THE ART AND SCIENCE OF PATIENCE: RELATIVE PRICES AND INFLATION

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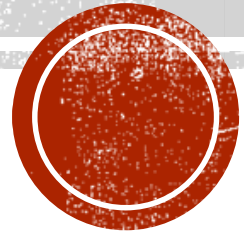
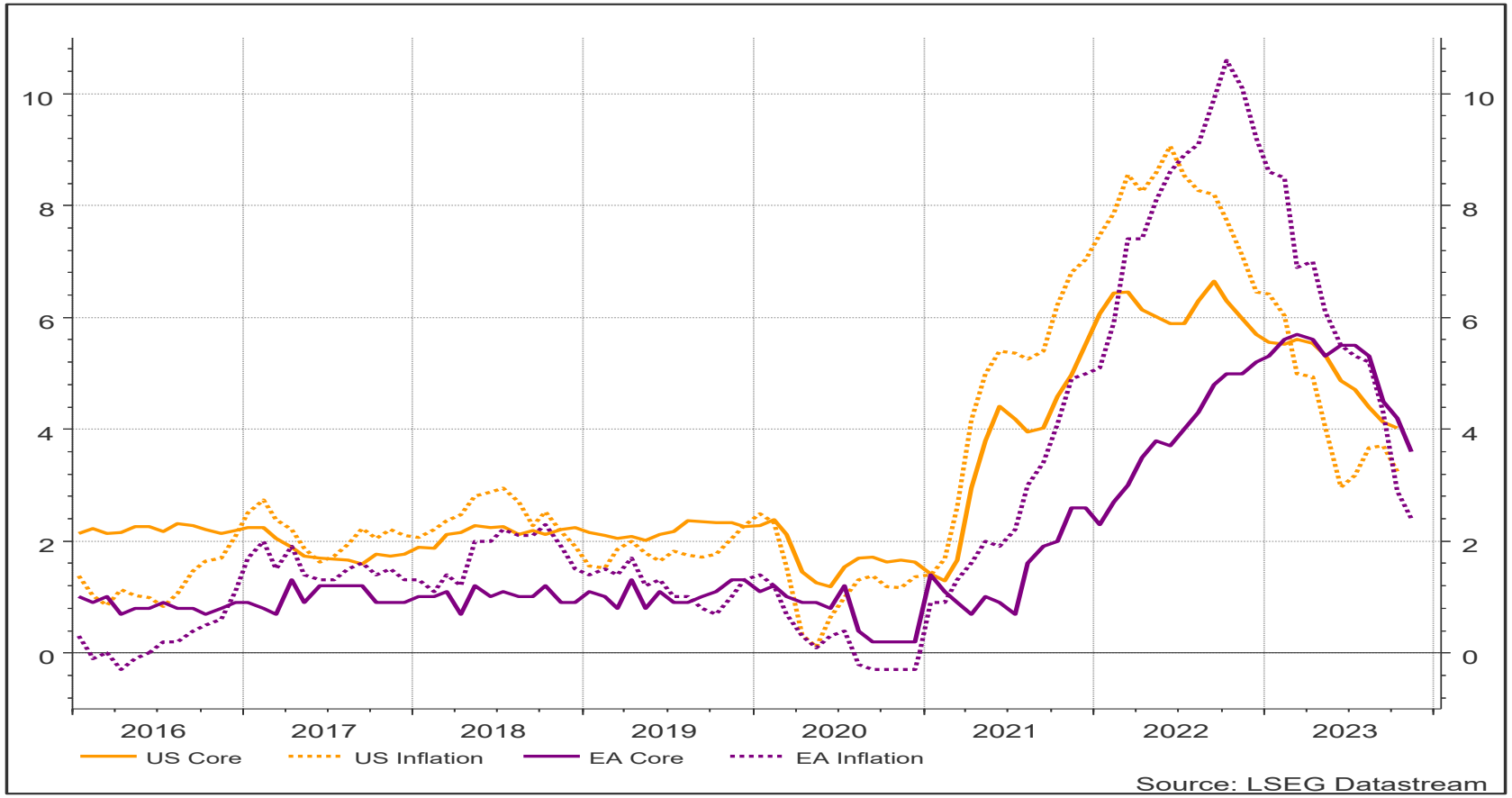


CORE AND HEADLINE INFLATION US AND EA



GENEVA REPORT RECAP

Report was written in Spring 2023 – when central banks were still on tightening mode

It advocated patience (esp. for the EA) on the basis of following main argument:

- Large relative price shocks create lagged reaction in core inflation via the goods' market (indirect effects)

- Second-round effects via wage-price spiral and expectations subdued
  - Wage growth lagging inflation notwithstanding tight labor market
  - Expectation anchored
  - Monetary policy at the time was tight enough

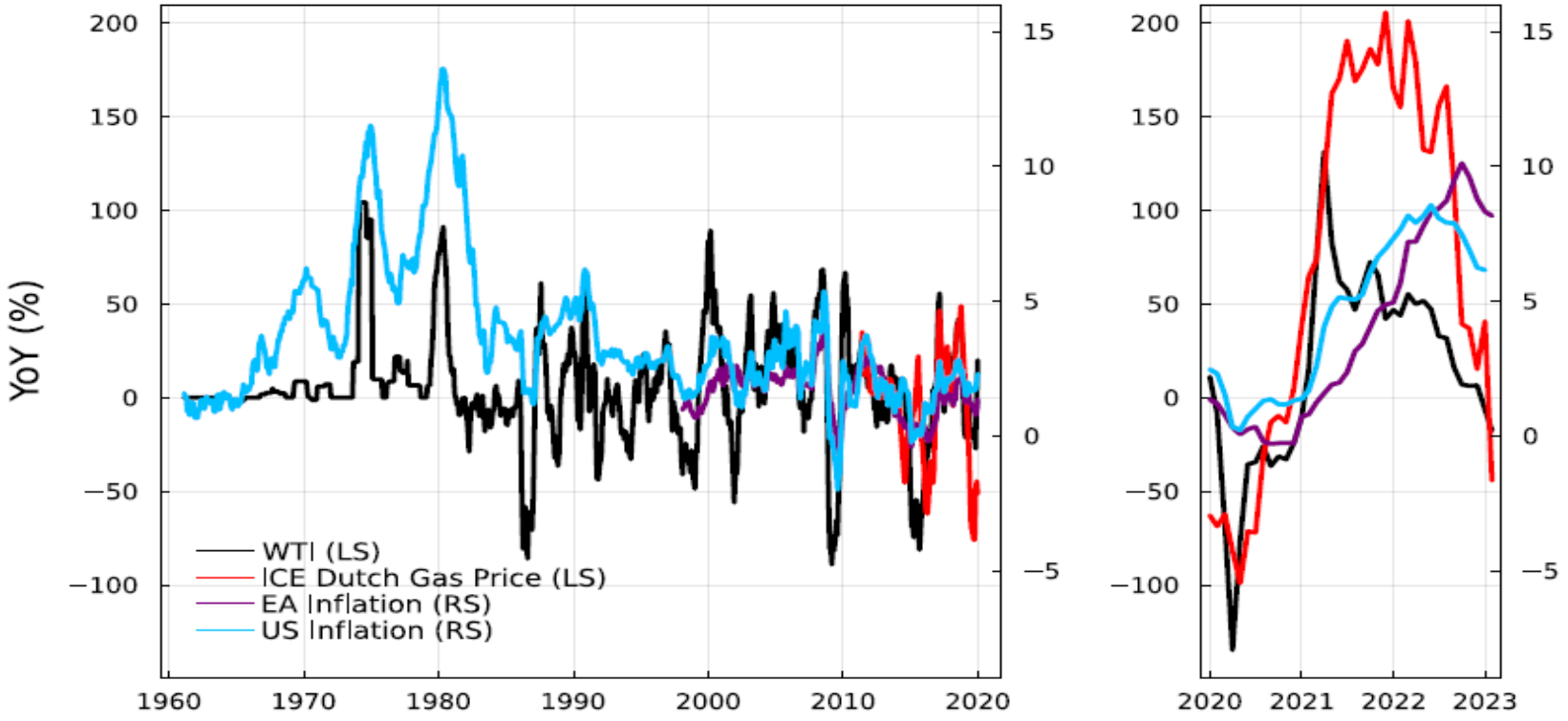
GENEVA REPORT RECAP (CONTINUED)

- The argument against additional tightening was stronger in EA because:
  - Weaker GDP, I and C
  - Negative TOT shock
  - Weaker fiscal policy stance

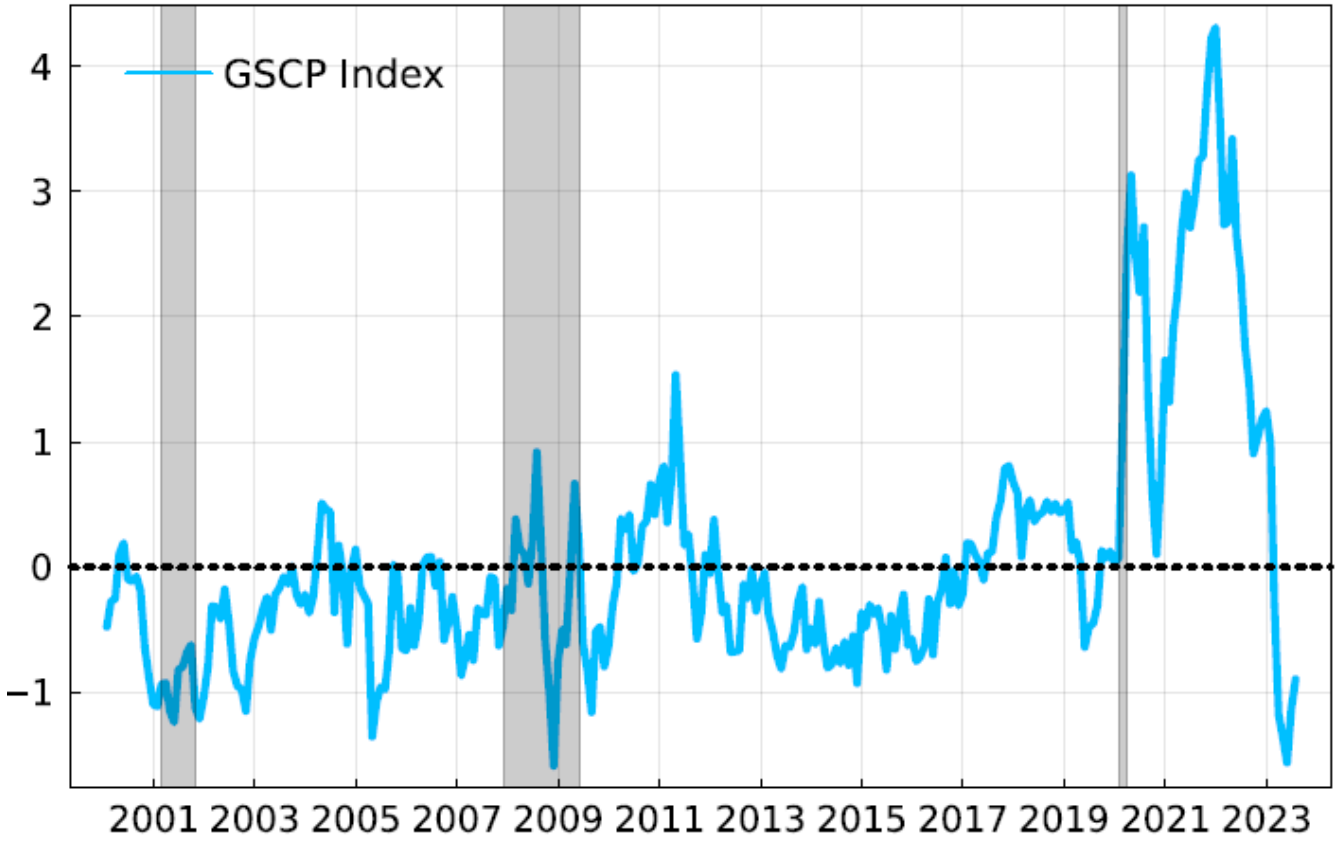
- Historical comparison shows that:
  - For many countries, the energy shock was bigger than the seventies
  - The tightening harsher than in Volcker's times.

- Lags of monetary policy are long

THE SUPPLY SHOCK HAS BEEN LARGE IN HISTORICAL PERSPECTIVE

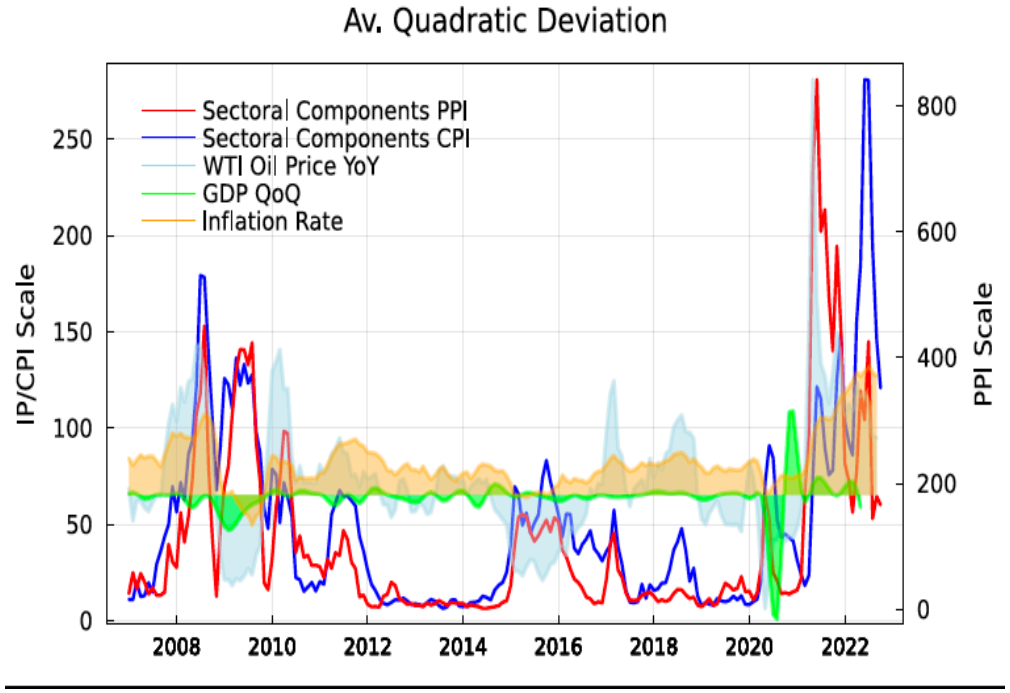


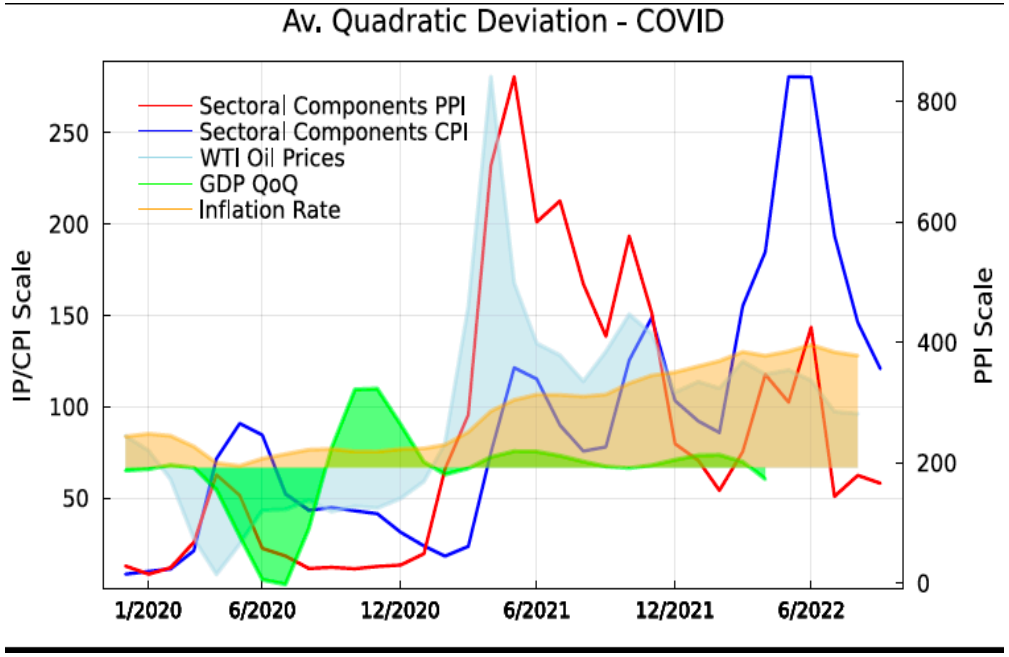
GLOBAL SUPPLY CHAIN PRESSURE INDEX

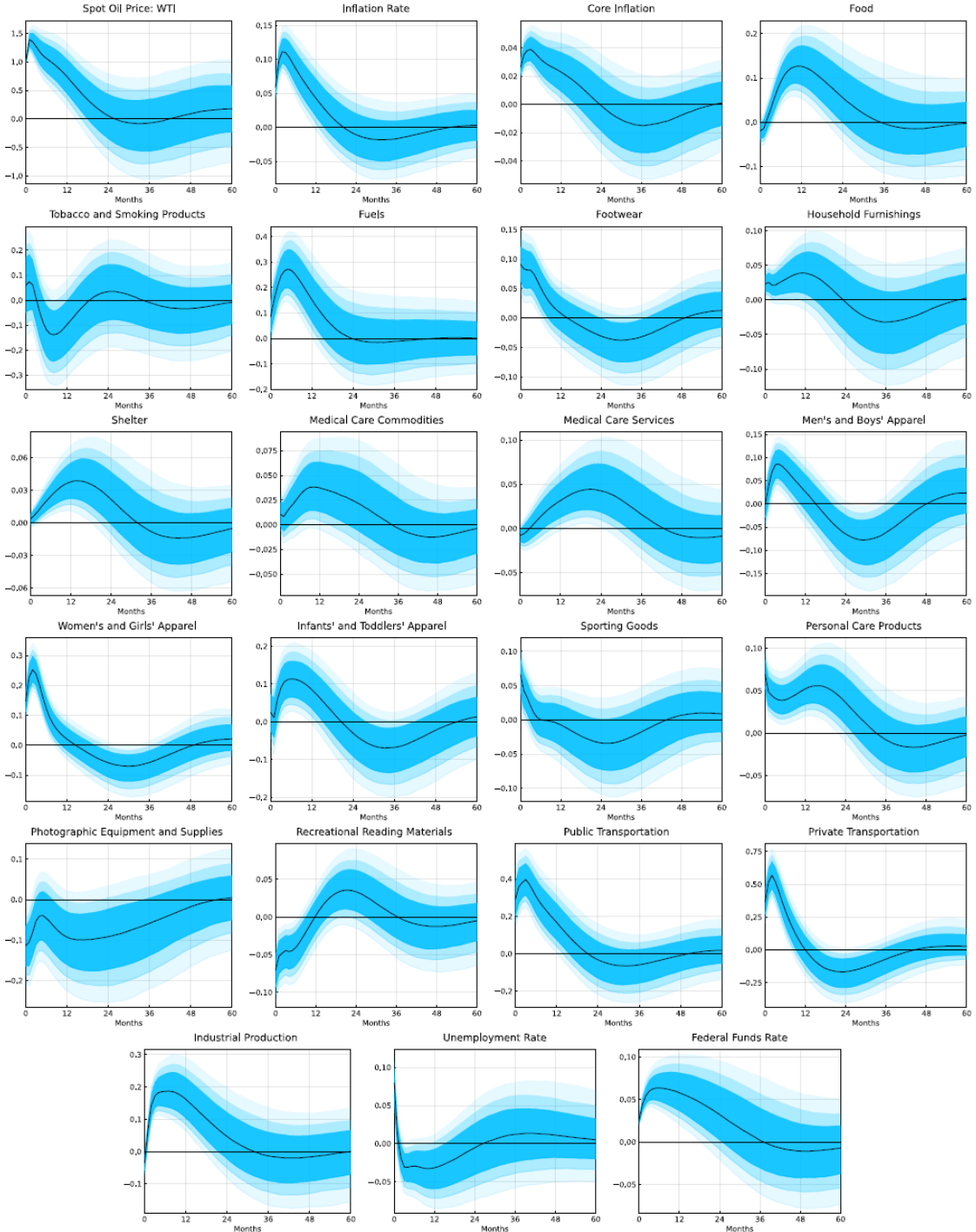


Source: Federal Reserve Bank of New York.

LARGE CHANGES IN RELATIVE PRICES (US)





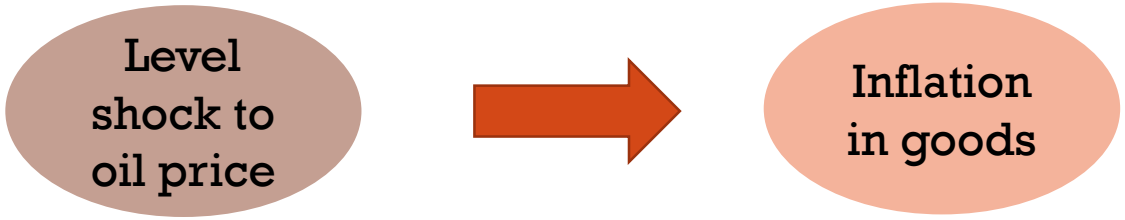


IMPULSE RESPONSES TO OIL SHOCK US (1979-2015)

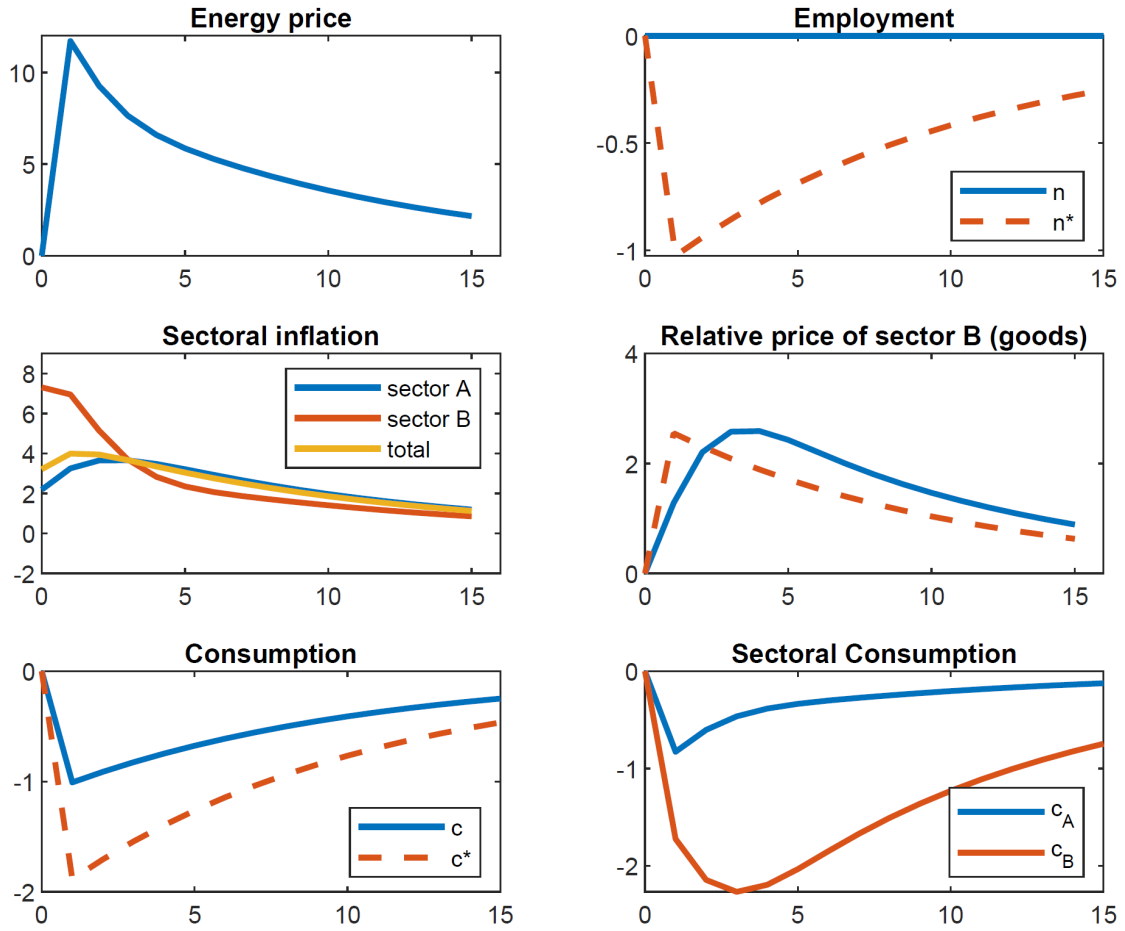
Instrument = OPEC announcements

UNEVEN SHOCKS

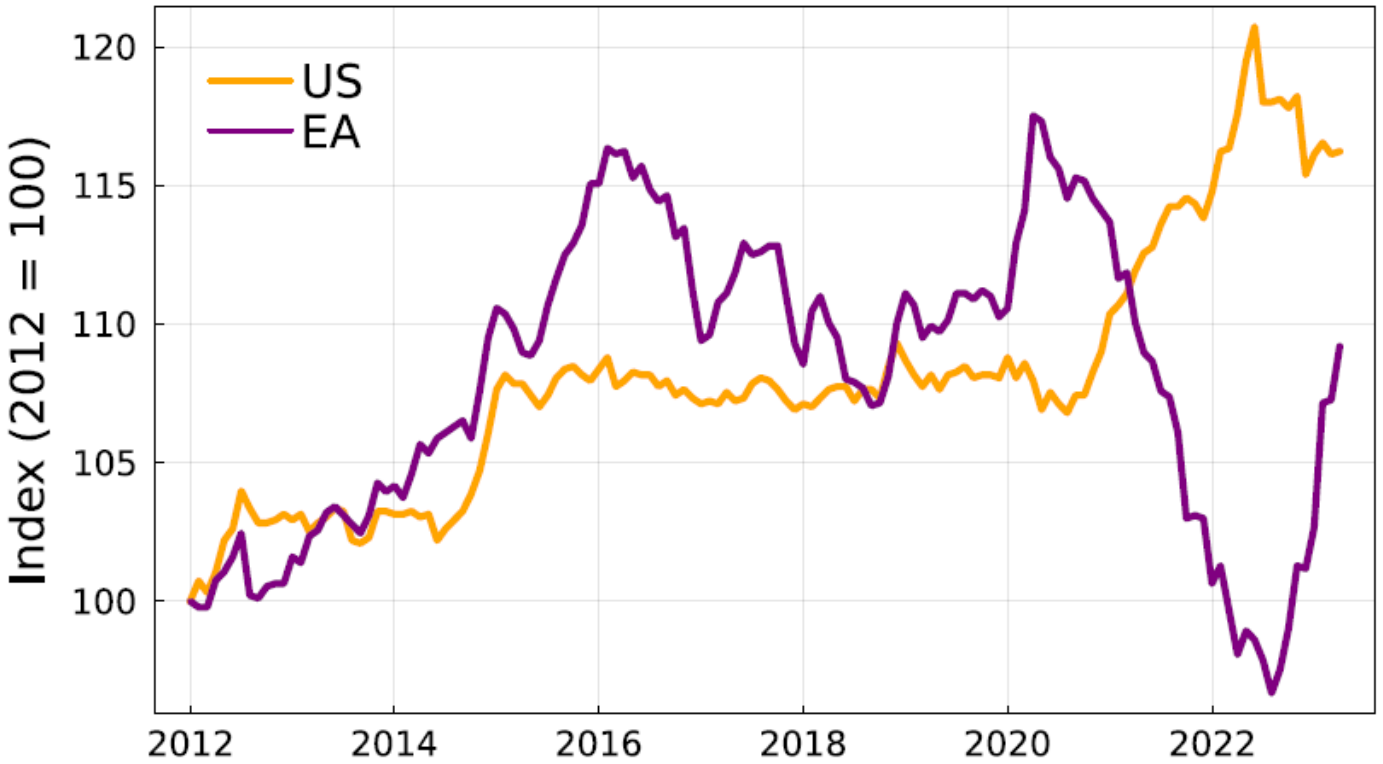
- Uneven shocks behind the recent rise in inflation: energy shocks (oil and natural gas), supply chain disruptions
- **Simple 2-sector model**: a supply shock that hits different sectors differently generates lagged waves of sectoral inflation that make aggregate inflation response persistent
- Key: the transmission mechanism depends on the input-output structure of the economy and on sectoral price stickiness
- One sector uses oil directly and responds right away
- The other sector uses oil indirectly, through intermediates, and responds with a lag



OIL PRICE SHOCK

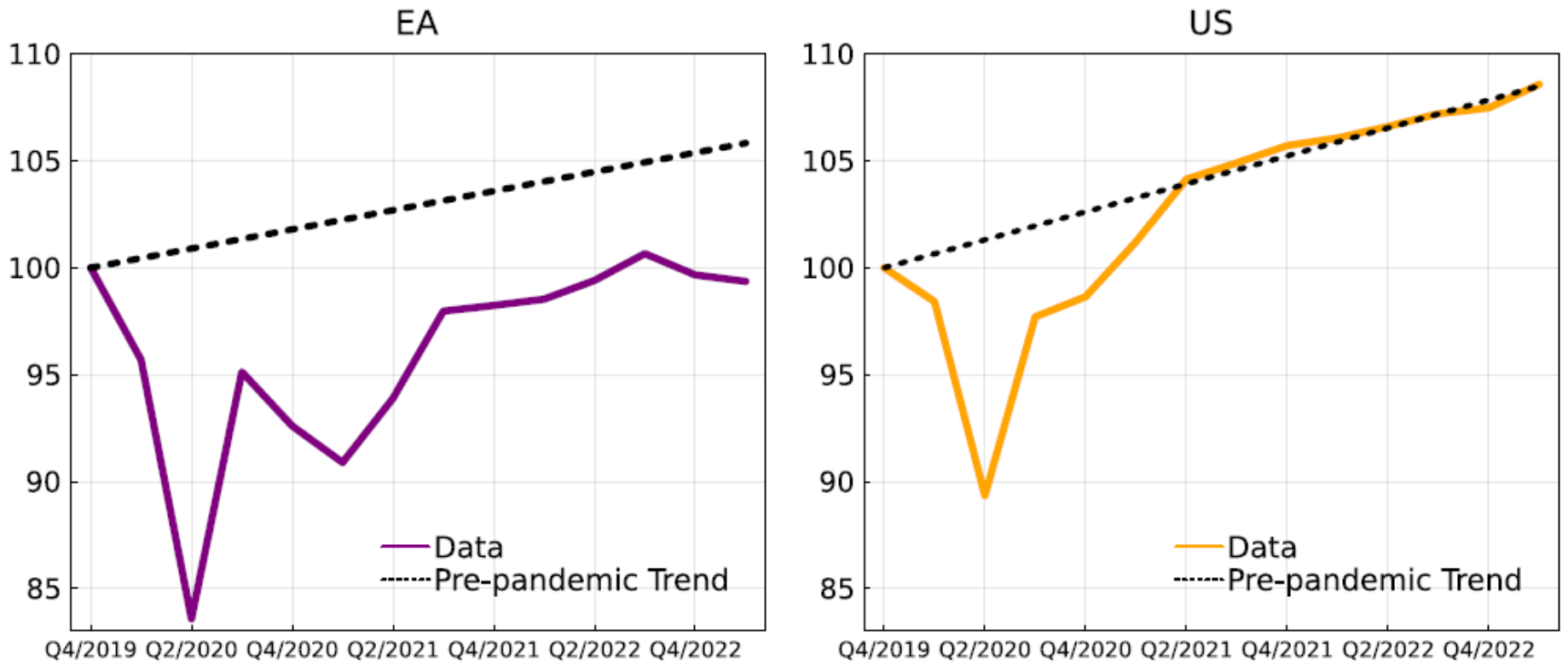


US VS EURO AREA: DIFFERENT TERMS OF TRADE



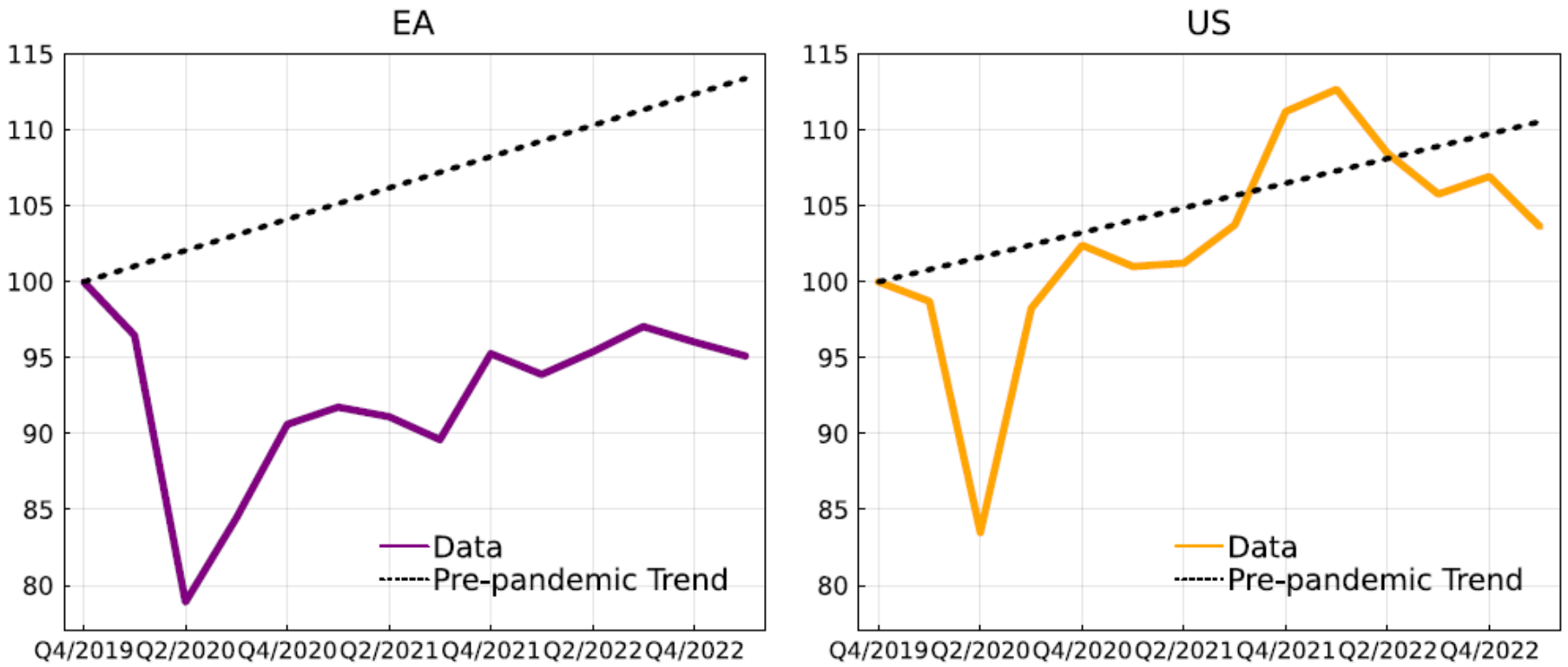
Source: Haver Analytics.

WEAKER DEMAND IN EURO AREA: CONSUMPTION



Source: Haver Analytics. The pre-pandemic linear trend is computed on the sample Q1-2015:Q4-2019.

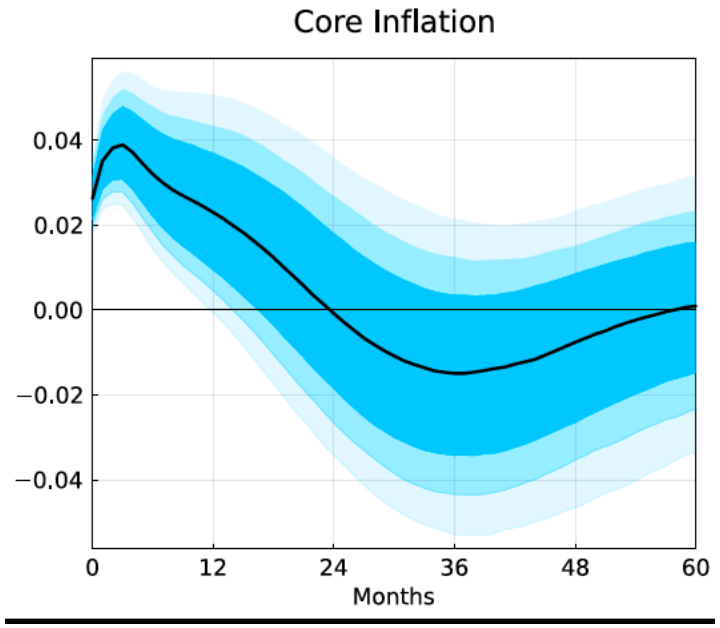
WEAKER DEMAND IN EURO AREA: INVESTMENT



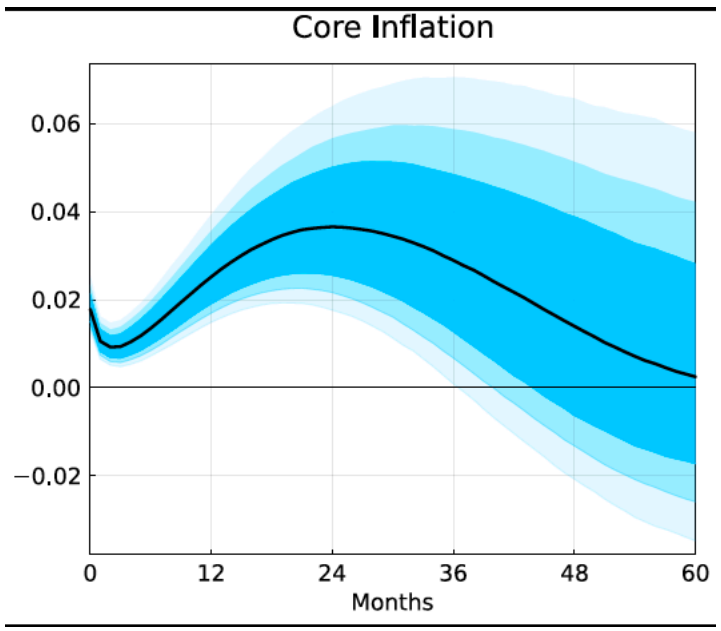
Source: Haver Analytics. The pre-pandemic linear trend is computed on the sample Q1-2015:Q4-2019.

INFLATION RESPONSE TO OIL SHOCK: US VS EURO AREA

US

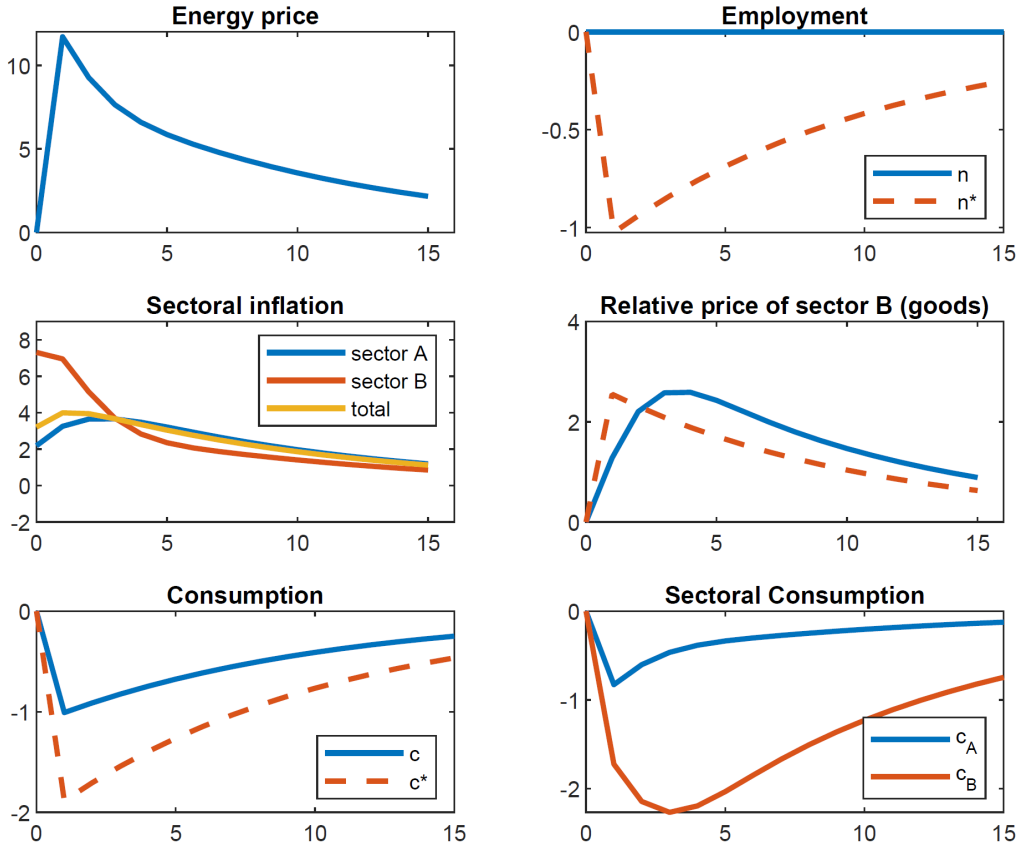


Euro Area



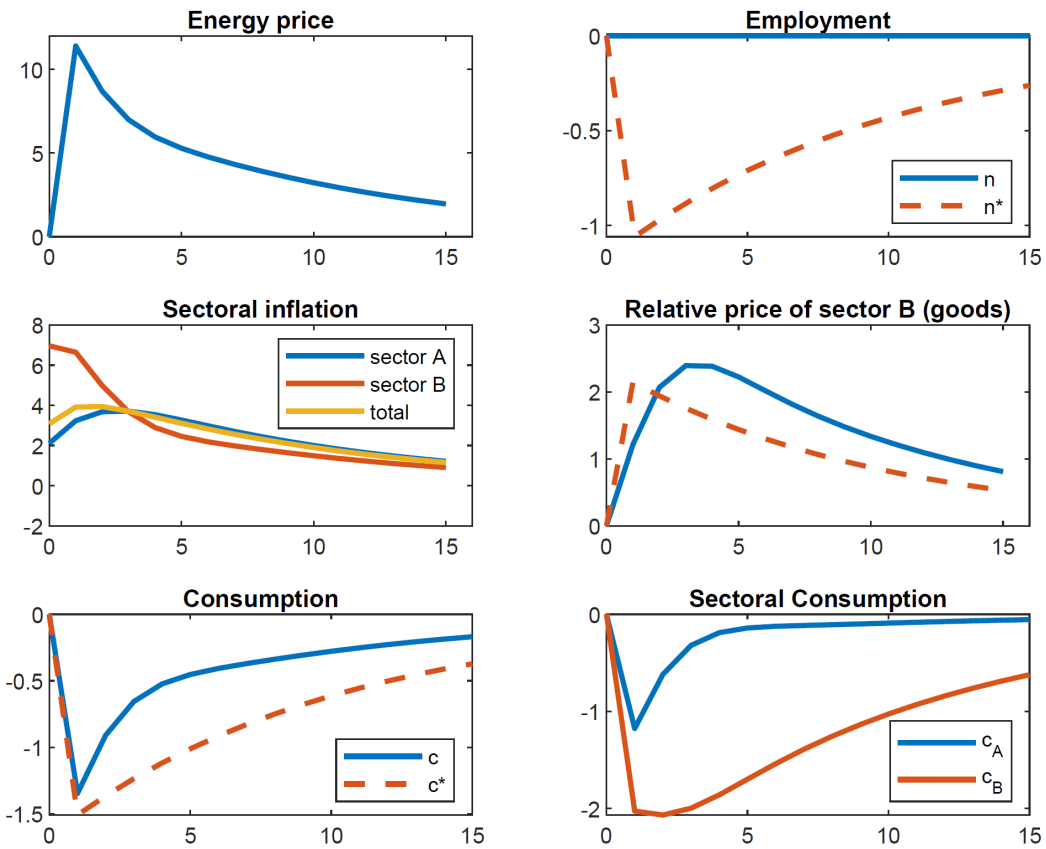
US VS EUROPE

Closed economy



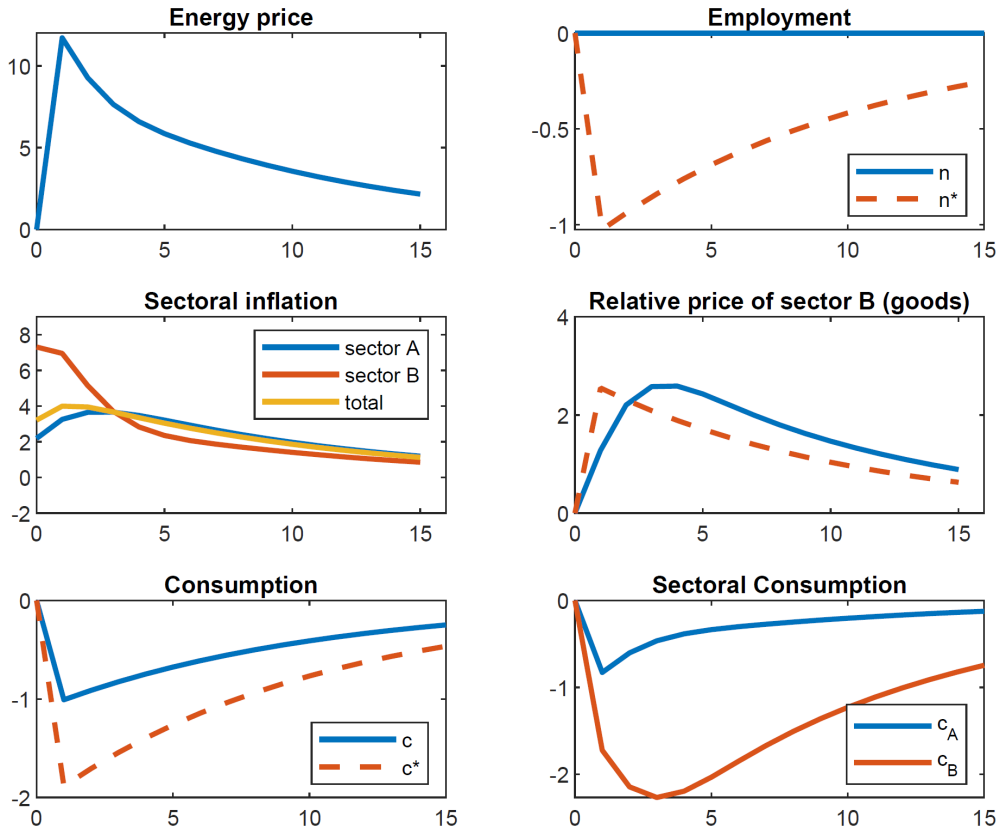
P_{Zt}

Open economy

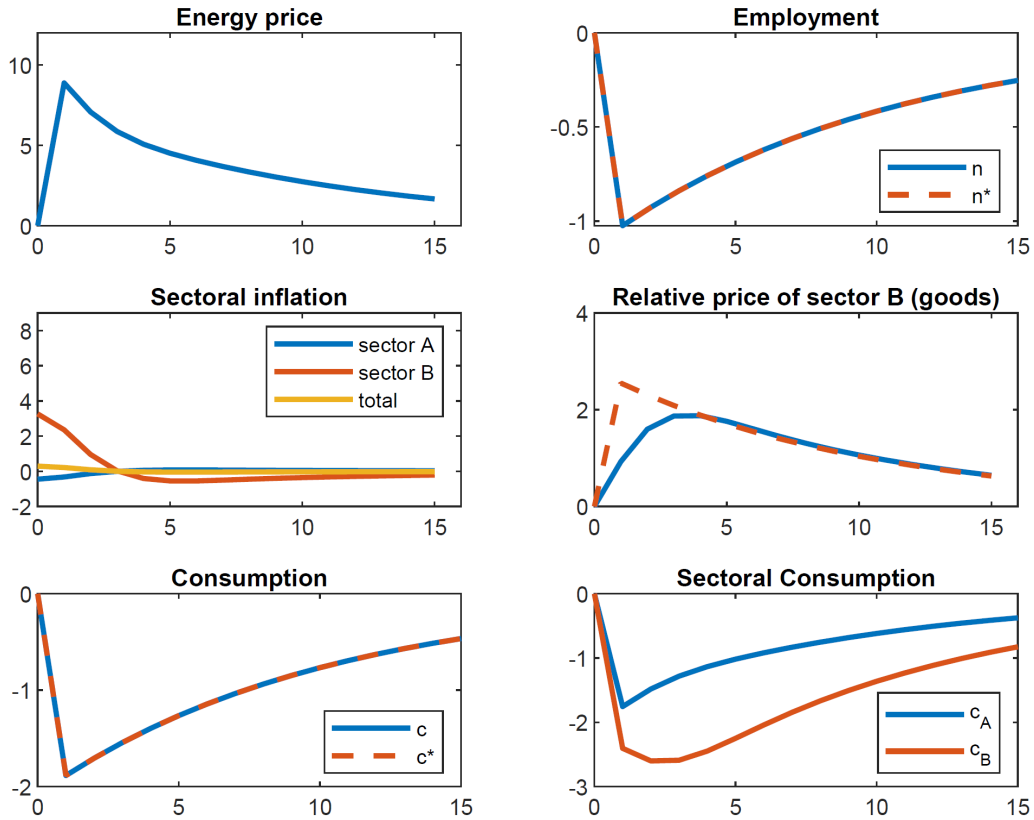


LOOSE VS TIGHT MONETARY POLICY

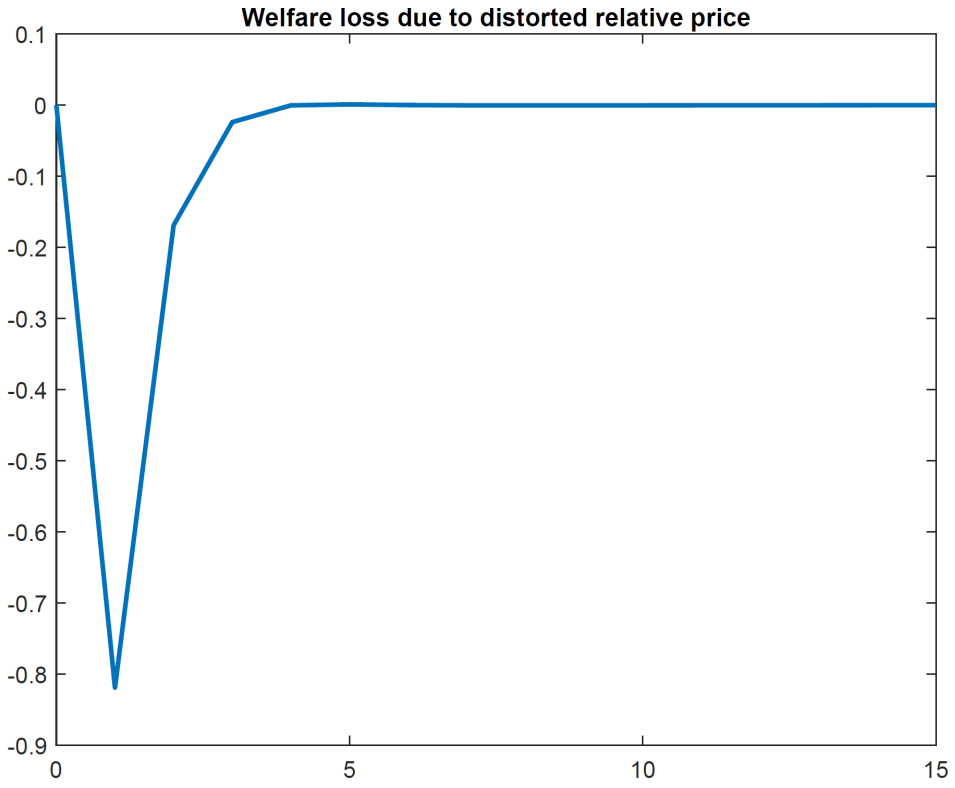
Loose monetary policy



Tight monetary policy



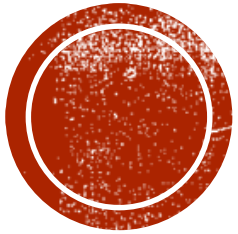
WELFARE LOSS DUE TO RELATIVE PRICES



CONCLUDING: WHERE ARE WE NOW?

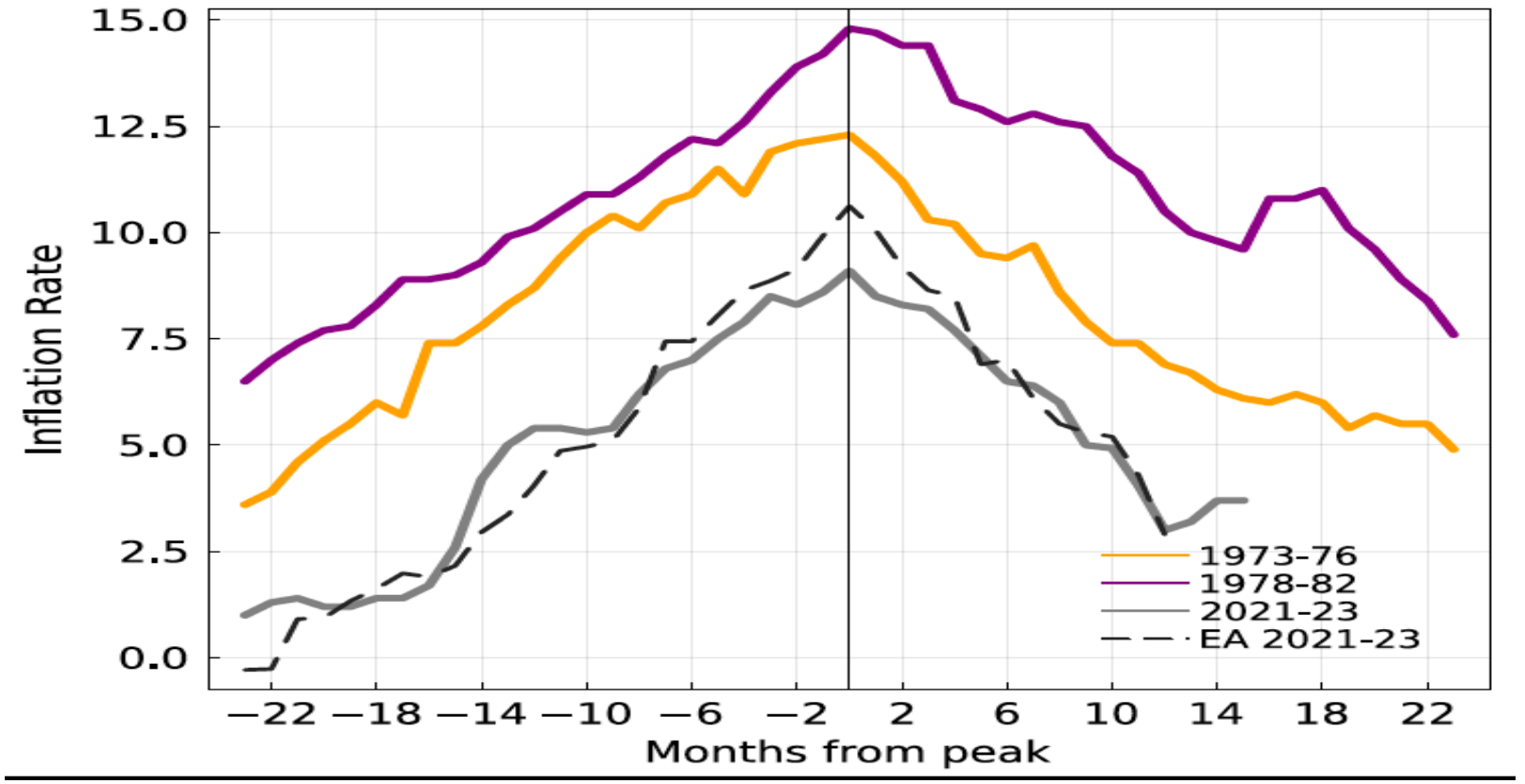
- Supply shock is unwinding, pushing down inflation and supporting activity.
  - Core following headline with some lag, as in historical data
  - Tight labor market but no wage-price spiral
  - Inflation expectations remain stable

- Monetary policy will have an increasing impact on the economy as positive impulse from supply shock unwinds.
  - For the Fed and for markets, "high for longer" already morphed into "not so high and not for longer". ECB?



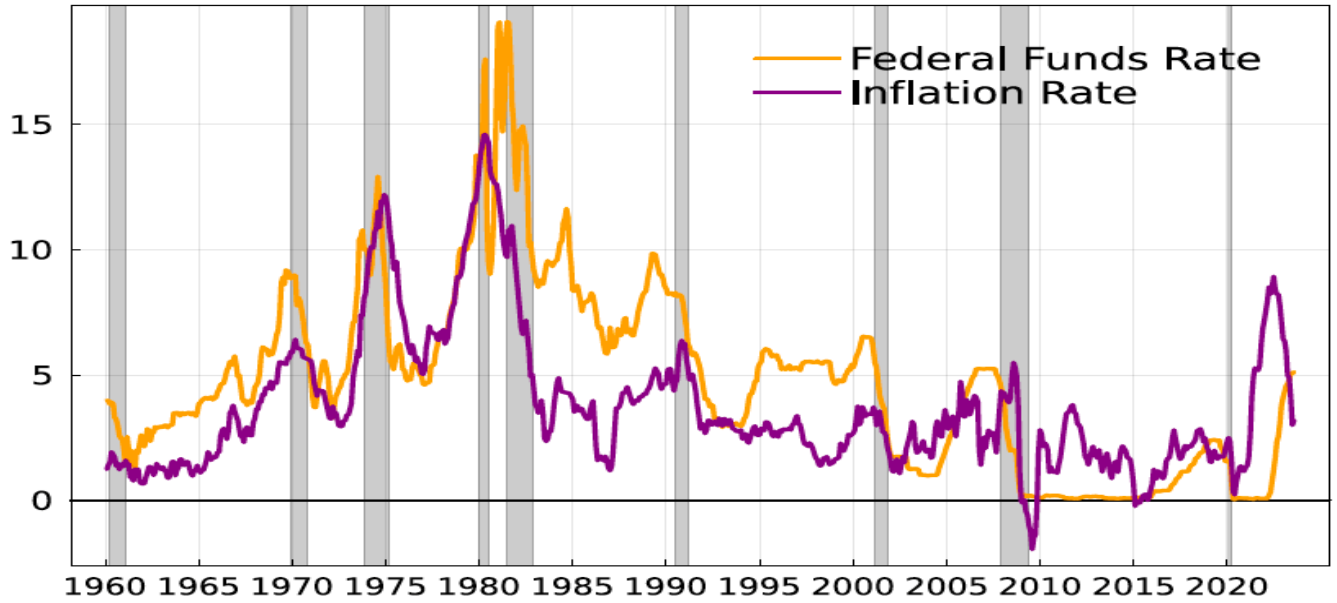
BACKUP SLIDES

BUT DISINFLATION HAS NEVER BEEN SO RAPID: COMPARING 4 EPISODES IN THE US



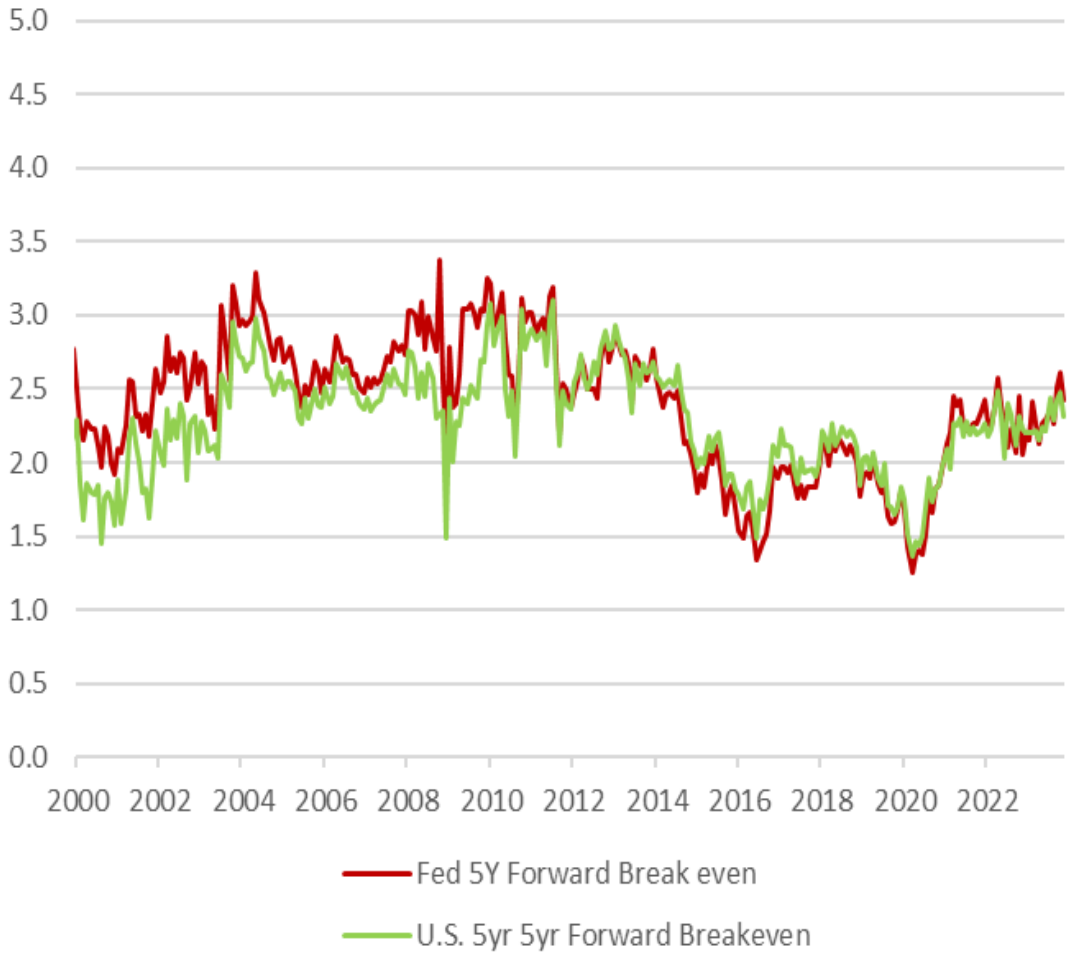
VOLCKER'S DISINFLATION KEPT INFLATION BETWEEN 3.5 AND 4 FOR 10 YEARS

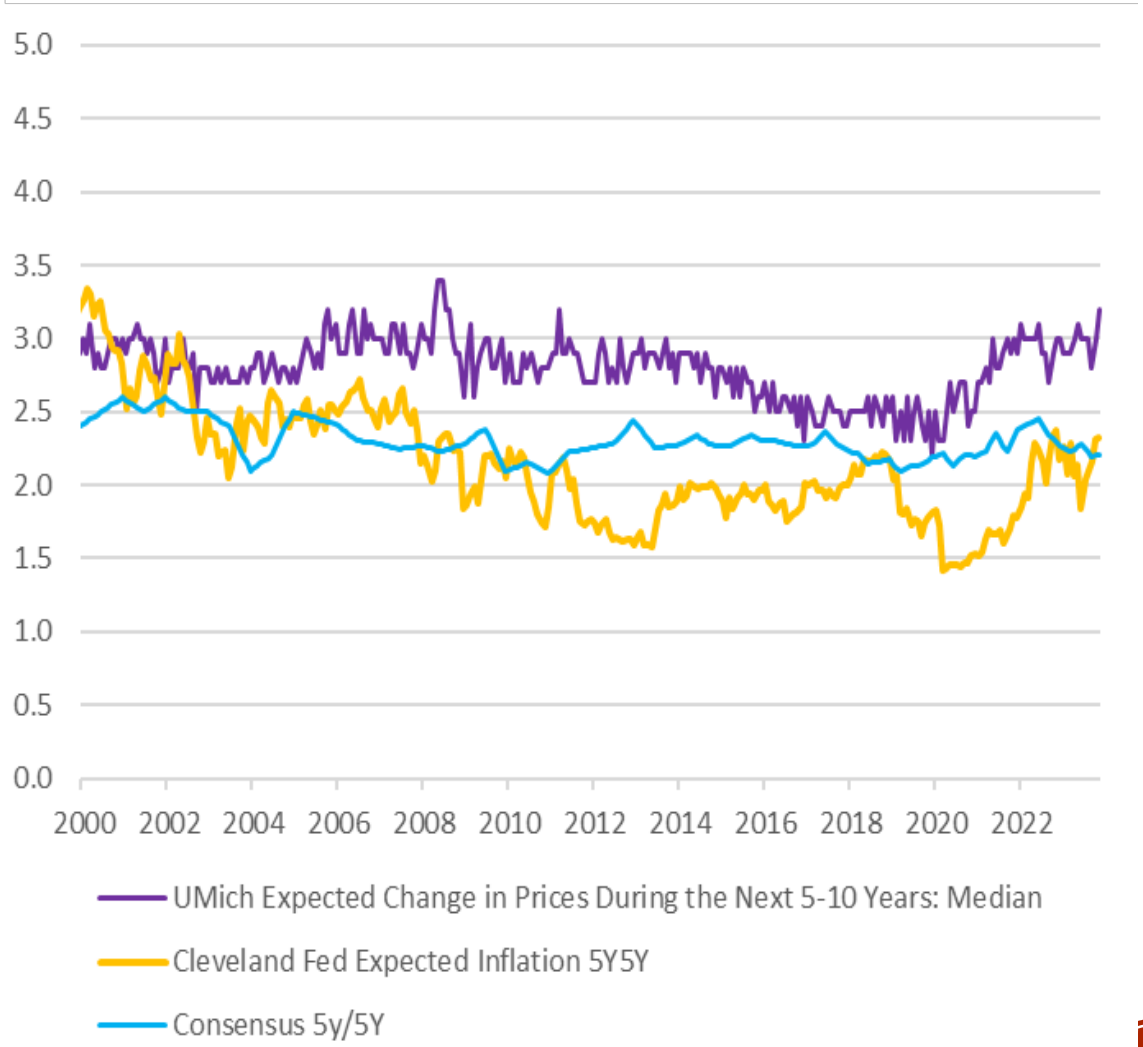
Figure 37: Federal Funds Rate and Inflation Rate - 1960:2023



Source: Haver Analytics

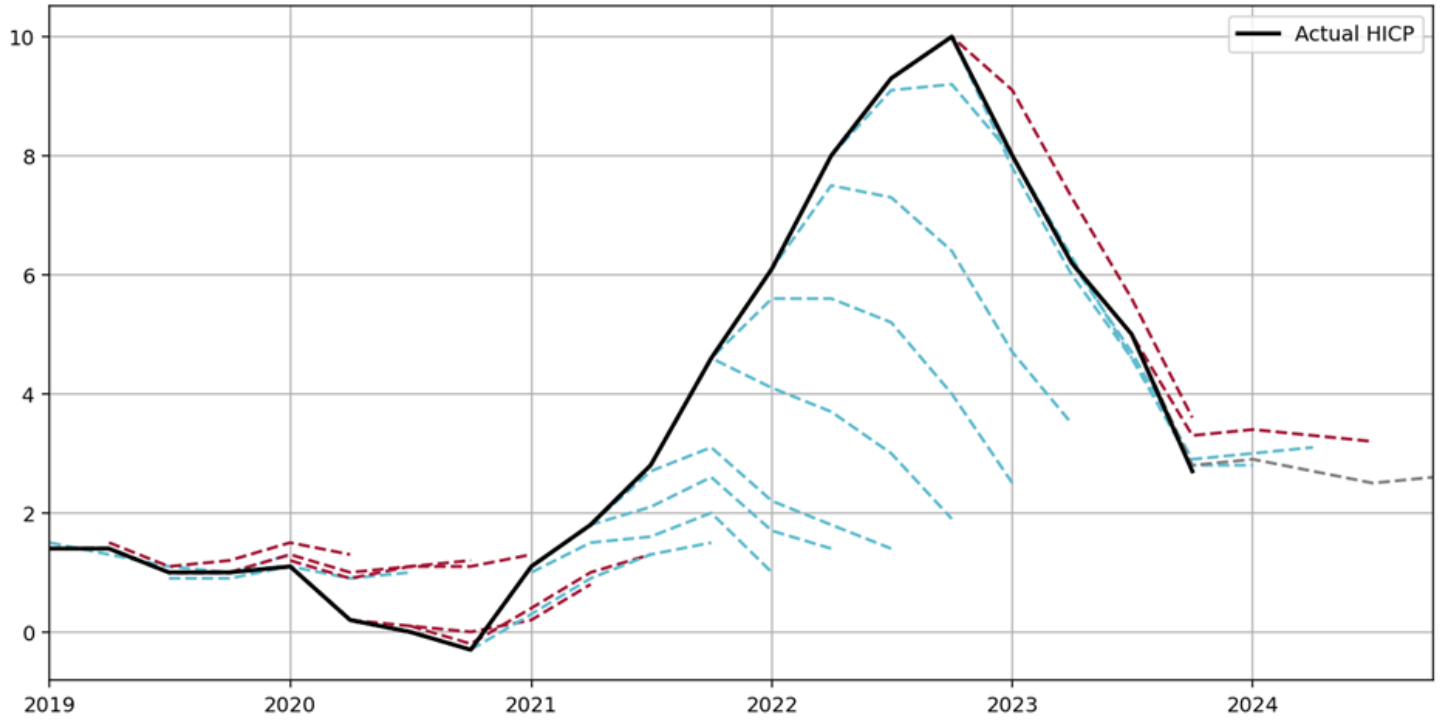
INFLATION EXPECTATIONS – A MEDIUM-TERM LOOK AT THE US





Source: Bloomberg

ECB INFLATION PROJECTION



SECTORAL PHILLIPS CURVES

- Sectoral Phillips curve:

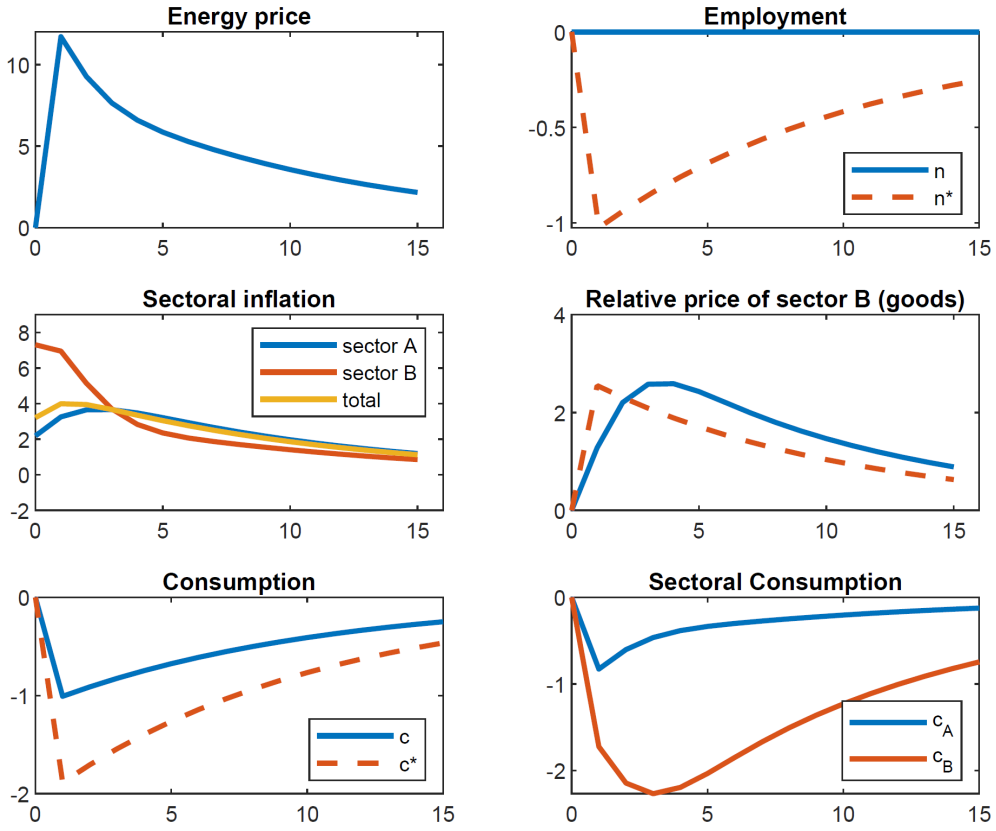
$$\pi_{st} = \rho\pi_{st-1} + \lambda_s(mc_{st} - p_{st}) + (1-\rho)\beta\pi_{st+1}$$

- ρ = inertia parameter (can be microfunded introducing a form of indexation)
- λ_s= degree of price stickiness in the sector
- mc_{st}= marginal cost in the sector

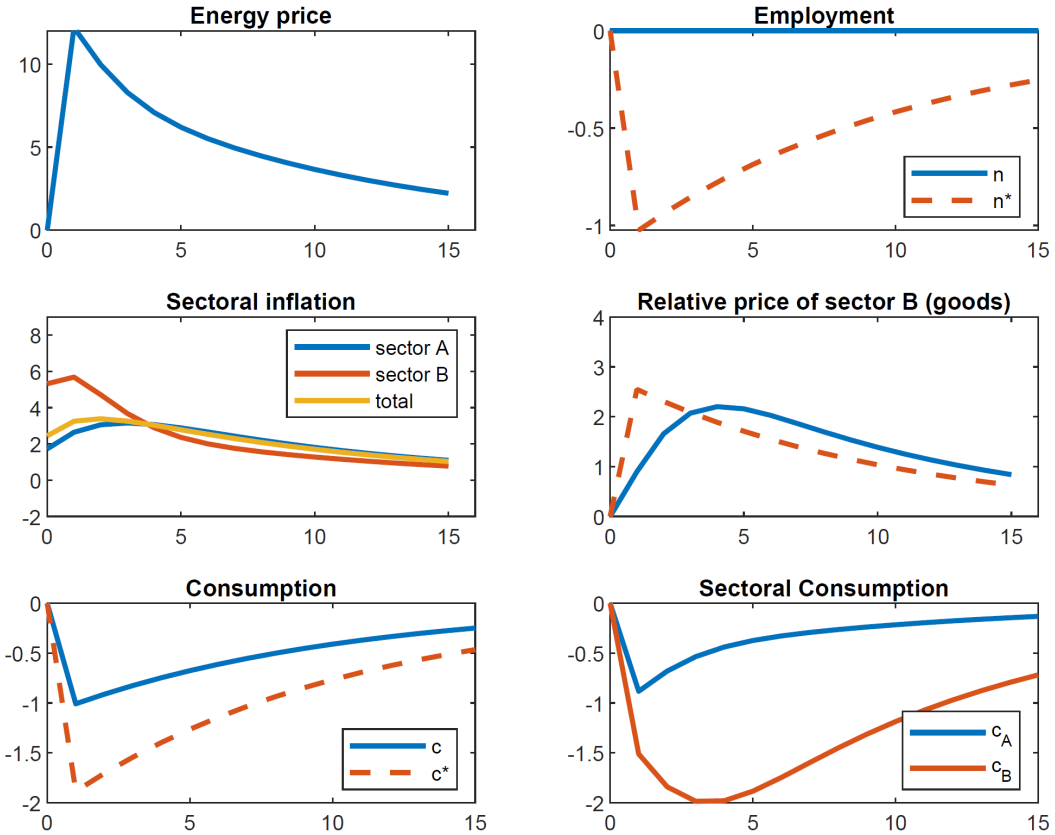
$$mc_{At} = \alpha_A w_t + (1-\alpha_A)p_{Bt} \text{ and } mc_{Bt} = \alpha_B w_t + (1-\alpha_B)p_{Zt}$$

CHANGING PRICE STICKINESS

US (less sticky)

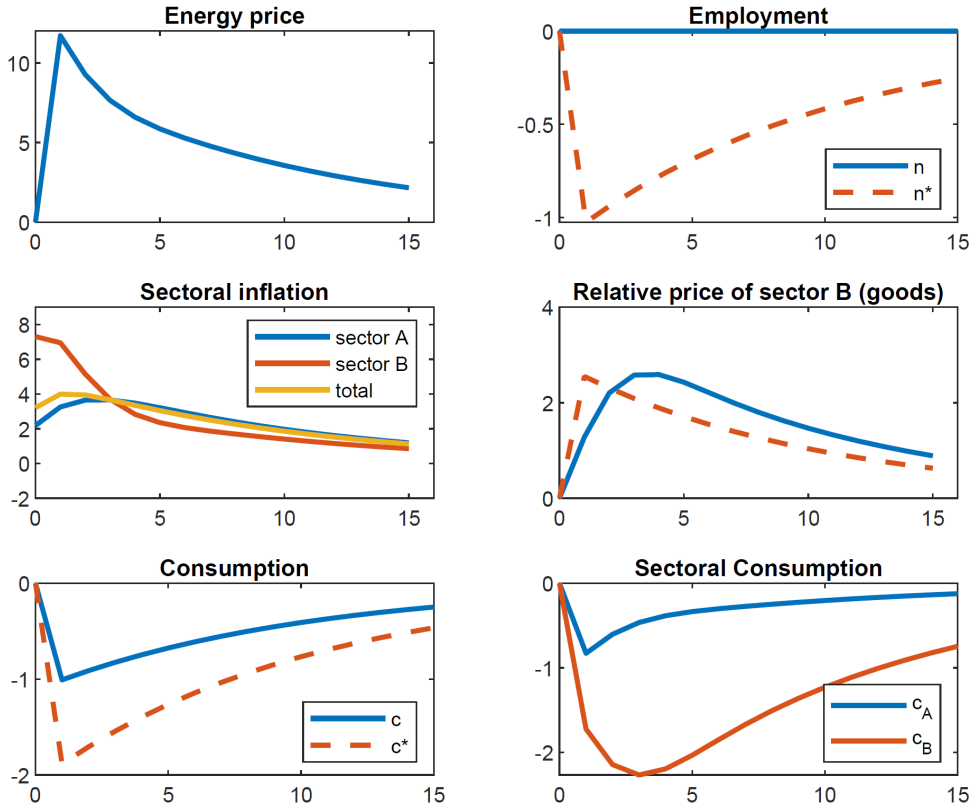


EA (more sticky)



OIL SHOCK VS MONETARY POLICY SHOCK

Oil shock



Monetary policy shock