates from other asset-owning intermodal marketing companies.

We also thank IANA for tracking the equipment flows of containers and trailers on the rails. Their equipment flow data allows us to weigh our national number appropriately to actual market volumes.

We thank DAT Solutions — Ken Adamo, Dean Croke, and the entire data team — who ensure our estimates to the 3PLs and shippers are as accurate as possible.

We appreciate all the data that DAT Solutions, IANA, and InTek Freight and Logistics bring to the industry and our goal is to simply build upon their great work and industry expertise.

We highly encourage our readers to contact us and our data contributors if you have further questions.

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

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