Tucson’s Economy Sails Into Uncertain Waters

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MAP Talk Webinar
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Key Topics

► U.S. economy did not enter recession in early 2022
► U.S. inflation is still running very hot
  ► Phoenix prices are rising faster, driven by housing
► Arizona’s labor market remains very tight
  ► With low unemployment, rapidly rising wages, and a mountain of open jobs
► Baseline forecast calls for continued growth in Tucson, but downside risks are elevated
Are We in a Recession?

- As defined by NBER (NBER.org)
  - A recession is a substantial decline in the level of economic activity
  - Depth, diffusion, duration
  - No fixed rules
- Backward-looking classification
- Six key monthly series, but many others are evaluated as well, including real GDP
- Average length of U.S. post-WWII recessions/expansions
  - Recession average: 10 months
  - Expansion average: 64 months

Identifying Peaks and Troughs

It’s Not Easy in Real Time
U.S. Nonfarm Payroll Jobs
Seasonally Adjusted, Through August 2022

U.S. Real Personal Income Less Transfers
Seasonally Adjusted, Billions of Chained 2012 Dollars
Through July 2022
U.S. Inflation Remains Elevated

U.S. CPIU-All Items and Core, Over the Year

Phoenix Inflation Is Outpacing the U.S.

All-Items CPIU, Over the Year

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Phoenix Shelter Inflation Far Above U.S.

**Shelter CPIU, Over the Year**

![Graph showing Phoenix and U.S. Shelter CPIU inflation](image)

- Phoenix: 19.0%
- U.S.: 6.2%

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Tucson’s Labor Market Is Tight

**Tucson and U.S. Unemployment Rates, Seasonally Adjusted, Through August 2022**

<table>
<thead>
<tr>
<th>Month</th>
<th>U.S. (U3)</th>
<th>Tucson (U3)</th>
<th>U.S. (U6)</th>
<th>Tucson (U6)</th>
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</thead>
<tbody>
<tr>
<td>Apr 20</td>
<td>14.7</td>
<td>13.5</td>
<td>22.9</td>
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<td>Dec 21</td>
<td>3.9</td>
<td>3.8</td>
<td>7.3</td>
<td>7.3</td>
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<td>Mar 22</td>
<td>3.6</td>
<td>3.3</td>
<td>6.9</td>
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<tr>
<td>Jun 22</td>
<td>3.6</td>
<td>3.4</td>
<td>6.7</td>
<td>6.7</td>
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<tr>
<td>Aug 22</td>
<td>3.7</td>
<td>3.5</td>
<td>7.0</td>
<td>7.0</td>
</tr>
</tbody>
</table>

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Tucson MSA Nonfarm Payroll Jobs

Seasonally Adjusted, Through August 2022

Thousands

Tucson MSA Jobs by Industry

Change from February 2020 to August 2022
Thousands, Seasonally Adjusted

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Employment Cost Index

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

Year-Over-Year Percent Change

<table>
<thead>
<tr>
<th></th>
<th>Arizona</th>
<th>U.S.</th>
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<tbody>
<tr>
<td>2021Q1</td>
<td>3.6</td>
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<td>2021Q2</td>
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<td>3.1</td>
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<tr>
<td>2021Q3</td>
<td>4.6</td>
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<tr>
<td>2021Q4</td>
<td>4.9</td>
<td>4.4</td>
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<tr>
<td>2022Q1</td>
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<tr>
<td>2022Q2</td>
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</table>


Tucson MSA Short-Run Forecast Summary

Third Quarter 2022

<table>
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<tr>
<th></th>
<th>Actual 2021</th>
<th>Forecast 2022</th>
<th>Forecast 2023</th>
<th>Forecast 2024</th>
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<tbody>
<tr>
<td><strong>Growth Rate</strong></td>
<td></td>
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<tr>
<td>Nonfarm Jobs</td>
<td>1.5</td>
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<td>2.2</td>
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</tr>
<tr>
<td>Personal Income</td>
<td>7.5</td>
<td>0.8</td>
<td>6.3</td>
<td>5.9</td>
</tr>
<tr>
<td>Retail Plus Remote Sales</td>
<td>19.1</td>
<td>6.5</td>
<td>4.0</td>
<td>5.2</td>
</tr>
<tr>
<td>Population</td>
<td>1.2</td>
<td>1.2</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing Permits</td>
<td>6,284</td>
<td>6,400</td>
<td>5,956</td>
<td>4,890</td>
</tr>
</tbody>
</table>

Personal income is forecast in 2021.

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Tucson MSA and U.S. Job Growth

Third Quarter 2022

Tucson MSA Net Migration and Natural Increase

Third Quarter 2022

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Key Takeaways

► Inflation is still rapid and it will be slow to decelerate
► Tucson’s labor market remains tight
  ► But will loosen as the economy slows
► The baseline forecast calls for growth to continue
  ► But a national downturn is almost as likely
► In the long-run, Tucson is forecast to outpace U.S. growth
  ► But education attainment and water sustainability are important risks

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