The Journal of Commerce

Intermodal Savings Index

2nd Quarter | August 2022

An Analysis of the Domestic Intermodal and Truckload Markets

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Intermodal Savings Index 2Q22

Contents

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I. How The Index is Calculated

Calculation: *The Journal of Commerce evaluates 117 lanes in our study of intermodal savings. We send estimates to 3PLs and shippers to review.*

Our estimates include margins and fuel but exclude accessorial charges such as detention, demurrage ("storage fees"), excessive per diem, lumper fees, and other fees. 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 truck and intermodal rates are identical. If intermodal rates are 20 percent cheaper, then our Index value is 20 percent higher than 100, or a value of 120. If trucking rates are 20 percent cheaper, then the value is 20 percent lower than 100, or a value of 80.

Higher index values indicate greater intermodal savings to the shipper. Lower index values indicate intermodal has limited or no price advantage to trucking, which tends to be quicker, more reliable, and resilient than intermodal rail.

JOC calculates regional index values for the Midwest, Mountain, Northwest, Southeast, South Central, and Southwest US, using the regional map of the Intermodal Association of North America.

A national index value is calculated on a weighted basis using IANA's 53-foot equipment flow data and is reweighted each month.

Index values are linked to percentages:

- *140 = Rail 40% cheaper*
- *130 = Rail 30% cheaper*
- *120 = Rail 20% cheaper*
- *110 = Rail 10% cheaper*
- *100 = Rail and Trucking tied*
- *90 = Trucking 10% cheaper*
- *80 = Trucking 20% cheaper*

II. Executive Summary

The bottom line: Domestic intermodal volume grew year over year in the first quarter, and shippers saved more money than a year ago on intermodal, but service was inconsistent and unreliable.

While intermodal volume for the entire industry fell 4.3 percent year over year in the second quarter, it was the result of an 8.4 percent decline in international volume, according to the Intermodal Association of North America (IANA), as shippers gravitated more toward East Coast ports, which are shorter hauls and more truck competitive on rates.

Domestic container traffic (COFC) grew 4.0 percent year over year in the second quarter, but overall domestic volume was only up 0.2 percent when including trailer-on-flatcar traffic (TOFC). Total volume is relevant because as TOFC loads convert to COFC, the container number rises while the trailer number falls.

Intra-US domestic container volume — an origin and destination in the US — was up year over year in each US region, although Midwest outbound volume was only up 1.6 percent in the second quarter.

For more on volume, we recommend IANA's Intermodal Quarterly, a companion research report. Our report focuses on rates and service, while IANA's focuses on volume.

Intermodal service was inconsistent and unreliable for the second consecutive quarter. Intermodal train speeds were slower for all Class I railroads except Kansas City Southern Railway, according to the Association of American Railroads. Norfolk Southern Railway had the worst decline in the East Coast, falling 6.6 percent year over year to the slowest speed since JOC's analysis of AAR data dating back to 2010. Union Pacific Railroad fell 3.9 percent to the slowest intermodal train speed in the second quarter for the company.

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
110.9	132.4	118.3	134.6	116.3	137.1

Source: IHS Markit

Despite subpar service, intermodal contracts deliver a strong value compared with truckload contracts. The JOC Contract ISI averaged 132.4 (32.4 percent savings) in the second quarter. Intermodal spot rates, however, did not deliver much value. The JOC Spot ISI averaged 110.9 (10.9 percent savings) in the second quarter (Chart 2A).

Since 2018, the average monthly value is 127.9 for the JOC Contract ISI and 112.5 for the JOC Spot ISI.

We also created a special intermodal contract versus truckload spot measurement to track the migration of core intermodal business to trucking. The JOC Contract-to-Spot Trucking ISI — as we'll call it — was 125.0 in the second quarter, but later in this report we will highlight key cities where this number is below our base of 100.

Chart 3A

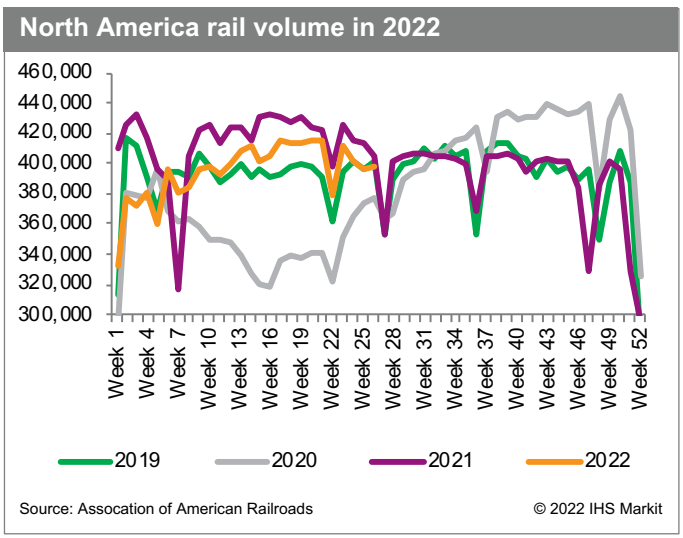
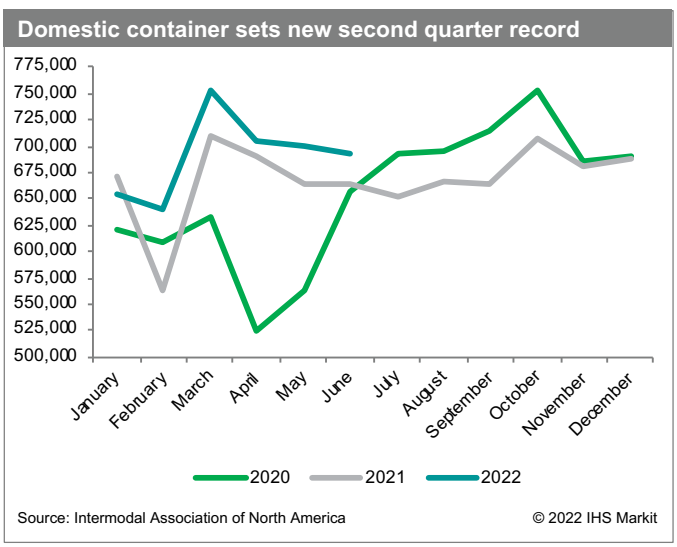


Chart 3B



III. The Volume and Service Picture

The bottom line: Although domestic container volume rose, shippers were less efficient with containers and service from railroads and IMCs was subpar.

Volume Totals: Intermodal volume overall has trended higher than 2019 levels but lower than year ago levels across all container types, according to the AAR data (Chart 3A) But domestic volume set a second quarter record with 2,098,606 container hauls, up 2.6 percent from the first quarter and 4 percent higher year over year, according to the Intermodal Association of North America (Chart 3B). Remember, however, that including trailer-on-flatcar, volume was up only 0.2 percent to 2,328,783 loads.

On intra-US traffic only, the US Midwest is the largest origination point but trailed the larger COFC market by rising only 1.6 percent to 579,451 container hauls. The second largest origination — the US Southwest —trended to the national market with a 3.8 percent gain year over year to 437,124 container hauls in the second quarter.

Box Turns Slowing Down: Intermodal companies measure efficiency in box turns, or how many loads an average container moved per month. If the box turns decline, then the container owner, whether it's a railroad or IMC, must use more containers ("assets") to move the same number of loads. J.B. Hunt

"The western part of the network is highly challenged on fluidity and reliability. We're working closely with our partners to focus on key areas of improvement so we can move more volume that benefits the rail providers, Schneider, and importantly our customers…While we are justifiably focused on rail fluidity and box turns in the West, I should mention that our eastern rail partners CSX is performing very reliably…[and] we're really pleased with the Union Pacific, particularly on the fluidity inside their ramps."

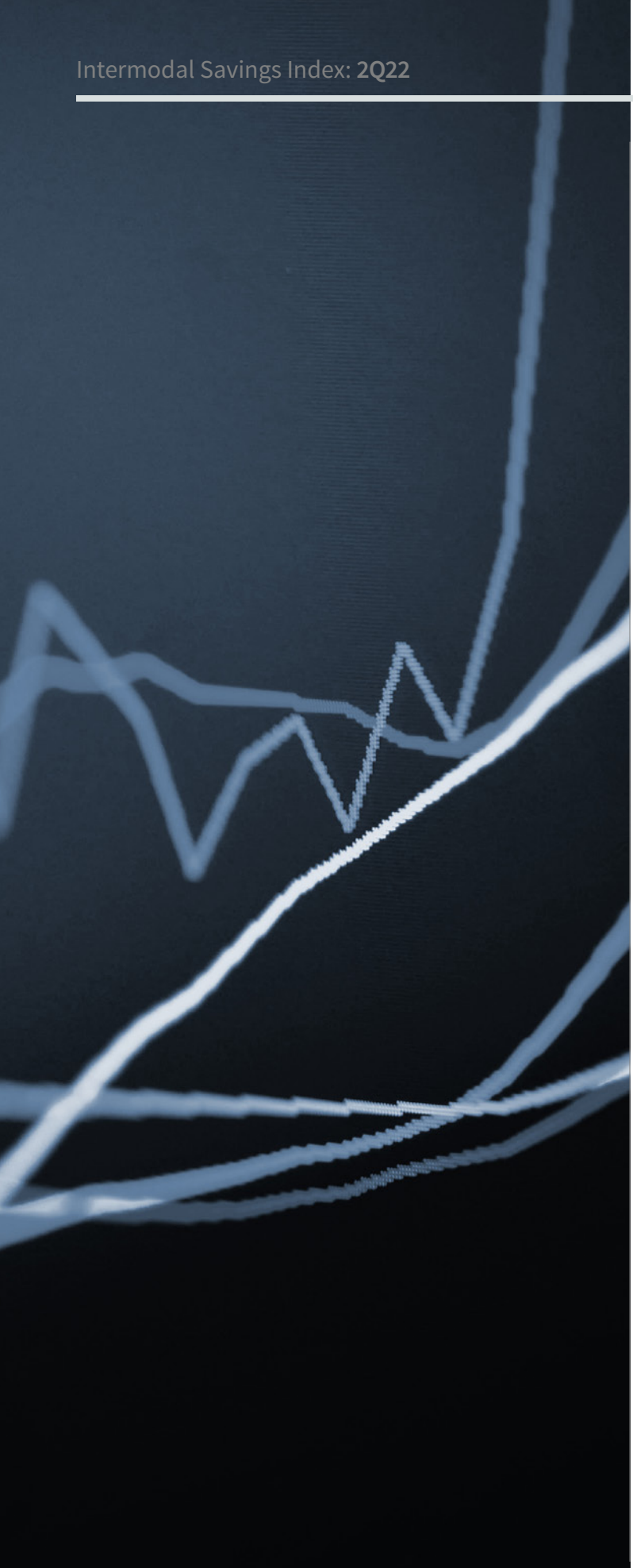
— Mark Rourke, CEO of Schneider National.

Transport Services reported a box turn ratio of 1.62 in the second quarter, down 3.1 percent compared with a year ago. Schneider National reported box turns fell to 1.40 in the second quarter, down 18 percent year over year. We estimate box turns across the US were between 1.67 to 1.72 in the second quarter, a decline of 8.3 percent year over year. All told, intermodal shippers are slower to unload 53-foot containers than a year ago and railroads and IMCs performance degraded as a result.

Service and market share: J.B. Hunt outperformed the larger market with a 7.9 percent increase year over year in intermodal traffic in the second quarter. Schneider also outperformed the market with a 5 percent growth in volume, while Hub Group underperformed with only a 1 percent increase in volume. Service from the large IMCs and rail partners was below par. Several shippers mentioned struggles with Schneider in the second quarter, particularly in the western US, a problem that the company acknowledged on its earnings call on July 28. Schneider also had major chassis shortages. Schneider purchases chassis directly from manufacturers and the delivery of chassis is lagging containers.

Union Pacific Railroad reported intermodal "trip-plan compliance" was less than 70 percent in the second quarter and BNSF Railway fell below 60 percent. Most railroads define "trip-plan compliance" as on time or up to 24 hours behind schedule. UP set a benchmark of 80 percent trip-plan compliance by the end of the year, and BNSF's 70 percent target, according to filings with the US Surface Transportation Board.
What do shippers consider "truck-like" consistency on transcontinental loads? Shippers have told us 90 to 95 percent, and CSX Transportation was the only US Class I railroad hitting that level consistently in the second quarter.

One BNSF customer shared its performance data for a recent seven-day period: 36 percent on time. Trip-plan compliance: 60 percent.



IX. Acknowledgements

Although we are prohibited from disclosing the identities of many 3PLs and shippers contributing to the JOC Intermodal Savings Index, we thank them for participating.

We can identify Cargo Chief, InTek Freight and Logistics, Sunset Transportation, Transfix, and Zipline Logistics as valued JOC Intermodal Savings Index partners.

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 JOC Intermodal Savings Index sample size.

We thank Professor Jason Miller of Michigan State University for his three-month forecast, and Rick LaGore, CEO of InTek Freight and Logistics, for providing weekly intermodal spot data on more than 115 lanes.

We average Rick's numbers with freight all kinds (FAK) transactional rates published by Class I railroads and asset-based IMCs to provide a complete view of the spot market.

We thank DAT Freight & Analytics for ensuring our estimates to 3PLs and shippers are as accurate as possible, and the Intermodal Association of North America for their container flow data which allows us to properly weigh the JOC Intermodal Savings Index monthly.

We appreciate all the data that Cargo Chief, DAT, IANA, InTek, Loadsmart, Sunset, Transfix, Zipline Logistics bring to the industry. Our goal is to build upon their great work and industry expertise. The aggregated data underlying the JOC Intermodal Savings Index is available to JOC members with the proper subscription tier. We encourage our readers to contact us or our data contributors if you have further questions.

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

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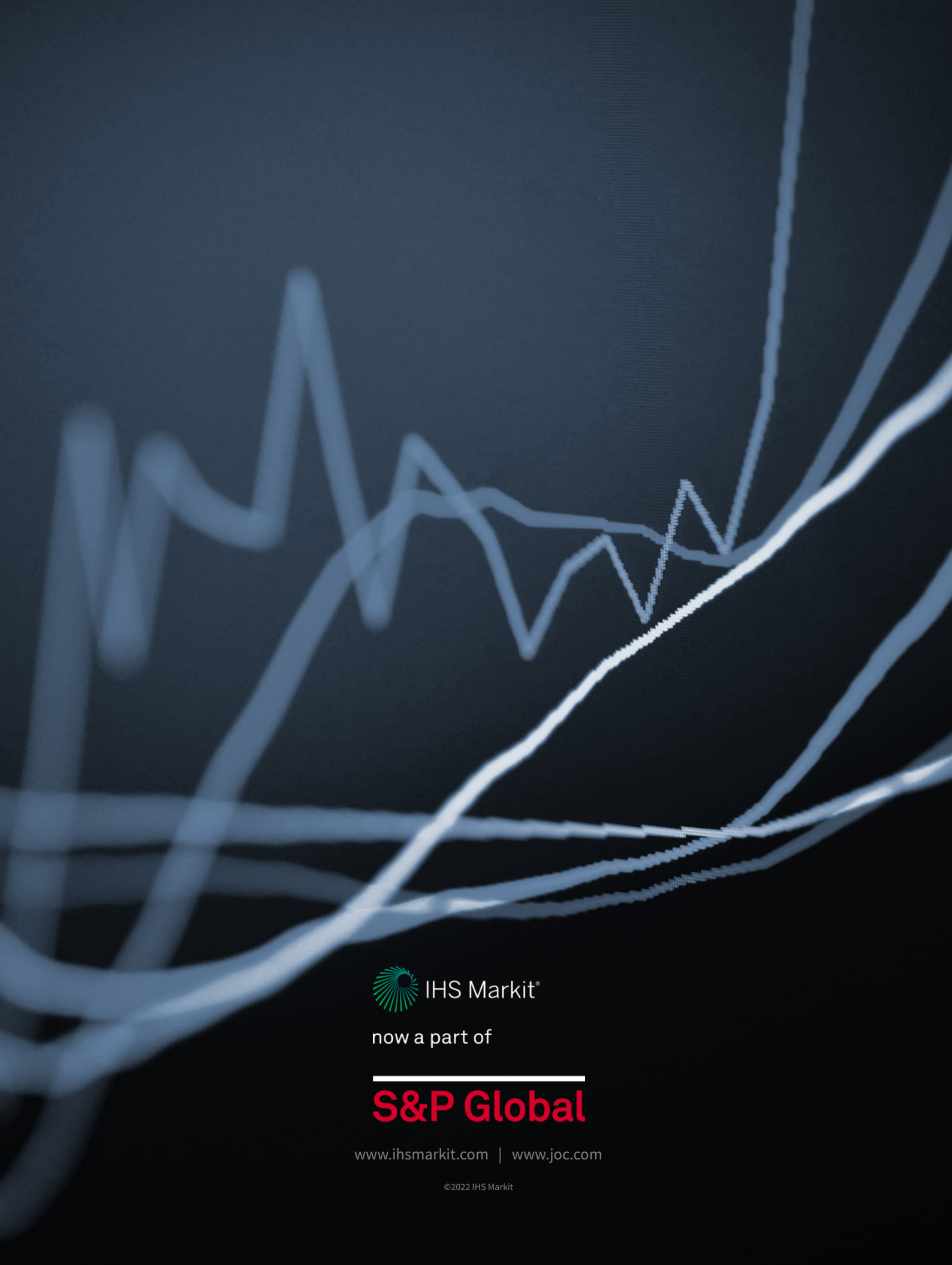
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