



Panel Discussion on

# Monetary Policy in the Polycrisis New Normal

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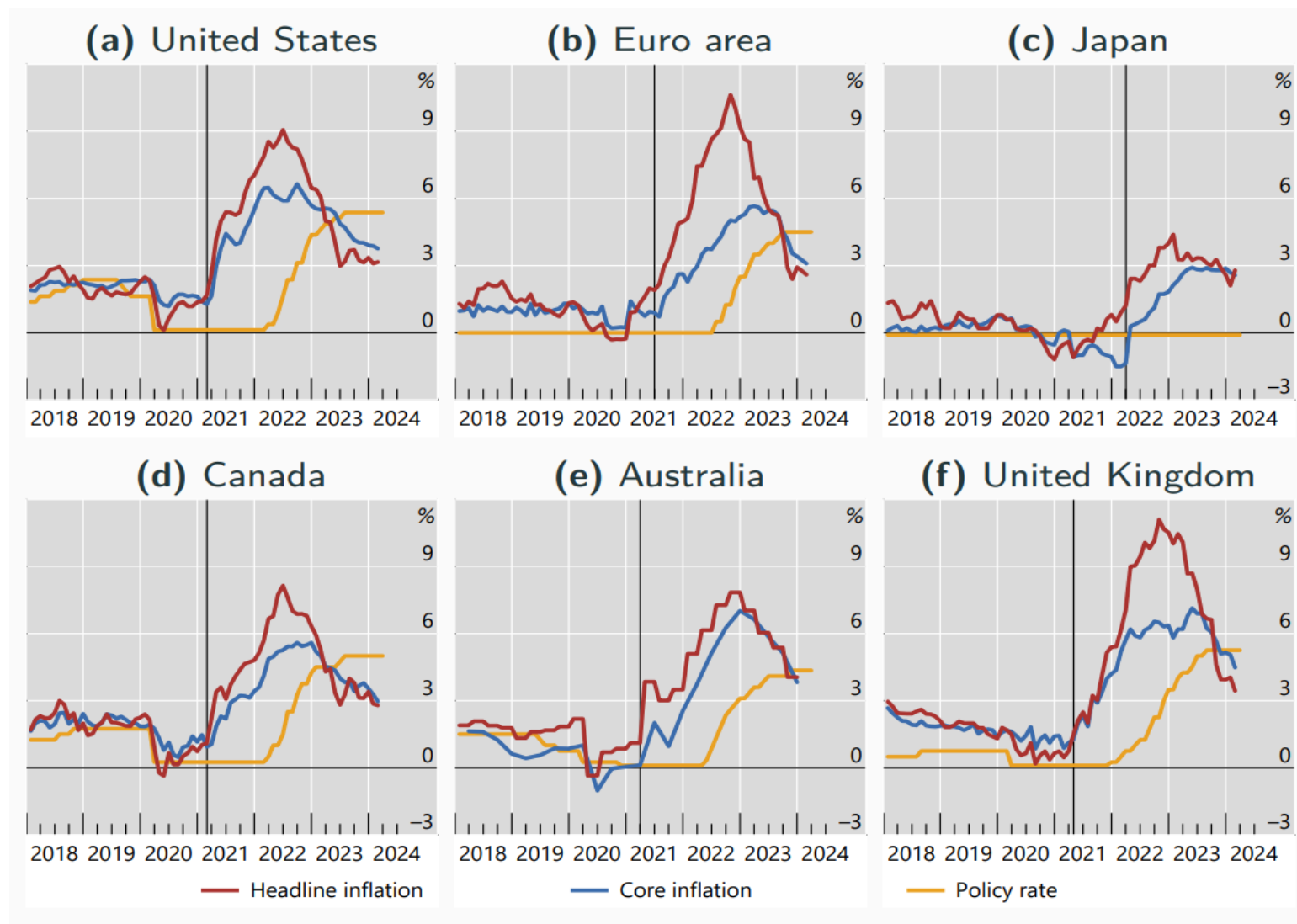
# Challenges for monetary policy in the post-pandemic environment

- Main questions
  - Has the inflation surge affected price and wage setting behavior?
  - What implications for monetary policy (MP) from post-pandemic structural developments?
- Focus here on
  - Key element of wage and price setting: inflation expectations
  - Implications for MP of structural developments
    - Larger role of supply side factors --> energy transition, geopolitical tensions
    - Steeper Phillips curve --> labor market tightness, workers' bargaining power
    - Higher  $r^*$  --> age-related fiscal pressures, investment in green transition and defense
- Results based on De Fiore, Mojon, Rees, and Sandri (2023)

# Response of inflation expectations to the inflation surge

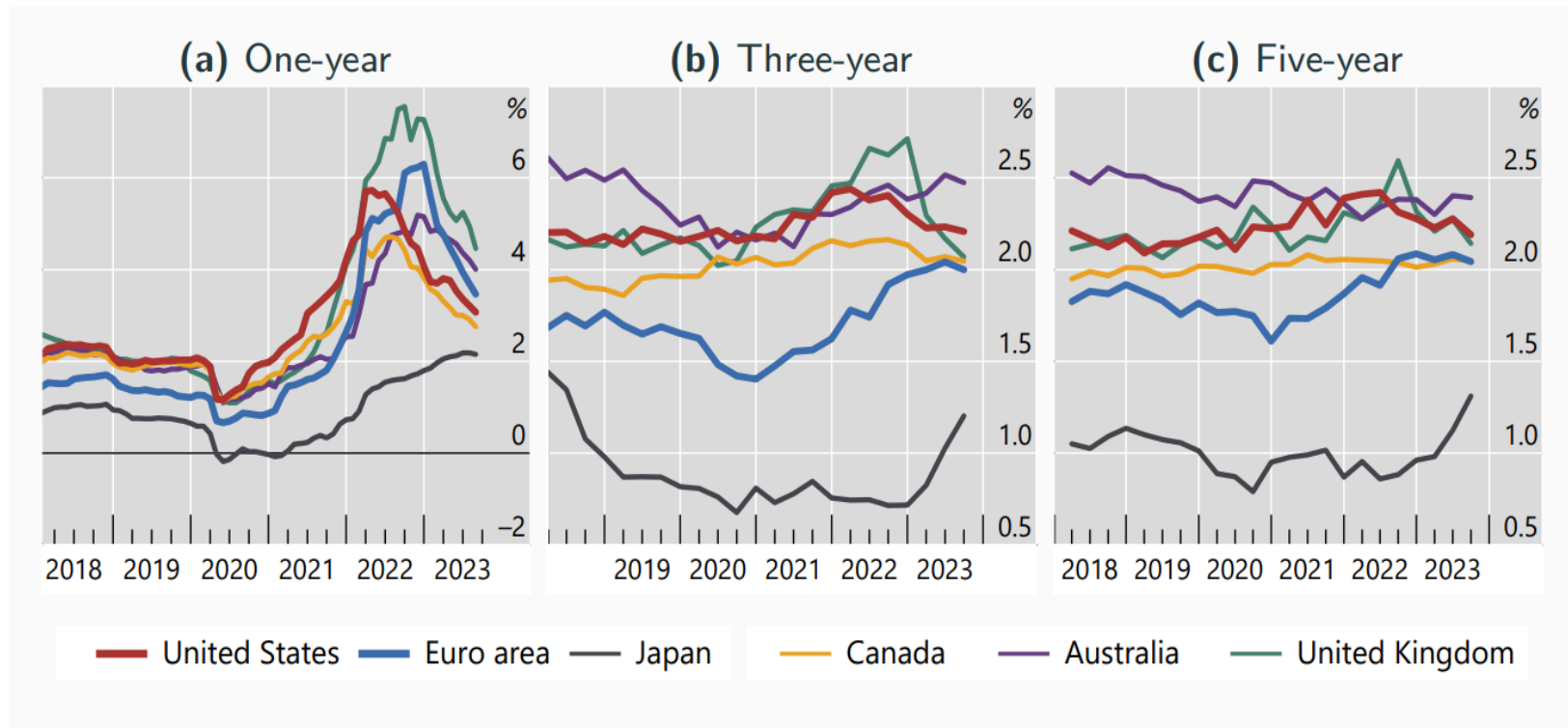
## Highly synchronized inflation surge across countries

- Black line: quarter when inflation rises above 2%
- Highly synchronised inflation surge
- Lift-off well beyond the initial rise in inflation in all countries



## Stable medium- and long-term inflation expectations with some upward movement

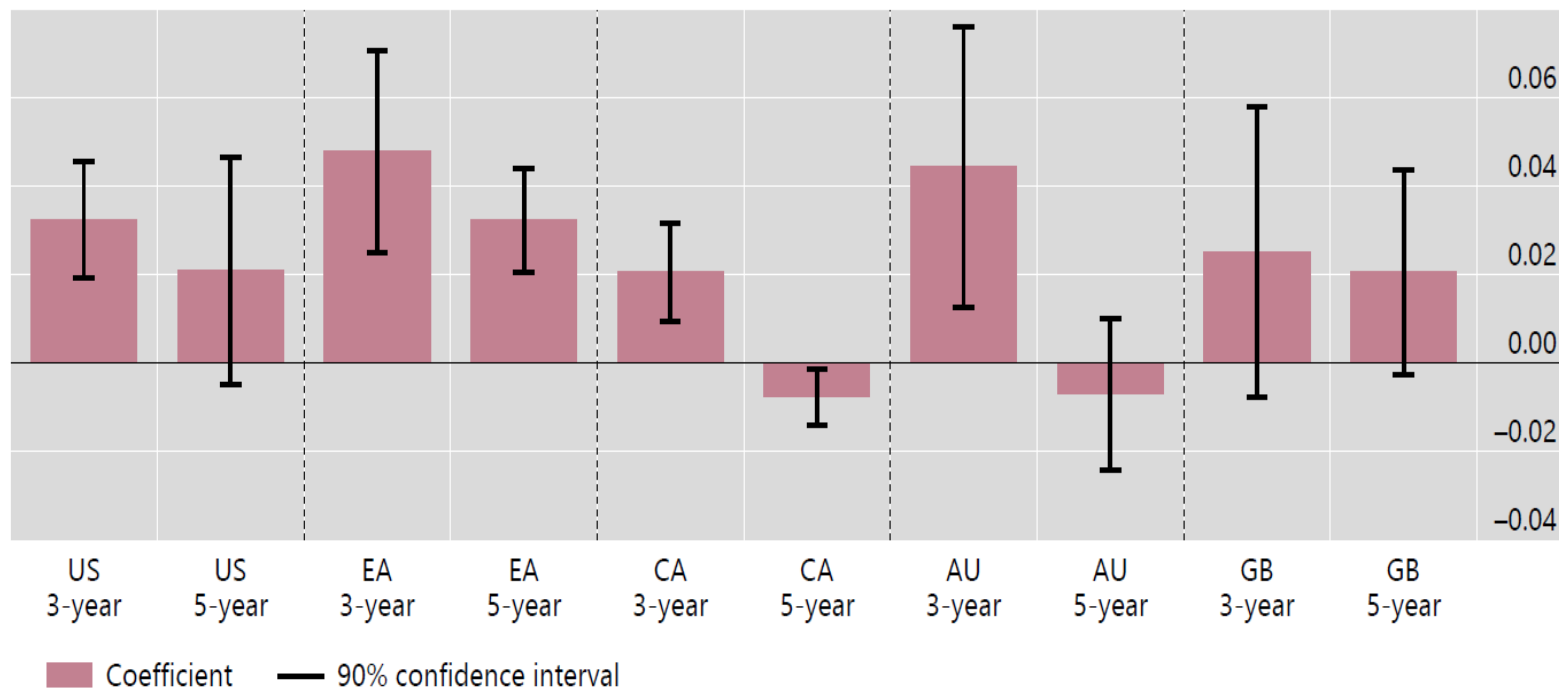
- Expectations from Survey of Professional Forecasters
- 1-yr ahead inflation expectations followed closely realized inflation
- 3- and 5 yr ahead expectations remained more stable...
- ... but rose more noticeably in EA and JP



# Inflation expectations remained well-anchored during the inflation surge

- Estimates of  $\beta$  over the period since inflation exceeds 2% are positive but small
- Mild evidence of stronger de-anchoring in the EA

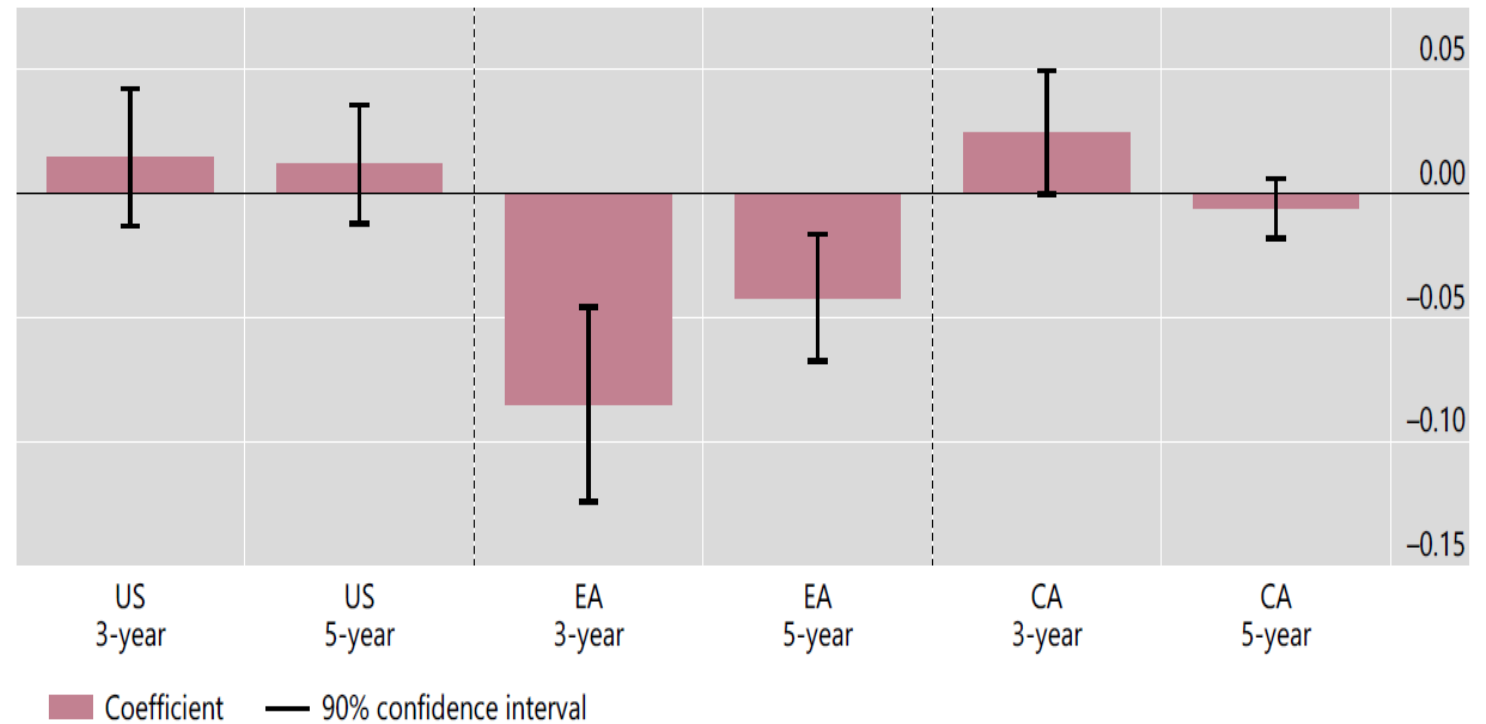
$$\text{Regression: } \pi_t^E = \alpha + \beta \pi_t + \epsilon_t$$



# Recent changes in monetary policy frameworks did not compromise the anchoring

- Did the shift towards more accommodative MP frameworks in 2021 contributed to the de-anchoring?
- Estimates of  $\gamma$  over 2003Q1-2023Q2
- Some evidence of improved anchoring in EA after framework review

Regression:  $\pi_t^E = \alpha + (\beta + \gamma \times T_{MPF})\pi_t + \delta T_{MPF} + \epsilon_t$



# Implications of post-pandemic structural developments for MP



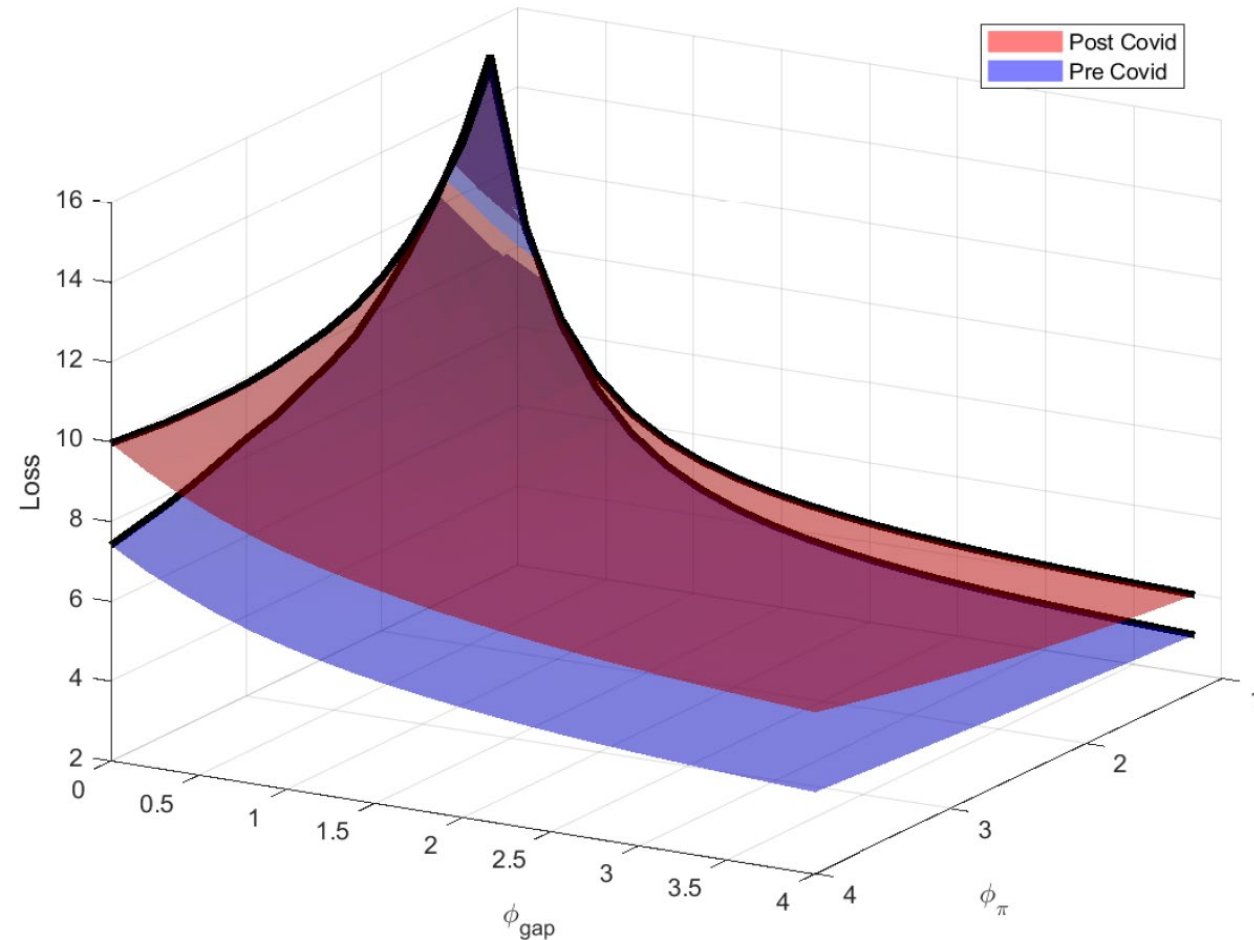
## Model-based scenarios

- DSGE model similar to the one of the NY Fed (Del Negro et al., 2023)
- Estimation for the US over the period 1984Q1-2019Q4
- Back up the shocks for post-Covid period 2020Q1 to 2023Q3, using observables
- Run stochastic simulations under
  - post-Covid shocks
  - steeper Phillips curve
  - higher  $r^*$
- MP rules:
  - Average inflation targeting (AIT) vs inflation targeting (IT)
  - Simple rules with persistence  $\rho_R$  and reaction coefficients  $\phi_\pi$  and  $\phi_{gap}$
- Welfare measured with loss function:  $L = (\pi - \pi^*)^2 + (y - y^*)^2 + 0.5(R - R^*)^2$

# 1. Implications for monetary policy from higher incidence of supply shocks

- Under **IT**, a higher incidence of supply shocks:
  - Implies more severe **trade-offs for MP**, hence higher welfare losses
  - Calls for **less aggressive response** to inflation and output gap

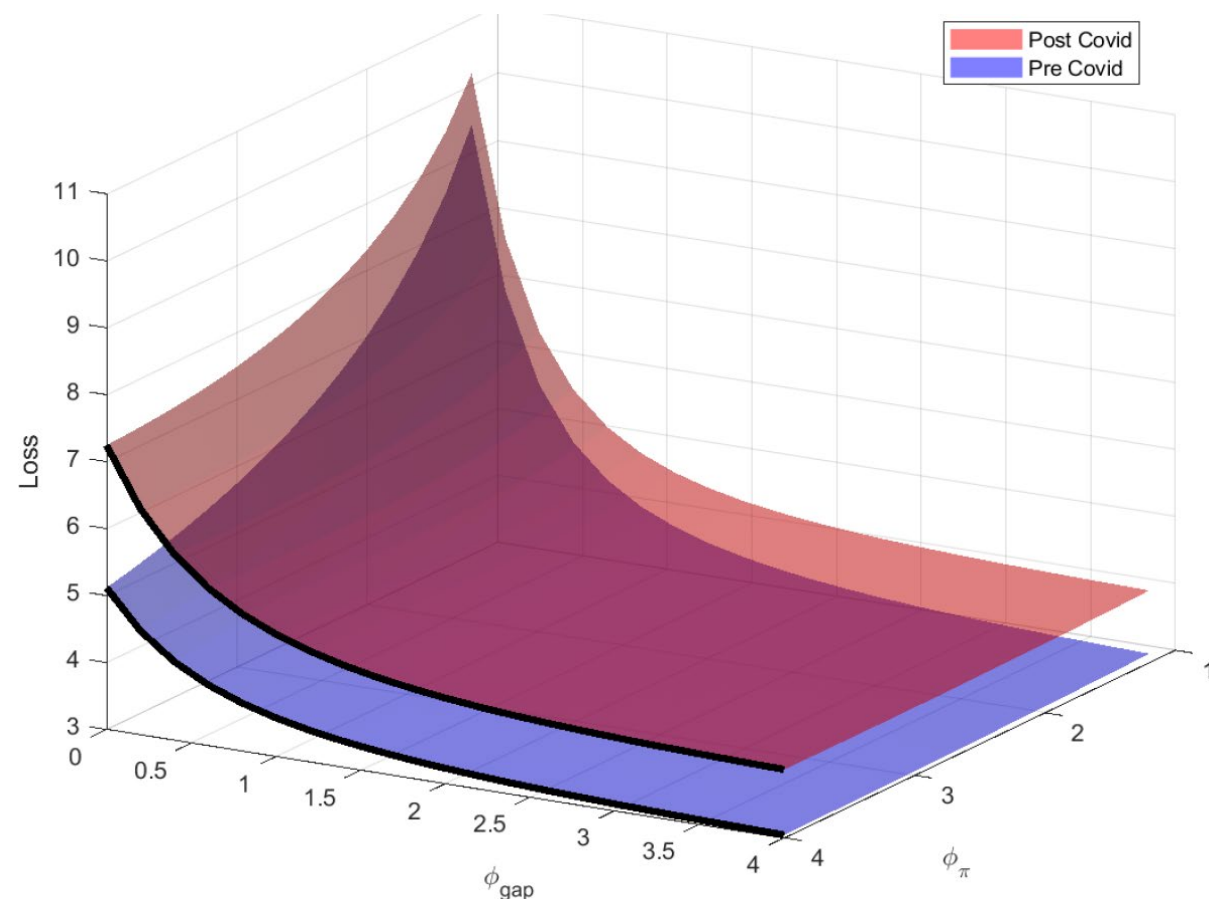
Welfare losses under **IT** framework



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- Under **AIT**, similar considerations apply but
  - need for **more aggressive response to output gap** if aggressive response to inflation
  - **guardrail** against excessive output volatility

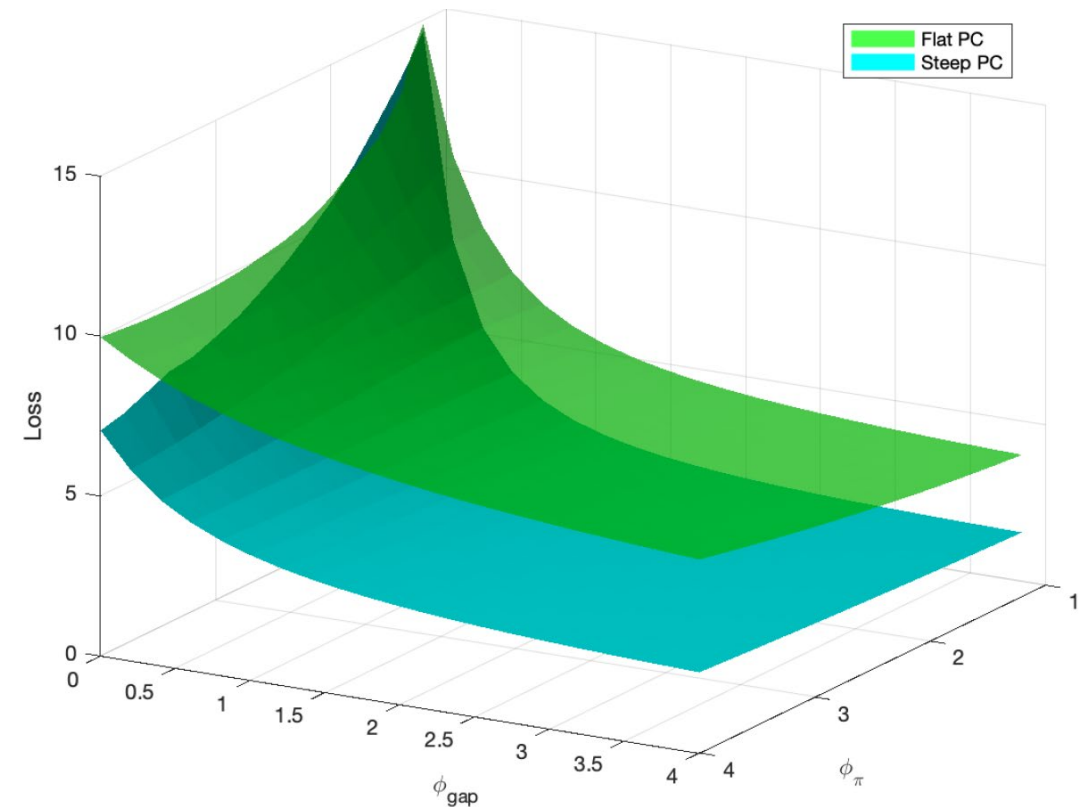
Welfare losses under **AIT** framework



## 2. Implications for monetary policy from a steeper Phillips Curve

- Under **IT**, a steeper Phillips curve:
  - Implies improved MP ability to control inflation, hence lower welfare losses
  - Calls for **more aggressive response** to inflation and output gap
- Under **AIT**, similar considerations apply
  - However, less need for **aggressive response to output gap**
  - This is because MP can control inflation without inducing as much output volatility

Welfare losses under **IT** framework



### 3. Implications for monetary policy from higher $r^*$

- Welfare comparison of AIT vs IT: negative numbers --> AIT reduces losses relative to IT
- Under **low  $r^*$** , AIT reduces ELB incidence and volatility of inflation, output, and interest rates, irrespective of the PC slope and prevalence of supply shocks
- As  **$r^*$  rises and supply shocks become more frequent**: output gains from AIT decline and then reverse

**Relative benefits of AIT vs IT**

$r^*$	Calibration		ELB frequency	Volatility of		
	Phillips Curve	Shocks		Inflation	Output	Interest rate
0.5%	Flat	Pre-Covid	-5.0	-0.5	-0.9	-0.8
0.5%	Flat	Post-Covid	-4.6	-0.4	-0.6	-1.6
0.5%	Steep	Post-Covid	-4.5	-0.3	-0.3	-0.8
1%	Steep	Post-Covid	-3.8	-0.1	-0.1	-0.8
1.5%	Steep	Post-Covid	-2.0	-0.1	0.0	-0.9
2%	Steep	Post-Covid	-0.7	-0.1	0.1	-0.9

## Conclusions

- **Inflation expectations** remained strongly anchored despite the unprecedented inflation surge
- **Higher incidence of supply shocks** increases trade-offs and calls for less aggressive MP response
  - Under AIT, output response is key to guard against excessive output volatility
- A **steeper Phillips Curve** would partly restore MP effectiveness
- A **higher  $r^*$**  would reduce the stabilization advantages of AIT vs IT
  - For sufficiently high  $r^*$ , IT would improve upon AIT in terms of output stabilization