Energy and the Economy

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*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.
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
  - Katrina Washington (chair), Owner/Broker, Stratos Realty, Oklahoma City
  - Walt Duncan, President, Duncan Oil Properties, Oklahoma City
  - Rhonda Hooper, President & CEO, Jordan Advertising, Oklahoma City
  - Susan Plumb, Chair & CEO, Bank of Cherokee County, Tahlequah
  - Brady Sidwell, Principal, Sidwell Strategies, Enid
  - Chris Turner, COO, First National Bank, Shawnee/OKC
  - Dana Weber, Chair & CEO, Webco Industries, Sand Springs
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

Percent change

-4 -2  0  2  4  6  8  10


Real GDP
Range
Sept. 2021 Median Projection
Dec. 2021 Median Projection
March 2022 Median Projection

Current (Q4 2021): 6.9%

Projections

Note: Data and FOMC projections are for year-end.
Sources: Bureau of Economic Analysis, FOMC
Manufacturing and services activity has increased in recent months, with strong outlooks.
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

Stocks/use ratio, %

Sources: FRBKC Surveys, USDA
U.S. unemployment remains historically low and is projected to remain very low in coming years

U.S. Unemployment Rate

- U.S. unemployment rate
- Range
- Sept. 2021 Median Projection
- Dec. 2021 Median Projection
- March 2022 Median Projection

Current (Mar. 2022): 3.6%

Projections

Note: Data and FOMC projections are for year-end.

Sources: U.S. Bureau of Labor Statistics, FOMC
The number of jobs in Oklahoma is still down compared to pre-COVID, despite record low unemployment.

**Non-Farm Payroll Employment**

Index, Jan. 2020=100

**Unemployment Rate**

Source: U.S. Bureau of Labor Statistics
High inflation is expected to ease a bit by year-end as pandemic disruptions improve and rates rise.

Current Overall PCE (Feb. 2022): 6.4%
Current Core PCE (Feb. 2022): 5.4%

Note: Data and FOMC projections are for year-end.
Sources: Bureau of Economic Analysis, FOMC
Inflation pressure may be moving from goods to services, and energy prices rose significantly in March.

*Goods excluding Food; Services excluding Energy.
Note: Relative Importance as Share of CPI shown in parenthesis.

Sources: BLS/Haver Analytics
More rate increases are now expected in 2022 and 2023.
The Fed also plans to reduce its balance sheet

Source: Federal Reserve Board
Oil prices have been elevated since the Ukraine invasion, and remain highly profitable for most firms.
Regional energy firms expected oil prices to moderate slightly moving forward but still be high in 2027.

**WTI Oil Prices**

- **Profitable Price**: $62
- **Substantial Increase Price**: $86
- **Price expected in 6 months**: $96
- **Price expected in 1 year**: $89
- **Price expected in 2 years**: $83
- **Price expected in 5 years**: $84

Survey ranges in orange, survey average.

Source: FRBKC Energy Survey
Natural gas prices have also risen considerably above profitable and strong growth levels.

![Energy Prices Chart](Image)

*Sources: EIA/Haver Analytics, FRBKC Energy Survey, WSJ*
Firms at the end of Q1 expected natural gas prices to remain above $4 for the foreseeable future.

Henry Hub Natural Gas Prices

- Profitable Price: $3.72
- Substantial Increase Price: $4.53
- Price expected in 6 months: $4.45
- Price expected in 1 year: $4.32
- Price expected in 2 years: $4.29
- Price expected in 5 years: $4.74

Survey range in orange.
Internationally, prices have jumped, and U.S. export capacity has expanded.
Still growth in energy activity remained steady in Q1, as profit growth slowed and wage pressures mounted.
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?”

“In 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

Source: EIA/Haver Analytics
Recent increases in rigs have been in TX, ND, NM, OK, PA, and offshore Louisiana.
Disruptions in Russian oil supply are shifting the sources of future supply

Change in Global Petroleum Supply

mbpd, y/y chg

U.S.
U.S. SPR
Russia
OPEC
All Other
Total

Note: 2022 and 2023 values are February and April STEO Forecasts.

Source: EIA/Haver Analytics
Firms have been able to produce more with less over the past 30 years

Oklahoma Oil & Gas Rig Count, Employment, and Production

Note: Employment is for total mining. Production shown on 3-month moving average.

Sources: Baker Hughes, BLS, EIA/Haver Analytics
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?”

Source: FRBKC Energy Survey
Renewable energy activity has increased significantly as a source of electricity.
Additional renewable energy capacity growth is planned over the next few years

Note: Sum of summer capacity shown. 2021-2025 data shown as net additions and retirements.

Source: EIA, Authors’ calculations
Energy jobs in Oklahoma are still down the most, by far, while transportation jobs have grown.
Oklahoma’s population grew in 2021, despite a historic increase in deaths, due to massive in-migration.
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

Sources: CDC, U.S. Census Bureau
Many people moved to OK from CA and TX, mostly to the metros but some other parts of the state, too.
Summary

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Questions?

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