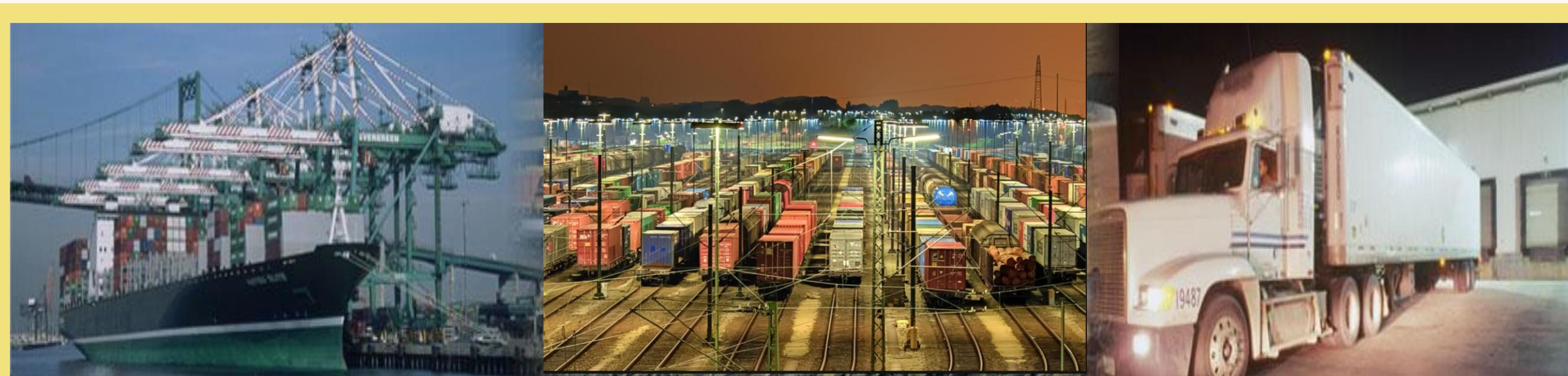


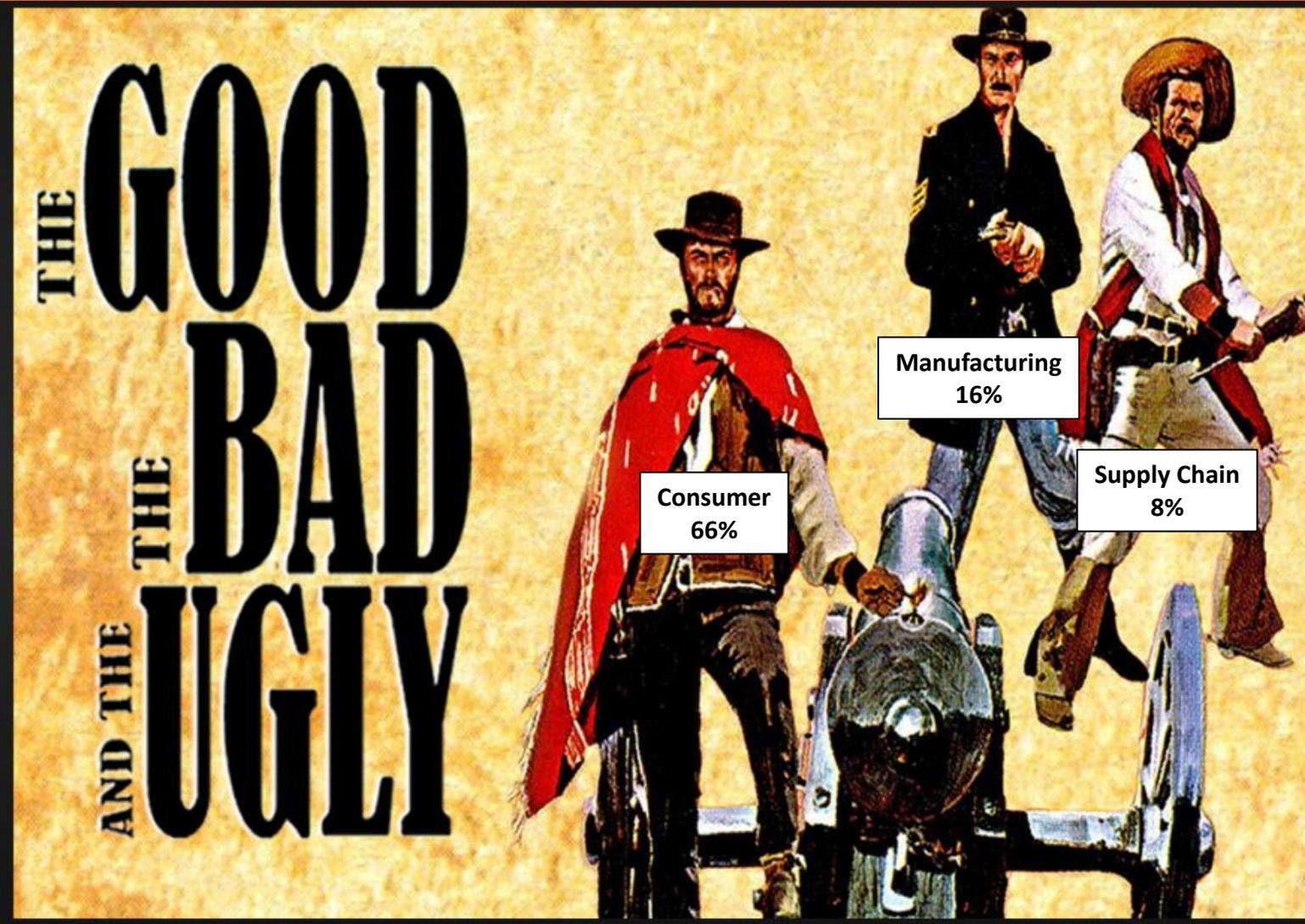
# ECONOMIC UPDATE

**SAM KYEI, CHIEF ECONOMIST**

**Southwest Association of Rail Shippers (SWARS) Conference  
Fort Worth, TX  
September 30, 2021**



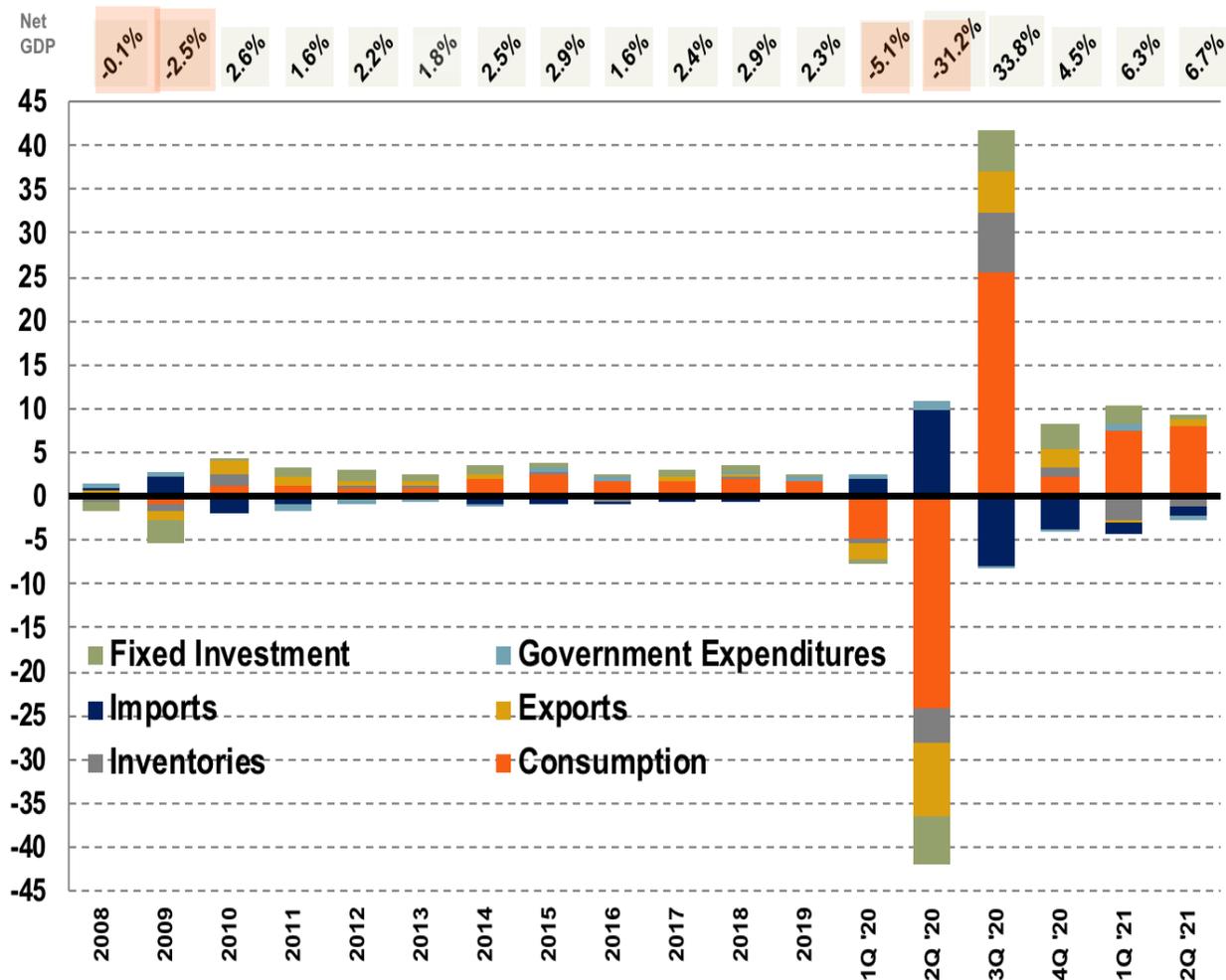
# Agenda



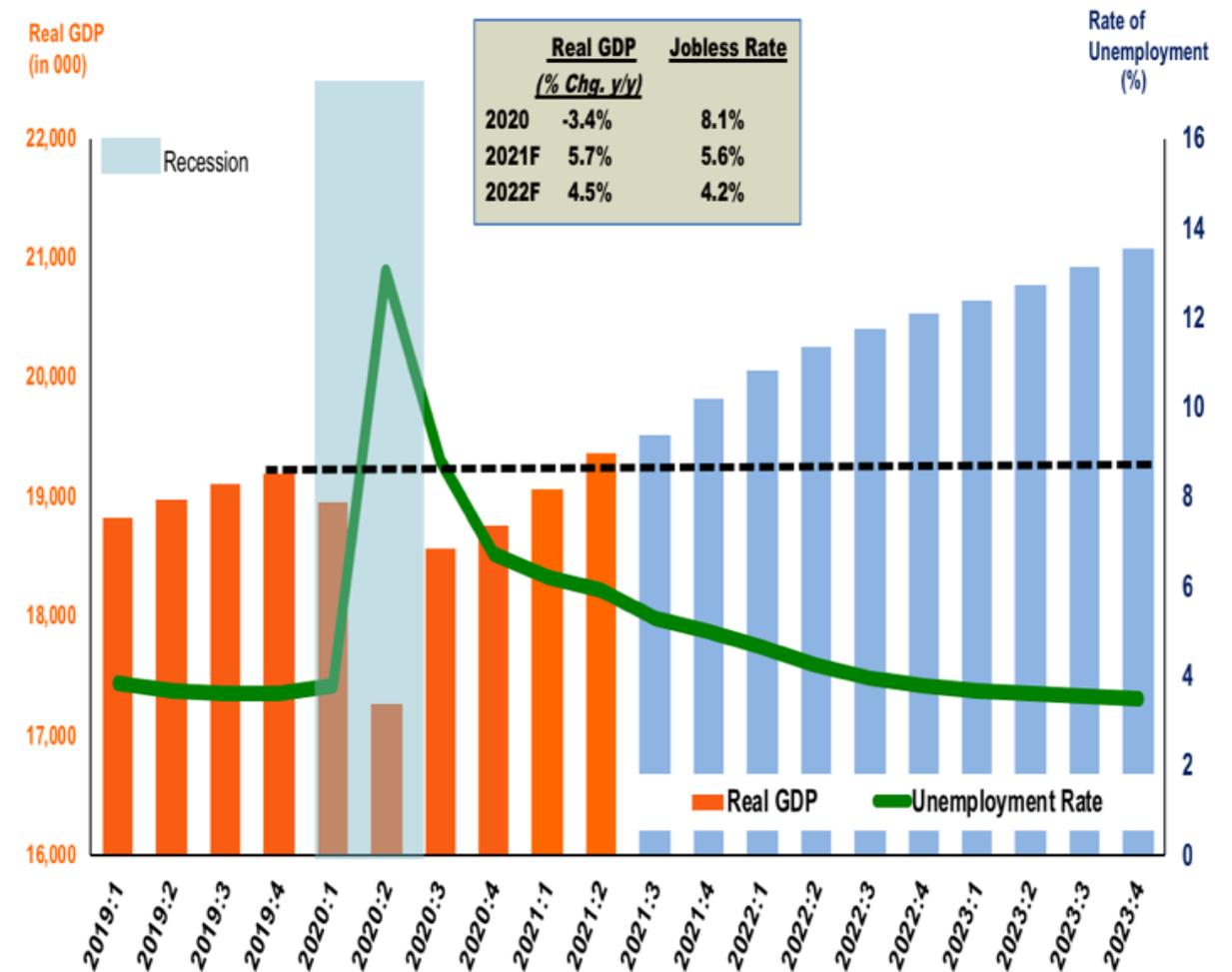
# U.S. ECONOMIC GROWTH

Q2 real GDP rose 6.7% q/q. Expect 5.7% y/y growth in 2021 and 4.5% in 2022. The economy gets to full employment around 2023

## Real GDP Growth and its Contributions



## Real GDP vs. Rate of Unemployment



Source: U.S. Dept. of Commerce, Bureau of Economic Analysis, September 30, 2021

Source: BEA, August 26, 2021, IHS Markit September 2021

# THE CONSUMER SECTOR

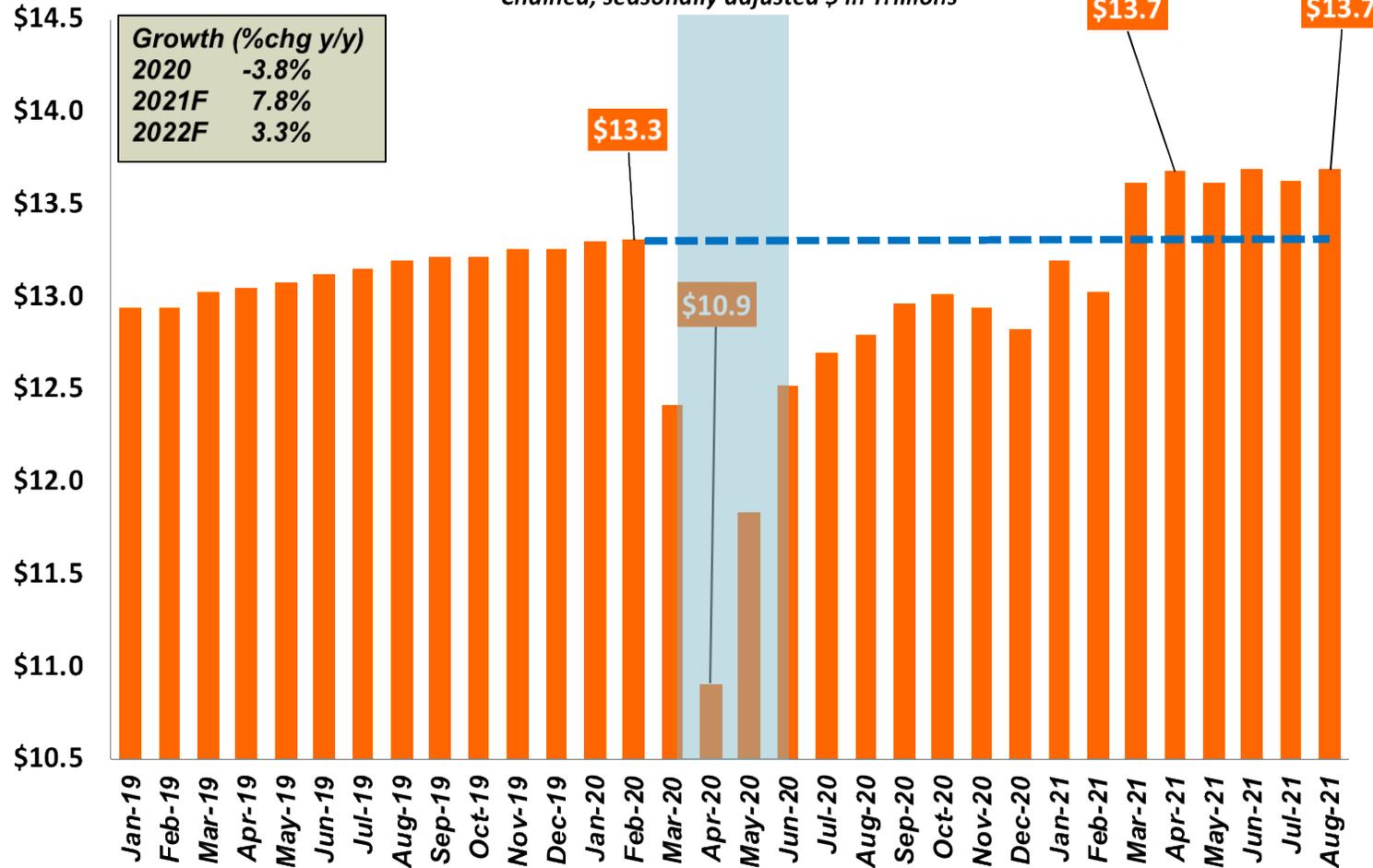
Consumer spending is now exceeding pre-pandemic levels, up 7.0% y/y in Aug. '21, reflecting the economic stimulus and vaccinations



## U.S. Consumer Spending

August 2021

Chained, seasonally adjusted \$ in Trillions

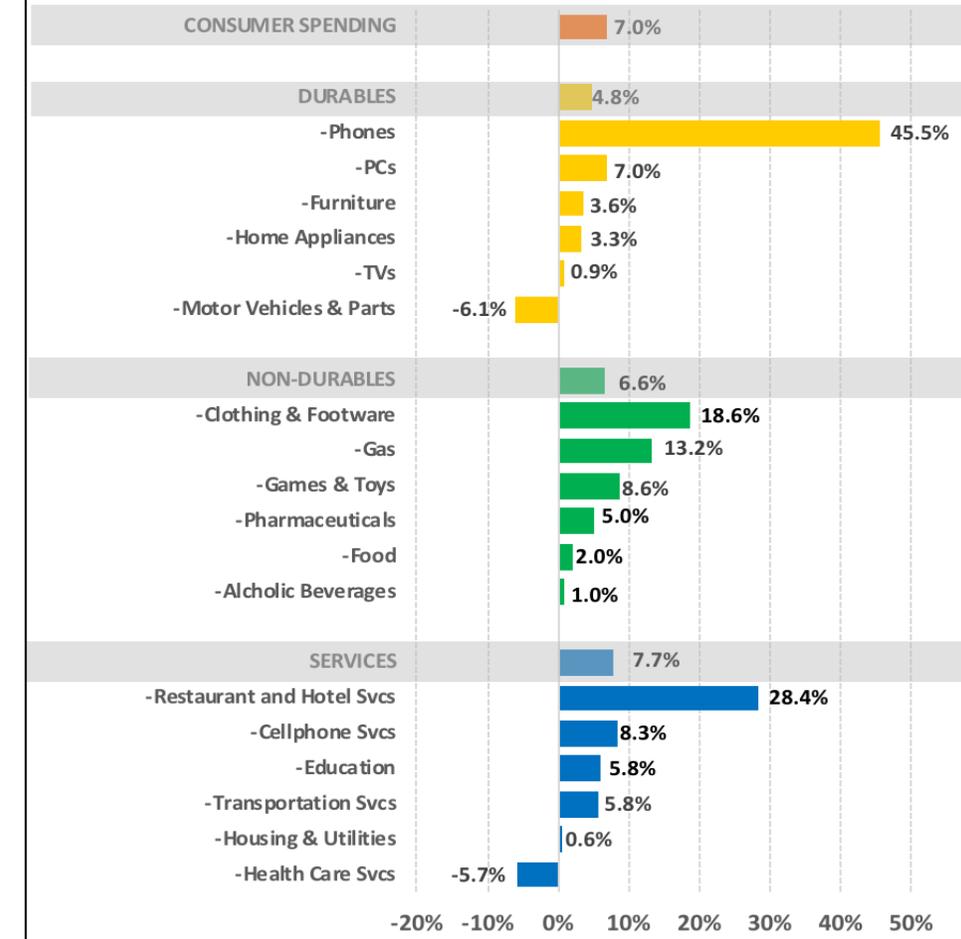


Growth (%chg y/y)	
2020	-3.8%
2021F	7.8%
2022F	3.3%

## SELECTED CONSUMER ITEMS

August 2021

(% Chg. Y/Y)

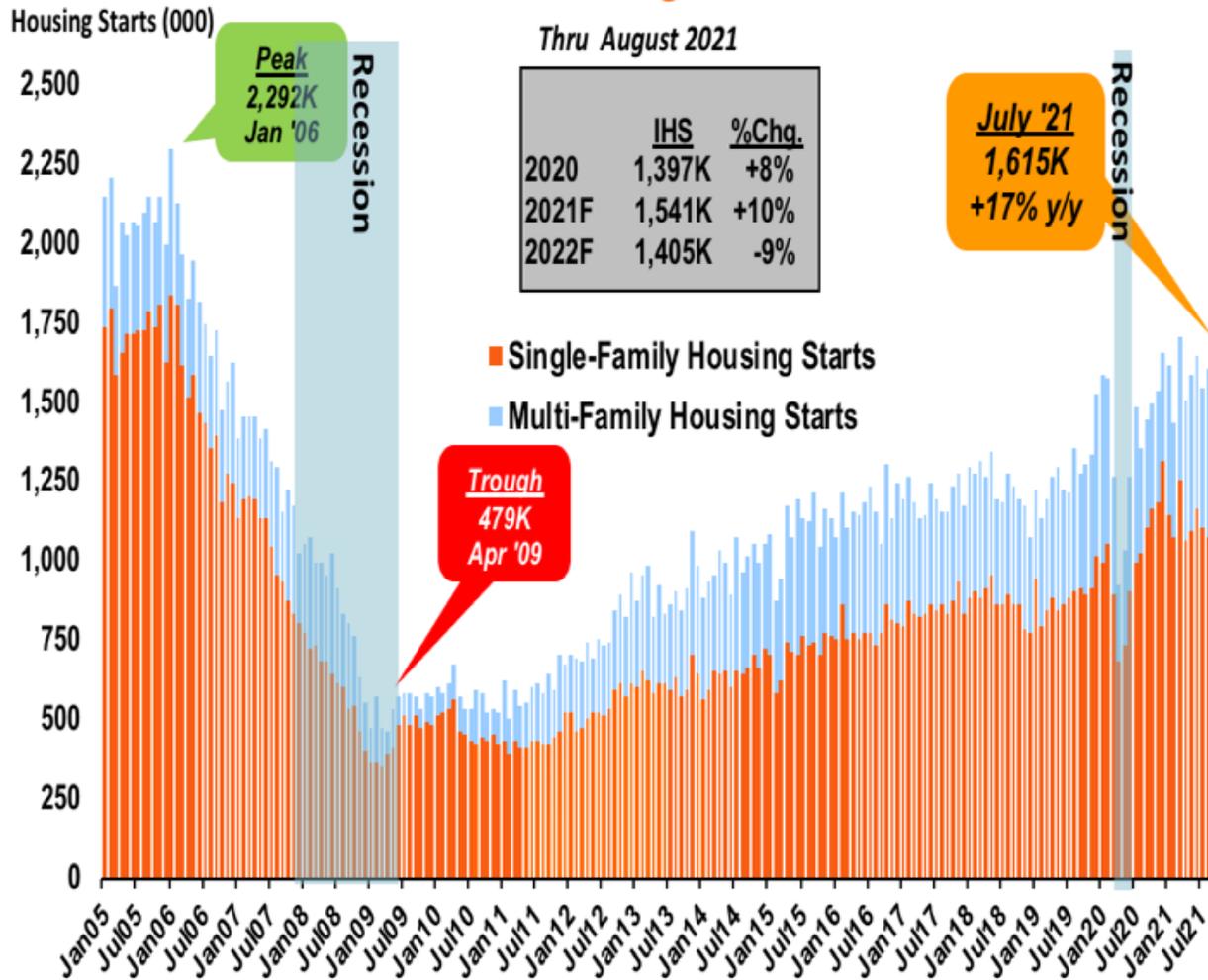


Source: Bureau of Economic Analysis, October 1, 2021, IHS Markit, September 2021

# THE HOUSING MARKET

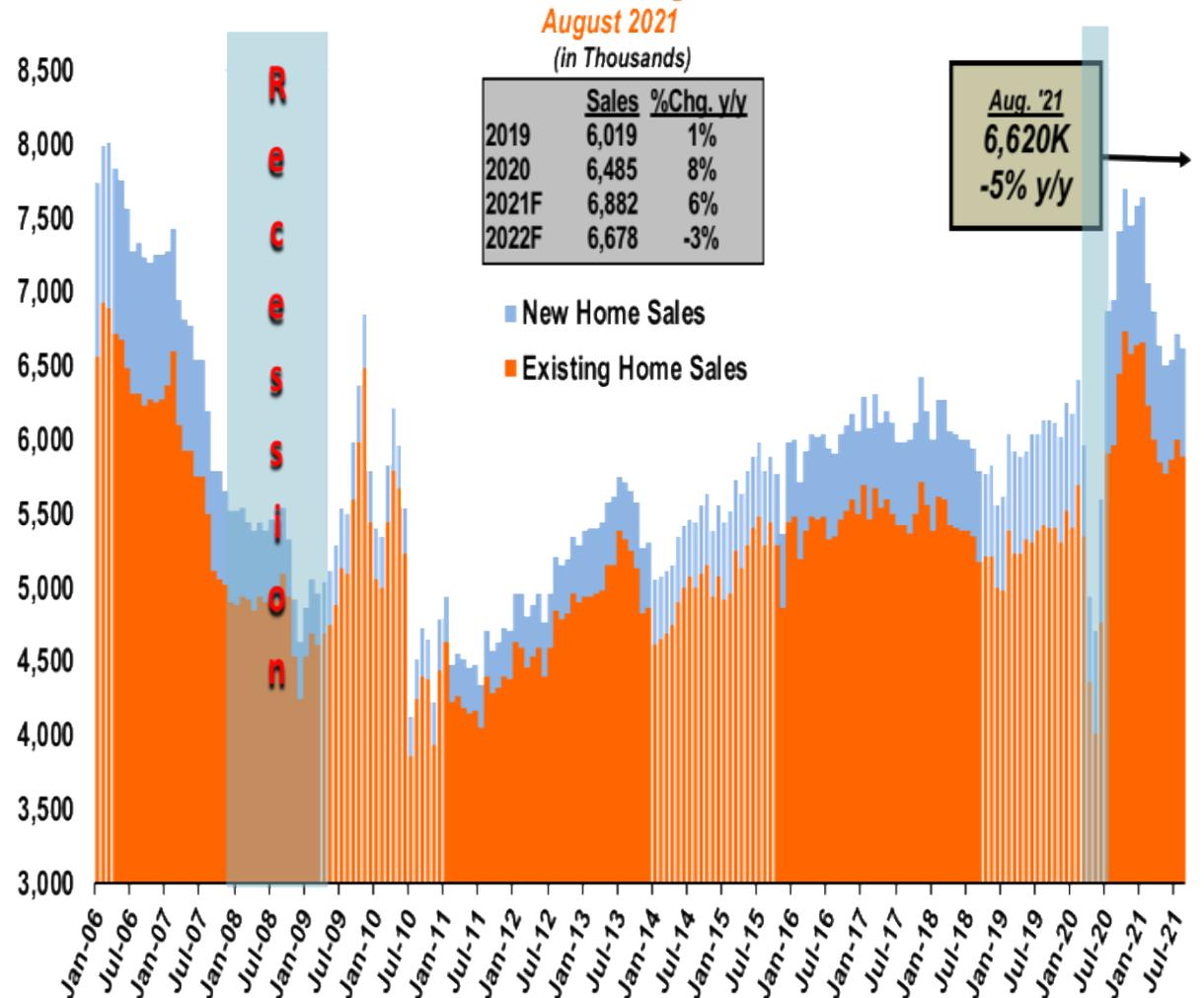
The housing market is still strong. But, the chaotic market is showing signs of calming down, with skyrocketing home prices

## Housing Starts



Source: Census Bureau, September 21, 2021, IHS Markit, September 2021

## U.S. New and Existing Home Sales



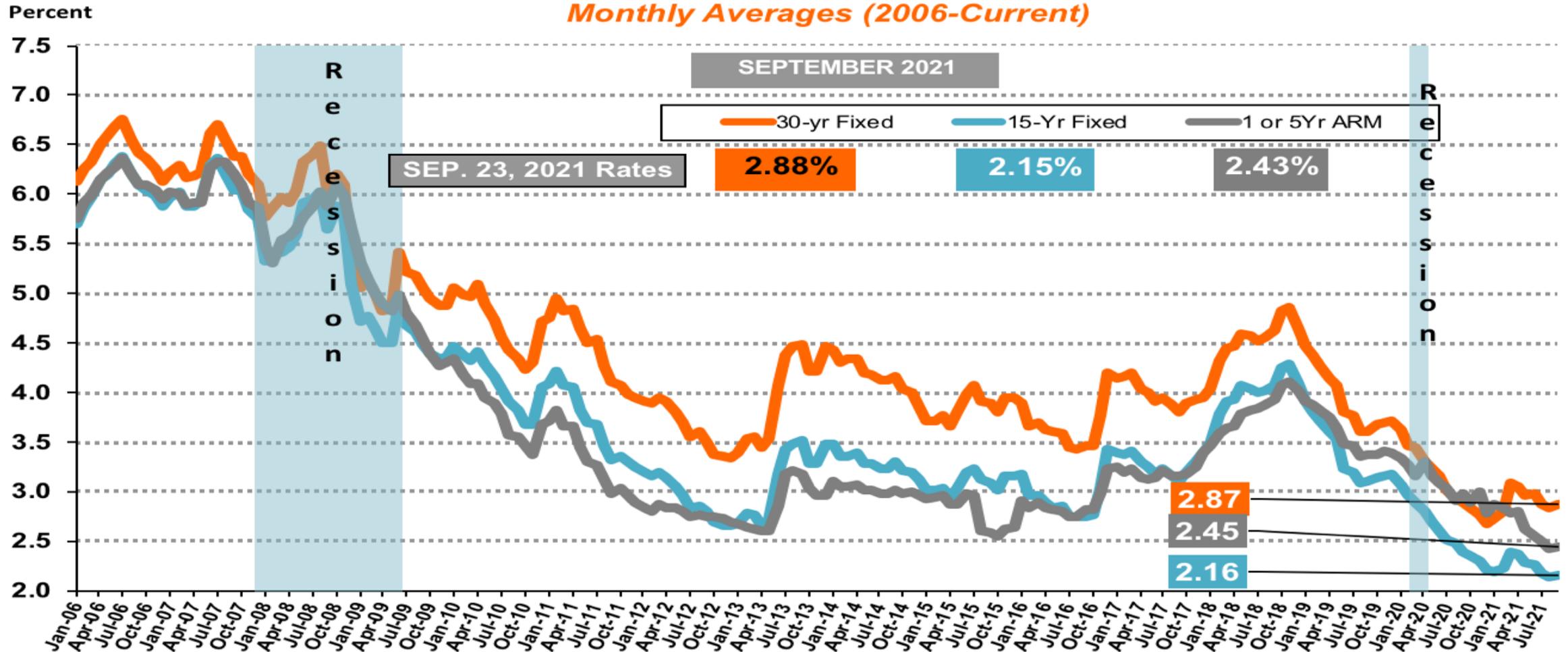
Source: U.S. Department of Census, September 24, 2021; NAR, September 23, 2021, IHS Markit, SAK Economics LLC, Sep. 2021

# THE HOUSING MARKET

Mortgage rates have fallen by over 200 basis points since mid-Nov '18 close to record lows, due to the pandemic, trade tensions, lower interest rates



## Mortgage Rates Monthly Averages (2006-Current)



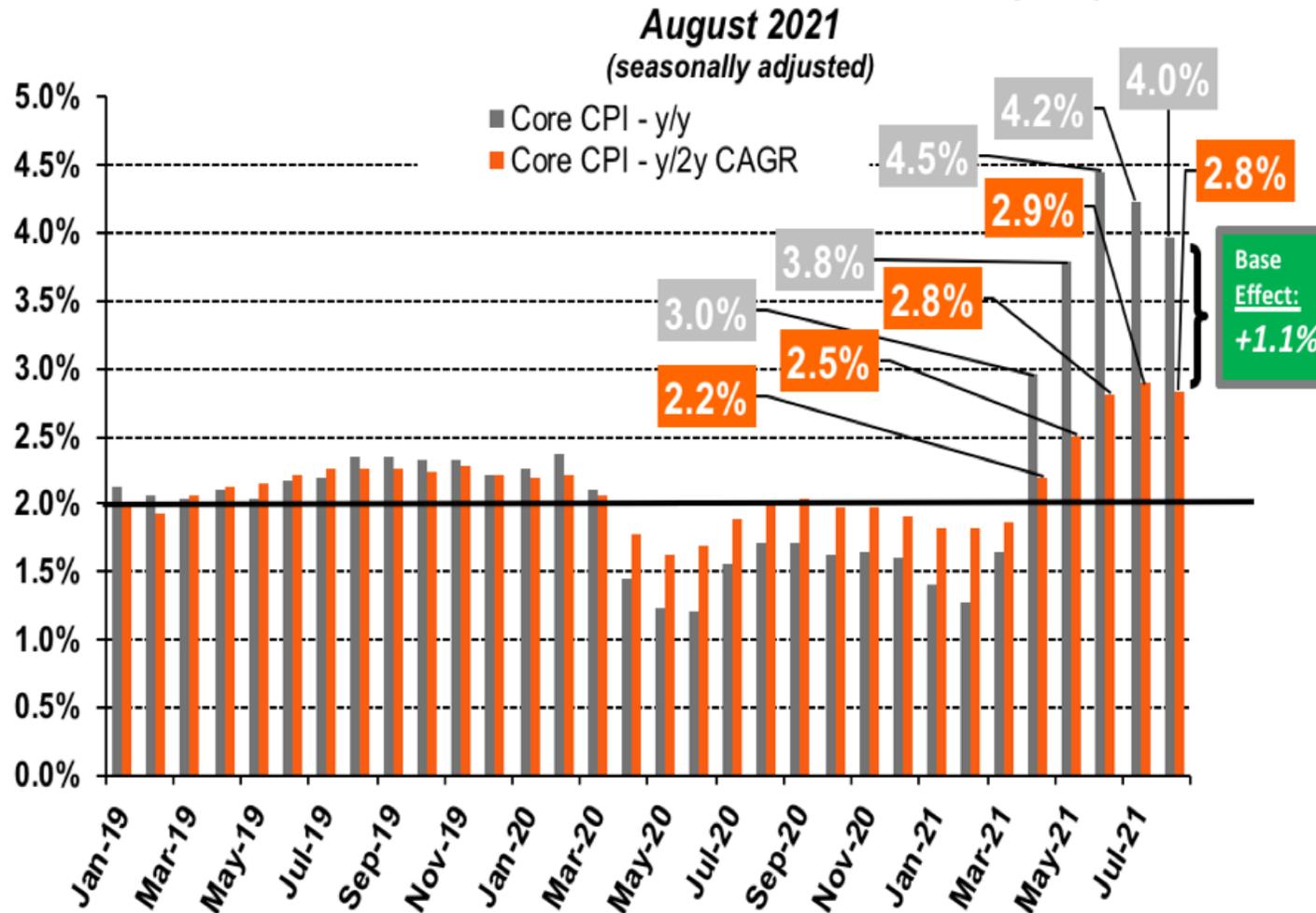
Source: Freddie Mac, Primary Mortgage Market Survey, September 24, 2021

# THE CONSUMER SECTOR

Core consumer inflation cooled to 4% y/y in August, but about a third of the gain reflects transitory base effects and supply chain bottlenecks



## Core Consumer Price Inflation (CPI)

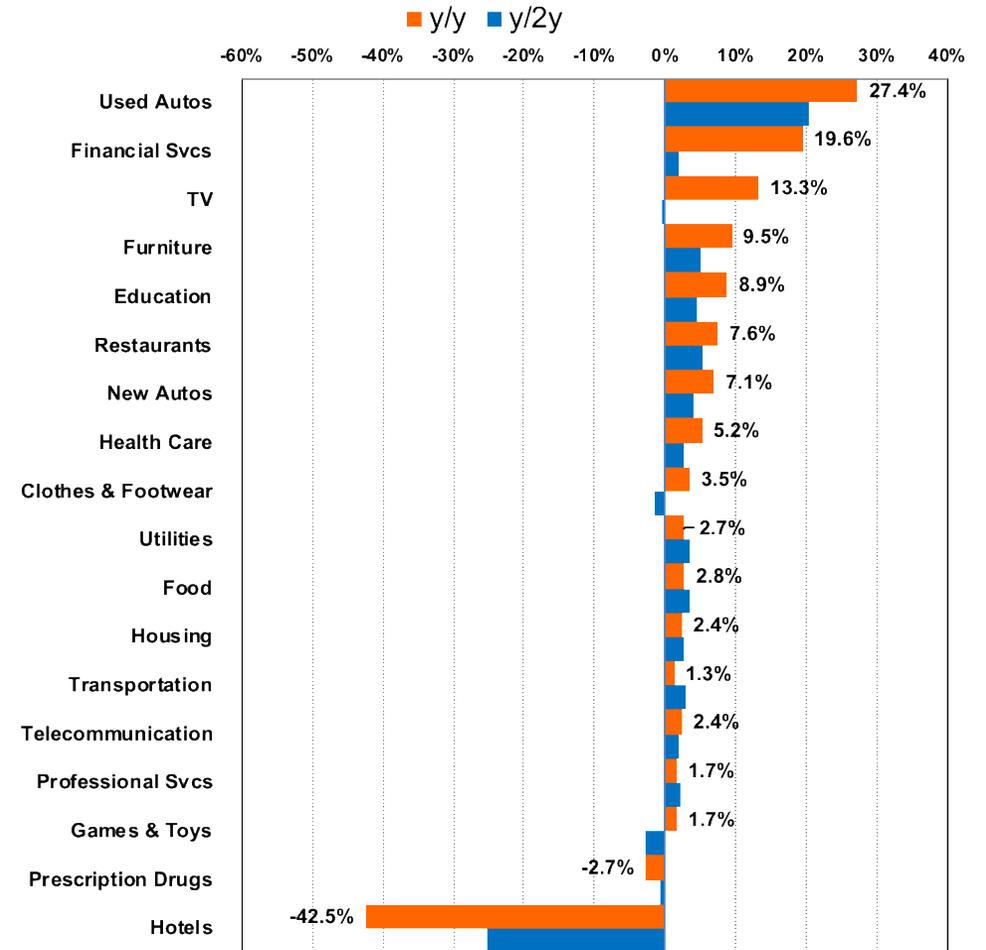


Source: Bureau of Labor Statistics, September 14, 2021

## CONSUMER PRICE INFLATION (PCE)

Selected Consumer Goods and Services

August 2021



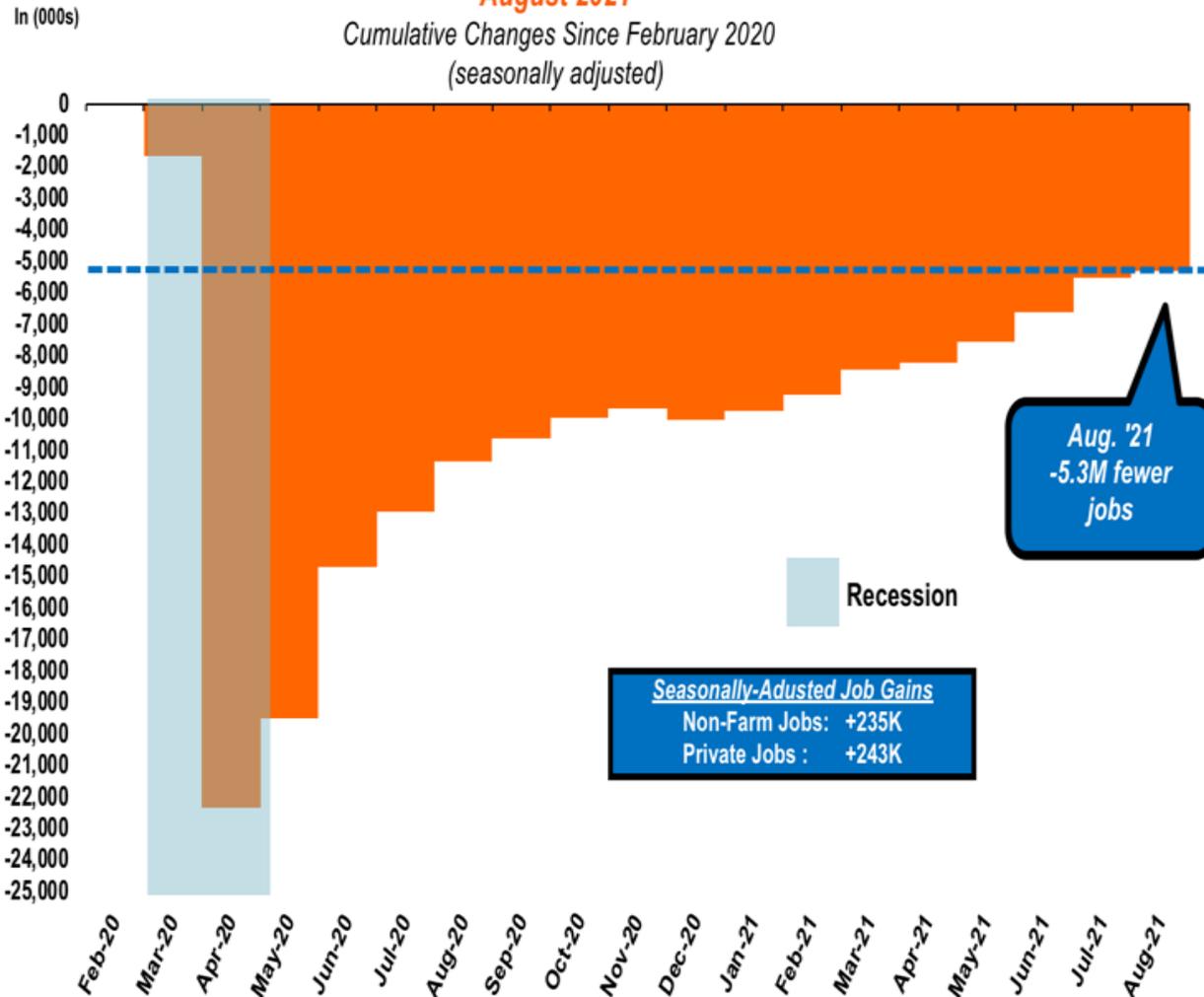
Source: Bureau of Economic Analysis, October 1, 2021

# THE LABOR MARKET

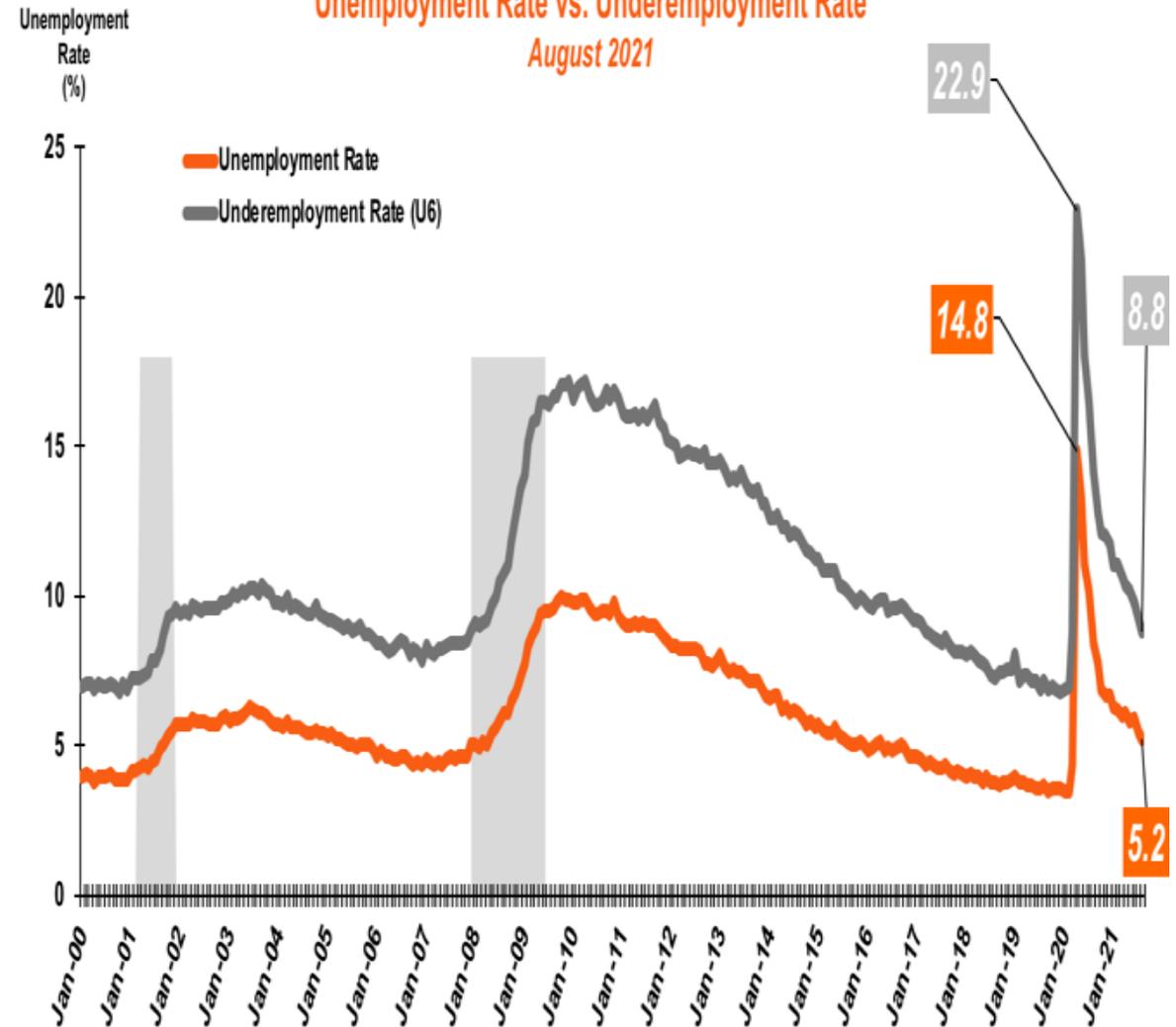
The labor market added almost 235K more jobs in Aug. '21. It lost 22.4M jobs due to the pandemic lockdowns. The jobless rate is now 5.2%

## Total Non-Farm Payroll Employment August 2021

Cumulative Changes Since February 2020  
(seasonally adjusted)



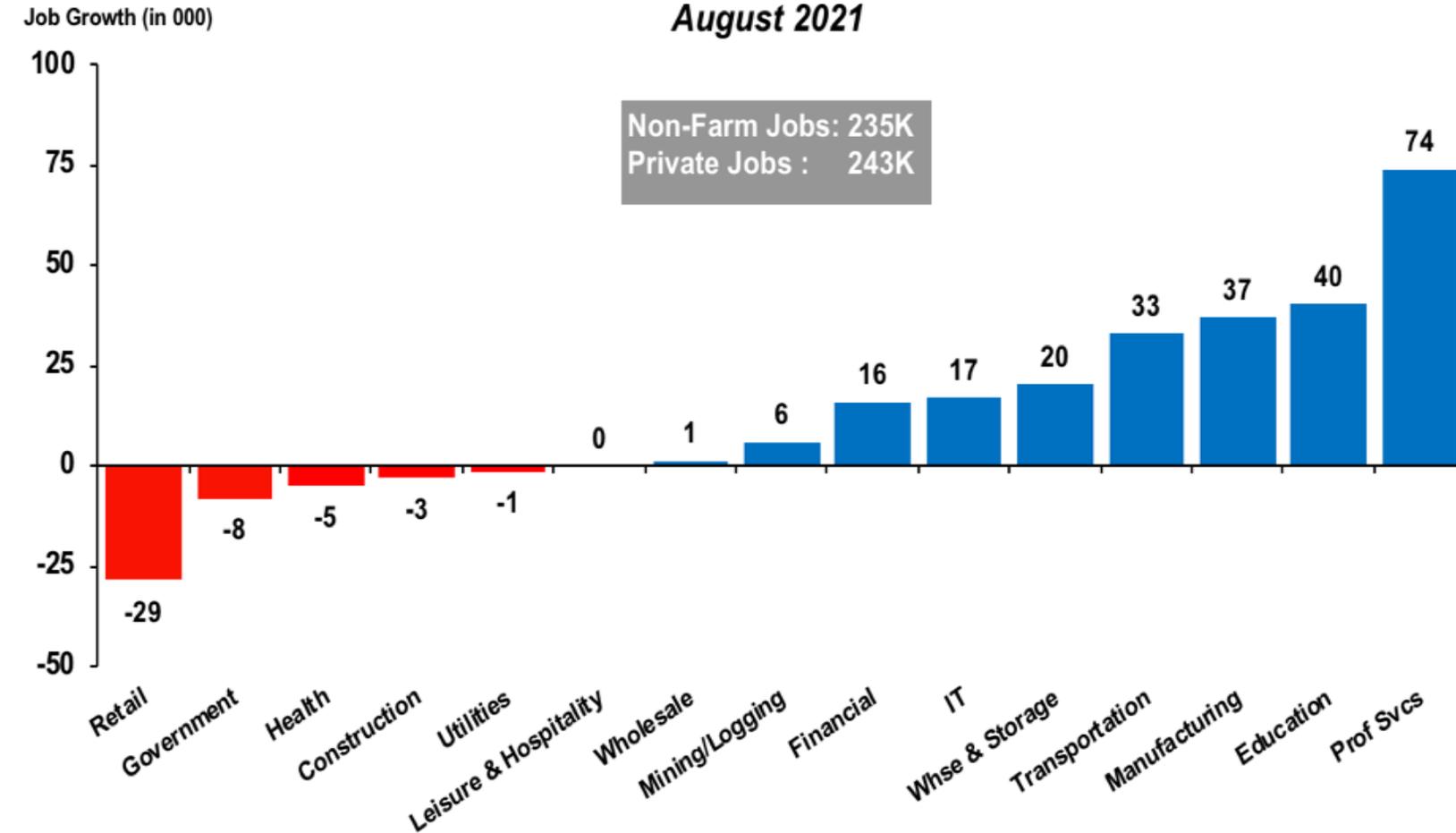
## Unemployment Rate vs. Underemployment Rate August 2021



# THE LABOR MARKET

The labor market is 76% recovered. The sectors that lost the most jobs due to Covid-19, including leisure, are showing the biggest job gains

## Payroll Employment Growth- By Sector August 2021



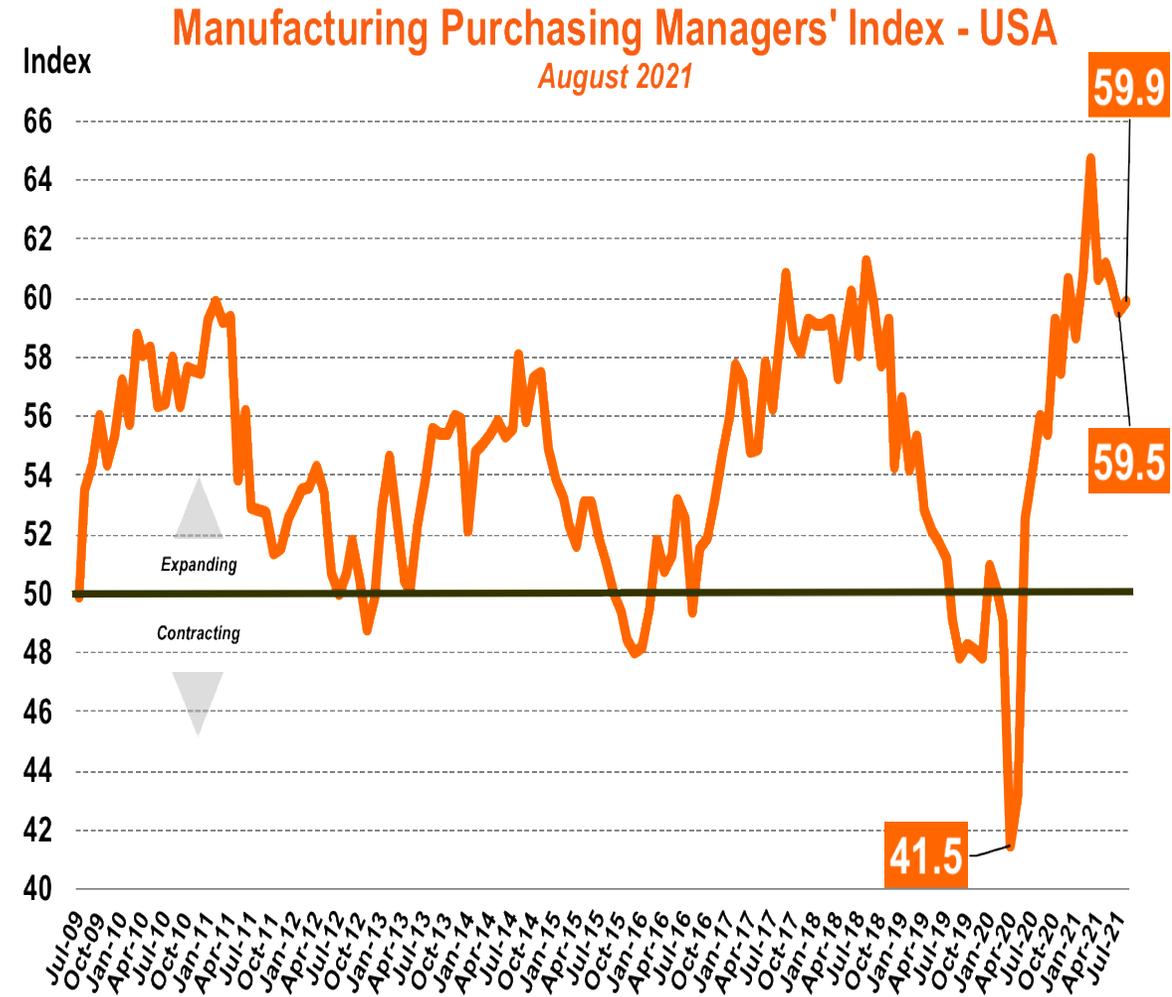
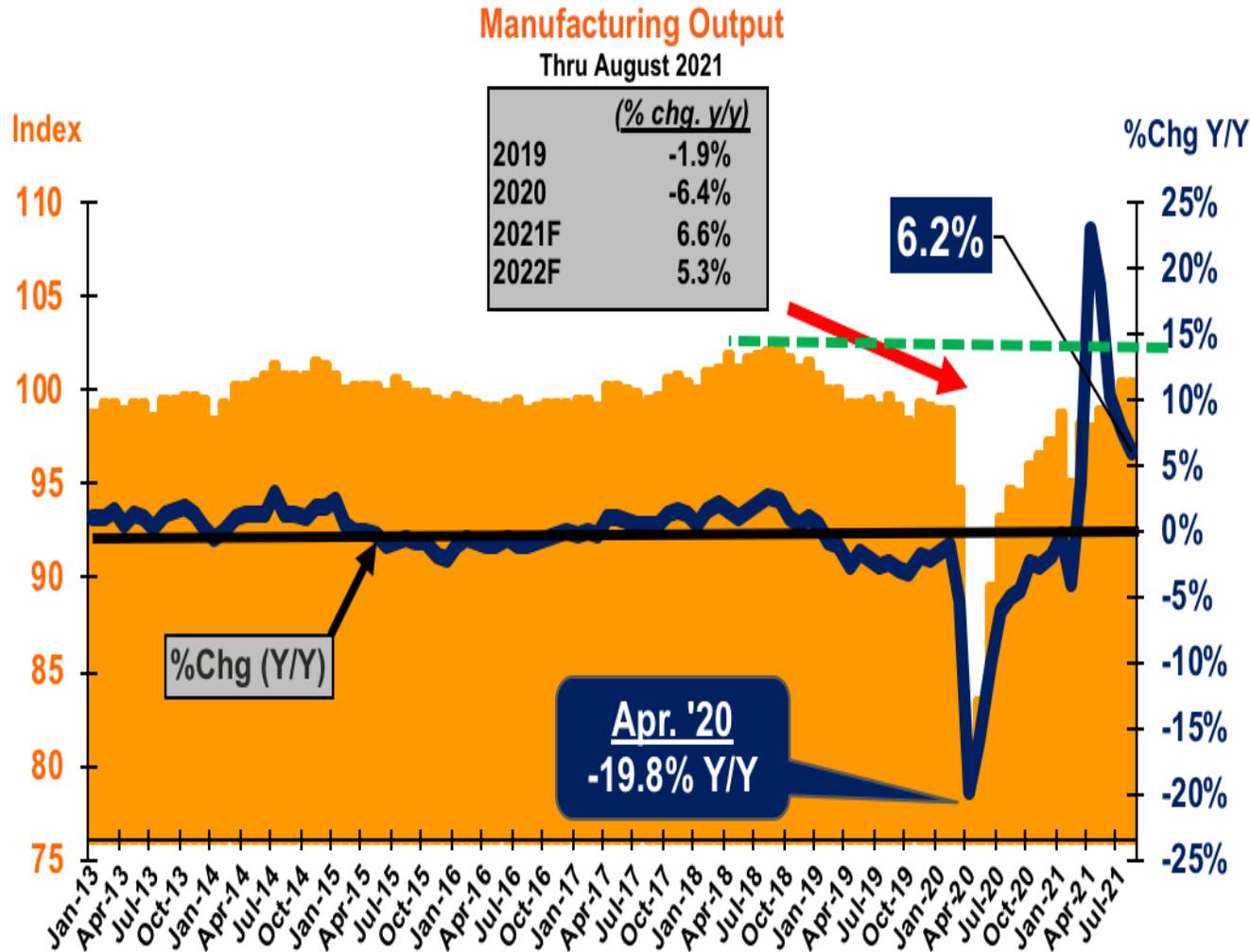
\* Temp Workers are not classified by sector

Source: U.S. Dept. of Labor, Bureau of Labor Statistics, September 3, 2021

Sector	Loss (3/20-4/20)	Gain (5/20-8/21)	Recovery%
Leisure & Hospitality	8,224	6,525	79%
Prof Svcs	2,387	1,919	80%
Retail	2,375	2,090	88%
Health	1,617	1,103	68%
Manufacturing	1,385	1,007	73%
Construction	1,113	881	79%
Education	525	367	70%
Wholesale	409	236	58%
IT	281	131	47%
Financial	279	250	90%
State & Local Govt.	229	214	93%
Transit & Passenger	186	87	47%
Warehouse & Storage	106	232	219%
Trucks	96	70	73%
Airlines	78	9	12%
Mining/Logging	68	22	32%
Barges	6	(3)	-57%
Railroads	6	(11)	-193%
Utilities	4	(6)	-159%
Pipelines	0	(2)	0%
Federal Govt.	(20)	5	-25%
<b>NON-FARM TOTAL</b>	<b>22,362</b>	<b>17,029</b>	<b>76%</b>

# MANUFACTURING

US factories are recovering from the pandemic, but output levels lag cycle peak in Dec '18 before tariffs put them into recession



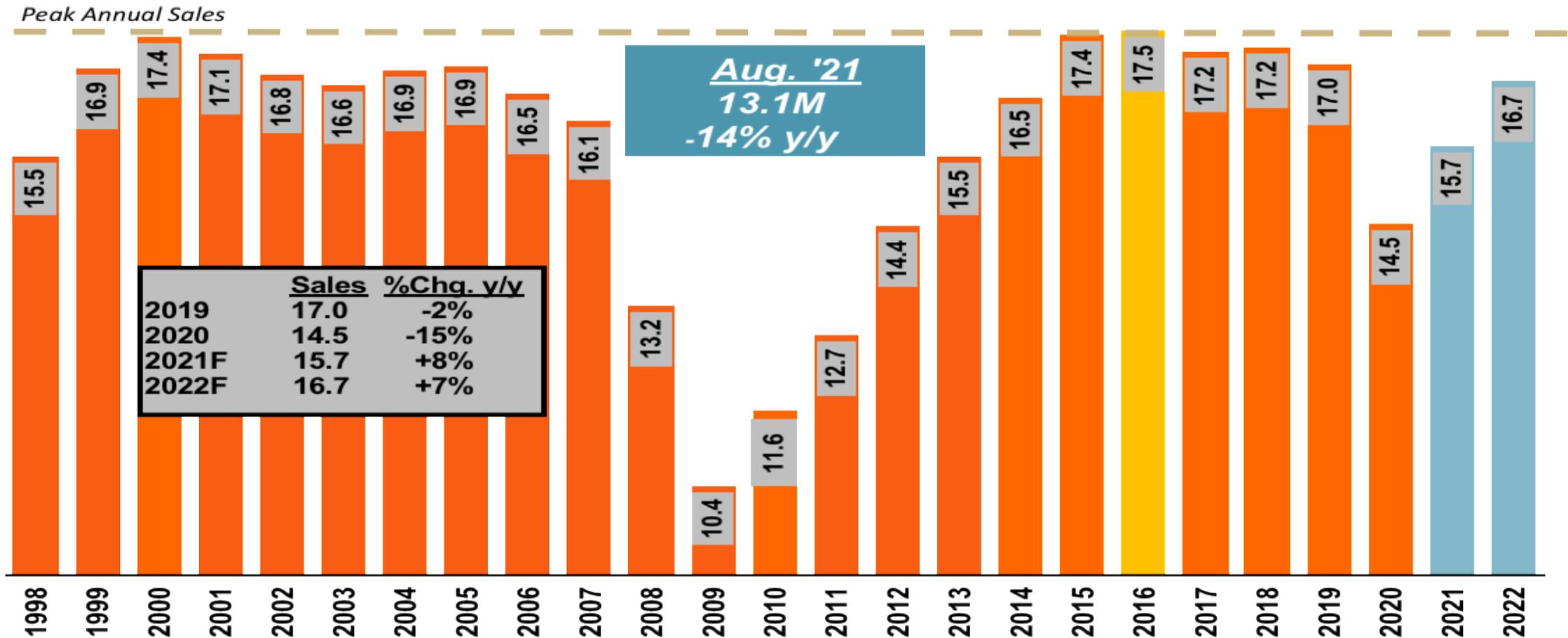
Source: Federal Reserve Board, September 15, 2021; IHS Markit, September 2021

Source: Markit Economics; Institute of Supply Managers; September 1, 2021

# AUTO SECTOR

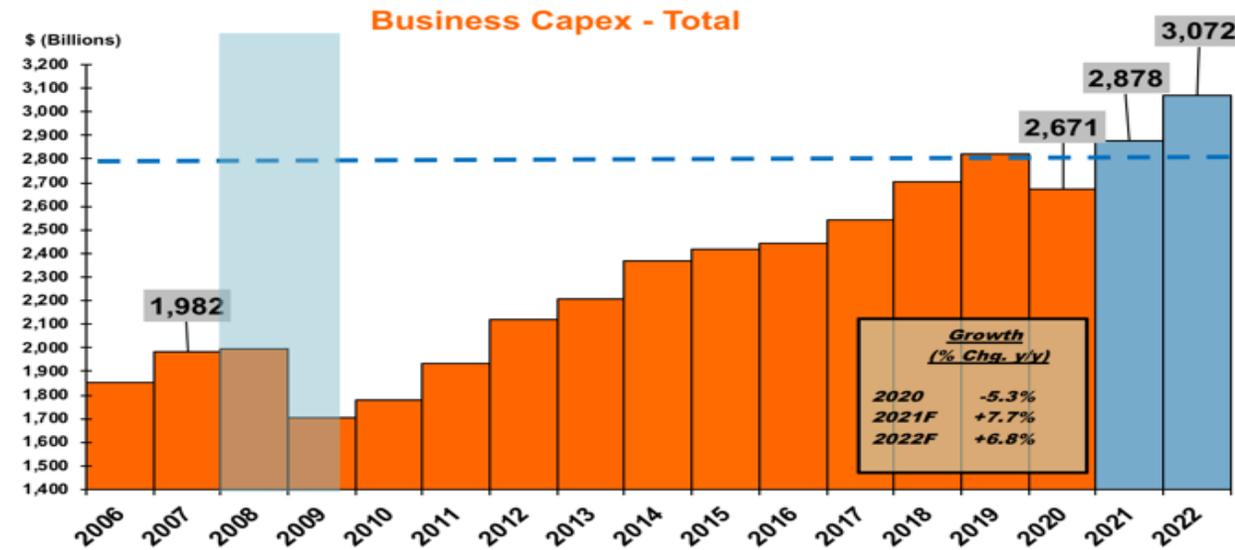
Auto plants shut down during the pandemic. In addition to structural issues, the sector faces a severe chip shortage, lean stocks and higher prices

## Annual Light Vehicle Sales Actuals Thru August 2021 (in 000,000)

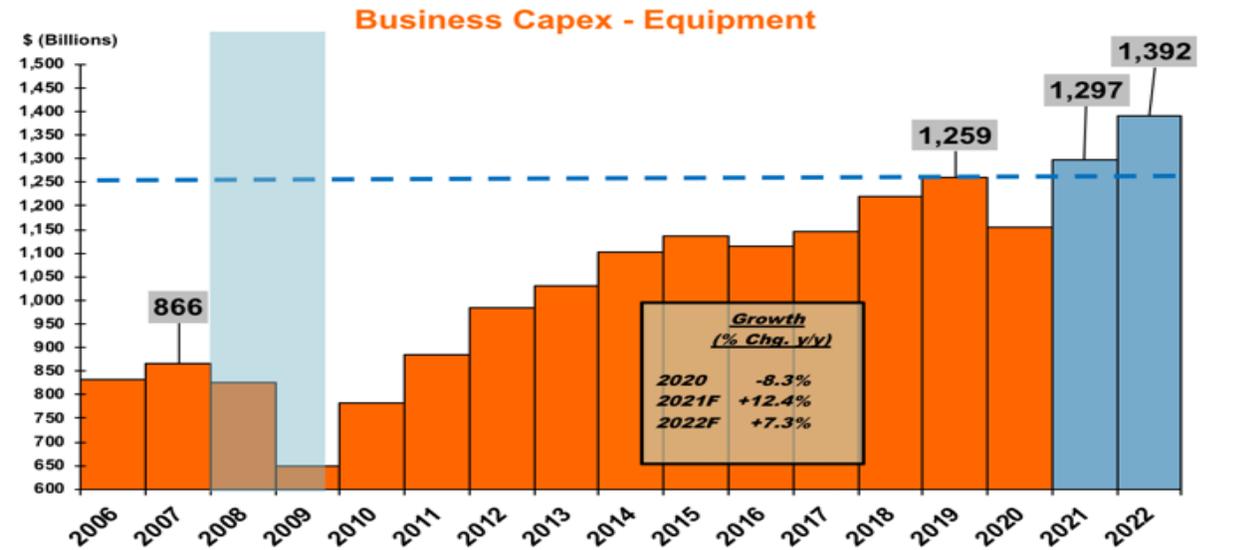


# BUSINESS CAPEX

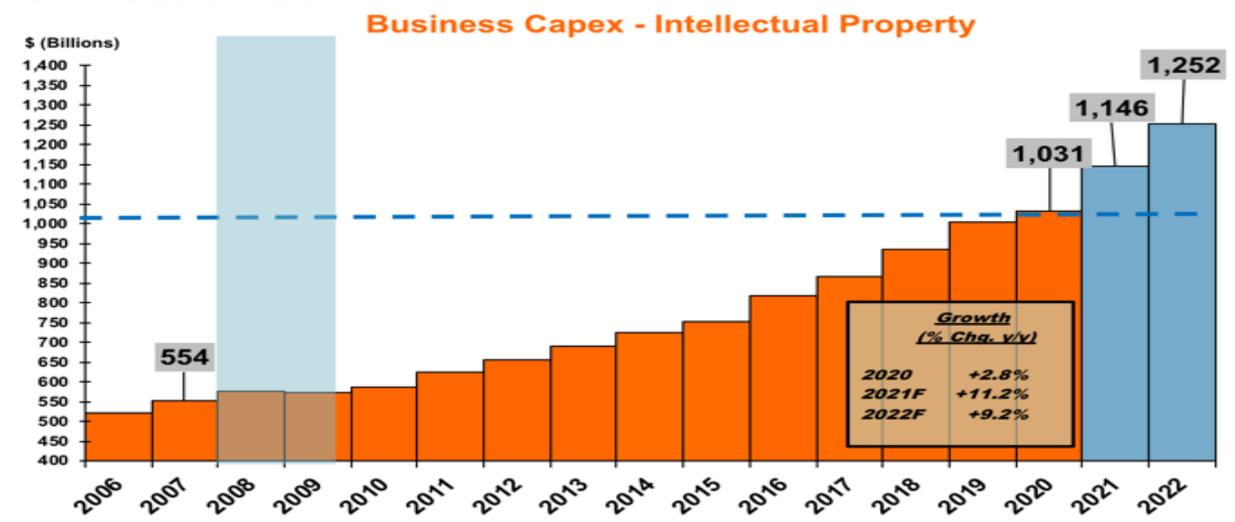
Expect business capex to display a tale of three cities in 2021-22, with replacement and software capex growing and expansion capex declining or flat



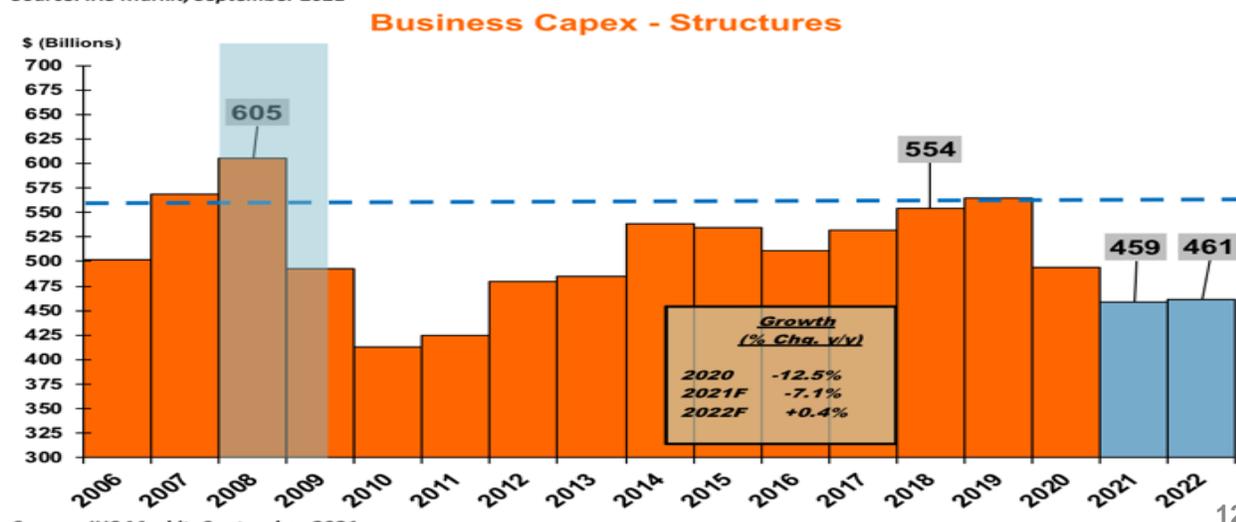
Source: IHS Markit, September 2021



Source: IHS Markit, September 2021



Source: IHS Markit, September 2021



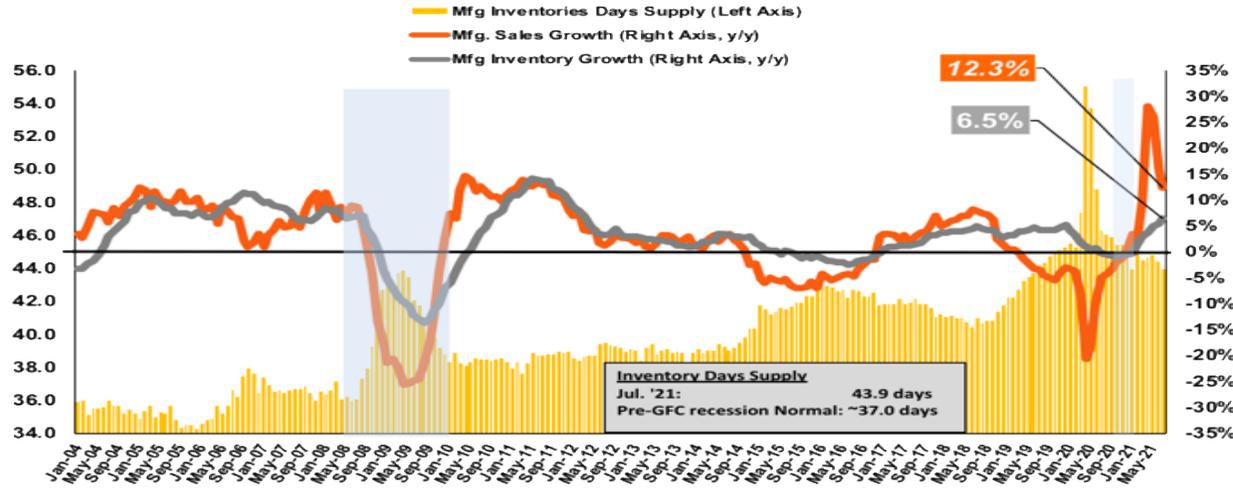
Source: IHS Markit, September 2021

# BUSINESS INVENTORIES

After years of "Just in Time" inventories, the pandemic has led to record low inventory days-supply. But, not all inventories are the same

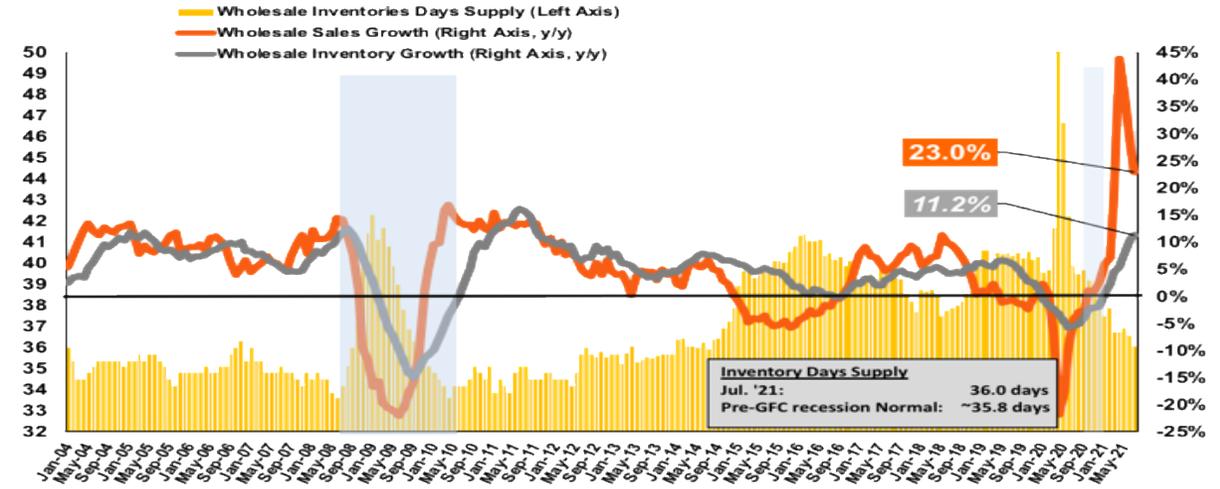


**Manufacturing Inventories vs. Sales**  
July 2021



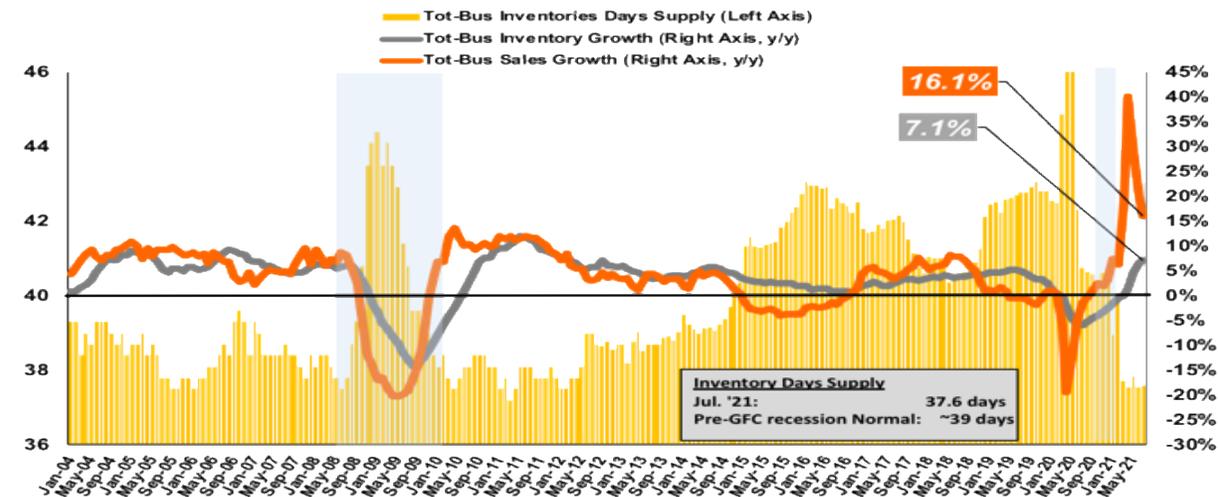
Source: U.S. Census Bureau, September 16, 2021

**Wholesalers Inventories vs. Sales**  
July 2021



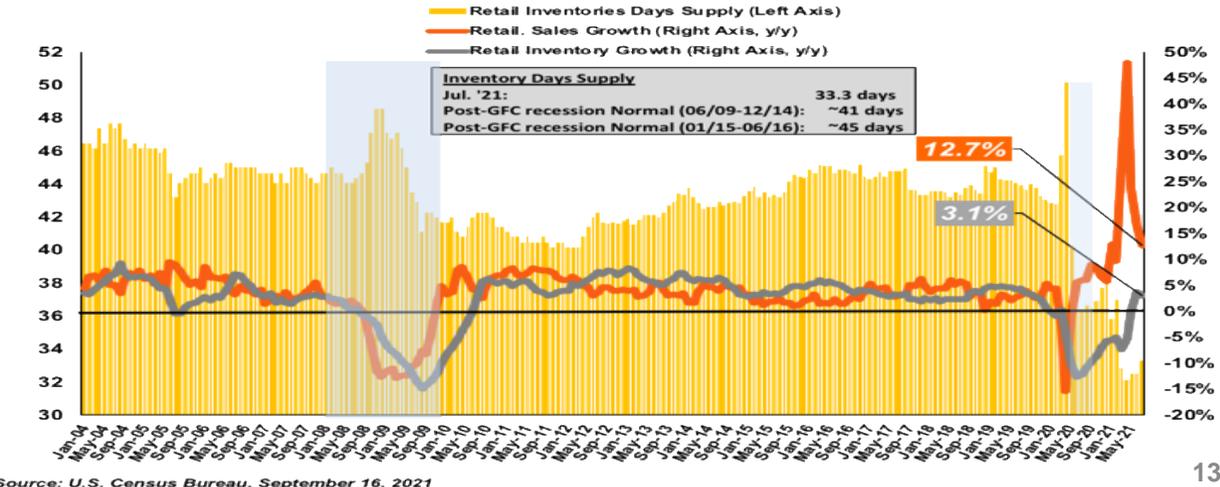
Source: U.S. Census Bureau, September 16, 2021

**Total Business Inventories vs. Sales**  
July 2021



Source: U.S. Census Bureau, September 16, 2021

**Retailers Inventories vs. Sales**  
July 2021



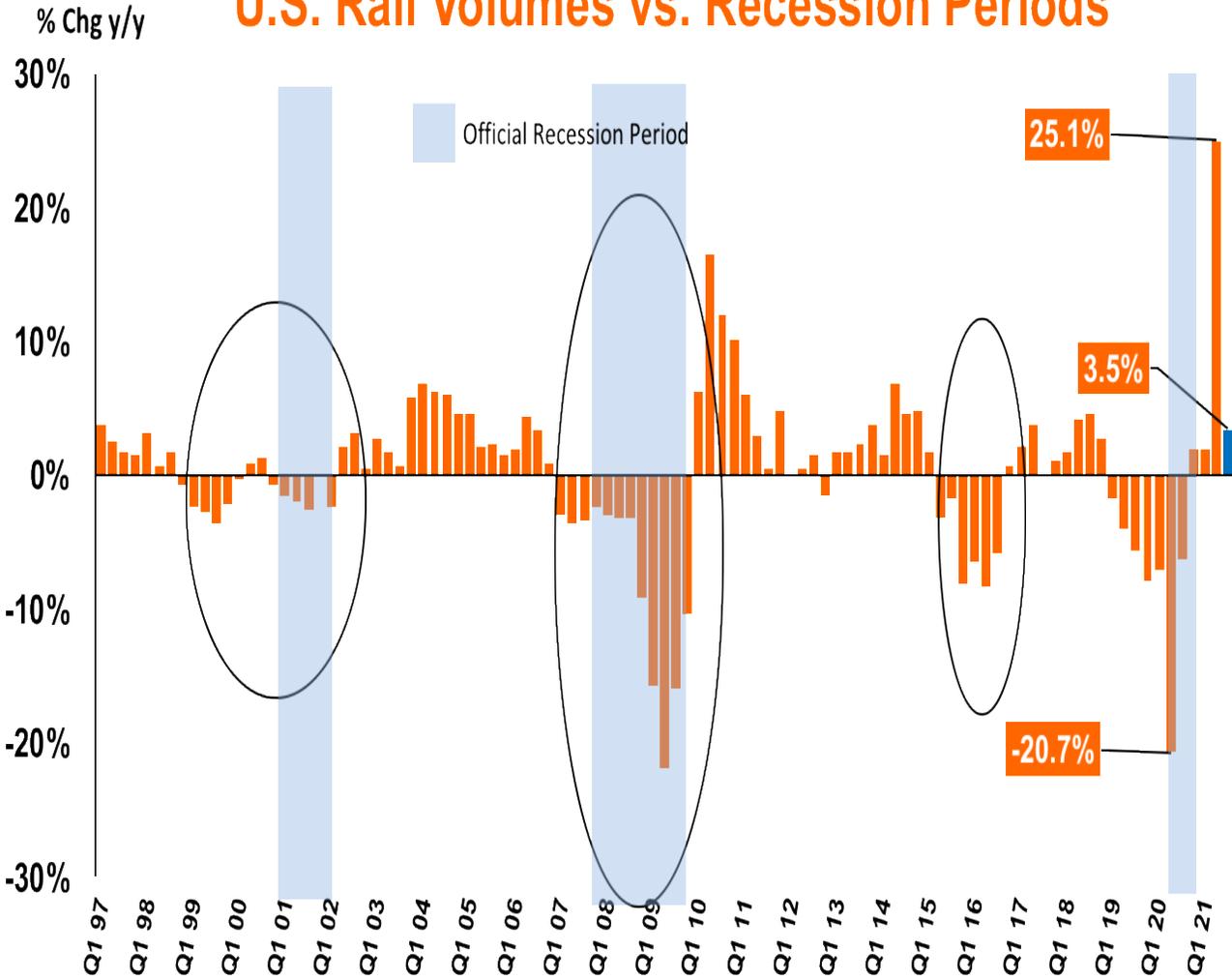
Source: U.S. Census Bureau, September 16, 2021

# THE FREIGHT RAIL SECTOR

Rail sector volume growth is a leading indicator of recessions. Q2 growth was +25.1% y/y, but volumes have slowed to -1% in Sep. '21

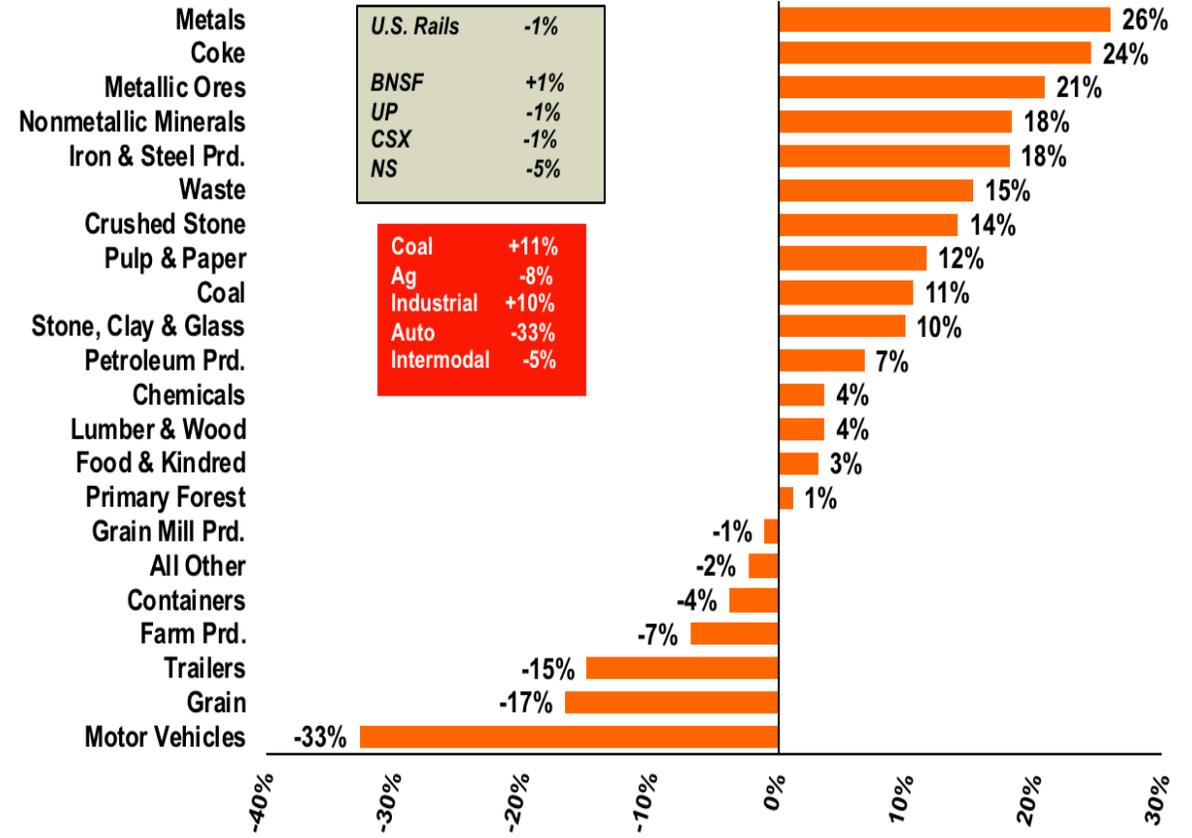


## U.S. Rail Volumes vs. Recession Periods



Source: Association of American Railroads, September 29, 2021

## U.S. RAILROADS (CS54 Groups, % Change in Units Handled) September 2021 Weeks 35 through 38 2021 vs. 2020 Sep. 4, 2021 through Sep. 25, 2021



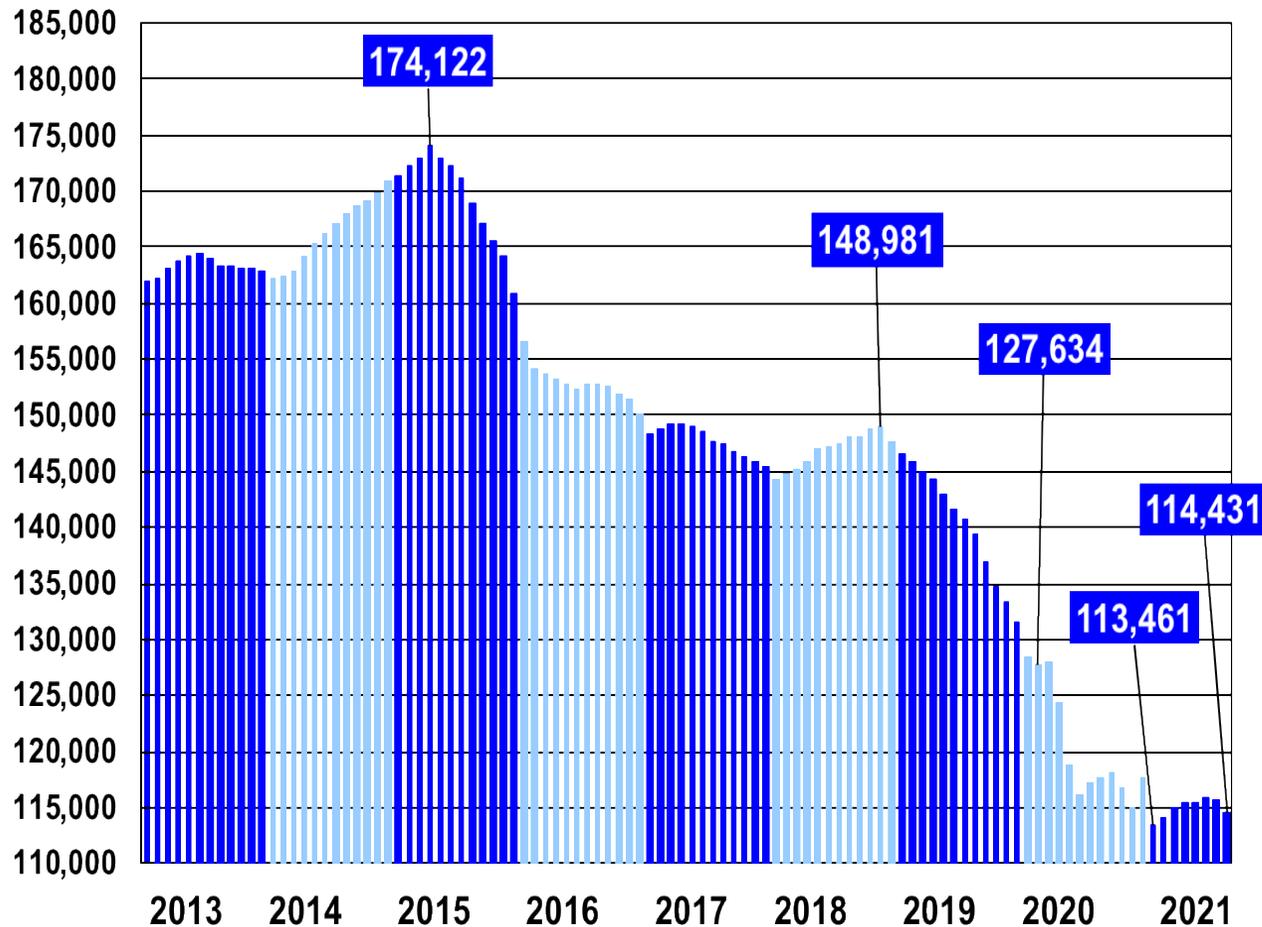
Source: Association of American Railroads, September 29, 2021

# THE FREIGHT RAIL SECTOR

The rail sector cut about 14K jobs during the pandemic. Payrolls are up by about 1K since Jan. '21, a woeful recovery ratio of only 7%



Class I Railroad Employment: Jan. 2013 - August 2021



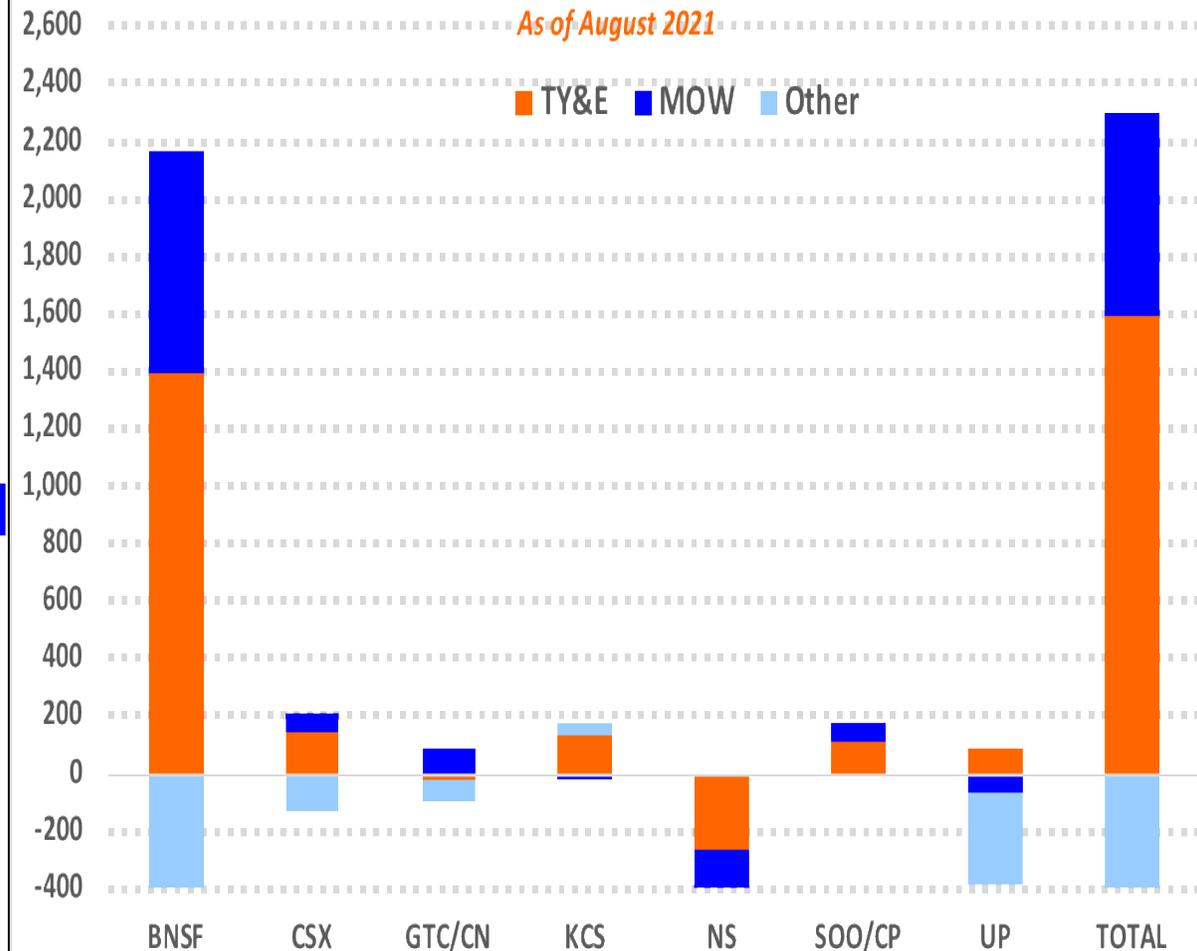
Source: Surface Transportation Board, September 29, 2021. Data are not seasonally adjusted.

US AND CANADA RAILS: PAYROLL JOB CHANGES

Since Jan 2021

As of August 2021

TY&E MOW Other



Source: Surface Transportation Board, Employment Data September 29, 2021

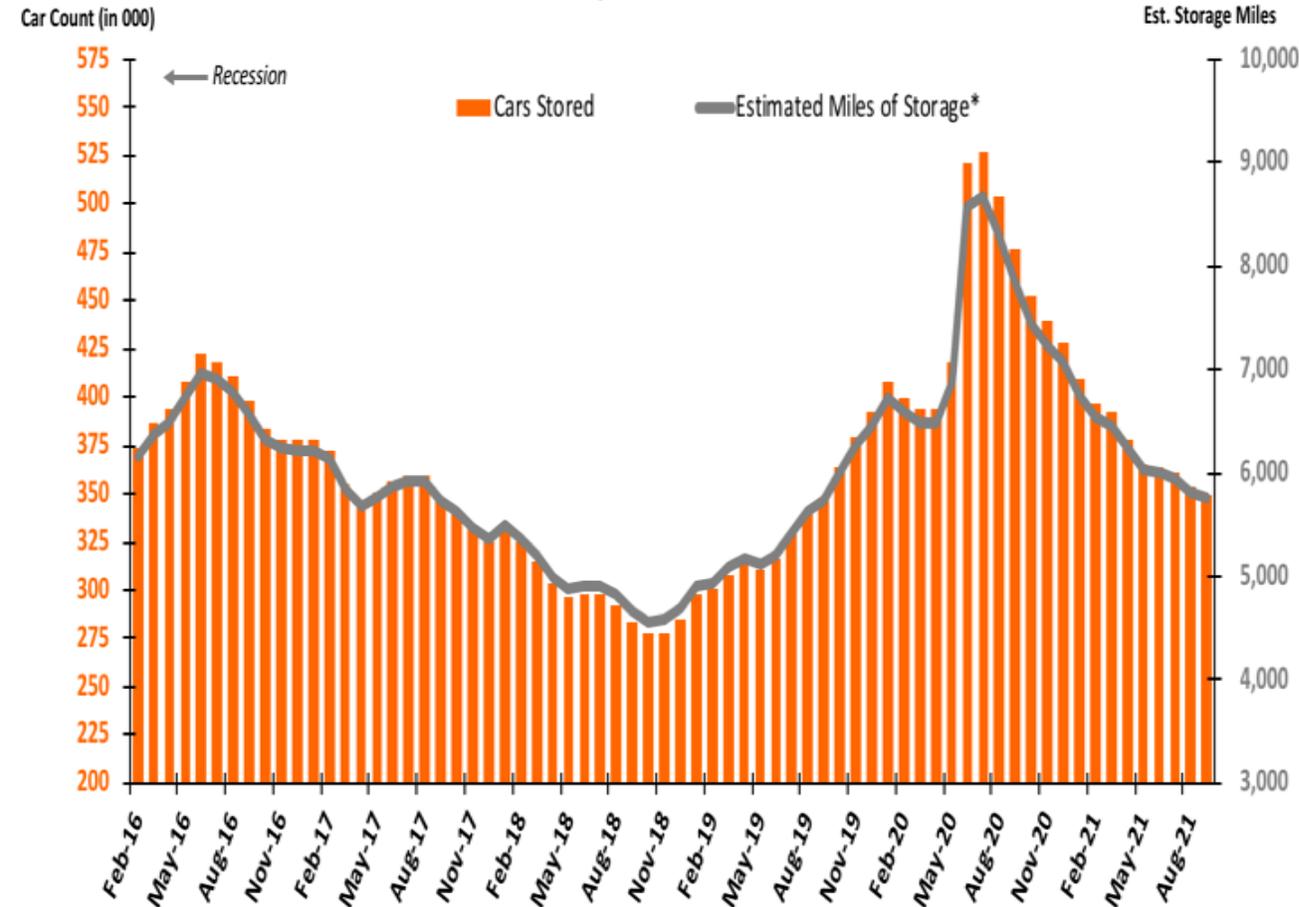
# THE FREIGHT RAIL SECTOR

The Rails pulled more cars out of storage (177K) than they parked in the pandemic (126K). Covered hoppers and tanks are 71% of storage



## North American Rail Cars in Storage - Past 60 Days

September 2021

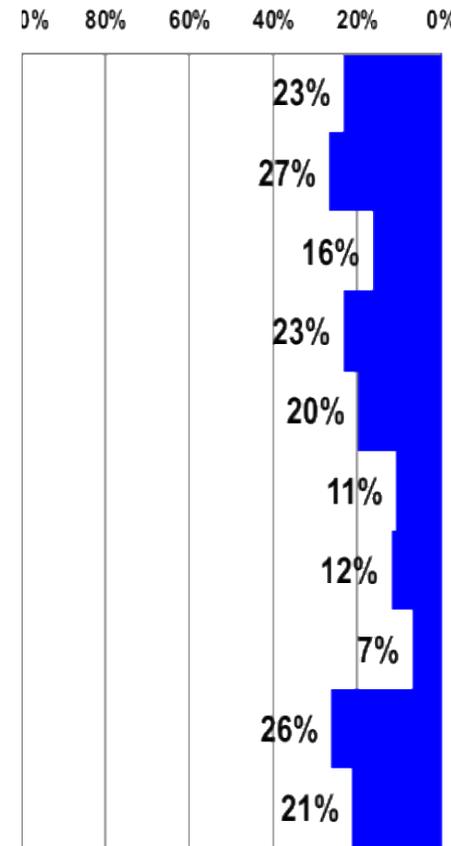


\* Assumes BNSF Railway system average equipment length

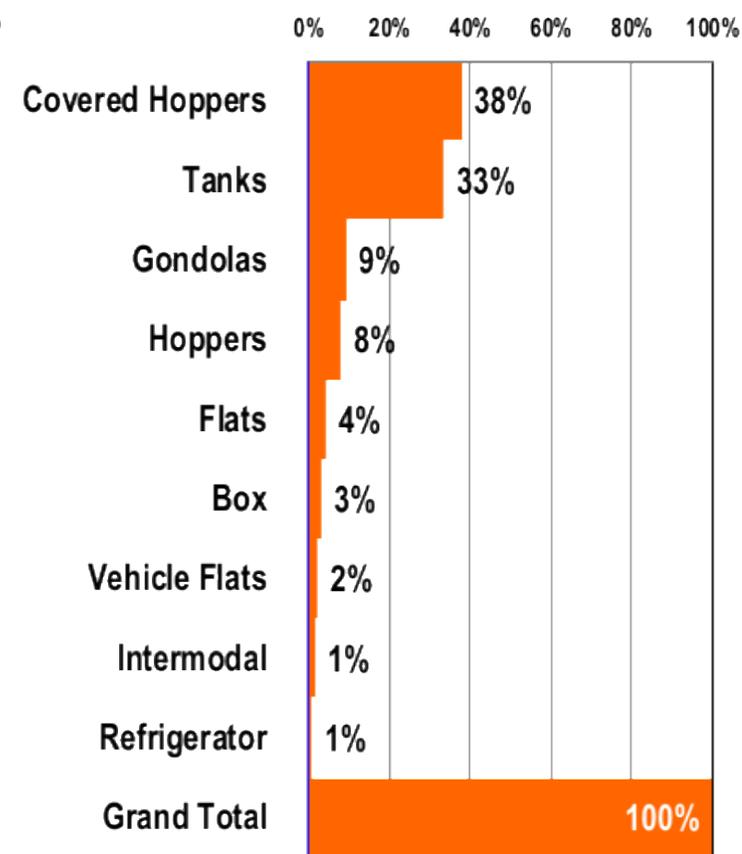
## Car Storage By Car Type

September 1, 2021

### Percent of Each Fleet



### Percent of Total Fleet



# THE FREIGHT RAIL SECTOR

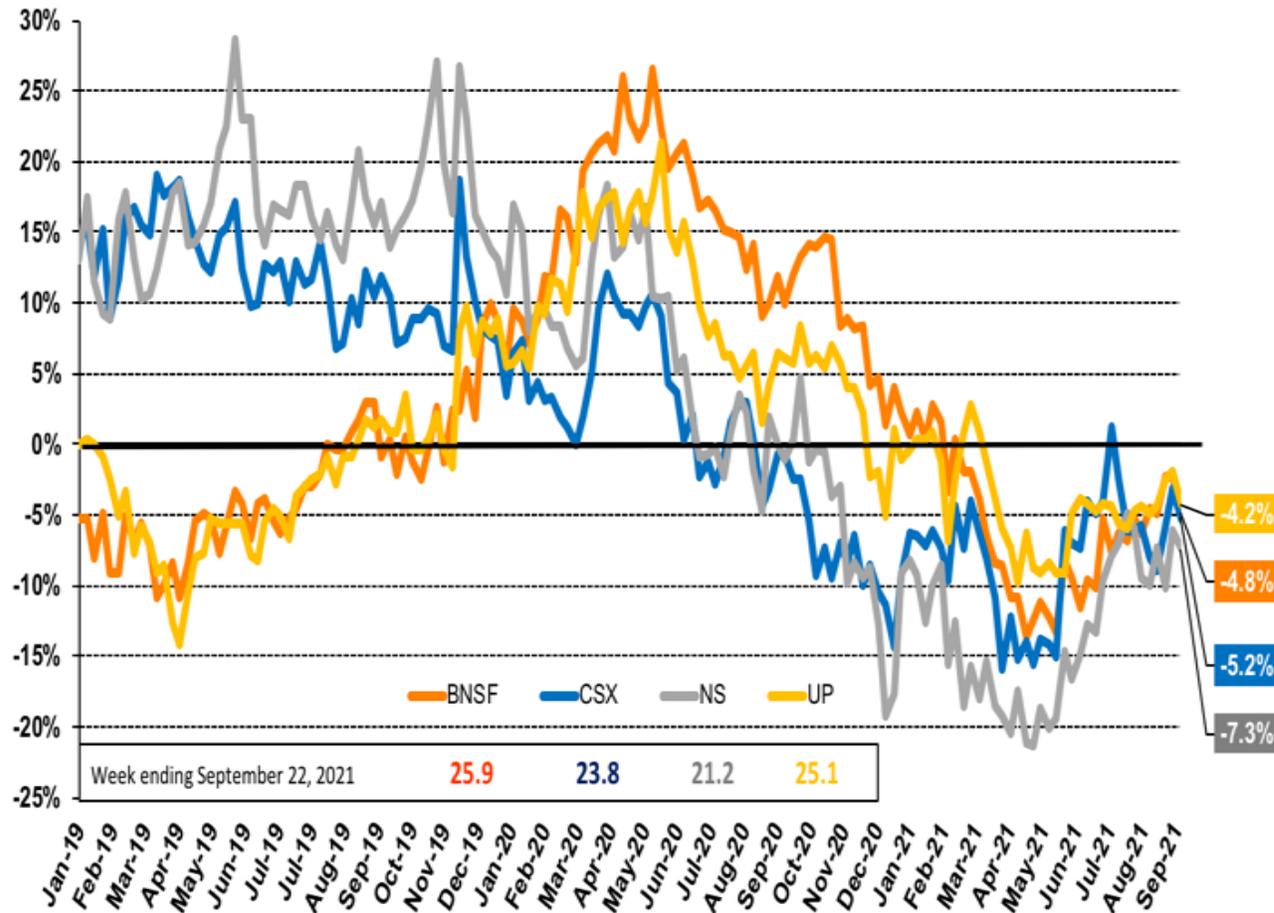
Trains on US Rails are running about 4-7% y/y slower during the expansion. Terminal dwells are longer y/y, especially on the PSR railroads



## US Class 1 Rail - Train Velocity

Thru September 22, 2021

(Weekly Average Train Speed in MPH, % chg y/y)

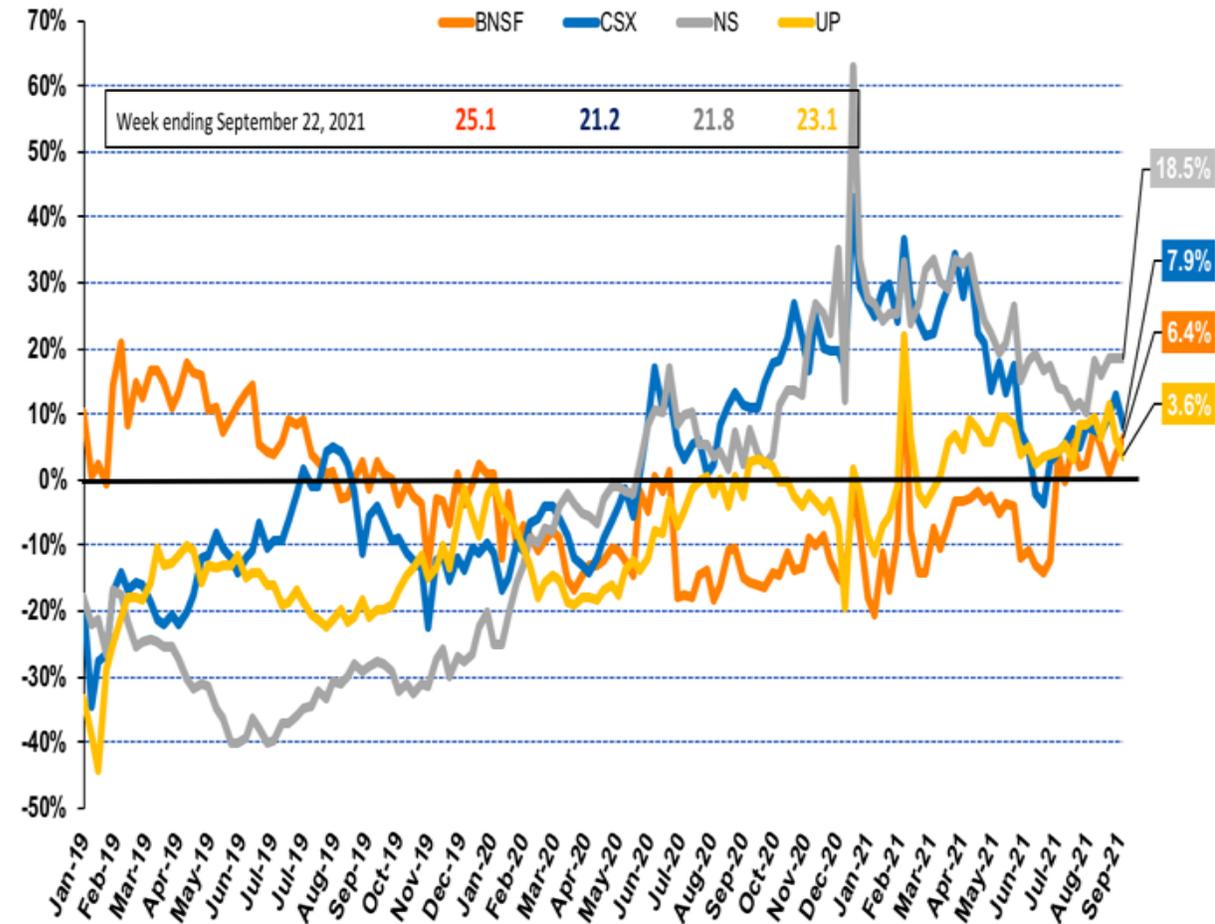


Source: STB EP724 Data, September 23, 2021

## US Class 1 Rail - Terminal Dwell Time

Thru September 22, 2021

(Weekly Average Terminal Dwell Time - Ex Run-Thru Trains, in Hours, % chg y/y)



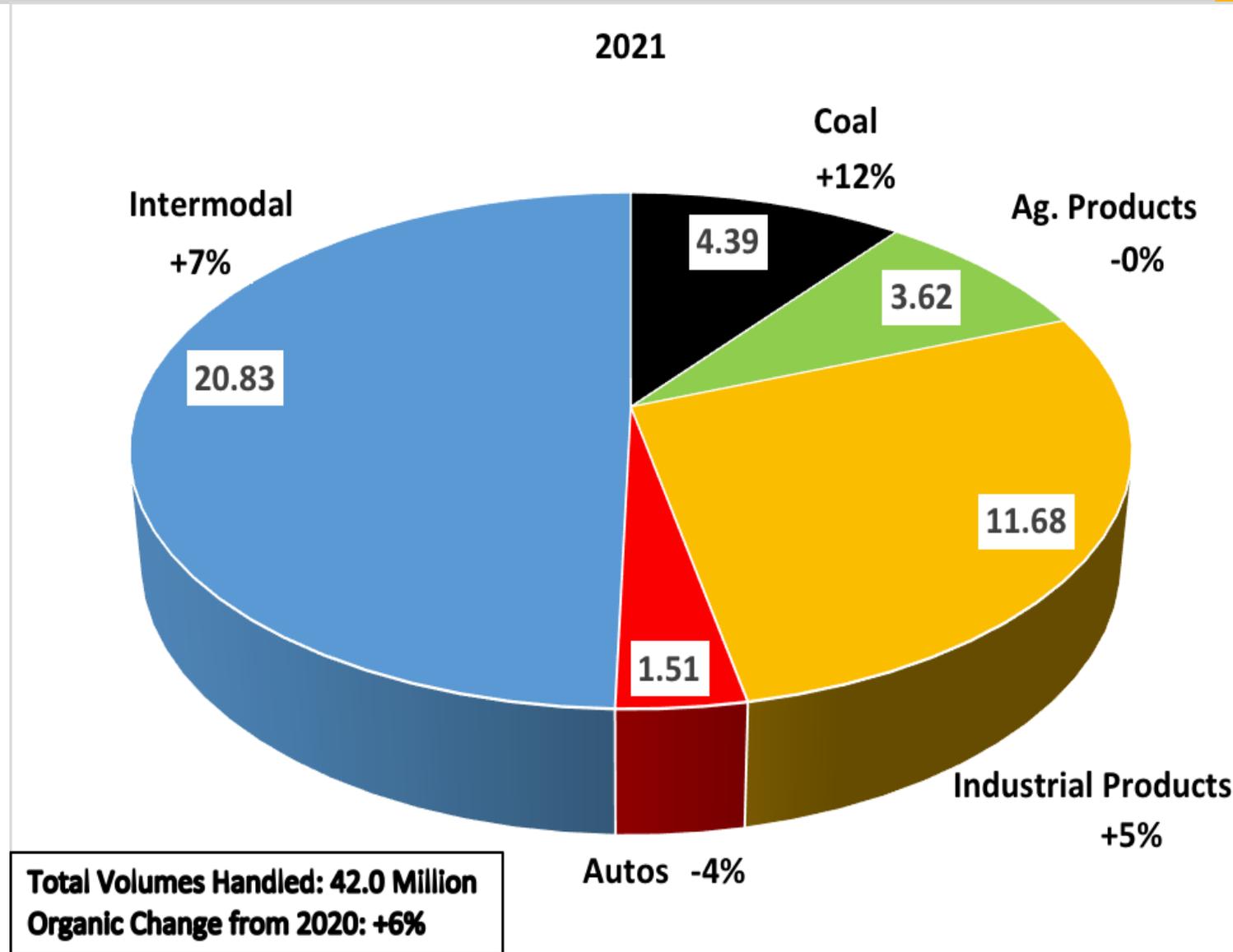
Source: STB EP724 Data, September 23, 2021

**Baseline Probability: 50%**

<b>Macro Economic <b>BASE CASE</b> Assumptions</b>		
<i>(September 2021 Forecast)</i>		
<i>% Chg Y/Y Unless Stated</i>	<b>2021</b>	<b>2022</b>
Real GDP	5.7%	4.5%
Unemployment Rate	5.6%	4.2%
EIA- Western Coal Production	10.9%	3.8%
EIA- App Coal Production	15.1%	11.7%
EIA- Interior Coal Production	12.9%	14.7%
Coal Share of Electricity Generation	24.4%	23.6%
Natural Gas Share of Electricity Generation	35.2%	34.5%
Natural Gas Price (Henry Hub)	\$3.63	\$3.47
Grains Usage (Bushels, Billions)	22.1	21.8
Industrial Production	5.6%	4.5%
Manufacturing	6.6%	5.3%
Housing Starts (Millions)	1.541	1.405
Housing Starts (% Chg.Y/Y)	10.4%	-8.8%
Lt Veh - Sales (Millions)	15.7	16.7
Lt Veh - Sales (% Chg.Y/Y)	8.2%	6.8%
Goods Imports	12.1%	2.5%
Goods Exports	7.4%	6.3%
Consumer Expenditures	7.8%	3.3%
Retail Sales	18.1%	0.8%
CPI Inflation	4.2%	2.4%
Core CPI Inflation	3.4%	3.0%
WTI Crude Oil (\$/Barrel)	65.7	62.4
Brent Crude Oil (\$/Barrel)	68.6	66.0
Brent-WTI Spread (\$/Barrel)	2.9	3.7

Source: IHS Markit (Sep. 2021); EIA and USDA WASDE (Sep. 2021), SAK Economics LLC

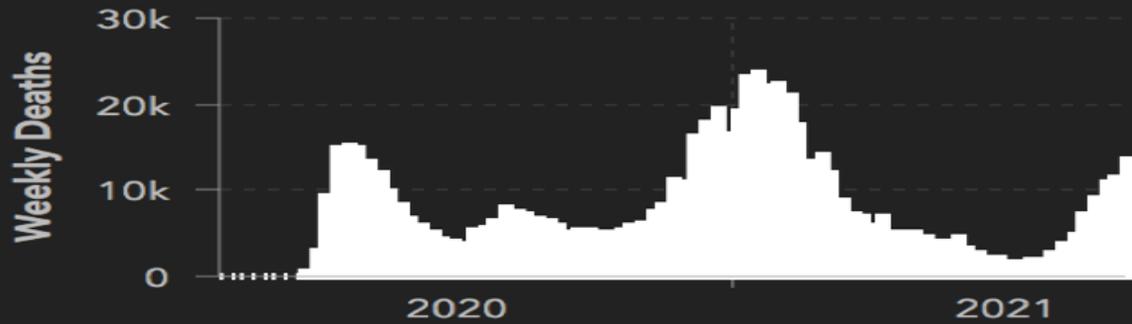
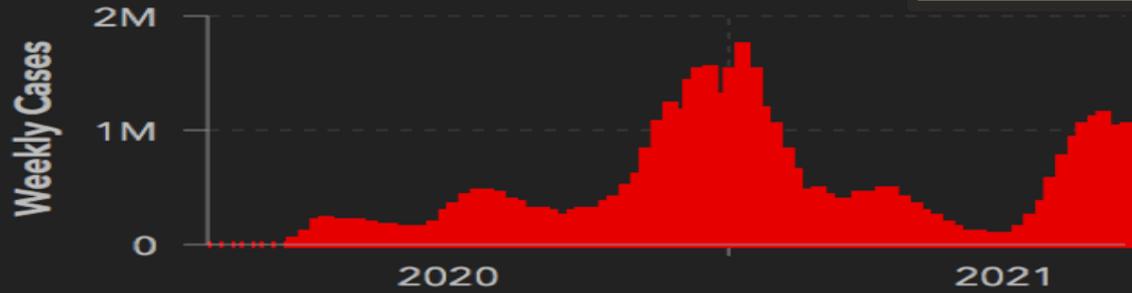
# THE U.S. & CANADIAN RAIL OUTLOOK



# RISKS

Another deadly coronavirus wave, potential for higher inflation and port/rail congestion are now the biggest risks facing growth

Downside Probability: 30%



Weekly

Daily



# OPPORTUNITIES

Congress has spent about \$5.1 trillion on fiscal stimulus and the Fed's balance sheet exploded by \$4.3 trillion since Feb. '20

**Upside Probability: 20%**

**Coronavirus Aid, Relief, and Economic Security Act**

**Worth: \$2.3 trillion**

**STIMULUS #2: THE**

**Worth: \$0.9 trillion**

**The American Rescue Plan Act of 2021**

Key Insights for Businesses and Individuals

**Worth: \$1.9 trillion**

