INFLATION: WHAT HAPPENED AND WHAT IS TO COME?

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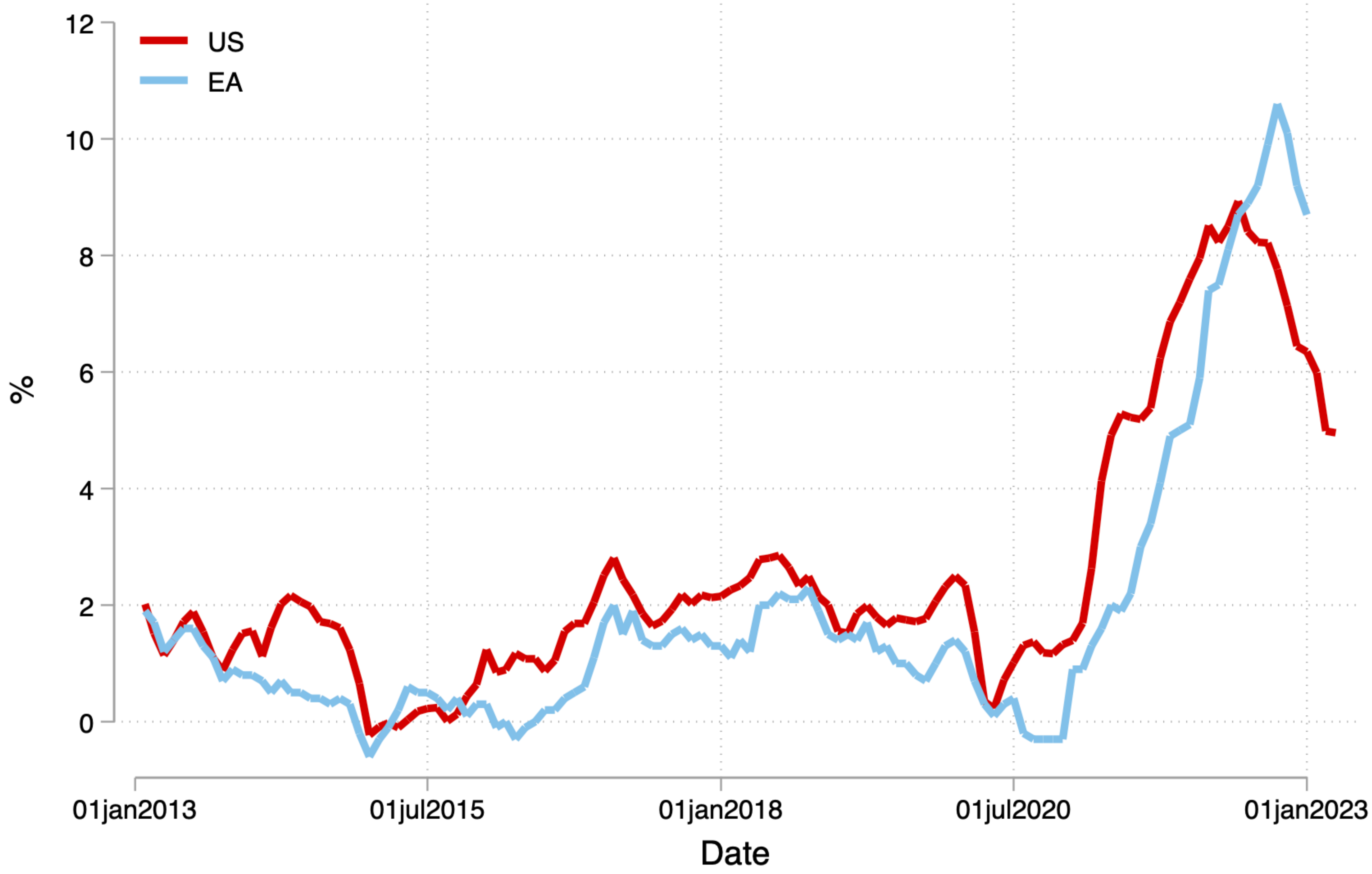
Why is inflation out of control?

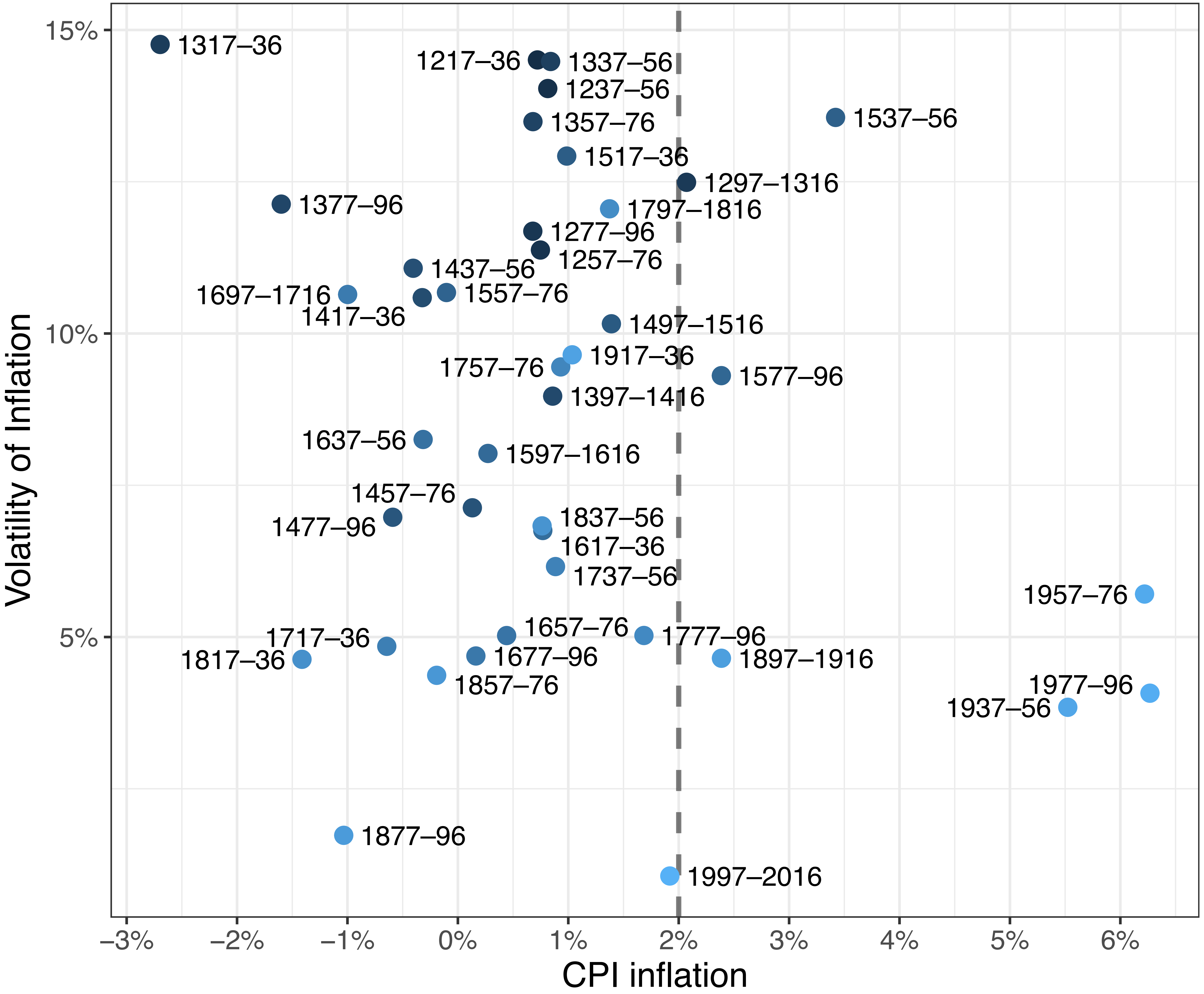


- ECB predicts inflation will be back at 2% only in 2025 Q3, which is 4 years since it was last at or below 2%

- Fall in last few months is entirely driven by energy prices, non-energy inflation at 4-5%

Source:: FRED, CPI and HICP, 12-month changes, not seasonally adjusted

The context: 30+ years of price stability



Three pillars of this success

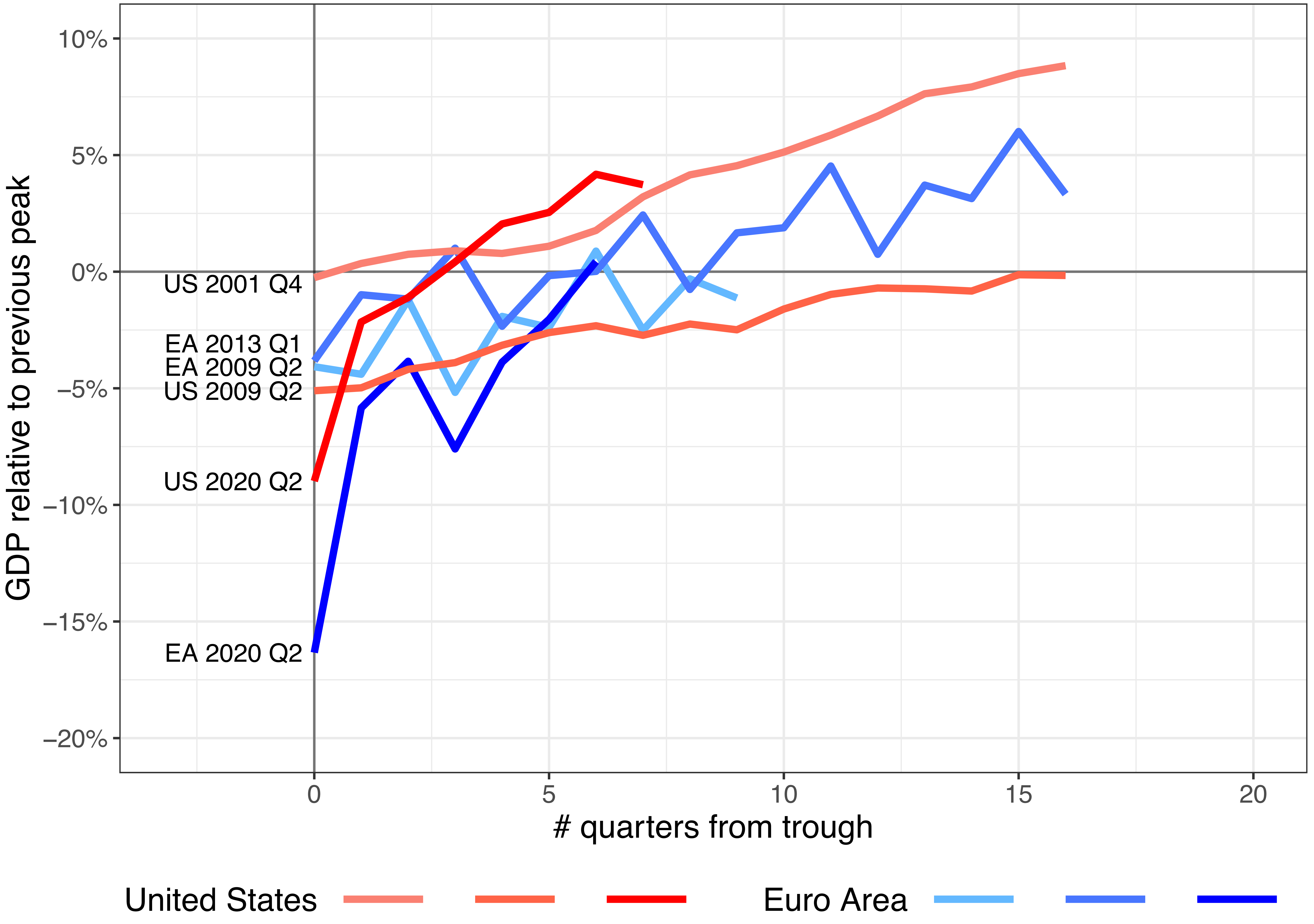
- Central bank independence
- Inflation targeting
- Primacy of the short-term interest rate as the policy tool, set in transparent and predictable way

Source:: Reis (2022) "The Burst of High Inflation in 2021-22: How and Why Did We Get Here?"

How did we get here?

The shocks of 2021: excess demand

Inflation = expected inflation + excess demand + supply shocks



Source:: Reis (2022) "The Burst of High Inflation in 2021-22: How and Why Did We Get Here?"

The shocks of 2021: supply bottlenecks

Inflation = expected inflation + excess demand + supply shocks

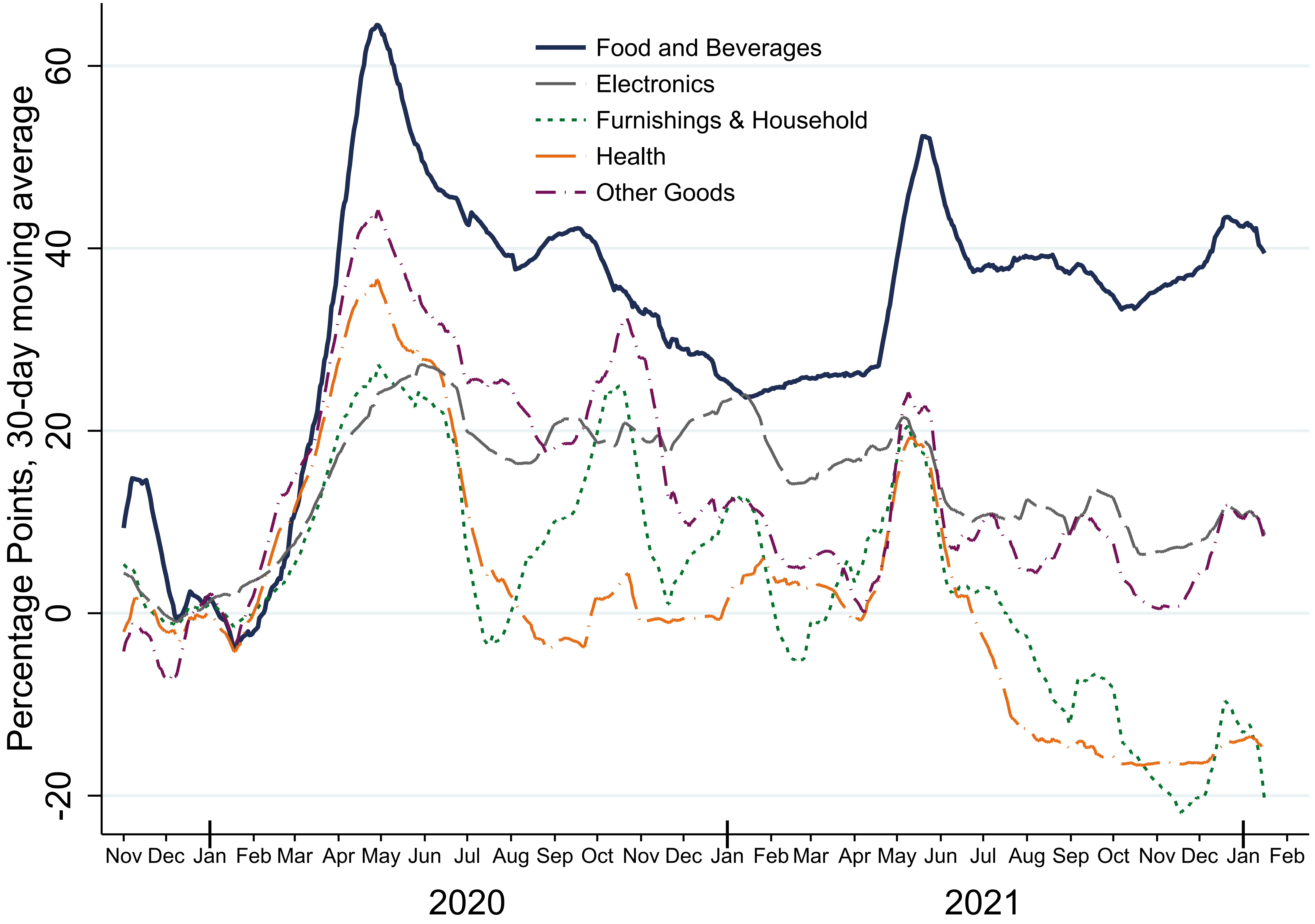
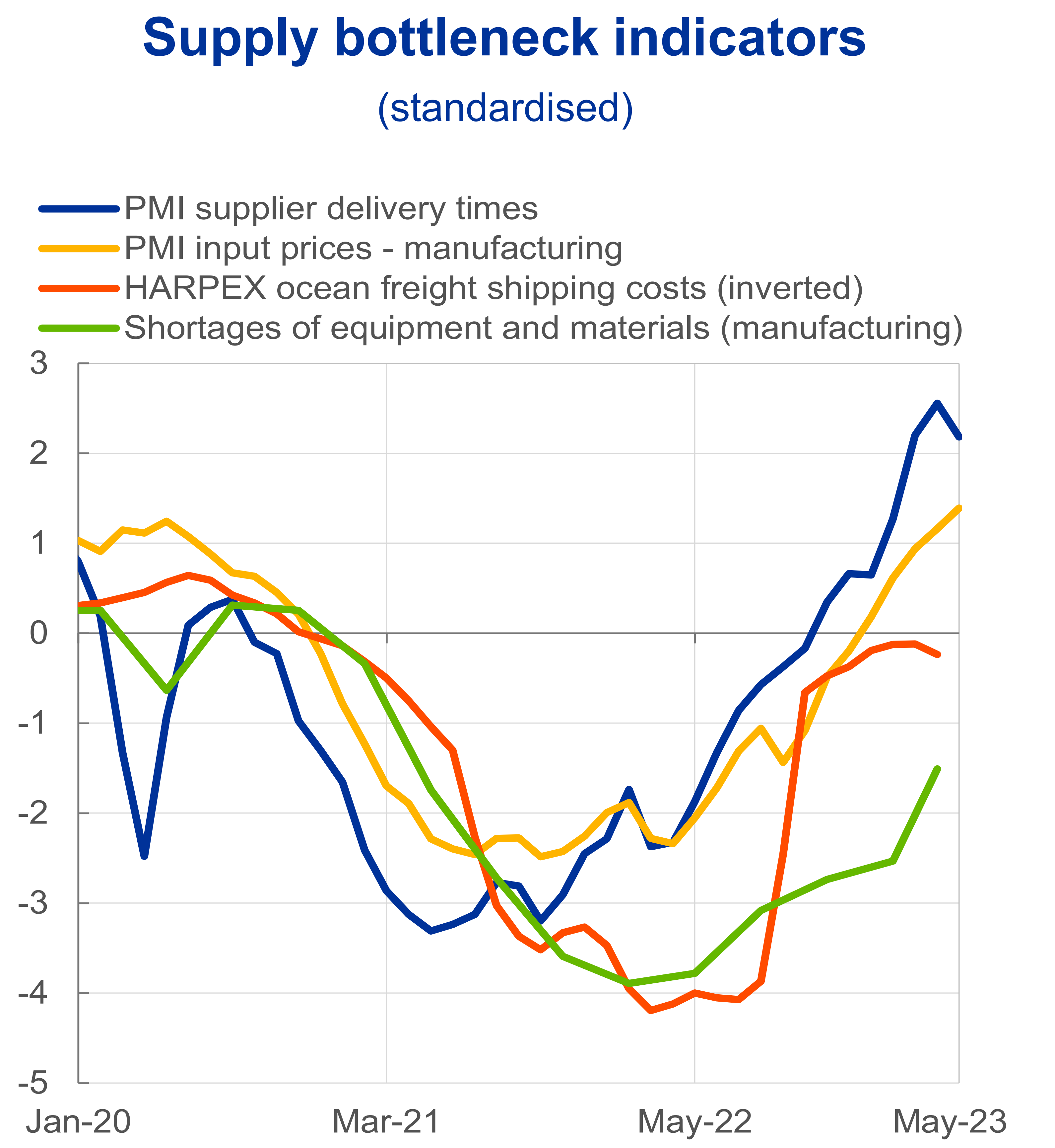


Figure 3: All Stockouts in U.S. Sectors

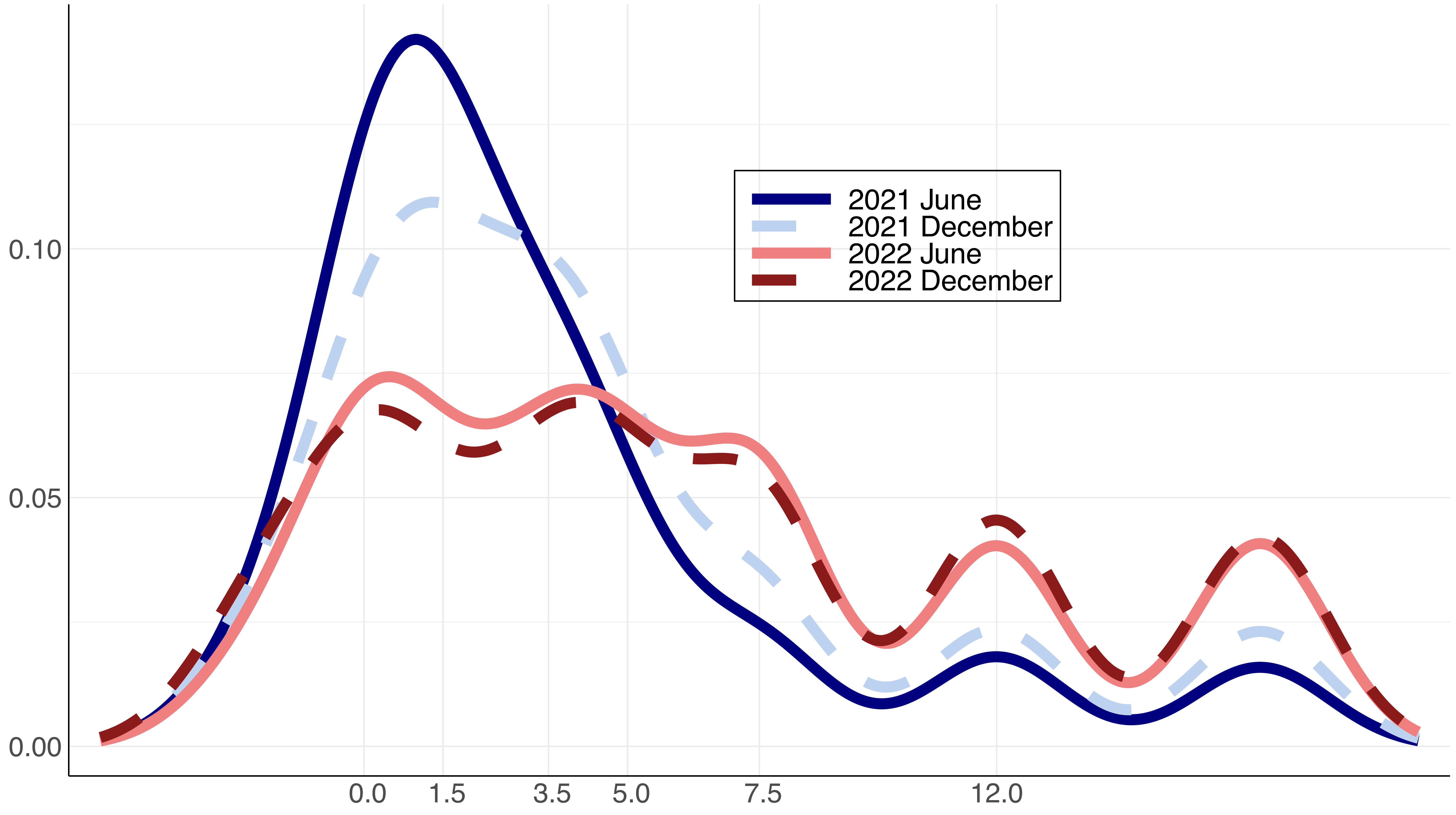


Sources: Eurostat, S&P global, DG-ECFIN and ECB calculations.
Notes: The series is standardised over the period 2000-23. The latest observations are for the second quarter of 2023 (survey conducted in April) for European Commission equipment shortages, May 2023 for PMI supplier delivery times and PMI input prices - manufacturing, and April 2023 for HARPEX ocean freight shipping costs.

Sources: Cavallo Krystov (2022), and Lane speech (2003/05)

The shocks of 2021: expectations

Inflation = <u>expected inflation</u> + excess demand + supply shocks



How survey expectations tend to shift:

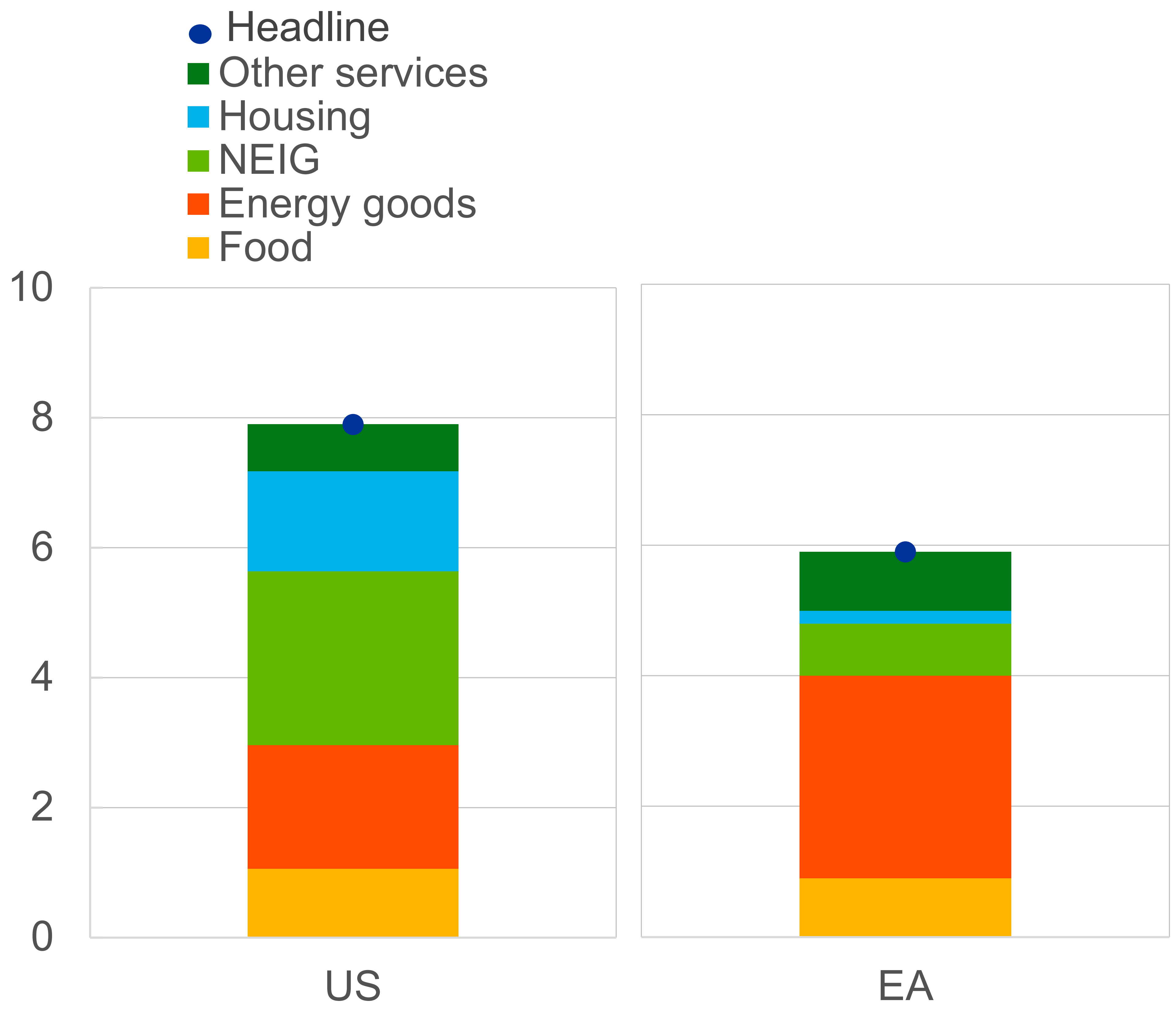
- First get skewness
- Then get variance
- Then both decline, and the mean has definitely shifted

Source:: Reis (2022) "What can keep euro area inflation high? An update, six months later"

The shocks of early 2022: energy

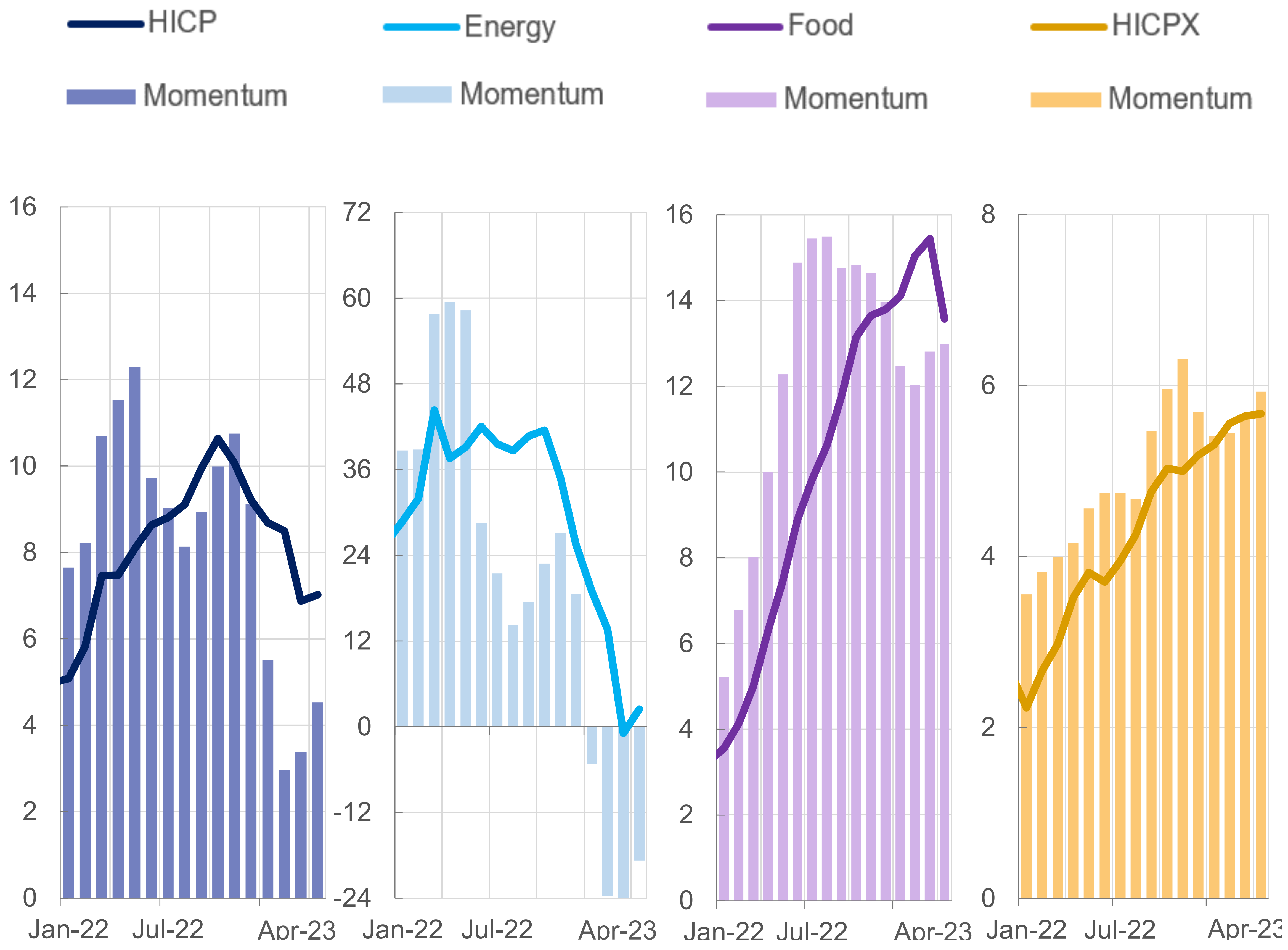
Inflation = <u>expected inflation</u> + excess demand + <u>supply shocks</u>

Inflation drivers in February 2022
(annual percentage changes, percentage point contributions)



Source: Haver DLX and Eurostat.

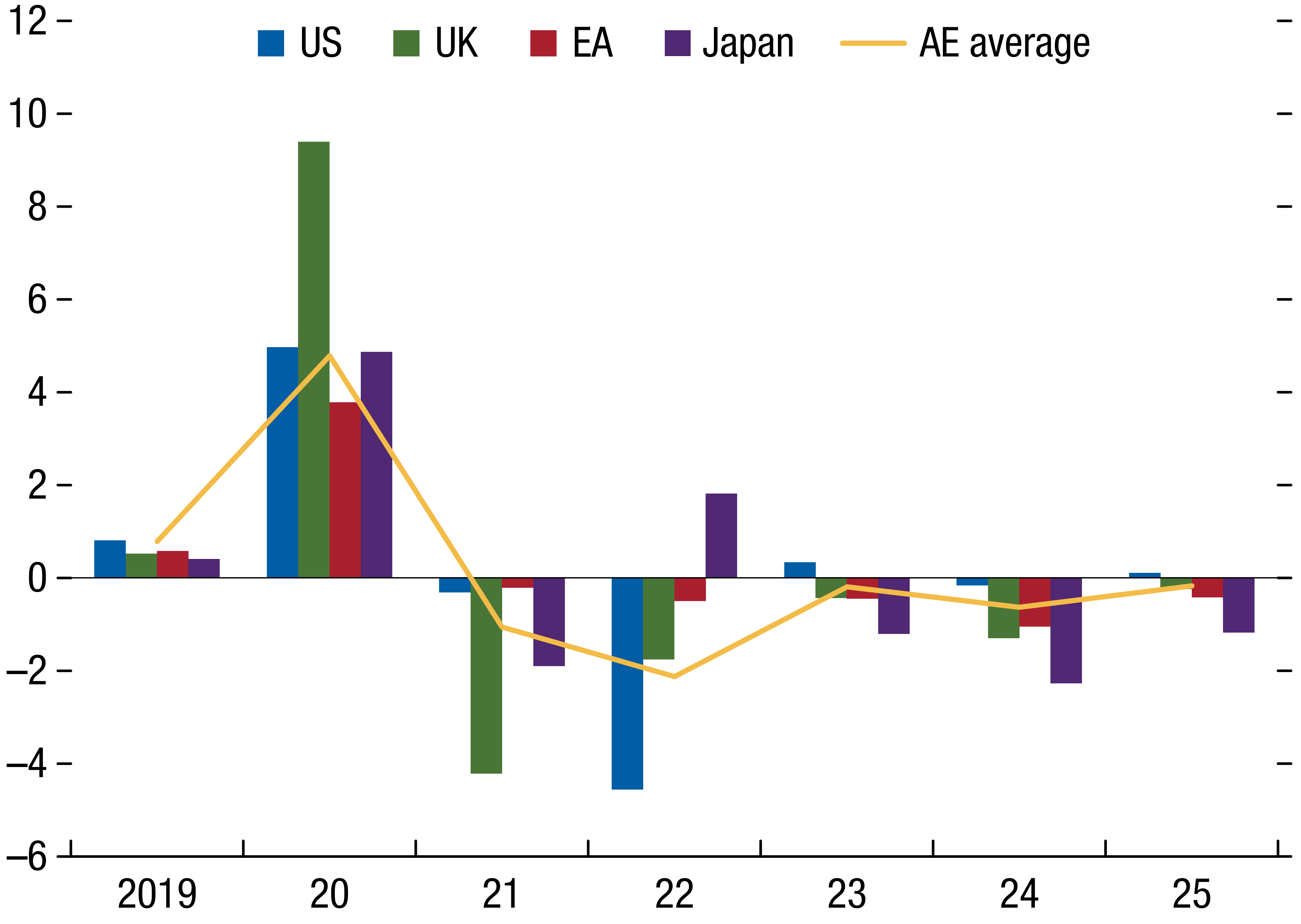
Inflation momentum for HICP and sub
(annual percentage changes; annualised 3-month-on-3-mont



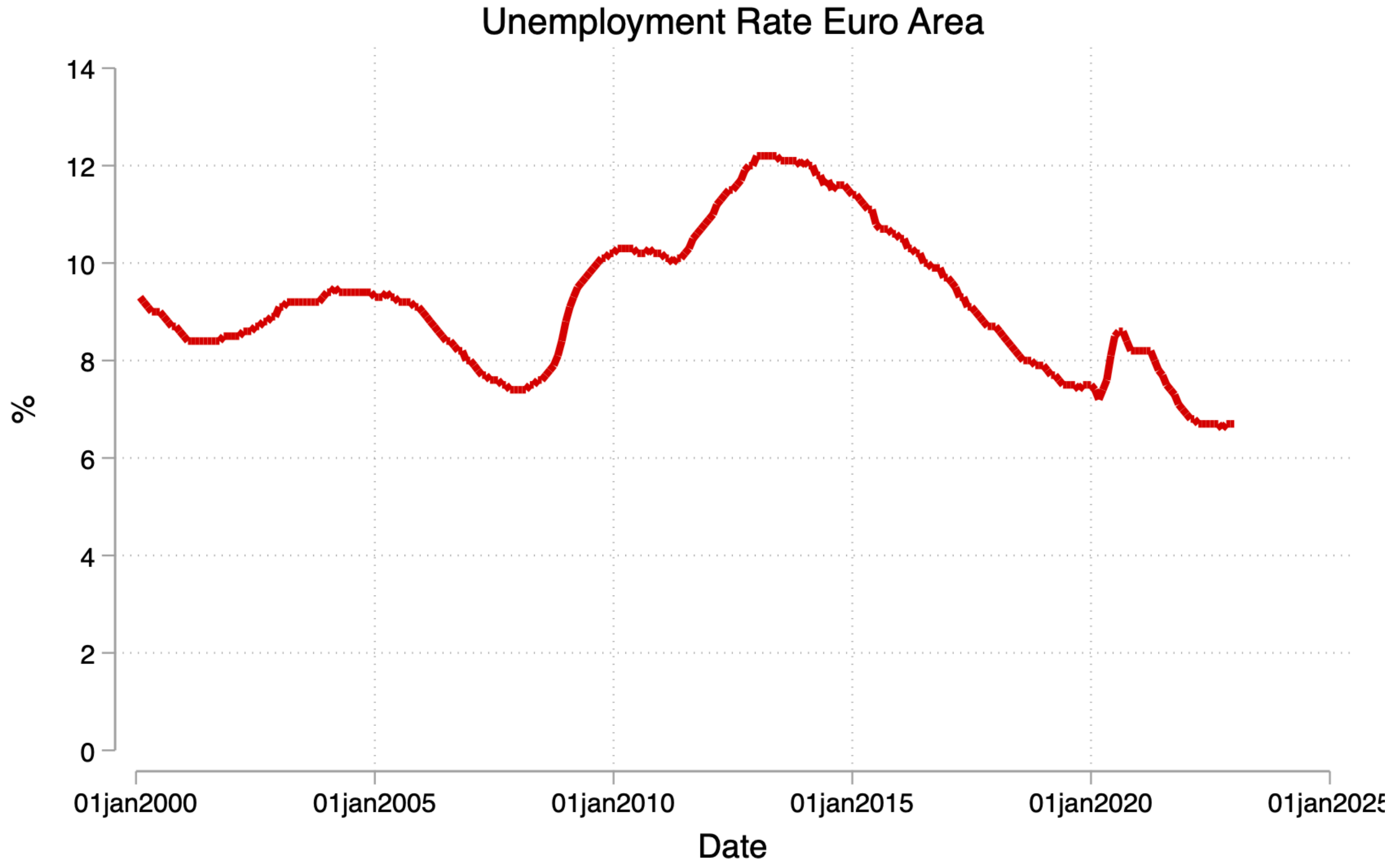
Sources: Schanbel (2022 speech), and Lane 2023/05 speech

The policies of 2021-2023: large stimulus

Figure 1.6. Fiscal Impulse: Advanced Economies
(Percentage points)

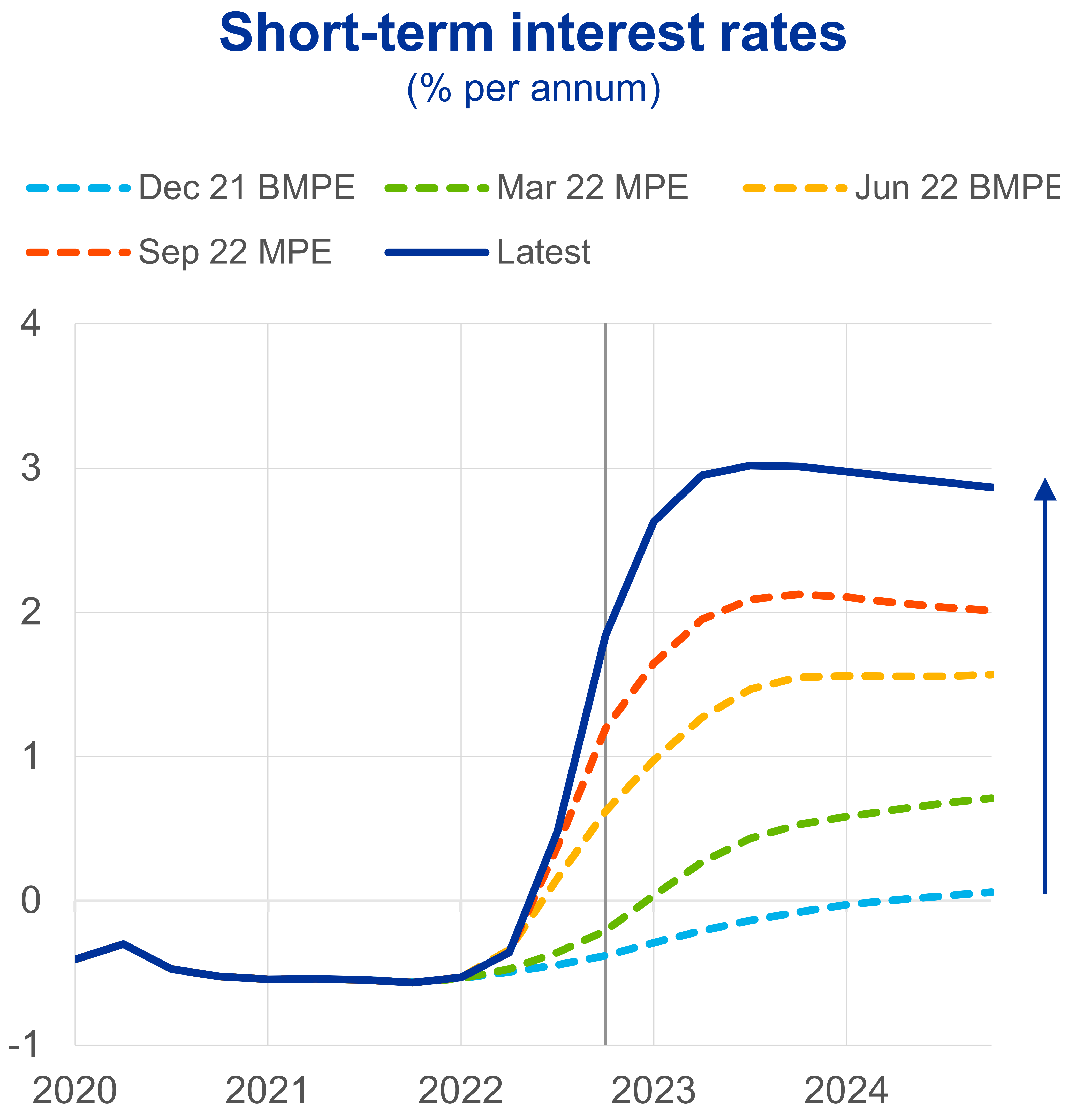


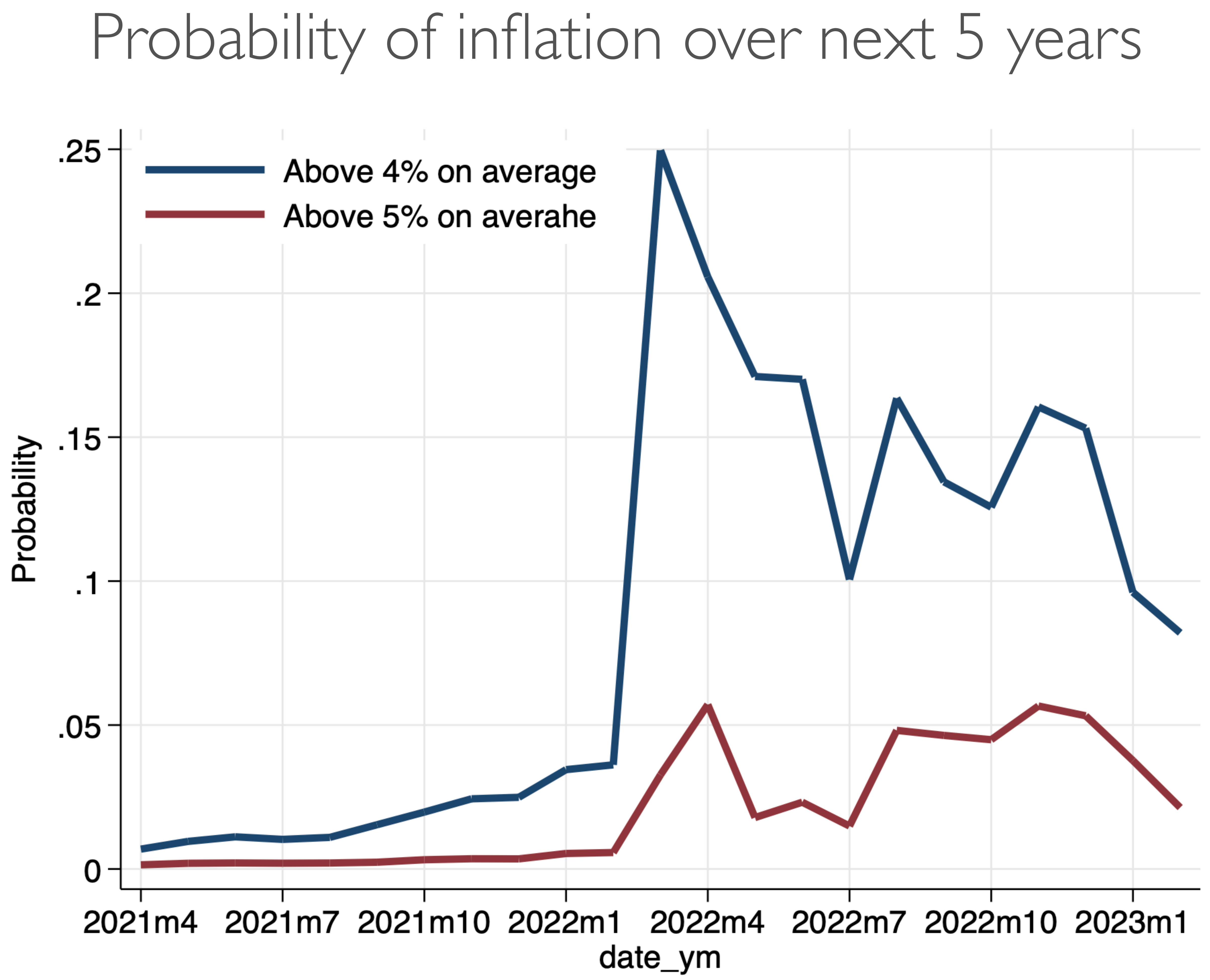
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
Note: The fiscal impulse is calculated as the annual change in the cyclically adjusted primary balance, multiplied by –1. A positive (negative) fiscal impulse implies an expansionary (contractionary) fiscal stance. Advanced economy (AE) averages are weighted by purchasing-power-parity-adjusted nominal GDP in US dollars. EA = euro area; UK = United Kingdom; US = United States.



Sources: IMF Fiscal Monitor April 2023; and Eurostat unemployment rate

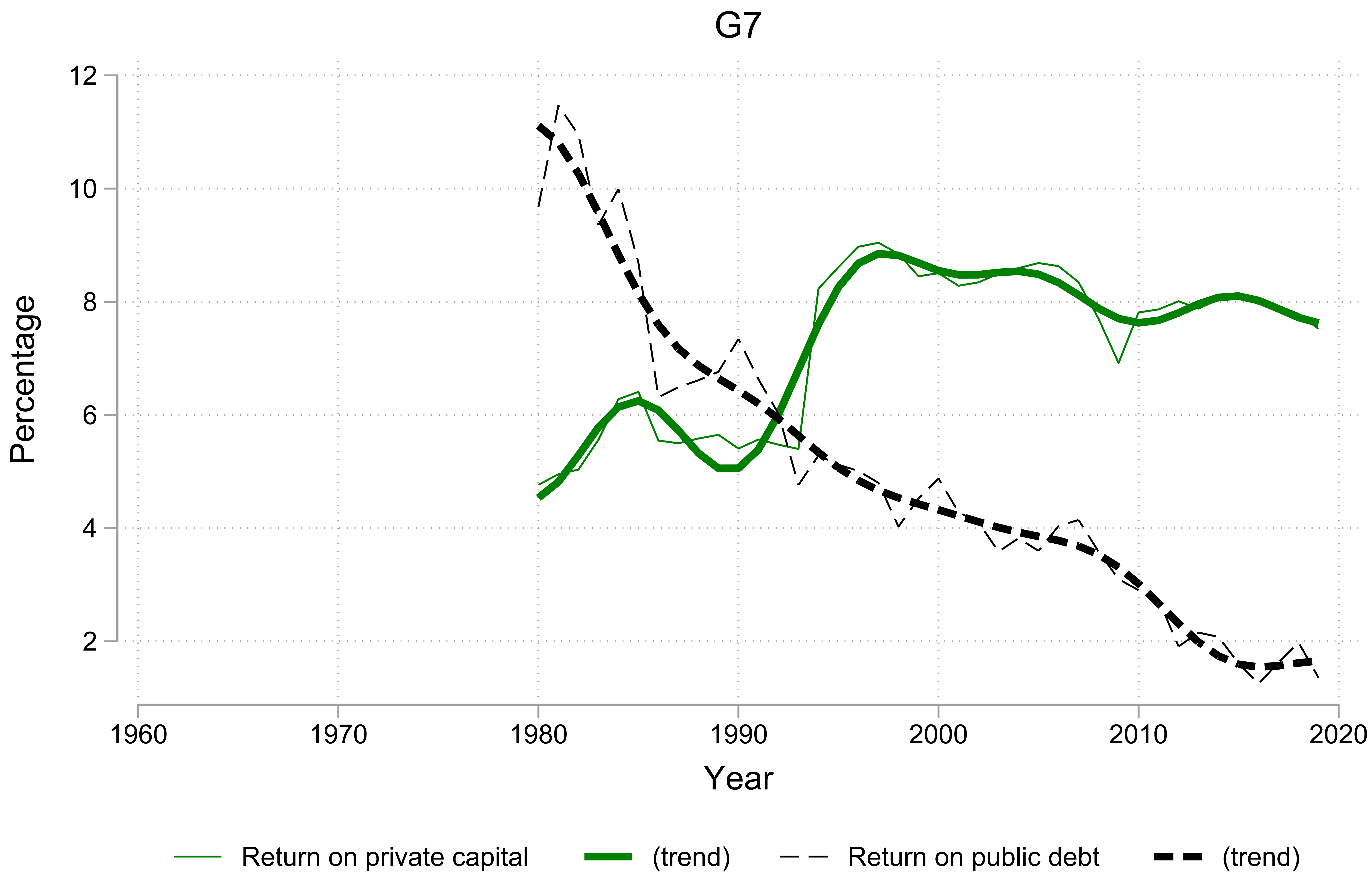
The policies of 2021-2022: loose monetary





Sources: Schanbel (2022 speech) and Hilscher Raviv and Reis "How Likely Is An Inflation Disaster?"

Framework problem: ECB review



<u>Focus on low r*, natural or neutral real interest rate</u>

- More likely policy is too tight once hit ZLB
- Deflation trap, insufficient demand, ZLB, commit to be irresponsible
- Focus on aggregate demand
- Inflaiton expectations anchored, maybe even are too low

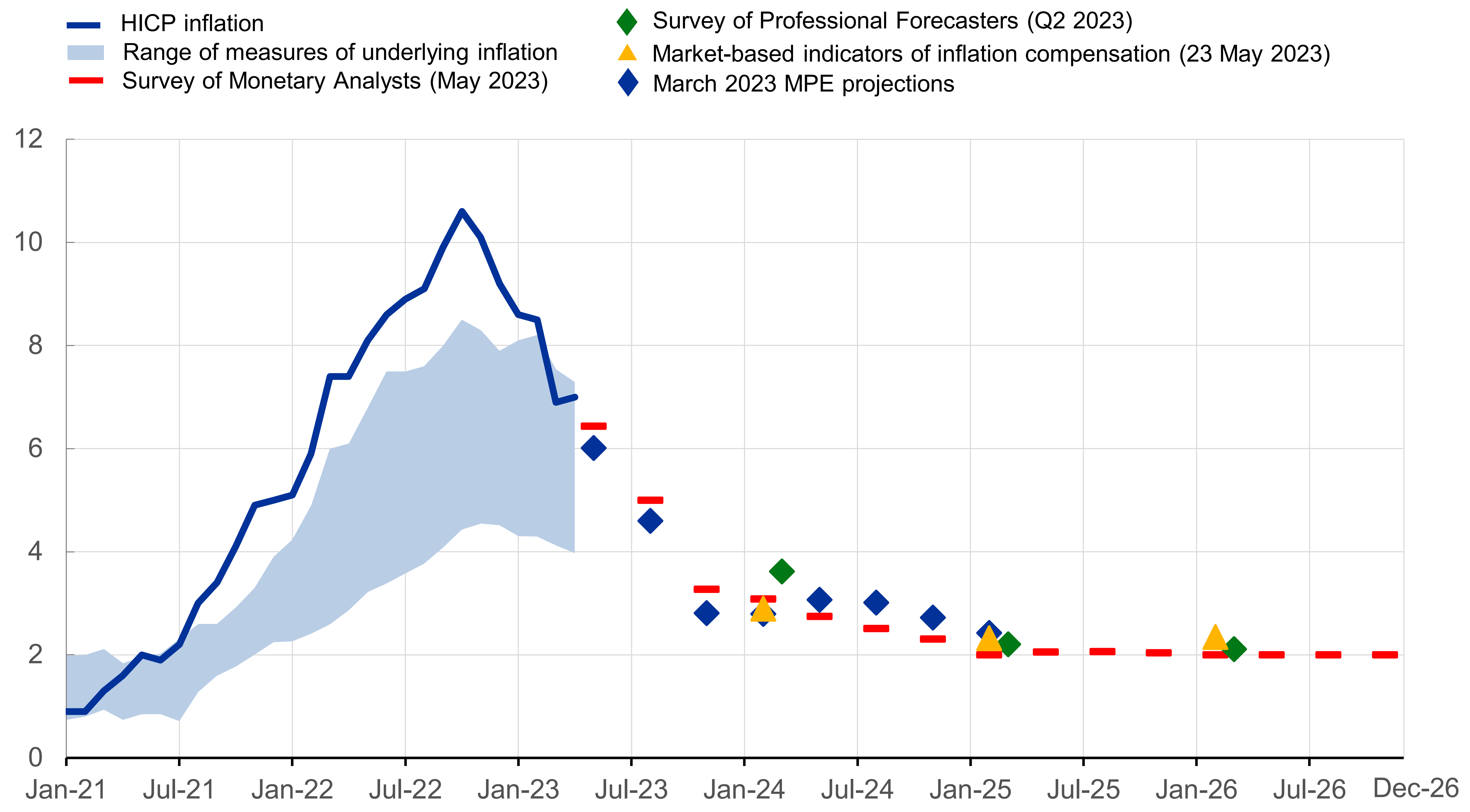
Source: Reis (2023) "Which R-star: Public Bonds or Private Investment? Measurement and Policy Implications"

What is to come?

ECB is optimistic…. Or not

Headline inflation, measures of underlying inflation and inflation projections and expectations

(annual percentage changes)



Sources: Eurostat and ECB calculations.
The latest observations are for April 2023 for HICP and March 2023 for the range of measures of underlying inflation. The latest observations for market-based indicators of inflation compensation are for 23 May 2023. The SPF data show expected annual percentage changes one-year and two-years ahead of latest HICP data at the time the Q2 2023 round was conducted (i.e. for March 2024 and March 2025) and for the calendar year 2026. The Survey of Monetary Analysts and the September 2022 ECB staff projections show quarterly forecasts. The cut-off date for data included in the ECB staff macroeconomic projections was 2 March 2023

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Source: Lane 2023/05 speech

Neurotic approach: what could go wrong?

Table 1: Signs of dominance preventing the central bank from lowering inflation

Type of dominance	Obstacle to raising policy rates
Misjudgment	- persistently underestimate how high they must rise - excessively rely on low r-star
Expectations	- fail to talk tough because want to be popular - fail to act tough and neglect need to overshoot neutral rate
Fiscal	- tempted by short-term fiscal benefit of higher inflation, neglecting long-term fall in debt revenue - overuse balance-sheet policy leading to large losses that require recapitalization - jeopardize legality of euro by engaging in large transfers across regions
Financial	- yield to groups lobbying for respite from redistribution caused - be unwilling to use macro-prudential and liquidity policies to handle financial stress - get caught in diabolic loop between banks and sovereigns
Recession	- over-rely on Phillips curve, which gets steeper as inflation persists - over-estimate potential output
External	- follow foreign central bank that lets inflation drift to prevent the adjustments in exchange rates and capital flows - be too averse to needed relative-price and relative-output adjustments

A central bank is dominated by misjudgment if it clings to outdated theories or measurements of the economy, finding excuses for why inflation is rising that absolve its policy- makers from their responsibility.

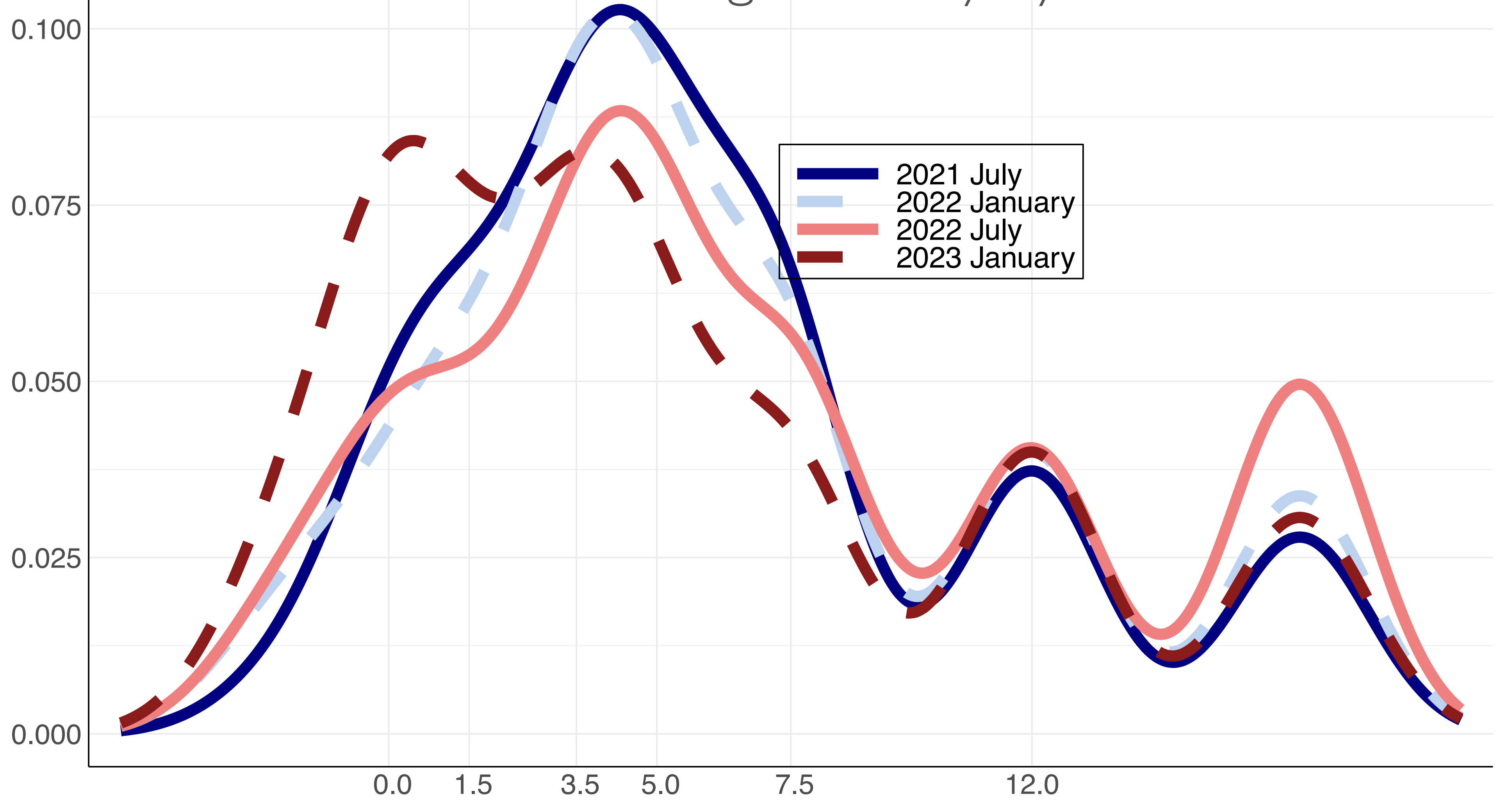
Abandoned low r*.

But averse to overshooting in interest rates

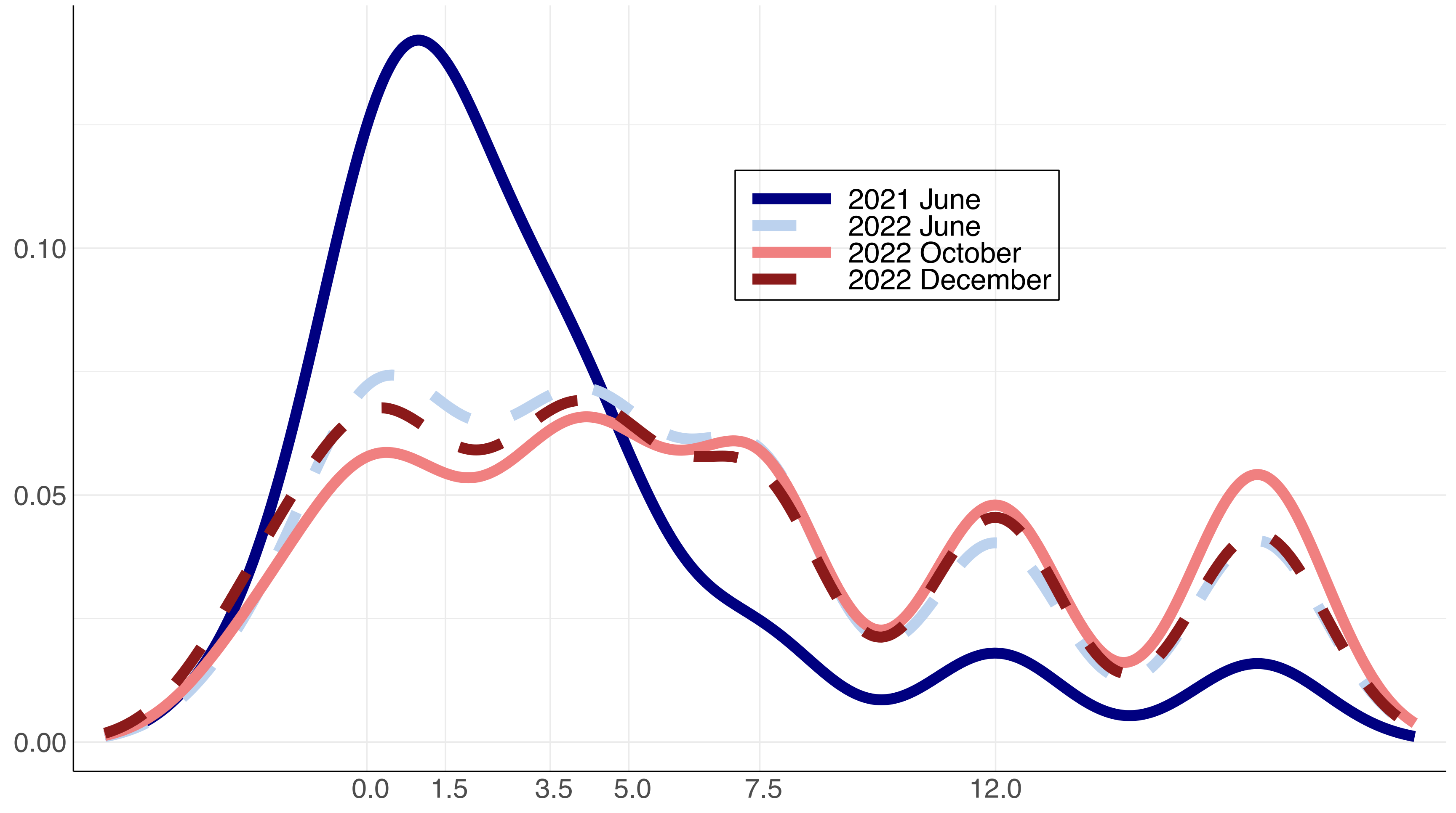
Source: Reis (2023) "What Can Keep Euro Area Inflation High?"

Expectations dominance?

US Michigan survey 1y ahead



ECB's survey of consumers 1y ahead



US

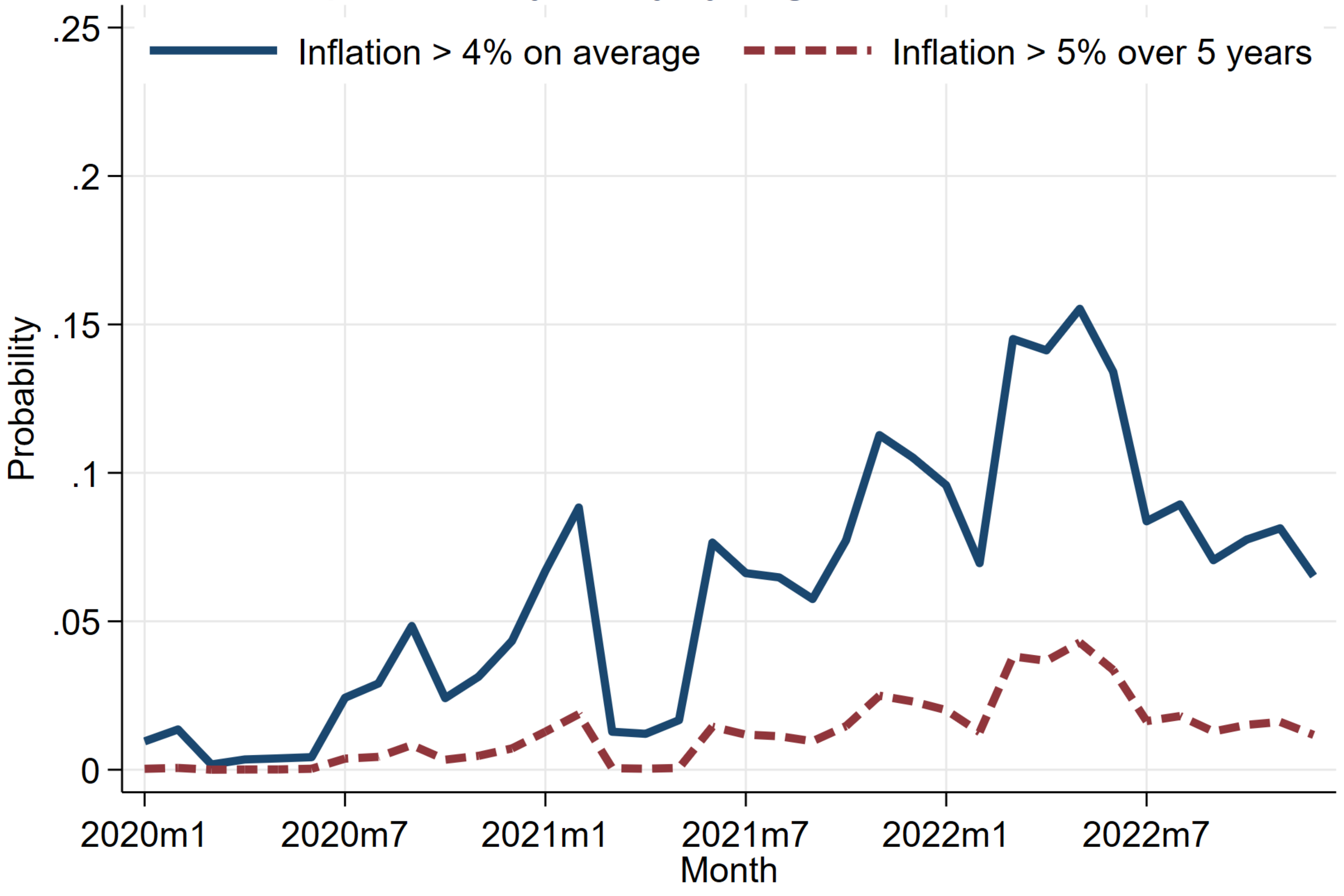
- re-anchoring
- very clear

EA

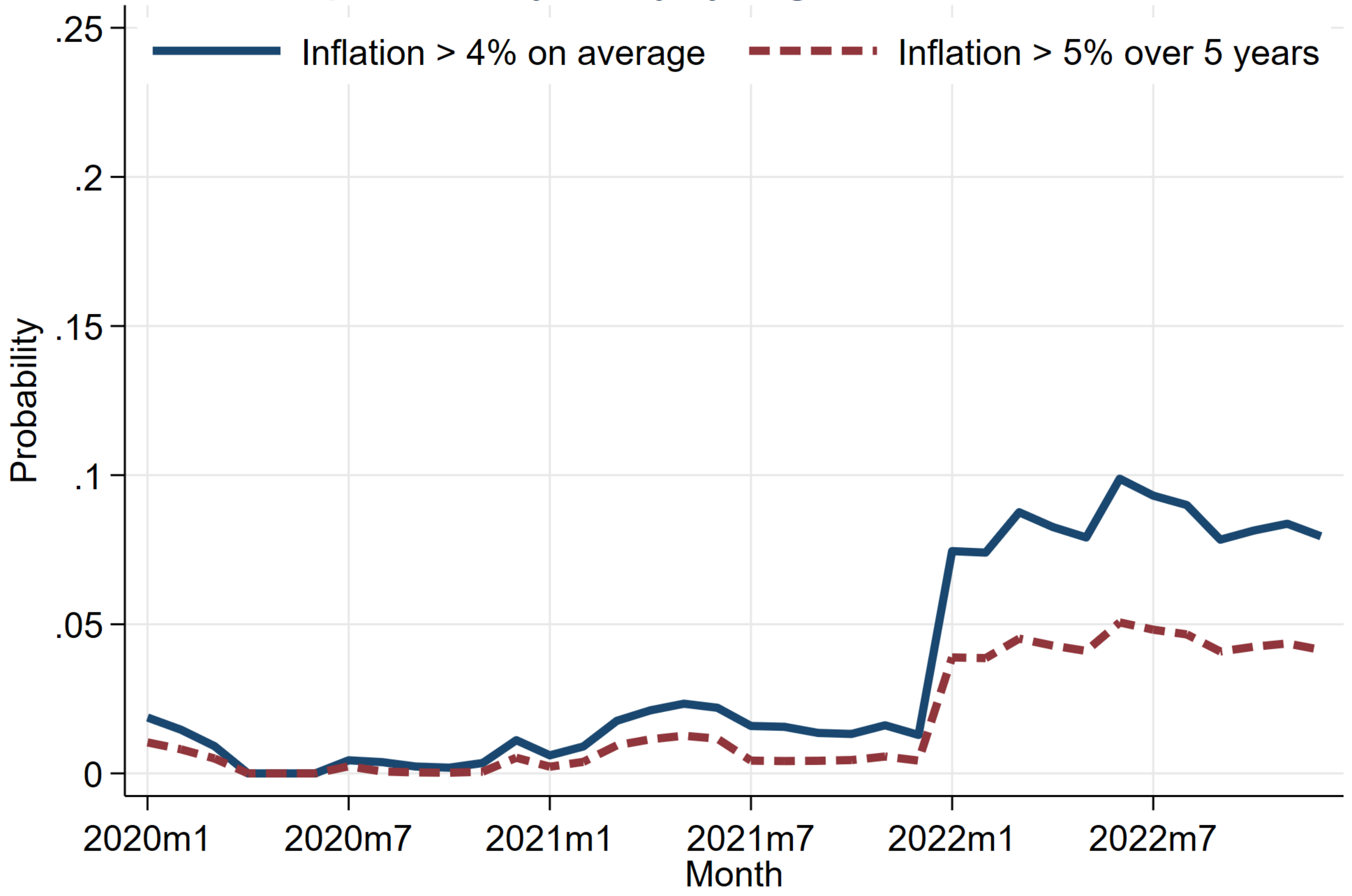
- Not there
- Coming?

Hilscher-Raviv-Reis measure

US probability of 5y5y high-inflation disaster

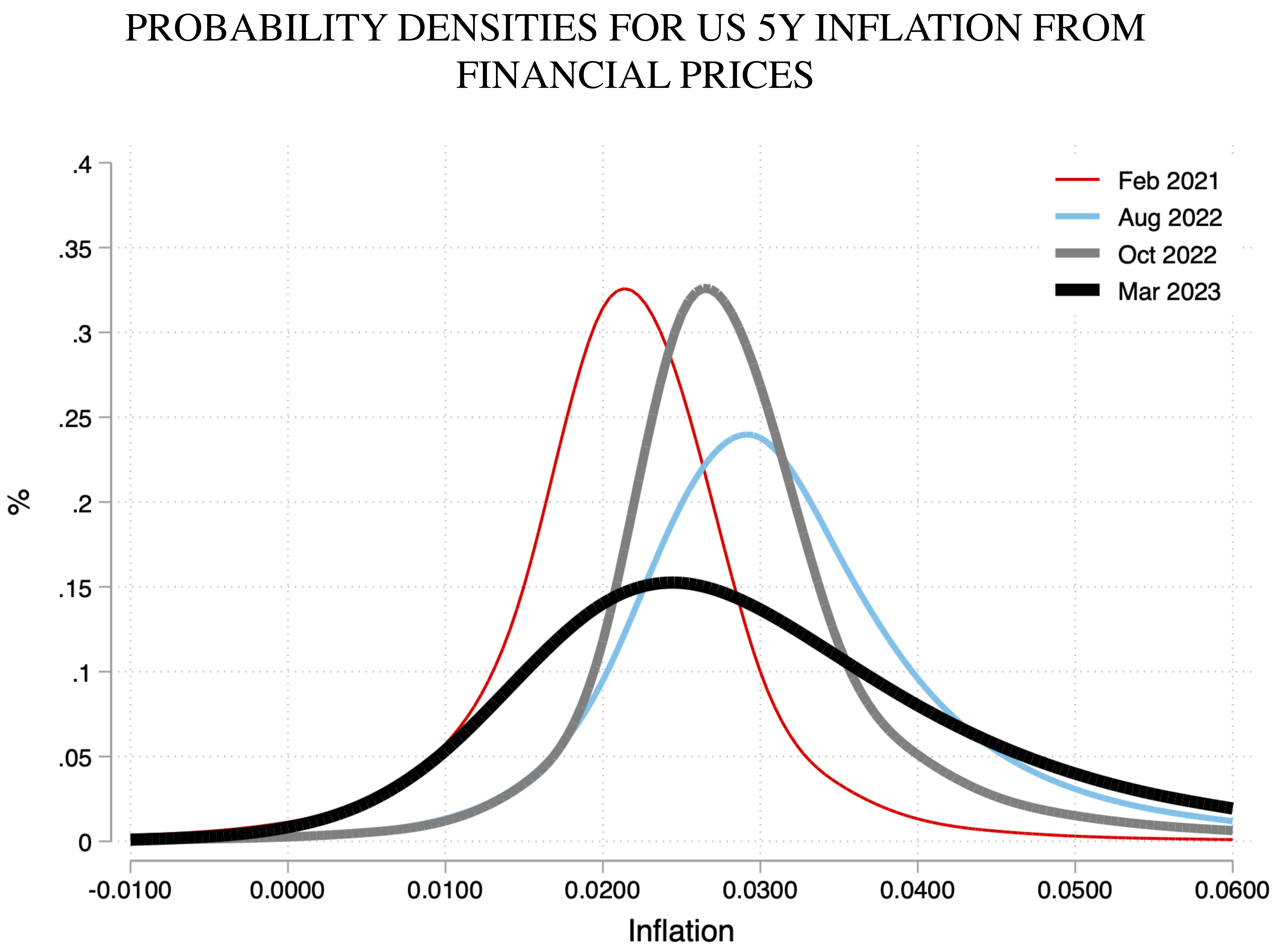


EZ probability of 5y5y high-inflation disaster



Source: Hilscher Raviv and Reis "How Likely Is An Inflation Disaster?"

Foreign dominance

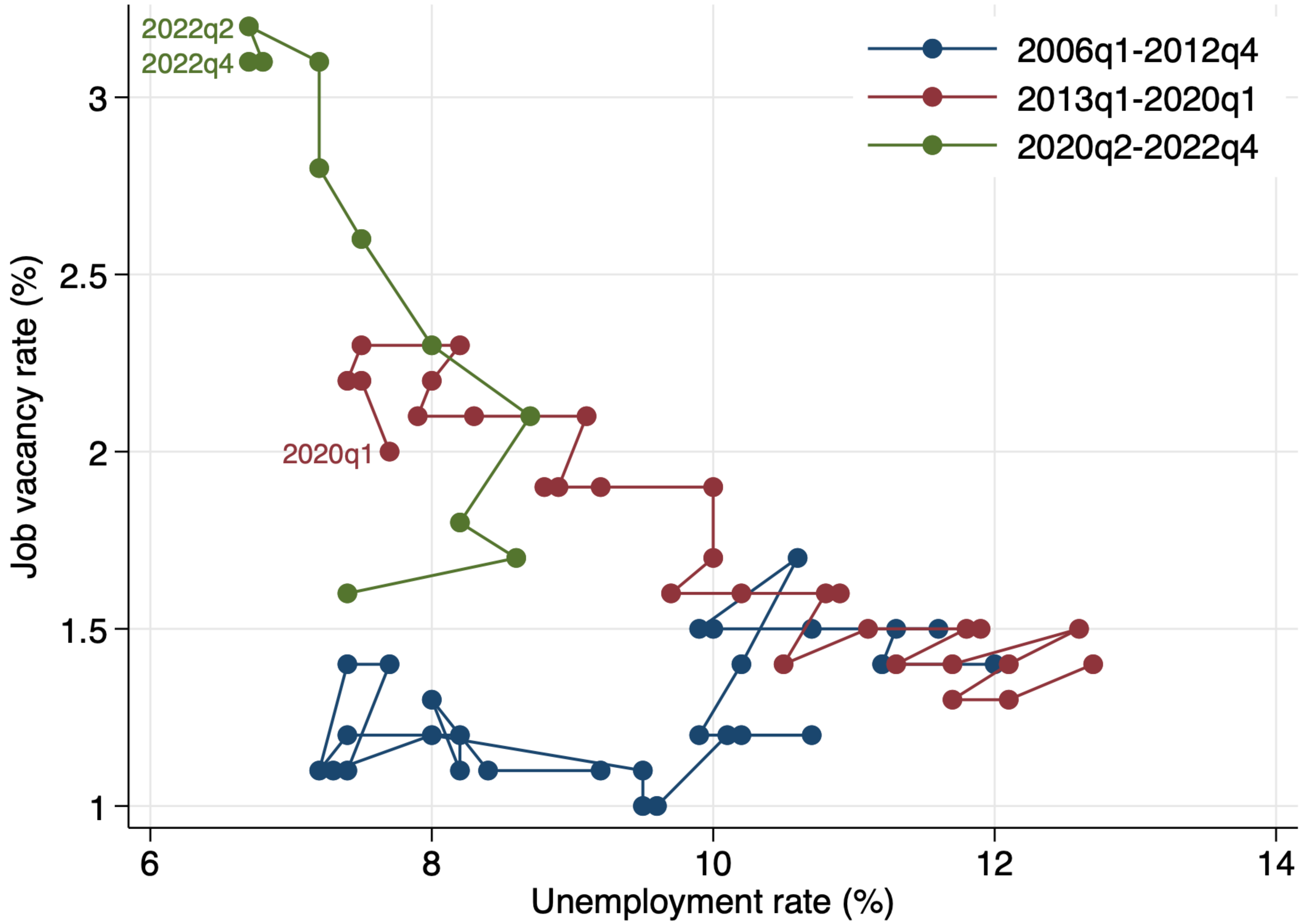


The central bank is dominated by external forces if it resists bringing inflation down because it fears the flows of capital and the movements in exchange rates that result.

If anything the Fed is more committed right now

Source: Hilscher Raviv and Reis "How Likely Is An Inflation Disaster?"

Recession dominance



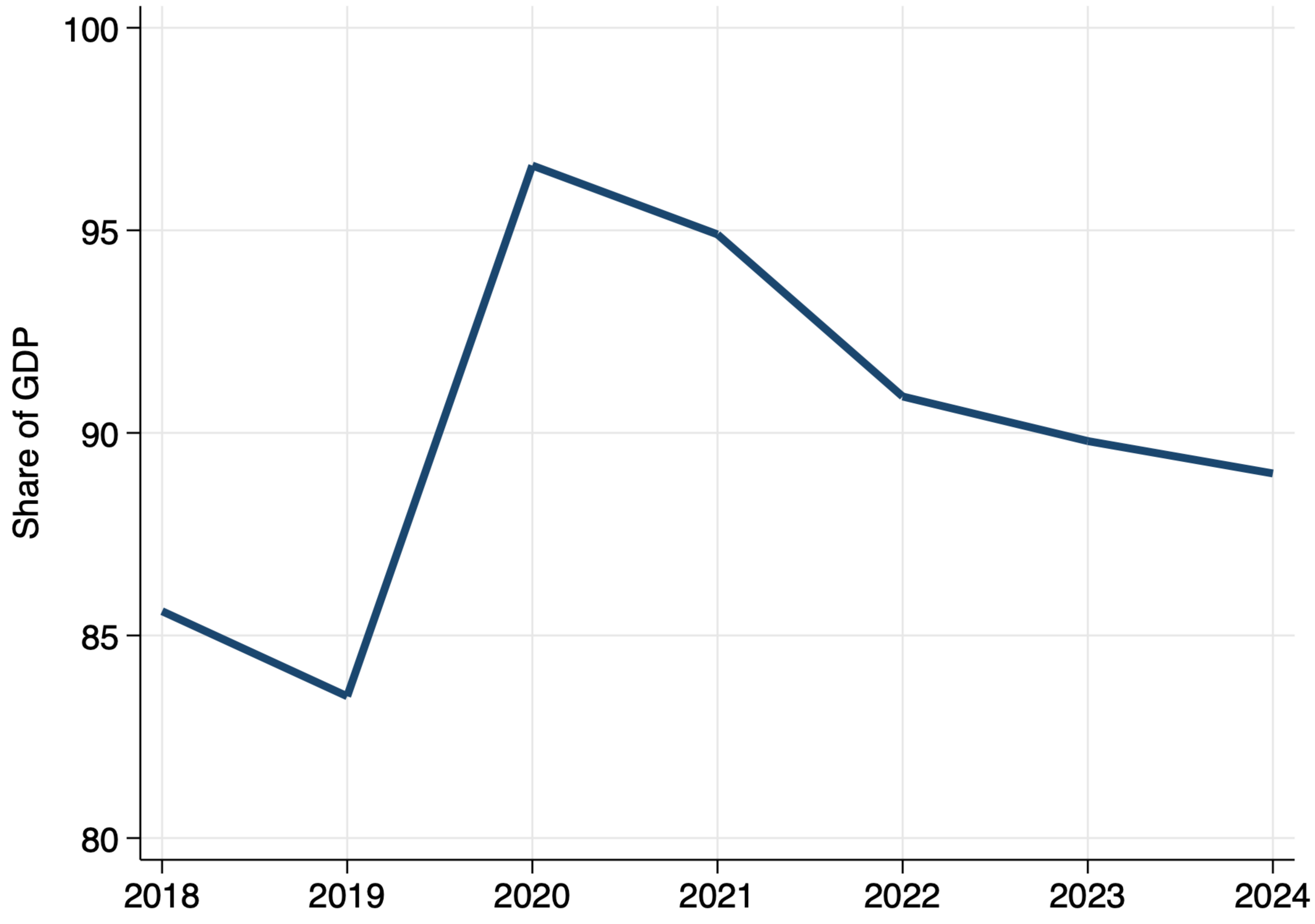
The central bank is <u>dominated by the fear of a recession</u> if it persistently raises policy rates too little or tool late because it is concerned with the resulting depth of the recession.

The big unknown right now.

Source:: Reis (2022) "What can keep euro area inflation high? An update, six months later"

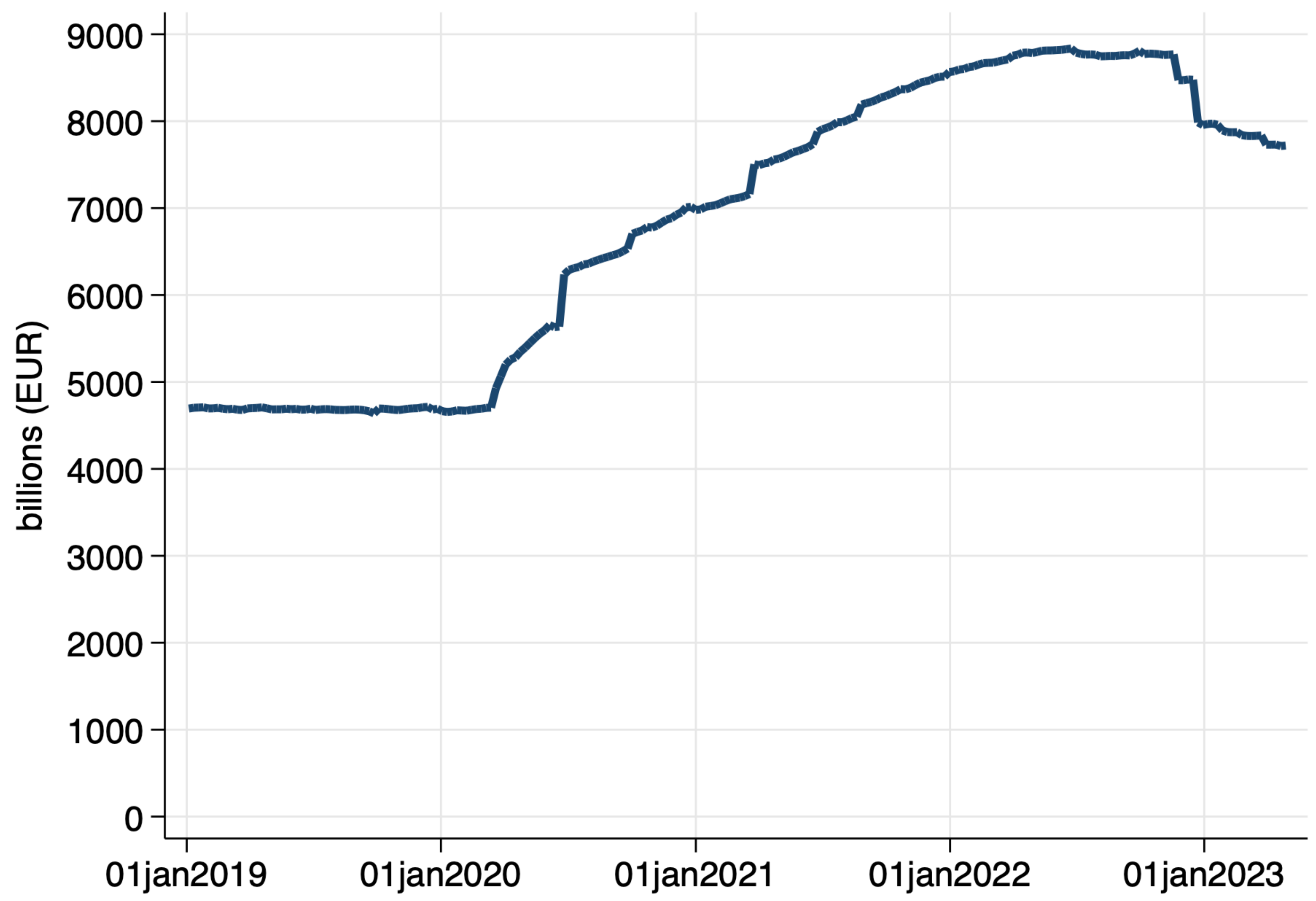
Fiscal dominance

Public debt in Euro Area



A central bank is <u>fiscally dominated</u> when it does not bring inflation under control because it fears breaking the government's budget.

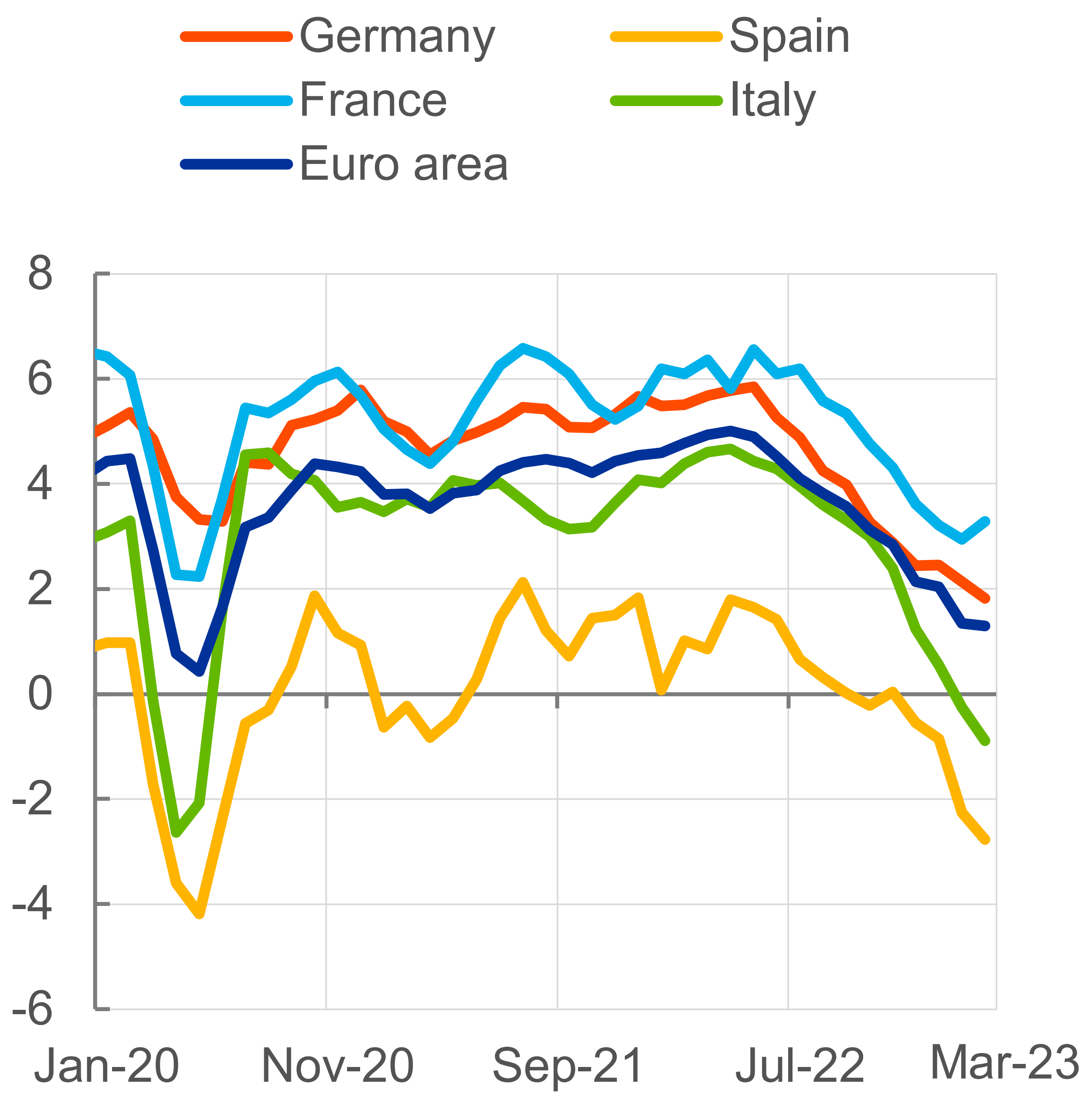
Not yet at least



Source:: Reis (2022) "What can keep euro area inflation high? An update, six months later"

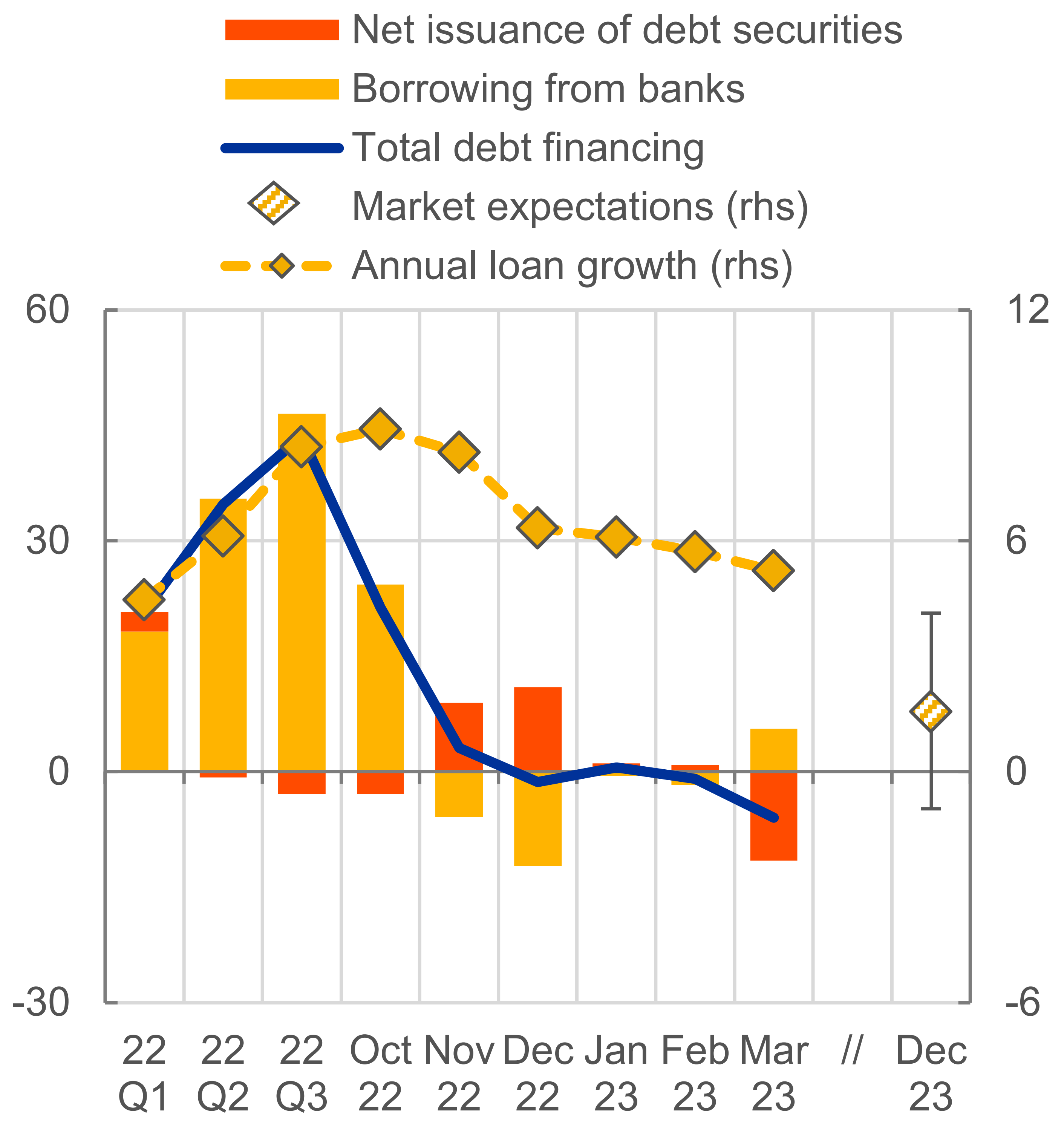
Financial dominance

Loans to households growth
(3-month annualised growth rates)



Sources: ECB (BSI).
Note: Loans are adjusted for sales, securitisation and cash pooling activities. The latest observations are for March 2023.

Net debt financing of firms
(lhs: average monthly flows in EUR billions, rhs: annual percentage changes)



Sources: ECB (BSI, CSEC) and ECB calculations. Notes: The dashed diamond shows the median annual growth rate of bank loans as reported by BES forecasters. Whiskers represent values within one standard dev. around the median (16th and 84th percentiles). Distribution weighted by realised loan volume as of year-end 2022. Based on a sample of 204 forecasts covering 36 banks, submitted between 1 April and 19 May 2023. Ireland is dropped for data quality issues, and forecasts are trimmed of 10% of observations on each side. The latest observation is for March 2023.

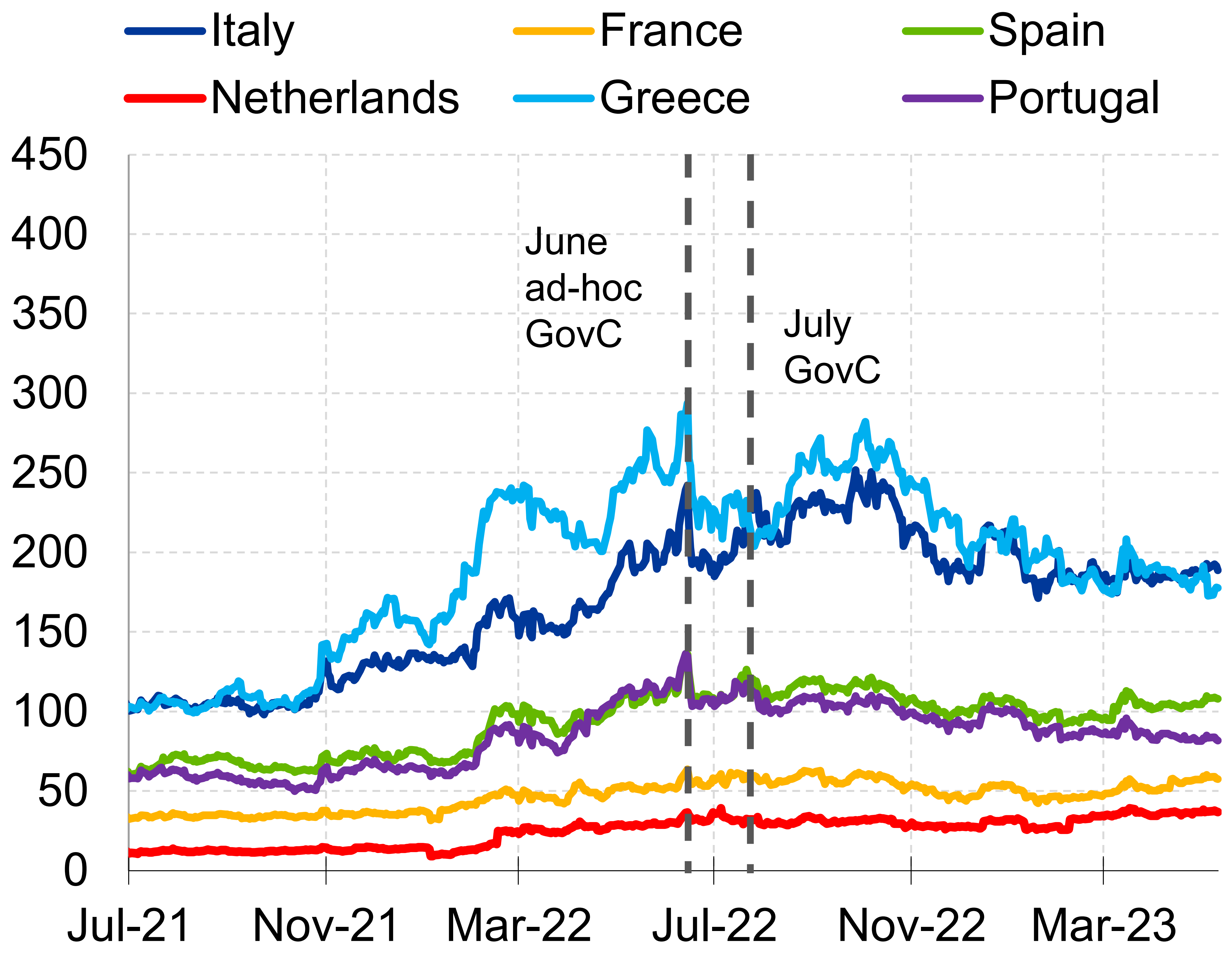
The central bank is <u>financially dominated</u> when it resists bringing inflation down because it fears breaking parts of the financial system along the way.

Certainly, credit contracted, but not a crisis so far, at least while house prices hold up

Source:: Schnabel speech 2023/05

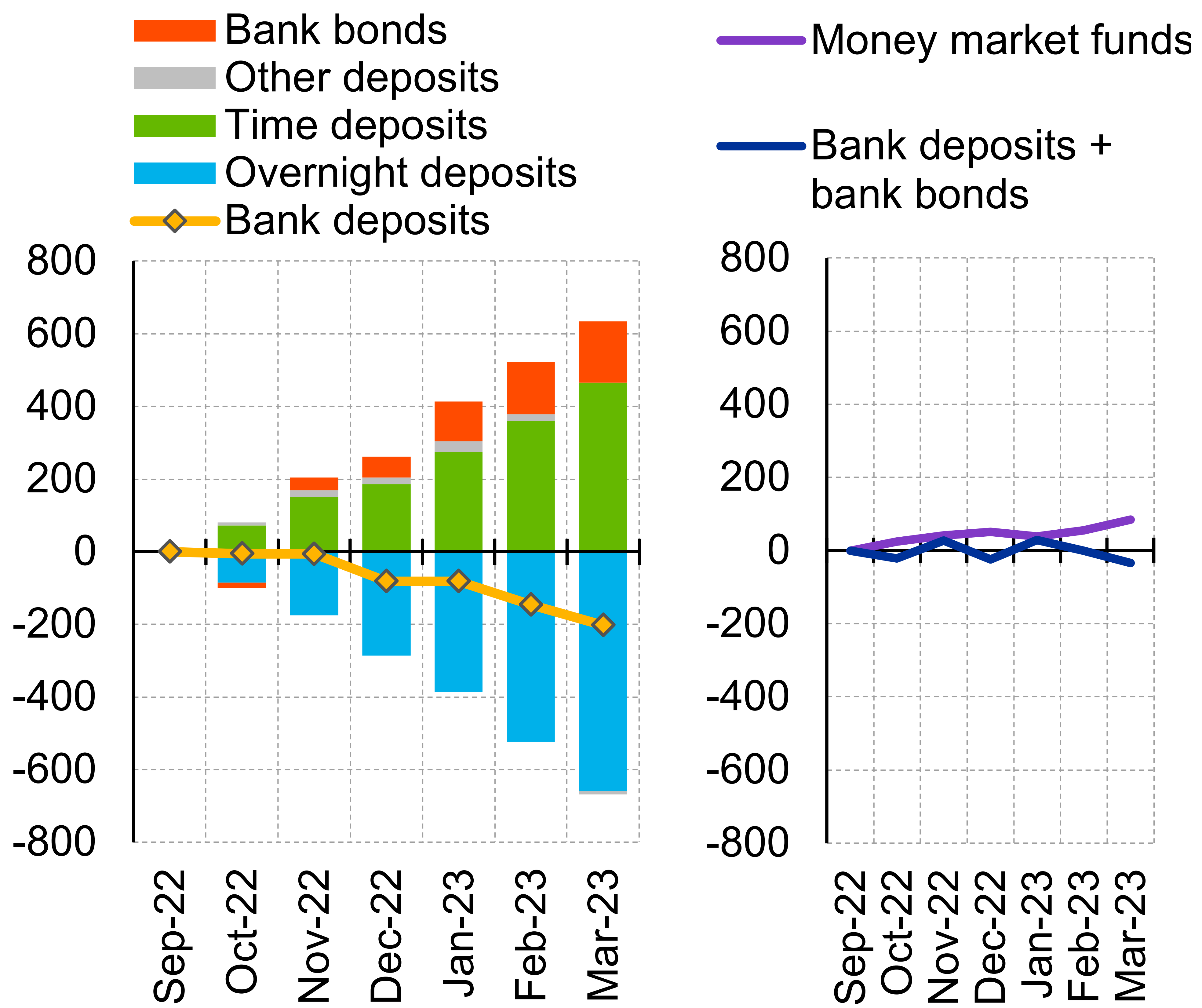
Financial dominance: old and new problems

10-year euro area sovereign spreads versus Germany
(basis points)



Sources: Bloomberg.
Latest observation: 16 May 2023.

Bank funding in the euro area
(cumulated flows in EUR bn since end-September 2022; SA)



Sources: ECB (BSI) and ECB calculations.
Notes: Bank deposits consist of deposits held with the MFI sector by euro area residents excluding MFIs, central government and financial vehicle corporations involved in securitisation activity. Their flows have been adjusted for the operational incident in TARGET2, which inflated the September 2022 OFI deposits, to be then reversed in October and November 2022. Bank bonds are those held by euro area residents excluding MFIs and central government. Latest observation: March 2023.

Source:: Schnabel speech 2023/05

Conclusion

Inflation

- Went up because unlucky with unusual shocks led to sharp increase. Persisted because failure in policy, partly because of fiscal largesse, partly because the ECB's framework made it slow to move.

- Last 9 months policy caught up, inflation starting to come down, halted the drift of expectations and prices.

- Now it is facing a turning point and balancing act is always difficult. I would like to see a greater sense of urgency, four years seems too long

- Moving forward no clear signs of dominance, where financial/fiscal are always the more pressing for the ECB