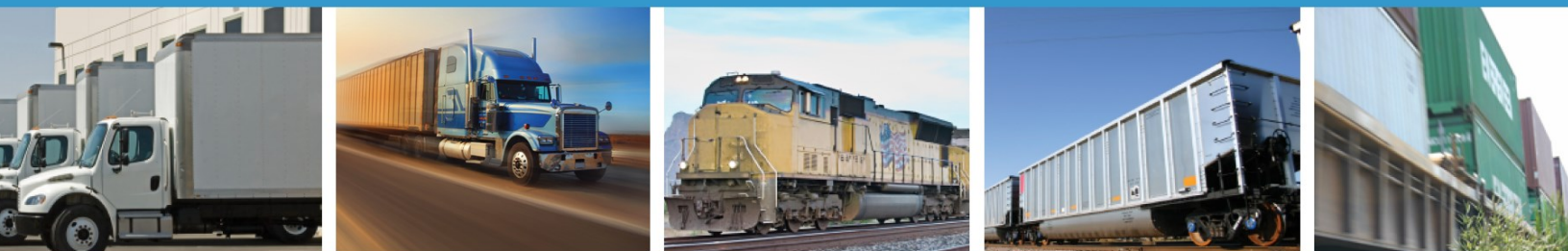


## Equipment Focus

Truck & Trailer Outlook  
Rail Equipment Outlook

## Freight Focus

Shippers Update  
**Trucking Update**  
Rail Update  
Intermodal



# Trucking Update

*January 2022*



# Trucking January 2022

**COMMENTARY (pg 16):**

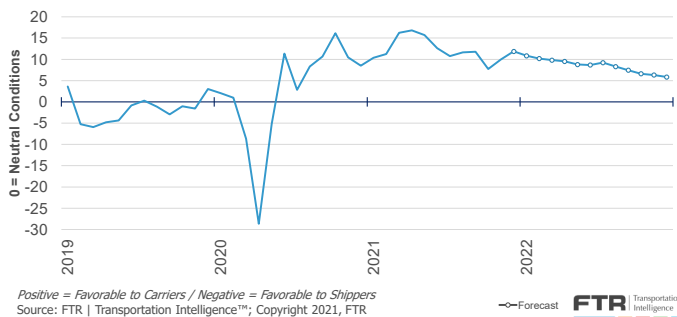
**Forecast risks around heading into 2022**

*Watch consumers, supply chains, capacity, and the pandemic, of course.*

## Market conditions for carriers improve as diesel prices stabilize.

### FTR Trucking Conditions Index

*TCI is a broad measure of carrier conditions – volumes, rates, costs, etc.*

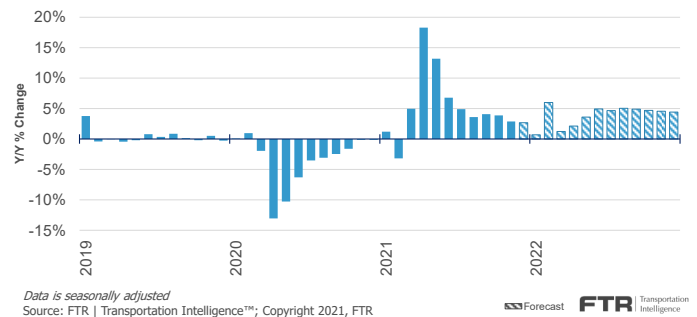


Steadier diesel prices were mostly responsible for improved trucking conditions in November, although slightly firmer freight volume and rates contributed.

The Trucking Conditions Index increased to 10.0 from 7.75 in October. The outlook is positive through 2022.

See page 3 for more on trucking conditions...

### Truck Loadings Outlook

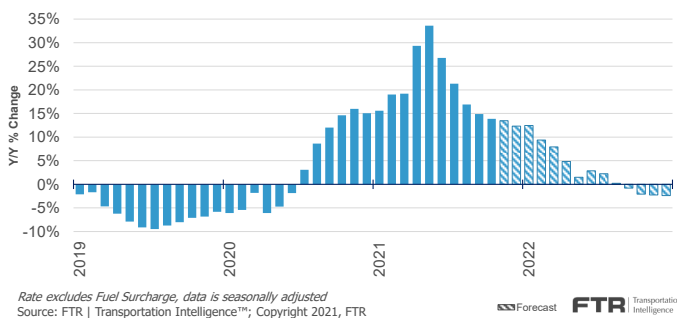


The truck loadings forecast for 2022 is slightly stronger at 3.9% higher y/y. Stronger outlooks for bulk/dump, tank, and flatbed are mostly responsible.

Truck loadings for 2021 are projected at 5.0% higher y/y, which is unchanged from the prior forecast.

See page 2 for more on the loadings outlook...

### Truck Rates Outlook



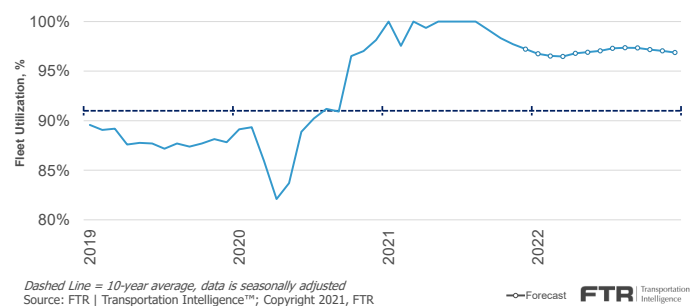
The truckload rate forecast for 2022 is slightly stronger at 2.7% higher y/y, excluding fuel. Contract rates look to rise nearly 6% as spot rates are forecast to decline only 2.5%.

The estimate for 2021 remains around +19% with spot rates up about 29% and contract rates up about 14% y/y.

See page 3 for more on freight rates...

### Active Truck Utilization Outlook

*Share of seated trucks actively engaged in freight hauling*



Active truck utilization finally eases a bit, but the outlook is essentially unchanged from the prior forecast with only slight additional softening expected in the near term.

The share of seated trucks engaged in hauling freight should remain above 96% into 2023.

See page 4 for more on capacity and utilization...



### Freight Indicators

- Economic indicators see slow growth in November.
- Spot volume still holding steady at high levels.

Economic indicators in November largely saw modest gains. Payroll employment rose by 210,000, which would have been solid before the pandemic but was the weakest since a loss of more than 300,000 jobs in December 2020. Industrial production and manufacturing output rose modestly as volatility due to Hurricane Ida and automotive output settled. Retail sales ticked up just 0.3% after a much stronger gain in October, and inflation was fully responsible for the increase. One exception to weak growth was residential construction. Housing starts jumped 11% to their second highest level in 15 years.

Spot market volume has barely budged in the second half of 2021 aside from declines due to holidays. Load postings are still running significantly ahead of comparable 2020 levels, but those comparisons will start going negative in February if volume remains flat. In recent weeks, slightly stronger dry van volume has offset slightly weaker refrigerated load availability.

### Freight Outlook

- The 2022 truck loadings forecast is a bit stronger than the prior outlook, due mostly to slightly higher loadings expected for construction and bulk aggregates.
- Truck loadings are projected to end 2021 5.0% higher y/y, which is unchanged from the prior forecast.
- The 2023 outlook is slightly weaker at a 3.2% gain.

FTR's **total truck loadings** forecast for 2022 is a 3.9% increase, up from 3.6% previously.

**Dry van** loadings are forecast at a 2.9% increase, unchanged from the prior outlook. The estimated 2021 increase is 5.8%.

**Refrigerated** loadings are forecast to increase 3.7%, up from 3.5% previously. The 2021 estimate also is a 3.7% increase.

**Flatbed** loadings are forecast at a 4.9% increase, up from 4.7% previously. Loadings are estimated to have increased 4.8% in 2021.

**Specialized** loadings are forecast to rise 4.7%, up from 4.6% in the prior outlook. The 2021 estimate is a 6.1% increase, which leads all segments.

**Tank** loadings are forecast at a 4.1% increase, up from 3.7% previously. Loadings are estimated at 2.7% growth in 2021, which is the weakest of all segments.

**Bulk/dump** loadings are forecast to increase 4.2%, up from 3.6% in the prior outlook. The 2021 loadings estimate is a 4.9% increase.

See pages 5-9 for more detailed analysis by segment...

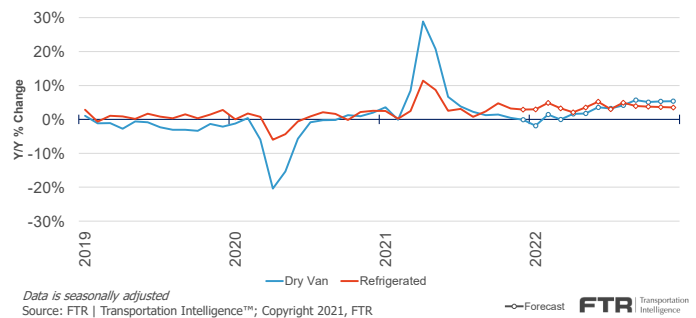
### Truck Loadings Summary

Annual Growth Rate

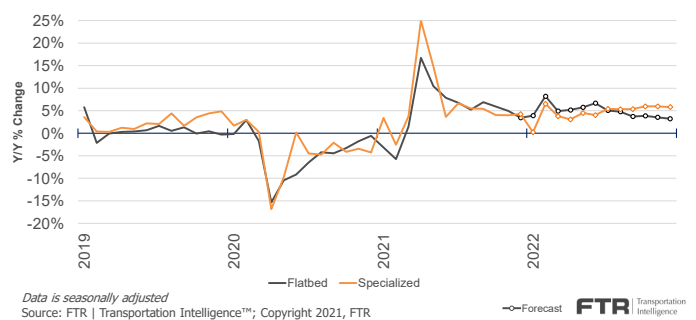
Segment	Forecast				
	2019	2020	2021	2022	2023
Dry Van	-1.7%	-3.8%	5.8%	2.9%	4.2%
Refrigerated	1.1%	0.0%	3.7%	3.7%	3.1%
Flatbed	0.7%	-4.6%	4.8%	4.9%	2.0%
Specialized	2.5%	-3.7%	6.1%	4.7%	3.8%
Tank	0.1%	-4.1%	2.7%	4.1%	1.7%
Bulk/Dump	1.9%	-2.9%	4.9%	4.2%	2.9%
<b>Total</b>	<b>0.4%</b>	<b>-3.4%</b>	<b>5.0%</b>	<b>3.9%</b>	<b>3.2%</b>

Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

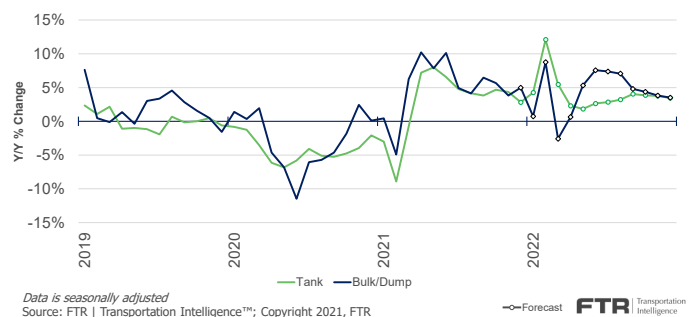
### Freight Outlook: Dry & Refrigerated



### Freight Outlook: Flatbed & Specialized



### Freight Outlook: Tank vs Bulk/Dump





### Carrier Conditions

- Truckload rates are still strengthening modestly.
- Trucking conditions improve as fuel costs settle.
- Diesel prices were on the decline in December.

The **truckload rate outlook** for 2022 is a bit stronger in the revised forecast at 2.7% higher y/y, excluding fuel, after an estimated gain of more than 19% in 2021. Spot rates look to give back less than 3% after surging about 29% y/y in 2021. Contract rates are forecast to rise another 5.9% y/y after a gain of about 14% in 2021.

The refrigerated segment's outlook is modestly stronger with a forecast of 3.4% higher rates in 2022. The weakest growth is expected in dry van at a 2.1% gain y/y.

The outlook for LTL rates is an increase of 0.7% in 2022 following the estimated 2021 increase of about 17% y/y.

Market conditions for trucking companies improved in November mostly due to the end of the surge in diesel prices that had marred otherwise robust conditions in October. The **Trucking Conditions Index** rose to 10.0 from the 7.75 reading in October. The base of 0 represents neutral market conditions, indicating a balance between carriers and shippers.

While more stable fuel costs was the biggest change in November, slightly stronger freight demand and rates also contributed to the TCI improvement. On the other hand, a marginal decline in capacity utilization was a negative factor. The outlook through 2022Q1 is largely in the same territory as the November reading with high single-digit readings expected thereafter through 2022.

After a November that mostly held on to the big gains in October, **diesel prices** fell steadily in December. The national average price declined about 11 cents a gallon over the five weeks ended December 20 with more than 9 cents of that decrease occurring in December. Year over year, diesel prices were up just over \$1, down from nearly \$1.36 at the beginning of November.

The key factor in diesel's pricing weakness has been a sharp drop in crude prices that was spurred by renewed worries over the path of the pandemic.

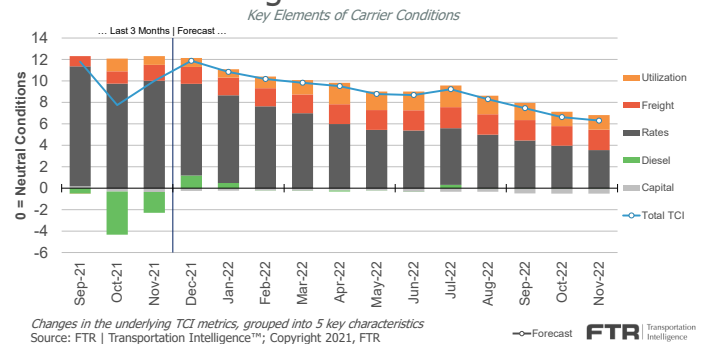
### Total Truckload Rates Overview

Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>13.9%</b>	<b>13.5%</b>	<b>12.3%</b>	<b>19.3%</b>	<b>2.7%</b>
<b>Spot Truck Rates</b>	11.8%	11.4%	11.2%	29.1%	-2.5%
<b>Contract Truck Rates</b>	15.2%	14.5%	13.3%	13.9%	5.9%
<b>Dry Van</b>	11.9%	12.2%	10.3%	19.3%	2.1%
<b>Refrigerated</b>	18.7%	16.7%	17.2%	21.2%	3.4%
<b>Flatbed</b>	15.0%	13.9%	13.0%	20.0%	2.9%
<b>Specialized</b>	13.8%	13.1%	12.3%	18.2%	2.6%
<b>LTL Rates</b>	19.1%	16.2%	14.8%	17.2%	0.7%

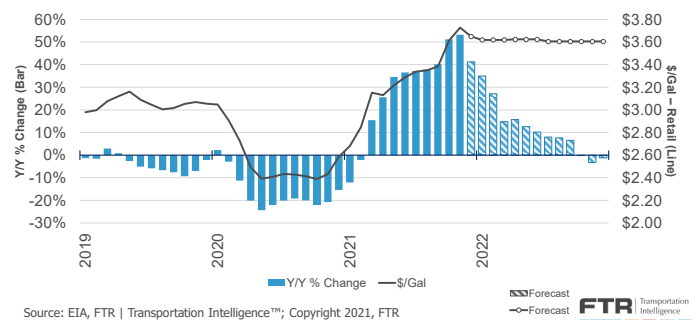
F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Trucking Conditions Index



### Diesel Price Outlook



### Publicly Traded Truckload Carriers

Revenue, income, costs, and rates

Q2'21	Freight Revenue	Fuel Surcharge Revenue	Net Income	Total Costs	Wages	Fuel	Rent/O-Qs	Other	Revenue per Loaded Mile (\$/Mi.)
\$ (Millions)	\$2,452	\$269	\$281	\$2,443	\$822	\$280	\$736	\$605	\$2.535
Q/Q%	3.9%	16.4%	27.2%	5.7%	2.6%	9.6%	12.5%	0.6%	3.6%
Y/Y%	17.5%	64.6%	144.5%	16.3%	6.8%	55.6%	44.8%	-5.8%	18.0%

Source: Company reports, FTR | Transportation Intelligence™; Copyright 2021, FTR // NOTE: Revenue per Mile excludes Fuel Surcharge



### Market Capacity & Utilization

- Utilization eases slightly, but it should remain elevated.
- Spot market imbalance is declining only modestly.

As the trucking industry has become modestly more successful in adding to payrolls in recent months, **active truck utilization** finally has eased to below 98% for the first time since February. The average for Q4 is estimated at 97.8%. However, FTR forecasts a high floor for active utilization with the share of seated trucks engaged in hauling freight remaining above 96% through 2023.

Given this uncharacteristically strong outlook, the forecasts risks are heavily oriented toward the downside. Significant increases in capacity or productivity and/or materially weaker freight volume could spark a normalization more in line of what occurred in late 2018 and in 2019. (For a discussion of freight forecast risks, see page 16.)

The **Market Demand Index (MDI)** – the ratio of loads available to trucks available in the Truckstop.com system – has continued to decline gradually, although that easing was interrupted by the holidays as it usually is. The MDI has still been running slightly ahead of comparable 2020 levels, but that situation likely will change by February.

See page 11 for more on the truck driver situation...

### New Truck Environment

- Truck orders stall as OEMs control their backlogs.
- Class 8 production improves after a weak October.
- Trailer orders jump, but production remains limited.

Net **truck orders** for U.S. & Canada were 8,900 units, down 58% m/m and down 82% y/y in November. U.S. orders were down 57% m/m and down 82% y/y against high comps. Canada orders were down 70% m/m and down 85% y/y. OEMs continue to display caution.

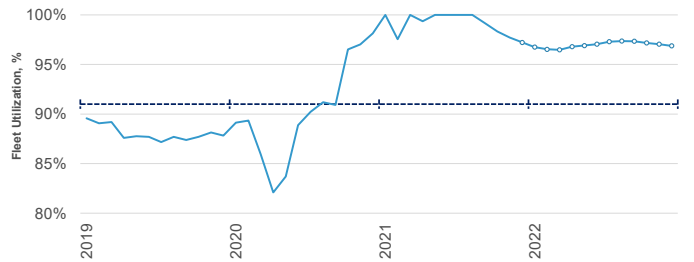
**Class 8 production** increased 12% per day as component availability improved. Builds will decrease in December due to holiday breaks but should recover in Q1. Retail sales remain flat due to limited production.

U.S. **trailer orders** jumped to 32,100 units. Several large dry van orders boosted the total. Most OEMs continue to book orders at a measured pace. Builds were up 2% m/m, per day. Trailer production should start to grow in 2022 as parts and components become more plentiful.

For trucks ordered in November, the estimated **average time from order to delivery** fell to 13.1 months from 14.6 months in October. OEMs are way behind due to the shortages of semiconductors and other components. It is expected to take more than a year for the OEMs to catch up with demand.

### Active Truck Utilization Outlook

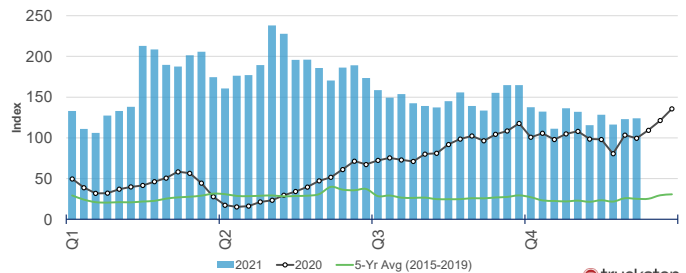
Share of seated trucks actively engaged in freight hauling



Dashed Line = 10-year average, data is seasonally adjusted  
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Spot Market: Total MDI

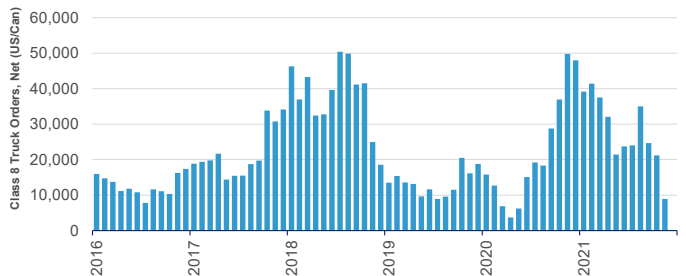
Market Demand Index (MDI)



Ratio of available loads to available trucks. A higher index indicates more demand for available capacity.  
Weekly Data. Source: Truckstop.com, FTR | Transportation Intelligence™; Copyright 2021, FTR



### New Truck Order Activity

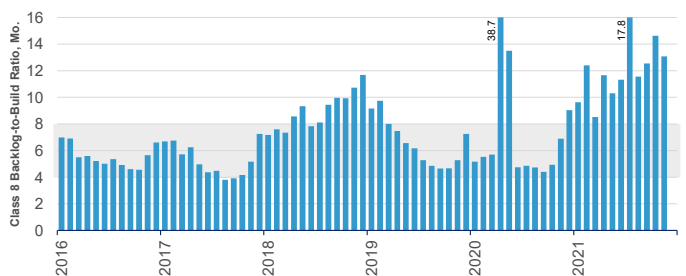


Source: FTR | Transportation Intelligence™, Truck & Trailer Outlook; Copyright 2021, FTR



### New Truck Lead Time

Average Lead Time, Order-to-Build (Months)



Gray box indicates normal range.  
Source: FTR | Transportation Intelligence™, Truck & Trailer Outlook; Copyright 2021, FTR







## Dry Van: Stable outlook for volume and rates

The 2022 forecast for dry van loadings is unchanged from the prior forecast at 2.9% growth y/y. Solid gains in other commodities are expected to offset weak gains in automotive and packaged goods. The 2021 estimate also is unchanged at an increase of 5.8% y/y.

Spot market volume continues to run at near-record levels aside from the two-week spike due to weather in February 2021.

Dry van truckload rates are forecast at 2.1% higher y/y in 2022. The 2021 estimate is firm at up about 19% y/y.

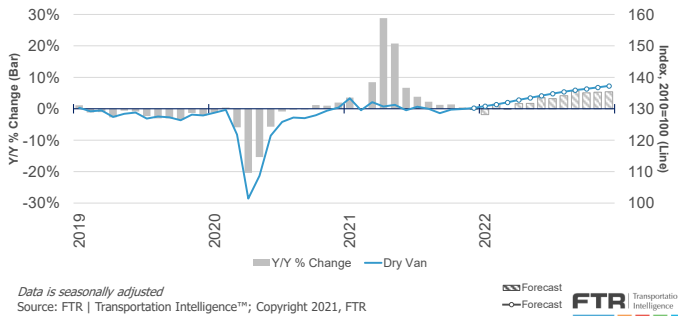
### Dry Van Truck Rates Overview

Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>11.9%</b>	<b>12.2%</b>	<b>10.3%</b>	<b>19.3%</b>	<b>2.1%</b>
<b>Spot Truck Rates</b>	<b>8.4%</b>	<b>8.9%</b>	<b>7.8%</b>	<b>28.8%</b>	<b>-2.7%</b>
<b>Contract Truck Rates</b>	<b>14.2%</b>	<b>14.0%</b>	<b>12.4%</b>	<b>14.0%</b>	<b>5.1%</b>

F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

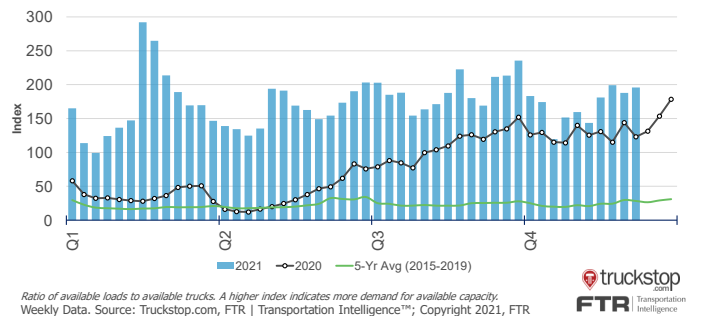
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Freight Outlook: Dry Van

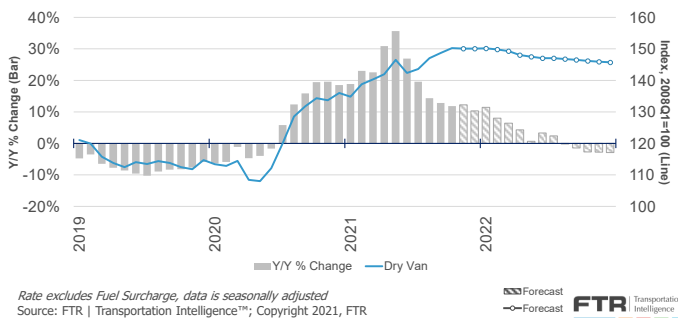


### Spot Market: Dry Van MDI

Market Demand Index (MDI)

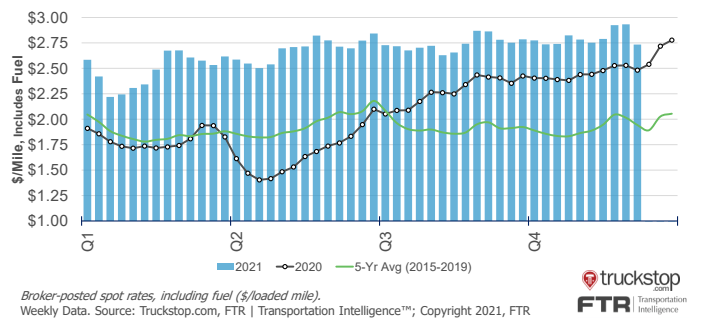


### Rate Outlook: Dry Van

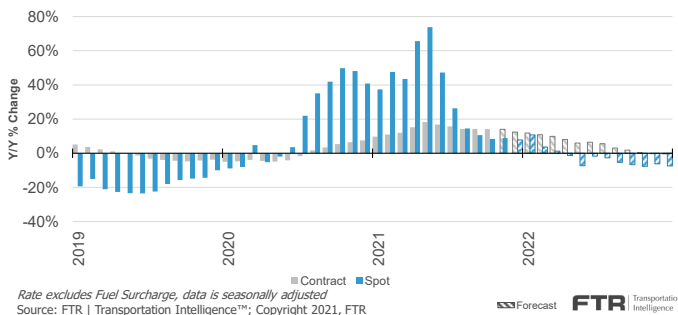


### Spot Market: Dry Van Rates

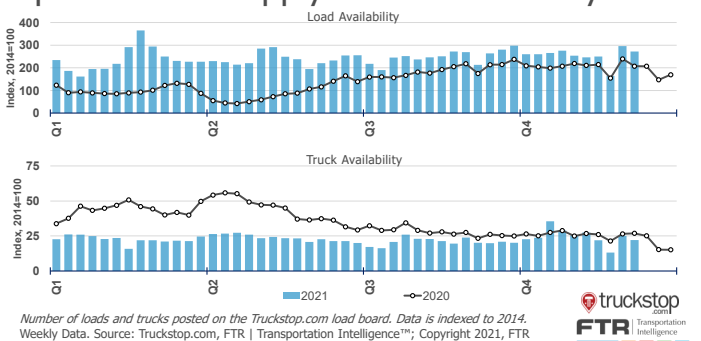
Broker-posted spot rate, including fuel



### Dry Van Rates: Spot vs Contract



### Spot Market: Supply vs Demand – Dry Van



See glossary at end for definitions of truckload segments...



## Refrigerated: The expected leader in 2022 rate growth

Refrigerated loadings are forecast at an increase of 3.7% y/y in 2022, up from 3.5% previously. The latest estimate for 2021 also is a 3.7% increase over the prior year.

Spot volume softened in line with seasonal expectations in December, but it remains well above strong comparable 2020 levels.

Total refrigerated truckload rates are forecast at 3.4% higher y/y in 2022, which would place the segment as the industry's rate growth leader. The same is true for 2021 as rates are estimated at about +21% y/y.

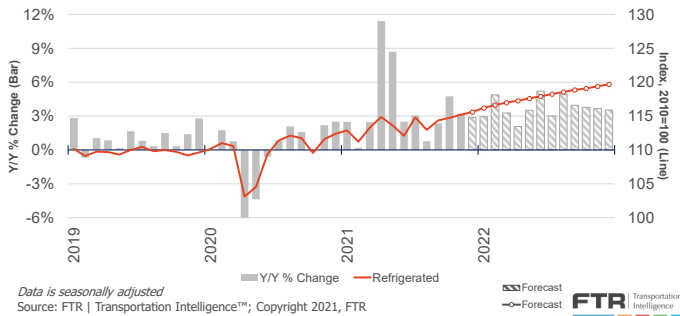
### Refrigerated Truck Rates Overview

Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>18.7%</b>	<b>16.7%</b>	<b>17.2%</b>	<b>21.2%</b>	<b>3.4%</b>
<b>Spot Truck Rates</b>	<b>17.7%</b>	<b>17.0%</b>	<b>20.9%</b>	<b>31.6%</b>	<b>-0.4%</b>
<b>Contract Truck Rates</b>	<b>19.3%</b>	<b>16.5%</b>	<b>15.0%</b>	<b>15.4%</b>	<b>5.9%</b>

F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

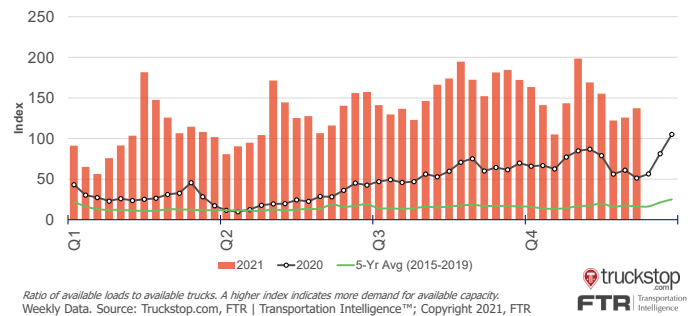
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Freight Outlook: Refrigerated

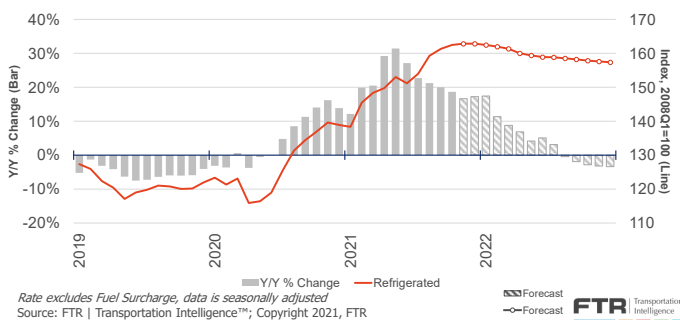


### Spot Market: Refrigerated MDI

Market Demand Index (MDI)

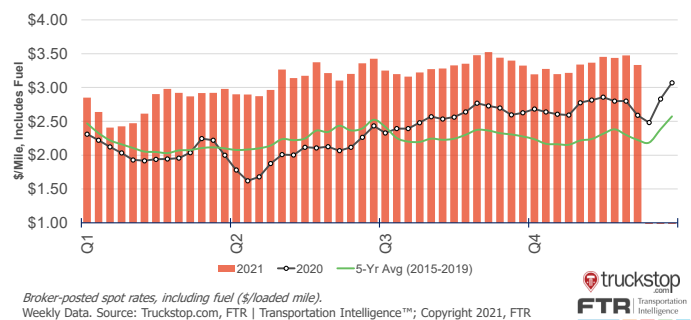


### Rate Outlook: Refrigerated Van

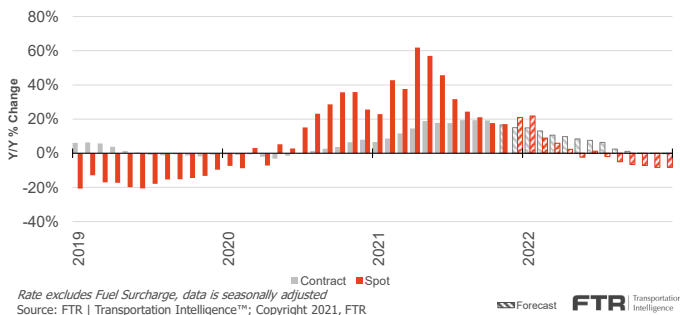


### Spot Market: Refrigerated Rates

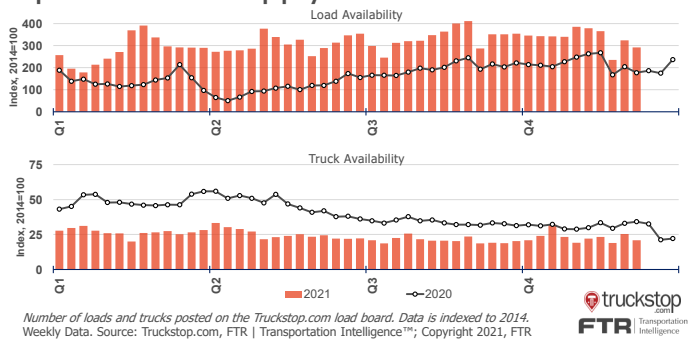
Broker-posted spot rate, including fuel



### Refrigerated Rates: Spot vs Contract



### Spot Market: Supply vs Demand – Ref. Van



See glossary at end for definitions of truckload segments...



## Flatbed: A solid outlook for 2022

Flatbed loadings are forecast at a 4.9% increase in 2022, up from 4.4% previously. The stronger outlook results from a higher forecast for all major commodity groups. The 2021 estimate is a gain of 4.8%.

Spot volume has eased in line with seasonal expectations and is running very close to comparable 2020 levels. Spot volume likely will turn negative year over year in the coming weeks.

The 2022 outlook for flatbed truckload rates is +2.9% y/y. The 2021 estimate is a strong 20% increase y/y.

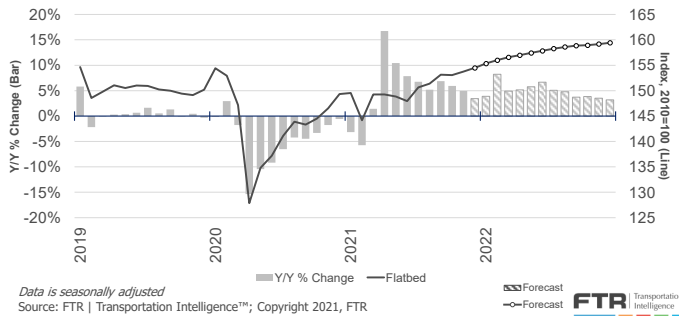
### Flatbed Truck Rates Overview

Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>15.0%</b>	<b>13.9%</b>	<b>13.0%</b>	<b>20.0%</b>	<b>2.9%</b>
<b>Spot Truck Rates</b>	<b>14.5%</b>	<b>12.7%</b>	<b>11.7%</b>	<b>30.2%</b>	<b>-3.3%</b>
<b>Contract Truck Rates</b>	<b>15.2%</b>	<b>14.8%</b>	<b>13.8%</b>	<b>14.3%</b>	<b>6.9%</b>

F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

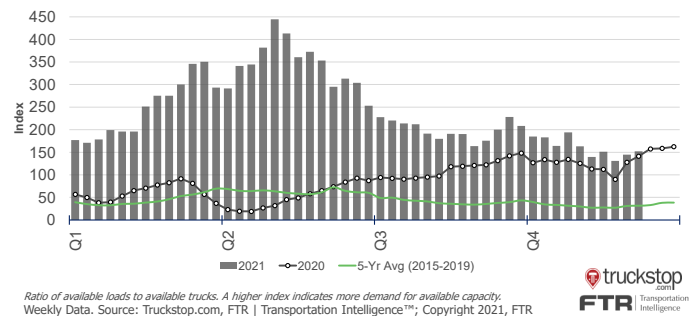
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Freight Outlook: Flatbed

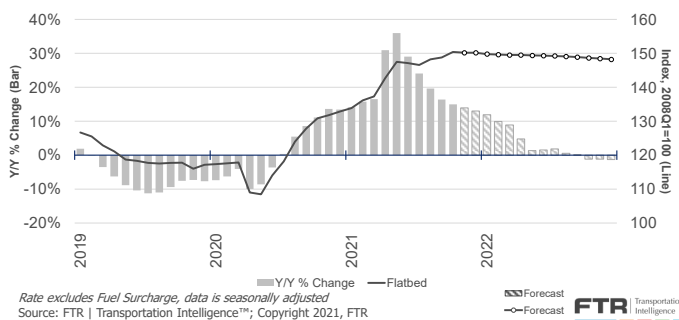


### Spot Market: Flatbed MDI

Market Demand Index (MDI)

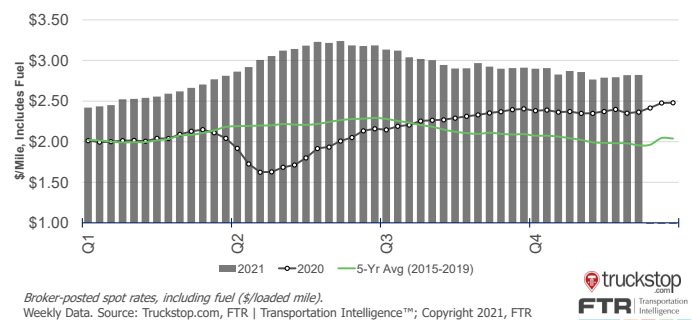


### Rate Outlook: Flatbed

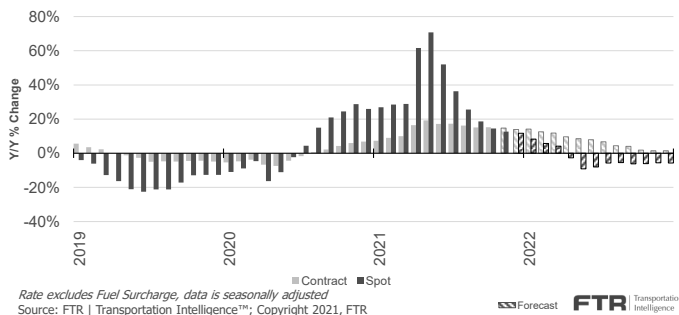


### Spot Market: Flatbed Rates

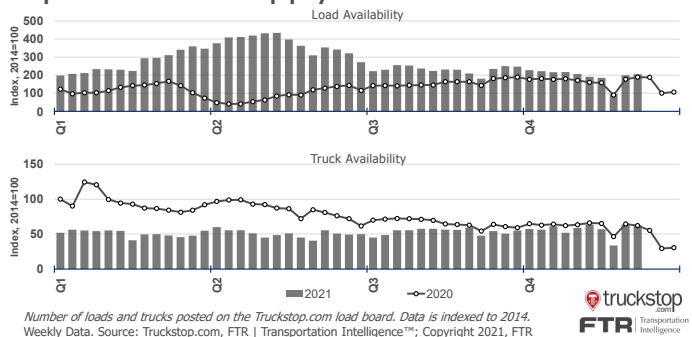
Broker-posted spot rate, including fuel



### Flatbed Rates: Spot vs Contract



### Spot Market: Supply vs Demand – Flatbed



See glossary at end for definitions of truckload segments...





## Specialized: 2021's volume growth leader

Specialized loadings are forecast at 4.7% higher y/y, little changed from the prior outlook. The 2021 estimate is a 6.1% increase, the strongest growth of all segments.

Spot volume remains mostly steady since falling from record levels in April and May. Loadings are ahead of 2020 levels, but negative comparisons look likely by February.

The 2022 outlook for specialized truckload rates is slightly stronger at +2.6% y/y. The 2021 estimate is a gain of about 18% y/y.

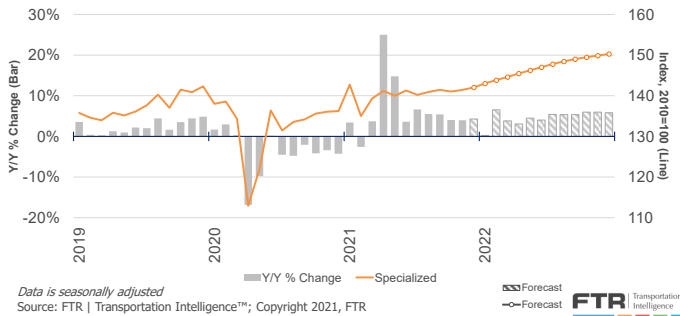
### Specialized Truck Rates Overview

Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>13.8%</b>	<b>13.1%</b>	<b>12.3%</b>	<b>18.2%</b>	<b>2.6%</b>
<b>Spot Truck Rates</b>	12.7%	11.7%	11.8%	27.8%	-2.9%
<b>Contract Truck Rates</b>	14.5%	13.8%	12.9%	13.0%	6.1%

F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

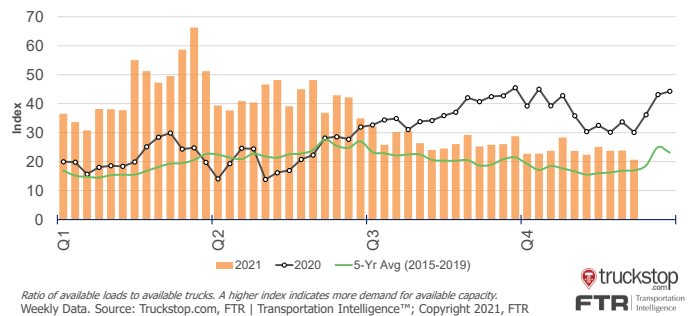
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

### Freight Outlook: Specialized

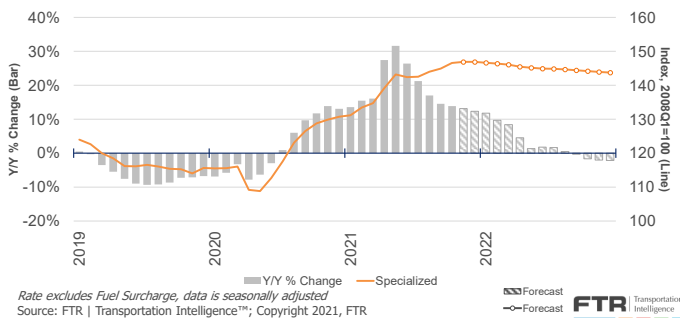


### Spot Market: Specialized MDI

Market Demand Index (MDI)

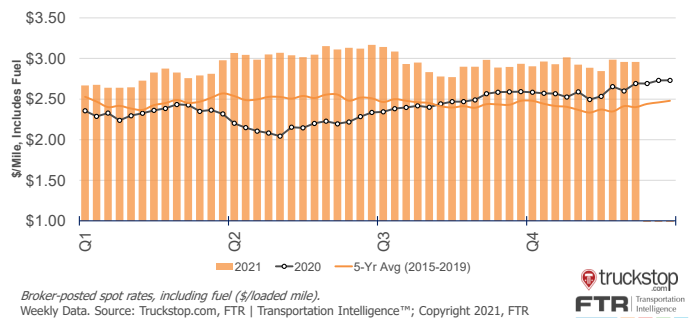


### Rate Outlook: Specialized

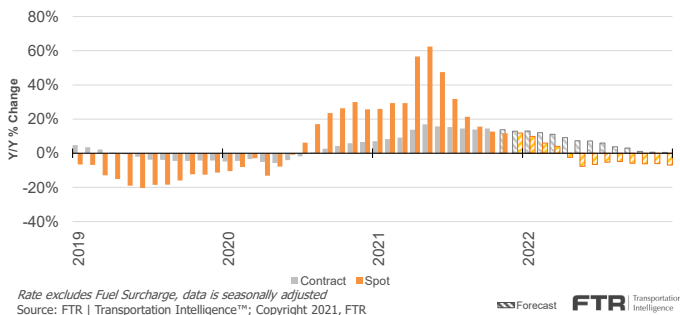


### Spot Market: Specialized Rates

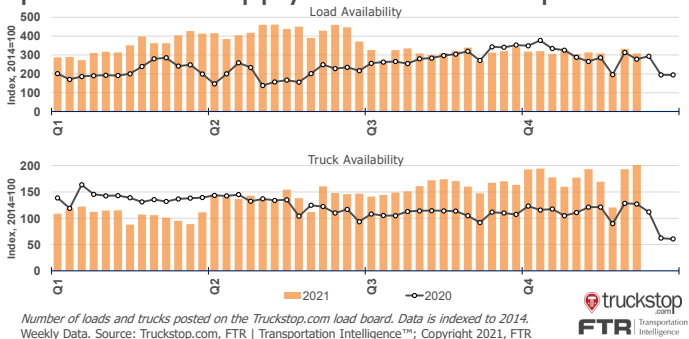
Broker-posted spot rate, including fuel



### Specialized Rates: Spot vs Contract



### Spot Market: Supply vs Demand – Specialized



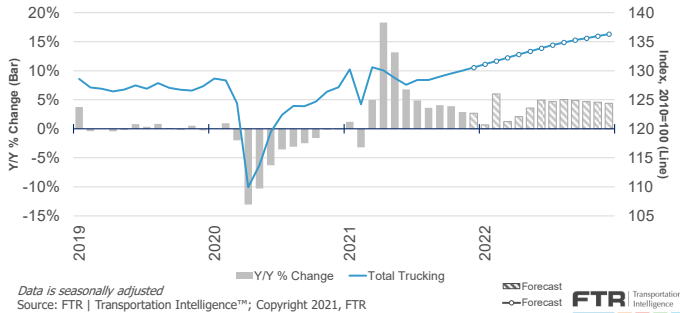
See glossary at end for definitions of truckload segments...



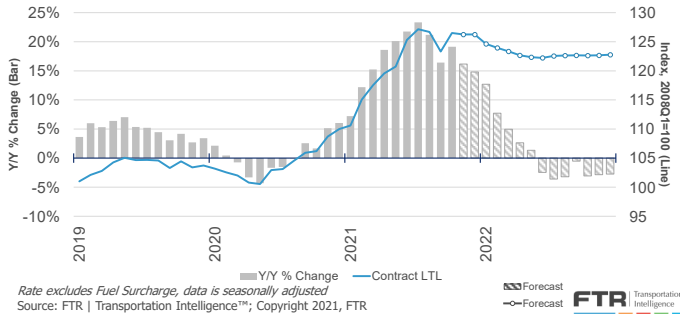
# Trucking January 2022

## Total Trucking Market

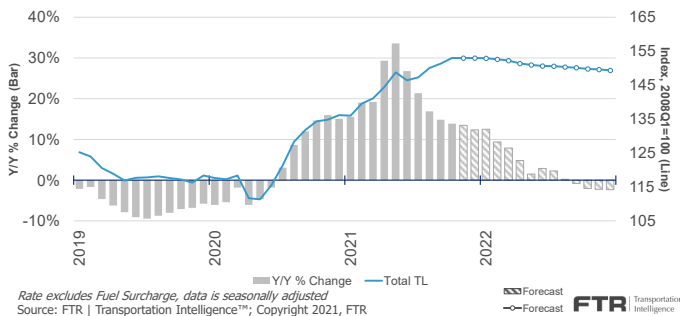
### Freight Outlook: Total Trucking



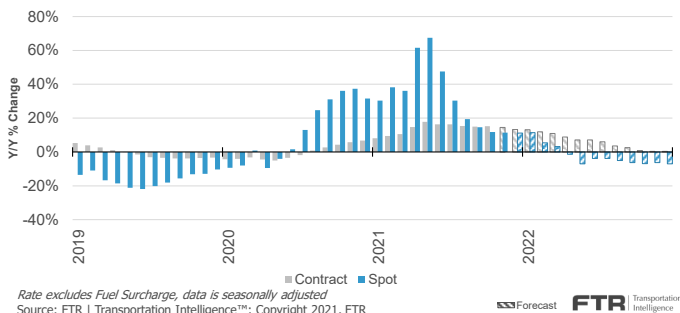
### Rate Outlook: Contract LTL



### Rate Outlook: Total TL



### Truckload Rates: Spot vs Contract



See glossary at end for definitions of truckload segments...

### Total Truckload Rates Overview

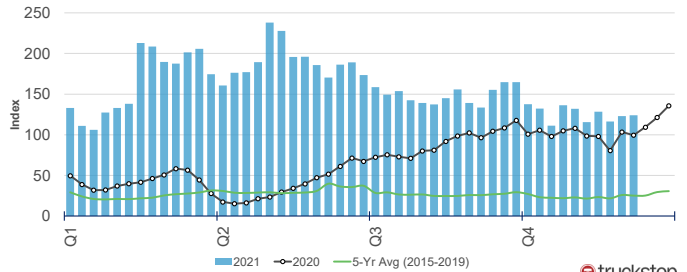
Y/Y % Change	Oct-21	Nov-21	Dec-21	2021	2022
		F	F	F	F
<b>Total Truck (Spot + Contract)</b>	<b>13.9%</b>	<b>13.5%</b>	<b>12.3%</b>	<b>19.3%</b>	<b>2.7%</b>
<b>Spot Truck Rates</b>	<b>11.8%</b>	<b>11.4%</b>	<b>11.2%</b>	<b>29.1%</b>	<b>-2.5%</b>
<b>Contract Truck Rates</b>	<b>15.2%</b>	<b>14.5%</b>	<b>13.3%</b>	<b>13.9%</b>	<b>5.9%</b>
<b>Dry Van</b>	<b>11.9%</b>	<b>12.2%</b>	<b>10.3%</b>	<b>19.3%</b>	<b>2.1%</b>
<b>Refrigerated</b>	<b>18.7%</b>	<b>16.7%</b>	<b>17.2%</b>	<b>21.2%</b>	<b>3.4%</b>
<b>Flatbed</b>	<b>15.0%</b>	<b>13.9%</b>	<b>13.0%</b>	<b>20.0%</b>	<b>2.9%</b>
<b>Specialized</b>	<b>13.8%</b>	<b>13.1%</b>	<b>12.3%</b>	<b>18.2%</b>	<b>2.6%</b>
<b>LTL Rates</b>	<b>19.1%</b>	<b>16.2%</b>	<b>14.8%</b>	<b>17.2%</b>	<b>0.7%</b>

F = Forecast // Rates exclude Fuel Surcharges, data is seasonally adjusted

Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

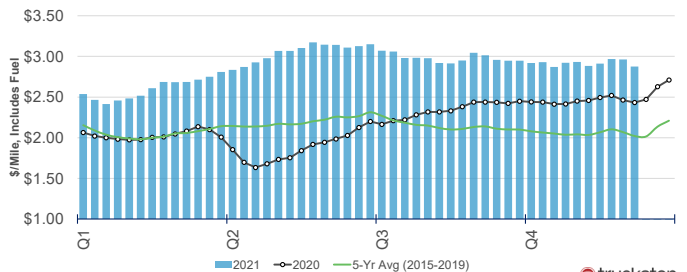
### Spot Market: Total MDI

Market Demand Index (MDI)

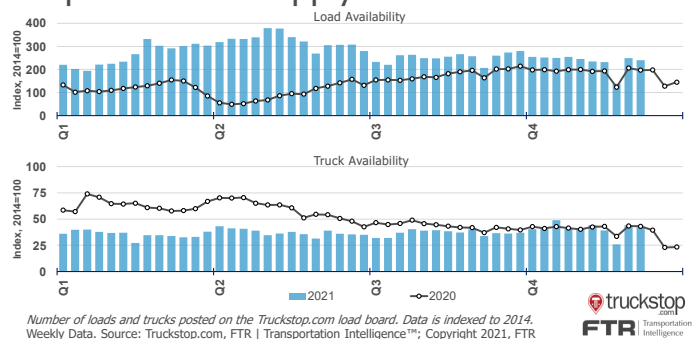


### Spot Market: Total Rates

Broker-posted spot rate, including fuel



### Spot Market: Supply vs Demand – Total





#### U.S. Truck Freight: Commodity Groups & Trailer Types

Seasonally Adjusted (000,000s of Loadings Originated)

F = Forecast	MONTH							QUARTER				
	Sep-21	Oct-21	Nov-21	Dec-21F	Jan-22F	Feb-22F	Mar-22F	Q2'21	Q3'21	Q4'21F	Q1'22F	Q2'22F
<b>Total Truck Loadings</b>	<b>64.85</b>	<b>65.13</b>	<b>65.38</b>	<b>65.65</b>	<b>65.93</b>	<b>66.21</b>	<b>66.49</b>	<b>194.28</b>	<b>193.98</b>	<b>196.16</b>	<b>198.62</b>	<b>201.15</b>
Active Truck Utilization Rate (%) <sup>2</sup>	99.2%	98.3%	97.7%	97.2%	96.8%	96.5%	96.5%	100.0%	99.9%	97.8%	96.6%	96.9%
<b>Commodity Groups</b>												
Food & Kindred Products	9.56	9.59	9.62	9.66	9.72	9.76	9.79	28.88	28.68	28.87	29.27	29.50
Stone, Clay, Glass & Concrete	5.64	5.63	5.65	5.68	5.71	5.73	5.75	16.58	16.76	16.96	17.19	17.37
Nonmetallic Minerals, Except Fuels	9.86	9.95	10.06	10.13	10.09	10.13	10.17	29.24	28.82	30.13	30.39	30.80
Chemicals & Allied Products	2.73	2.75	2.75	2.76	2.81	2.83	2.84	8.31	8.34	8.26	8.49	8.52
Transportation Equipment	4.88	4.94	4.91	4.90	4.93	4.96	5.02	15.88	15.22	14.74	14.91	15.55
All Other	32.17	32.28	32.40	32.52	32.67	32.79	32.91	95.39	96.16	97.19	98.37	99.41
<b>Trailer Types</b>												
Dry Van	20.56	20.73	20.76	20.82	20.91	21.00	21.10	62.57	62.22	62.31	63.01	64.01
Reefer Van	4.50	4.51	4.53	4.55	4.57	4.59	4.60	13.39	13.45	13.59	13.76	13.87
Flatbed	7.76	7.75	7.79	7.83	7.87	7.90	7.93	22.60	23.06	23.37	23.70	23.92
Specialized	9.86	9.83	9.86	9.90	9.97	10.02	10.08	29.45	29.45	29.59	30.08	30.58
Tank	6.80	6.82	6.84	6.87	6.94	6.97	7.00	20.58	20.49	20.52	20.91	21.05
Bulk/Dump	15.38	15.48	15.60	15.69	15.67	15.72	15.78	45.69	45.32	46.77	47.17	47.72
<b>Y/Y % Change <sup>1</sup></b>												
<b>Total Truck Loadings</b>	<b>4.1%</b>	<b>3.9%</b>	<b>2.9%</b>	<b>2.7%</b>	<b>0.7%</b>	<b>6.0%</b>	<b>1.2%</b>	<b>12.6%</b>	<b>4.2%</b>	<b>3.1%</b>	<b>2.6%</b>	<b>3.5%</b>
<b>Commodity Groups</b>												
Food & Kindred Products	2.5%	2.9%	1.6%	2.0%	0.9%	3.8%	2.4%	7.7%	2.7%	2.1%	2.3%	2.1%
Stone, Clay, Glass & Concrete	3.4%	1.6%	0.2%	-3.0%	-1.2%	5.4%	1.6%	7.4%	1.1%	-0.5%	1.9%	4.8%
Nonmetallic Minerals, Except Fuels	5.4%	5.4%	3.3%	6.7%	0.6%	10.5%	-4.1%	6.6%	3.5%	5.1%	2.0%	5.3%
Chemicals & Allied Products	3.1%	2.8%	4.3%	2.6%	8.6%	16.4%	12.6%	5.9%	3.7%	3.2%	12.4%	2.5%
Transportation Equipment	-6.6%	-7.6%	-9.4%	-9.7%	-12.2%	-5.1%	-4.8%	48.5%	-3.2%	-8.9%	-7.5%	-2.1%
All Other	6.2%	6.3%	5.7%	4.9%	2.6%	6.5%	2.7%	13.1%	6.8%	5.6%	3.9%	4.2%
<b>Trailer Types</b>												
Dry Van	1.3%	1.4%	0.4%	-0.1%	-1.9%	1.4%	-0.1%	18.1%	2.4%	0.6%	-0.2%	2.3%
Reefer Van	2.3%	4.8%	3.2%	2.9%	2.9%	4.9%	3.3%	7.4%	2.1%	3.6%	3.7%	3.6%
Flatbed	6.9%	5.9%	5.0%	3.4%	3.9%	8.2%	4.9%	11.6%	6.3%	4.8%	5.6%	5.9%
Specialized	5.4%	4.0%	4.0%	4.3%	0.2%	6.5%	3.8%	13.8%	5.9%	4.1%	3.5%	3.9%
Tank	3.8%	4.7%	4.3%	2.8%	4.2%	12.1%	5.5%	7.2%	4.2%	3.9%	7.2%	2.3%
Bulk/Dump	6.5%	5.6%	3.8%	5.0%	0.7%	8.8%	-2.6%	9.4%	5.2%	4.8%	2.1%	4.4%

#### Annual Data

F = Forecast	2020	2021F	2022F	2023F	2019	2020	2021F	2022F	2023F
<b>Total Truck Loadings</b>	<b>740.69</b>	<b>778.03</b>	<b>808.28</b>	<b>834.33</b>	<b>0.4%</b>	<b>-3.4%</b>	<b>5.0%</b>	<b>3.9%</b>	<b>3.2%</b>
Active Truck Utilization Rate (%) <sup>2</sup>	90.3%	99.3%	97.0%	96.4%					
<b>Commodity Groups</b>									
Food & Kindred Products	111.49	115.03	118.40	121.87	-0.6%	-1.3%	3.2%	2.9%	2.9%
Stone, Clay, Glass & Concrete	66.33	67.17	69.70	71.29	1.1%	-1.6%	1.3%	3.8%	2.3%
Nonmetallic Minerals, Except Fuels	113.48	117.99	123.83	128.22	2.7%	-2.6%	4.0%	4.9%	3.5%
Chemicals & Allied Products	31.91	32.46	34.16	34.59	-1.9%	-2.8%	1.7%	5.3%	1.3%
Transportation Equipment	57.75	61.96	62.91	67.45	-1.6%	-12.5%	7.3%	1.5%	7.2%
Other	359.74	383.41	399.28	410.91	0.4%	-3.2%	6.6%	4.1%	2.9%
<b>Trailer Types</b>									
Dry Van	236.45	250.21	257.52	268.29	-1.7%	-3.8%	5.8%	2.9%	4.2%
Reefer Van	51.81	53.71	55.70	57.45	1.1%	0.0%	3.7%	3.7%	3.1%
Flatbed	87.28	91.46	95.92	97.81	0.7%	-4.6%	4.8%	4.9%	2.0%
Specialized	110.77	117.56	123.03	127.75	2.5%	-3.7%	6.1%	4.7%	3.8%
Tank	78.97	81.10	84.41	85.86	0.1%	-4.1%	2.7%	4.1%	1.7%
Bulk/Dump	175.42	183.99	191.70	197.16	1.9%	-2.9%	4.9%	4.2%	2.9%

Notes:

Preliminary Data: Based on economic data and subject to revision. F = Forecast

Total Truck Loadings includes both Tractor/Trailer Loadings and Straight Truck Loadings.

Source: FTR | Transportation Intelligence™; Copyright 2021, FTR

<sup>1</sup> - Y/Y % Change: Current period vs. year-ago period.

<sup>2</sup> - Utilization Rate: Trucks in use as a percentage of trucks actively competing for freight.



## Driver Situation: FTR Driver Labor Metrics

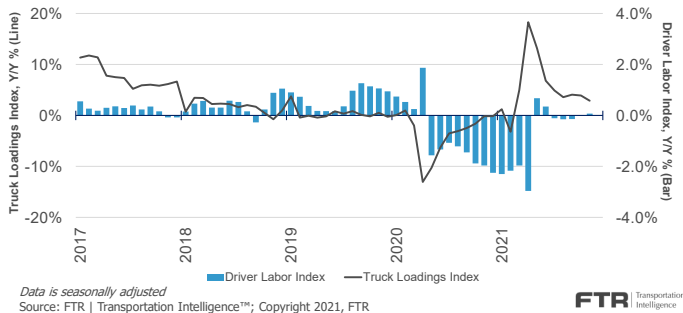
- For-hire trucking adds 5,600 payroll jobs in November.
- The outlook for the Truck Driver Pressure Index is essentially unchanged.

For-hire trucking added 5,600 **payroll jobs**, seasonally adjusted, in November. Total payroll employment in trucking is now just 3,500 jobs, or 0.2%, below the pre-pandemic month of February 2020. However, more granular data available only through October shows that strong gains in local general freight trucking are offsetting declines elsewhere. Through October, local general freight trucking had posted an 8.2% increase in production/nonsupervisory employees relative to February 2020. Meanwhile, long-haul general freight truckload was still down 5.0%.

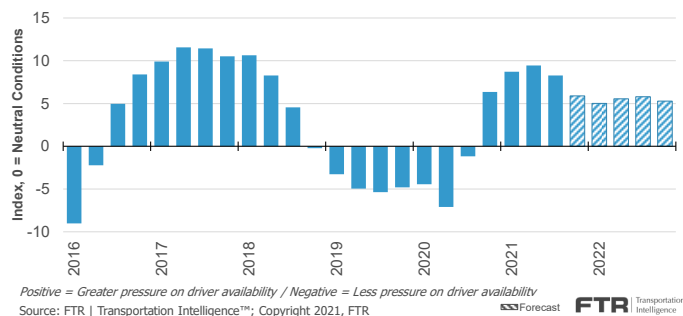
Couriers and messengers (parcel and local delivery) added 26,800 jobs. Employment is up 216,800 jobs, or 24.6%, during the pandemic.

With a stable outlook on freight and utilization, the forecast for the **Truck Driver Pressure Index** is basically unchanged from the prior forecast.

### Driver Supply Vs. Truck Demand



### Truck Driver Pressure Index



### Truck Driver Environment

#### Driver Labor Indicators

	Aug	Sep	Oct	Impact
<b>Employment Indicators</b>				
Unemployment Rate (%)	5.2%	4.8%	4.6%	▲
Personal Income (M/M %)	0.2%	-1.0%	--	▼
<b>Total Payroll Employment (000's)</b>				
% Change (M/M)	0.3%	0.2%	0.4%	
% Change (Y/Y)	4.5%	4.2%	4.1%	
Job Creation	483k	312k	531k	
<b>Service-Providing Industries</b>				
• Retail	15,378	15,435	15,470	▲
<b>Manufacturing</b>				
Construction	7,424	7,454	7,498	▲
<b>Total Transportation &amp; Warehousing</b>				
• Truck Transportation	1,503	1,508	1,516	▲

Source: Bureau of Labor Statistics

#### Driver Labor Supply \*

Index (1992=100) *	125.2	125.1	124.8	▲
% Change (M/M)	0.2%	-0.1%	-0.2%	
% Change (Y/Y)	-0.2%	-0.1%	0.0%	

#### Truck Loads Demand

Index (1992=100)	146.1	146.7	147.0	▲
% Change (M/M)	0.3%	0.4%	0.2%	
% Change (Y/Y)	3.7%	4.2%	3.8%	

Impacts: ▼ - Loosening; ▲ - Tightening; ● - Neutral

Source: FTR | Transportation Intelligence™

### Driver Labor Outlook

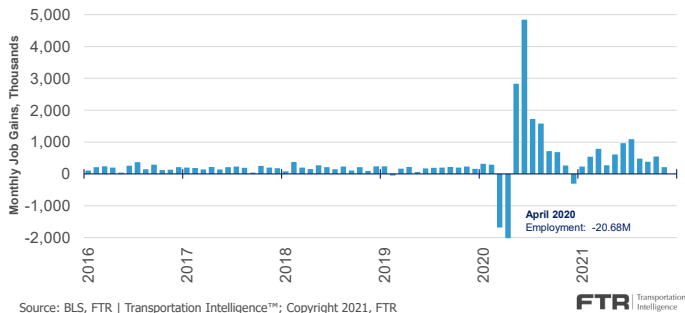
#### | FORECAST

	Q3'21	Q4'21	Q1'22	Q2'22
<b>ACTIVE TRUCK CAPACITY</b>				
Utilization %	99.9%	97.8%	96.6%	96.9%
<b>CL. 8 TRUCK LOADS</b>				
% Change, Y/Y	4.2%	3.1%	2.6%	3.5%
<b>DRIVER LABOR INDEX</b>				
% Change, Y/Y	-0.1%	0.4%	0.9%	0.6%
<b>TRUCK DRIVER PRESSURE INDEX</b>				
0 = Neutral Conditions	8.28	5.88	5.00	5.55

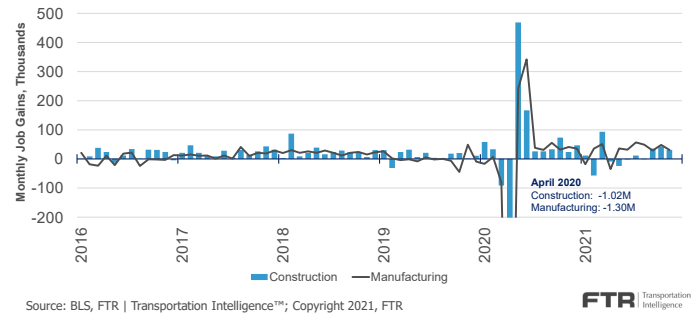
Source: FTR | Transportation Intelligence™; Copyright 2021, FTR



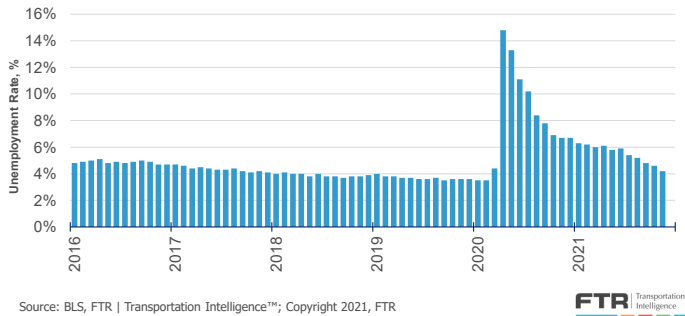
### Employment: Total Payroll



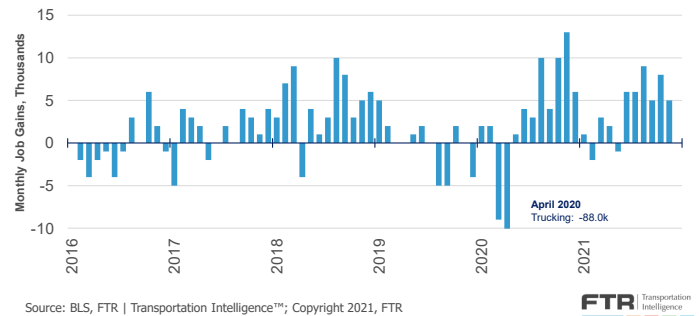
### Employment: Construction & Manufacturing



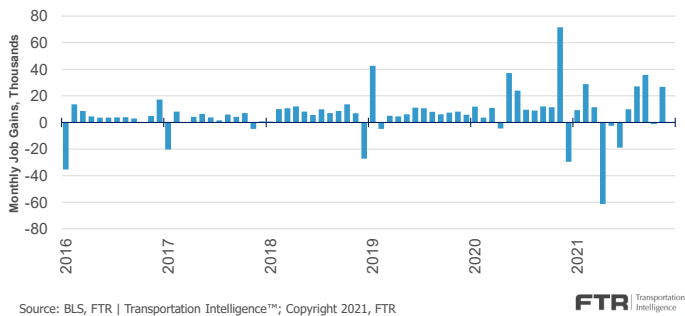
### Employment: Unemployment Rate



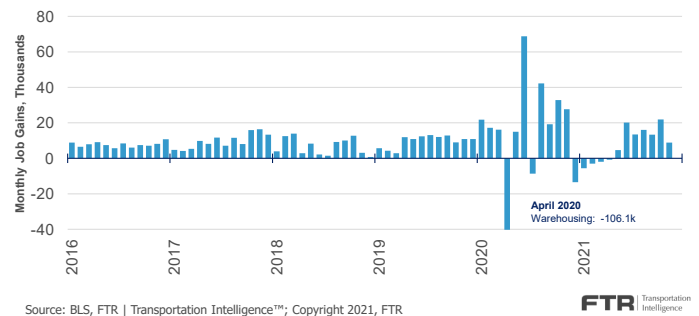
### Employment: Trucking



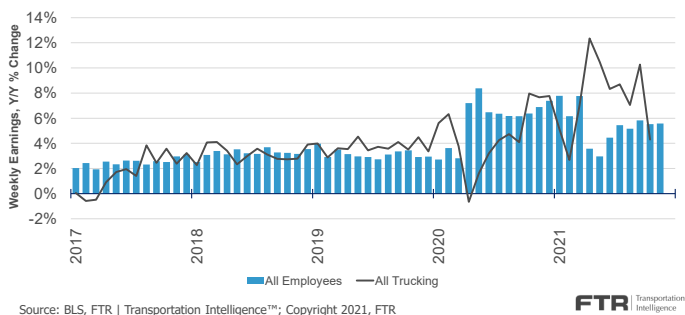
### Employment: Parcel/Courier



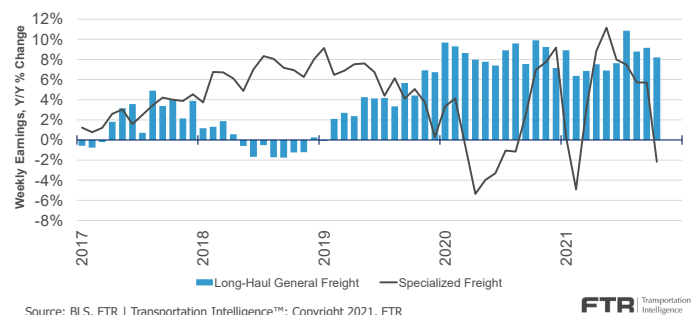
### Employment: Warehousing



### Weekly Earnings: Total vs Trucking



### Weekly Earnings: Long-Haul TL vs Special







### Summary

The economy is showing signs of a rebound in Q4 after a slower Q3. Stimulus checks ignited consumer spending in the first half of 2021, and both consumers and businesses contributed to a spike in demand for goods. Overwhelmed supply chains contributed to the jump in inflation. 2022 will likely be a year of re-balancing, as aggregate demand for goods cools and spending shifts back to services. This will slow inflation, but not quick enough for the Federal Reserve to avoid taking steps to rein it in. The economy has sturdy fundamentals with solid corporate and household balance sheets. Omicron could slow supply chain progress and force stronger Fed action.

### Consumer

Retail sales remained healthy in November, although growth was not as strong as October. Total sales increased 0.3% in November following a 1.8% advance in October. Performance was mixed in November, with advances in gas stations, grocery stores, and sporting goods stores and declines in department stores and electronics and appliance stores sales. The year-over-year rate increased to 18.2%, up from 16.3% in October. Some of the slower growth in November can be attributed to an earlier pickup in holiday shopping. A slower pace for goods is expected as spending shifts to services. Consumption will remain healthy in 2022.

### Manufacturing

The ISM manufacturing index increased to 61.1 in November from 60.8 in October. There was a modest improvement in new orders and production. The prices paid index and supply delivery index fell modestly, suggesting a slight improvement in supply chain performance. The outlook for production is decent. Industrial production rose 0.5% in November, following a 1.7% advance in October. Manufacturing advanced 0.7%, in part fueled by a 2.2% increase in auto output. The outlook for the industrial sector is bright, and inventories are low. Near-term prospects will be driven by supply chain improvements.

### Residential Construction

New residential investment increased more than expected in November. Housing starts increased by 11.8% in November to an annual pace of 1.68 million. Single-family starts leaped 11.1% to an annual pace of 1.17 million. The multi-family sector saw starts at 491,000. Future activity looks good as total permits rose 3.6% to 1.712 million. Strong demand, low inventories, and still-low interest rates will support activity. Prices are high, but there are signs of moderation. The number of houses started but not completed is at high levels. Shortages of labor and building materials are still present, but there are indications that the situation is improving.

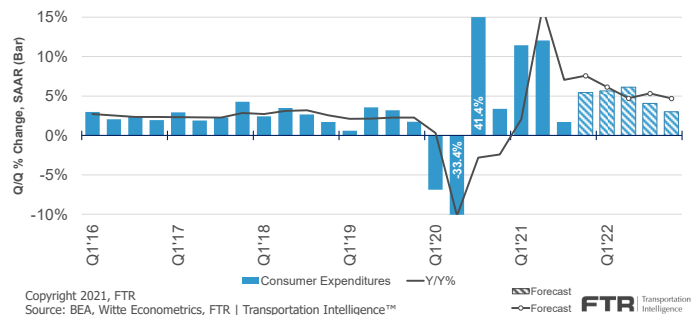
### Economic Outlook Overview

Q/Q % Change, SAAR	Q3'21	Q4'21F	2021F	2022F
<b>Real Gross Domestic Product (GDP)</b>	2.1%	4.7%	5.5%	4.5%
<b>Industrial Production (IP)</b>	3.8%	5.6%	5.6%	4.5%
<b>Goods Transportation Sector (GTS)</b>	-2.9%	6.5%	10.7%	5.3%

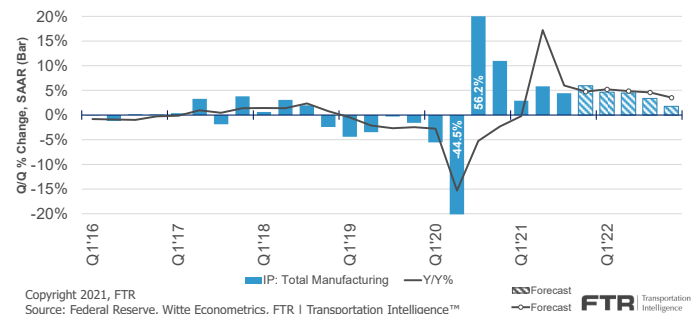
F = Forecast

Source: Witte Econometrics, FTR; Copyright 2021, FTR

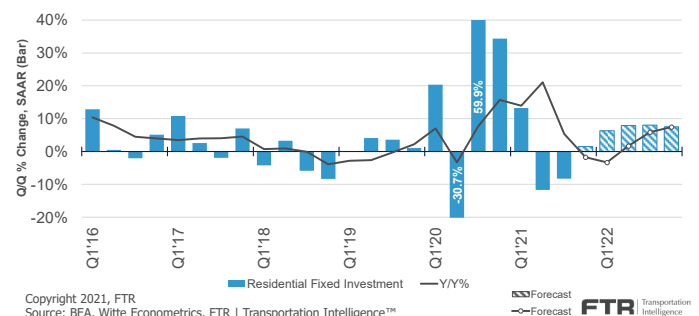
### GDP: Consumer Expenditures



### IP Outlook: Manufacturing



### GDP: Residential Investment





### Monthly Business & Economic Highlights

#### November's Economic Environment:

November had solid results and shows an economy poised for more gains as long as the consumer doesn't get spooked.

	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Impact</u>	<u>Y/Y Chg.</u>	<u>Comments</u>
INDUSTRIAL PRODUCTION							
Total Industrial Production	-0.1%	-1.0%	1.7%	0.5%	▲	5.3%	The gains continued in November, but not at the pace that was achieved in October. There were solid results throughout the industrial arena.
Total Manufacturing	-0.6%	-0.5%	1.4%	0.7%	▲	4.8%	
Automobile and Light Duty Motor Vehicle Production	-5.6%	-13.4%	16.7%	4.6%	▼	-11.5%	
BUSINESS INDICATORS							
Unemployment Rate	5.2%	4.8%	4.6%	4.2%	▲	-250 bp	Weaker-than-expected payroll data was partially offset by strong data from the household survey. Despite supply and labor challenges, businesses are showing positive results.
Job Creation (Payroll Employment)	483k	379k	546k	210k	▲	5,802k	
ISM Manufacturing Index	59.9	61.1	60.8	61.1	▲	360 bp	
CONSUMER INDICATORS							
Consumer Confidence (Conference Board)	115.2	109.8	111.6	109.5	●	16.6 pts	Sentiment has been volatile due to the rising and waning of infection levels. Inflation concerns are also beginning to weigh on expectations, but sales activity remains elevated.
Housing Starts	0.7%	-1.5%	-3.1%	11.8%	▲	8.3%	
Retail Sales	1.2%	0.7%	1.8%	0.3%	▲	18.2%	
Consumer Price Index	0.3%	0.4%	0.9%	0.8%	▼	6.9%	
OIL AND FUEL							
National Avg. Diesel/Gal.	\$3.350	\$3.384	\$3.612	\$3.727	▼	53.2%	Fuel prices were notably elevated in November. They may have peaked for the moment as oil prices have dropped.
W. Texas Int. Crude Oil (\$Bbl.)	\$67.73	\$71.65	\$81.48	\$79.15	●	93.3%	

Impacts: ▲ = Positive / ▼ = Negative / ● = Neutral

Source: Federal Reserve, BLS, ISM, Conference Board, Census Bureau, EIA, FTR | Transportation Intelligence™; Copyright 2021, FTR

### Employment

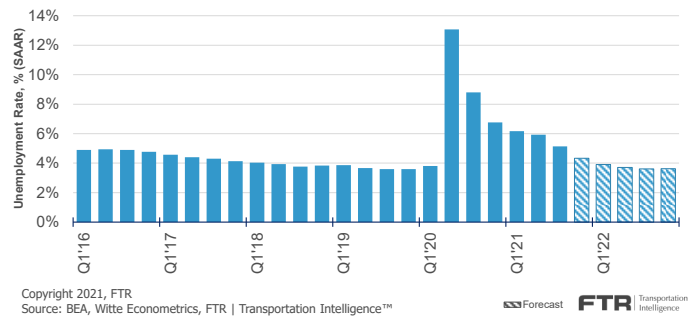
Payroll gains came in at 210,000 in November, weaker than expected. However, there were upward revisions to September and October. Results were mixed. Leisure/hospitality, which had seen some of the biggest gains in recent months, added just 23,000 jobs. The labor participation rate did tick up more than expected, rising to 61.8% from 61.6%. The rate was 63.3% in February 2020. The unemployment rate fell to 4.2% from 4.6% in October. COVID changed the labor market. There are 2.4 more million people not employed as before the pandemic and 11 million job openings, but labor will likely be slow returning to work.

### Forecast Risks

The economic recovery has produced supply chain and labor shortages that are feeding inflation. A great deal of the fuel for inflation comes from the unexpectedly quick rebound in demand for goods. The stimulus packages added fuel to the fire. Fading stimulus and the shift of spending back to services could weaken goods demand and help clear ports and slow overall inflation. The problem is that it will take more time than the Fed will tolerate. The biggest near-term risk is the omicron variant, which could slow the progress in balancing supply chains and feed inflation. This raises pressure on the Fed to act with more force than needed.

See page 7 for detailed economic outlook...

### Unemployment Rate Outlook



### Economic Outlook Probabilities

#### GDP Forecast Confidence Levels

	Next 4 Quarters		Following 2 Years	
	GDP Range	Probability ↓	GDP Range	Probability
<b>Faster Growth</b>	> 7%	15%	> 3%	25%
<b>Base Forecast</b>	5.0%	60%	2.5%	50%
<b>Slower Growth</b>	< 3%	25%	< 2%	25%

Source: FTR | Transportation Intelligence™; Copyright 2021, FTR



## U.S. Economic & Industrial Outlook

Forecasts of key economic data

	2021				2022				Annual			
	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22	2020	2021	2022	2023
<i>F = Forecast</i>				<i>F</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>F</i>		<i>F</i>	<i>F</i>	<i>F</i>
<b>Gross Domestic Product (SAAR)</b>												
<b>Real GDP</b>	<b>6.3%</b>	<b>6.7%</b>	<b>2.1%</b>	<b>4.7%</b>	<b>5.2%</b>	<b>5.3%</b>	<b>3.9%</b>	<b>2.6%</b>	<b>-3.4%</b>	<b>5.5%</b>	<b>4.5%</b>	<b>2.8%</b>
Consumer Expenditures	11.4%	12.0%	1.7%	5.4%	5.7%	6.1%	4.1%	3.0%	-3.8%	8.0%	5.2%	3.2%
Residential Fixed Investment	13.3%	-11.7%	-8.3%	1.5%	6.3%	7.9%	8.0%	7.5%	6.8%	9.1%	2.8%	6.7%
Change-Business Inventories	-88.3	-168.5	-73.2	-29.9	0.1	30.1	63.3	63.6	-42.3	-90.0	39.3	64.4
Real Exports of Goods	-1.4%	6.4%	-5.8%	3.3%	3.2%	3.1%	3.1%	3.1%	-10.2%	6.3%	2.2%	3.1%
Real Imports of Goods	13.3%	-11.7%	-8.3%	1.5%	6.3%	7.9%	8.0%	7.5%	6.8%	9.1%	2.8%	6.7%
Goods Transportation Sector	10.0%	5.2%	-2.9%	6.5%	6.7%	7.4%	6.8%	4.5%	-3.1%	10.7%	5.3%	4.6%
CPI Index	3.7%	8.4%	6.6%	5.2%	3.5%	3.8%	4.0%	3.5%	1.2%	4.5%	4.6%	3.5%
<b>Housing Starts - Millions (SAAR)</b>												
Housing Starts - Millions (SAAR)	1.60	1.59	1.56	1.59	1.60	1.62	1.62	1.64	1.40	1.58	1.62	1.64
% Change (SAAR)	6.1%	-2.6%	-8.1%	8.2%	4.3%	3.9%	1.5%	3.2%	8.1%	13.3%	2.4%	1.4%
<b>Auto Sales - Millions (SAAR)</b>												
Auto Sales - Millions (SAAR)	16.8	16.9	13.3	12.9	13.9	14.8	15.4	15.6	14.5	15.0	14.9	15.7
3 Month T-Bill Rate, %	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.4%	0.4%	0.0%	0.2%	0.7%
Moody AAA Bonds, %	2.7%	2.9%	2.6%	2.7%	2.8%	2.8%	2.9%	3.0%	2.5%	2.7%	2.9%	3.1%
Unemployment Rate, %	6.2%	5.9%	5.1%	4.3%	3.9%	3.7%	3.6%	3.6%	8.1%	5.4%	3.7%	3.6%
Federal Surplus, \$ (SAAR)	-\$4,089	-\$3,313	-\$2,250	-\$1,696	-\$1,533	-\$1,449	-\$1,414	-\$1,431	-\$3,110	-\$2,837	-\$1,457	-\$1,458

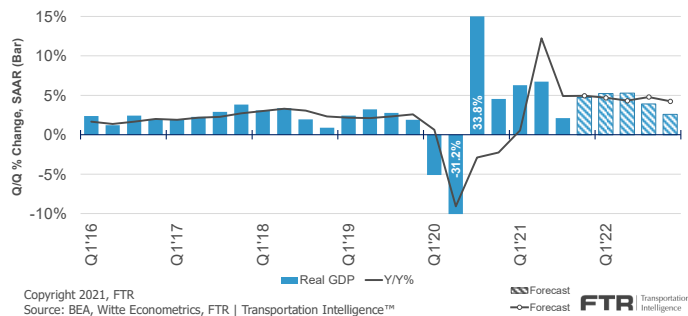
	2021				2022				Annual			
	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22	Q4'22	2020	2021	2022	2023
<i>F = Forecast</i>				<i>F</i>	<i>F</i>	<i>F</i>	<i>F</i>	<i>F</i>		<i>F</i>	<i>F</i>	<i>F</i>
<b>Industrial Production (SAAR)</b>												
<b>Total IP</b>	<b>4.0%</b>	<b>6.5%</b>	<b>3.8%</b>	<b>5.6%</b>	<b>4.7%</b>	<b>4.5%</b>	<b>3.2%</b>	<b>1.8%</b>	<b>-7.2%</b>	<b>5.6%</b>	<b>4.5%</b>	<b>1.9%</b>
Manufacturing, Total	2.9%	5.8%	4.4%	6.0%	4.7%	4.5%	3.4%	1.8%	-6.4%	6.6%	4.6%	1.8%
Manufacturing, Non-Durables	-1.1%	12.9%	0.4%	5.5%	4.4%	3.7%	2.7%	1.4%	-4.4%	4.4%	4.0%	1.5%
Manufacturing, Durables	6.7%	-0.2%	8.3%	6.4%	4.9%	5.2%	3.9%	2.0%	-8.2%	8.6%	5.0%	2.2%
Mining	7.3%	22.1%	-0.4%	13.6%	5.7%	5.1%	4.4%	3.0%	-14.2%	2.9%	6.8%	2.7%
Utilities	8.7%	0.3%	5.3%	-6.2%	3.8%	4.5%	1.2%	1.1%	-3.4%	2.5%	1.4%	1.6%

Q/Q % Change, SAAR // F = Forecast

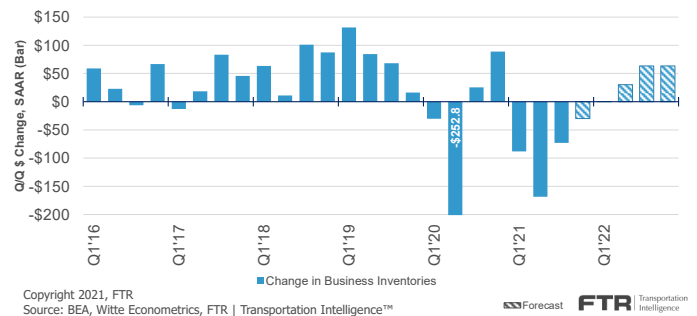
SAAR is Seasonally Adjusted Annual Rates or Seasonally Adjusted Quarter to Quarter Changes at Annual Rates.

Source: Witte Econometrics, Federal Reserve, BEA, FTR | Transportation Intelligence™; Copyright 2021, FTR

### Real GDP Outlook



### GDP: Business Inventories





## Forecast risks around heading into 2022

*Watch consumers, supply chains, capacity, and the pandemic, of course.*

A year ago, we were forecasting a solid 2021, but forecast risks appeared to be mostly to the downside. In some cases, we correctly predicted a result but did not anticipate the cause. For example, recovery in employment was slowing, but the issue seemed to be one of weak demand, not tight supply.

Our 2021 total truck loadings forecast a year ago is very close to our 2021 estimate today, although the path to that growth was not what we expected. Consider the dry van segment. We had forecast a 6.1% increase in loadings for 2021. Our current 2021 estimate is 5.8%. However, consumer-related loadings were stronger than anticipated while automotive-related loadings were weaker.

The factors that led to stronger consumer growth and weaker industrial growth were unknown – or at least highly uncertain – a year ago. As we head into 2022, those and other factors, including the pandemic itself, will shape the economy and freight dynamics, and they might even be less predictable today than they seemed to be a year ago.

### Will consumers remain a bedrock for recovery?

The third round of stimulus enacted in March 2021 was not a total surprise, but it was far from certain as of late December 2020. Its fate rested on Democrats winning both seats in the Georgia Senate runoff election, and even that outcome did not necessarily ensure another stimulus package.

The March disbursements included large one-time payments to taxpayers, continuation of generous unemployment payments through early September, and monthly advance payments of child tax credits paid in July through December. Our concerns a year ago over the strength of the consumer sector were moot following such extraordinary levels of stimulus.

Today, however, the situation is complicated. Consumers still have hundreds of billions of unspent dollars from the first three rounds of stimulus. They also *might* have strong pent-up demand in at least one major category of durable goods as a shortage of semiconductors has held back availability of cars, trucks, and SUVs. Our qualification of that pent-up

demand is due to the extraordinary levels of purchasing of used vehicles in lieu of new ones.

Another plus is the recovery in employment. We have seen some soft patches such as the preliminary figures for November, but continued gains in payroll employment are likely, and that will mean higher incomes and more spending.

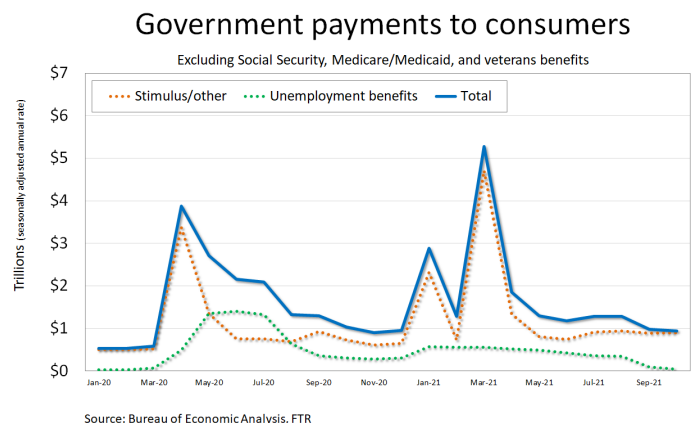
These factors are not really upside risks to our forecast, however. At most, they are offsets to downside risks, which are substantial. The largest probably would be sharply lower consumer spending due to a loss of stimulus. The omicron variant (or another future one) is unlikely to generate another massive infusion of consumer stimulus.

With child tax credit payments gone, the economy just lost a monthly infusion of about \$18 billion. The Build Back Better Act would renew those payments through 2022, but as of late December that legislation is in doubt as Sen. Joe Manchin (D-West Virginia) said he will not support it without a rewrite.

Even if that legislation is dead, Congress might still pass a pared-down bill that includes the monthly payments, but that is far from a sure thing. Moreover, renewal of those payments would not boost spending; it would just support current levels.

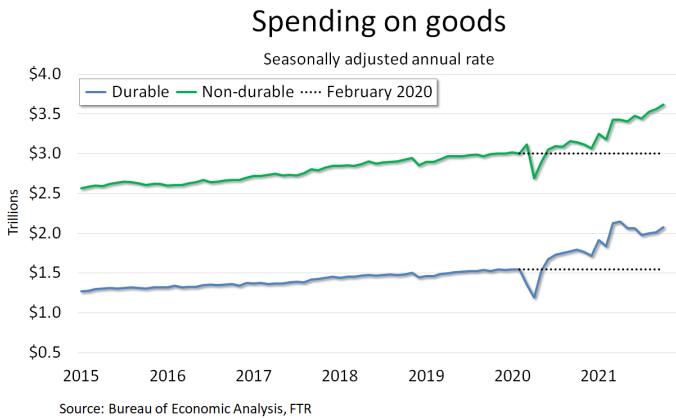
Another downside risk is the converse of pent-up demand. Although the semiconductor shortage thwarted the purchase of as many new vehicles as consumers wanted, supply chain issues were not as

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(Continued from page 16)



severe in most other categories of durable goods, such as appliances, electronics, and furniture.

Stimulus-fueled spending arguably pulled forward purchases of durable goods that might otherwise have occurred during 2022 or beyond. Spending on durable goods remains very strong, but it has been outpaced by spending on non-durable goods in recent months. Also, given severely depleted vehicle inventories in 2021, much of 2022's durable goods spending likely will be for cars, trucks, and SUVs.

Another downside risk for consumer spending is inflation. The 12-month increase in the Consumer Price Index in November was 6.8%, which is the largest gain in nearly 40 years.

Inflation brings a host of unpleasant effects, including higher interest rates, but the most direct one for freight transportation is that it reduces consumers' buying power. For example, retail and food service sales in November ticked up 0.3% to a record. However, adjusted for inflation, November sales actually declined 0.5%.

Inflation is a relatively minor risk for freight, however. Also, it seems to be driven today largely by extraordinary consumer demand. If that demand wanes, we would expect inflation to settle as well.

### Are supply chain issues an upside risk?

One of the big drivers of inflation in 2021 was vehicle prices, and those prices soared in large part because demand outstripped supply. In December 2020, we did not know about the impending semiconductor shortage, so that issue was nowhere to be found in our forecast risks for 2021. Motor

vehicle and parts output in November 2020 had risen 2.8% month over month and was just barely below pre-pandemic levels.

Moreover, since we had no clarity over the stimulus and did not envision record levels of job openings, we did not anticipate the broader supply chain issues that have constrained other sectors. Nor could we have envisioned dozens of container ships moored in San Pedro Bay waiting to be off-loaded at the ports of Los Angeles and Long Beach.

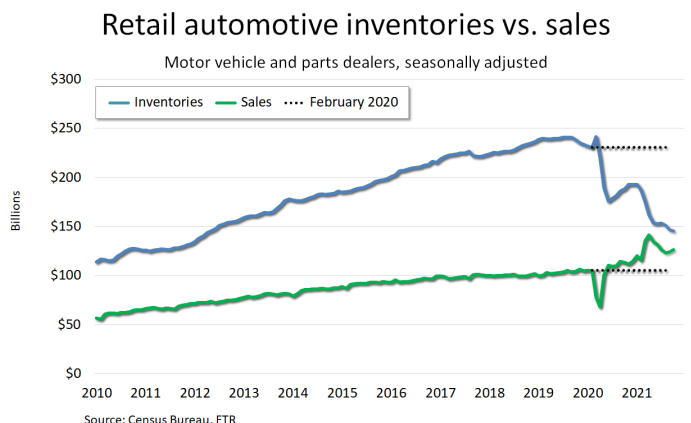
As we enter 2022, supply chains remain stressed, but we anticipate improvement due to a combination of economic pressure to increase throughput and a stabilization of demand. Opening bottlenecks obviously would be a positive development for the flow of goods, and at least modest improvement seems likely. Although there are no guarantees, the supply chain challenges we faced in 2021 appear to be largely an upside risk for 2022.

Automotive is one industry where the supply chain situation clearly is an upside risk. Given that the semiconductor shortage has proven to be so intractable, our base forecast does not presume a material improvement in 2022.

Meanwhile, the demand for increased production to the extent the chip situation does improve is only growing. As of October, inventories of motor vehicles and parts were 37% below pre-pandemic levels as sales were running 20% ahead. Even if sales weaken substantially, the automotive industry will need to push production limits for months to restore a comfortable level of inventories.

However, broader retail inventories arguably represent a downside risk for freight. Although total

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retail inventories in October were 7.8% below February 2020 levels, inventories were 8.1% higher if we exclude motor vehicles and parts.

Retail inventories excluding automotive are higher today than they would have been without the pandemic. Of course, retail sales are so robust that inventories are still the leanest on record relative to sales. However, if consumer spending were to slow significantly for the reasons discussed earlier, an inventory correction could be in the offing.

### Could trucking capacity normalize quickly?

Trucking companies' struggles to keep their trucks seated has risen to such a level that the White House in December launched an initiative to recruit truck drivers. The plan includes expedited licensing, increasing apprenticeships, and tapping the pool of veterans who have truck driving experience.

As we discussed in our December 2021 commentary, trucking's nearly full recovery to pre-pandemic levels in total payroll employment masks a significant deficit in over-the-road truckload. Local trucking operations have added significantly to their payrolls during the pandemic, offsetting reduced job levels in all other segments.

Local versus long-haul is not the only complication, however. The *distribution* of drivers might have more to do with the current freight market stress than the total *number* of drivers.

FTR estimates that more than 75,000 new for-hire carriers that received authority between July 2020 and November 2021 operate tractors and represent

more than 110,000 truck drivers. Prior to the pandemic, most of those drivers probably worked for larger truckload carriers as either leased owner-operators or company drivers. Now, most are working for intermediaries in the spot market or in digital freight platforms. This shift of capacity has been highly disruptive and is one of the contributors to robust freight rates.

In past cycles, we have seen a fairly rapid exit of new entrants once spot rates come down and their margins tighten. Spot rates have been quite resilient this time, however. As long as spot rates remain highly elevated, we would expect the number of new carriers to remain higher than the norm before the pandemic. We also would expect fewer carriers than usual exiting the business.

Given how many drivers are linked to new entrants, however, an inflection in spot rates could spark a faster normalization of capacity than we are forecasting. What might lead to an inflection in spot rates? One factor could be some of the downside freight risks we discussed earlier and even some of the upside risks. For example, an improvement in supply chains might lead to less stress on the spot market and, hence, lower rates.

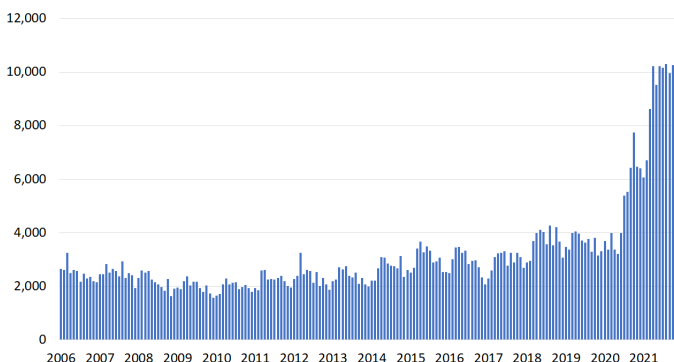
Or perhaps we could begin to see a return of driver capacity in the contract arena that would take pressure off the spot market. For example, according to the Department of Transportation, the issuance of commercial driver's licenses and permits in 2021 was running 20% ahead of 2019.

A rapid return of drivers to larger carriers is speculative at best, but it could have a major impact on freight markets. However, there is at least one more reason to be skeptical of that outcome. A federal appeals court has lifted a stay on the Biden administration's mandate that employers with 100 or more employees ensure that workers are either vaccinated or tested weekly. Unless the Supreme Court reverses, many truck drivers might choose to get their own operating authority or quit altogether.

Even if drivers return, one more potential constraint on capacity is emerging. Prices for used trucks are soaring, and inventories are tight. Meanwhile, the lead time for a new truck is more than a year. So even if carriers can get drivers, don't count on capacity easing much in the near term. All the talk in 2021 about a driver shortage might just become talk about a truck shortage in 2022.

### New for-hire trucking companies

Grants of motor property authority (common and contract), monthly



Source: FTR analysis of FMCSA data



## General Terms

### Annualized rate

A rate of return for a given period that is less than 1 year, but it is computed as if the rate were for a full year.

### Average Length-of-Haul

Total tonmiles divided by total tons.

### Basis Points

A unit that is equal to 1/100 of 1%. If something increased from 2.2% to 2.8%, it increased 60 basis points.

### Goods Transportation Sector

Components of GDP that are critical in demand for goods and thereby induce demand for transportation services.

### M/M

Month over month. The difference in percentage or units when compared to the previous month.

### New Truck Lead Time

The Backlog of Class 8 truck orders divided by the Build for a given month. Gives an indication of the average length of time in months for a fleet to take delivery of a new truck order.

### Rail Carloads

Rail carloads is the seasonally adjusted number of carloadings originated in the United States plus loads that come to U.S. destinations from Mexico and Canada. Data in this report excludes intermodal loadings.

### Rail Shippers Conditions Index (RCI)

A measure of market conditions that influence the rail shippers freight transport environment. This index tracks the changes representing five major conditions in the U.S. carload freight market. The conditions are: freight demand, freight rates, fleet capacity, carload service, and fuel price. The individual metrics are combined into a single index that tracks the conditions that influence the rail shippers freight transport environment. A positive score represents good, optimistic conditions; a negative score represents bad, pessimistic conditions.

### Railcar Utilization Rate

This metric calculates the percentage of the total population of railcars that is required to move the N.A. rail freight. In general, a figure above 90% indicates a tight market where the majority of the railcar population is at work. A figure below 80% indicates a weak market where a significant portion of the population is idle or underutilized.

### SAAR

Seasonally Adjusted Annualized Rate

### Shippers Conditions Index (SCI)

This index tracks the changes representing four major conditions in the U.S. full-load freight market. The major conditions are: freight demand, freight rates, fleet capacity, and fuel price. The individual metrics are combined into a single index that tracks the market conditions that influence the shippers freight transport environment. A positive score represents good, optimistic conditions; a negative score represents bad, pessimistic conditions.

### STCC

Standard Transportation Commodity Code (Similar to the SIC/NAICS Codes with a few added categories designed for transportation movements)

### TEU

Twenty Foot Equivalent Unit. Used for reported port container statistics.

### Ton

Tonnage. Ton Originated by specific mode (i.e. one ton of coal shipped by rail and then by water would be shown as two tons of coal). This is Domestic Traffic Only. Export movements are included only as far as the border or to a port in which it will be directly exported. The same is true for Imports. An import is counted once it reaches the border or a port.

### Tonmile

One ton moved one mile = one tonmile.

### Truck Driver Pressure Index

The index tracks carriers' need for additional drivers based on trends in the business cycle, demographics, and regulations. Business cycles create natural shortages (and surpluses) that stem from typical economic activity. Demographic changes in any given year are small and only add up after a significant time span. Regulations vary across the industry and are difficult to predict due to changing priorities and uncertain response.

The index baseline is zero, representing balance in the driver hiring environment. Positive readings suggest greater pressure on rates and utilization; negative readings suggest less pressure.

### Truck Loadings

Truck loadings is the estimated number of truck loads originated in the United States plus truck loads that come to U.S. destinations from Mexico and Canada. It is tons divided by the average tons per load.

### Truck Utilization Rate - "Active"

This metric calculates the percentage of the population of active trucks that is required to move the U.S. truck freight. In general, a figure above 95% indicates a tight market where the majority of the truck population is at work. A figure below 90% indicates a weak market where a significant portion of the truck population is idle.

### Truck Utilization Rate - "Total"

This metric calculates the percentage of the total population of trucks that is required to move U.S. truck freight. In general, a figure above 90% indicates a tight market, a figure below 85% indicates a weak market.

### Trucking Conditions Index (TCI)

This index tracks the changes representing four major conditions in the U.S. full-load truck market. The major conditions are: freight demand, freight rates, fleet capacity, and fuel price. The individual metrics are combined into a single index that tracks the market conditions that influence fleet behavior. A positive score represents good, optimistic conditions; a negative score represents bad, pessimistic conditions.

### Y/Y

Year over year. The difference in percentage or units when compared to the same month, quarter, or time period of the previous year.



## **Trailer Types**

### **Dry Van**

An enclosed, rectangular, box trailer that carries general freight.

### **Refrigerated (Reefer) Van**

A refrigerated and insulated van used to transport temperature-sensitive freight.

### **Flatbed (Platform)**

A flat surfaced, open, trailer with no enclosure or doors.

### **Specialized (Specialty)**

There is a wide assortment of specialized trailers that are highly engineered for specific purposes (i.e. auto hauler, livestock, lowbed, oversized, etc.)

### **Tank (Tanker)**

A trailer with an enclosed, sealed, cylinder-shaped tank used to carry liquid or dry bulk freight.

### **Bulk/Dump**

This is a combined group of Dump trailers and Straight Trucks. A Dump trailer has an open-top box (bucket) used for hauling dirt, rocks or gravel. Discharge can be from end, bottom, or side. Straight Trucks have the trailing equipment permanently mounted to the chassis. The largest segment are Dump Trucks that haul stone and aggregates.

## **Railcar Types**

### **Box Cars**

An enclosed car which has doors. It is used for general service and for lading which must be protected from the weather.

### **Covered Hoppers**

A hopper car with a permanent roof and bottom openings for unloading. Used for carrying cement, grain, or other bulk commodities.

### **Flat Cars**

An open car without sides, ends or top, used principally for hauling lumber, stone, heavy machinery, TOFC/COFC equipment, etc.

### **Gondolas**

A car without a top covering which has straight sides and ends, the floor or bottom of which is approximately level. Used for bulk freight.

### **Open-Top Hoppers**

Cars having sides and ends but no roof with a sloping floor which will discharge its load by gravity through the hopper doors.

### **Tank Cars**

A car which consists of a tank for carrying liquids such as oil, molasses, vinegar, acids, compressed gasses and granular solids.

## **Freight Rates**

### **Dry Van**

Revenue per Loaded Mile. Spot/contract rates for Dry Van activity both with and w/o Fuel Surcharge (FSC).

Indexed to 1Q2008.

### **Refrigerated (Reefer) Van**

Temperature-Controlled (TC). Revenue per Loaded Mile. Spot/contract rates for Refrigerated activity both with and w/o Fuel Surcharge (FSC).

Indexed to 1Q2008.

### **Flatbed (Platform)**

Revenue per Loaded Mile. Spot/contract rates for Flatbed activity both with and w/o Fuel Surcharge (FSC).

Indexed to 1Q2008.

### **Specialized**

Revenue per Loaded Mile. Spot/contract rates for Specialized equipment both with and w/o Fuel Surcharge (FSC).

Indexed to 1Q2008. Note: Includes numerous types of trailer freight, but generally excludes tank trailers.

### **Less-Than-Truckload (LTL)**

Revenue per hundredweight. Contract rates for LTL moves. These are parcel, pallet, or less than full truckload moves by LTL carriers.

Indexed to 1Q2008.

### **Intermodal**

Revenue per Load. An estimate of pricing trajectory that is calculated based on the underlying cost pressures from dry van truckload and rail line-haul. Shown both with fuel surcharges (FSC) included and net of FSC.

Indexed to 1Q2008.

### **Rail Carload**

An estimate of U.S. Class I rail pricing power that is calculated from data reported to the STB. It measures revenue per tonmile and is shown both with fuel surcharges (FSC) included and net of FSC. It is impacted by both actual railroad rates and by changes in the mix of commodities moved.

Indexed to 1Q2008.



## **AAR Carload Commodity Definitions**

### **Chemicals**

Industrial chemicals, plastic resins, fertilizer, ethanol, hazardous materials, etc.

### **Coal**

Coal. Includes anthracite, bituminous, and lignite coal.

### **Coke**

Petroleum coke, coke produced from coal, and coal or coke briquettes

### **Crushed Stone, Sand & Gravel**

Crushed or broken stone, sand, aggregate, gravel

### **Farm Products Excluding Grain**

Primarily fresh fruits and vegetables. Includes all farm products except grains and soybeans.

### **Food Products**

Canned goods, meat and animal products, sugar, beverages, seed and vegetable oils, etc.

### **Grain**

Primarily corn, wheat, and soybeans but also includes oats, barley, rye, sorghum, etc.

### **Grain Mill Products**

Soybean meal, corn syrup, animal feed, flour, corn starch, milled rice, distiller's dried grains (DDG), etc.

### **Iron and Steel Scrap**

Iron and steel (i.e. ferrous) scrap

### **Lumber & Wood Products**

Lumber and dimension stock, plywood, etc.; does not include furniture

### **Metallic Ores**

Overwhelmingly iron ore, but some aluminum ore, copper ore, etc.

### **Motor Vehicles & Parts**

Finished vehicles, parts, auto and truck bodies, etc.

### **Nonmetallic Minerals**

Phosphate rock, rock salt, crude sulphur, clay, etc.

### **Petroleum & Petroleum Products**

Crude petroleum and products of petroleum refining such as liquefied gases, jet fuel, fuel oil, lubricating oils, asphalt tars, etc.

### **Primary Forest Products**

Wood raw materials such as pulpwood and wood chips

### **Primary Metal Products**

Primarily iron and steel products; some aluminum, copper, etc. Includes galvanized, and fabricated metal products, except ordnance materials, machinery, and transportation equipment.

### **Pulp & Paper Products**

Paperboard, pulpboard, fiberboard, printing paper, pulp, newsprint, boxes, industrial paper, etc.

### **Stone, Clay & Glass Products**

Ground nonmetallic minerals or earths, cement, lime, gypsum products, glass products, bricks and other clay products, abrasives, etc.

### **Waste & Scrap**

Non-ferrous scrap metal, scrap paper, construction debris, ashes, etc.

### **All Other Carloads**

Commodities not included in any of the above categories, excluding intermodal traffic

## **AAR Carload Summary Traffic Groups**

### **Agricultural Products**

Grain; Farm Products; Grain Mill Products; Food Products

### **Automotive**

Motor Vehicles & Parts

### **Chemicals**

Chemicals; Petroleum & Petroleum Products

### **Coal**

Coal

### **Forest Products**

Primary Forest Products; Lumber & Wood Products; Pulp & Paper Products

### **Metallic Ores & Metals**

Metallic Ores; Coke; Primary Metal Products; Iron & Steel Scrap

### **Non-Metallic Minerals and Products**

Crushed Stone, Sand & Gravel; Non-Metallic Minerals; Stone, Clay & Glass Products

### **All Other**

Waste & Non-Ferrous Scrap; All Other Carloads



## Rail Intermodal

### Revenue Moves

Rail Intermodal Loadings of Units Originated. Intermodal is defined as a movement of a container or trailer via more than one mode of transportation (i.e. rail + truck or ship + rail or ship + truck). This data tracks intermodal movements that involve the rail mode. Such movements may involve the movement of International and Domestic Containers as well as Trailers via rail.

### Intermodal

Counts intermodal rail revenue movements, defined as any movement of a container or trailer, whether loaded or empty, that generates revenue for the railroad. Empty movements of rail-owned containers and trailers typically do not generate rail revenue and therefore are not captured in the data.

A revenue movement typically encompasses the entire journey from when the container or trailer is placed on the rail at the originating intermodal terminal to where it is removed from the railcar at the terminating intermodal terminal and may involve movement over more than one railroad.

Long-haul movements passing through rail gateways, such as Chicago, that involve highway transfer between terminals will generally be counted as two separate movements unless traveling on a through bill of lading.

### Intermodal Competitive Index (ICI)

This index tracks the changes representing five major conditions in the U.S. rail intermodal market. The major conditions are: freight demand, freight rates, truck capacity, rail service, and fuel price. The individual metrics are combined into a single index that measures the competitive posture of domestic intermodal vs. OTR Truck.

A positive score represents favorable conditions for intermodal to compete with truck; a negative score represents reductions in intermodal's ability to gain additional market share from truck.

### Intermodal Market Segments

These figures track the movement of equipment, not freight. Domestic freight being moved in 20', 40', or 45' containers will be counted as INTERNATIONAL. International cargo transloaded into Domestic Containers or trailers is counted as DOMESTIC.

#### **- International**

Includes movements of Containers of the following lengths only: 20', 40', and 45'.

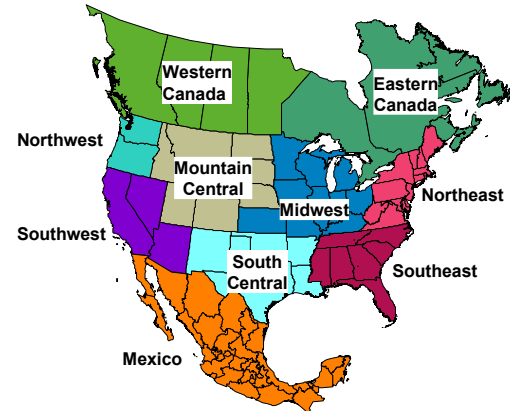
#### **- Domestic**

Includes movements of Trailers and all other Containers not included in International movements. Trailers of the following lengths: 20', 28', 40', 45', 48', 53'+. Containers of the following lengths: 48', 53'+. Reported movements of 28' containers are converted to 28' trailers, as all 28' containers are reportedly permanently mounted on chassis and moving as trailers.

### Long-Haul Market Share

Average Length of Haul 550 miles or longer. Designated by Commodity at the 3-Digit STCC level.

## Intermodal Territories



## Sources

### Association of American Railroads (AAR)

Weekly Rail Traffic Report

### Bureau of Labor Statistics (BLS)

Employment, Consumer Prices, Producer Prices

### Federal Reserve

Industrial Production Statistics

### FTR

Freight-cast Transportation Model

### Intermodal Association of North America (IANA)

ETSO Database

### Port Reports

Monthly Container Volumes

### Rail Reports

Weekly Market Metrics

### Surface Transportation Board

Public Use Waybill, Rail Reporting Metrics

### Truck/Trailer OEMs

Monthly Market Indicators

### Truckstop.com

Weekly Spot Market Indicators

### U.S. Census Bureau

Economic Census, USA Trade, Monthly Indicators

### U.S. Department of Commerce

Industrial Reports; Commodity Flow Surveys, Monthly Indicators

### Wards Automotive

RS-3S (Truck Retail Sales), FS-3 (Truck Factory Sales)

### Witte Econometrics

U.S. Econometric Forecasting Model





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