THE BURST OF HIGH INFLATION IN 2021-22: HOW AND WHY DID WE GET HERE?

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"Imagine that inflation was running at 5 percent against our inflation objective of 2 percent. Is there a doubt that any central banker worth their salt would be reacting strongly to fight this high inflation rate? No, there isn’t any doubt. They would be acting as if their hair was on fire." Charlie Evans, January 2011
The context: 30+ years of price stability

Three pillars of this success

• Central bank independence
• Inflation targeting
• Primacy of the short-term interest rate as the policy tool, set in transparent and predictable way

Source: Miles, Panizza, Reis, Uribe (2016)
What went wrong?
Shocks and mis-diagnoses
A good problem: very fast recovery

\[ \pi = \pi^e + \beta(y - y^*) + \varepsilon \]

- Three drivers of inflation
- 2020 policies end up being excessive
- Benefit of hindsight
- But why did not revert course earlier? Forward guidance?

<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
<th>GDP relative to previous peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>US 2001 Q4</td>
<td>-20%</td>
</tr>
<tr>
<td>United States</td>
<td>US 2009 Q2</td>
<td>0%</td>
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<tr>
<td>United States</td>
<td>US 2020 Q2</td>
<td>15%</td>
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<tr>
<td>United States</td>
<td>EA 2009 Q2</td>
<td>10%</td>
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<tr>
<td>United States</td>
<td>EA 2013 Q1</td>
<td>0%</td>
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<tr>
<td>United States</td>
<td>EA 2020 Q2</td>
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<td>Euro Area</td>
<td>EA 2020 Q2</td>
<td>-15%</td>
</tr>
</tbody>
</table>

# quarters from trough

United States | Euro Area
A tougher problem: supply bottlenecks

\[ \pi = \pi^e + \beta (y - y^*) + \varepsilon \]

- Policy interpreted all of them as temporary markup shocks
- Ports, global supply chains, globalization: may be declines in the potential output.
- Allow deviations from target, or divine coincidence

Figure 3: All Stockouts in U.S. Sectors

Notes: The initial level of \( AOOS \) varies greatly by sector, so in order to facilitate the comparison, here we plot the change relative to pre-pandemic levels, given by \( AOOS_{cj, Jan 2020} \).

Stockouts rose first for "Health" and personal care goods, but then quickly spread to other categories. In May 2020, the stockout increase ranged from 23 ppt for "Furnishings and Household" goods to over 60 ppt for "Food and Beverages." Some categories fully recovered. In particular, by January 2022, "Health" and "Furnishings and Household" actually had more products available for sale than before the pandemic. By contrast, the disruptions were more persistent for "Food and Beverages," where stockouts remained over 30 ppt above pre-pandemic levels in early 2022, and to a lesser degree in "Electronics." These findings are consistent with U.S. media reports on these two sectors, with labor and transportation disruptions affecting food production and computer-chip shortages affecting the supply of electronics.

3.2 Other Countries

Stockout patterns in the U.S. data are broadly similar to those in other countries. Figure 4 shows both temporary and permanent stockouts for all seven countries. To facilitate the comparisons of \( AOOS \), see Fitch (2021) and Kang (2021).
Next: energy and same reaction

\[ \pi = \pi^e + \beta(y - y^*) + \varepsilon \]

- Same interpretation as markup shock
- See through valid only if expectations anchored

Sources: Bloomberg Finance L.P., Department for Business, Energy and Industrial Strategy, ONS and Bank calculations.
Notes: See notes to Chart 2.19 in the February 2022 MPR. January 2022 outturn shown for aggregate CPI inflation only, all other data from January to June 2022 are Bank staff’s projection at the time of the February Report.
ECB (or Fed, BoE) loose policy until recently

Unemployment rate
1-year interest rate
1-year expected inflation

Sources: ECB, Bundesbank
What about the framework: the role of expectations
Framework problem: expectations stuck low

August 27, 2020

New Economic Challenges and the Fed's Monetary Policy Review

Chair Jerome H. Powell

At "Navigating the Decade Ahead: Implications for Monetary Policy," an economic policy symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming (via webcast)

"Households, businesses, and market participants also believe that current high inflation readings are likely to prove transitory and that, in any case, the Fed will keep inflation close to our 2 percent objective over time.”

“adverse cycle of ever-lower inflation and inflation expectations”

Consequences:

• Expectations constant, major factor driving inflation up removed
• Welcome a rise in expectations if fear is rather a deflation trap
• Temporary inflation shock will not become persistent.
Expectations beyond means

How survey expectations tend to shift:

- First get skewness
- Then get variance
- Then both decline, and the mean has definitely shifted
- Temporary inflation shock becomes persistent.
Remember the 1960s: the early unanchoring

- Same pattern over a few years as in the last 12 months.
- Worse data, and at the time lacked understanding of how to measure these.
Euro area too

Inflation Expectations - next five years on average

- Professionals very slow, but eventually catch up
Validated in 2021: expectations out of control

Some improvement in US in last three months.
The third factor: credibility
Credibility: look further ahead, 10 years

\[ \pi = \pi^e + \beta(y - y^*) + \varepsilon \]

- Capital of inattention
- If stable, exploit trade-offs with real activity, flat curve doveish. Otherwise inflation
- From August on, the emergence of a thicker right tail
Back out from insurance prices (options)

The current market-perceived probability average inflation above 4% 2027-32?

Some lack of faith in monetary policy. Relying on credibility to offset shocks

Source: Hilscher, Raviv, Reis (2022)
The focus on $r^*$
and the tolerance of inflation
Framework problem: focus on r*

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“…fall in the equilibrium real interest rate, or “r-star” …”. Powell (2020)

“structural developments have lowered the equilibrium real rate of interest” ECB (2021)

Focus on low r*, natural or neutral real interest rate
- investment=savings and output is at potential or long-run steady state

Why it matters?
- More likely policy is too tight once hit ZLB
- Deflation trap, insufficient demand, ZLB, commit to be irresponsible
- Focus on aggregate demand
Long literature shows robust decline

- All literature measured it using returns on government bonds

- But look instead at returns on capital investment

- Big increase in specialness of debt, in the wedge

![Graph](chart.png)
Implication for monetary policy

• Which one matters for level of output?
  • For whether policy is constrained, it is the government bond $r^*$
  • For the transmission of monetary policy, it is private investment $r^*$

• What should monetary policy do?
  • Aggregate demand stimulus and how much it crowds in investment
  • Aggregate supply focus on capital allocation
  • Inflation can hurt debt sustainability

Source: Reis (2022e)
Conclusion
Conclusion and policy priorities

Presumption: central banks can always rein in inflation, deviations are a choice.

Last 12 months are a significant deviation from 25-year success. Why?

1. Misdiagnosed shocks, understandable but always in same direction, and slow to pivot and to react.

2. Steadfast belief that short-term expectations would stay anchored, some bad luck but also slow, this determines persistence.

3. Over-reliance on credibility, and on a favorable slope of the Phillips curve.

4. Estimates of falling $r^*$, tolerance of inflation.