

Energy and the Economy

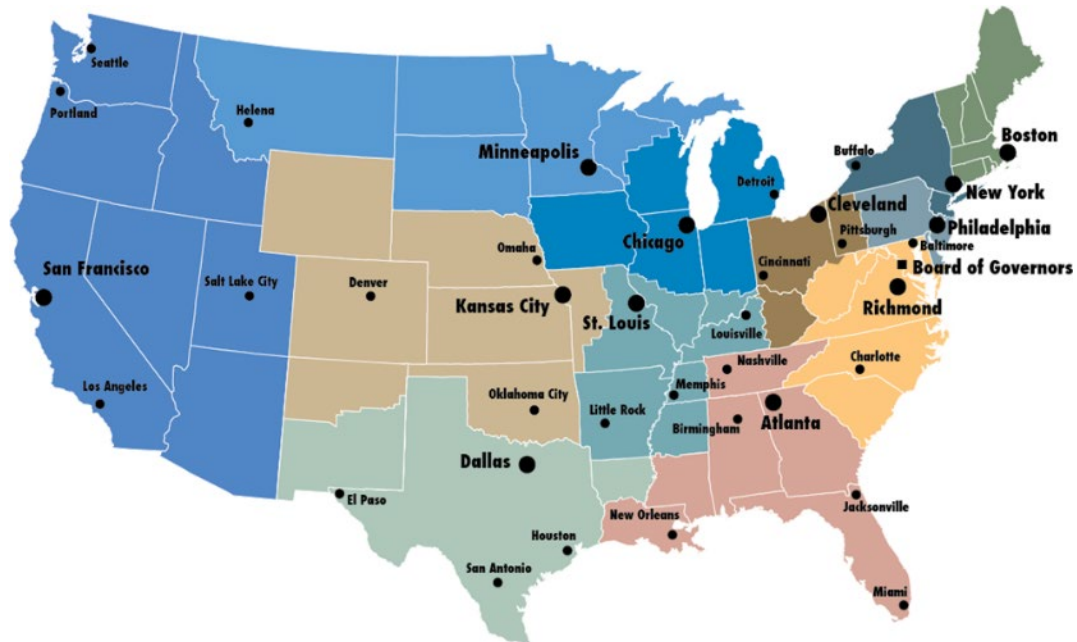
Midcontinent GPA Annual Meeting
April 21, 2022

Chad Wilkerson
Vice President, Economist, and Oklahoma City Branch Executive

*The views expressed herein are those of the presenter only and do not necessarily reflect the views of the Federal Reserve Bank of Kansas City or the Federal Reserve System.



Structure & Functions of the Federal Reserve



The “Fed” consists of three main entities:

- Board of Governors: 7 members appointed by U.S. President
- Federal Reserve Banks: 12 total; semi-independent by design
- Federal Open Market Committee: 19 members; 12 voting

Primary responsibility areas:

- Monetary policy
- Bank regulation
- Financial services



The Oklahoma City Branch of the Federal Reserve Bank of Kansas City

www.kansascityfed.org/oklahomacity

- **Functions and purposes ~ 50 staff**
 - Research on U.S. and Oklahoma economies; energy sector and business survey focus
 - Examinations of Oklahoma financial institutions (~45 banks, ~175 holding cos.)
 - Risk analysis and IT development for bank exams; exam assistance for other Fed offices
 - Community development programming for low/moderate income groups, workforce focus
 - Economic education and public outreach programming
- **2022 OKC Fed Branch Board of Directors**
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 - **Walt Duncan**, President, Duncan Oil Properties, Oklahoma City
 - **Rhonda Hooper**, President & CEO, Jordan Advertising, Oklahoma City
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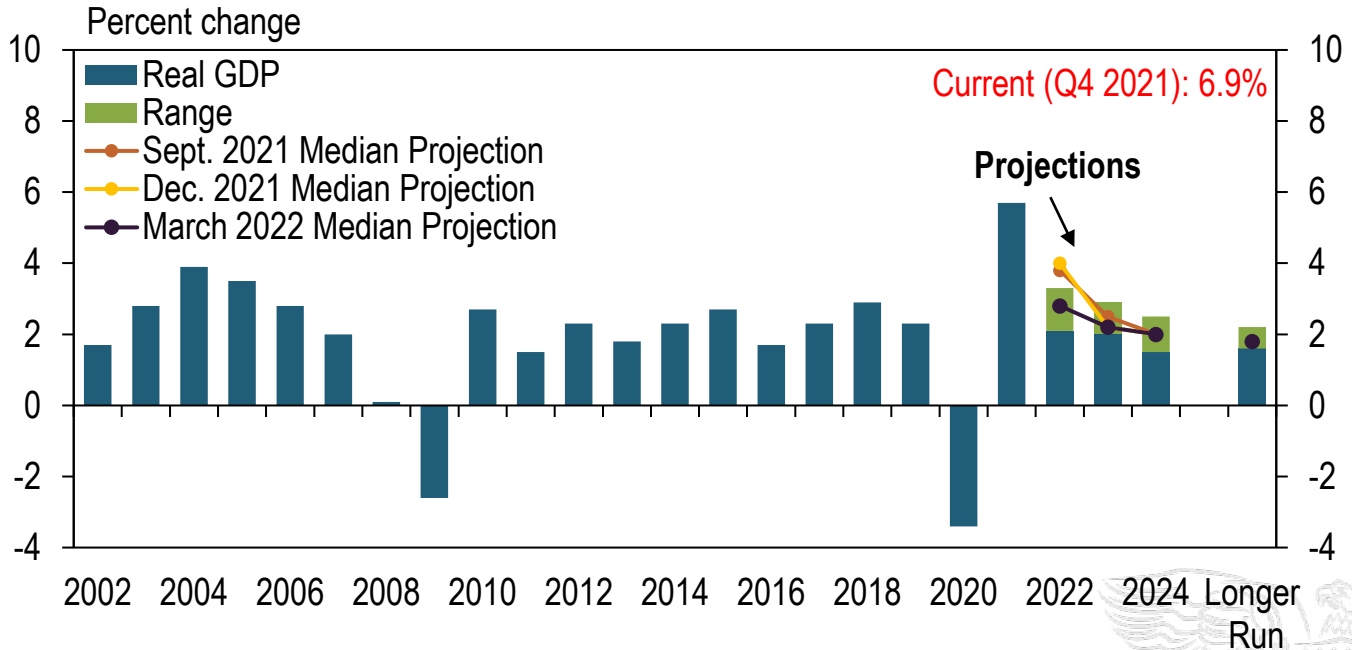
Overview

- Economic growth, job growth, and business optimism remain solid, despite it all: supply chain issues, higher input prices, tight labor markets
- Inflation has refused to come down, and indeed has risen further, and thus, several rate increases and Fed balance sheet reductions are projected in 2022
- In energy, activity continues to grow moderately even with high oil and gas prices, and employment remains well below pre-pandemic levels



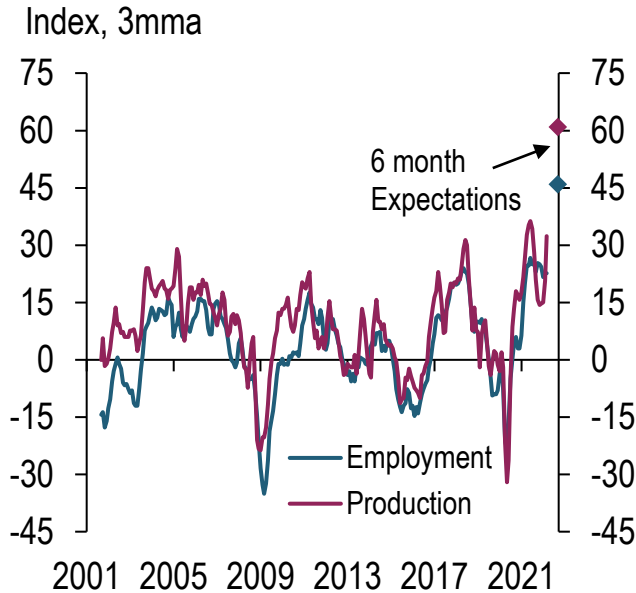
GDP recovered strongly in 2021, including in Q4, with solid growth also expected in 2022

Change in Real GDP



Manufacturing and services activity has increased in recent months, with strong outlooks

KC Fed Manufacturing Survey

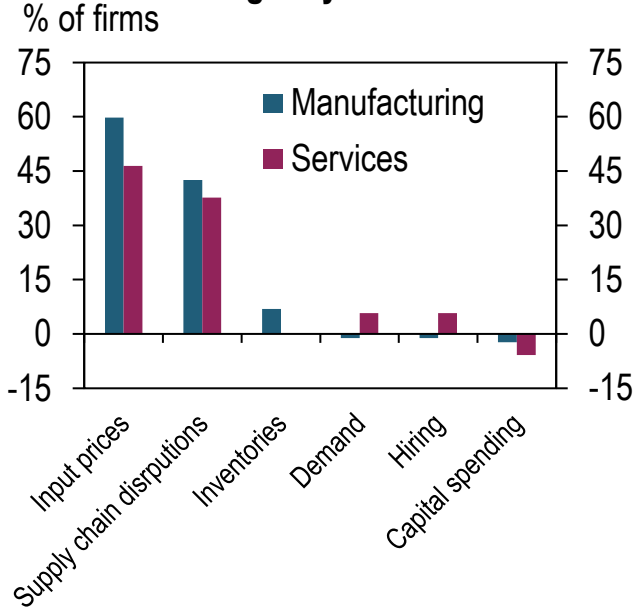


KC Fed Services Survey

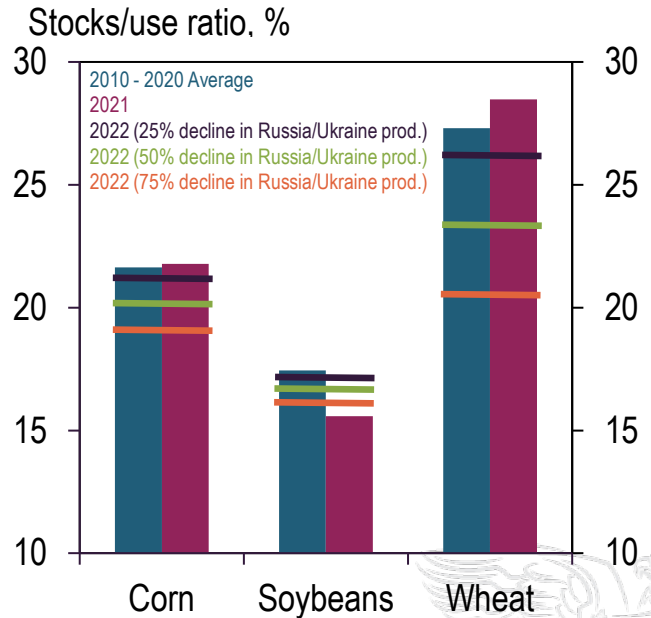


The war in Ukraine has contributed to some additional supply chain disruptions, especially for wheat

March 2022 Survey Special Question: "How has the Russia/Ukraine conflict affected the following for your business?"

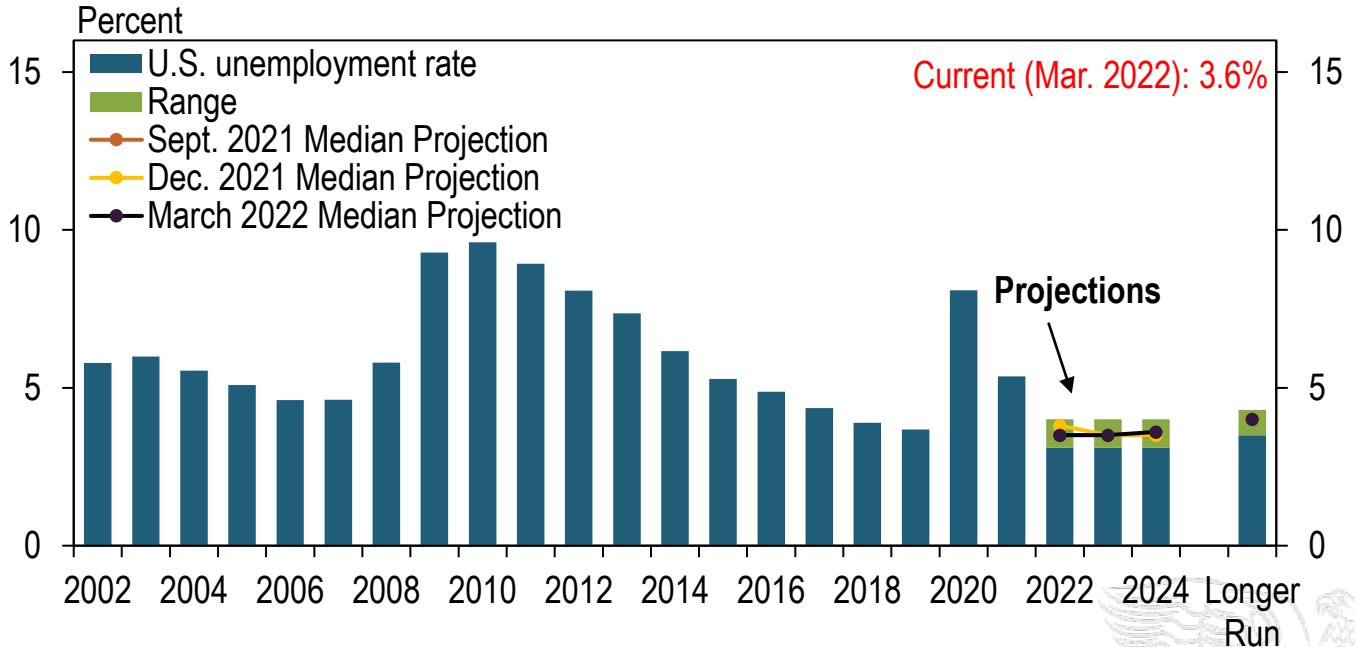


World Crop Inventories



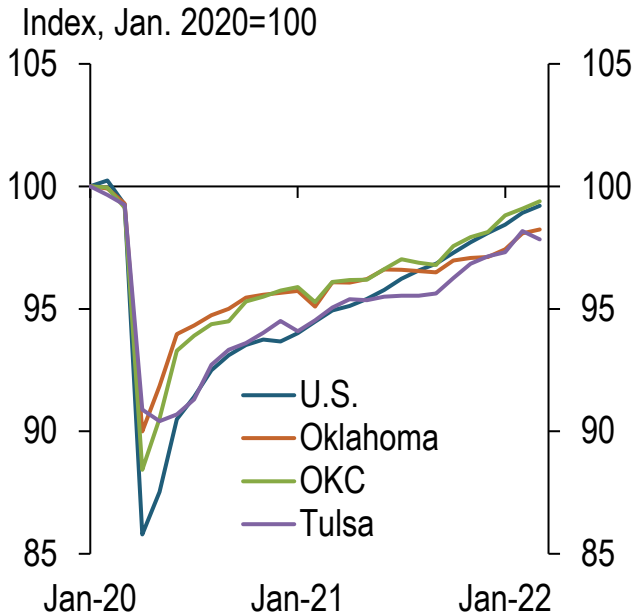
U.S. unemployment remains historically low and is projected to remain very low in coming years

U.S. Unemployment Rate

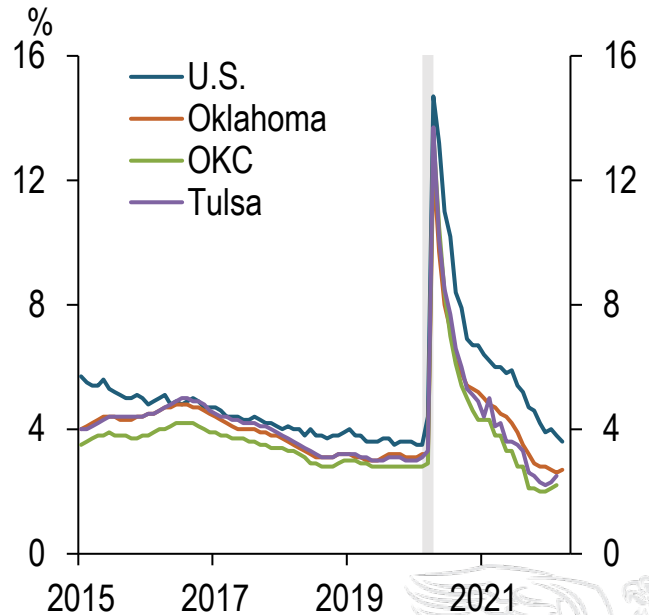


The number of jobs in Oklahoma is still down compared to pre-COVID, despite record low unemployment

Non-Farm Payroll Employment

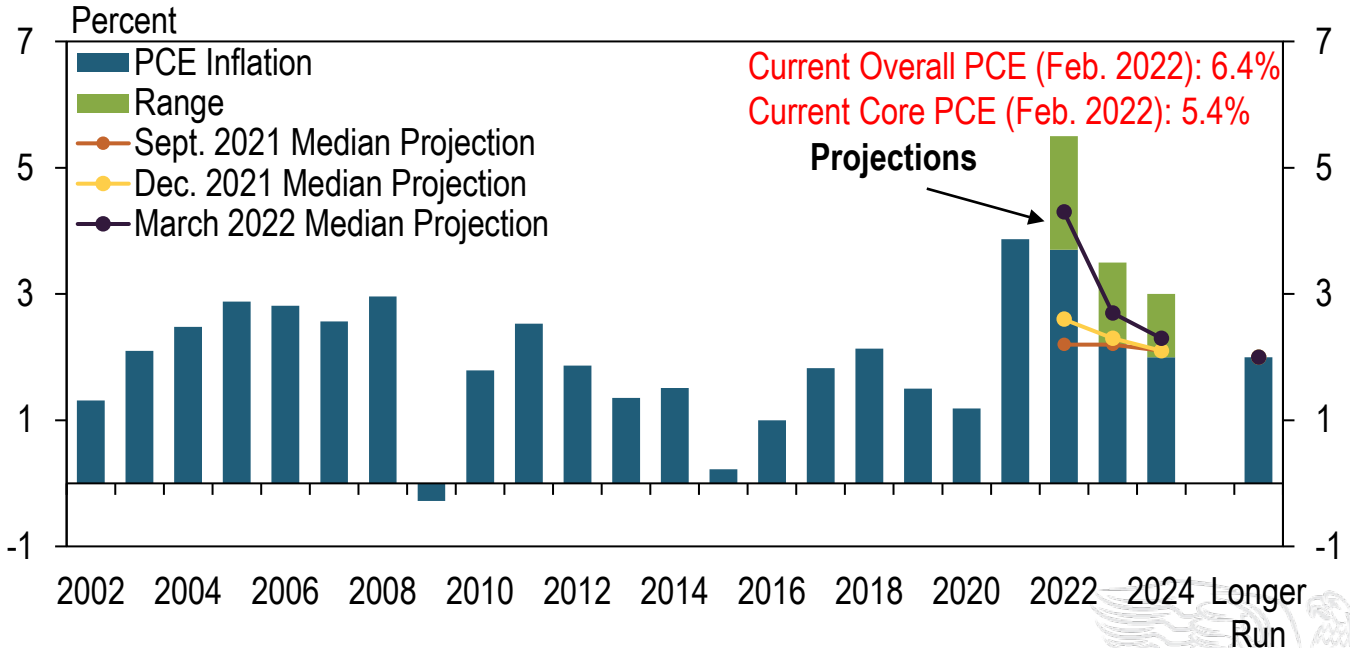


Unemployment Rate



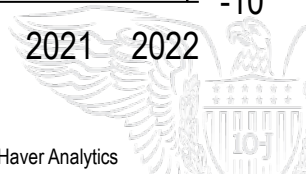
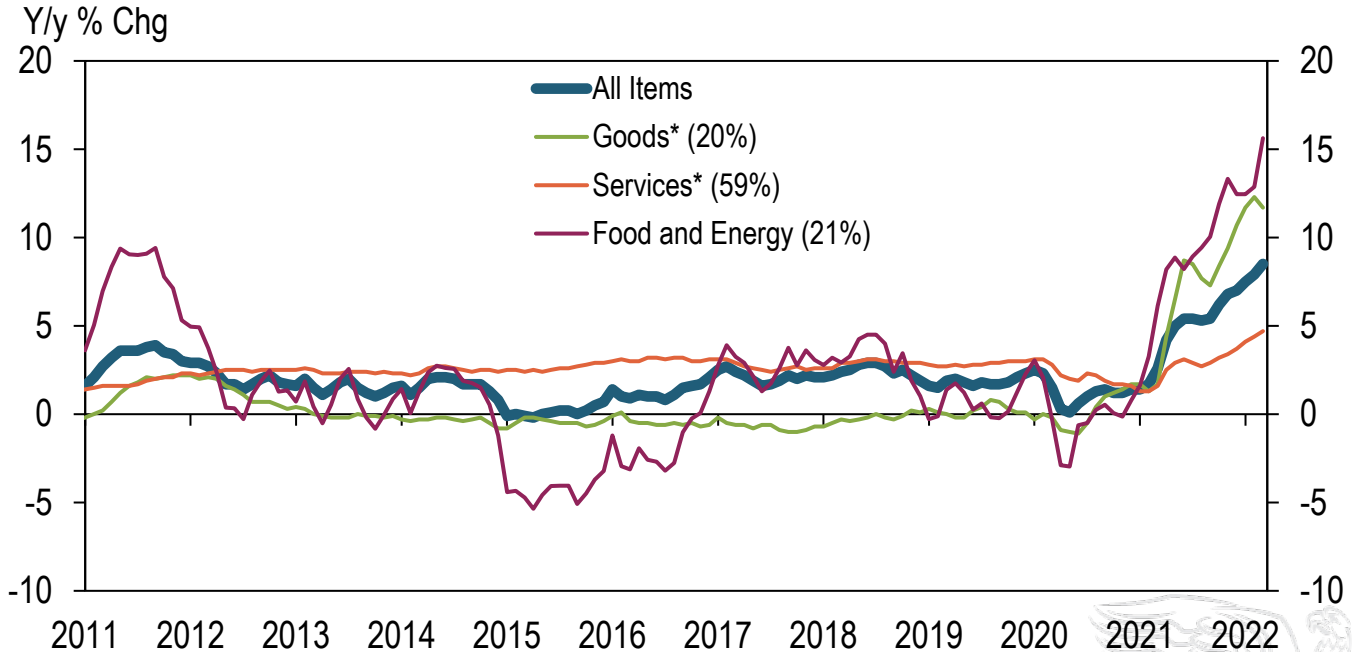
High inflation is expected to ease a bit by year-end as pandemic disruptions improve and rates rise

PCE Inflation Index



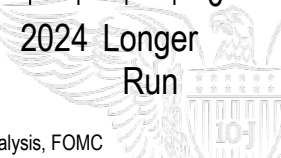
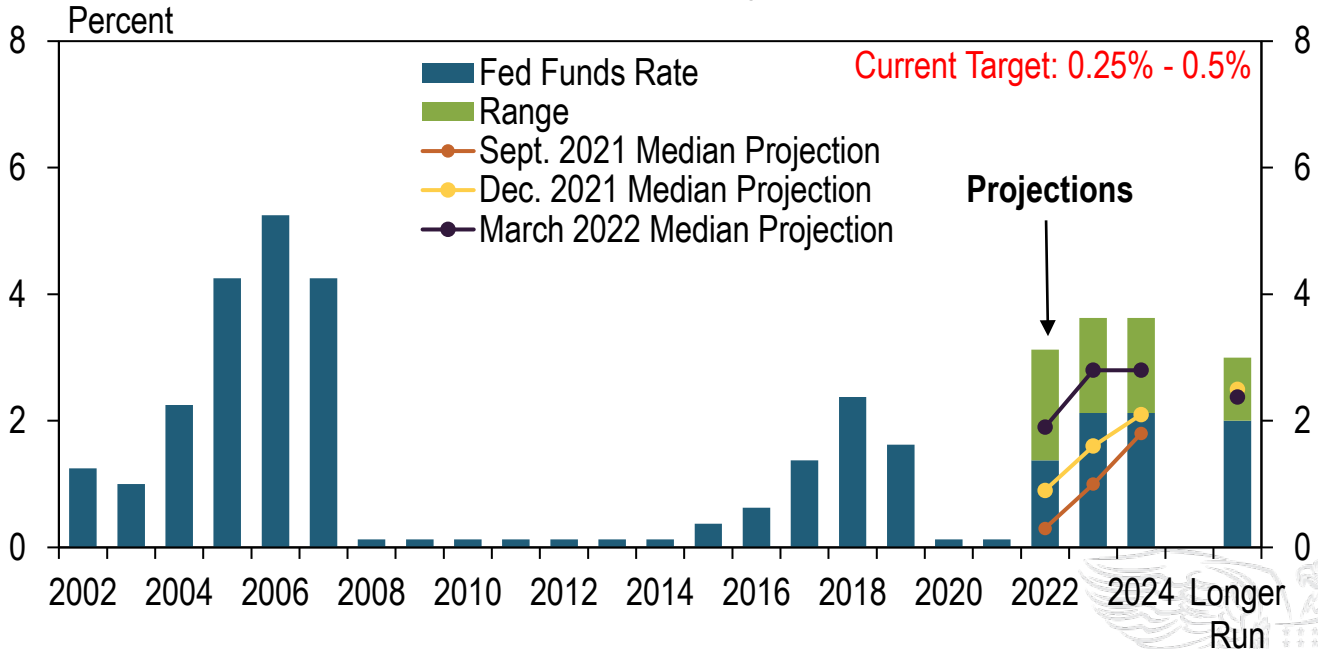
Inflation pressure may be moving from goods to services, and energy prices rose significantly in March

Consumer Price Index



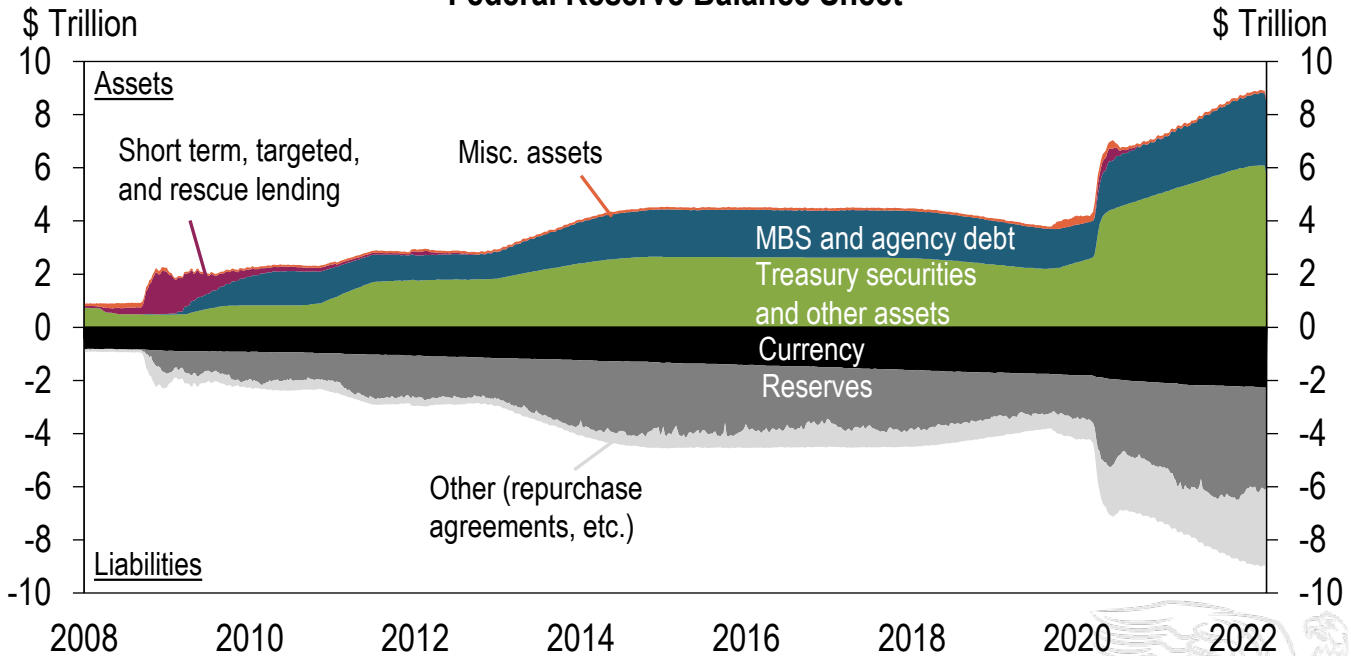
More rate increases are now expected in 2022 and 2023

Federal Funds Rate
Year-End Target



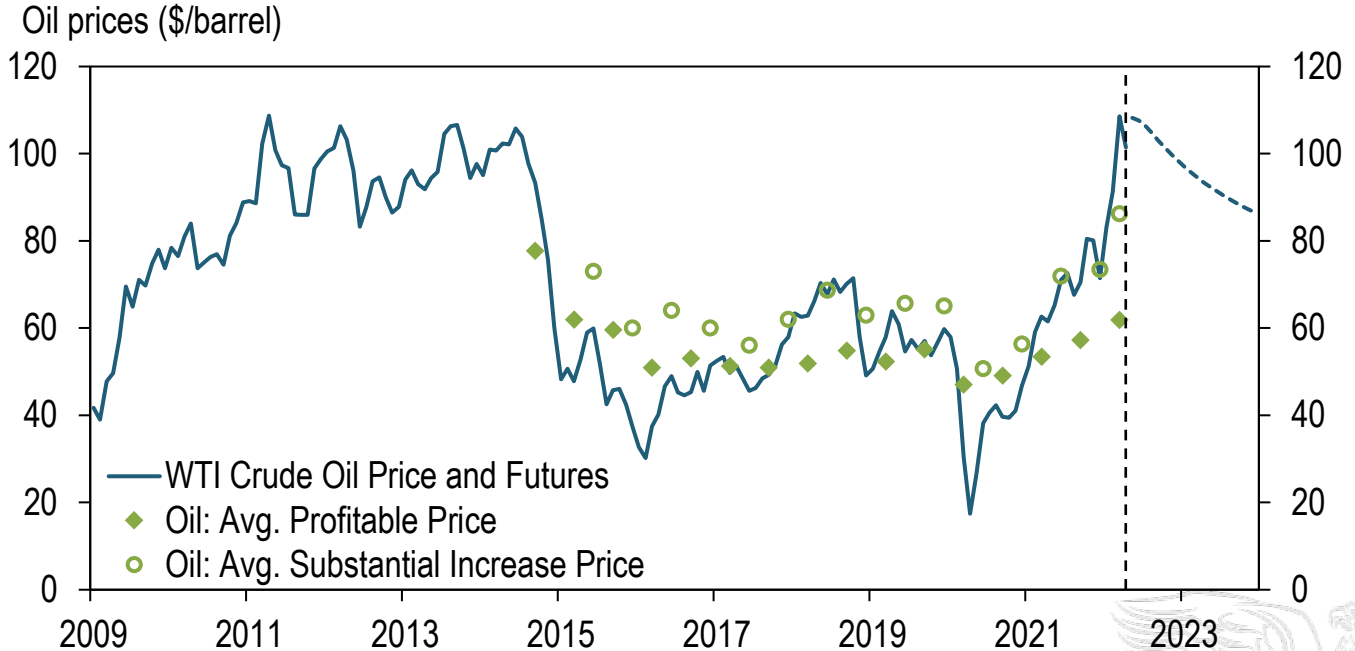
The Fed also plans to reduce its balance sheet

Federal Reserve Balance Sheet



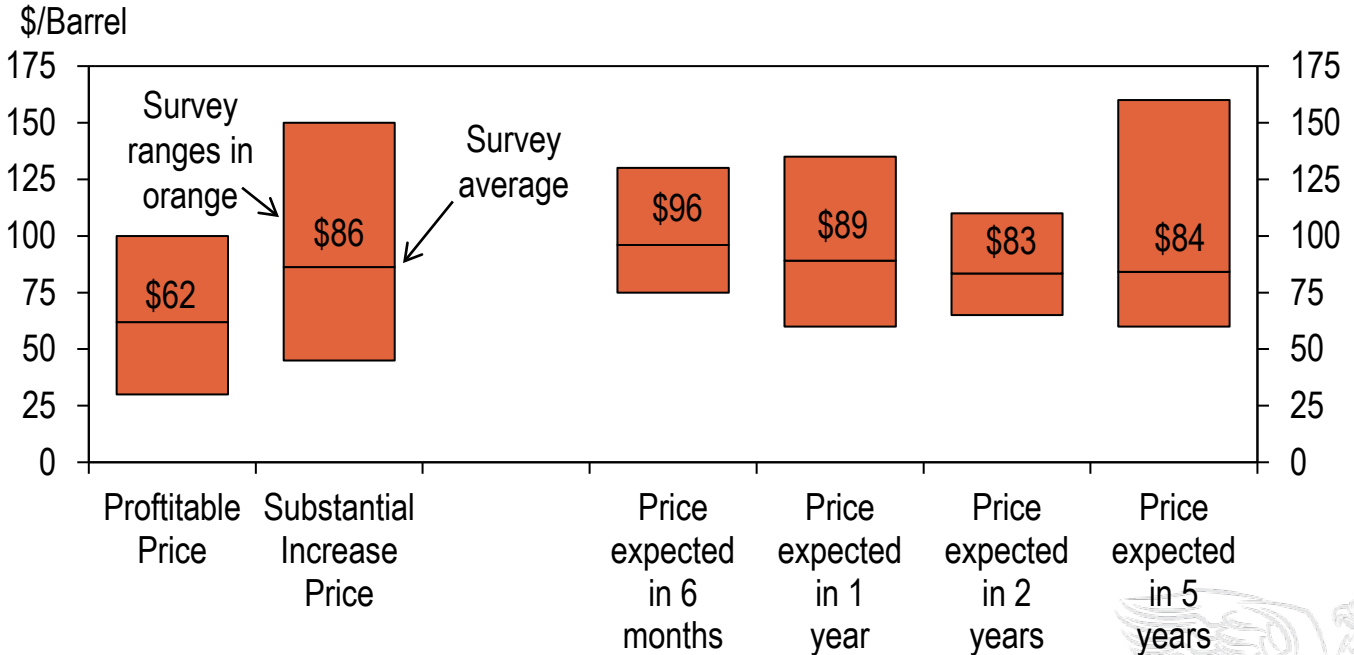
Oil prices have been elevated since the Ukraine invasion, and remain highly profitable for most firms

Energy Prices



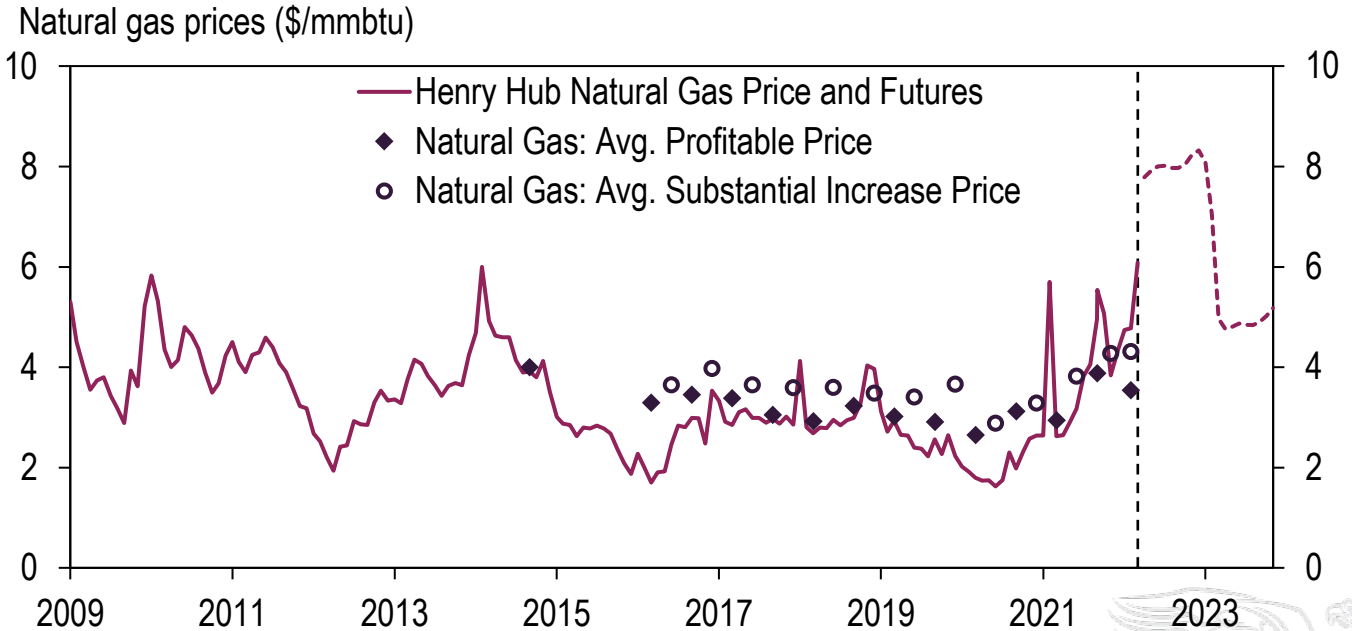
Regional energy firms expected oil prices to moderate slightly moving forward but still be high in 2027

WTI Oil Prices



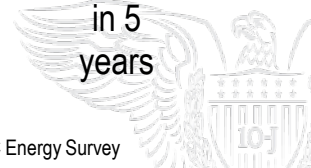
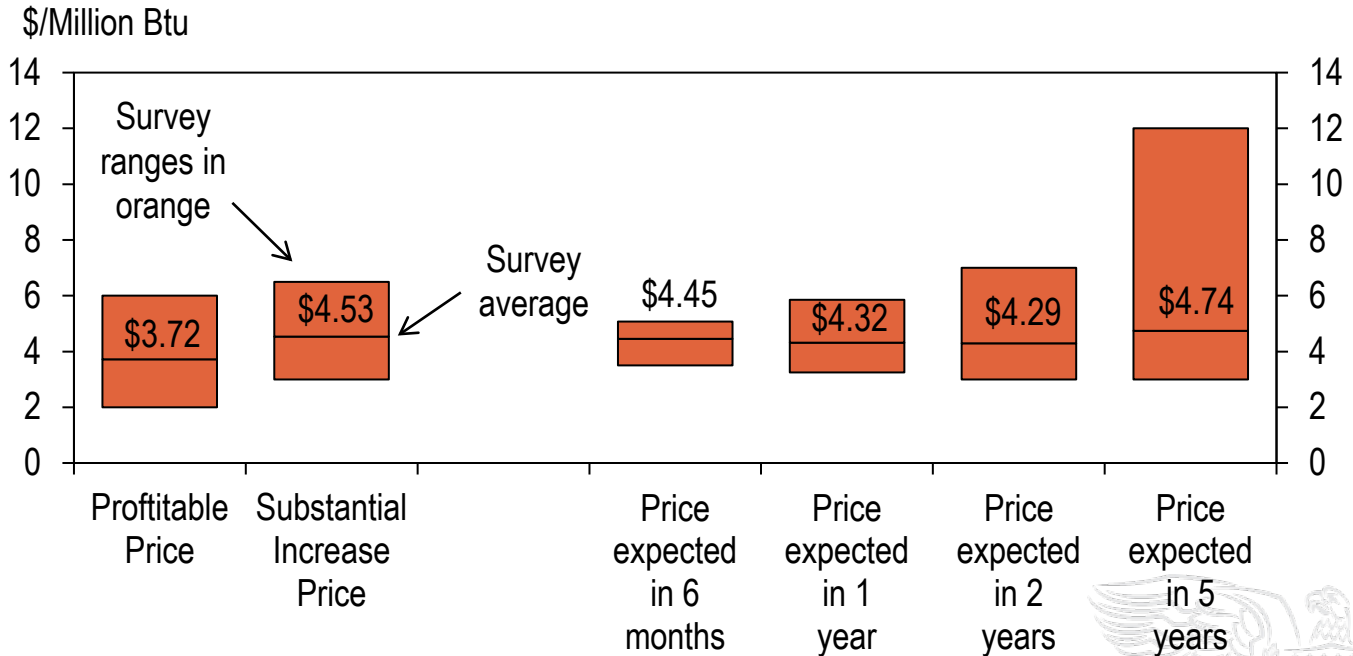
Natural gas prices have also risen considerably above profitable and strong growth levels

Energy Prices



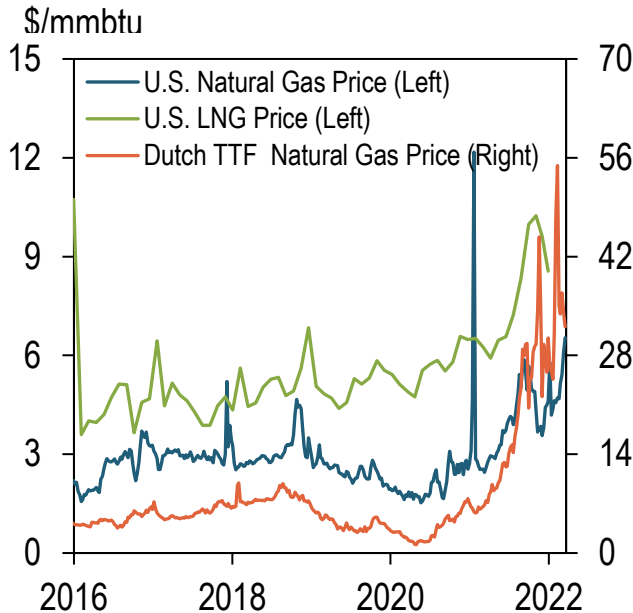
Firms at the end of Q1 expected natural gas prices to remain above \$4 for the foreseeable future

Henry Hub Natural Gas Prices

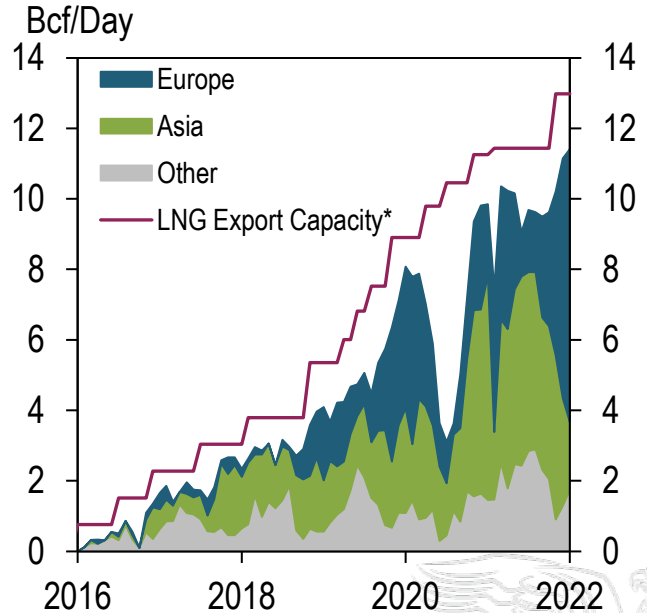


Internationally, prices have jumped, and U.S. export capacity has expanded

Natural Gas Prices

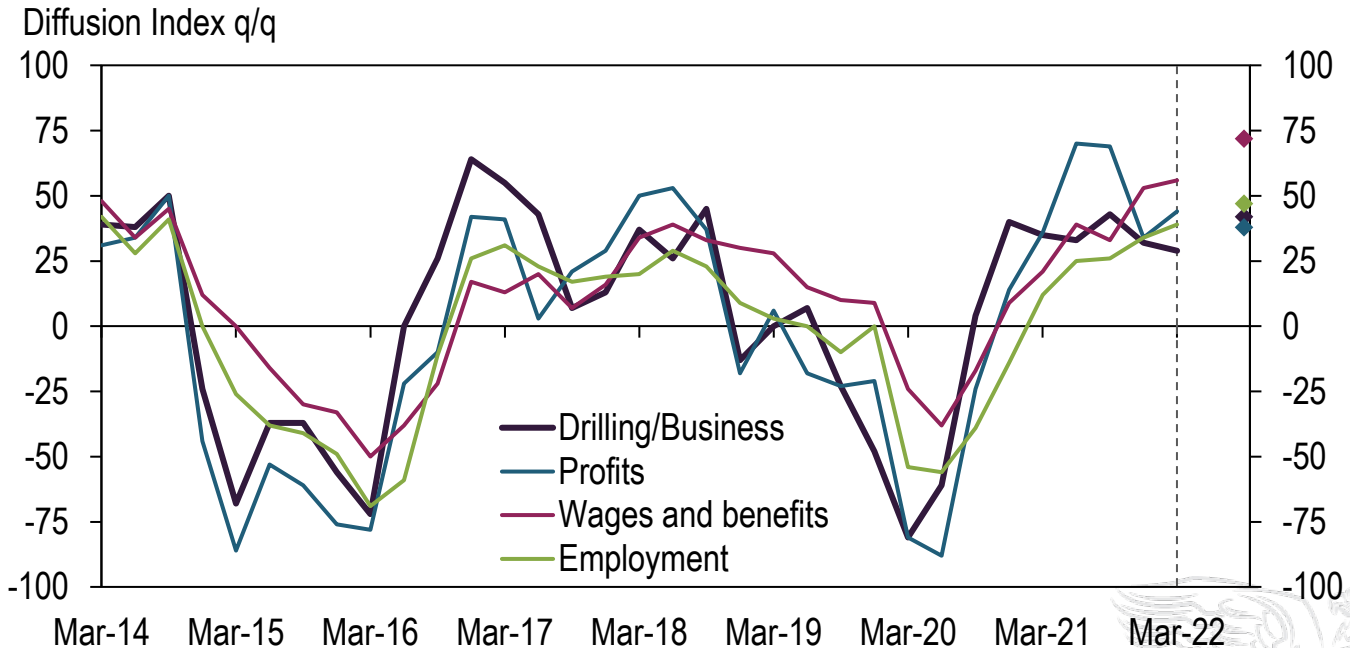


U.S. LNG Exports and Capacity



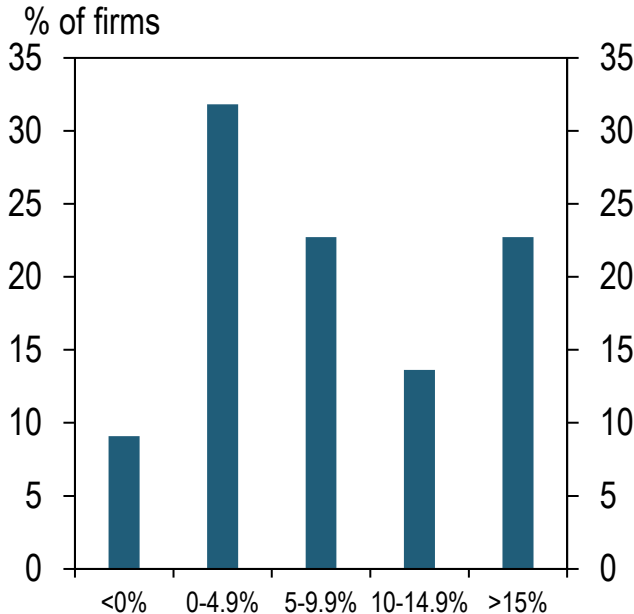
Still growth in energy activity remained steady in Q1, as profit growth slowed and wage pressures mounted

Energy Survey Indexes

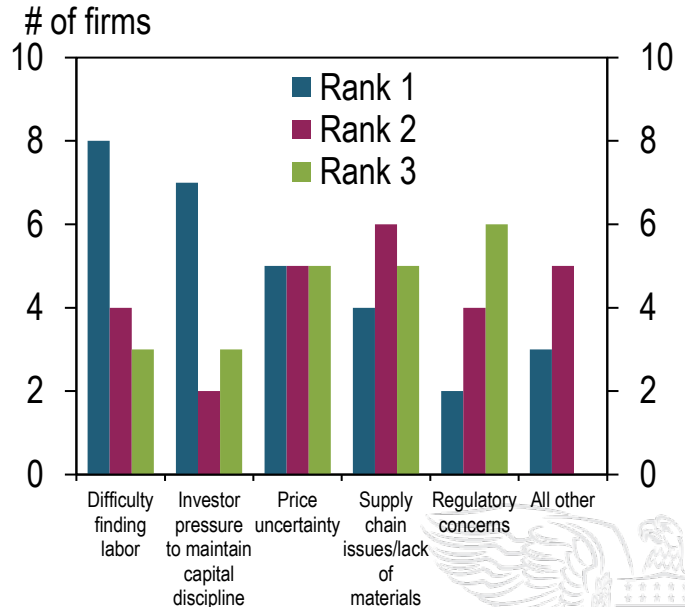


In Q1 2022, firms ranked difficulty finding labor and investor pressure as the top constraints to growth

“By what % do you expect your firm's crude oil production to change from the fourth quarter of 2021 to the fourth quarter of 2022?”

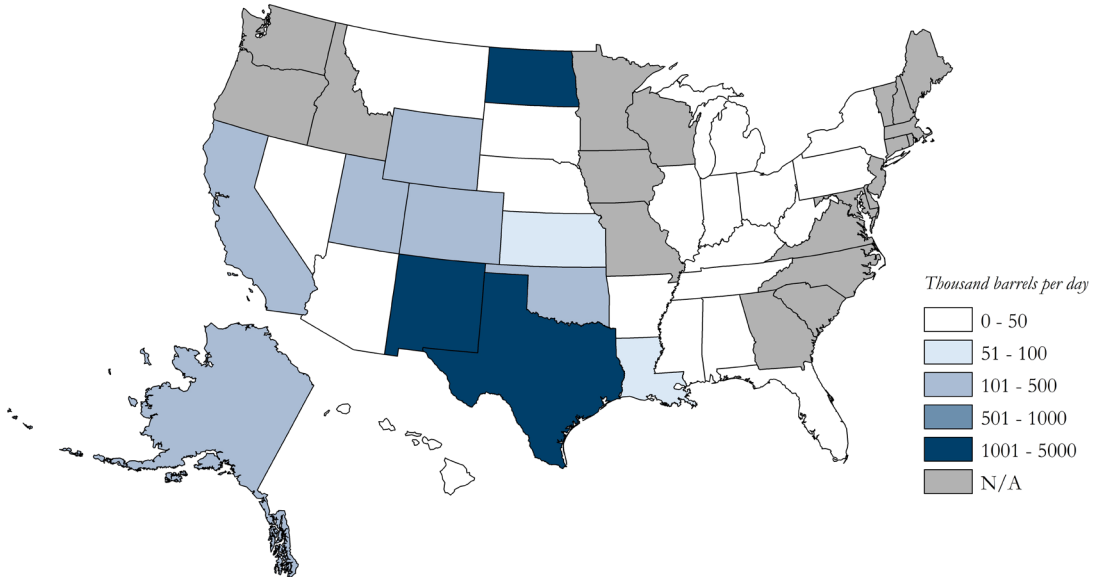


“Which of the following are the top reasons restraining growth for your firm despite high oil prices? (rank)”



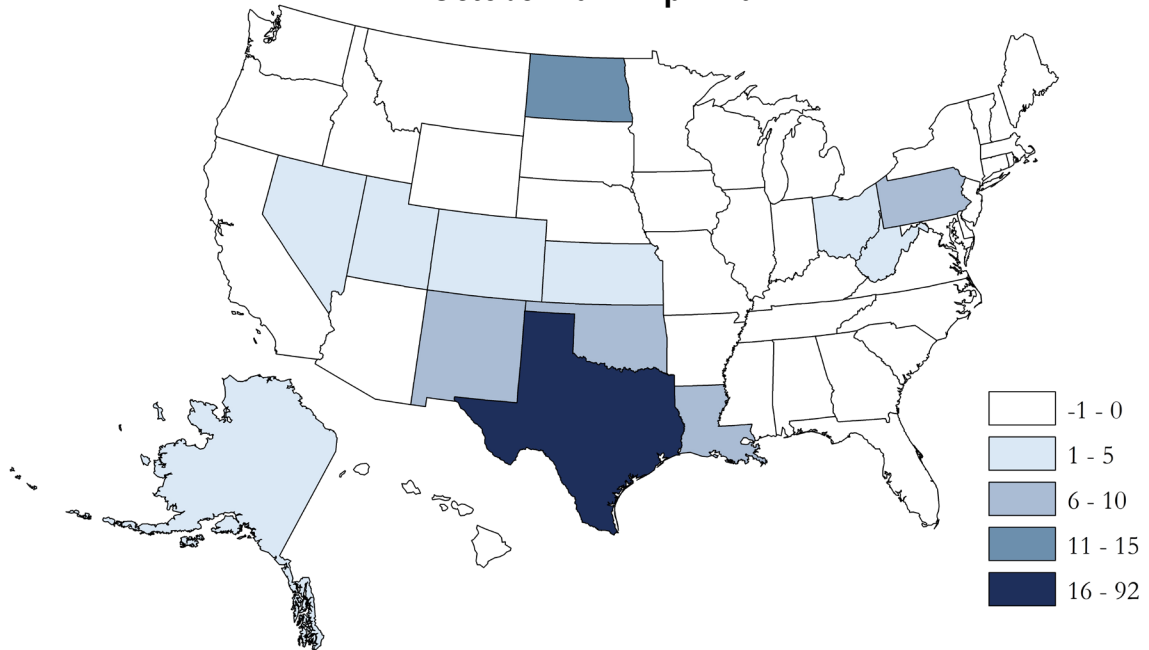
U.S. Crude oil production has mainly been concentrated in the Permian (NM & TX) and Bakken (ND)

January 2022 U.S. Crude Oil Production



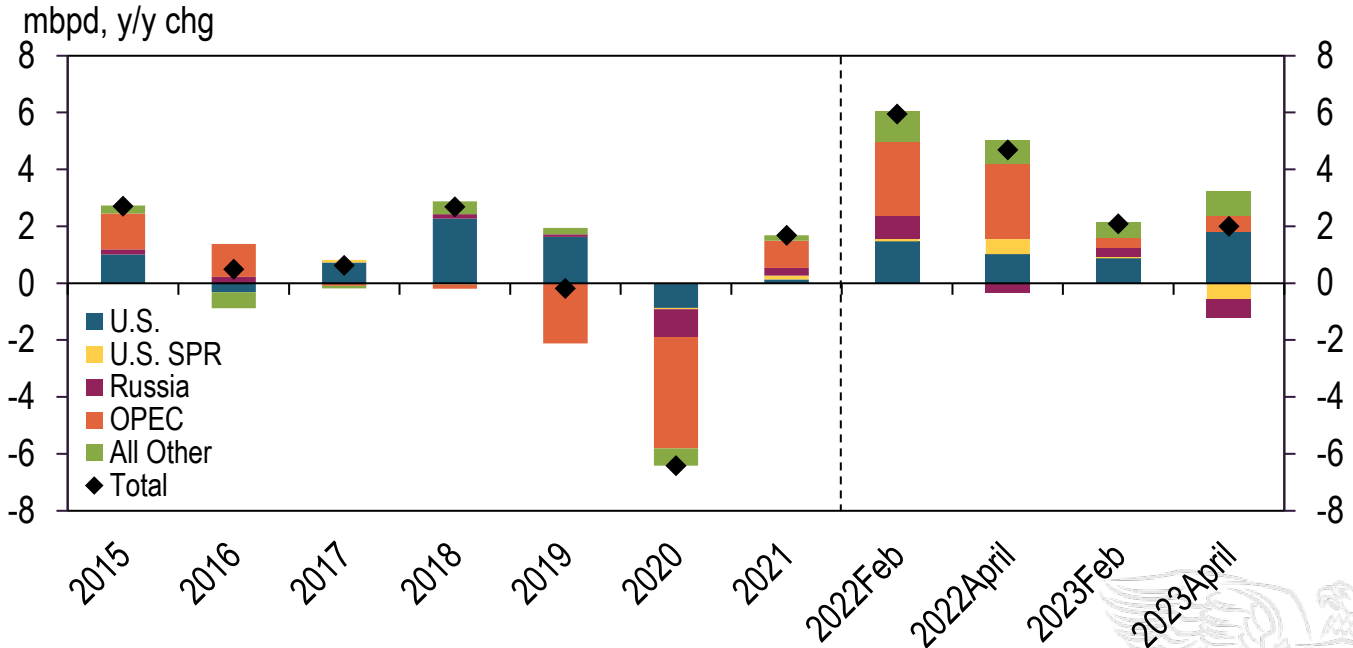
Recent increases in rigs have been in TX, ND, NM, OK, PA, and offshore Louisiana

Change in Active Oil & Gas Drilling Rig Counts
October 2021- April 2022



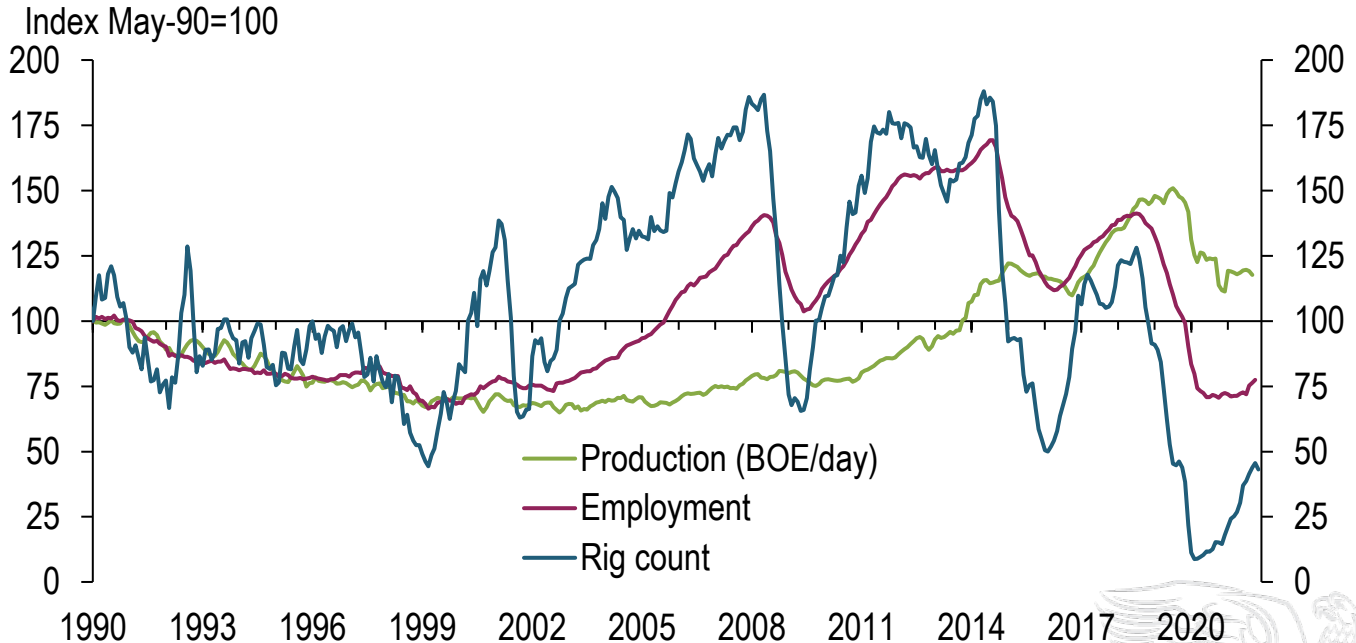
Disruptions in Russian oil supply are shifting the sources of future supply

Change in Global Petroleum Supply



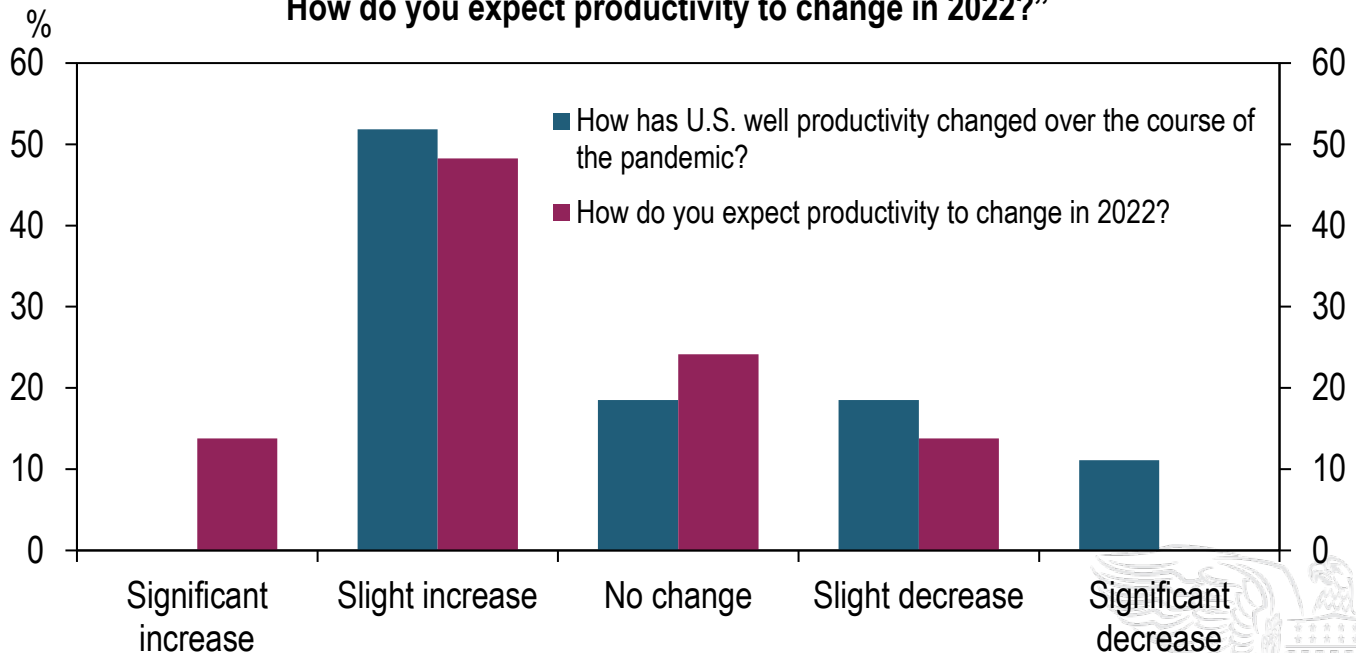
Firms have been able to produce more with less over the past 30 years

Oklahoma Oil & Gas Rig Count, Employment, and Production



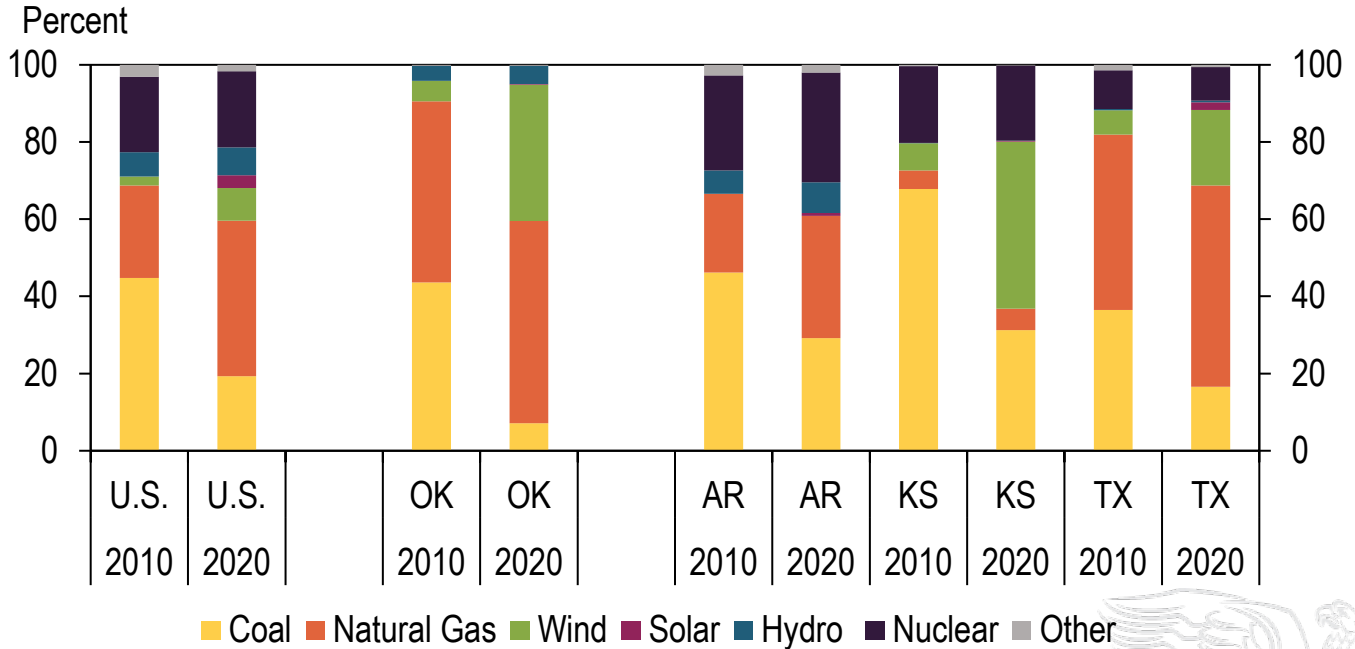
Well productivity has increased for over half of firms, and more firms expect additional productivity in 2022

**Q1 2022 Survey Special Questions:
 “How has U.S. well productivity changed over the course of the pandemic?
 How do you expect productivity to change in 2022?”**



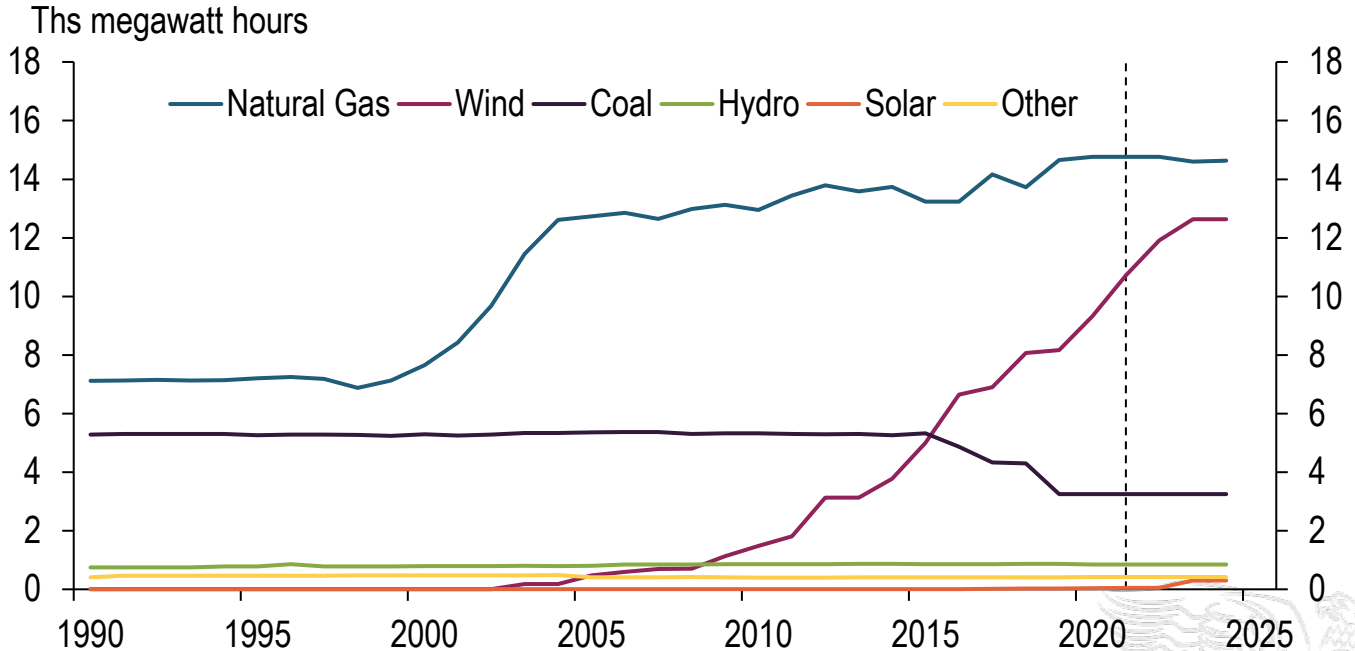
Renewable energy activity has increased significantly as a source of electricity

Share of Total Electricity Generation



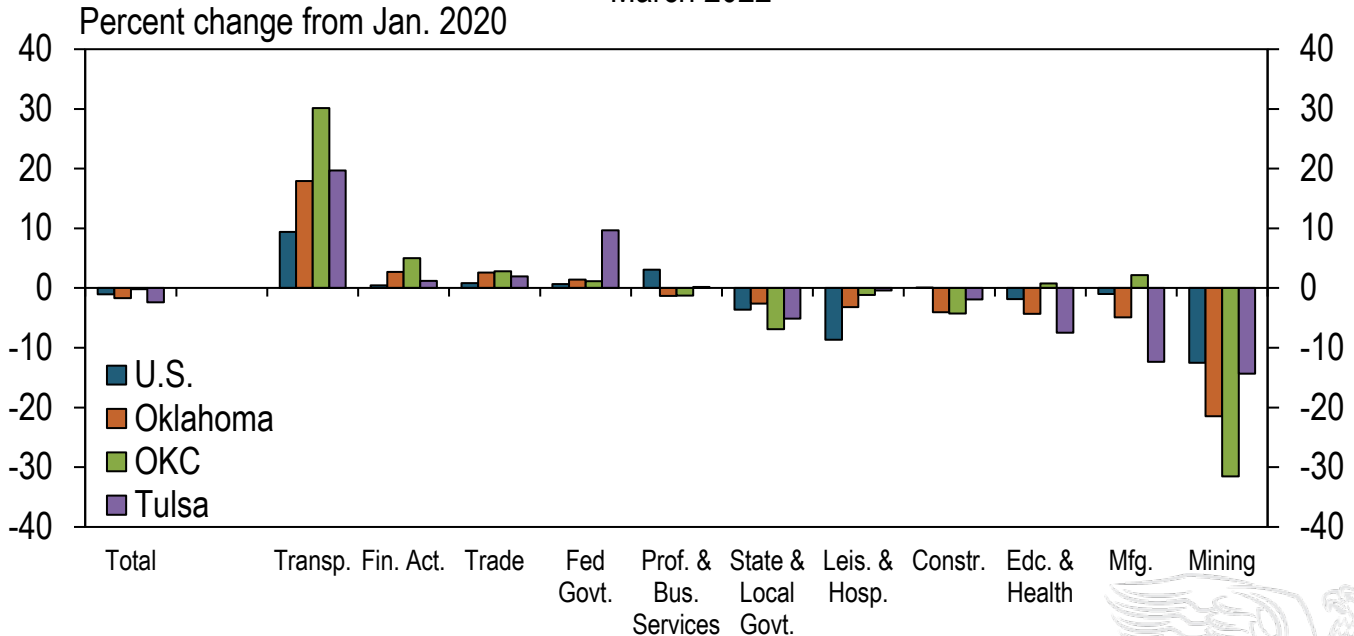
Additional renewable energy capacity growth is planned over the next few years

Oklahoma's Electricity Capacity & Plans through 2025



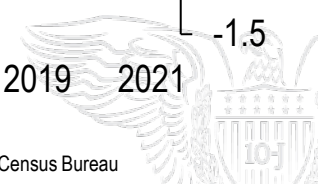
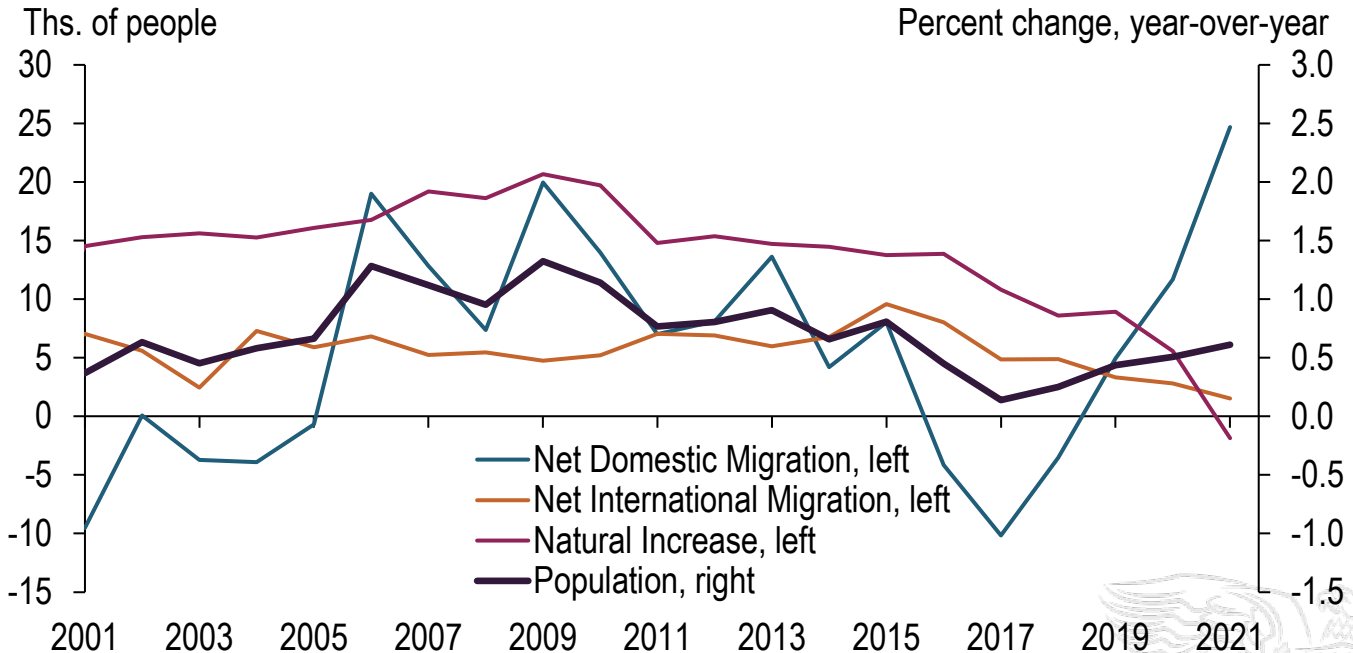
Energy jobs in Oklahoma are still down the most, by far, while transportation jobs have grown

Job Growth by Industry
March 2022



Oklahoma's population grew in 2021, despite a historic increase in deaths, due to massive in-migration

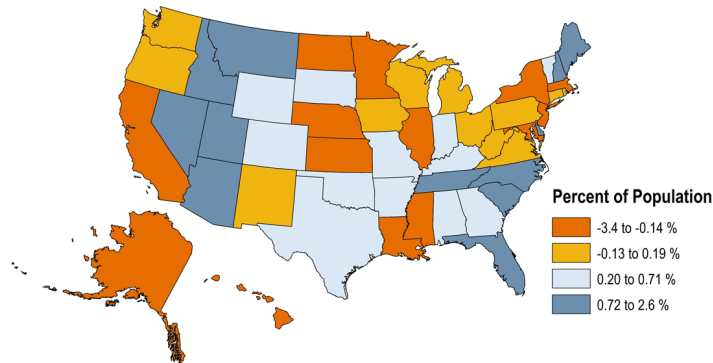
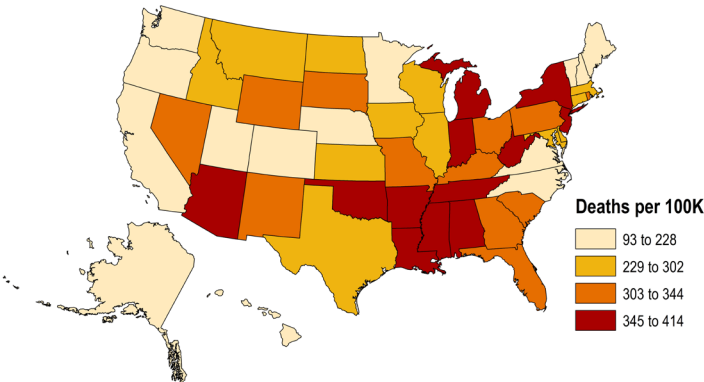
Oklahoma Population Changes by Component, 2001-2021



Oklahoma ranked highly in both COVID deaths per capita and net domestic in-migration in 2020 and 2021

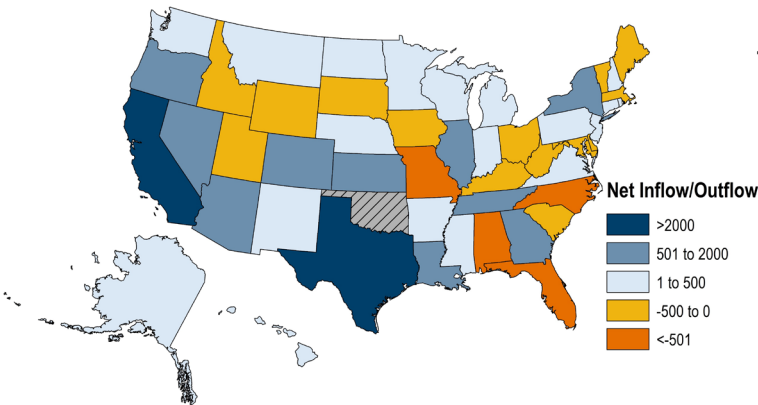
COVID-19 Death Rate
Jan. 2020 - March 2022

Net Domestic Migration
2020 - 2021

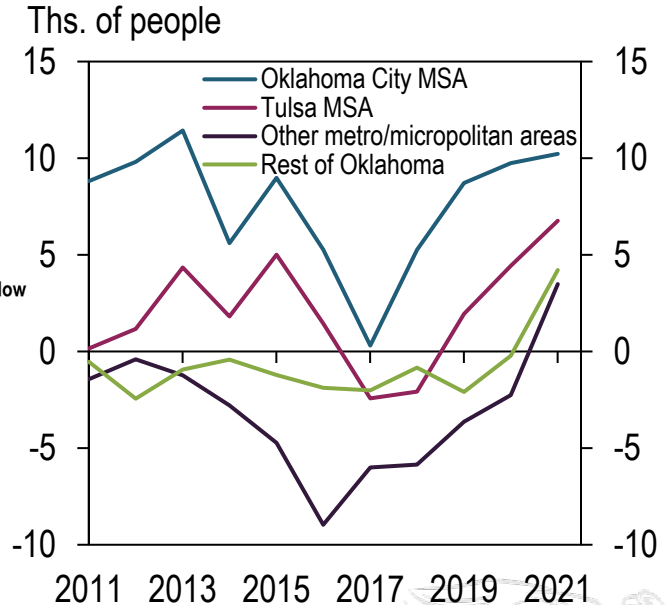


Many people moved to OK from CA and TX, mostly to the metros but some other parts of the state, too

Net Domestic Migration to Oklahoma
2020 and 2021



Oklahoma Net Domestic Migration



Summary

- Economic growth, job growth, and business optimism remain solid, despite it all: supply chain issues, higher input prices, tight labor markets
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- In energy, activity continues to grow moderately even with high oil and gas prices, and employment remains well below pre-pandemic levels



Questions?

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