June 28, 2021 | 9:30 AM ET

Housing affordability issues put brakes on flatbed demand

Throughout the period of economic recovery following the early 2020 recession, the growth in new and existing home sales seemed inexorable. That has transformed a miserable market for flatbed carriers into a nicely profitable one. But, market forces have put the brakes on the continuous improvement in the market (from the perspective of the carriers) and the latest housing-related data points are off their recent highs, as are most flatbed-related data points. That causes us to wonder whether the market can get much better for flatbed carriers.

Unfulfilled consumer demand to buy homes remains extremely high, but the reality of high prices and tight lending standards has brought many consumers to reality. Meanwhile, the lack of available lots, expensive building materials and labor availability issues have slowed recent construction trends.

New and existing home sales impact many transportation modes including maritime, dry van and intermodal, but due to its specialized nature and relatively small market size, we believe no transportation segment is more directly impacted than flatbed trucking.

Leveraging electronic tender data contained in SONAR, this report illustrates how the domestic flatbed market has tightened during the past year, going from its status as perhaps the loosest domestic transportation segment to become as tight, or tighter, than the dry van market, a segment that remains characterized by scarce capacity. <u>To illustrate, flatbed tender rejection rates increased from a low of less than 1% in April 2020 to 30% in June 2021 before retreating to 26%.</u>

In addition, data from surveys of small and mid-sized flatbed carriers show how improved flatbed volume has translated into improved operating and financial performance for flatbed carriers. <u>Favorable demand enabled flatbed carriers' operating ratios to break out of the 95%-105% range into the mid-80s.</u> The carriers did this through improved load selection that enabled them to run fewer miles out of route, improved rates, improved driver productivity and by carrying more long-haul loads.

May Housing starts[1] (y/y change)

Midwest	239 (+66.0%)
Northeast	118 (+52.5%)
South	814 (+59.6%)
West	401 (+24.5%)
National	1,572 (+50.3%)

May Existing home sales[2]

Midwest	1,310 (+27.2%)
Northeast	720 (+46.9%)
South	2,590 (+47.2%)
West	1,180 (+61.6%)
National	**5,800 (+44.6%)**

Flatbed spot all-in rates per mile[3]

National	**$3.64 (+59.2%)**

Flatbed tender rejection rates (yearly change)

National	25.13% (+1,686 bps)

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[1] In thousands
[2] In thousands
[3] Truckstop.com all-in per-mile rate

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The housing boom has reached a crossroads at the halfway point of 2021.
A boom in home repair projects was one of the unexpected impacts of COVID, giving an unexpected boost to do-it-yourself retailers such as Home Depot. In addition, COVID, economic growth and appreciation in asset values have spurred demand for new home construction and existing home sales.

There are several factors that remain in place to support a strong housing market, including:

- Asset prices and wealth levels remain near records.
- Mortgage rates remain near record lows.
- Flexible work schedules have given employees more opportunities to live where they want or can more easily afford.
- The strong labor market and high rates of employee turnover and quitting creates housing churn as people relocate.
- Geographic migration as the U.S. population, in general, moves south and west, creates demand for construction in newer cities.

But, too many prospective home buyers' dollars are chasing too little housing inventory and markets have adjusted to the unprecedented housing demand. That has worked to naturally put the brakes on the red-hot housing market. Some ways that is evident include:

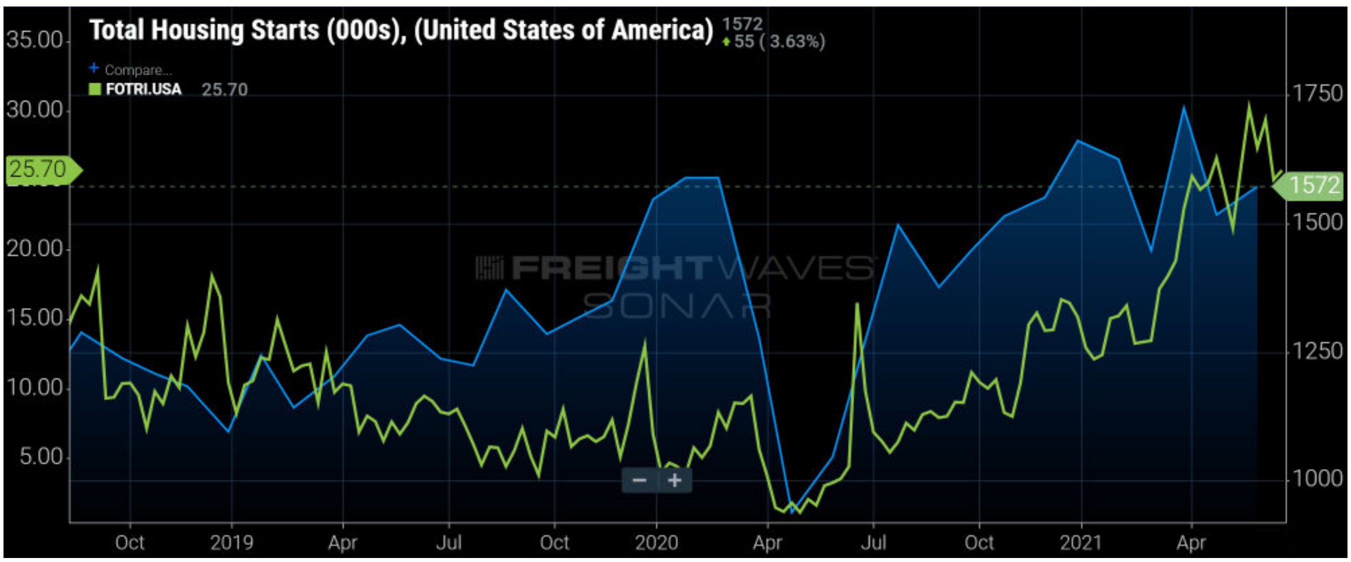
- High demand combined with low inventory levels has driven average U.S. housing prices to a new all-time high record level of $350,000. Of course, in many geographies, average home prices are a multiple of that average and have left many prospective buyers priced out of their desired market.
- The building and repair boom has also been seen in the prices of building materials, such as lumber, which have shot up and have added an average of $30,000 to the price of a newly built home.
- Prospective buyers with strong credit are the ones most able to obtain mortgages and are generally expected to put 20%+ down (of course, 20% of a larger amount as home prices have risen).
- Property taxes may also be giving prospective buyers sticker shock since they rise proportionately to property values.

FreightWaves' Lead Economist Anthony Smith summarized the situation: "Consumers are still sitting on a fair amount of savings, especially those households earning between $50,000 and $100,000 of take-home income. Those Americans are the primary demographic for entry-level homes and first-time homebuyers, which typically make up around one-third of all homebuyers. However, they are being squeezed out by the current market conditions."

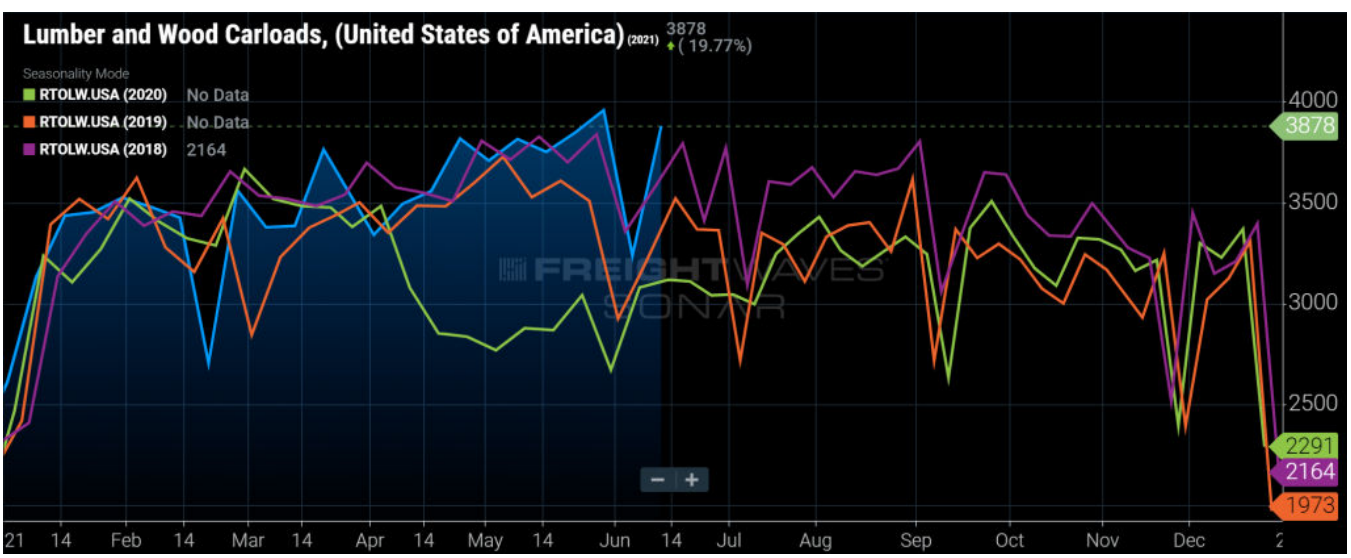
In the following pages, we will discuss the impact that the volatile housing market is having on the flatbed trucking industry as well as potential impacts on other modes.

The domestic transportation markets are clearly being influenced by the pick-up in housing starts, particularly the flatbed trucking market.

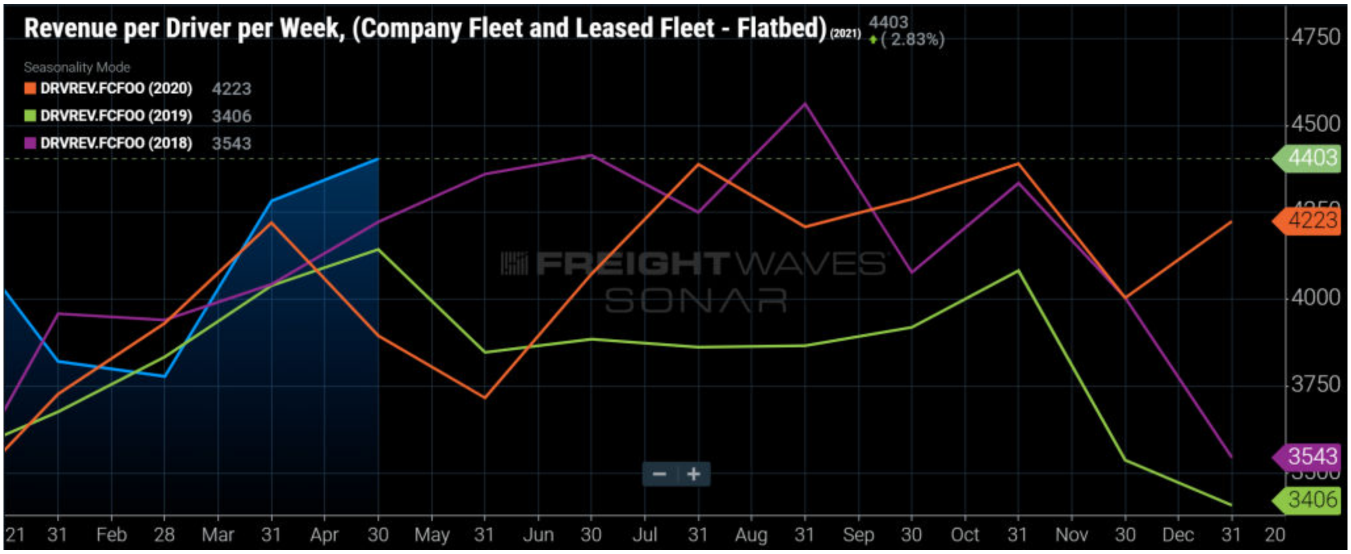
We can see this most clearly in the comparison of total housing starts (blue line on the right axis in the chart below) to flatbed outbound tender rejection rates (green line in on the left axis on the chart below). We first saw the flatbed tender rejection rate increase in late 2019, in accordance with a pick-up in housing starts in late 2019 that persisted through early 2020. After a COVID-related dropoff, housing starts rose steadily from April 2020 until April/May 2021 and have corresponded to increases in the flatbed tender rejection rate. As we stand now in June 2021, both indices are off the recent highs reached this spring, with housing starts being limited by available lots, expensive building materials and available construction workers.



In addition to increases in flatbed trucking, volumes of lumber and wood carload originations on the U.S. railroads are above the levels of recent years, including 2019, which was also a robust year for the movement of building materials.

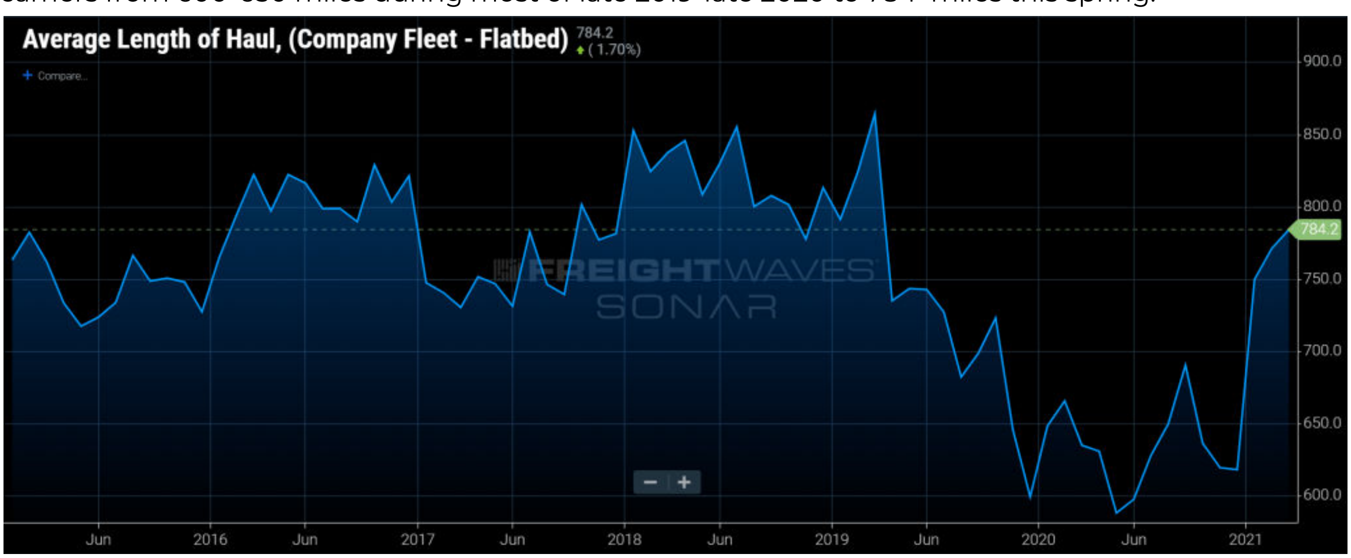


As a result of the recent pick-up in housing starts and the related increase in the movement of building materials and tightening in the flatbed trucking market, flatbed carriers have become more profitable of late. One relevant operating metric related to profitability is revenue per driver per week for the flatbed industry (taken from the Truckload Carriers' Association survey of small and mid-size carriers), which was higher this spring than during the previous three years. In addition, the April data (most recent month available) is at the top of the overall four-year range with the exception of late summer 2018 (purple line below), a very strong period for overall freight demand.

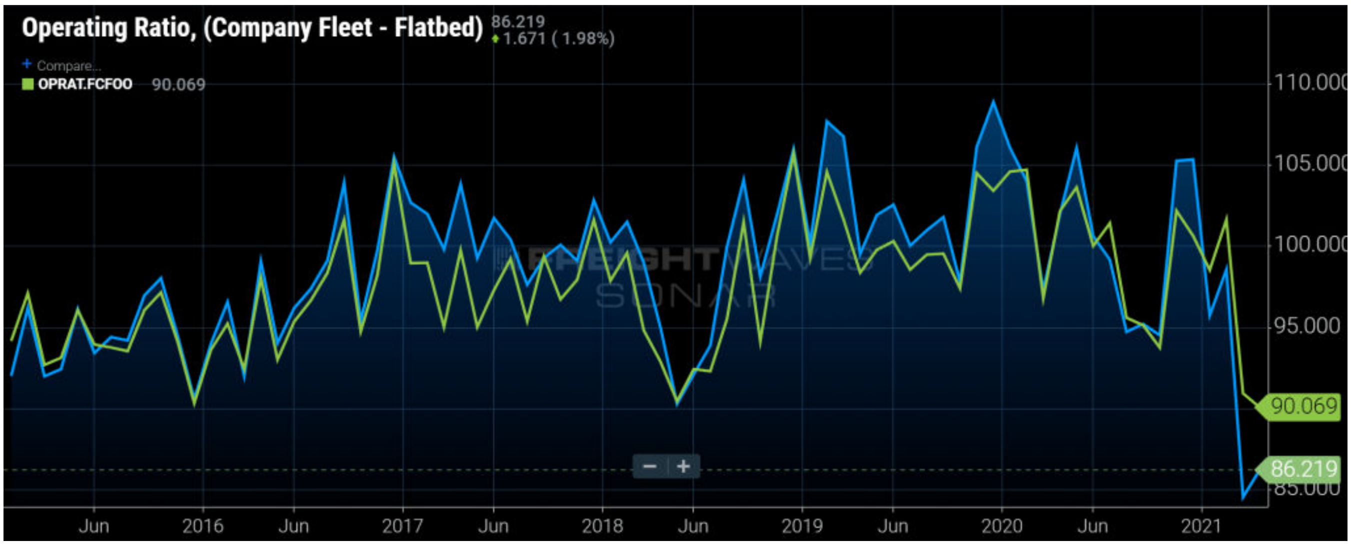


The flatbed carriers' higher revenue per driver per week, as shown in the chart above, is likely a combination of higher revenue per mile and a greater number of loaded miles per driver driven, which in turn, is likely a result of carriers being more selective in accepting loads and not accepting loads that will take them out of route or are low-rated.

In addition to carriers accepting fewer loads that take them out of route, part of the reason why revenue per driver per week has increased is a recovery in the average length of haul for flatbed carriers from 600-650 miles during most of late 2019-late 2020 to 784 miles this spring.



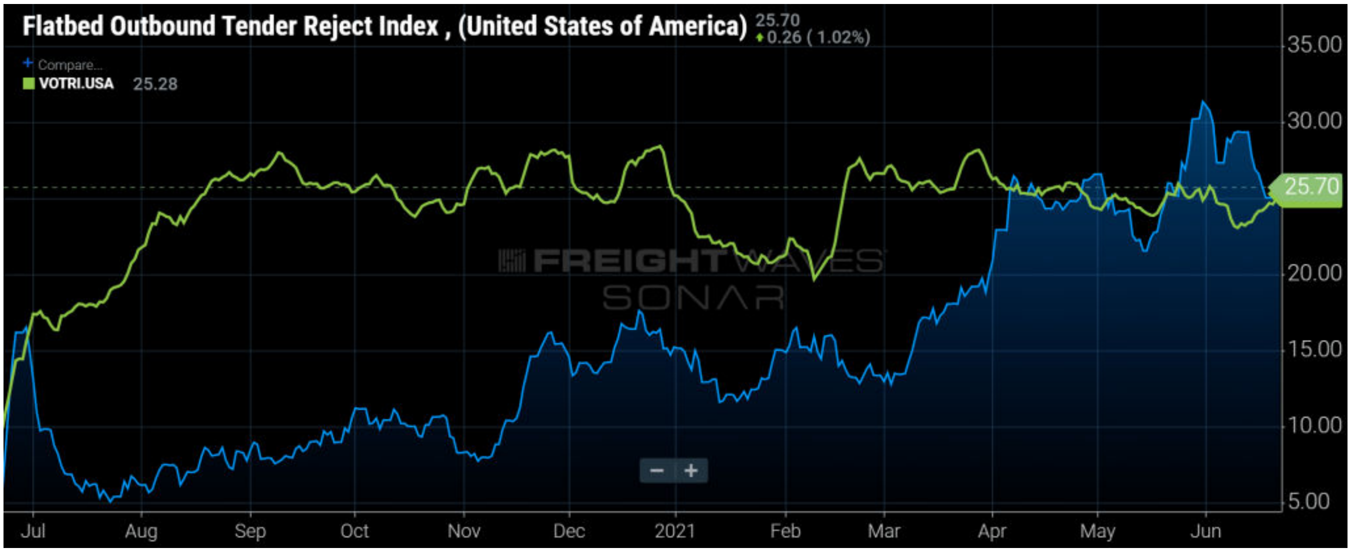
The operating ratio chart below shows two major trends: (1) flatbed carriers in recent months have posted the lowest operating ratios (or highest operating margins) of the past five years; and (2) a gap has opened up between the flatbed operating ratios for company-owned fleets only (shown in blue below) and the operating ratios for flatbed carriers when company-owned equipment and owner-operators are both included (shown with the green line below). Therefore, flatbed carriers are the most profitable they have been in the past few years and flatbed carriers have the luxury of handling the most profitable loads in their own networks – those are not always the highest-rated loads if they result in fewer out-of-route miles.



How tight is the flatbed market?

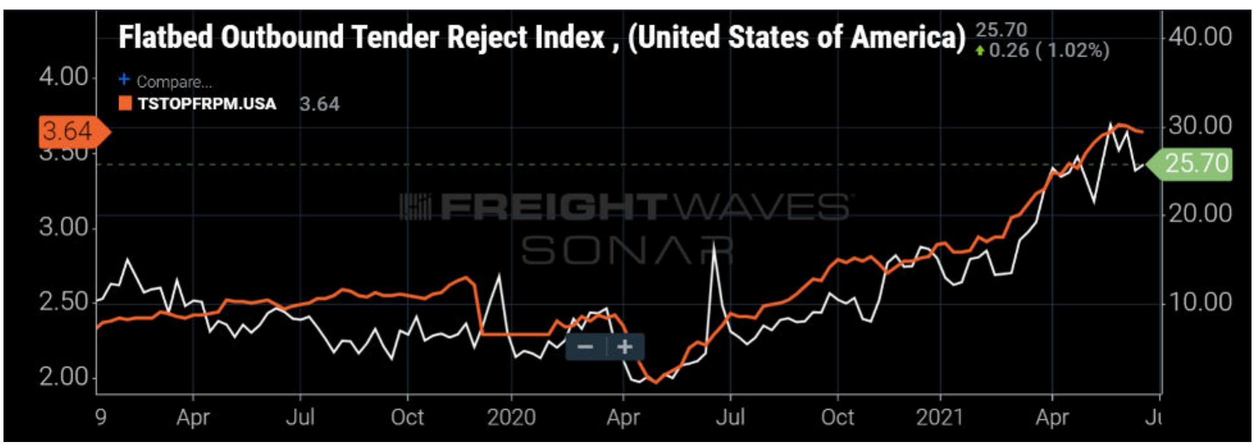
Relative flatbed capacity is the tightest it has ever been in recent years as rejection rates eclipsed 30% in June 2021. The Flatbed Outbound Tender Reject Index (FOTRI) measures relative capacity based on the percentage of electronically tendered loads (most of which are contracted tenders) that are rejected by carriers, usually because more lucrative spot loads are available.

The flatbed market held up better than the overall trucking market during the historically soft period in the back half of 2018 and throughout 2019. When the pandemic hit and shut down nearly all industrial production (which caused the loosest period for trucking in recent history), the Outbound Tender Reject Index (OTRI) fell below 3%. The flatbed market, which is heavily skewed to the industrial economy and housing markets, loosened even faster as rejection rates briefly fell below 1%.



(FreightWaves SONAR: The U.S. flatbed tender rejection rate (blue) remained relatively low during most of 2020 before catching up to, and exceeding, the dry van tender rejection rate (green) in 2Q21. Currently, the dry van and flatbed tender rejection rates are roughly even.)

Unlike the dry van and reefer markets, the flatbed market didn't experience the drastic tightening of capacity throughout the summer months of 2020, but has slowly risen to elevated rejection rates in more recent months. Outside of a disruption in late June 2019, FOTRI didn't reach equilibrium (in the high-single digits, where we believe contract rates are neither inflationary or deflationary) until late September, when it remained relatively stable until the week prior to Thanksgiving.



(FreightWaves SONAR: Flatbed Outbound Tender Reject Index {white} and Truckstop.com's flatbed spot rate {orange}, 2019-2021)

Currently, flatbed rejection rates sit at 25.7%, which is nearly 2,000 basis points higher than a year ago and more than 1,600 basis points higher than 2019 levels. The recent tightening in the flatbed market is led by the industrial economy coming back online, as well as elevated housing starts over the past six months.

The tightness in the flatbed market is a prime leading indicator for flatbed loads that fall through the routing guide and hit load boards. The flatbed spot rate, as reported by Truckstop.com's load board, tracks extremely close directionally to FOTRI. FOTRI, which is reported on a daily basis, compared to a weekly basis with the spot rate, gives insight into where spot rates are headed in the short-term.

Since May 2020, flatbed spot rates have increased by 85% to $3.64/mi, including fuel surcharges, just off the all-time high in the dataset which dates back to January 2019. Flatbed spot rates have pulled back by $0.05 per mile since the beginning of June, following the slight loosening in the flatbed market as rejection rates have fallen by 563 basis points since Memorial Day.

Ultimately, as the industrial economy continues its recovery, the flatbed market will likely remain strong. Housing prices are impacting housing starts and the housing market in general, which is a headwind for the flatbed industry. Further strength in housing (i.e. increases in housing starts and existing home sales) would likely drive rejections higher as capacity constraints pop up across the entire industrial economy with higher freight rates to follow.

The South flexes its muscles when it comes to housing starts

Building Permits, U.S. and Regions

	U.S. TOTAL	ONE UNIT	2-4 UNITS	5+ UNITS	MULTI-FAMILY	NORTH-EAST	MID-WEST	SOUTH	WEST
2016	1,207	751	35	421	456	117	186	594	310
2017	1,282	820	37	425	462	124	195	627	336
2018	1,329	855	39	434	473	123	185	677	343
2019	1,386	862	42	481	524	141	185	710	350
2020	1,471	979	47	444	492	135	202	776	358
	Seasonally Adjusted Annual Rates								
2020 - May	1,246	753	44	449	493	112	172	681	281
Jun	1,296	850	41	405	446	128	186	685	297
Jul	1,542	993	49	500	549	146	236	783	377
Aug	1,522	1,055	53	414	467	127	195	823	377
Sep	1,589	1,121	46	422	468	156	215	837	381
Oct	1,595	1,141	60	394	454	141	220	848	386
Nov	1,696	1,155	54	487	541	165	233	890	408
Dec	1,758	1,233	49	476	525	155	259	898	446
2021 - Jan	1,883	1,268	55	560	615	195	245	956	487
Feb	1,726	1,145	48	533	581	170	250	863	443
Mar	1,755	1,194	58	503	561	155	253	908	439
Apr	1,733	1,148	50	535	585	168	228	918	419
May	1,681	1,130	57	494	551	156	222	897	406

Last Updated: 06/16/2021

For greater detail and analysis of these and other data, go to HousingEconomics.com

Source: U.S. Bureau of the Census, Construction Reports, Series C-20, Housing Starts.
Prepared by Economics Department, NAHB. Available at www.HousingEconomics.com

The South region is the hottest housing region in the country, given the ample room for expansion compared to denser regions like the Northeast. The region itself accounts for more than 50% of all housing starts in the country, with 73% of the housing starts in May 2021 being single family homes. The region is by far the largest in the country and includes: Alabama, Arkansas, Delaware, Washington D.C., Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

The rapid migration from the Northeast into the southern U.S. in 2020 is having a substantial impact on the housing markets – especially in Florida, North Carolina, South Carolina, Tennessee and Texas – which are five of the top eight states experiencing an influx in migration, according to North American Moving Services. The number of housing starts in the South region increased 59.6% year-over-year (y/y)while increasing just 3.8% sequentially in May, the second-smallest increase across the four regions. The smaller increase on a month-over-month (m/m) basis compared to the other regions is largely due to the higher base.

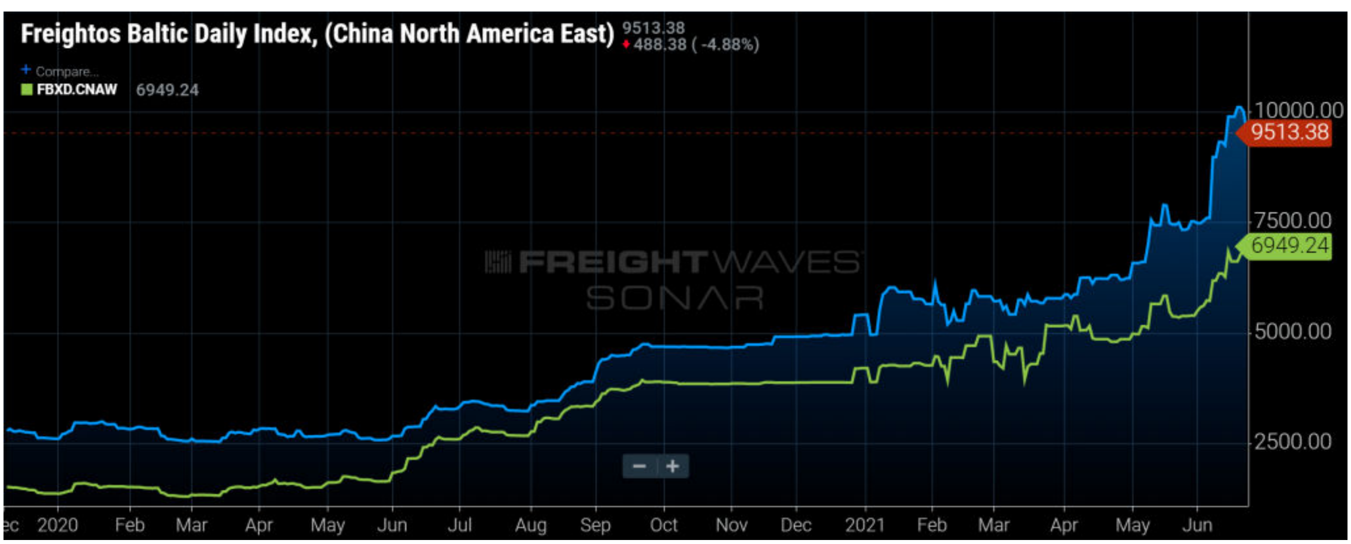
The Midwest region was one of the hottest regions for housing starts in the most recent release from the Census Bureau. The region accounted for just 15% of all new housing starts across the country, but the May figure represented a stark recovery from both April and the year prior. Housing starts in May were up 66% y/y and 29.9% sequentially, the largest percent increase of any region. The rebound in housing starts is somewhat of a surprise given that both Michigan and Illinois were in the top 10 states in terms of outbound migration. The region is second behind the Northeast in outbound migration and ultimately the South region is the region benefitting from these moves.

The West region, which is home to: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, had a relatively soft month as housing starts only increased 1% m/m in May. The region is largely experiencing some inter-regional moves as California to Idaho has been among the most popular moves, though there are numerous families leaving California for the South region (particularly Texas and Florida). The West region represents more than one-quarter of the overall housing starts in the country, but on a year-over-year basis the number of housing starts is soft compared to the other regions as housing starts have increased just 24.5% y/y. The availability and affordability of lots appears to be impairing further development.

The South should remain one of the hotter regions for flatbed volumes (assuming the trends in housing continue). In addition to the industrial economy, which is weighted toward the southern states, the housing boom will likely keep demand elevated for a prolonged period while also keeping capacity in the region tight.

Housing starts and existing home sales have a meaningful impact on dry van freight volume

Existing home sales equal over 90% of total home sales with new home construction representing less than 10%. While new home construction has a bigger impact on overall freight volume with the movement of lumber and other building materials, the impact that existing home sales have on dry van freight volume should not be underestimated. Following new or existing home sales, consumers typically buy furniture to fit the dimensions of their new homes and often upgrade appliances. In addition, many existing home sales give rise to renovation projects, particularly in older homes.



(FreightWaves SONAR: Daily ocean rates to move 40' containers from China to the U.S. East Coast {blue} as well as rates to move 40' containers from China to the U.S. West Coast {green} have risen steadily since the pandemic began, including another surge in June 2021)

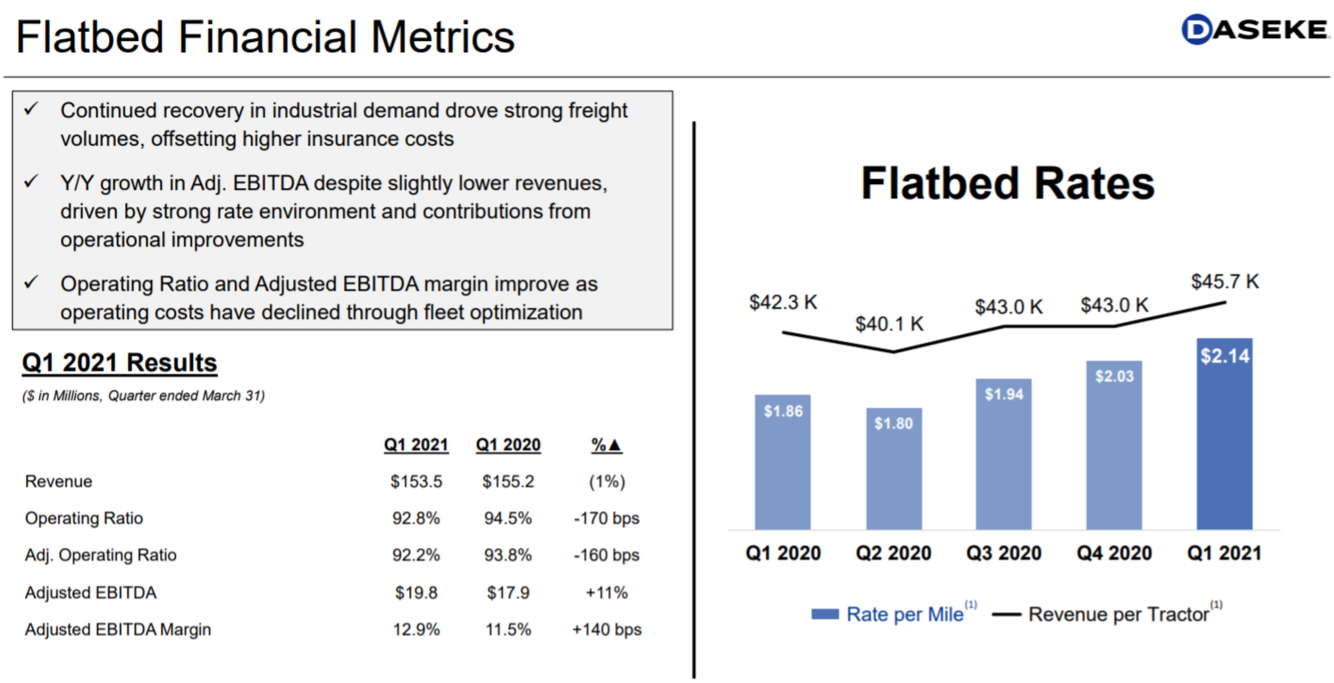
Furniture is manufactured all over the world and some of the more expensive pieces may be manufactured domestically or in nearby markets. But, China dominates in the manufacturing of cheaper furniture. Much of the furniture that is manufactured in China moves via rail intermodal to the major consumption centers in the eastern and midwestern states.

Trade flows are similar for appliances and white goods, with China being the "manufacturer of the world" and the U.S. being the largest consumption center. In addition, a significant portion of the white goods manufactured for U.S. consumption are manufactured in Mexico and are moved north crossborder.

A strong quarter from Daseke in a typically soft period

Daseke, a publicly traded trucking company specializing in industrial and flatbed, reported a relatively strong first quarter. The company reported that its adjusted operating ratio improved by 160 basis points year-over-year to 92.2% for the flatbed segment following significant changes in the segment over the past few years.

Jason Bates, CFO of Daseke, stated on the first quarter earnings call "Q1's results were driven by the various ongoing operational improvements we have undertaken, combined with improving market demand. The uplift in construction-related verticals, such as lumber, roofing, steel and glass, combined with strength in munitions, gained momentum in the first quarter. And this growing demand, combined with a tighter market capacity, led to a strong rate environment in the first quarter."



(Source: Daseke Q1 earnings presentation)

The increased flatbed demand across the entire industrial economy, which has recovered at a slower rate than the overall economy, has resulted in the elevated rate per mile that flatbed carriers experienced in the first quarter that will continue in the coming quarters. Daseke's executives said on its analyst call, "Flatbed rates were very strong in the quarter as rate per mile grew 15% year-over-year, as demand across the broader industrial market continues to improve sequentially."

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