Welcome

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Dean
Eller College of Management
Welcome

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PNC Bank

Our world

Economic Outlook
Fed Tightening Will Cause Mild Near-Term Recession

Gus Faucher
Chief Economist
The PNC Financial Services Group
Best Small Business Optimism in Decades...

...But Interest Rates Have Increased Across the Board
The Global Economy Is at Risk

Employment Has Fully Recovered From the Pandemic
Global Supply Chain Pressures Are Now Below Average

High Core Services Inflation Is a Big Concern
Big Jump in Mortgage Rates Is Weighing on the Housing Market

30-year fixed-rate mortgage commitment rate, % (L)

Existing single-family home sales, SAAR, mil (R)

Sources: Freddie Mac, National Association of Realtors

Yield Curve Remains Deeply Inverted

Yield spread, percentage points

Sources: Federal Reserve Board, NBER

George Hammond, director
Economic and Business Research Center
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Accumulated Savings and Great Balance Sheets Will Limit Hit to Consumer Spending

Structurally Tighter Labor Market Post-Pandemic

George Hammond, director
Economic and Business Research Center
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Most Likely Outcome Is Mild Recession in Early 2024

Real GDP, % change year ago (L)

Unemployment rate, % (R)

Housing, Business Investment Will Lead the Recession

Index, pre-recession peak=100

Real fixed business investment

Real GDP

Employment

Industrial production

Housing starts

Sources: BEA, BLS, Federal Reserve Board, Census Bureau, PNC
What I’m Pretty Sure About

- Very steep recession in 2020
- Not in recession now
- Fed will do what’s necessary
- Structural shifts
  - Retail, supply chains, commercial real estate
- Structural changes to the labor market

Open Questions

- Recession not inevitable
- Student loan payments
- Middle East
- Government shutdown
- Financial stresses
- Commercial real estate
- Russia/Ukraine
- Path of pandemic
- Longer-run growth
- Housing market
- AI
For more information from PNC Economics visit Pnc.com/economicreports

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Key Topics

► Tucson jobs are rising but below the U.S. pace
  ► Several sectors have not recovered from the pandemic
► Arizona’s labor market remains very tight
  ► There are modest signs of loosening
► Phoenix inflation has decelerated below the U.S. pace
  ► Price levels remain far above their pre-pandemic level
► Tucson is well-positioned to continue to grow next year
  ► At a slower pace
  ► U.S. recession risks remain

Tucson MSA Nonfarm Jobs

Over-the-Year Growth, Nonseasonally Adjusted

<table>
<thead>
<tr>
<th>Year</th>
<th>Tucson MSA</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>1.1%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

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Tucson MSA Jobs by Industry

Change from February 2020 to October 2023
Thousands, Seasonally Adjusted

- Trade, Transportation, and Utilities: +5.4
- Financial Activities: +2.5
- Manufacturing: +1.9
- Construction: +1.9
- Government: +1.6
- Natural Resources and Mining: +0.5
- Other Services: +0.2
- Information: -2.4
- Priv. Educational and Health Services: -2.8
- Professional and Business Services: -3.6
- Leisure and Hospitality: -3.6

Two Measures of Tucson MSA Employment

Employed Residents and Jobs at Establishments

Thousands

- Household Survey
- Establishment Survey
Arizona’s Labor Market Is Loosening A Little

Arizona and U.S. Unemployment Rates, Seasonally Adjusted, Through October 2023

<table>
<thead>
<tr>
<th></th>
<th>October 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>4.2%</td>
</tr>
<tr>
<td>U.S.</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

Employment Cost Index

Total Private-Sector Compensation for U.S. and Phoenix MSA

Year-Over-Year Percent Change

<table>
<thead>
<tr>
<th></th>
<th>Phoenix</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021Q2</td>
<td>3.7</td>
<td>3.1</td>
</tr>
<tr>
<td>2021Q3</td>
<td>4.6</td>
<td>4.1</td>
</tr>
<tr>
<td>2021Q4</td>
<td>4.9</td>
<td>4.4</td>
</tr>
<tr>
<td>2022Q1</td>
<td>5.5</td>
<td>4.8</td>
</tr>
<tr>
<td>2022Q2</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>2022Q3</td>
<td>5.5</td>
<td>5.2</td>
</tr>
<tr>
<td>2022Q4</td>
<td>4.4</td>
<td>5.1</td>
</tr>
<tr>
<td>2023Q1</td>
<td>4.6</td>
<td>4.8</td>
</tr>
<tr>
<td>2023Q2</td>
<td>3.9</td>
<td>4.5</td>
</tr>
<tr>
<td>2023Q3</td>
<td>3.5</td>
<td>4.3</td>
</tr>
</tbody>
</table>


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Arizona Per Capita Personal Income
Annual, Nominal and Real

- Dollars per Person
- December 2001 Dollars

- Up 2.5% from 2019.
- Inflation adjustment using Phoenix CPIU

Consumer Prices Remain Elevated
Percent Change from October 2019 to October 2023

- Phoenix
- U.S.

- All Items: 24.4, 19.6
- Core: 23.7, 17.5
- Commodities: 17.3, 20.8
- Services: 28.6, 18.8
- Shelter: 41.1, 20.5
Rent Has Stabilized
Phoenix and Tucson Median Monthly Rent, New Leases

<table>
<thead>
<tr>
<th></th>
<th>Tucson</th>
<th>Phoenix</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 2022</td>
<td>$1,333</td>
<td>$1,617</td>
<td>$1,370</td>
</tr>
<tr>
<td>Oct. 2023</td>
<td>$1,359</td>
<td>$1,547</td>
<td>$1,354</td>
</tr>
<tr>
<td>%change</td>
<td>2.0%</td>
<td>-4.3%</td>
<td>-1.2%</td>
</tr>
</tbody>
</table>

House Prices Have Begun to Rise Again
Phoenix and Tucson

Median House Price

<table>
<thead>
<tr>
<th></th>
<th>Tucson</th>
<th>Phoenix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 2022</td>
<td>$360,000</td>
<td>$465,000</td>
</tr>
<tr>
<td>Oct 2023</td>
<td>$379,500</td>
<td>$468,000</td>
</tr>
<tr>
<td>%change</td>
<td>5.4%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Phoenix median sales price is down 8.2% from May 2022 peak.
Housing Affordability

NAHB-Wells Fargo

<table>
<thead>
<tr>
<th>City</th>
<th>2019Q4</th>
<th>2023Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>11.3</td>
<td>2.7</td>
</tr>
<tr>
<td>Phoenix</td>
<td>64.9</td>
<td>24.9</td>
</tr>
<tr>
<td>San Francisco</td>
<td>12.3</td>
<td>5.4</td>
</tr>
<tr>
<td>San Jose</td>
<td>20.6</td>
<td>6.8</td>
</tr>
<tr>
<td>Seattle</td>
<td>44.3</td>
<td>20.6</td>
</tr>
<tr>
<td>Tucson</td>
<td>71.2</td>
<td>33.8</td>
</tr>
<tr>
<td>U.S.</td>
<td>63.2</td>
<td>37.4</td>
</tr>
</tbody>
</table>

The share of homes sold that are affordable to a family making the median income.

Tucson MSA Jobs Finally Above 2007 Peak

Annual Growth Rates

Thousands

George Hammond, director
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Tucson MSA Job Growth

Annual Growth Rates

Tucson MSA Net Migration and Natural Increase

Annual
Tucson MSA Forecast Summary

Fourth Quarter 2023

<table>
<thead>
<tr>
<th></th>
<th>Actual 2022</th>
<th>Forecast 2023</th>
<th>Forecast 2024</th>
<th>Forecast 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth Rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonfarm Jobs</td>
<td>3.2</td>
<td>1.6</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Personal Income*</td>
<td>2.6</td>
<td>5.3</td>
<td>5.8</td>
<td>6.3</td>
</tr>
<tr>
<td>Retail Plus Remote Sales</td>
<td>5.9</td>
<td>4.6</td>
<td>3.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Population</td>
<td>1.3</td>
<td>0.8</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing Permits</td>
<td>5,714</td>
<td>5,108</td>
<td>4,149</td>
<td>4,394</td>
</tr>
</tbody>
</table>

*Personal income data are forecast in 2022.

Main Takeaways

- **Arizona’s labor market remains in good shape**
  - Job growth is solid and the labor market is showing some signs of loosening
- **Phoenix inflation has moderated**
  - Price levels are far above pre-pandemic levels
- **Rents have stabilized but house prices have begun to rise again**
  - Housing affordability remains low
- **Arizona, Phoenix, and Tucson are forecast to grow next year**
  - But at a slower pace
  - U.S. recession risks remain
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