

# Understanding the Freight Cycle



# Waterfall Theory of Freight

Every year — and sometimes more than once — shippers will send out an RFP (request for pricing) on freight lanes where they know they will have volume in the upcoming year. Shippers will then establish a routing guide that lists carriers or brokers by order of preference, typically arranged from the lowest to the highest priced options. This ranking approach, known as the Waterfall Theory of Freight, dictates that contract rates increase as each carrier rejects a shipper's load request (or tender). Initially, a shipper sends a load request to the preferred carrier. If this request is rejected, it cascades to the next carrier in the routing guide. This process continues until the load is accepted, ensuring that shippers attempt to secure the most cost-effective shipping option first.

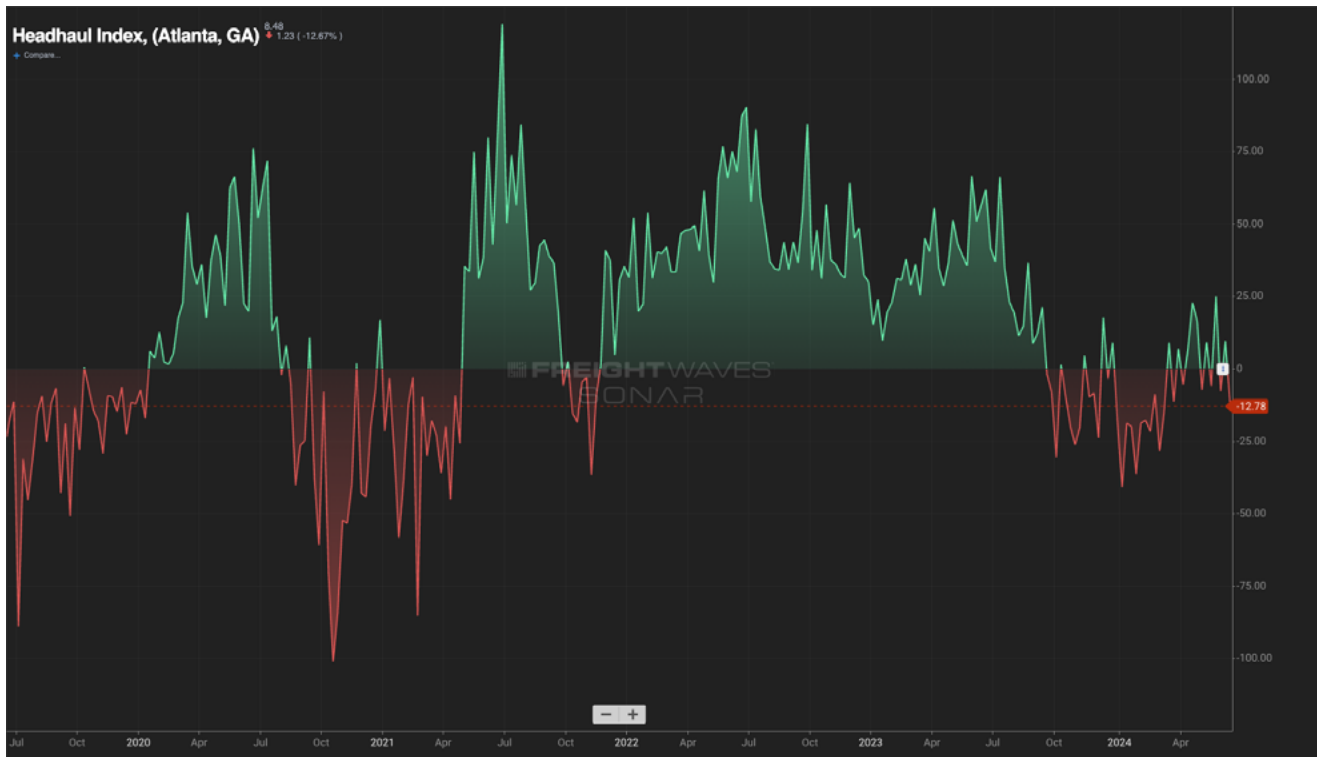
However, as rejections continue, the load request progressively moves down the waterfall. Each subsequent rejection means the shipper must send the request to a more expensive carrier, and if all contracted carriers reject the load, it may fall out of the contract and into the spot market, where prices are typically higher. This sequence can significantly increase shipping costs as more loads fall out of the preferred contract rates. Therefore, maintaining high routing guide compliance is crucial for controlling freight rates, as frequent deviations can lead to increased shipping expenses.

## Using Tender Volume Data to Identify Trends

SONAR gives users the ability to track these load requests or tenders with its vast database of electronically tendered transactions, making up about \$200 billion in annual truckload freight spend. The Outbound Tender Volume Index (OTVI) is an indexed data set that shows how much freight is being tendered on a daily basis, highlighting the overall demand for capacity on the market. Users have the ability to see which markets in the country are having an increase or a decrease in their load requests from day to day and can act accordingly.

Combining the OTVI with the Inbound Tender Volume Index (ITVI) shows a fuller picture of supply and demand in a specific market. This is why SONAR created the Headhaul Index (HAUL), which shows the balance or imbalance in markets based on this tender data. The Headhaul Index takes the OTVI of a market and subtracts the ITVI of a market to show the imbalance in that market.

When the Headhaul for a market is zero (0), that means there is an equal amount of outbound and inbound freight. When the HAUL value is positive, there is more freight being tendered out of that market than inbound to that market. These are good markets for carriers to be present in because they have the purchasing power in that market. When the HAUL value is negative, more freight is being tendered inbound to a market than outbound. These markets are good for brokers and shippers to gain negotiation power.

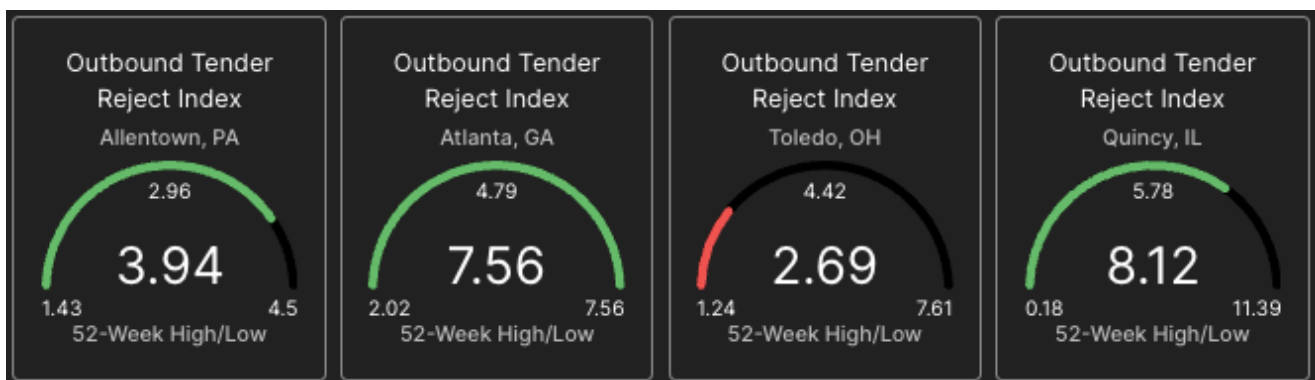


Headhaul Index for Atlanta, GA (HAUL.ATL)

# Tracking Tender Rejections With SONAR

Taking it even further, let's dive into the Outbound Tender Reject Index (OTRI). SONAR displays all OTRI values as a percentage, providing the percentage of freight that is being rejected out of a given market. When rejections are increasing in a market, it usually means that shippers are struggling to secure capacity and are likely more willing to pay higher rates in the spot market. Using OTRI shows which markets have more freight available to brokers and carriers on the spot market. The Waterfall Theory of Freight really shows this as the leading indicator for spot market rates.

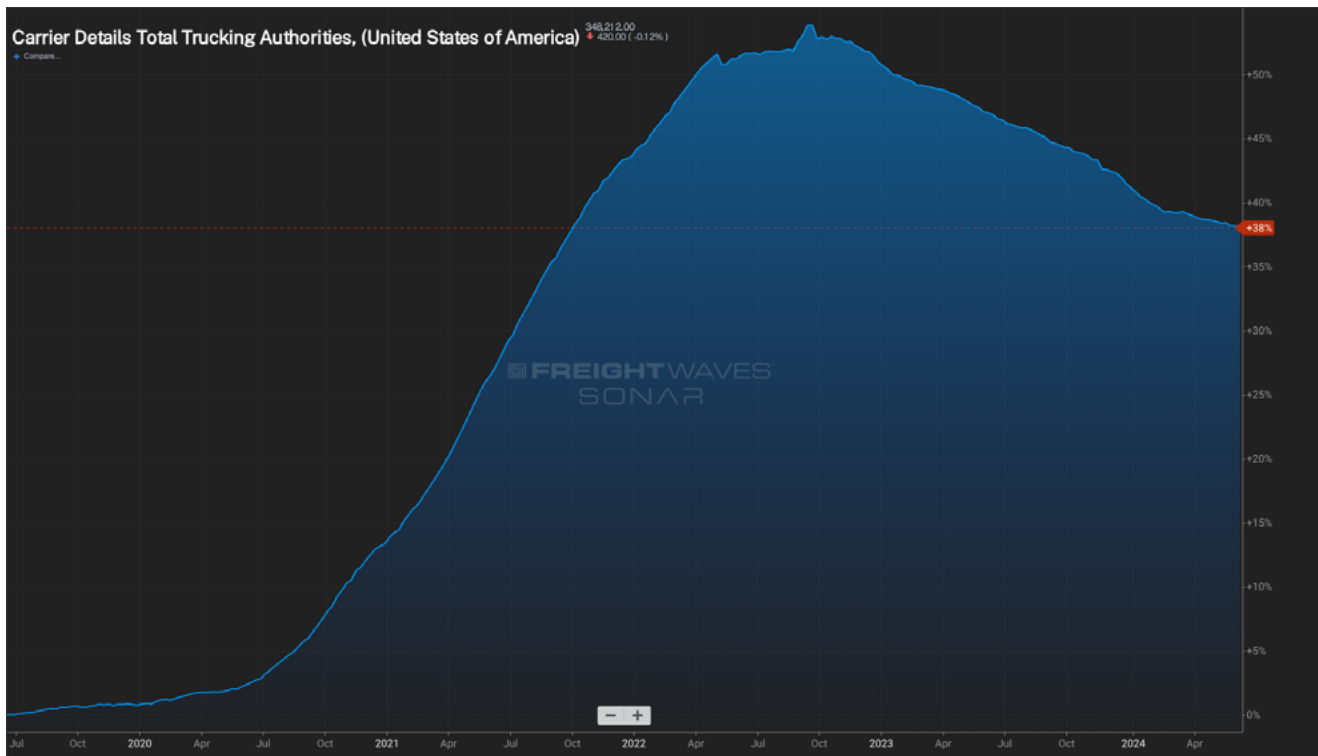
When shippers are struggling to secure capacity and see that their routing guide is falling apart, they will put that load on the spot board and most likely pay higher rates.



*Outbound Tender Rejections for Allentown, PA (OTRI.ABE), Atlanta, GA (OTRI.ATL), Toledo, OH (OTRI.TOL), and Quincy, IL (OTRI.UIN)*

Capacity is another indicator of which direction spot and contract rates may be moving. Carrier Details Total Trucking Authorities (CDTTA.USA) tracks the total number of active trucking authorities in the U.S. During the pandemic, there was a huge move to enter the market as a trucking company to take advantage of the high rates that were being paid out during that time.

In early 2023, the amount of active authorities began to decrease and has been on a downward trend ever since. This data set shows how oversaturated with capacity the market is and how those numbers are likely to continue falling.

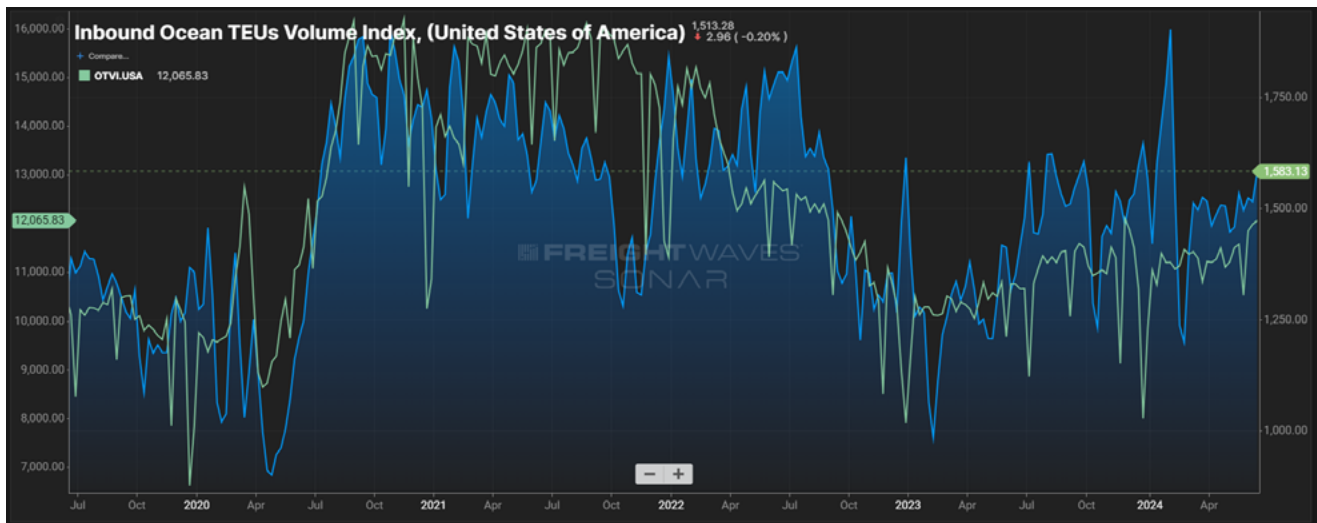


Carrier Details Total Trucking Authorities (CDTTA.USA)

## Tracking the International Freight Market With SONAR

SONAR is a multi-modal tool, tracking not only over-the-road freight but also intermodal, ocean and air freight. The Inbound Ocean TEU Volume Index (IOTI) tracks the amount of TEU volume that is moving in the world. This data set can be viewed in multiple different ways: nationally and internationally, specific to certain ports and at an overall country level. Looking at the IOTI on a national level shows the amount of TEU volume that is coming into the country. This provides a great indication of how much freight will eventually be moved over the road to its final destinations in the U.S.

Being able to see this upstream data proves very insightful for anyone in the industry that secures capacity. Seeing freight moving across the ocean before it hits our ports helps users be more proactive and better prepared for those eventual tenders.



*Inbound Ocean TEU Volume Index at a national level (IOTI.USA) in blue and the Outbound Tender Volume Index (OTVI.USA) in green*

## Conclusion

The Waterfall Theory of Freight illustrates the critical importance of maintaining high routing guide compliance to control shipping costs and what might happen if these routing guides fall apart. Tools like SONAR enable transportation providers to track tender volumes, rejections and market imbalances, providing valuable insights into freight trends. By leveraging these tools, SONAR users can better navigate the complexities of freight logistics, ensuring more efficient and cost-effective operations.

[Learn more](#) about how SONAR can improve your operations or [request a demo here](#).