FREIGHTWAVES SONAR

Monthly Market Update

DECEMBER 2022

A deep dive into the freight markets with unprecedented charts, analysis and market commentary.

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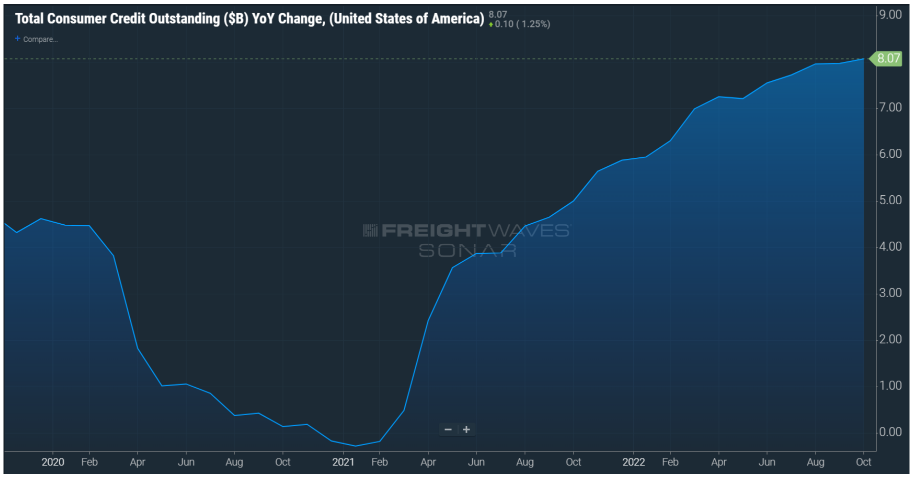
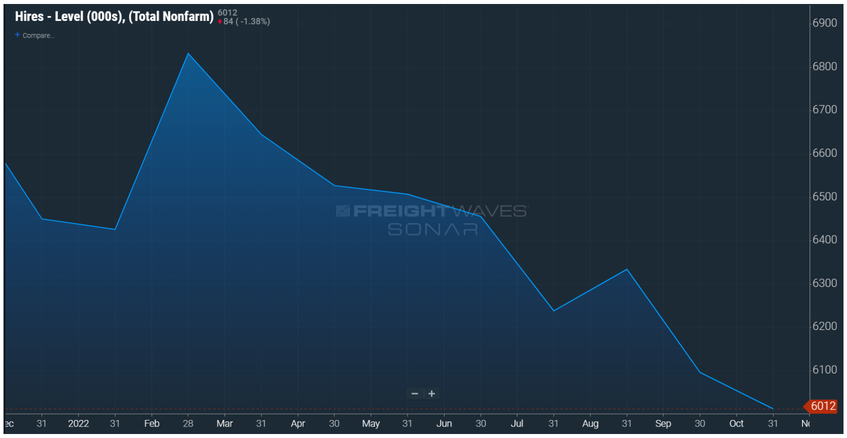
Economic Outlook

The year 2022 is ending with deceleration in various industries up and downstream. The U.S. is built around consumer activity, and the downstream momentum has kept the overall economy treading water over the last few quarters. However, the financial health of consumers is in critical condition. Credit utilization continues to climb for both revolving and non-revolving as more Americans lean on debt as savings dwindle. The savings rate is at the lowest level in 17 years and continues to fall. The lack of savings has also pushed many consumers to ramp up their usage of buy-now-pay-later programs and will potentially leave many Americans exposed to any sudden shifts in the jobs market.





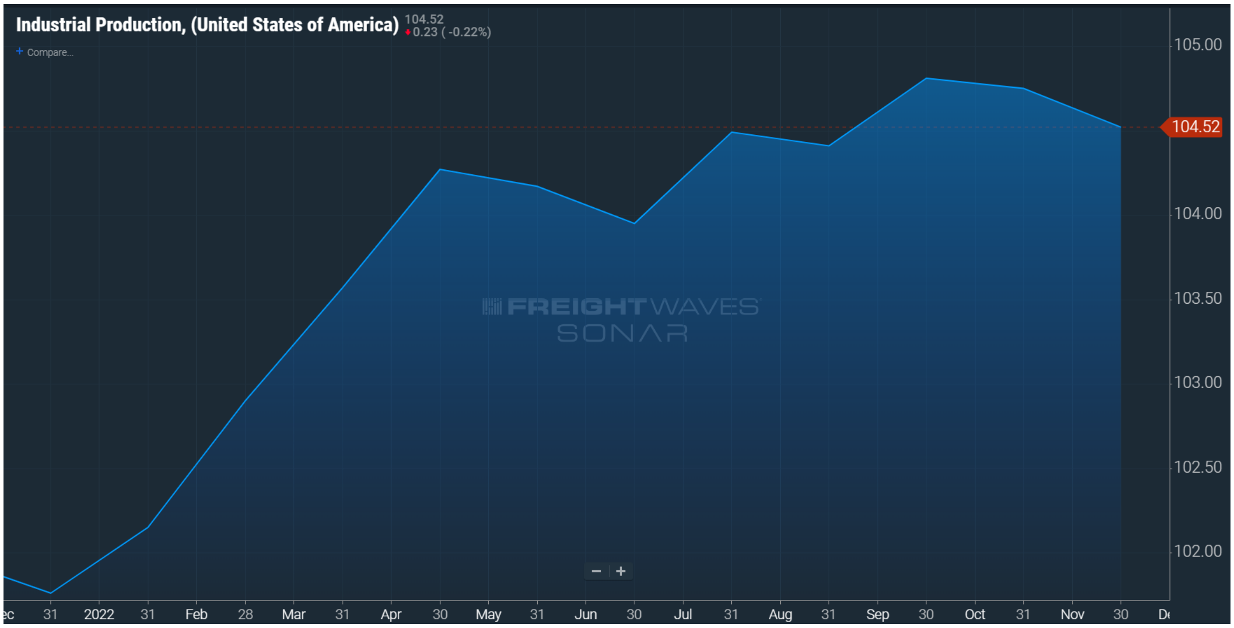
Job openings and the unemployment rate have been the critical measures that many point to prove strength and resiliency in the U.S. economy. However, despite the robust number of job openings, hiring dropped throughout much of 2022, and the labor force participation rate is still below the pre-pandemic level. The good news is that layoffs are currently low along with initial jobless claims, but these measures can have sudden shifts amid economic contraction. Further, continued claims (those that continue to file for insured unemployment) are in the early phase of a rising trend as more Americans remain on unemployment benefits. The "great resignation" trend took hold in the early months of 2021 and made its way into 2022, and has been fading over the last 12 months. The quit rate remains above the pre-pandemic level but is steadily declining.

This trend doesn't always mean that workers are content but can suggest that there are difficulties finding their ideal role as hiring eases and uncertainty around their economic outlook grows more uncertain. The overall fragile state of consumers will likely be a drain on demand for goods that would typically be hauled via freight going into 2023.

Further, any shock to the labor market will be severe for consumers that have been depleting savings and leveraging credit over the last two years. One of the areas that have not gotten a lot of attention in the previous 12 months is the value of the U.S. dollar. The U.S. dollar has been strong throughout much of 2022, which benefits imports. A sustained shift in the value of the U.S. dollar could cause inflationary pressures to resurface in the coming months.

Manufacturing

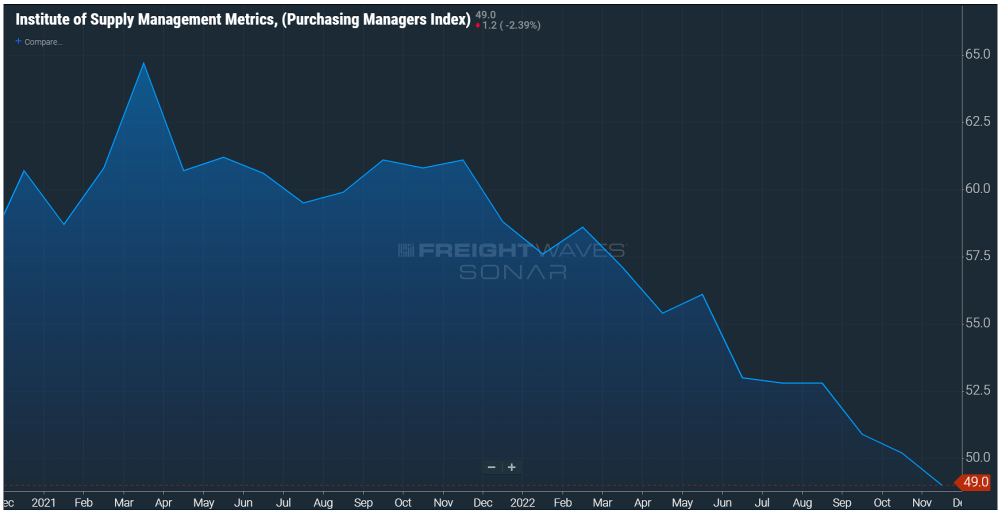
Manufacturing activity is easing with the following subcomponents within industrial production below year-ago levels: paper products (-6.0%), construction supplies (-0.7%), textile materials (-8.6%) primary metals (-3.7%), and wood products (-2.8%) along with a few other



segments. The automotive industry had many starts and stops throughout the year as components became available and production was able to be pushed out. However, the peak was likely in October 2022 and there will likely be an easing trend for this segment as increasing interest rates take a toll on big-ticket items. Domestic auto inventories are still low but are beginning to trend upward.

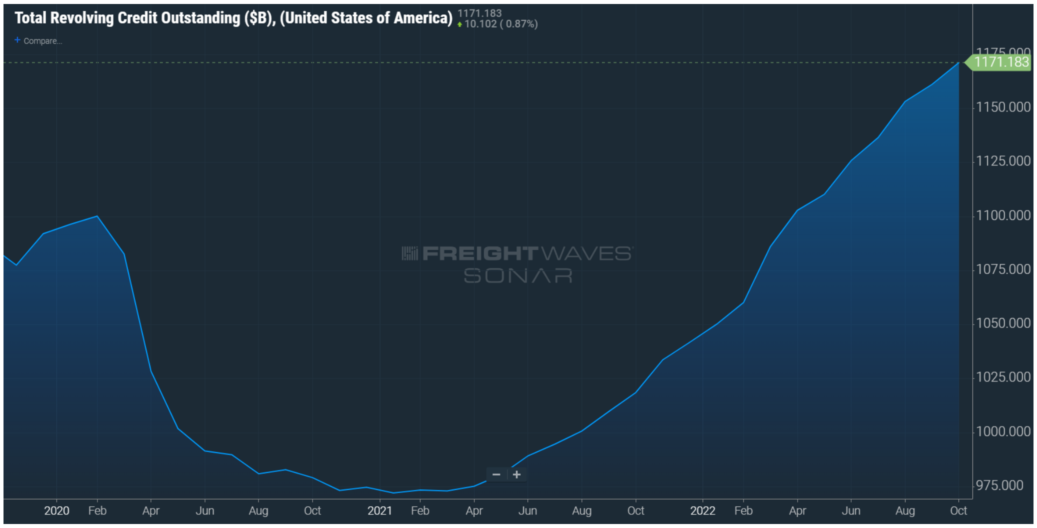
The industrial production index is down 0.2% and will likely ease throughout the first half of 2023. Although overall production is slowing, there are still orders and backlogs to work through. However, the backlogs will not be enough to keep general manufacturing from contracting in the latter half of 2023. Similar to housing, which will be discussed in a later segment, there was likely a pull forward for many businesses looking to place orders in a lower interest rate environment with an anticipated rise moving forward. Some of these orders can be canceled before going into production, which will take away from the overall backlog.

Manufacturing is contracting, according to the Institute for Supply Management (ISM). The ISM Manufacturing Index is based on the number 50, with below 50 is indicative of contraction for the month, and above 50, signaling growth within manufacturing. The ISM

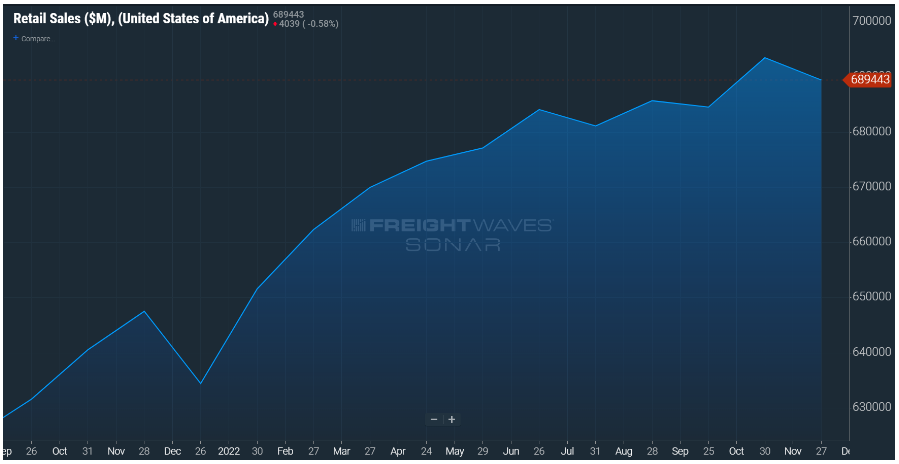


Manufacturing PMI is now contracting with a reading of 49.0, with new orders at 47.2. This supports expectations that there will be ongoing easing for the industrial production measure going into the first half of the year. The backlog component for the ISM PMI is also below the growth threshold at 40.0, another sign of diminishing activity going into 2023.

Consumer Conditions & Retail

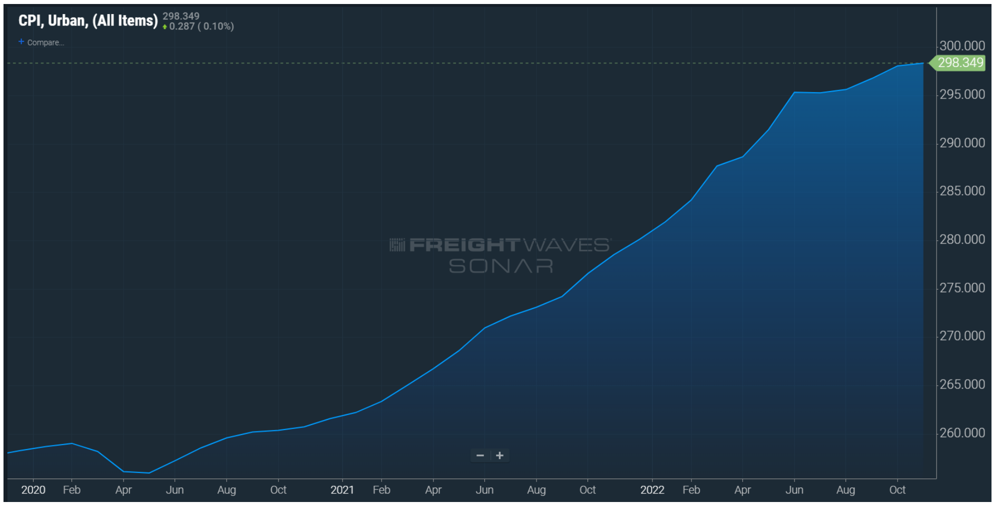


Consumer conditions going into 2023 are not ideal. As mentioned in the previous section, the savings rate for consumers is at the lowest level since 2005 and is trending downward. Credit utilization continues to rise, and inflationary pressures have not let up. The saving grace for consumers has been the current jobs market, allowing many to operate on a pay-check-to-pay-check basis. Buy-now-pay-later programs continue to be a concerning trend that is growing, and the true impact remains to be seen.



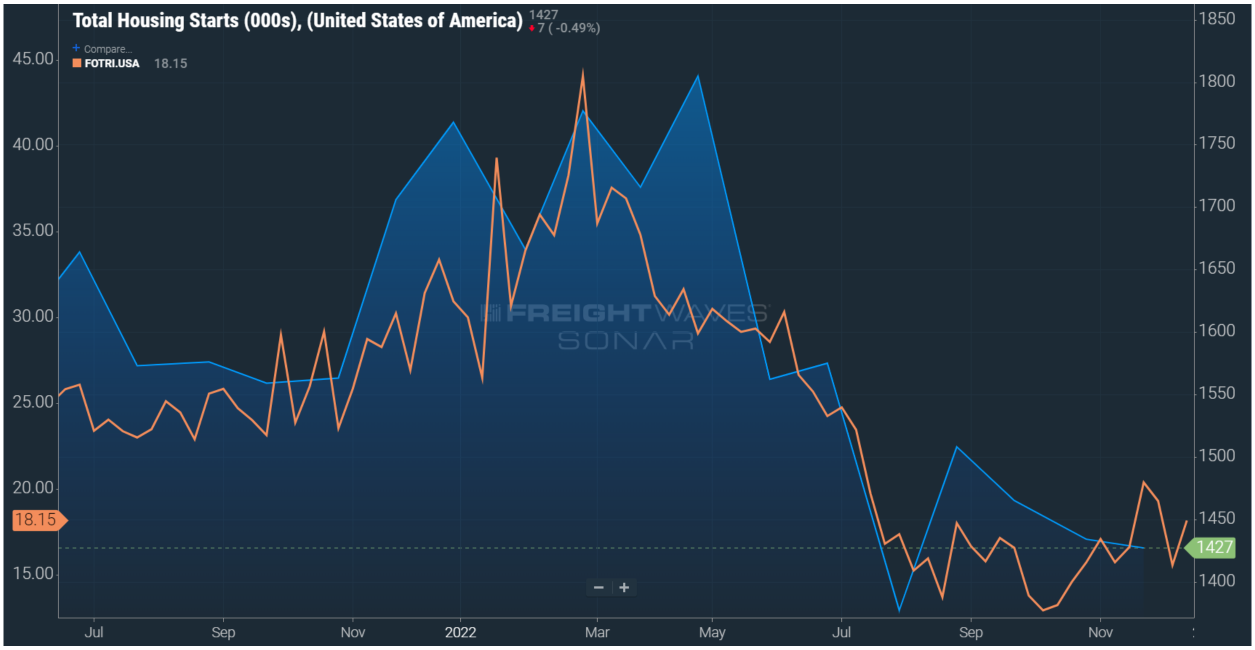
Retail sales dropped 0.6% in November, with declines for nonstore retailers (down 0.9%), Furniture (down 2.6%), Electronics (down 1.5%), and many more. Many sales happened in October, including Amazon's "Early Access Sales" and others. However, the downward movement signals a shift in consumer activity despite more consumer deals in November. (The headline retail sales report is not adjusted for inflation.)

The consumer price index (CPI) had a 0.1% monthly rise. This comes to a 7.1% year-over-year increase. Significant moves from the report come from used cars and trucks, down 2.9% for November. Gasoline also dropped 2.0%; however, consumer staples are still elevated, such as food, up another 0.5%, and shelter rising 0.6%. Inflationary pressures started a strong, rising trend roughly a year ago, and the year-over-year (y/y) comparisons may mask the actual bite of inflation as momentum seems to ease. The slowing trends overall will take away from freight volumes going into 2023.



Housing and Construction

Housing starts were updated for November, showing a 0.5% monthly decline. Single-family starts brought down the overall report with a 4.1% drop, 32.1% below the year-ago level. Single-family starts in the Midwest (-26.7%) and South (-6.6) regions were the leading detractors, but y/y trends are down double-digit levels in nearly every regional breakout. Housing permits are seen as an indicator of future housing activity and declined 11.2% for the month, 22.4% below the year-ago level. The ongoing contraction within permits signals that there will be more decline for starts in the coming months.



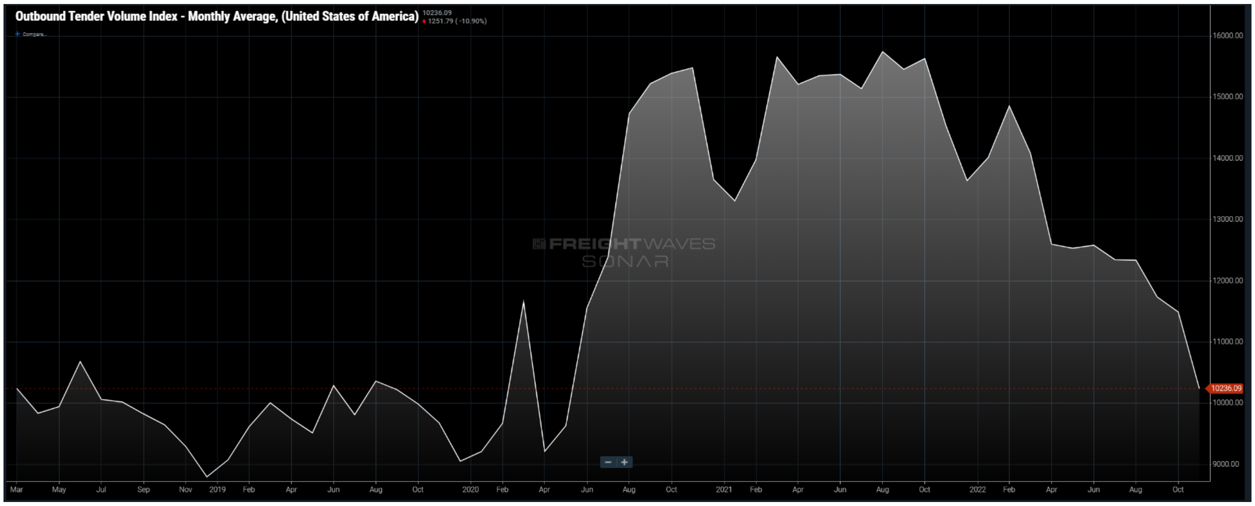
The Flatbed Outbound Tender Rejection Index fell from the highs seen in early 2022 but remains at double-digit levels, a far cry from reefer and dry van. Flatbed capacity remains relatively tight compared to other trailers, likely due to the backlog of ongoing projects. Housing units under construction are still at all-time highs, showing that there will still be demand for incomplete projects. Further, the number of homes that have been authorized but have yet to start is at levels not seen in decades. Some homes will be canceled, but there is still a substantial backlog to work through. Elevated mortgage rates will continue to ease activity along with overall uncertainty. The increased mortgage rates will likely keep the existing home inventory relatively tight as fewer homeowners opt to sell and give up a historically low mortgage rate.

Freight Market Overview

National Summary

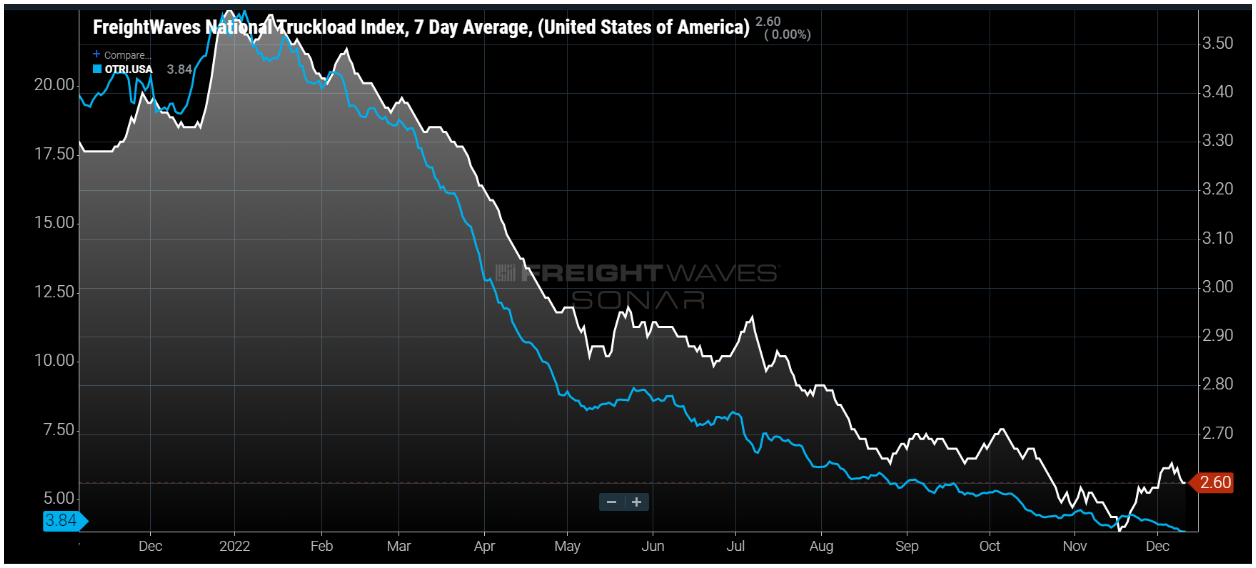
November was a lackluster month for the freight market from a historical perspective. Trucking spot rates did increase slightly after Thanksgiving, but this was largely due to direct to spot market freight as tender rejections failed to move significantly. Demand shrunk for all modes as the global economy continues to show signs of contraction thanks in large part to eroding consumer conditions. While total domestic truckload demand remained above pre pandemic levels, capacity appears to have grown enough to more than handle approximately 20% more demand than it could before 2020. In other words, the freight market has switched from under supplied to over supplied quickly.

Trucking



Demand destruction has been the theme of the fall. Shippers submitted nearly 11% fewer truckload tenders to carriers in November compared to October, the largest sequential drop since April of this past year when rejected tender volumes dropped dramatically. Tender volumes typically drop from October into November due to the holiday effect, but it is unusual to see this level of decline without rejected tenders being a large portion. For a historical point of reference, tender volumes are on par with September 2019 levels.

Anecdotally, FreightWaves has not covered or seen a significant level of exits. While we have no direct data on this, the media arm has only covered a fraction of the volume that we saw in late 2019.



While the supply side data is hard to find in aggregation, the end result of supply and demand is easily seen in tender rejections and spot rates. As mentioned above, spot rates did increase after Thanksgiving, but tender rejection rates barely moved. The implication is that contract freight was easily handled by carriers, but there was a mild push of direct to spot market freight.

Rejection rates fell below 4% for the first time since May of 2020 in mid-November before rising close to 4.5% in the days leading up to Thanksgiving. Rejection rates then gradually fell back below 4% in early December. Rejection rates below 6% are indicative of well supplied markets where capacity is prevalent due to low carrier optionality.

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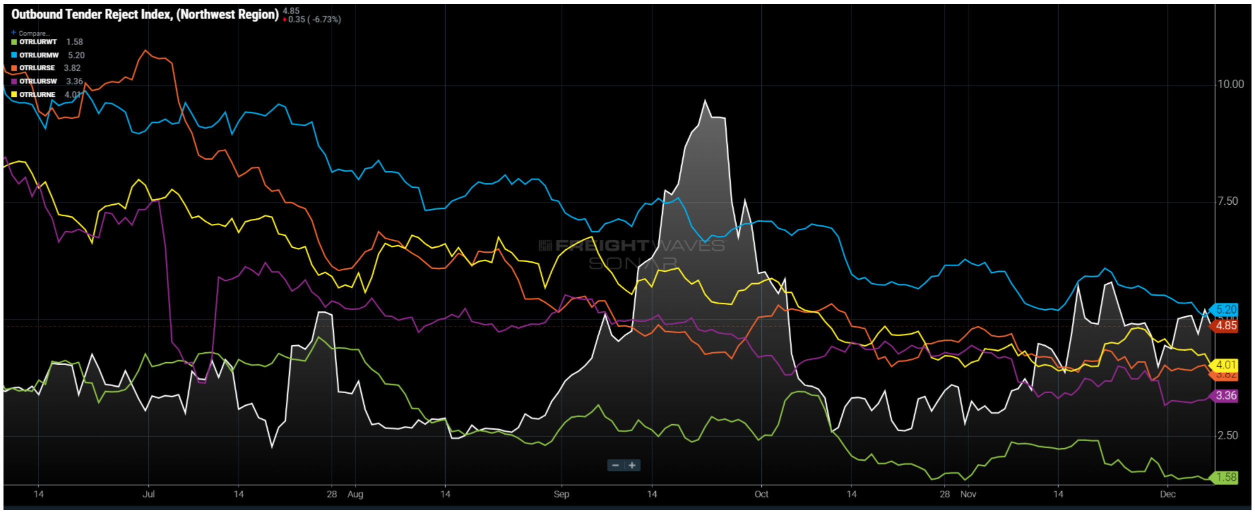
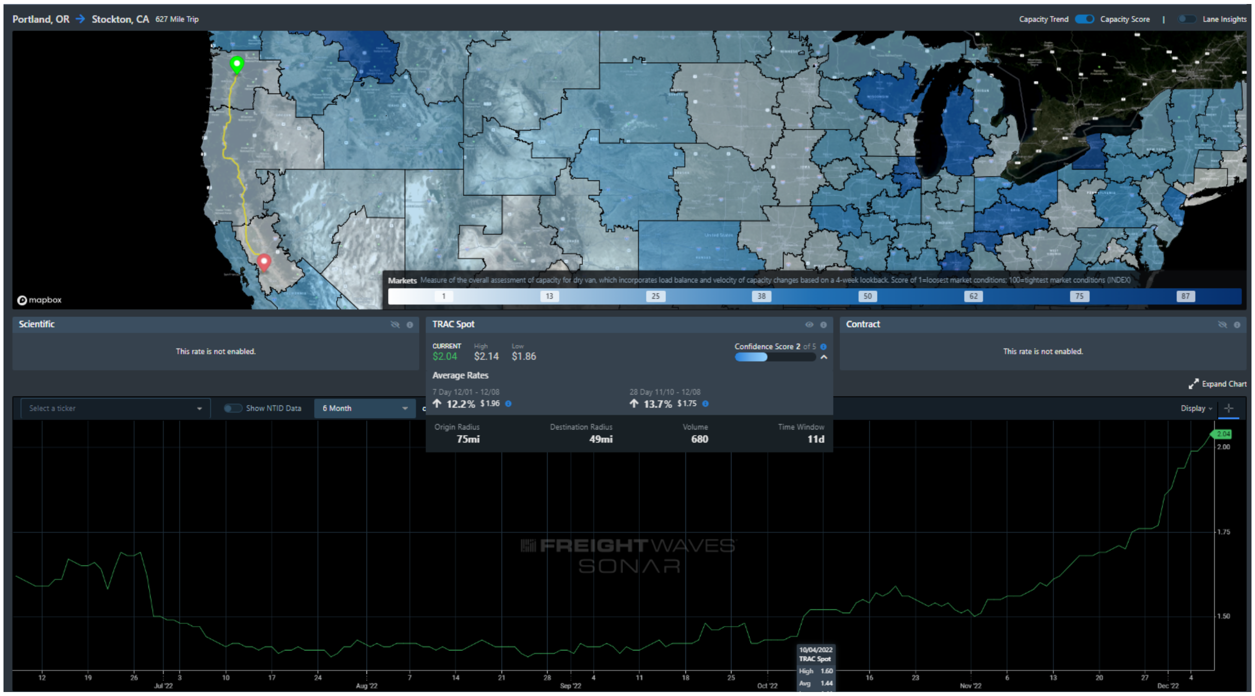
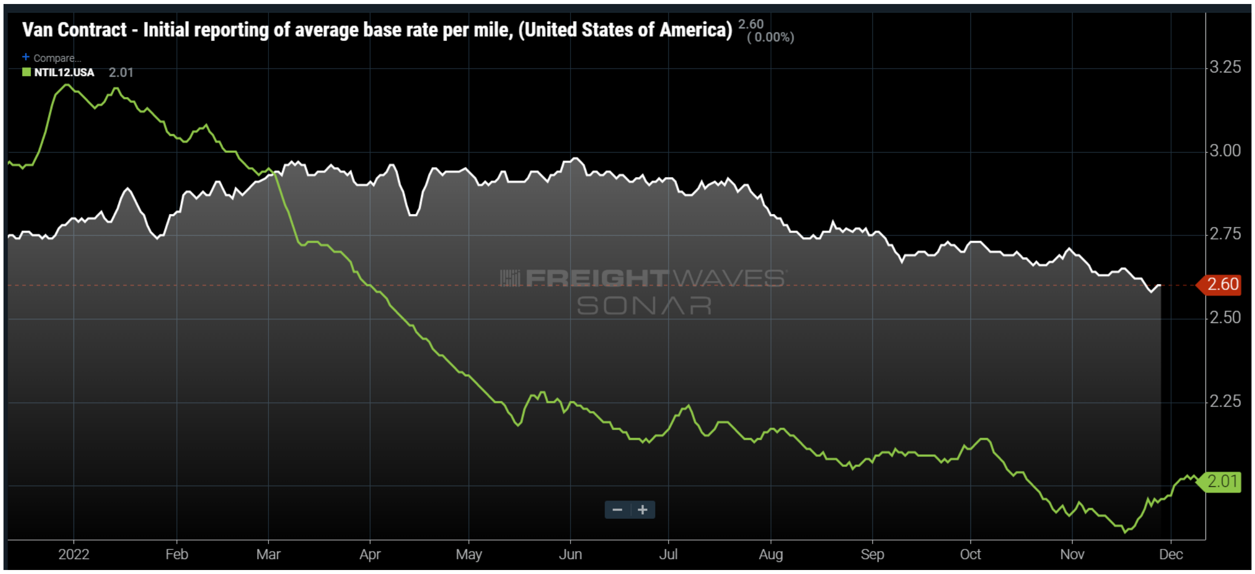
Rejection rates split out by mode continued to show little change in trend for the refrigerated and van sectors. Flatbed rejection rates trended higher through most of the month, however, hitting 20% for the first time since July. Flatbed season tends to wind down heading into December, but the lagging manufacturing sector, which includes automotive, may still have some life left in it. Backlogs of orders were still relatively high heading into the fourth quarter.



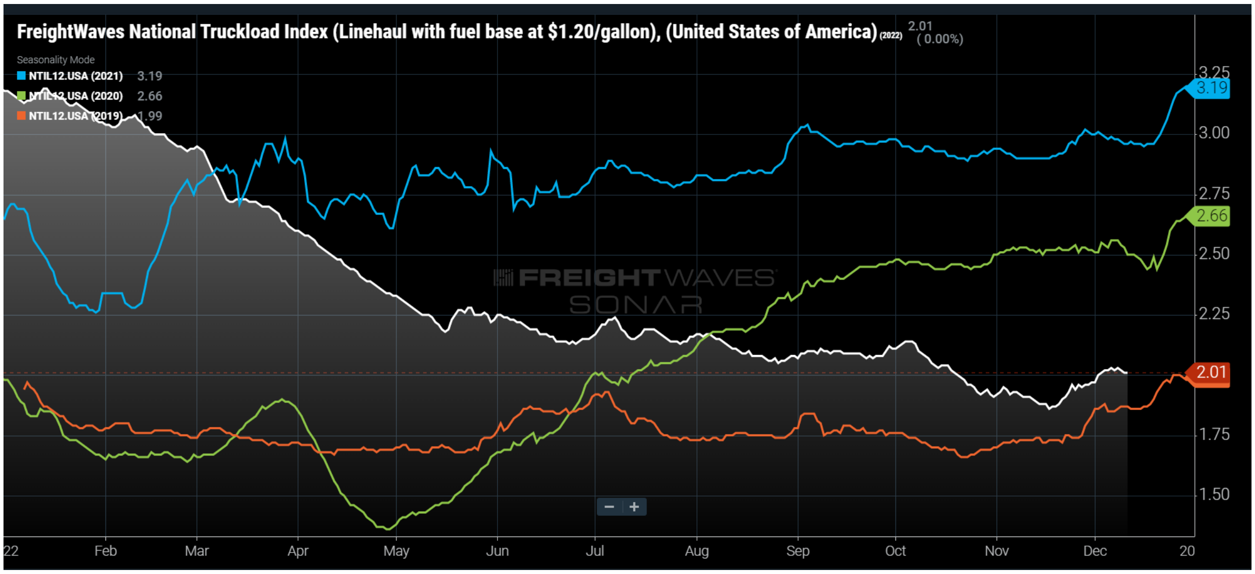
The Pacific Northwest was the only region that showed sequential tightening from October into November. Regional rejection rates remained below 6% but went from the second-lowest regional rejection rate to the second highest by month end.



Spot rates also spiked out of the Seattle and Portland markets. Average spot rates from Portland to Stockton, California, increased from $1.50/mi to $2.04/mi from Nov. 1 to Dec. 5. Christmas tree season is potentially a driving force behind the spike. Last year at this time, spot rates were averaging around $2.80/mi, but on much lower fuel.



Contract rates are still trending lower but are still well above spot on average, indicating they will more than likely fall through the first quarter of 2023. The spread between dry van contract rates (VCRPM1) and spot rates, excluding fuel above $1.20/gal (NTIL12), was still over $0.60/mi throughout November, recovering only slightly toward the end of the month. The temporary increase in spot rates around the holiday contracted the spread from $0.80/mi to $0.64/mi, but the figure still implies there is enormous downward pressure on contract rates.



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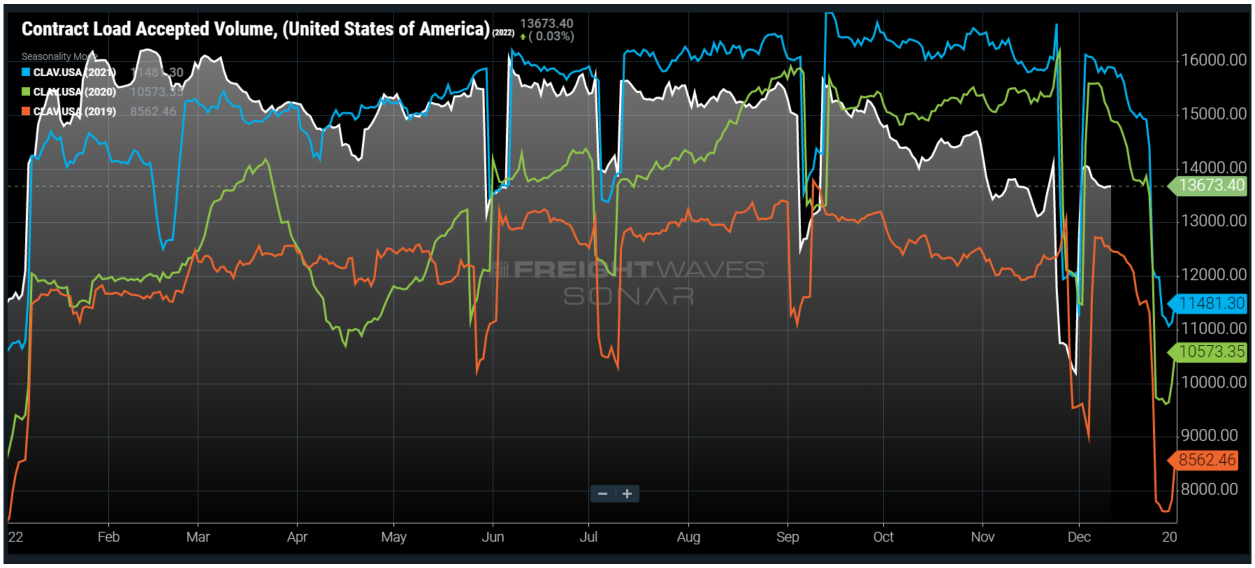
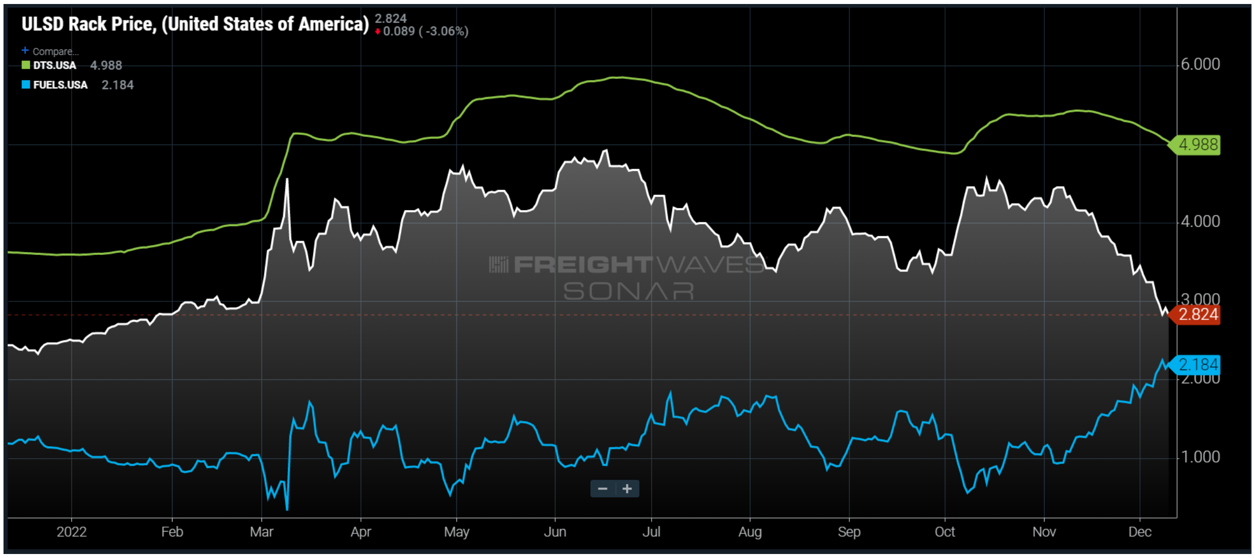
Spot rates, excluding fuel costs above $1.20/gal, increased roughly 9% from Nov. 17 to Dec. 7 , well above expectations in terms of absolute increase. It should be noted that this increase was off a multiyear low of $1.86 and never rose above September levels. In other words, the holiday did nothing to disrupt the long-term downward trend that started in May. The holiday actually appeared to normalize the rate of decline after a period of sharper decrease that characterized mid-October to mid-November.

The NTIL12 is approaching 2019 levels, implying carriers are operating on razor thin margins if not at a loss in most instances. Costs, excluding fuel, have increased significantly since 2019, almost certainly more than the 7.5% difference between the 2019 and 2022 figures.

Small fleets and owner operators who rely on spot market freight have been hit much harder than the larger fleets by the recent decline in freight activity. Contract rates stickiness relative to spot has made demand side declines more navigable. Contract freight has also been stickier as most of the demand erosion hit the spot market before the contract side took a significant hit. The Contract Load Accepted Volume (CLAV) Index is a good illustration of large fleets; demand side experience, measuring accepted load volumes only.



The CLAV averaged only 3%-5% lower y/y through most of the summer months before falling rapidly this fall. By mid-November the difference between 2021 and 2022 was nearly 17%, meaning large fleets were feeling significant gaps in their networks that the elevated contract rates could not fill.



Larger fleets with enough buying power to purchase fuel off the rack or at wholesale prices did have a potential headwind in November and early December as the spread between retail and rack prices expanded to its highest level in history of $2.25/gal. Normally, the spread between the two figures hovers around $1/gal, but oil supply uncertainty has created enormous volatility around the price of diesel fuel.

Contract freight passes fuel costs along more efficiently than spot rates in the form of variable surcharges that are based on the average DOE price of diesel each week. The reason the spread between the retail and rack price is so big is due to the sluggishness of retail to fall in response to the wholesale market.

This means surcharge tables are passing along a cost based on a potentially higher price than the carriers are paying. This mechanism does not always work in the carriers' favor, but it has been mostly favorable for large fleets since this spring.

Air

Air cargo volumes dropped for the ninth consecutive month in November, falling 8% from the prior year and 2% month over month, according to a recent update made by market intelligence firm Xeneta.

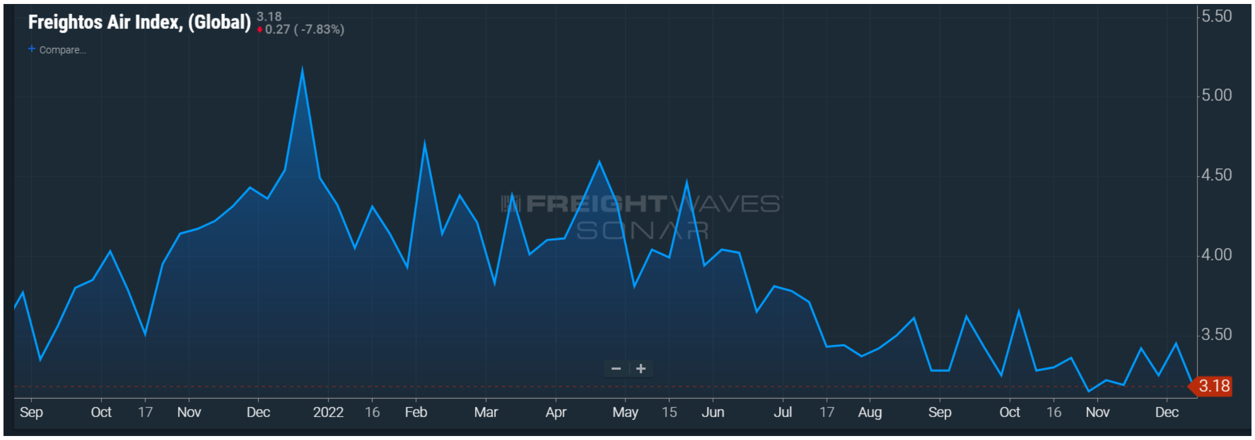
Global shipping volumes are down 18% from a year ago, while capacity has increased as passenger airlines restored more flights since the pandemic.

On a more current basis, air cargo rates have dropped again in mid-December after ticking up the previous week, according to the Freightos Global Air Index and other sources.

Overall, prices are down about 30% from a year ago. Other organizations with different methodologies show rates have fallen even more in the past year.

Europe bucked the global trend, with rates out of Frankfurt up about 4% week-over-week, and London Heathrow outbound rates up about 8%. Both origins have also experienced smaller year-over-year declines than the global average.

China rates ex-Shanghai slid about 5.5% and are down 60% from 12 months ago.

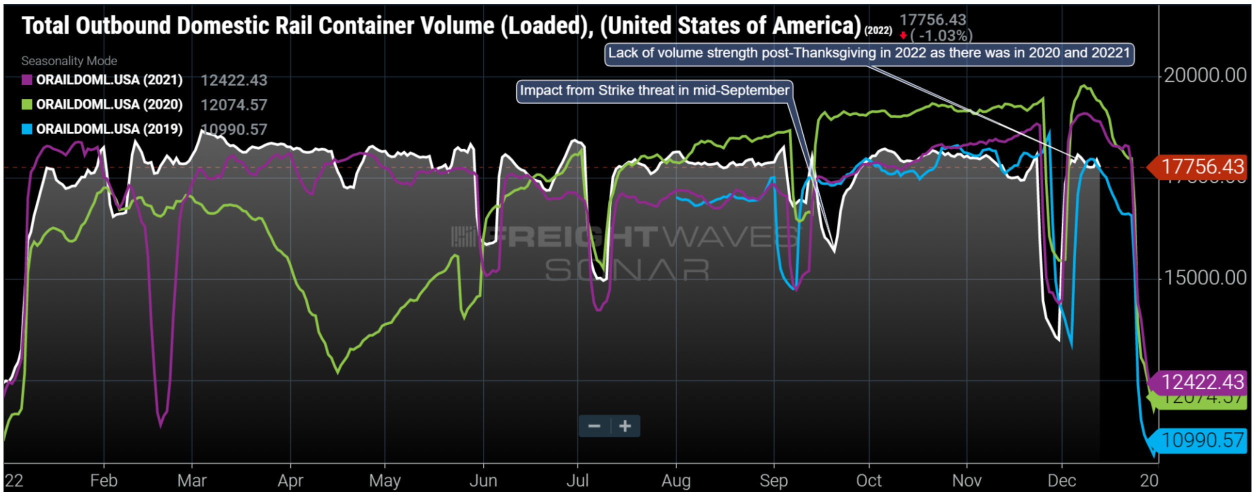


Freight forwarders are protecting themselves from the uncertainty by signing fewer long-term commitments for space allocations sold by airlines. Pricing has become much more dynamic. More transactions between airlines and forwarders are moving against a rate that is valid for less than a month. Close to half of transactions — 45% — have a price validity of less than one month because of the volatility in the marketplace. As airlines shorten the time window for transactions, forwarders are also signing more contracts with shippers with prices that are valid for three months or less.

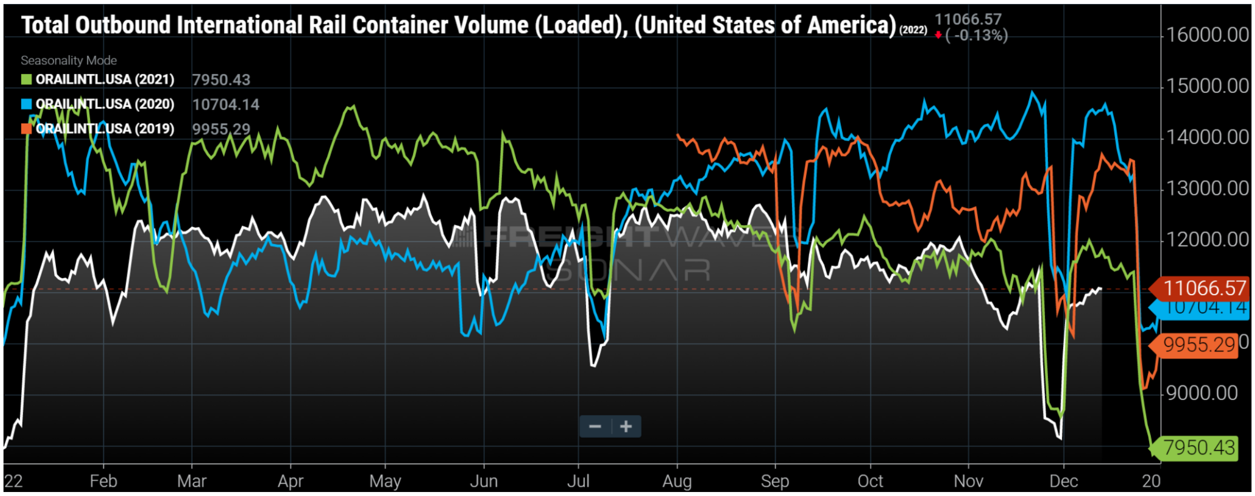
A 21% reduction in jet fuel prices in the past month has given airlines some respite from shrinking margins.

Intermodal/Rail

During the past four weeks, rail traffic reported by the Association of American Railroads shows that the volume of carloads originated by the U.S. railroads was down 1.9% y/y and the volume of intermodal units was down 5.9% y/y. Carloads holding up better than intermodal units suggests that the industrial economy is in a better place than the consumer economy. Carload traffic has defied gravity due in part to 5.4% y/y growth the past four weeks in motor vehicle traffic, 3.1% y/y growth in food products volume and flat coal volume y/y.



Within the containerized intermodal segment (i.e., COFC only), both domestic intermodal volume (chart above) and international intermodal volume (chart below) are showing volume declines when compared to 2020 and 2021. Both segments are being impacted by the decline in import volume, particularly import volume at the west coast ports, the region where imports are most closely related to intermodal volume. Certain Class I railroads have suggested that international intermodal volume (primarily 40' containers) should grow near-term because the container ship lines are now more willing to send international containers inland in light of the newfound availability of international containers. However, so far, the negative impact from falling import volume appears to be having a greater impact on international intermodal volume than any positive impact from less transloading from international containers into domestic containers. Meanwhile, domestic intermodal volume in the truck-competitive lanes is being negatively impacted by looseness in the domestic truckload market.



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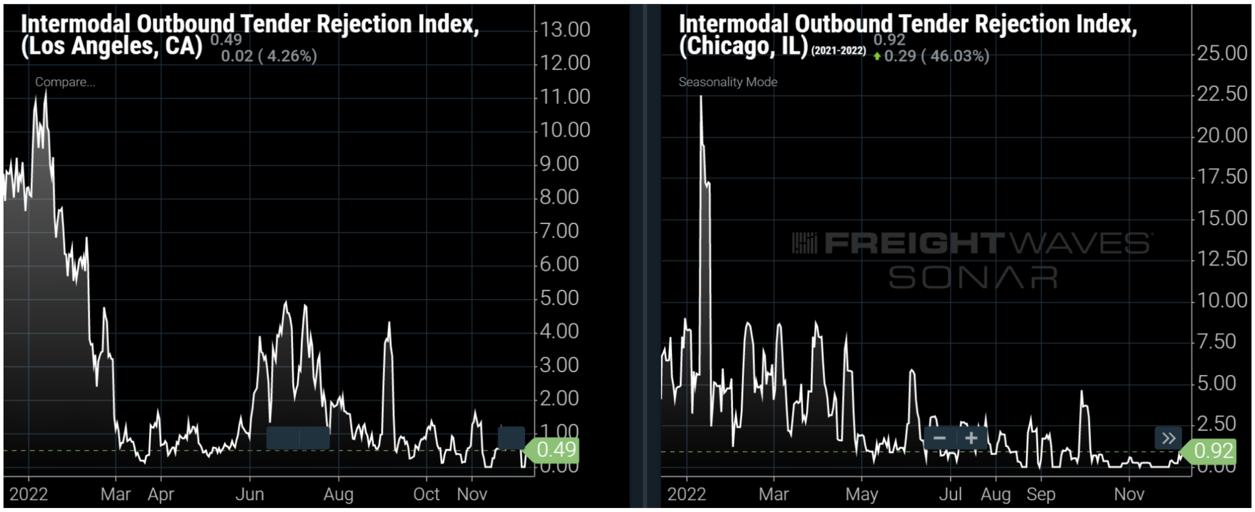
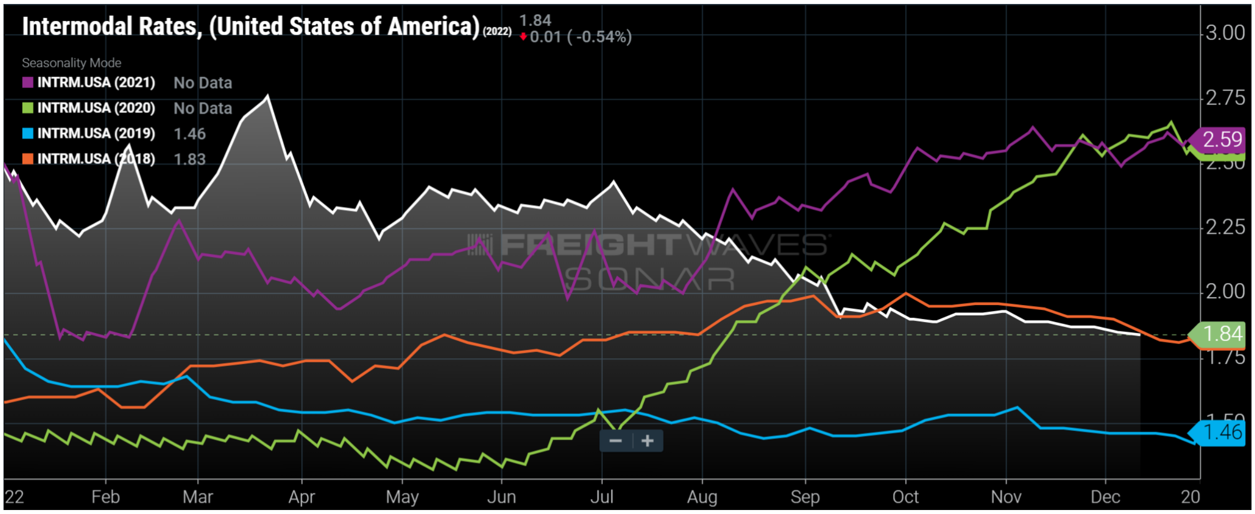
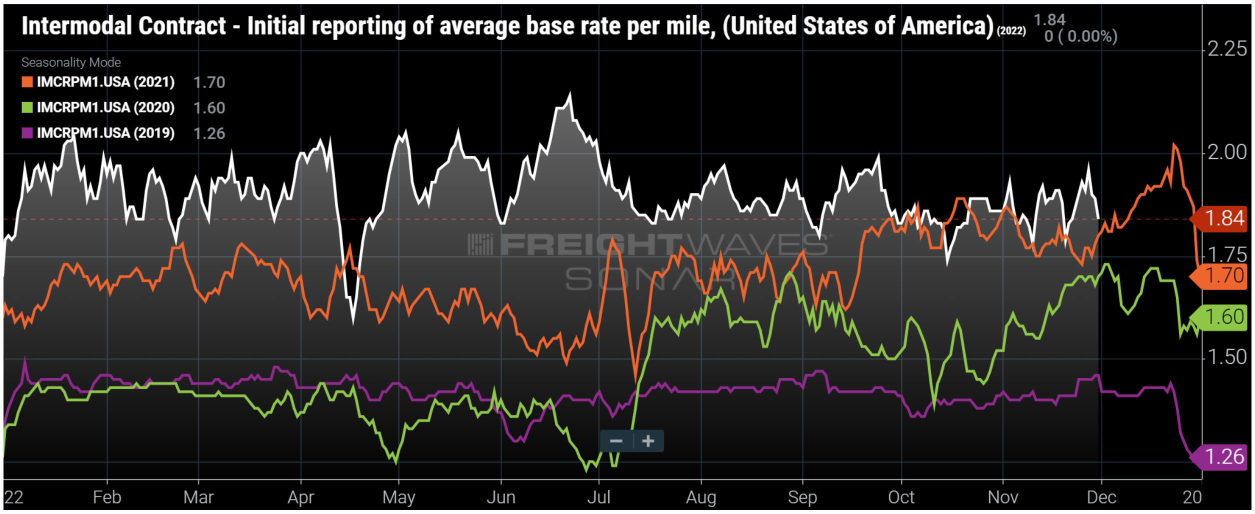
While few shippers would say that rail service is "truck-like," intermodal has not suffered the same degree of congestion this year as it did last year. Intermodal volume is often on "auto-accept," so low intermodal tender rejection rates do not necessarily mean service is strong. Still, an intermodal tender rejection rate below 1% shows fewer red flags than last year at this time (left chart below).



The domestic door-to-door intermodal spot rates contained in SONAR showed an early indicator this summer that this fall would lack a peak season. While only a small portion of intermodal volume moves on the spot market, there is still meaningful information in the weekly changes in spot rates. The downward trend in intermodal spot rates this summer (white line in chart below) and the flatness in intermodal spot rates since September indicated that the Class I rails and their domestic intermodal partners were unconcerned with securing capacity for contractual shippers, likely due to an expectation of a lack of a fall volume surge.



The lack of a fall peak season has implications for rates in 2023. Most intermodal contract rates are re-priced during the first half of the year and contract negotiations tend to follow the marketplace trends experienced the prior fall. Following a significant peak season, shippers are typically anxious to secure capacity for the next peak season and agree to higher rates in order to secure capacity commitments — that was the case in early 2021 and early 2022 when domestic intermodal contract rates rose double-digit percentages (chart below). Given the lack of a fall peak season this year, it stands to reason that contract rates will decline next year (excluding fuel surcharges) from elevated 2022 levels. Another way to think about intermodal contract rates next year is that they will follow the direction of dry van truckload rates — dry van truckload rates are likely to decline since dry van spot rates are well below contract rates.



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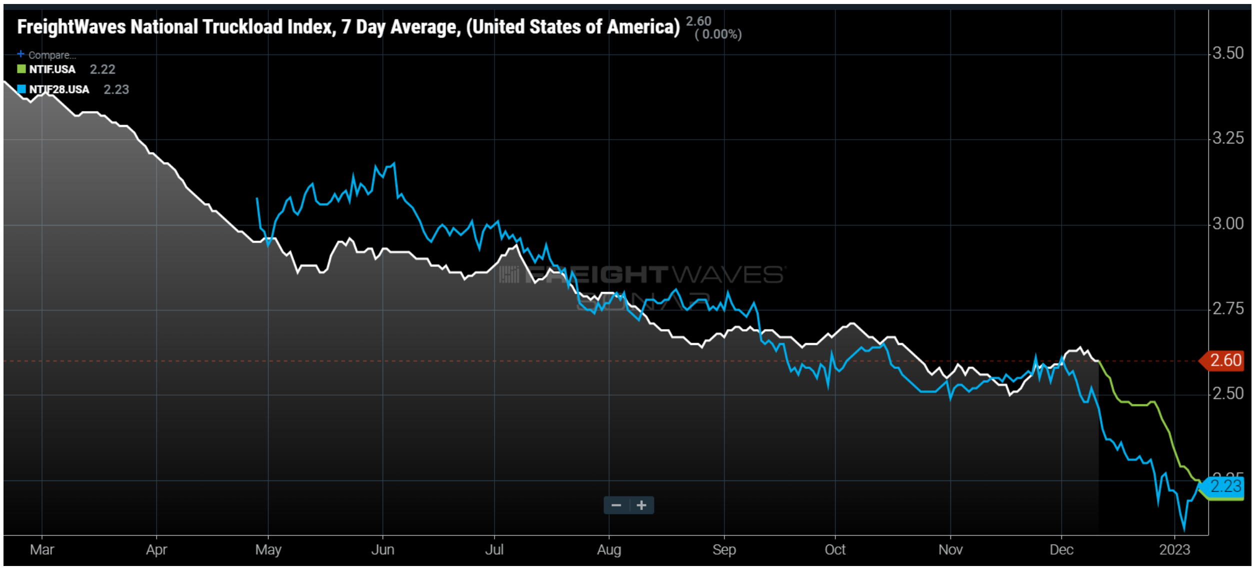
Outlook



While the spot rate forecast missed low for its Thanksgiving and early December prediction. The blue line is what the algo predicted 28 days prior. The white line is the actual and the green line is the current forecasted track. One of the reasons for the forecast's recent discrepancy is the slowness of retail fuel prices to respond to downward pressure from the wholesale market. The forecast has a fuel cost component that is currently not behaving as it has historically that we described in the content above. Adding a few percentage points to the forecast over the next month makes sense, expecting a more moderate trend in the spot market.

Heading into the new year, however, we do expect less support from seasonal freight, removing the influence of fuel. As mentioned earlier, rejection rates were non responsive to holiday pressure and continue to move lower. The next month is the slowest period of the year and we fully expect volume and rates to decline at an accelerated pace.