Economic Developments and Monetary Policy Environment

Federal Reserve Bank of Chicago
Academic Advisory Council Meeting
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Senior Vice President
Federal Reserve Bank of Chicago

The views expressed are my own and not necessarily those of the Federal Reserve Bank of Chicago or the Federal Reserve System
Employment Still Below Pre-Pandemic Level

Nonfarm Payroll Employment
(Millions, SA)

Source: Bureau of Labor Statistics via Haver Analytics
Unemployment Close to Pre-Pandemic

Unemployment Rate
(percent, SA)

<table>
<thead>
<tr>
<th></th>
<th>Feb’20</th>
<th>Apr’20</th>
<th>Apr’22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3.5</td>
<td>14.7</td>
<td>3.6</td>
</tr>
<tr>
<td>Adjusted for misreports(^1)</td>
<td>19.5</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>6.0</td>
<td>16.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.4</td>
<td>18.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Out of labor force but want a job (%LF)</td>
<td>3.0</td>
<td>6.3</td>
<td>3.6</td>
</tr>
</tbody>
</table>

1. BLS estimate accounting for misclassification of workers absent due to pandemic; estimates are upper bounds

Source: Bureau of Economic Analysis via Haver Analytics
Labor Force Participation

Labor Force Participation Rate
(SA, percent)

Labor Force Participation Rate: 16-64 Years
(percent, SA)

Source: Bureau of Labor Statistics via Haver Analytics
Job Openings and Quits are Extremely High

Source: Bureau of Labor Statistics via Haver Analytics
Compensation and Unit Labor Cost Growth

ECI Compensation Growth: Private Industry Workers
(Percent change year-to-year, SA)

Real ECI Compensation

Nominal ECI Compensation

Unit Labor Costs and Inflation
(four-quarter percent change)

Unit Labor Cost

Implicit Price Deflator

Source: Bureau of Labor Statistics via Haver Analytics
ECI Compensation includes value of benefits and nonproduction bonuses and holds constant industry and occupation shares of employment. Real is deflated by total PCE Price Index.
Household Spending

Personal Consumption Expenditures
(indexed, Feb-2020 = 100)

Source: Bureau of Economic Analysis via Haver Analytics

Light Vehicle Sales
(SAAR, million units)

Source: Autodata via Haver Analytics

Single Family Housing Starts and Permits
(SAAR, millions)

Source: Census Bureau via Haver Analytics
Household Income and Balance Sheets

**Personal Income**

(Bil $, SAAR)

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-2011</td>
<td>8000</td>
<td>9000</td>
<td>10000</td>
<td>11000</td>
<td>12000</td>
</tr>
<tr>
<td>Mar-2022</td>
<td>11000</td>
<td>12000</td>
<td>13000</td>
<td>14000</td>
<td>15000</td>
</tr>
</tbody>
</table>

**Households & Nonprofit Organizations Net worth**

(Percent of Disposable Personal Income, EOP)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2010</th>
<th>2014</th>
<th>2018</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4-2011</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>900</td>
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</tbody>
</table>

Source: Bureau of Economic Analysis via Haver Analytics

*Personal income less unemployment insurance, Coronavirus Food Assistance Program, PPP loans to businesses, increase in Medicare reimburse rates, extended unemployment benefits, pandemic unemployment assistance and compensation payments, pandemic emergency unemployment compensation, economic impact payments, lost wages supplemental payments, PPP loans and Provider Relief Fund to NPISH, Child Tax Credit

Source: Federal Reserve Board via Haver Analytics
Nonresidential Investment

Equipment and Intellectual Property
(Bil. $ 2012, SAAR)

Structures
(Bil. $ 2012, SAAR)

Source: Bureau of Economic Analysis via Haver Analytics
Global Growth Outlook Revised Down

<table>
<thead>
<tr>
<th>IMF GDP Forecasts¹</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Economies</td>
<td>5.2</td>
<td>3.3</td>
<td>2.4</td>
</tr>
<tr>
<td>January</td>
<td>3.9</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Emerging Economies</td>
<td>6.8</td>
<td>3.8</td>
<td>4.4</td>
</tr>
<tr>
<td>January</td>
<td>4.8</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>European Union</td>
<td>5.4</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>January</td>
<td>4.0</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>8.1</td>
<td>4.4</td>
<td>5.1</td>
</tr>
<tr>
<td>January</td>
<td>4.8</td>
<td>5.3</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>4.7</td>
<td>-8.5</td>
<td>-2.3</td>
</tr>
<tr>
<td>January</td>
<td>2.8</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

1. Percent change in average annual level of real GDP

Source: International Monetary Fund World Economic Outlook, April (current) and January 2022
Business Activity and Supply Constraints

Overall PMI
(above 50 is expansion)

Inventories Index
(below 50 is too low)

Supplier Deliveries Index
(above 50 is slower deliveries)

Prices Paid Index
(above 50 is increasing prices)

Source: Institute for Supply Management via Haver Analytics.
Manufacturing inventories, customer index; services, sentiment index.
Inflation is Very High

PCE Price Index
(12-month percent change)

Source: Bureau of Economic Analysis via Haver Analytics
Inflation Expectations

Michigan Survey of Inflation Expectations (percent)
- 1 year ahead
- 5-10 years ahead

TIPS Inflation Compensation (percent)
- 5-10 years ahead
- 5 years ahead

Source: University of Michigan via Haver Analytics
Source: Board of Governors of the Federal Reserve System
Higher Fed Funds Rate

Median SEP Federal Funds Rate Projection
(Percent, end of year)

Source: FOMC Summary of Economic Projections via Haver Analytics
Market Funds Rate Expectations

Market Pricing and Median SEP Projection of Federal Funds Rate Path
(Percent)

Source: Eurodollar Futures via CME Group; FOMC Summary of Economic Projections via Haver Analytics
Smaller Balance Sheet

Federal Reserve Holdings of Treasury and Agency Mortgage-Backed Securities
(Bil. $)

Data

Dec 2021 projection

Mar 2022 projection

Source: Federal Reserve Board via Haver Analytics; FRBNY Survey of Market Participants
Financial Market Developments

S&P 500 Index
(index)

Treasury Yields
(percentage)

Source: S&P Index via FRED

Source: Board of Governors of the Federal Reserve System via FRED
Financial Market Conditions

30-Year Fixed Mortgage Rate
(percent)

Source: Wall Street Journal via Haver Analytics

Chicago Fed National Financial Conditions Index
(+ indicates tighter than average)

Source: Federal Reserve Bank of Chicago via Haver Analytics
## Survey of Professional Forecasters

<table>
<thead>
<tr>
<th>Variable</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.5</td>
<td>2.3</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>February</td>
<td>3.7</td>
<td>2.7</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Unemployment rate&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3.6</td>
<td>3.6</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>February</td>
<td>3.7</td>
<td>3.4</td>
<td>3.6</td>
<td>3.7</td>
</tr>
<tr>
<td>PCE inflation&lt;sup&gt;2&lt;/sup&gt;</td>
<td>5.0</td>
<td>2.5</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>3.1</td>
<td>2.2</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Core PCE inflation&lt;sup&gt;2&lt;/sup&gt;</td>
<td>4.1</td>
<td>2.5</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>3.1</td>
<td>2.2</td>
<td>2.2</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Survey of Professional Forecasters via Federal Reserve Bank of Philadelphia, May (current) and February 2022

1 Percent change in annual-average levels; Q4 values only available for 2022; GDP Q4-to-Q4 growth is 1.4 percent and 2022-Q4 unemployment rates is 3.5 percent.

2 Q4/Q4 percent changes