

37th meeting of the
IOWA FREIGHT ADVISORY COUNCIL

June 17, 2022
10:00 AM to 2:00 PM
Courtyard by Marriot
2405 SE Creekview Dr, Ankeny, IA 50021

Meeting input objectives

1. Provide feedback on current Iowa DOT freight activities.
2. Discuss potential impacts to Iowa freight from current global surface transportation events and transportation system improvements that could be done in Iowa to mitigate these impacts.

10:00 AM Safety Briefing

Amanda Martin
Iowa DOT

Welcome & Introductions

Ice breaker: Provide any comments, updates, notable items, etc. related to your business since the last meeting.

Mike Steenhoek, Chair
Soy Transportation
Coalition

10:30 AM Iowa DOT Updates

General update from the Department, including the Iowa State University Supply Chain Forum, the impact of inflation on construction projects, and other notable items. A status update for the Linking Iowa's Freight Transportation System (LIFTS) and Rail Revolving Loan and Grant (RRLG) funding programs will also be provided.

Stu Anderson and
Amanda Martin
Iowa DOT

11:00 AM Canadian Pacific-Kansas City Southern Railroad Merger

Overview of the upcoming CP-KCS merger and anticipated impacts to global freight movement.

Andy Cummings
Canadian Pacific

12:00 PM Lunch

12:45 PM Impact of Supply Chain Disruptions

Discussion of how the Iowa and global supply chain systems have been impacted by recent disruptions (war in Ukraine, COVID-19 pandemic, etc.) and future implications or long-term impacts this could have.

Coralie Voss and
Matt Conard
Kent Corporation

2:00 PM Adjourn

Future meetings:

- September 16, 2022
- December 16, 2022

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IOWA FREIGHT ADVISORY COUNCIL

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 10:00 AM to 2:00 PM
 Courtyard by Marriot
 2405 SE Creekview Dr, Ankeny, IA 50021

Members

	Gabe Claypool, Des Moines Industrial	x	Dan Sabin, Iowa Northern Rail.
x	Tom Determann, Clinton Regional Development		Jody Sandy, Hy-Vee
x	Greg Dickinson, Ten D/Merchants Distribution	x	Mike Steenhoek, Soy Transportation Coalition
	Doug Martin, Amazon	x	Reilly Vaughan, Agribusiness Assoc. of Iowa
	Allison Meiners, IMTA	x	Marty Wadle, Ruan Transportation
x	Bob Rafferty for Delia Moon-Meier, Iowa 80	x	Jillian Walsh, Traverro
	James Niffenegger, Landus Cooperative		Ron White, Artco Fleeting Service
	Kelli O'Brien, Union Pacific Railroad		Tim Woods, Woods Development
	Joe Parsons, Iowa Interstate Railroad		

Ex-Officio Members

x	Zhi Chen for Todd Ashby, Des Moines Area MPO		Shirley McGuire, FMCSA
	Andrew Goodall for Col. Jesse Curry, USACE	x	Mike Norris, Southeast Iowa RPC
	Mike Hadley, Keokuk County	x	Paul Ovrom, IDALS
x	Michael Kober, Iowa DPS	x	Joseph Rude, Iowa Economic Dev. Authority
x	Sean Litteral, FHWA Iowa Division		Louis Vander Streek, Iowa Utilities Board
	Scott Marler, Iowa DOT		Jennifer Wright, Iowa DNR
x	Tim Marshall, FHWA Iowa Division		

Iowa DOT

x	Stu Anderson	x	Amanda Martin
	Zac Bitting		Tammy Nicholson
	Mikel Derby		Garrett Pedersen
	Brenda Freshour-Johnston	x	Charlie Purcell
	Melissa Gillett	x	Tom Bruun for Ryan Ridout
x	Sam Hiscocks		Adam Shell
x	Maria Hobbs		Jeff von Brown
	Alex Jansen		Andrea White
	Troy Jerman	x	Caleb Whitehouse
	David Lorenzen		Lee Wilkinson
x	Craig Markley		

Guests

x	Micah Loesch, FHWA Iowa Division		
x	Andy Cummings, Canadian Pacific Railway		
x	Coralie Voss, Kent Corporation		
x	Matt Conard, Kent Corporation		

Meeting input objectives

1. Provide feedback on current Iowa DOT freight activities.
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10:00 AM Safety Briefing

Amanda Martin
Iowa DOT

Welcome & Introductions

Ice breaker: Provide any comments, updates, notable items, etc. related to your business since the last meeting.

Mike Steenhoek,
Chair
Soy Transportation
Coalition

Amanda Martin welcomed members to the FAC meeting. Martin designated Sam Hiscocks as the 911 caller and Caleb Whitehouse as his backup. Martin also pointed out emergency exits, fire alarms, and weather shelters.

Mike Steenhoek began introductions with Hiscocks working around the table. Steenhoek introduced Marty (Ruan) to the FAC and allowed him to introduce himself.

- Been at Ruan 26 years, ISU Graduate, ISU supply chain forum
- Talked about Ruan's struggle with driver shortages/retention; Ruan is adding more drivers per month than they are losing

Steenhoek also introduced Bob Rafferty from Truck Stops of Iowa who is filling in for Delia Moon-Meier of the Iowa 80 Group.

10:30 AM Iowa DOT Updates

General update from the Department, including the Iowa State University Supply Chain Forum, the impact of inflation on construction projects, and other notable items. A status update for the Linking Iowa's Freight Transportation System (LIFTS) and Rail Revolving Loan and Grant (RRLG) funding programs will also be provided.

Stu Anderson and
Amanda Martin
Iowa DOT

Stu Anderson updated the FAC on the activities of the Iowa Transportation Commission and the implementation of Infrastructure Investment and Jobs Act (IIJA) infrastructure bill. The Commission has programmed several projects around I-380 in Cedar Rapids and Iowa City, as well as other surface transportation programs authorized from FY 2022 to FY 2026. Discussion surrounding IIJA has focused on receiving guidance from the federal government and determining how to allocate funds amongst the Iowa DOT, cities, counties, MPOs, and RPAs.

The new federal *National Electric Vehicle Infrastructure* program is allocated \$51 million over FFY 2022-2026 or approximately \$10.3 million each year. Funding must initially be used to put in fast-charging stations along the interstate system no more than 50-miles apart. This is anticipated to take two years after which time the Iowa DOT will look at further expanding the EV charging network to the non-interstate system. Charging stations will likely be at convenience stores or gas stations and not on Iowa DOT property or rest areas (for more info, visit <https://iowadot.gov/iowaevplan>).

2023-2027 Iowa Five-Year Program: This document was approved by the Iowa Transportation Commission on June 14th and includes the next five years of Iowa DOT highway and bridge projects.

Construction Cost Inflation: There has been a significant spike in the Construction Price Index due to inflation, which will impact the letting of projects. According to the producer price index (PPI) diesel fuel has increased by 237% between April 2020 and February 2022. Other construction products have increased in price over the same period.

Steenhoek asked if the federal government is going to provide any “latitude” on when IIJA money can be spent to avoid further inflation. Anderson said there is not pressure to program funds immediately, but there are incentives to states that fully obligate their funds, such as additional federal aid.

10:40

Amanda Martin gave an overview of the Linking Iowa’s Freight Transportation Systems (LIFTS) program and notified the FAC that applications are due July 18th. Martin also notified the FAC of the Railroad Revolving Loan and Grant (RRLG) program having the same application window.

Steenhoek asked Martin if the Iowa DOT is getting good applications for LIFTS or the RRLG program and asked Martin to give an example of a good LIFTS project.

Martin said that LIFTS is a tricky program that has “Buy America” provisions that are difficult to track. Craig Markley (Iowa DOT) gave an example of the challenges of the “Buy America” provisions. Markley said the easiest projects use materials that the Iowa DOT is familiar with like concrete rebar and railroad track. Steenhoek asked if the “Buy America” provisions increase the costs of projects. Markley said no for materials typically used by the Iowa DOT, but for other building materials that the Iowa DOT doesn’t have experience with it will most certainly increase the cost of a project.

Anderson said the Iowa DOT recommended against providing additional funding for the LIFTS program above and beyond what has been provided in the past because of these challenges. Markley also gave the example of a mooring cell as a project that would be a good LIFTS project because of the materials used.

Steenhoek asked Markley and Anderson for updates on the mooring cell project at Lock & Dam 14 and notes the difficulty of giving funds to the U.S. Army Corps of Engineers. Markley said the US Army Corps of Engineers is close to finalizing their contributed funds agreement and then they are hopeful the agreement will provide a path forward for other states to provide funds for similar projects.

Wrapping up, Steenhoek asked whether IIJA prioritizes projects that add lane miles or rather to maintain existing infrastructure. Anderson said the Iowa DOT is seeking to use IIJA funds to maintain existing infrastructure, and the federal government has only provided encouragement for maintenance (over expansion) and no specific guidance or regulations. Tim Marshall (FHWA) concurred with Anderson.

11:00 AM Canadian Pacific-Kansas City Southern Railroad merger **Andy Cummings**
Overview of the upcoming CP-KCS merger and anticipated impacts to **Canadian Pacific**
global freight movement.

Andy Cummings works in the Public Affairs Office at Canadian Pacific. Currently, CP owns KCS in trust while the Surface Transportation Board (STB) approves the merger. CP hopes to have approval from STB by February of 2023.

The merger will create the first U.S.-Mexico-Canada rail network. CP primarily moves grain from Saskatchewan and Western Canada to Chicago. Most U.S. business is in Minnesota and North Dakota, but

some business in Iowa. This merger would allow shippers to use a single railroad instead of switching between multiple railroads.

KCS operates a third of Mexico's rail under a concession agreement, which is a long-term agreement between the railroad and the Mexican government to operate along their rail lines.

The merger could remove 64,000 trucks from the highway system that are currently moving commodities like automotive parts between the U.S. and Mexico or Canada.

Steenhoek asked if CP will invest more into the track infrastructure between Kansas City and the Twin Cities. Cummings said that they do have a three-year plan for future investments, including \$275 million in sidings for new sidings, centralized traffic control, and yard and terminal improvements in Iowa between Kansas City, Chicago and the Twin Cities.

Cummings was asked if the proposed investments will also address the negative impacts to communities that will result from increased traffic. He said the STB will order CP to address concerns through an environmental impact statement. Additionally, the STB has ordered CP to work proactively with impacted communities to address future impacts. CP has proposed to the STB that CP give money to impacted communities to address impacts and then the communities will be removed from the EIS process.

Steenhoek asked what the STB process is like. Cummings said that it is an ongoing deliberation between CP-KCS and the STB. The merger is still in the argumentative phase and there is talk of conducting public hearings.

Steenhoek asked what the Iowa DOTs engagement is in the merger process. Martin said that Iowa DOT staff are working with CP staff.

12:00 PM Lunch

12:45 PM Impact of Supply Chain Disruptions

Discussion of how the Iowa and global supply chain systems have been impacted by recent disruptions (war in Ukraine, COVID-19 pandemic, etc.) and future implications or long-term impacts this could have.

**Coralie Voss and
Matt Conrad
Kent Corporation**

Coralie Voss and Matt Conrad discussed ongoing supply chain disruptions and the impacts being felt in Iowa and abroad. Voss discussed supply chain issues followed by Conrad covering logistics challenges.

Ukraine's Global commodity impact: The ongoing war in Ukraine is the largest commodity shock since the 1970s resulting in major disruptions and price increases for grain, fertilizers, and oil. These impacts will likely carry over to 2023.

COVID-19 Pandemic impact: Major impacts of the global pandemic included loss of agility, labor constraints, unknown future supply allocations, freight service level gaps, buyer behavior changes, companies use of cash to secure supply, warehouse programs, price inflation, suppliers extend lead-times, and supply/demand imbalance. Inventories have not returned to pre-pandemic levels. The rising costs of lumber has also forced Kent Corporation to implement surcharges for pallets used to ship products.

Labor challenges: There are currently two job openings for every person seeking a job. Kent Corporation believes that monetary compensation is no longer enough for workers, and must make other concessions related to work-from-home, paid-time-off, etc.

Energy Impact: The energy supply chain has experienced significant disruptions leading to the delay and suspension of planned coal power plant closures. These facilities will likely be needed to offset demand and avoid blackouts until the supply chain recovers. The U.S. is also leaving the “shale era” and will have less excess supply of natural gas.

Logistics Update: Shippers need as much lead time as possible to mitigate supply shocks.

The meeting was adjourned at 1:50 PM.

Future meetings:

- September 16, 2022
- December 16, 2022

Iowa DOT Updates

Iowa Freight Advisory Council
June 17, 2022

A decorative graphic at the bottom of the slide consisting of a dark red arrow pointing right, followed by four grey arrows of varying shades pointing right, all overlapping and pointing towards the right side of the slide.

Overview

- Infrastructure Bill Implementation
- 2023-2027 Iowa Transportation Improvement Program
- Inflationary Challenges

Infrastructure Bill Overview

- Infrastructure Investment and Jobs Act (IIJA)
- Includes reauthorization of surface transportation programs for FFY 2022 to FFY 2026.
- Includes \$550 billion in new funding with half going to transportation
- Core programs remain, and several new programs created

Highway Formula Programs (millions)

Program	2021 (actual)	2022	2023	2024	2025	2026
National Highway Performance	307.4	365.8	373.1	380.6	388.2	395.9
Surface Transportation Block	157.2	177.9	181.5	185.1	188.8	192.6
Highway Safety Improvement	28.1	35.8	36.6	37.5	38.3	39.2
Rail-Highway Crossings	5.7	5.7	5.7	5.7	5.7	5.7
Congestion Mitigation/Air Qual.	11.8	12.3	12.6	12.8	13.1	13.3
National Highway Freight	18.2	17.0	17.4	17.7	18.1	18.4
Metro Planning	2.1	2.6	2.7	2.7	2.8	2.8
State Planning and Research	10.6					
<i>Highway Infra/Bridge (through appropriation, not authorized)</i>	<i>43.6</i>	<i>37.9</i>				
Bridge Formula Program		93.4	93.4	93.4	93.4	93.4
Carbon Reduction		15.9	16.2	16.5	16.8	17.2
PROTECT		18.0	18.4	18.8	19.1	19.5
Total	584.7	782.4	757.5	770.8	784.4	798.2
<i>National EV Charging</i>		<i>10.3</i>	<i>10.3</i>	<i>10.3</i>	<i>10.3</i>	<i>10.3</i>

Infrastructure Bill Implementation

- ✓ Passage of Infrastructure Bill: Nov. 15, 2021
- ✓ Iowa DOT review and assessment
- ✓ Iowa DOT overview to Commission: October 11, 2021
- ✓ Initial stakeholder input
 - ✓ City/County/RPA/MPO Committee
 - ✓ Initial meeting: Feb. 2, 2022
 - ✓ Second meeting: March 16, 2022
 - ✓ Third meeting: May 13, 2022
 - ✓ All stakeholders
 - ✓ Initial communication: Nov. 30, 2021
 - ✓ Summary of committee discussions: June 8, 2022
- ✓ Summary of input/recommendations to Commission: June 13, 2022
- ☐ Stakeholder input on recommendations: After June 13, 2022
- ☐ Commission action: July 12, 2022 (anticipated)

National Electric Vehicle Infrastructure

- New US DOT program from the Infrastructure Bill
- Iowa allocated \$51 million over FFY 2022-2026 – approximately \$10.3 m per year
- FFY 2022 allocation: \$7.6 m (after off-the-tops)
- Infrastructure within one mile of Alternative Fuel Corridor Routes
- Opportunity to add routes (apps were due May 13) – Iowa did not seek additional routes to maximize flexibility

National Electric Vehicle Infrastructure

- State Deployment Plan
 - Due August 1, 2022
 - Approved by September 30, 2022
 - Approval required to access funds
- Iowa DOT and Iowa Economic Development Authority are coordinating and developing plan.
- <https://iowadot.gov/iowaevplan>

2023-2027 Iowa Transportation Improvement Program

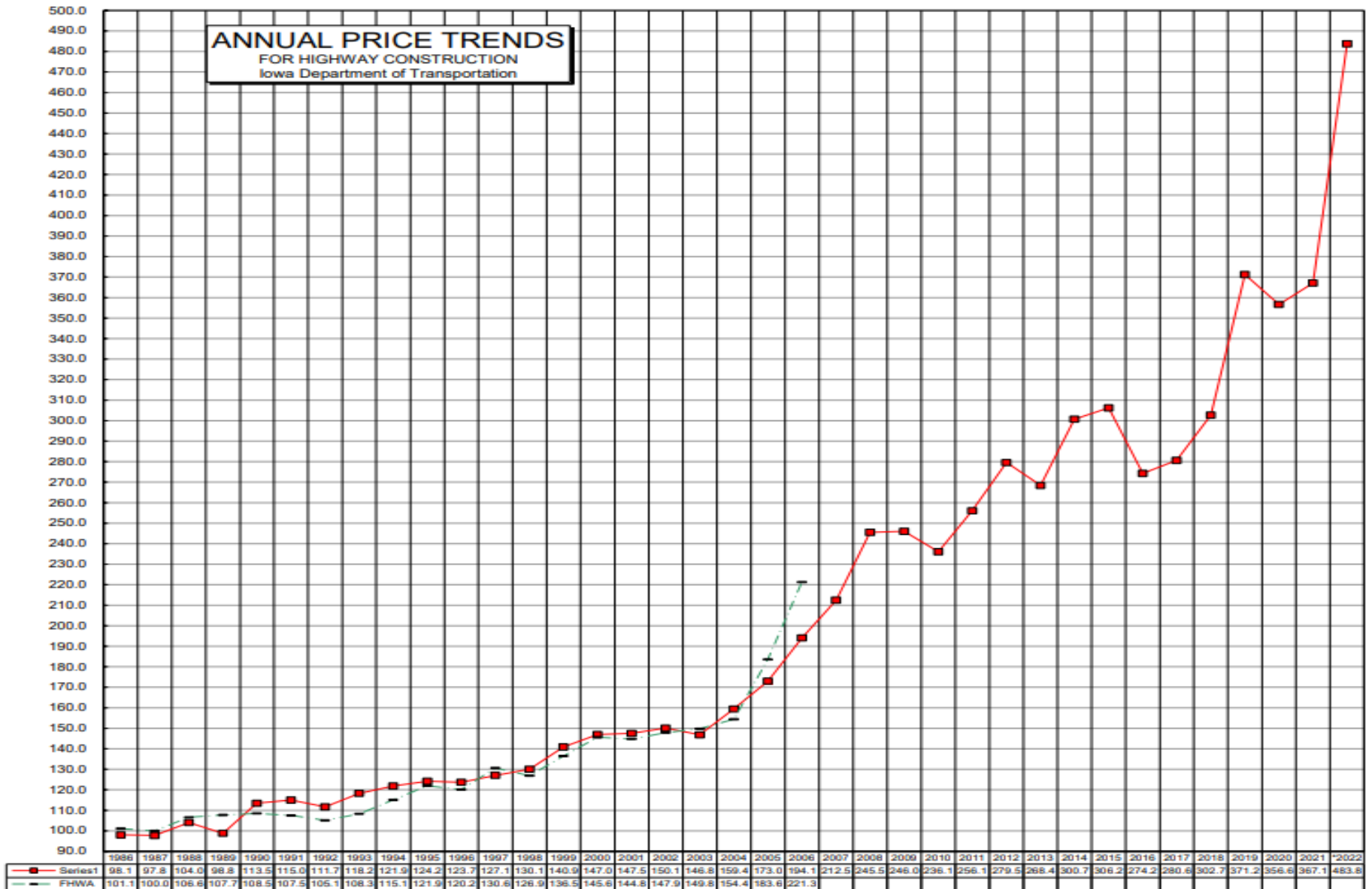
- Approved June 14, 2022
- Includes summary of all modal program approvals over the last year
- Includes next five-years of state highway/bridge projects
 - \$4.2 billion of state/federal funding
 - Fully program Infrastructure Bill funding increases
 - https://iowadot.gov/program_management/five-year-program

Iowa Highway Construction Price Index

(Annual, through 1st Quarter of 2022)

ANNUAL PRICE TRENDS
FOR HIGHWAY CONSTRUCTION
Iowa Department of Transportation

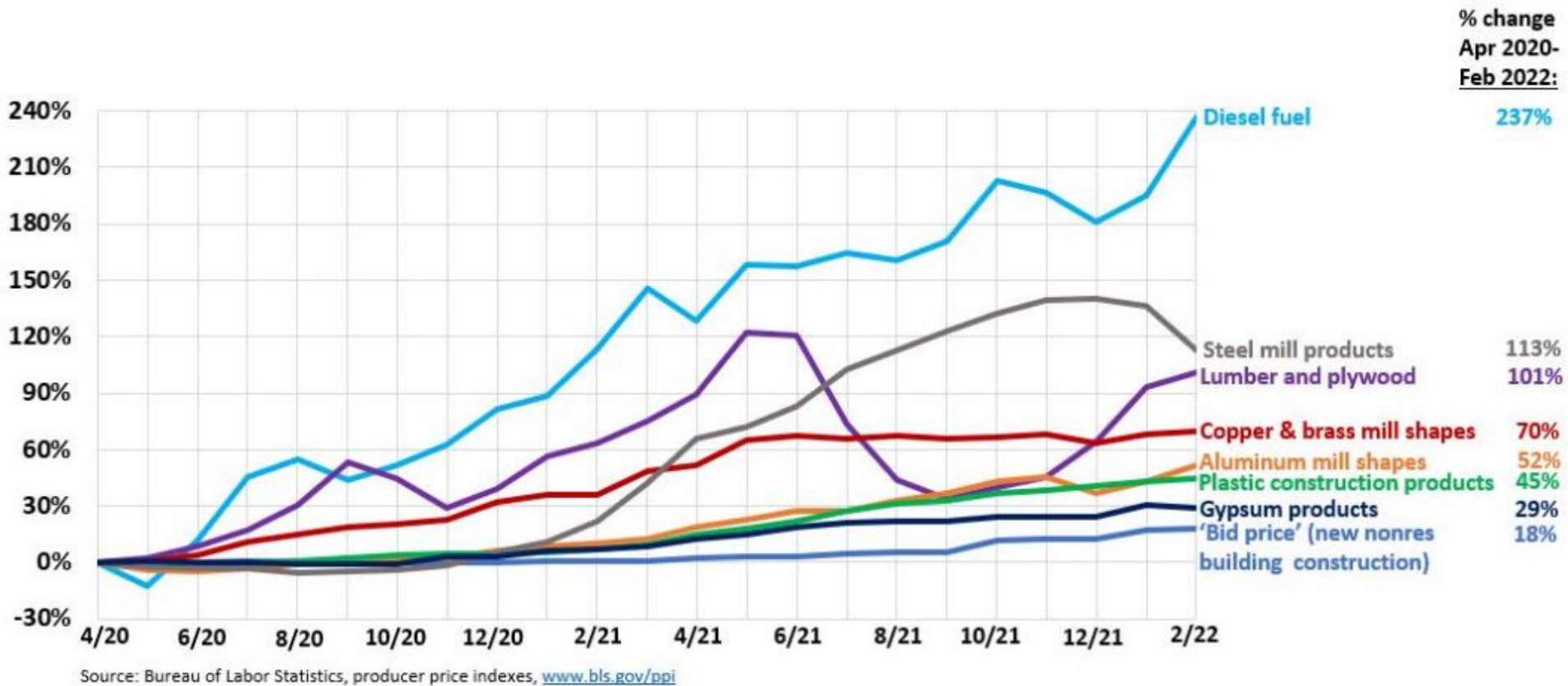
% of 1987 BASE



National Construction Trends

PPIs for construction bid prices and selected inputs

cumulative change in PPIs, April 2020–February 2022, not seasonally adjusted



Producer Price Indexes (PPI)

Source: Associated General Contractors (AGC) Construction Inflation Alert, April 2022

Questions?



FUTURE FOR FREIGHT

Iowa Freight Advisory Council

Andy Cummings, Manager Public Affairs and Community Relations

June 17, 2022



Forward-looking Information

The following presentation contains certain forward-looking information within the meaning of applicable securities laws in both the U.S. and Canada relating, among other things, to Canadian Pacific's operations, priorities and plans, anticipated financial and operational performance, including business prospects, market drivers and outlook, planned capital expenditures, anticipated revenues and the source thereof, programs and strategies (including financing strategies). This forward-looking information also includes, but is not limited to, statements concerning expectations, beliefs, plans, goals, objectives, assumptions and statements about possible future events, conditions, and results of operations or performance.

Forward-looking information may contain statements with words such as "anticipate", "believe", "expect", "plan", "financial expectations", "key assumptions", "outlook", "guidance", or similar words suggesting future outcomes.

With respect to the pending KCS business combination, we can provide no assurance when or if the combination will be completed. Completion of the combination is subject to the receipt of final approval from the STB of the CP-KCS control application by December 31, 2023. There can be no assurance of receipt of this final approval by December 31, 2023 or, if received, the successful integration of KCS.

Undue reliance should not be placed on forward-looking information as actual results may differ materially from the forward-looking information. Forward-looking information is not a guarantee of future performance.

By its nature, CP's forward-looking information involves numerous assumptions, inherent risks and uncertainties that could cause actual results to differ materially from the forward-looking information, including but not limited to the following factors: changes in business strategies; general North American and global economic, credit and business conditions; risks in agricultural production such as weather conditions and insect populations; the availability and price of energy commodities; the effects of competition and pricing pressures; industry capacity; shifts in market demand; changes in commodity prices; inflation; changes in laws, regulations and government policies, including regulation of rates; changes in taxes and tax rates; potential increases in maintenance and operating costs; changes in fuel prices; uncertainties of investigations, proceedings or other types of claims and litigation; labour disputes; risks and liabilities arising from derailments; transportation of dangerous goods; timing of completion of capital and maintenance projects; currency and interest rate fluctuations; effects of changes in market conditions and discount rates on the financial position of pension plans, including long-term floating rate notes and investments; climate change; various events that could disrupt operations, including severe weather, droughts, floods, avalanches and earthquakes as well as security threats and governmental response to them, and technological changes, and the pandemic created by the outbreak of the novel strain of Coronavirus and its variants (and the disease known as COVID-19) and resulting effects on economic

conditions, the demand environment for logistics requirements and energy prices, restrictions imposed by public health authorities or governments, fiscal and monetary policy responses by governments and financial institutions, and disruptions to global supply chains.

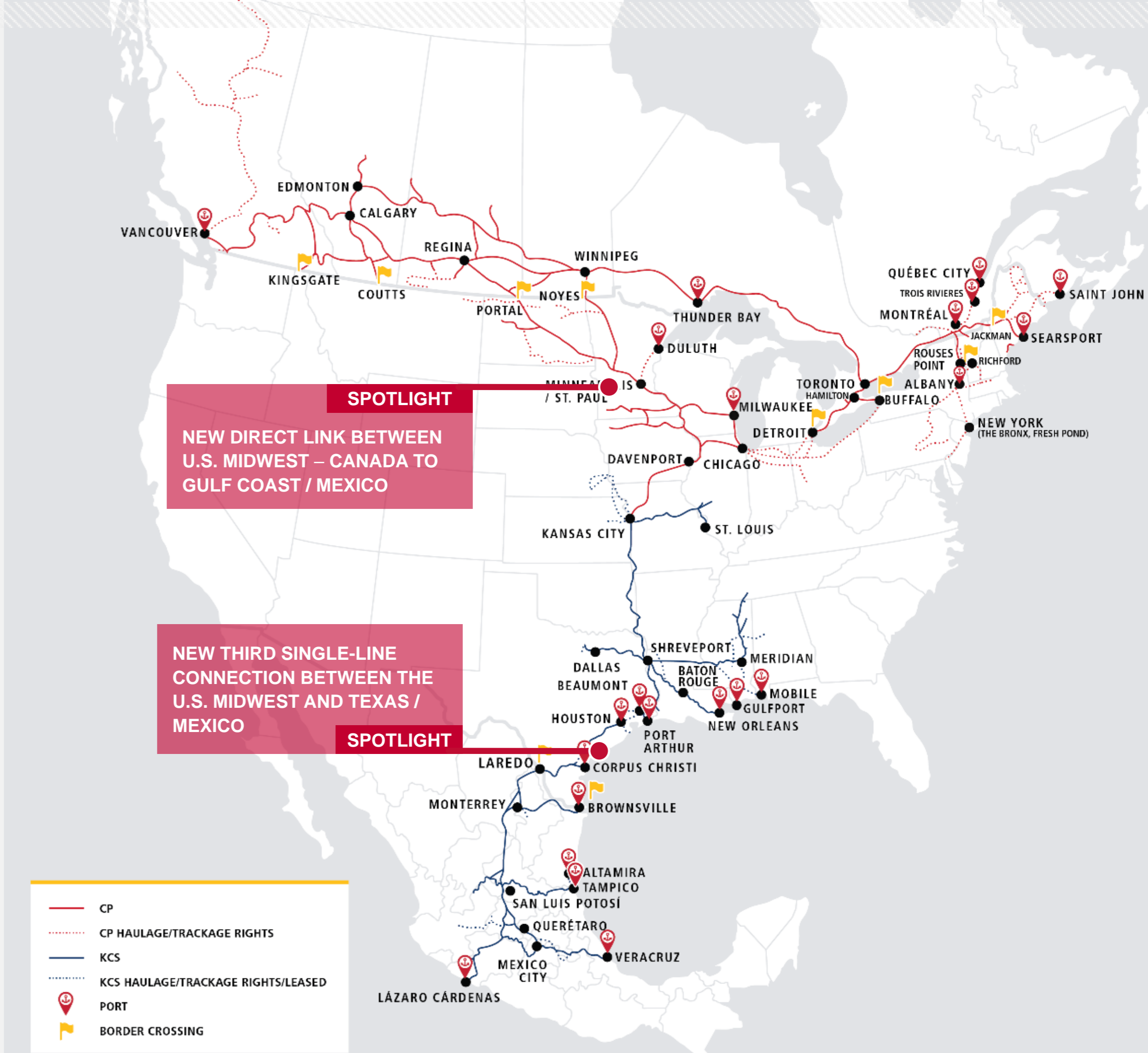
The foregoing list of factors is not exhaustive. These and other factors are detailed from time to time in reports filed by CP with securities regulators in Canada and the United States. Reference should be made to "Item 1A – Risk Factors" and "Item 7 – Management's Discussion and Analysis of Financial Condition and Results of Operations" in CP's annual and quarterly reports filed on Form 10-K and 10-Q, respectively.

Forward-looking information is based on current expectations, estimates and projections and it is possible that predictions, forecasts, projections, and other forms of forward-looking information will not be achieved by CP. Except as required by law, CP undertakes no obligation to update publicly or otherwise revise any forward-looking information, whether as a result of new information, future events or otherwise.

The First U.S. – Mexico – Canada Rail Network

- Enhances and creates **competition**.
- Creates new **single-line** routes.
- **Bypasses Chicago** with connections to new markets.
- **Capacity:** Room to grow.
- Focused on **service**.
- **Listening** to our customers.
- Enables **USMCA growth** and investment.
- Takes trucks **off the road**.

(Note: The CPKC network will exist only after STB approval has been received. STB approval is anticipated in Q1 2023.)



CPKC Network

SINGLE-LINE RAILWAY
CONNECTING U.S.
– MEXICO – CANADA

20,000-MILE
RAIL NETWORK

UNRIVALED
NORTH AMERICAN
PORT ACCESS

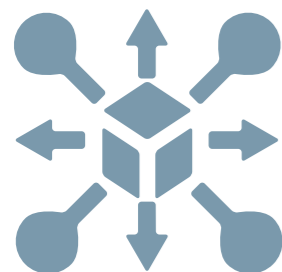


CPKC – The Future for Freight



LEADING COMMITMENT TO SAFETY & INNOVATION

Our proposed combination would join two strong performing Class 1s, providing KCS with access to CP's operation expertise, expanding CP's industry leading safety technologies to KCS and installing CP's leading safety culture at KCS.



UNPARALLELED SERVICE & BENEFITS FOR SHIPPERS

A true USMCA railroad, our combined network would offer seamless service throughout the U.S., Canada and Mexico, spurring greater competition and offering new transportation options and services for shippers.



BETTER ENVIRONMENTALLY

We are committed to sustainability and transportation of freight by rail will play an integral role in the low carbon future for North America. Railways represent the most energy-efficient method of moving freight over land, helping to remove trucks from the road. A single train lessens the burden on aging bridges and highways that cost taxpayers' money to maintain and repair.

A SINGLE UNIT TRAIN KEEPS MORE THAN

300

TRUCKS OFF OF PUBLIC ROADS



4x

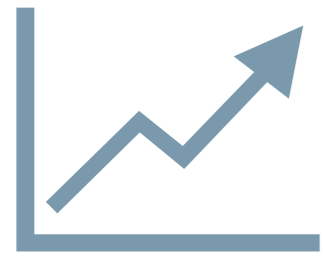
MORE FUEL-EFFICIENT

75%



LESS GHG EMISSIONS

CPKC – The Future for Freight



SUPPORT FOR CONTINUED ECONOMIC GROWTH

Our combination would add rail capacity that can drive current and future economic growth, providing benefits in communities across North America, including:

- More efficient use of existing infrastructure.
- Expanded and alternative network routes offering more options for shippers of all sizes.



THOROUGH REGULATORY REVIEW

CP and KCS have jointly filed a railroad control application with the STB regarding the proposed transaction to create CPKC. The comprehensive control application provides an overview of the proposed operational integration of the CP and KCS rail networks, the impact of that combination on the companies' finances and labor needs, and the anticipated competitive and other benefits that will flow from providing shippers with new and better transportation alternatives.

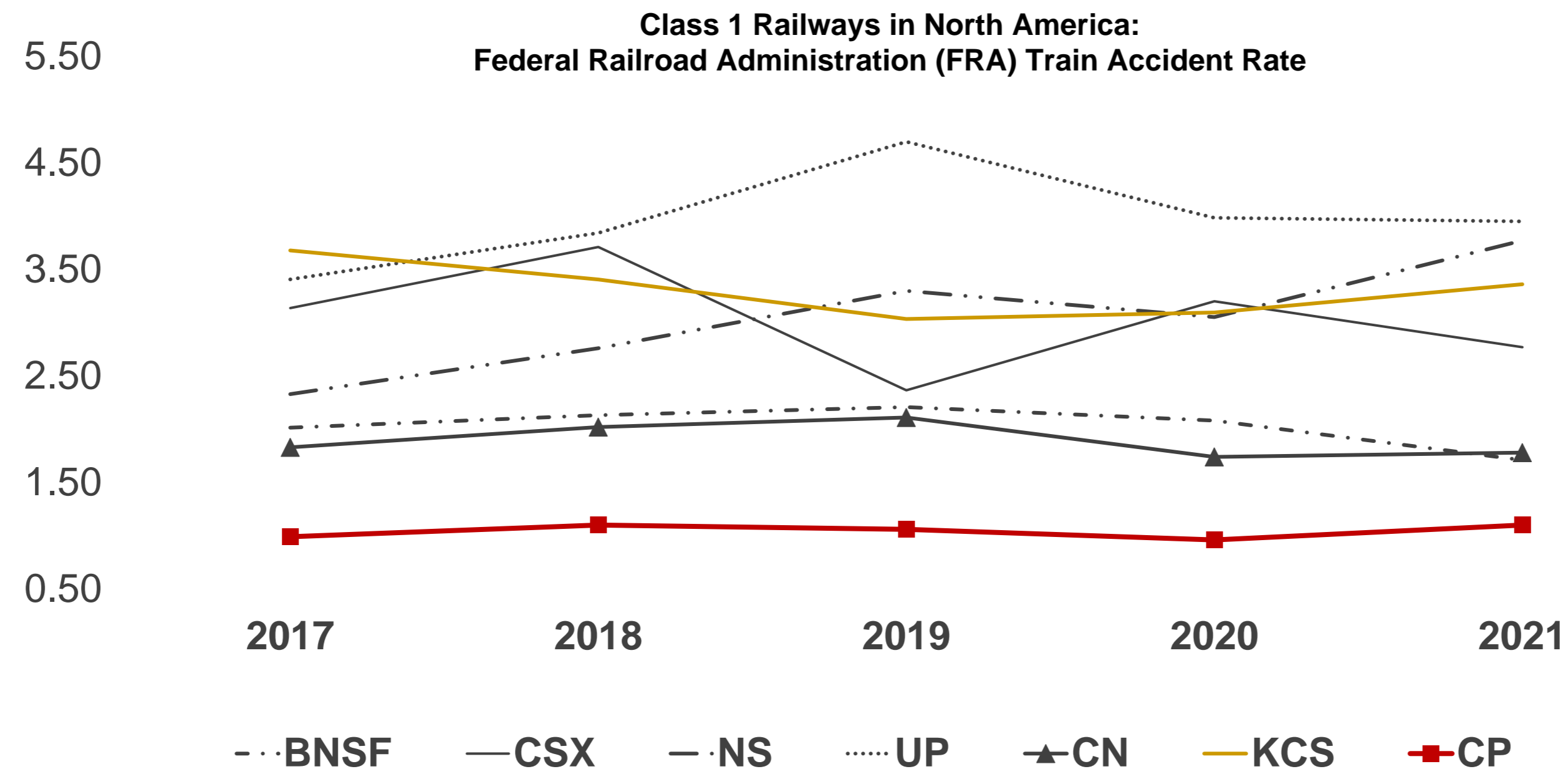
The STB has created a project [web site](#) for information about the board's environmental review of the proposed combination.

During the regulatory review the KCS remains in trust. KCS's management and Board of Directors continue to operate KCS while in trust.

A Leader in Safety

Safety is foundational at CP. We remain steadfast in our commitment to safety, across our entire operation.

- CP has been North America's safest railway for 16 consecutive years. Over the last decade, our train accident frequency has decreased more than 40%.
- Each year CP allocates over 50% of its capital investments toward safety and replacement initiatives to ensure our network remains safe and efficient.

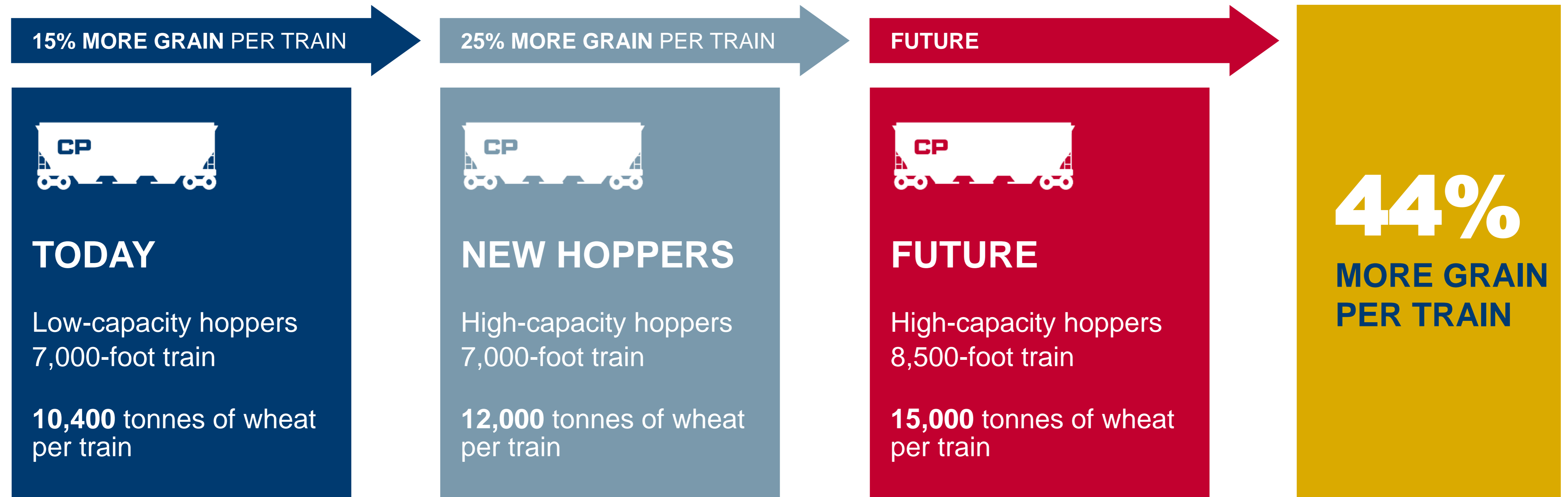


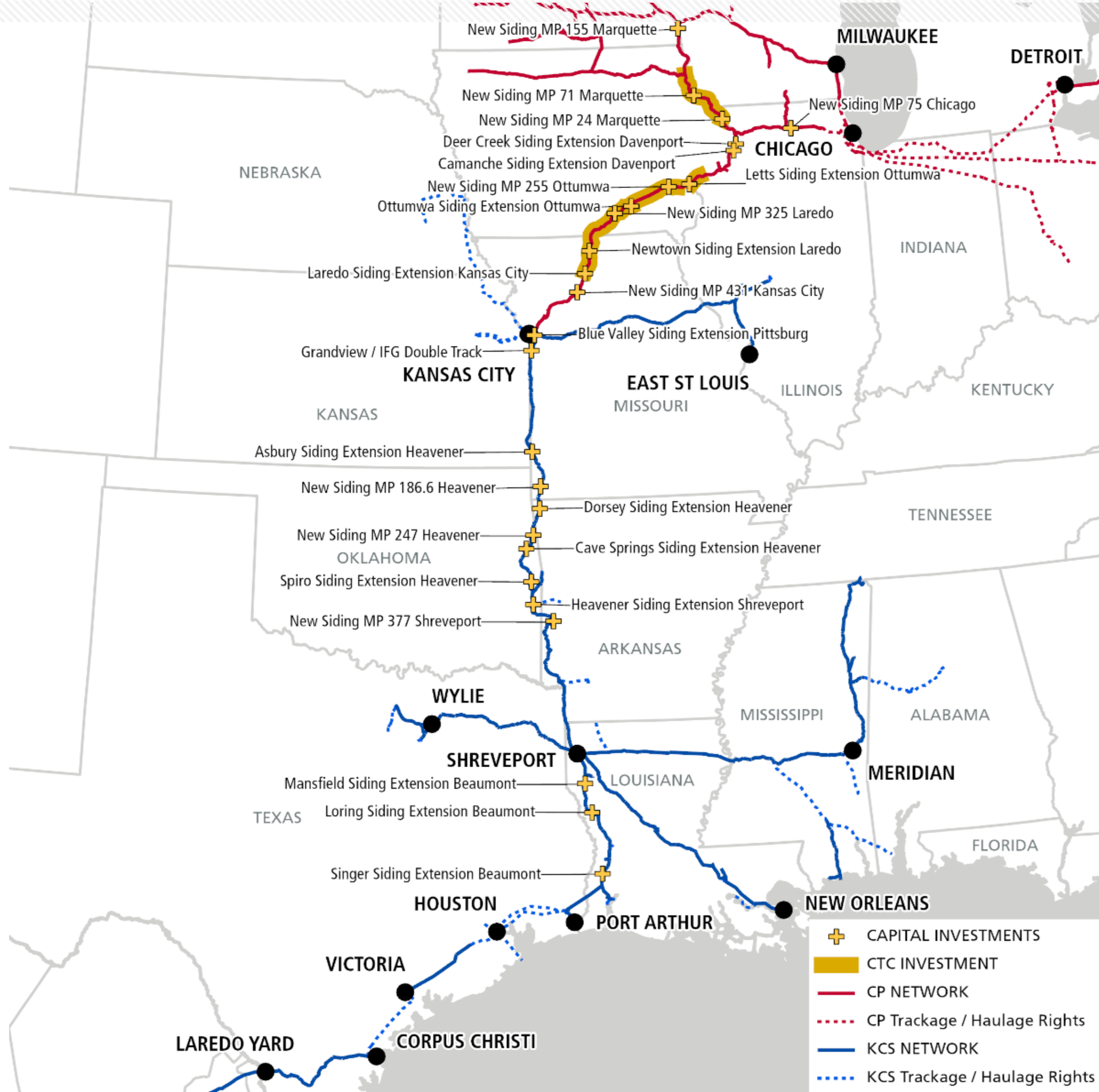
CPKC – Bulk

- Links grain and fertilizer producers and consumers across North America and the World.
- New options for grain receivers on KCS system and new market access for grain producers on CP's network.
- 8,500-foot High Efficiency Product (HEP) drives longer trains, velocity and efficiency.
- Market reach for grain products - DDGs, oils, meals and ethanol to export, domestic and renewable markets.
- Enables investment in crush facilities, grain elevators, Gulf export terminals and Mexico distribution.



The Future of the Grain Supply Chain





CPKC – Capital Improvements

\$275 MILLION INVESTMENT

- New and extended sidings.
- Centralized traffic control.
- Yard and terminal improvements.

**INCREASE SAFETY, CAPACITY,
EFFICIENCY AND FLUIDITY.**

Thank you





Iowa Freight Advisory Council

Impact of Supply Disruptions

June 17, 2022



Recognizing private company success



IFAC Agenda

Discussion of how the Iowa and global supply chain systems have been impacted by recent disruptions (war in Ukraine, COVID-19 pandemic, etc.) and future implications or long-term impacts this could have.



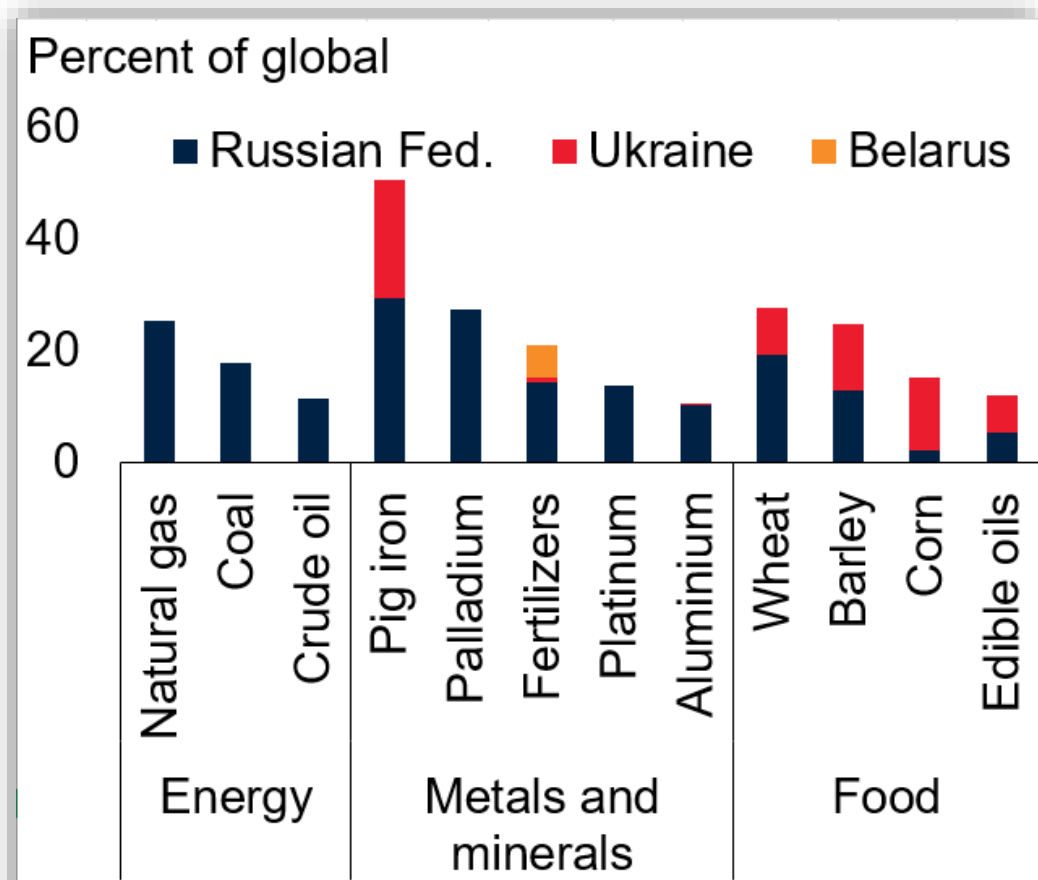


Supply Disrupted: Ukraine's Global Commodity Impact



Ukraine Commodity Impact

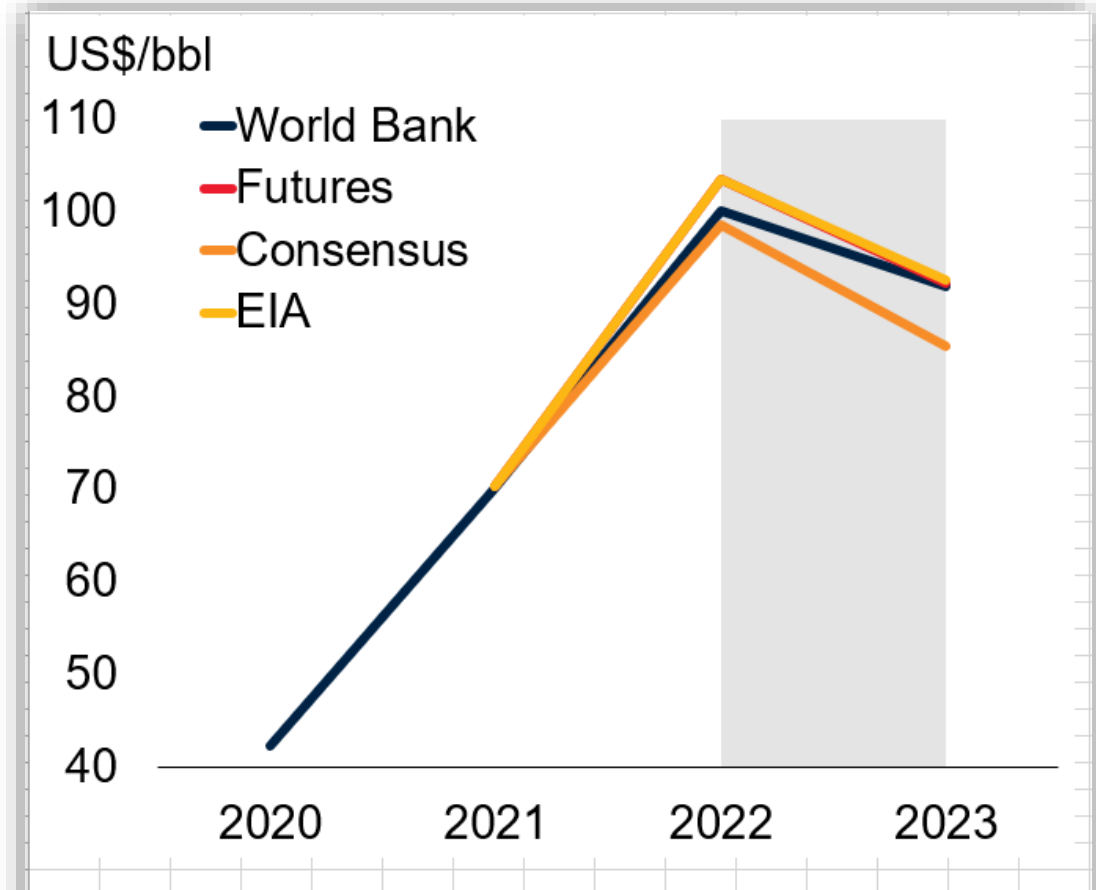
Russia and Ukraine's share of commodity exports



Sources: BP Statistical Review; UN Comtrade; U.S. Department of Agriculture; World Bank.

Note: Data for energy and food are trade volumes while metals and minerals are trade values. Fertilizers are phosphate rock and potash minerals, and ammonia-based non-minerals. Data are for 2020.

Brent crude oil price forecasts



Sources: Bloomberg; Energy Information Administration; World Bank.

Note: Shaded areas indicate forecasts. "Consensus" refers to the March 2022 consensus survey. "Futures" refers to the March 22, 2022 futures price. "EIA" refers to the EIA's Brent crude oil forecast (April 2022 STEO report).

Ukraine Commodity Impact

Ukraine: Corn Production

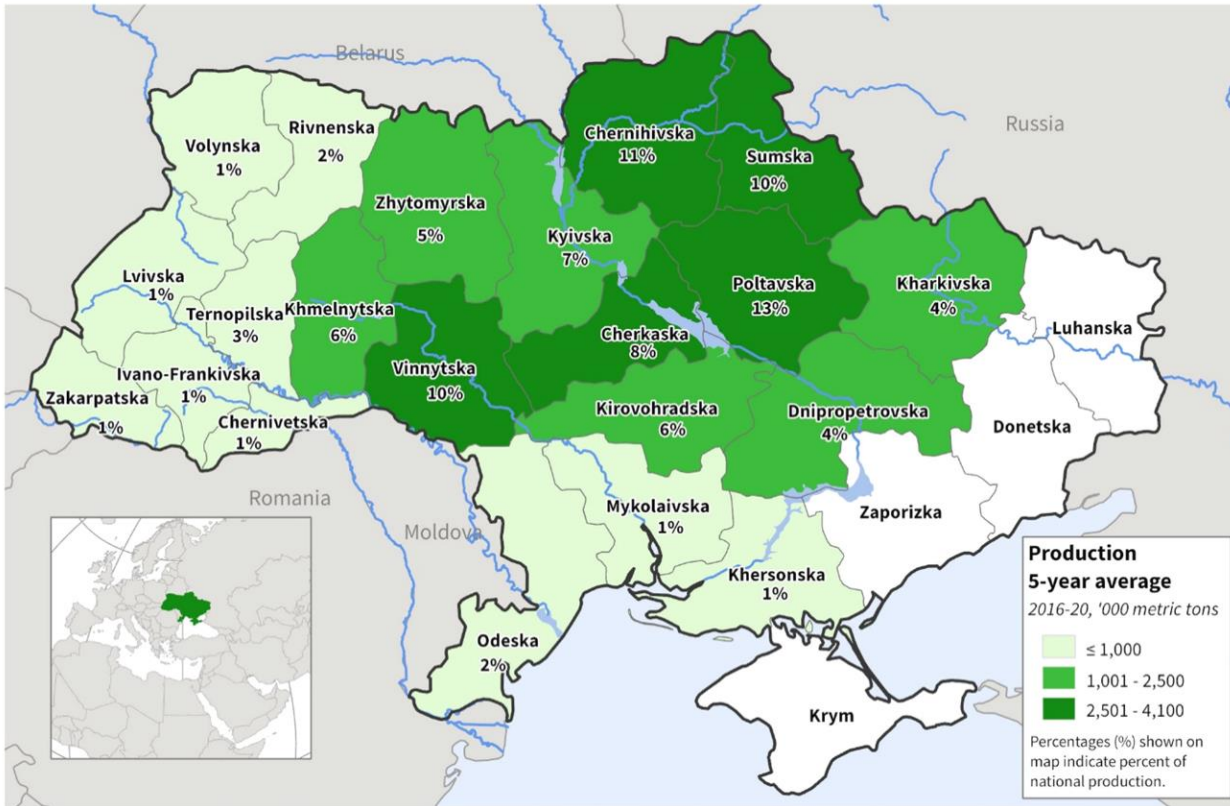
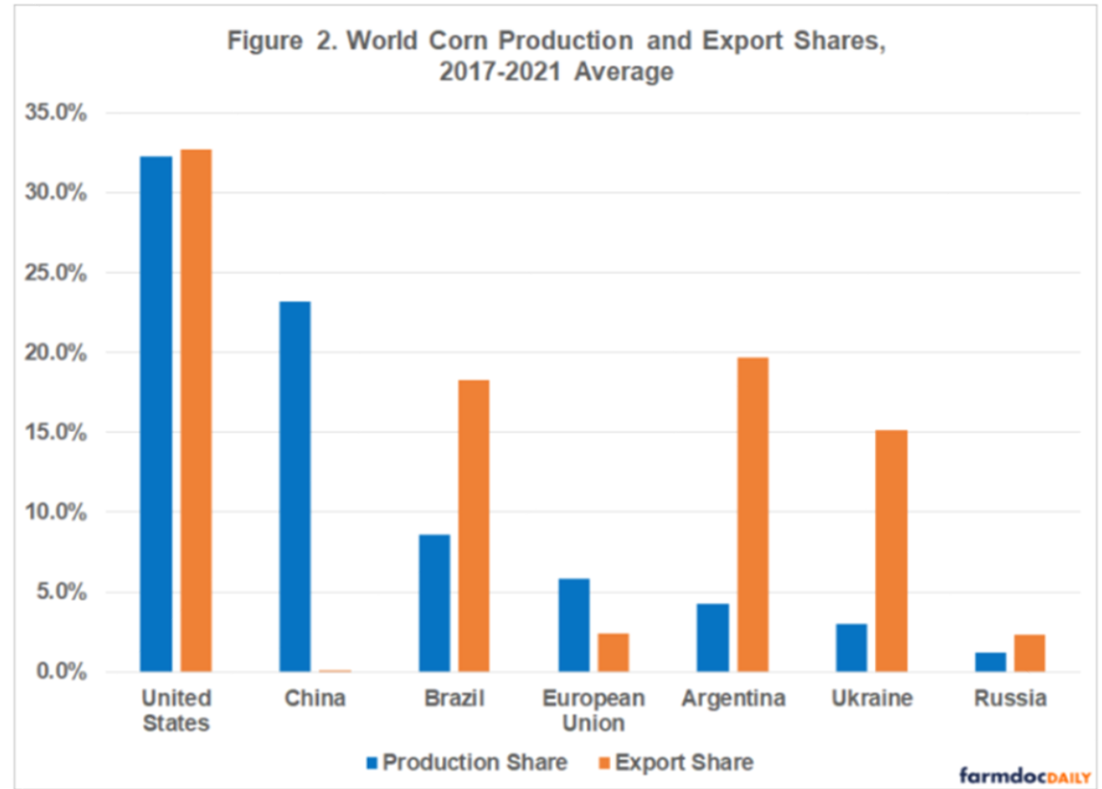


Figure 2. World Corn Production and Export Shares, 2017-2021 Average



Corn Futures Over 20 year Horizon



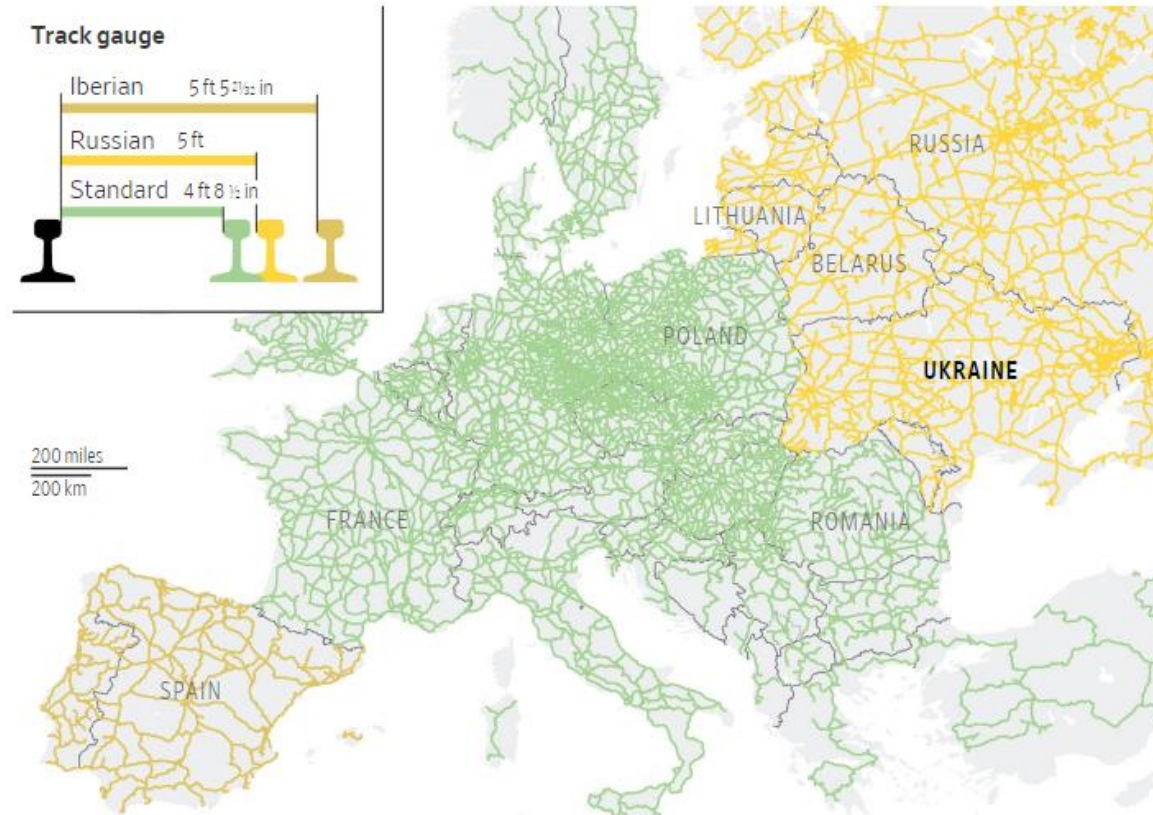
**Current
>\$7.91<**

\$5.00

\$3.00

Ukraine Commodity Impact

Rail transport in Europe



Note: Includes passenger and freight rail tracks. Finland's track gauge and Russian track gauge differ by 4mm but are compatible. All high-speed rail in Europe uses standard-gauge except from Russia and Finland.
Sources: Stratfor; Agico Group



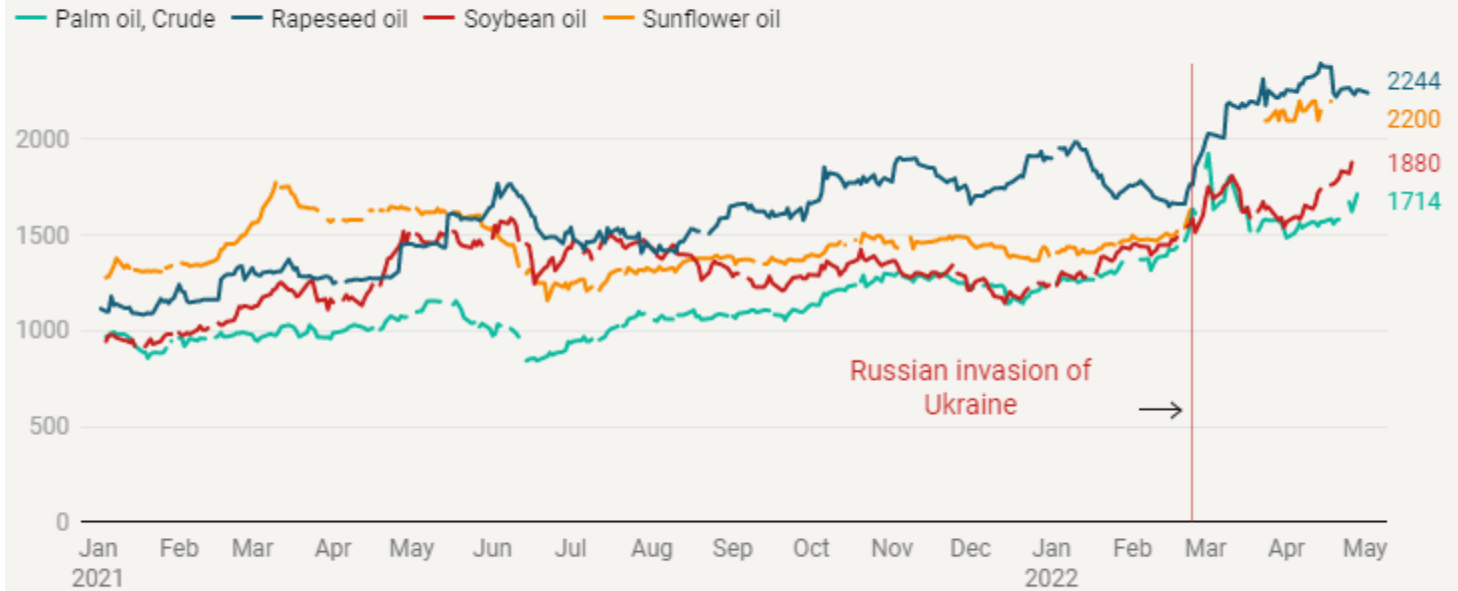
Source: Ministry of Agrarian Policy and Food of Ukraine

Source: WSJ Ukraine Is Struggling to Export Its Grain, and Here's Why – June 5, 2022

Ukraine Commodity Impact

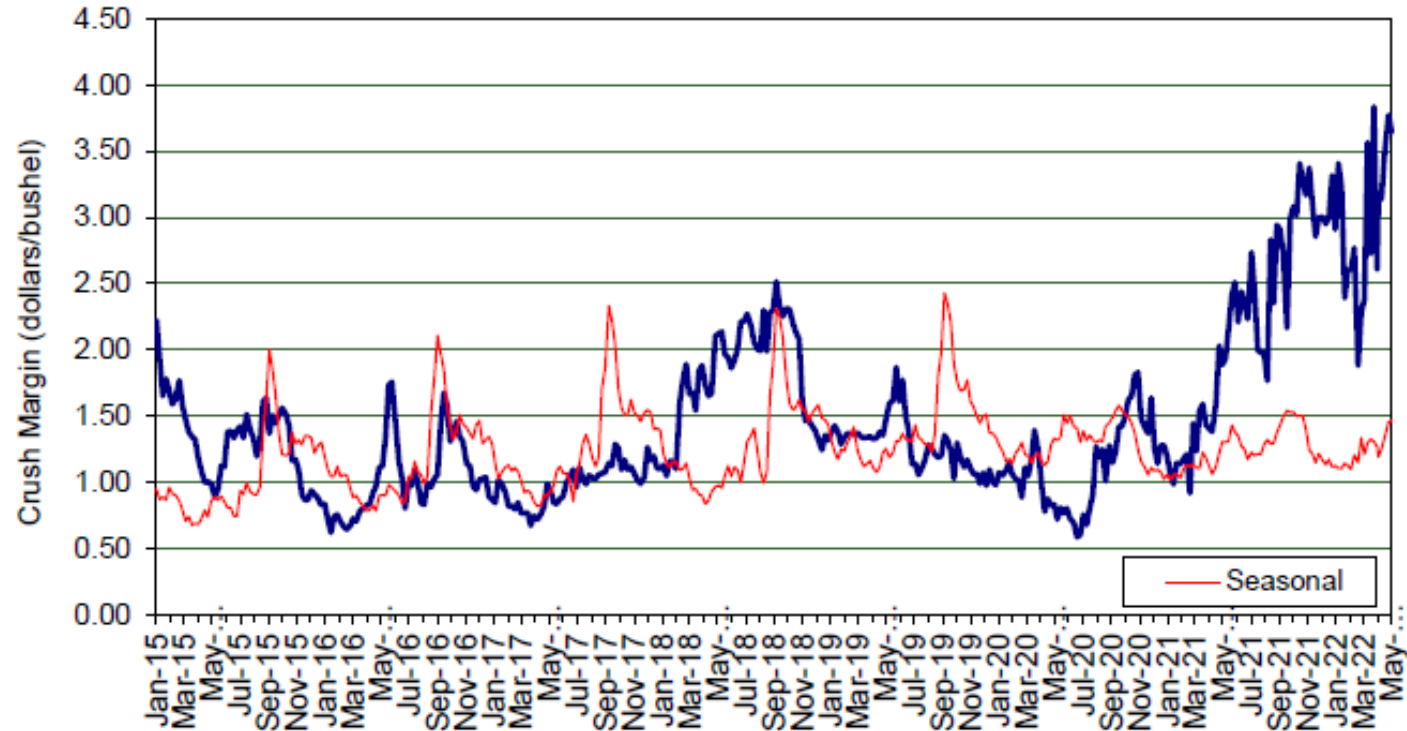
FIGURE 1

Daily vegetable oil prices, current USD



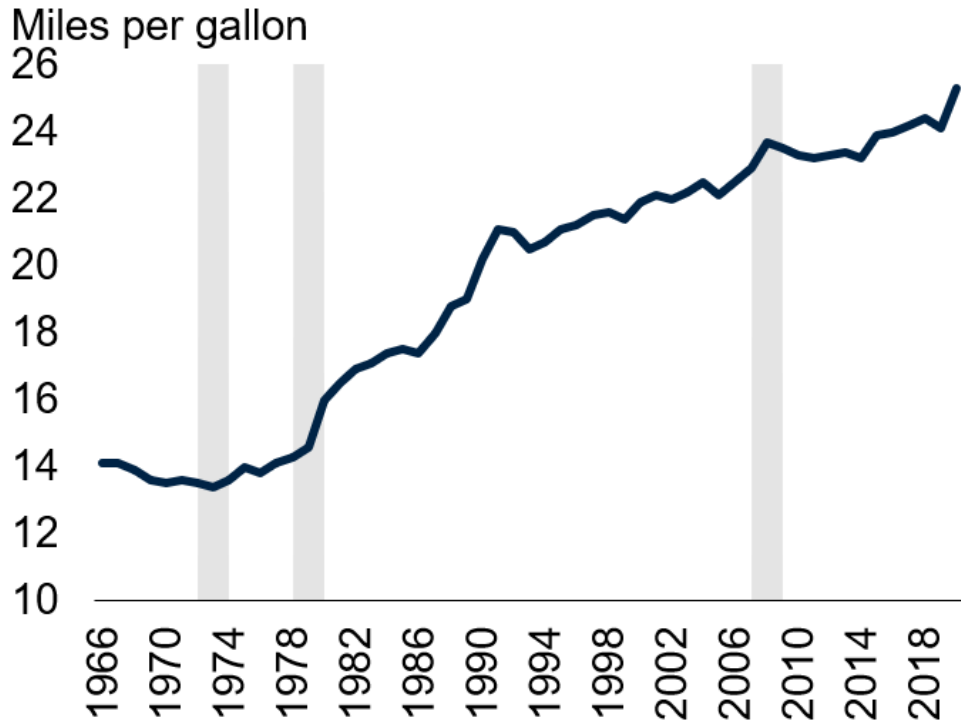
Soybean oil: CBOT, Palm Oil, crude: Malaysian Board daily price, Rapeseed Oil: Rotterdam spot prices, Sunflower oil: India CIF Mumbai price
 Chart: David Laborde • Source: MPOB, Bloomberg, CBOT • [Get the data](#) • [Embed](#) • [Download image](#)

U.S. Soy Crush Margin



Ukraine War's Future Impact?

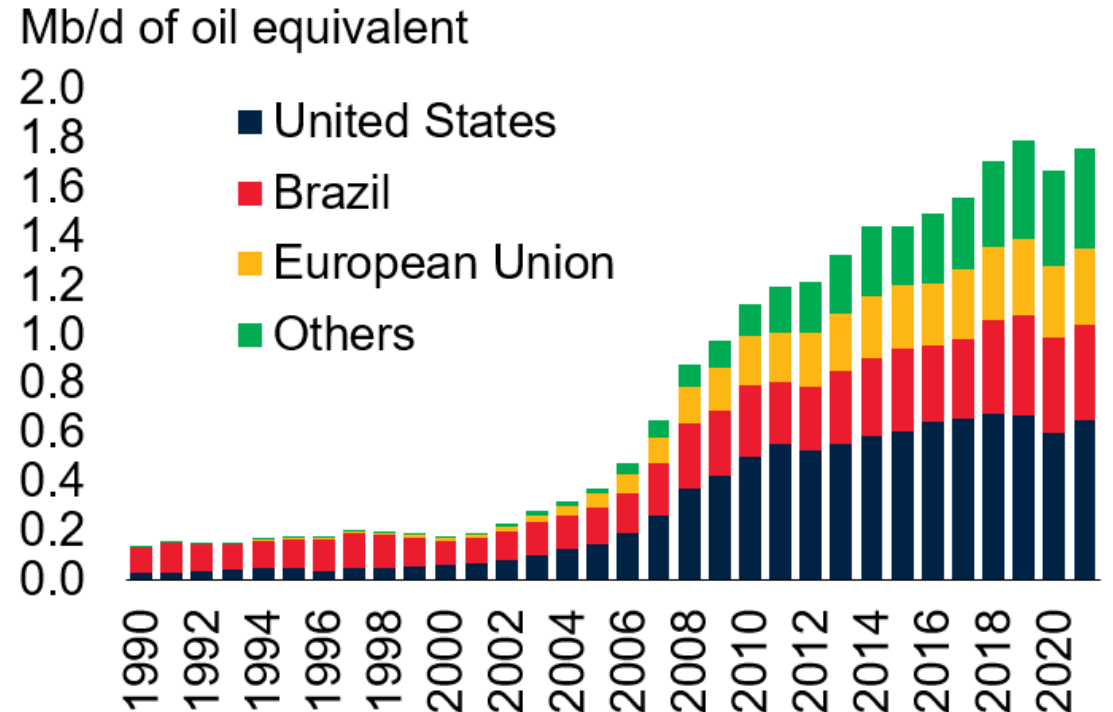
U.S. road vehicle fuel efficiency



Source: Energy Information Administration (EIA); World Bank.
 Note: Figure shows the fuel efficiency of U.S. vehicles in miles driven per gallon of gasoline consumed. Shaded areas refer to oil price shocks in 1973, 1979, and 2008.

Source: World Bank's Commodity Markets Outlook

Biofuel production



Sources: BP Statistical Review, Organisation for Economic Co-operation and Development; World Bank.



Supply Disrupted: COVID-19 Impact

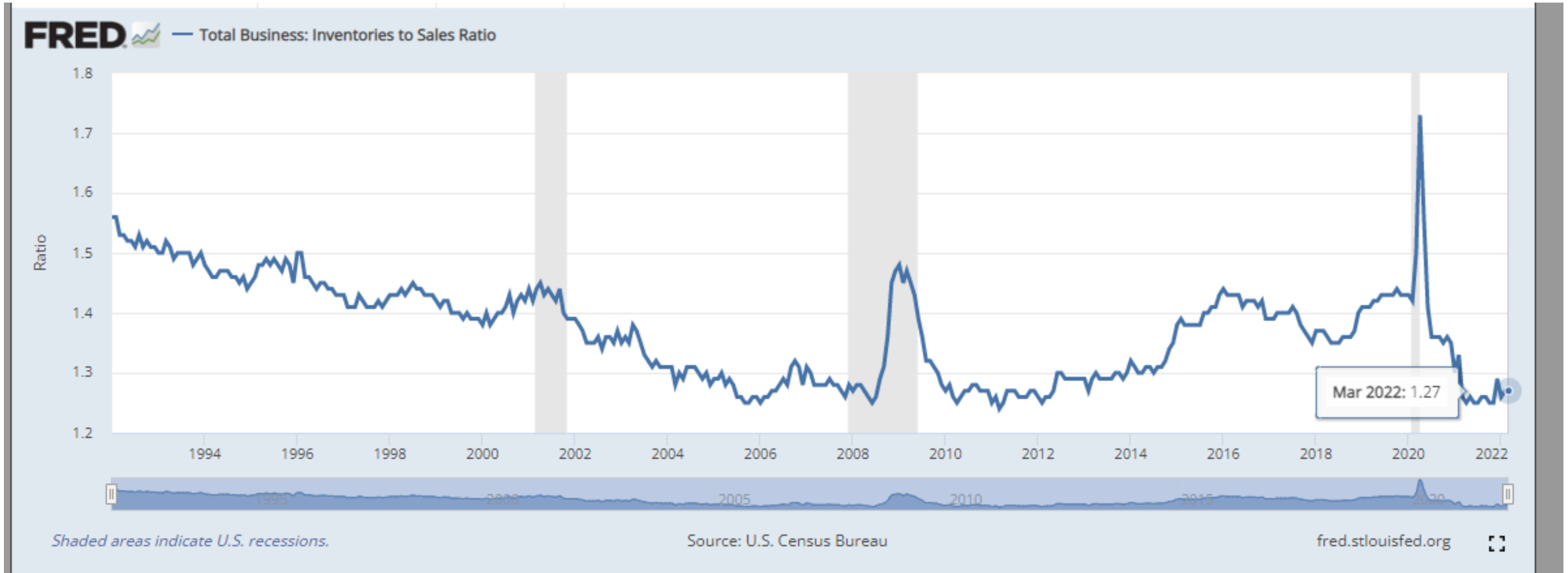


Recognizing private company success

COVID-19 Pandemic Impact

- Loss of agility - Rigid Supply Chain
- Labor Constraints
- Unknown Future - Supply Allocations
- Freight Service Level Gaps
- Buyer Behavior Changes
- Companies Use of Cash
- Secure Supply
- Warehouse Programs
- Price Inflation
- Suppliers Extended Lead-Times
- Supply/Demand Imbalance

COVID-19 Pandemic Impact



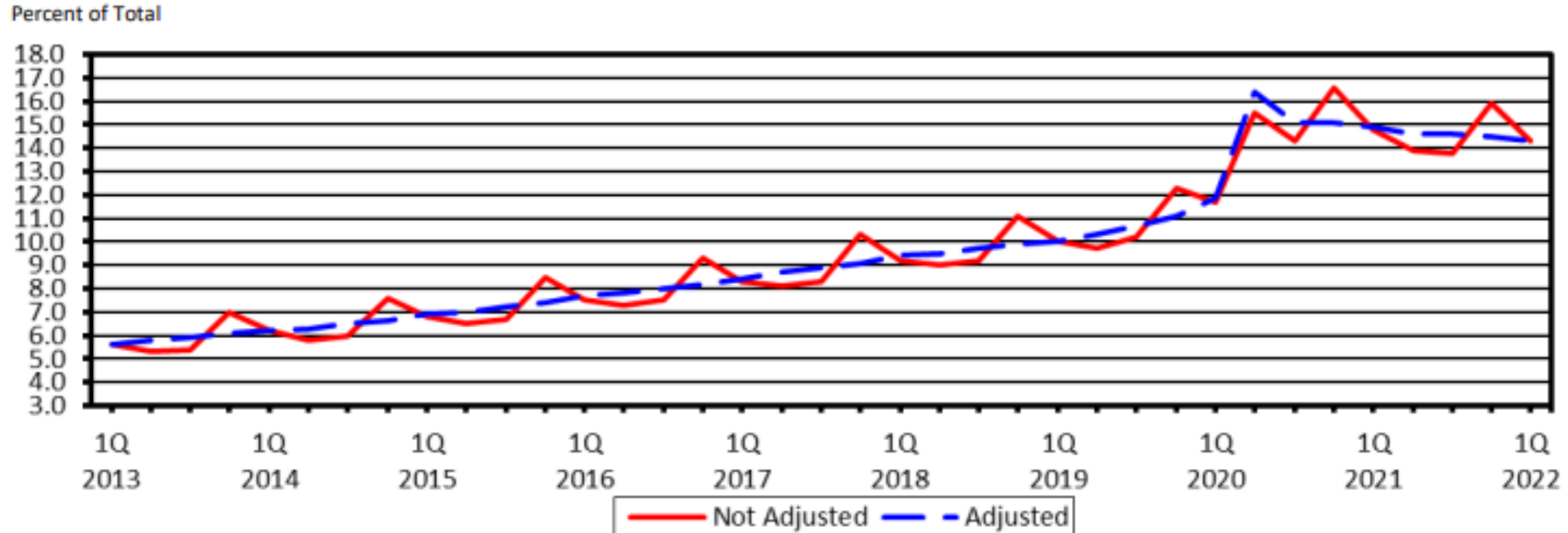
Share Links

Account Tools



COVID-19 Pandemic Impact

Estimated Quarterly U.S. Retail E-commerce Sales as a Percent of Total Quarterly Retail Sales:
1st Quarter 2013 – 1st Quarter 2022

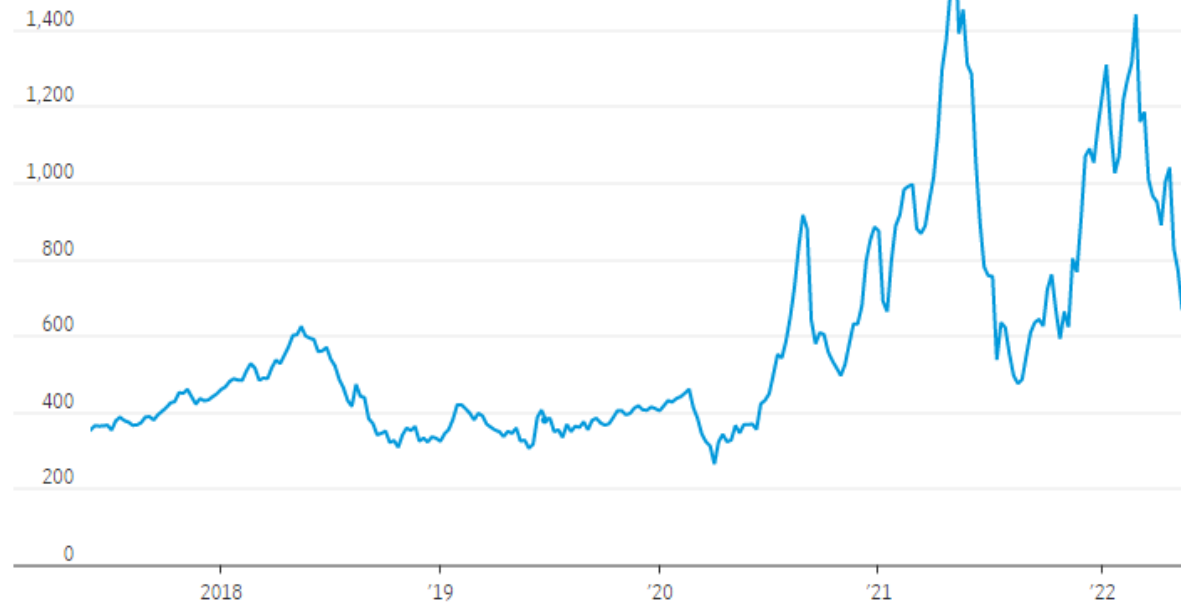


Source: WSJ The Pandemic Was Supposed to Push All Shopping Online. It Didn't— April 16, 2022

Lumber Prices

Lumber-futures price, weekly

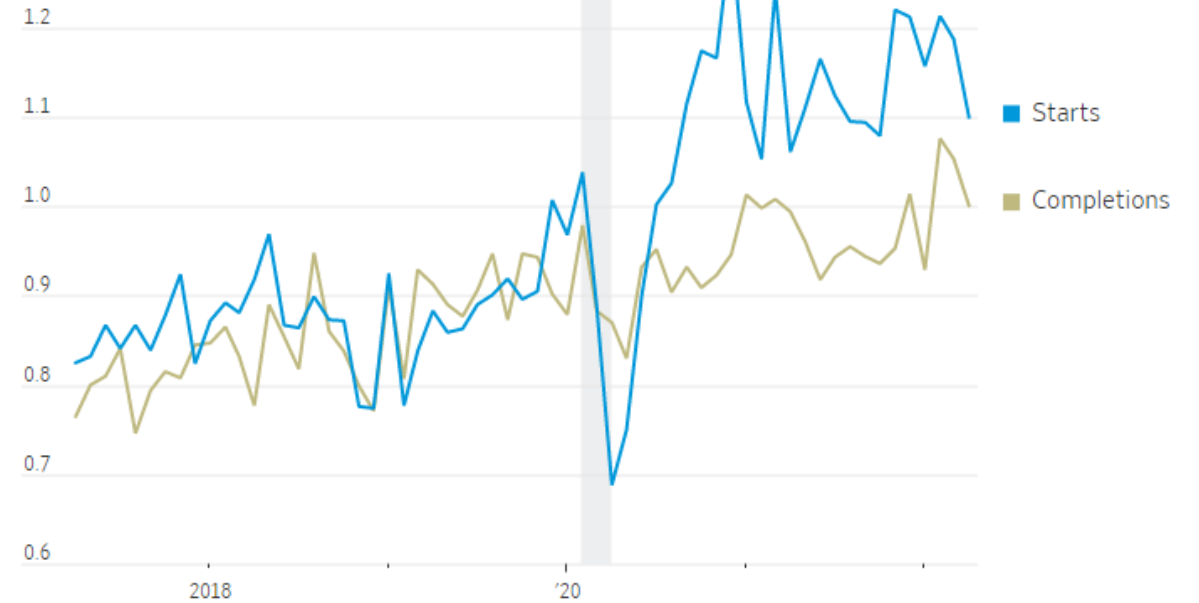
\$1,600 per 1,000 board feet



Note: Random length, continuous contract
Source: FactSet

Single-family houses started and completed

1.3 million



Note: Seasonally adjusted annual rates
Source: U.S. Census Bureau via St. Louis Fed

Source: WSJ Lumber Prices Slump with Rising Interest Rates – May 30, 2022

Employment Metrics

U.S. Labor Constraints

3.6% Unemployment
or 5.9M Unemployed

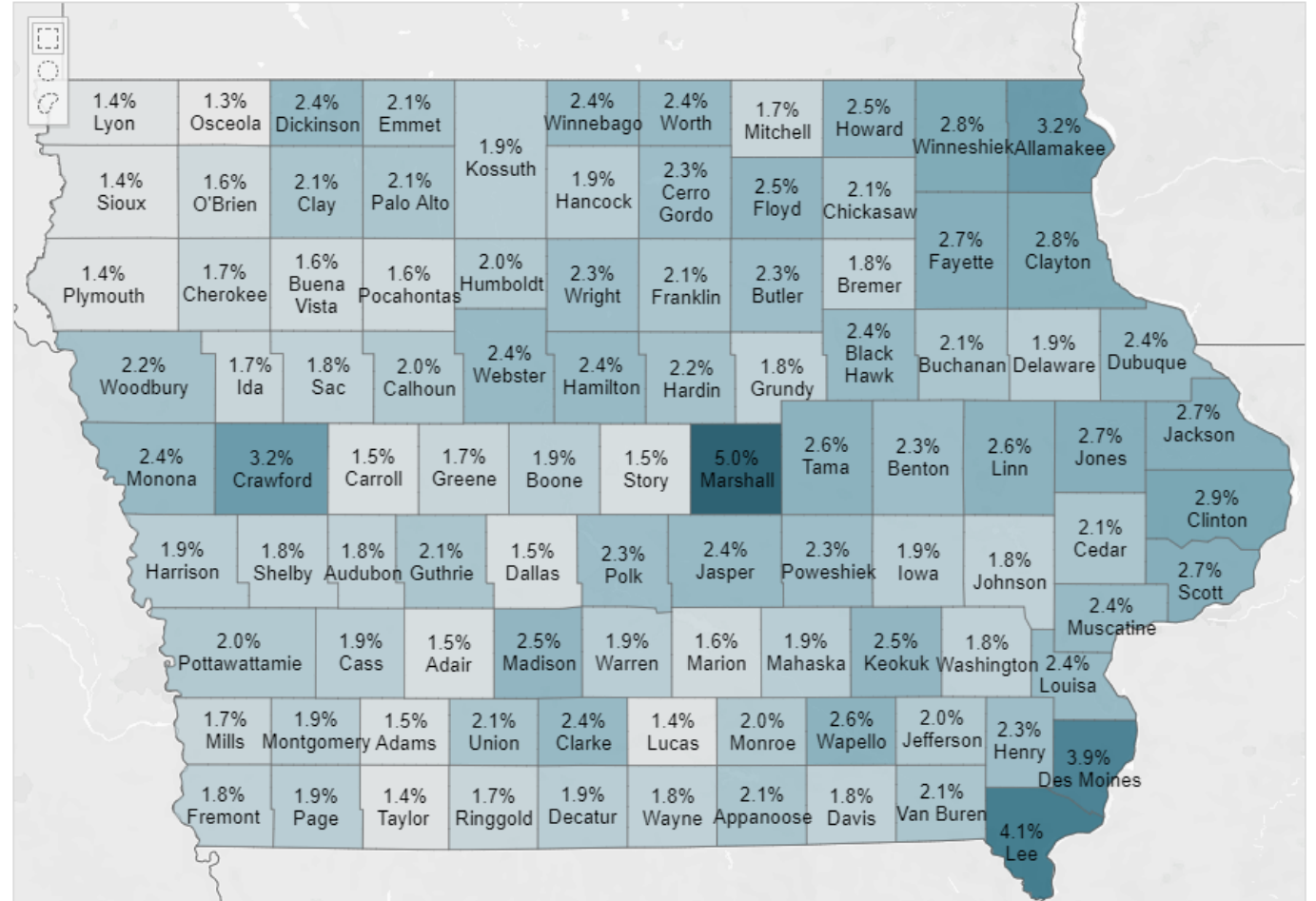
62.2% Labor
Participation Rate
(67.3% peak)



11.5M Job Openings
(7.1%)

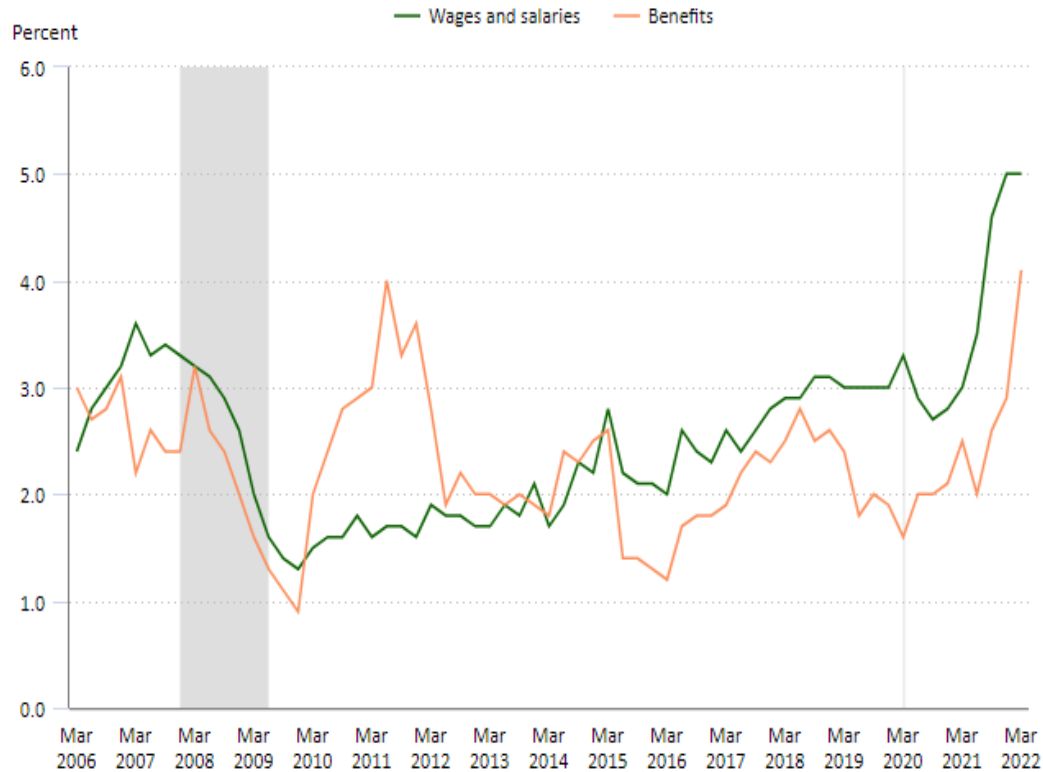
6.7M Hires (4.5%)
and
6.3M Separations
(4.2%)

April 2022 Unemployment Rate by County (Not Seasonally Adjusted)



Price Inflation

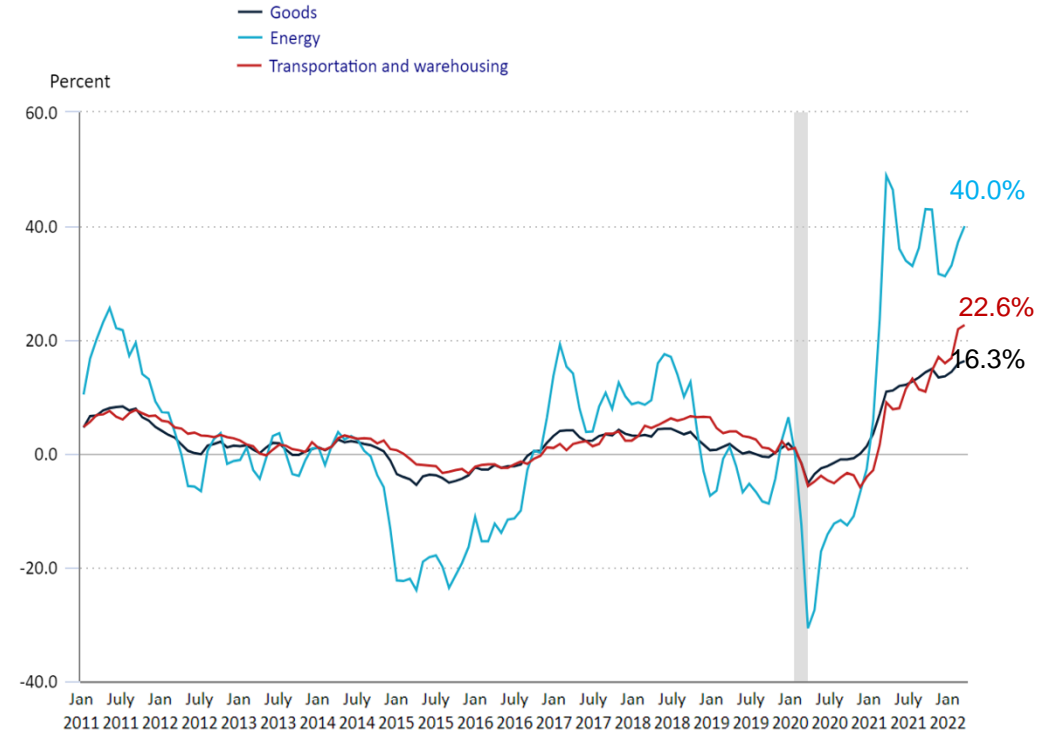
U.S. Employment Cost Index (ECI)



Hover over chart to view data.
 Note: Shaded area represents recession, as determined by the National Bureau of Economic Research.
 Source: U.S. Bureau of Labor Statistics.

Producer Price Index (PPI)

PPI for final demand, 12-month percent change, not seasonally adjusted



Source: U.S. Bureau of Labor Statistics.
 All data are subject to revision 4 months after originally published.



Supply Disrupted: Energy



Recognizing private company success

Energy Impact

Old Missouri Coal Plant Nearing Retirement; Now It's Needed to Avert Blackouts

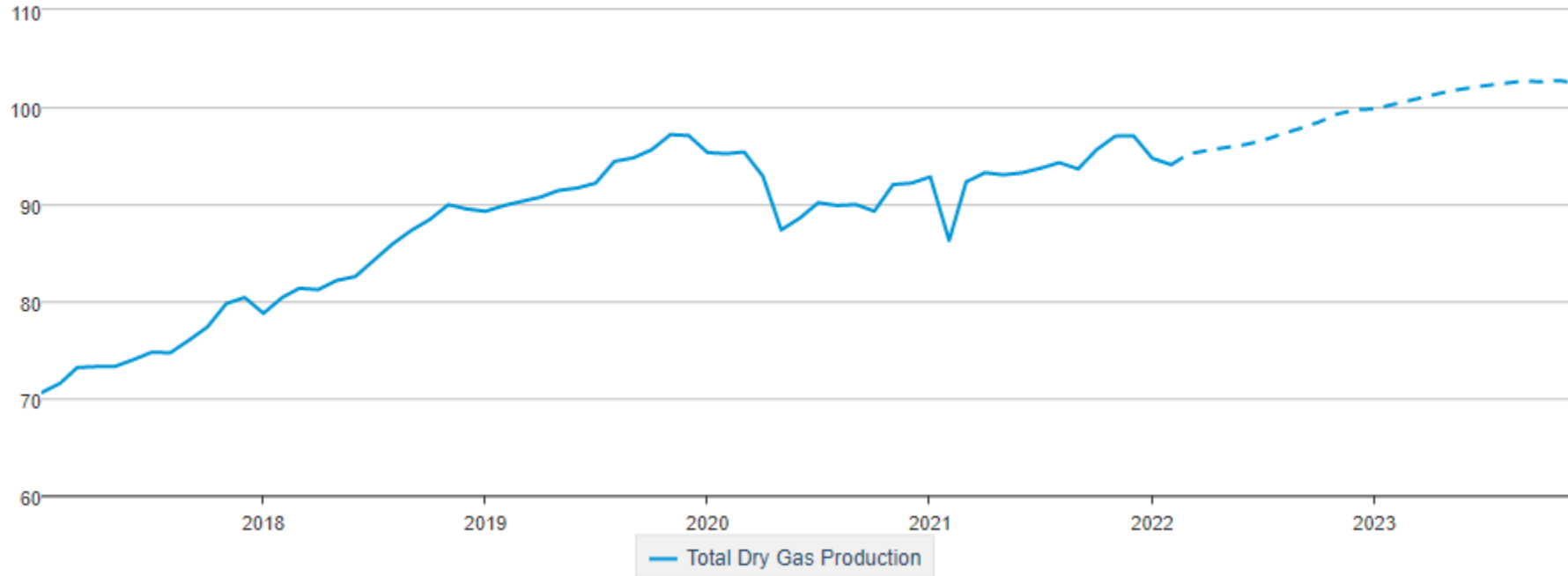
Grid operator likely needs Ameren's Rush Island generator as insurance to keep the lights on



Energy Impact

Total Dry Gas Production

billion cubic feet per day



Source: U.S. Energy Information Administration



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U.S. Natural Gas Price History



**Current
>\$7.279<**

\$6.00

\$2.00



Logistics Update

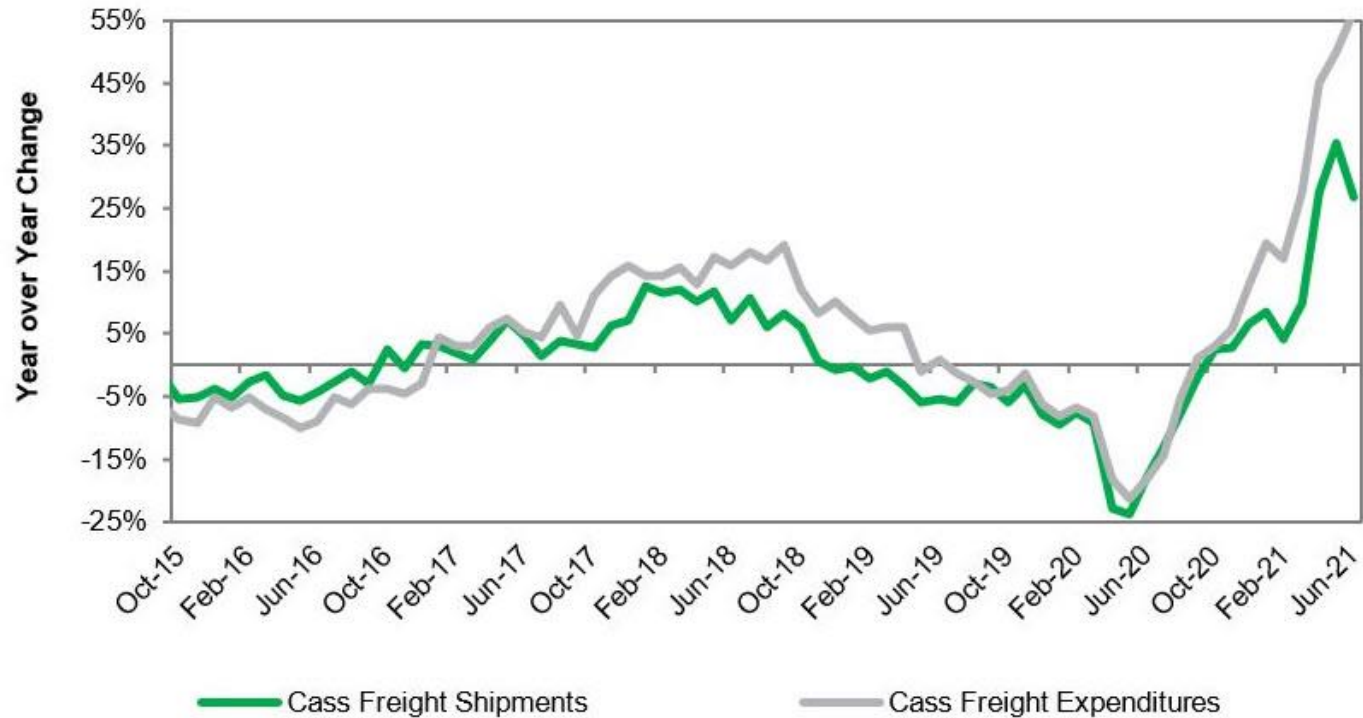


Recognizing private company success

Logistics Update

Rail, truck capacity constrains surface volumes, but rates soar higher

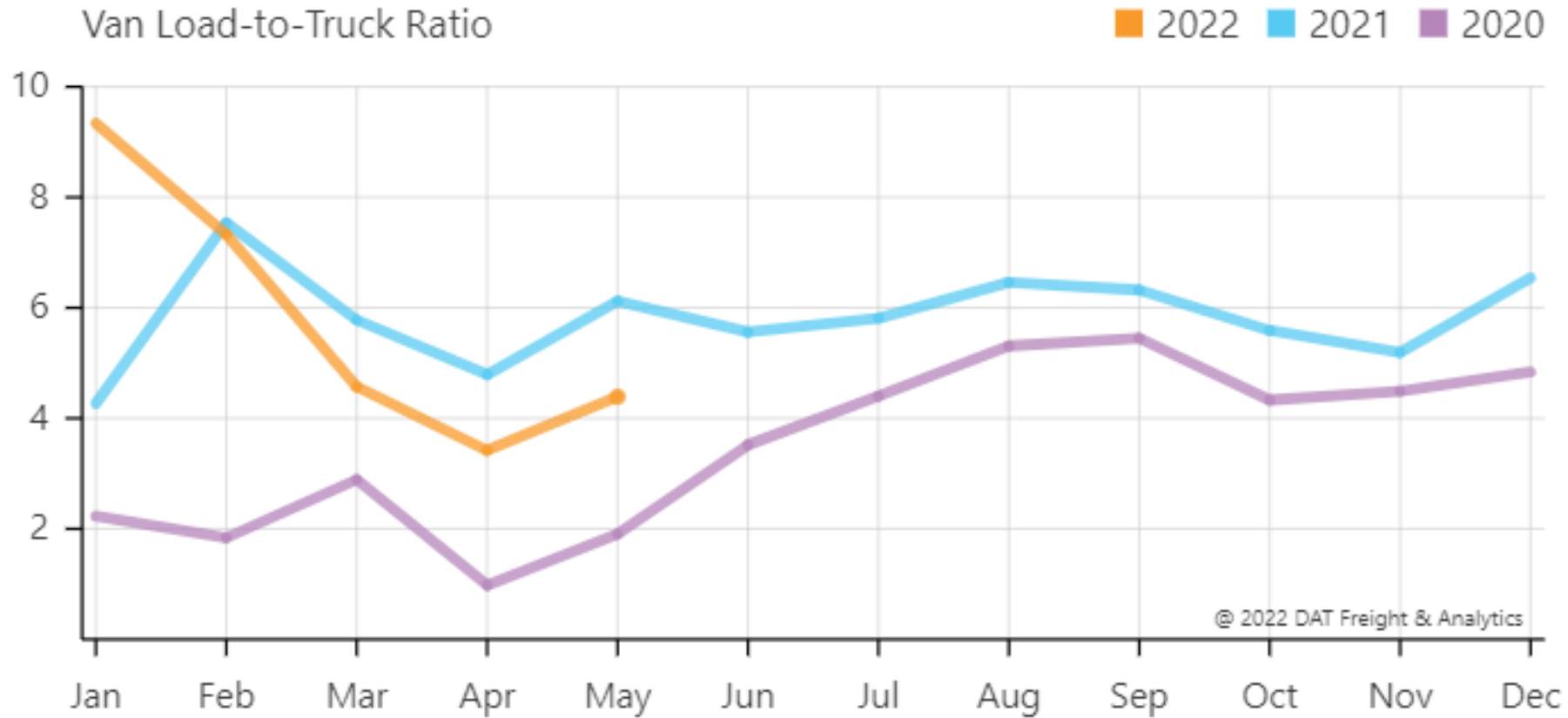
Year-over-year change in Cass Freight Index and Cass Freight Expenditures



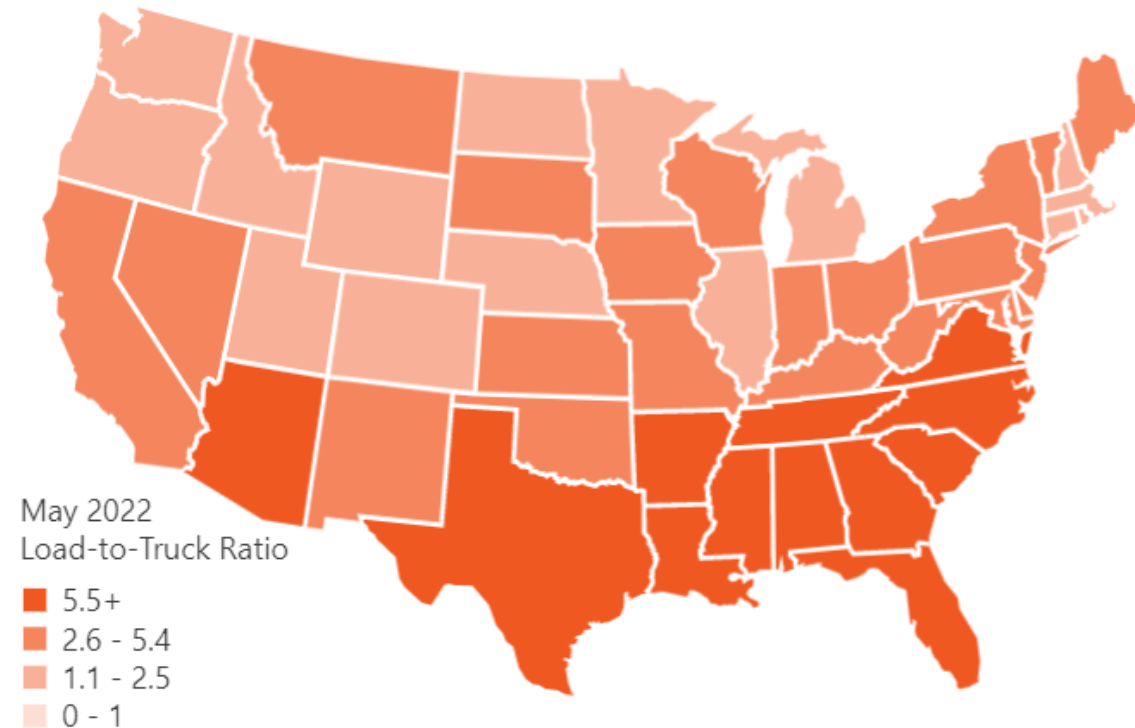
Source: Cass Freight Index

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Logistics Update



National Van Demand and Capacity



Hot Market Maps and Hot State Maps (above) in [DAT RateView](#) depict geographic trends in the load-to-truck ratio.

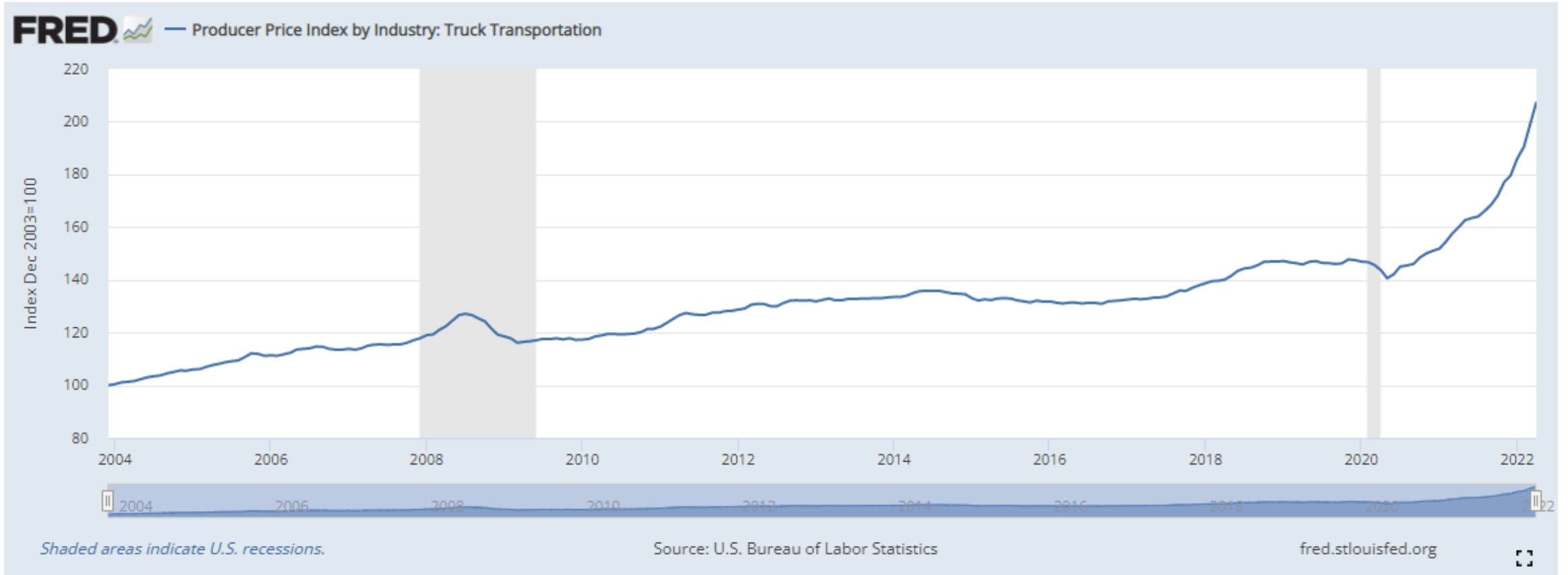
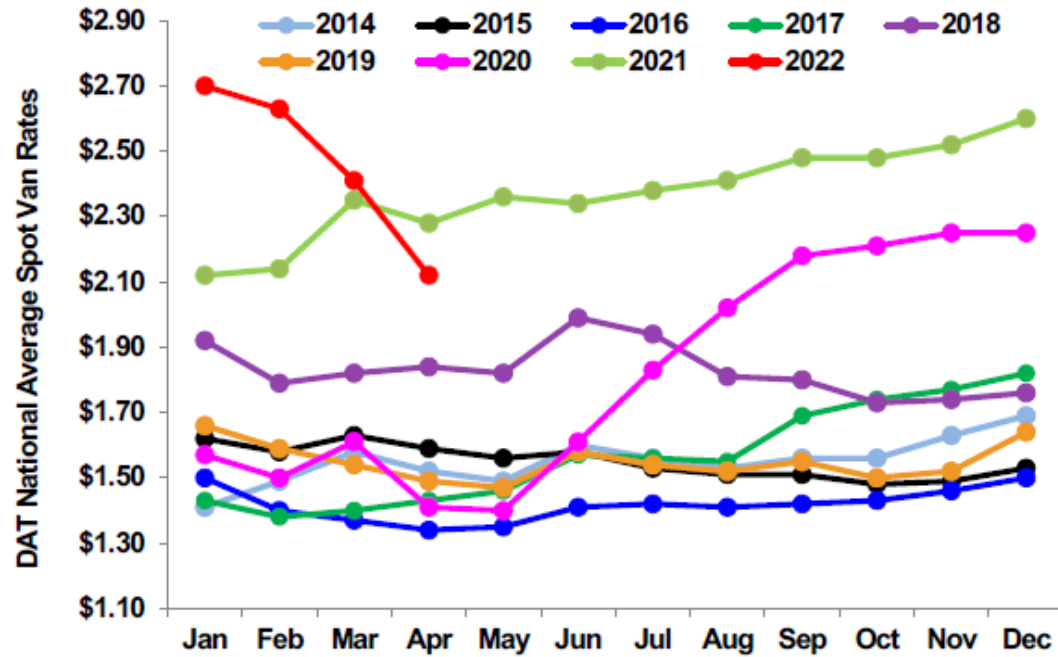
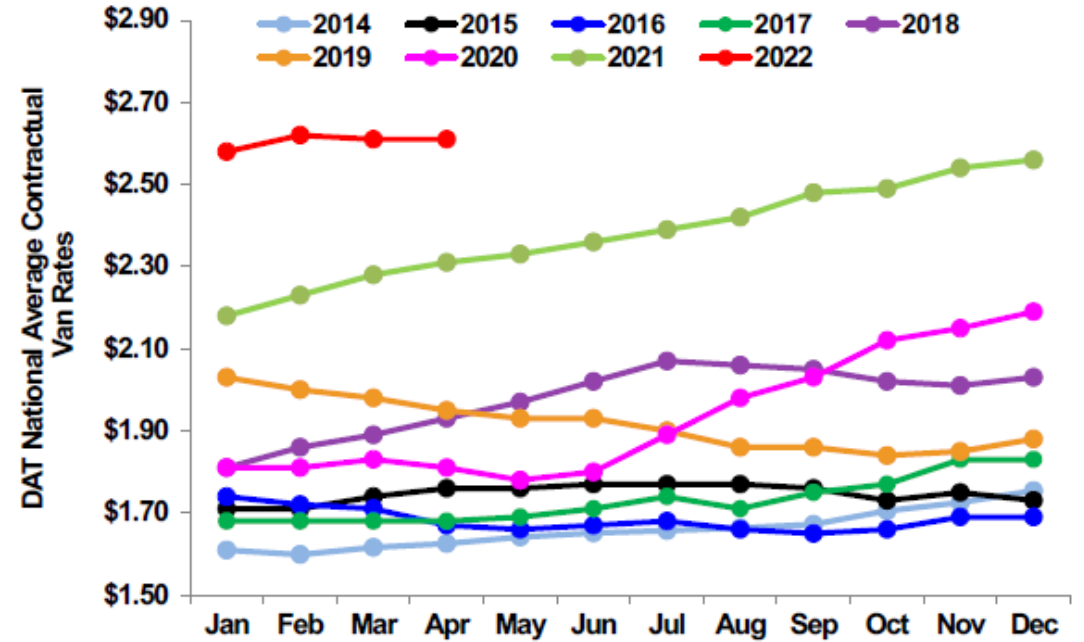


Exhibit 34: National Average Spot Van Rates ex. Fuel Surcharge



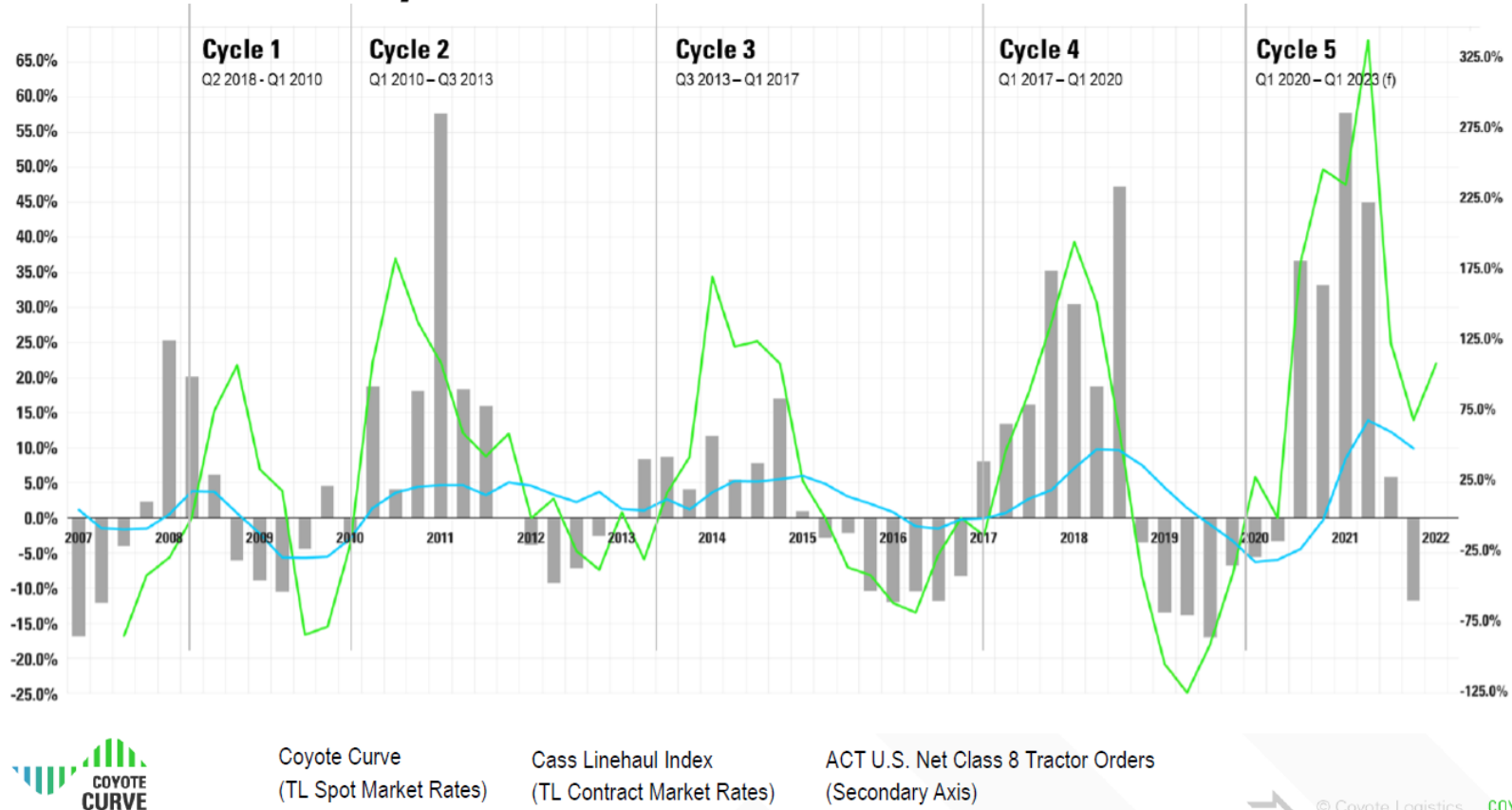
Source: Morgan Stanley Research, DAT Solutions (www.dat.com/resources/trendlines); Note: DAT sources from over \$24 B in transactions and 65k lanes.

Exhibit 35: National Average Contract Van Rates ex. Fuel Surcharge



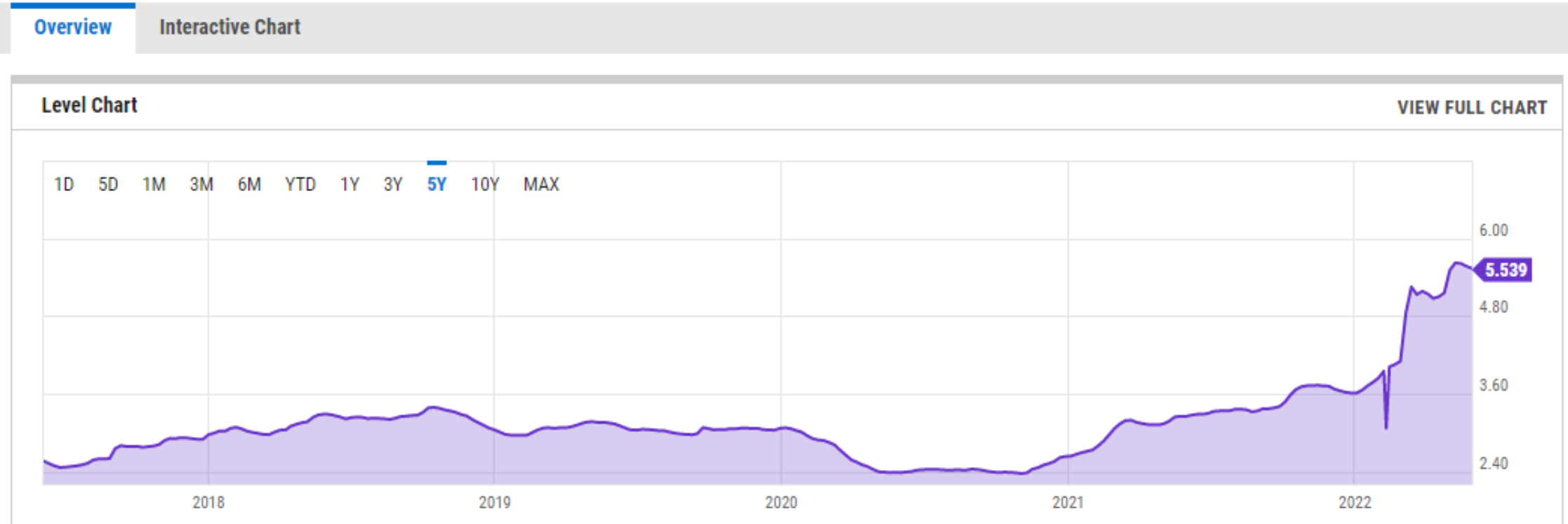
Source: DAT Solutions, Morgan Stanley Research

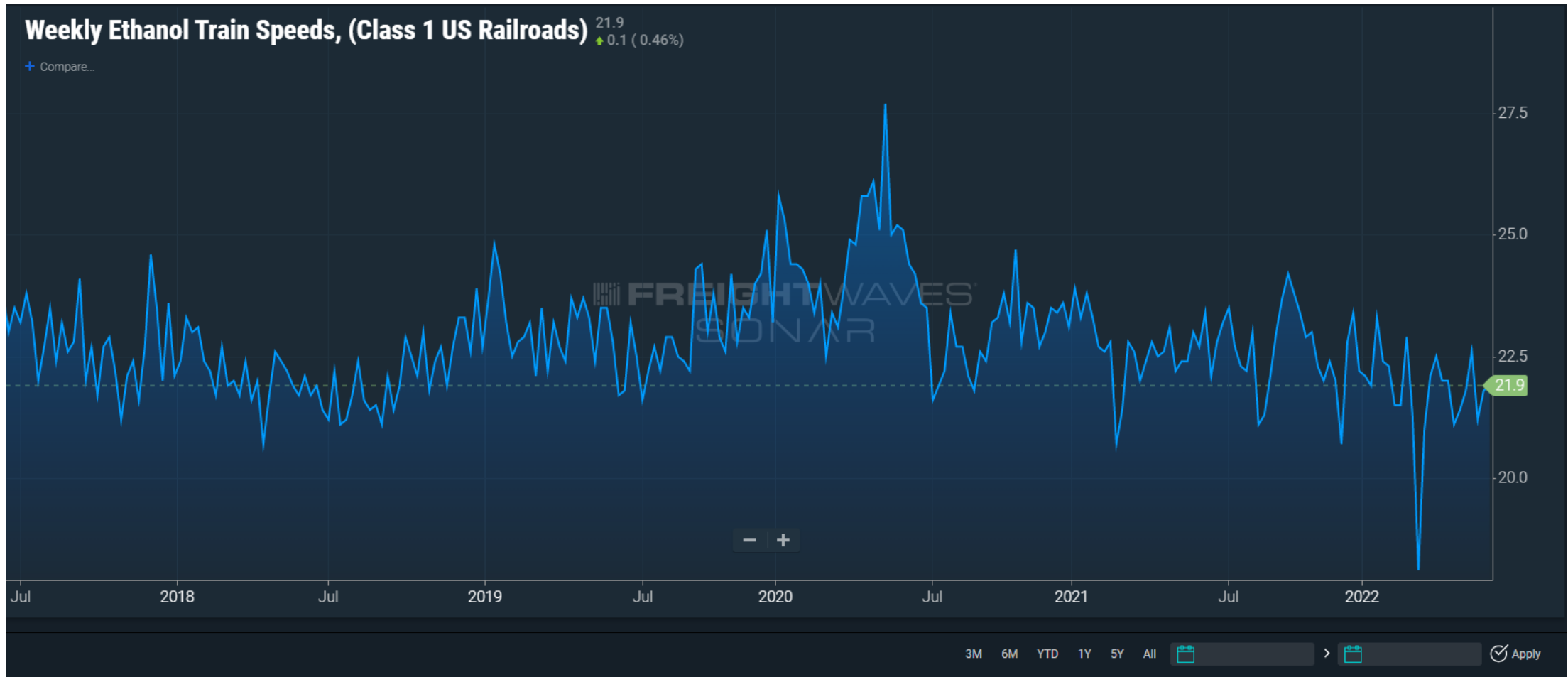
Truckload Market Cycles vs. Class 8 Truck Orders

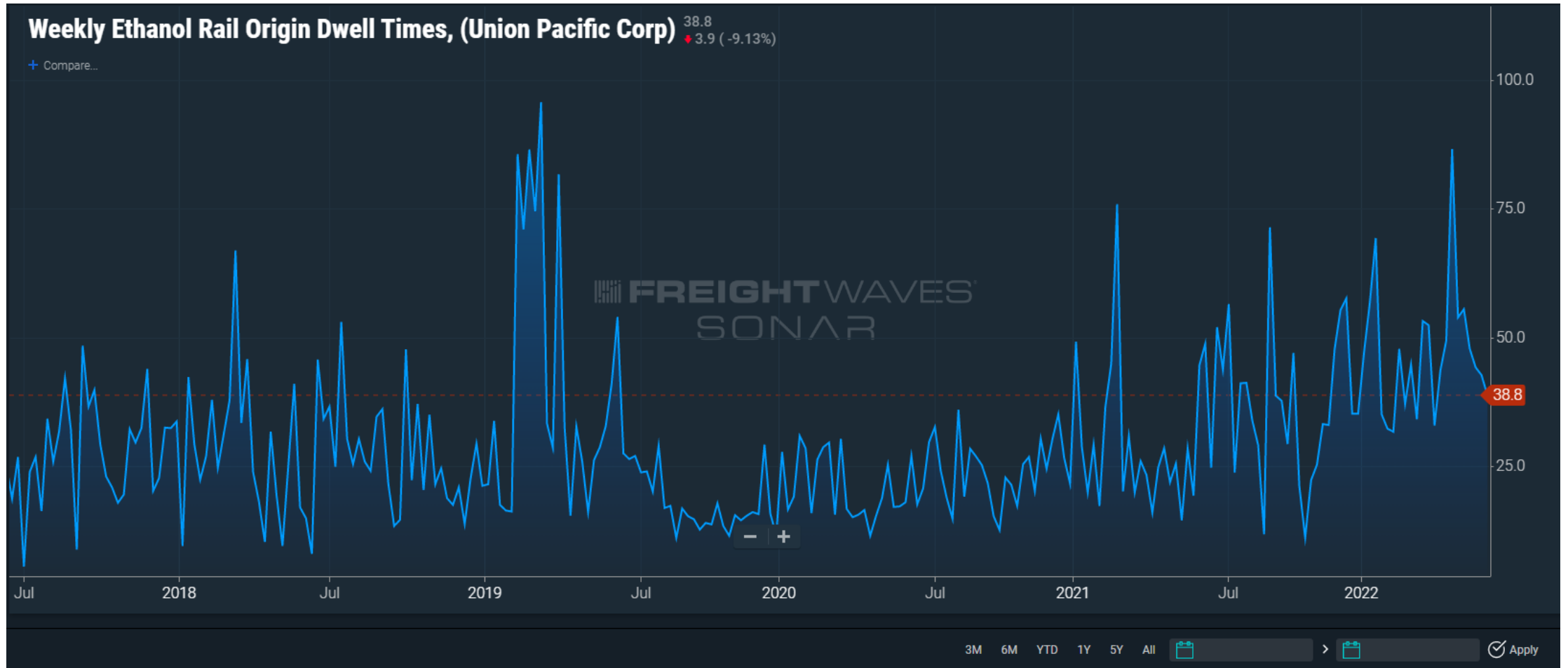


US Retail Diesel Price

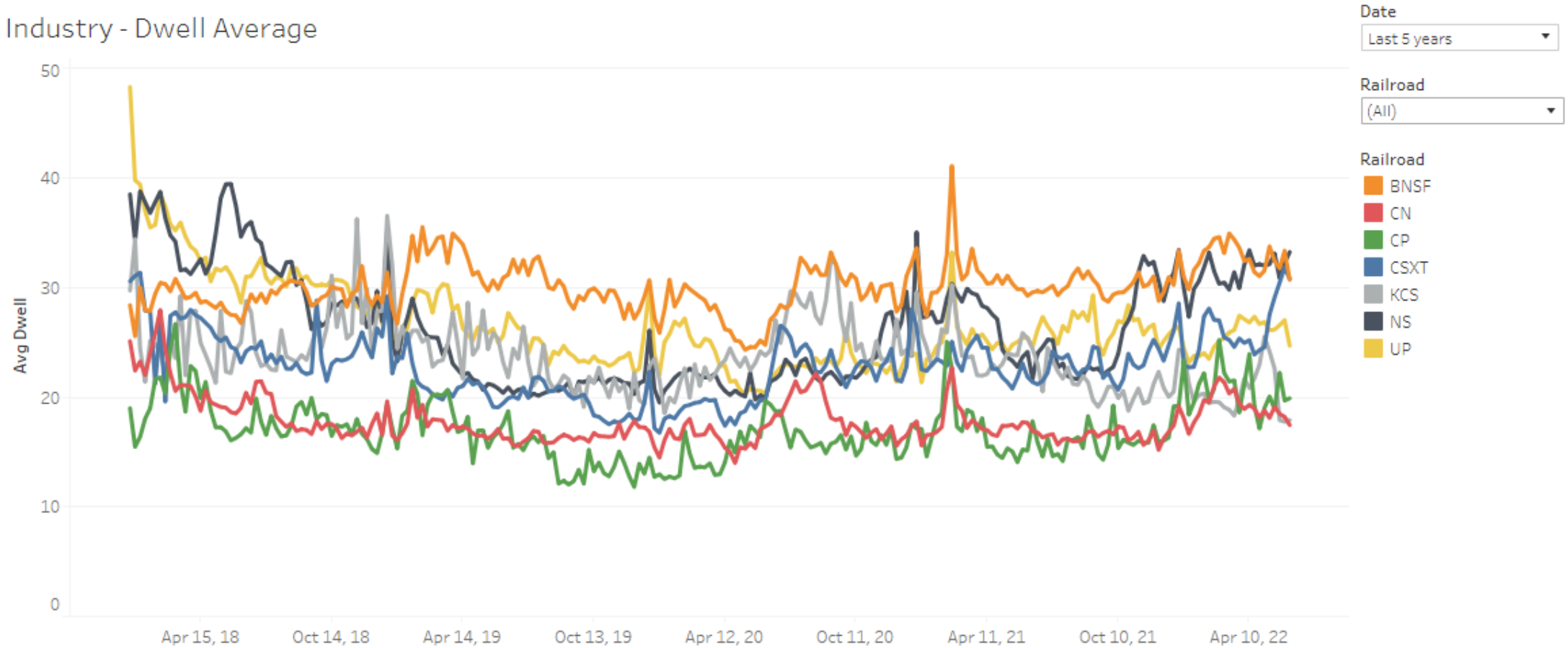
5.539 USD/gal for Wk of May 30 2022





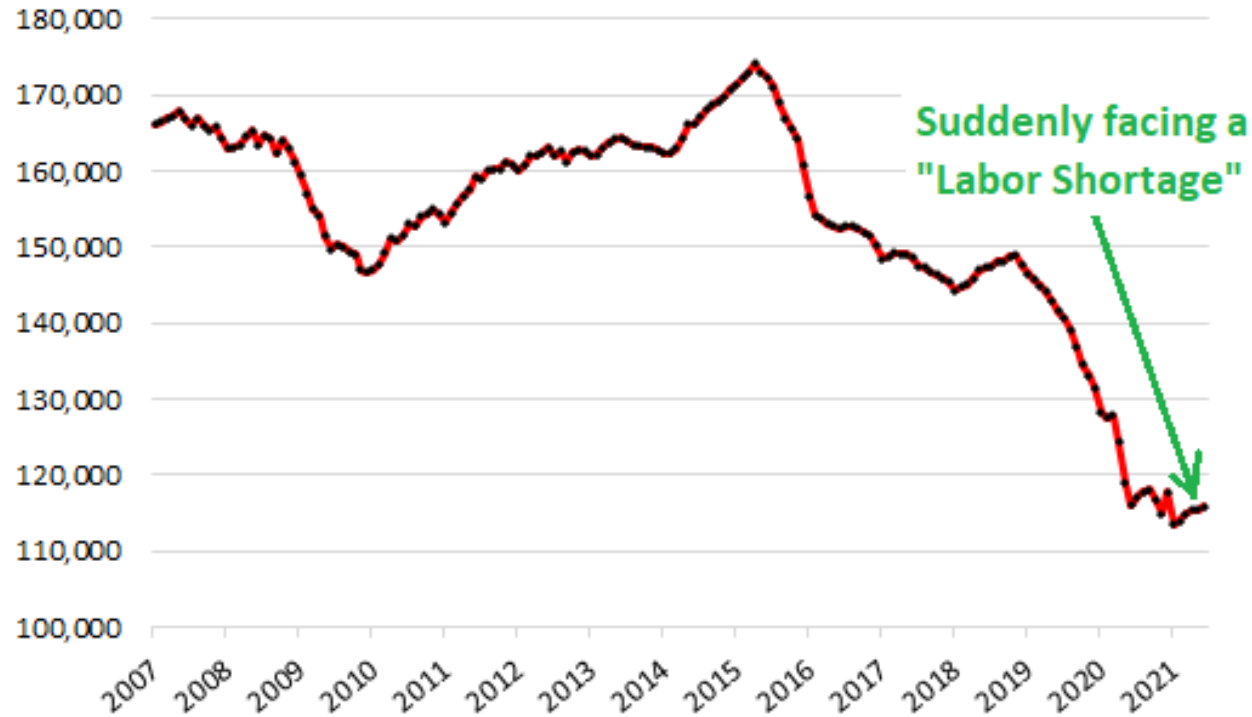


Industry - Dwell Average



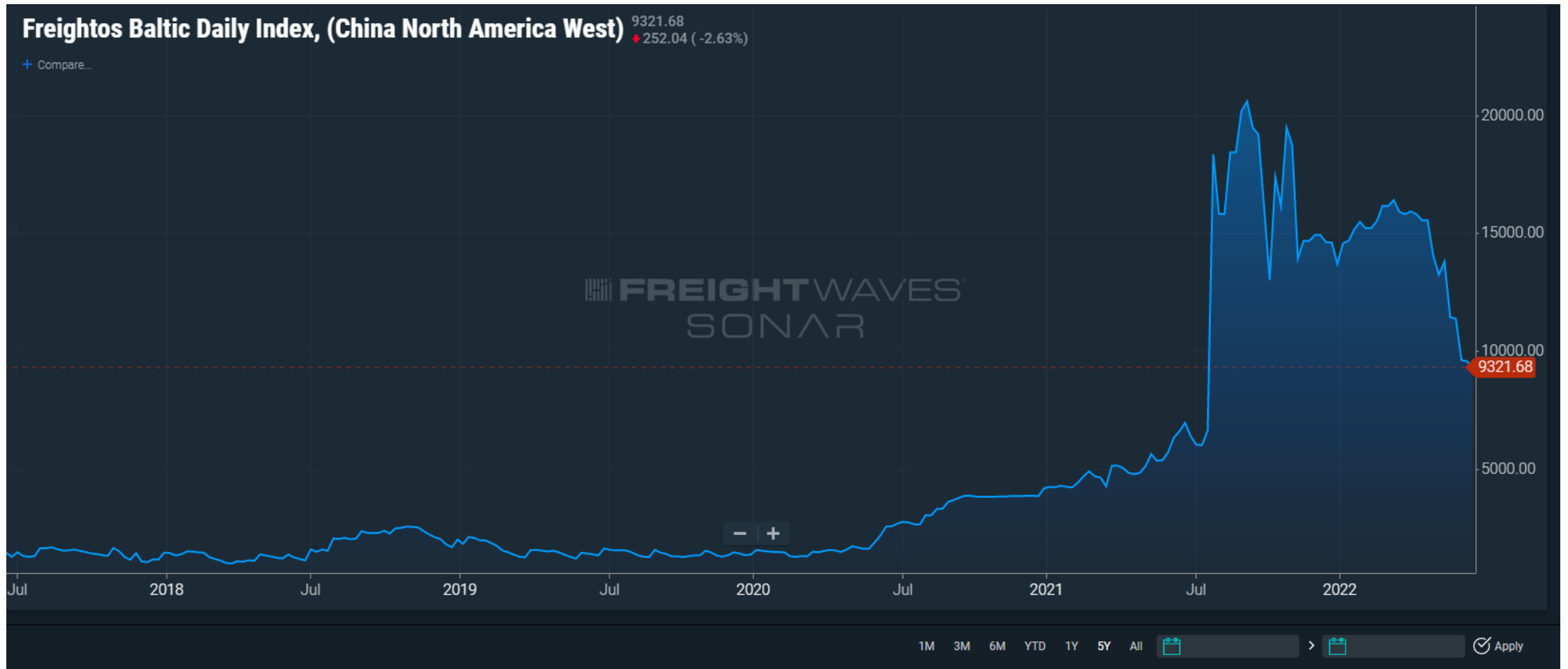
Railroads Slash Jobs:

Number of Employees at Class 1 Freight Railroads



Source: US STB

WOLFSTREET.com



Obviously, these things are out of our control, but we need to do the things we can control.

1. Communicate and plan – lead times are important!
2. Work with customers buying habits.
3. Consolidation and mode shifting – warehouse utilization.
4. Encourage consignees to unload quickly and not hold up equipment/drivers.
5. Review how you ship orders to maximize cube in trailers.
6. Can consignees do some receiving on the weekends?