The usefulness of inflation indicators

Benoit Mojon*

Head of Economic Analysis

SUERF-B_Italia-ECB-Suomen_P-Oesterreische_NB workshop
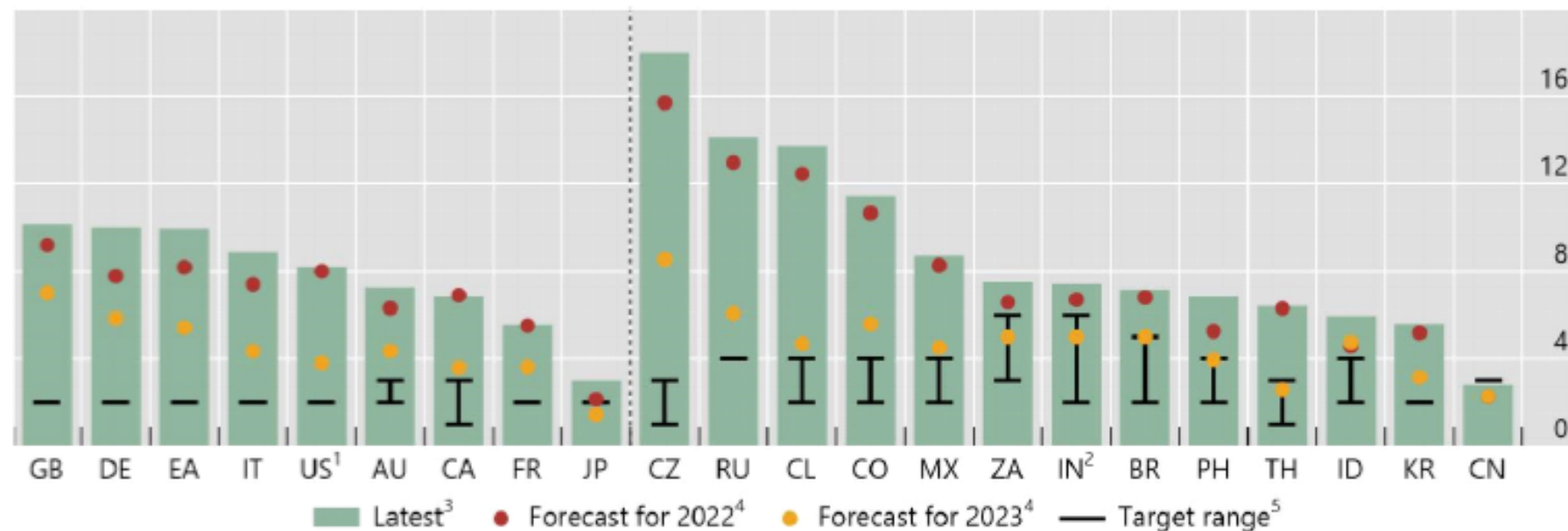
28 November 2022, Mexico City

*The views expressed are those of the speaker and not necessarily those of the BIS.

Inflation forecasts for 2022 and **2023**

Inflation rates, forecasts and targets

In per cent

Legend: Latest[3] ● Forecast for 2022[4] ● Forecast for 2023[4] — Target range[5]

[1] Cleveland Fed's CPI nowcast for August 2022. [2] Consensus Forecast for India corresponds to the fiscal year beginning April. [3] June for ZA; Q2 for AU; July for rest. [4] Average annual changes, year-end changes for RU, Latin American countries. [5] CN, EA, and US do not officially describe their monetary policy framework as inflation targeting.

Sources: Knotek and Zaman (2014); Federal Reserve Bank of Cleveland; Consensus Economics; Datastream; national data; BIS calculations.
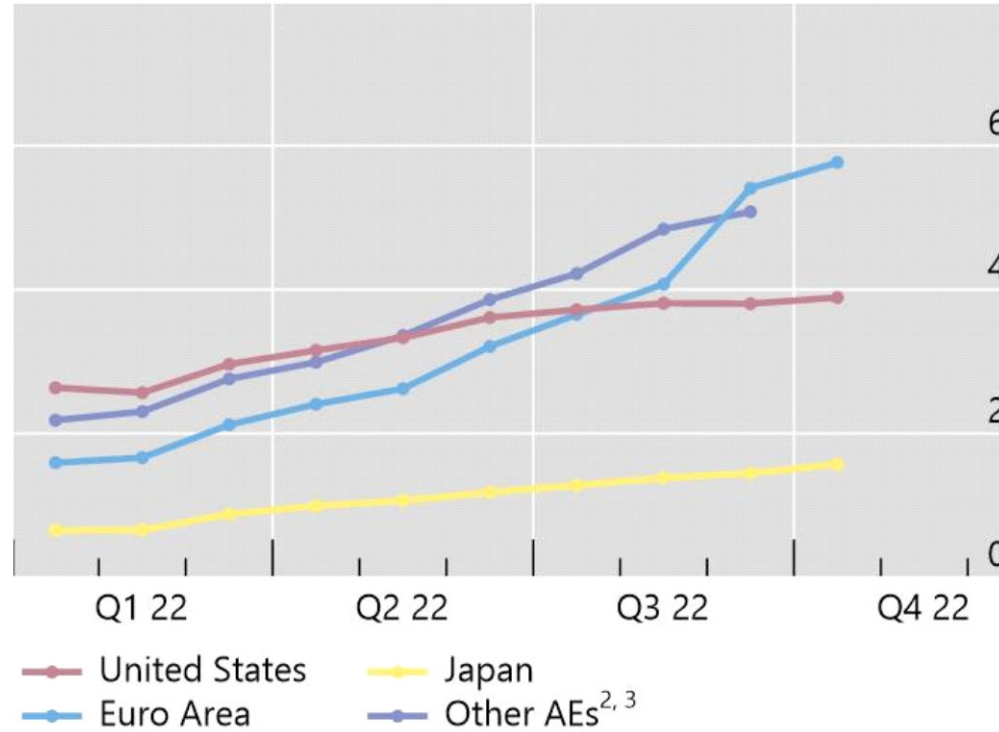
Inflation forecast have underestimated inflation since 2021
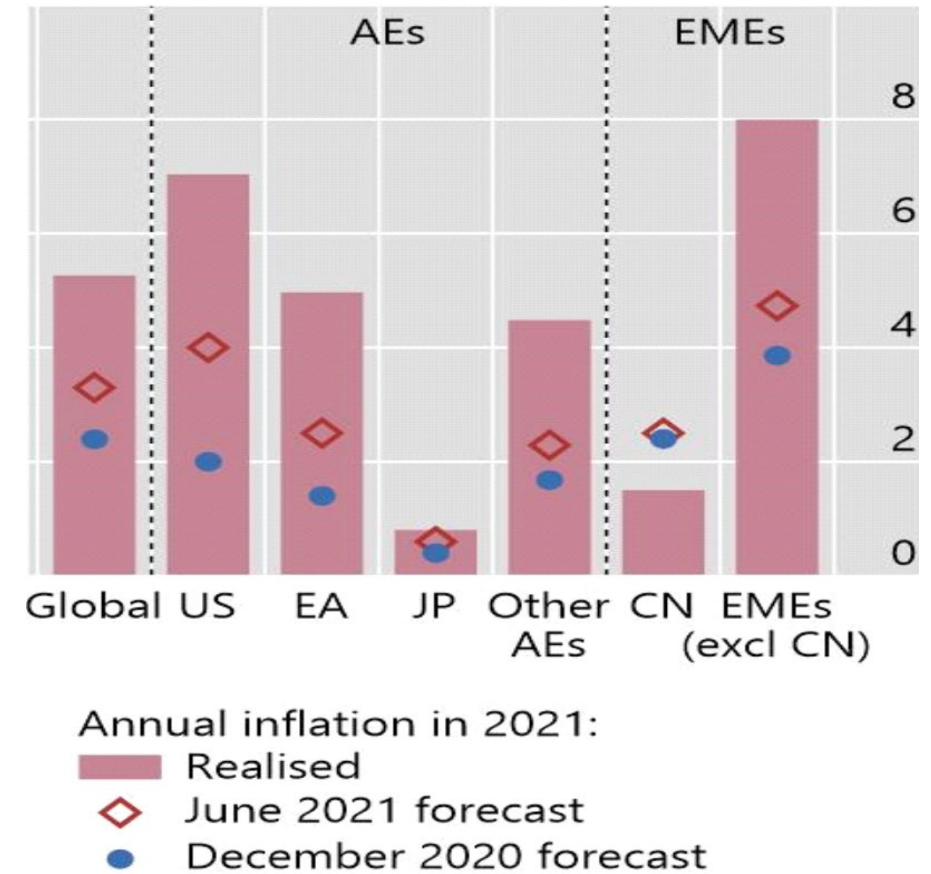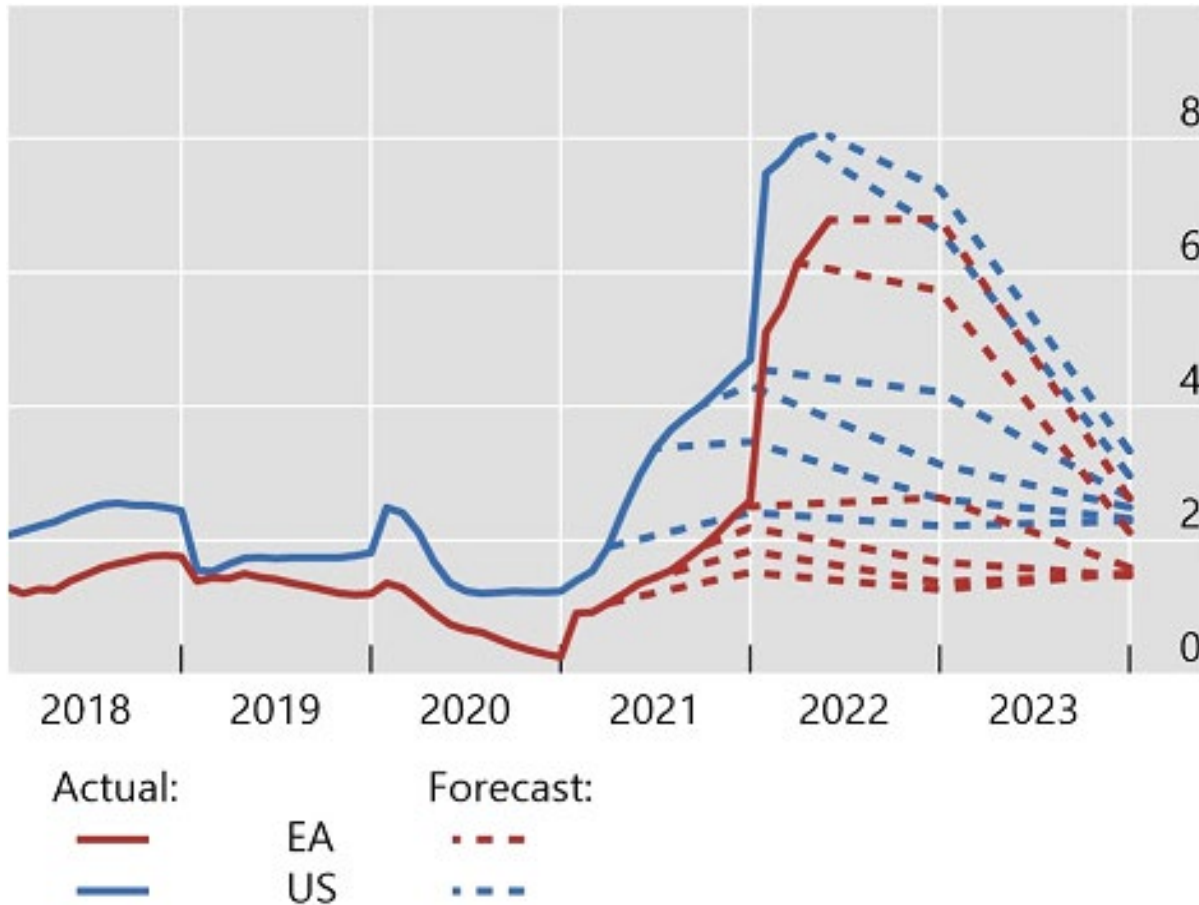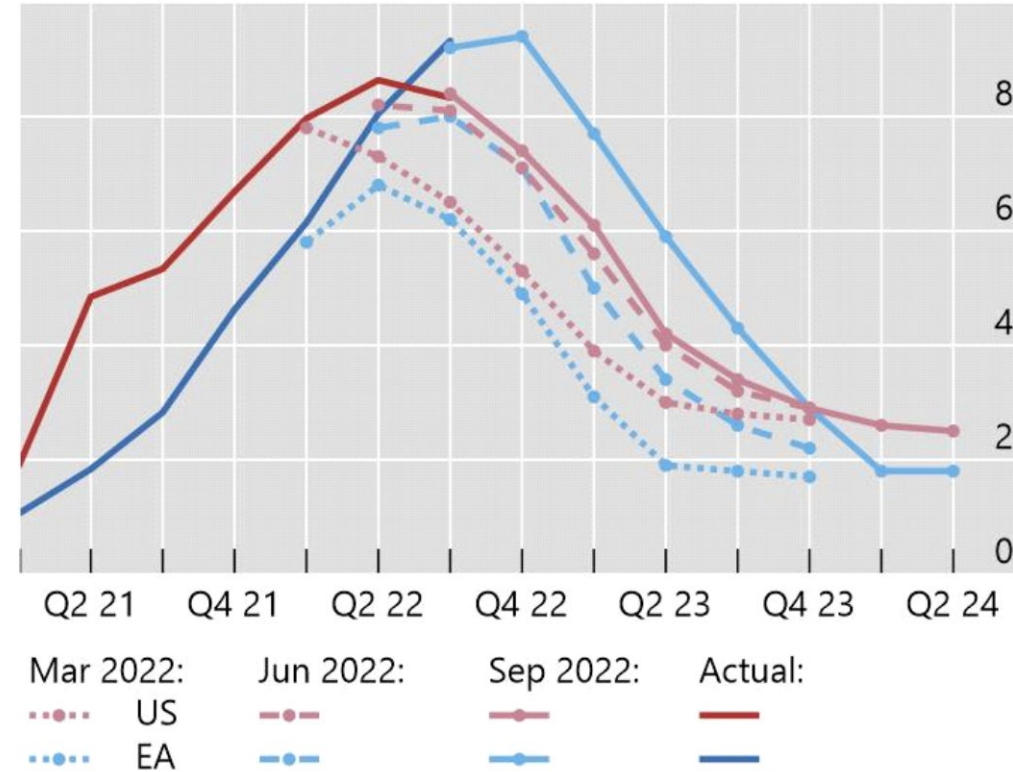

Source: Boissay, De Fiore and Kharroubi (2022)

Inflation forecasts for 2023 increased yet still sharp/fast disinflation wrt 2022
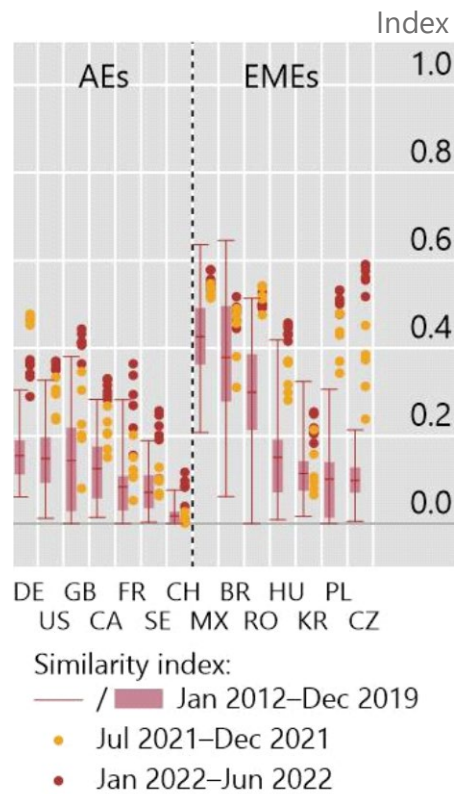
Changes in forecasts for 2023[1]

Quarterly forecasts (yoy changes)

United States   Japan

Euro Area   Other AEs[2,3]

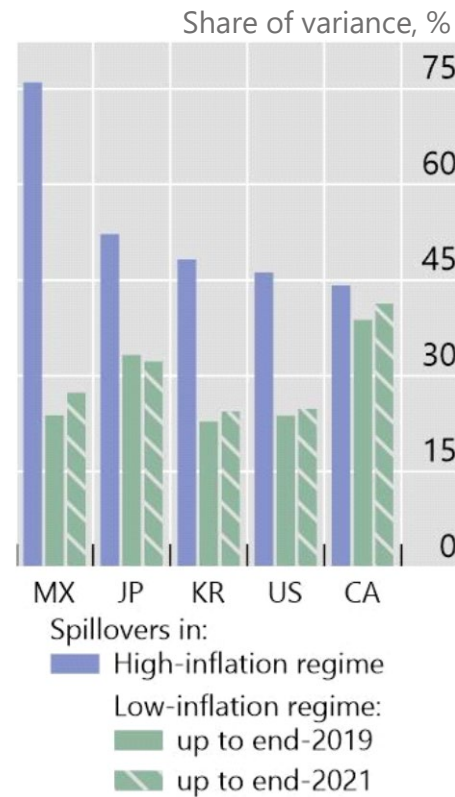Mar 2022:   Jun 2022:   Sep 2022:   Actual:

US

EA

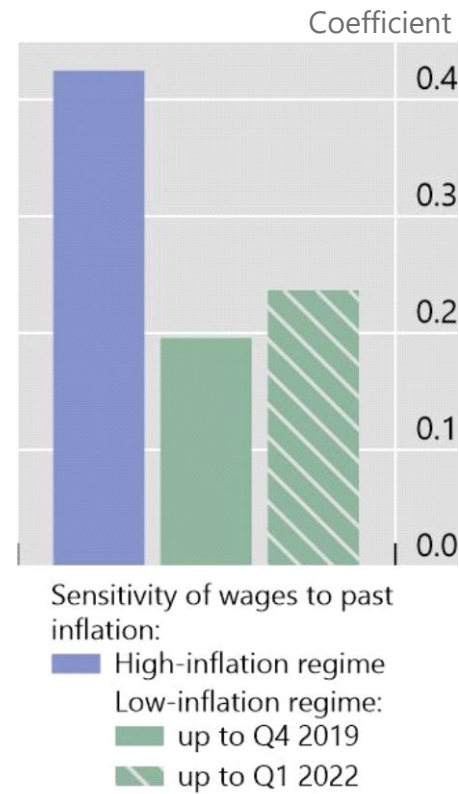# Some evidence that inflation dynamics is changing

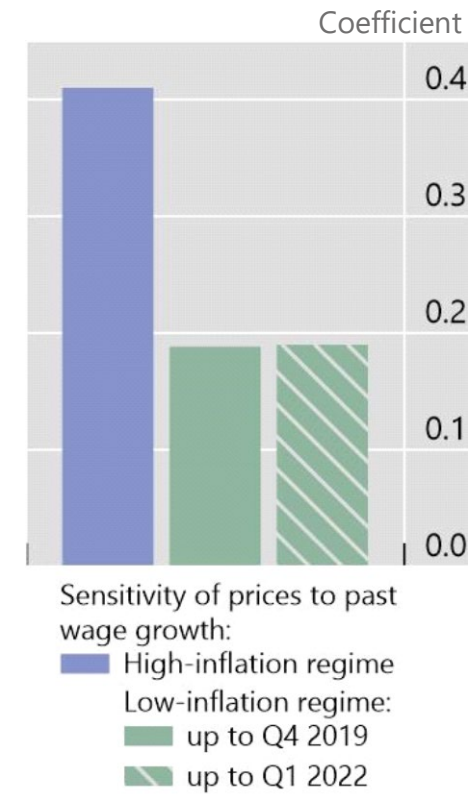Sectoral price changes become increasingly similar...[2]

...and sectoral price spillovers are increasing[3]

Sensitivity of wages to past inflation mildly higher...[4]

... while that of prices to past wage growth is stable[4]

Index

AEs   EMEs

1.0
0.8
0.6
0.4
0.2
0.0

DE GB FR CH BR HU PL
  US CA SE MX RO KR CZ

Similarity index:
━ / ▦ Jan 2012–Dec 2019
• Jul 2021–Dec 2021
• Jan 2022–Jun 2022

Share of variance, %

75
60
45
30
15
0

MX   JP   KR   US   CA

Spillovers in:
■ High-inflation regime
Low-inflation regime:
▦ up to end-2019
▨ up to end-2021

Coefficient

0.4
0.3
0.2
0.1
0.0

Sensitivity of wages to past inflation:
■ High-inflation regime
Low-inflation regime:
▦ up to Q4 2019
▨ up to Q1 2022

Coefficient

0.4
0.3
0.2
0.1
0.0

Sensitivity of prices to past wage growth:
■ High-inflation regime
Low-inflation regime:
▦ up to Q4 2019
▨ up to Q1 2022

Source: De Fiore, Lombardi and Rees (2022)
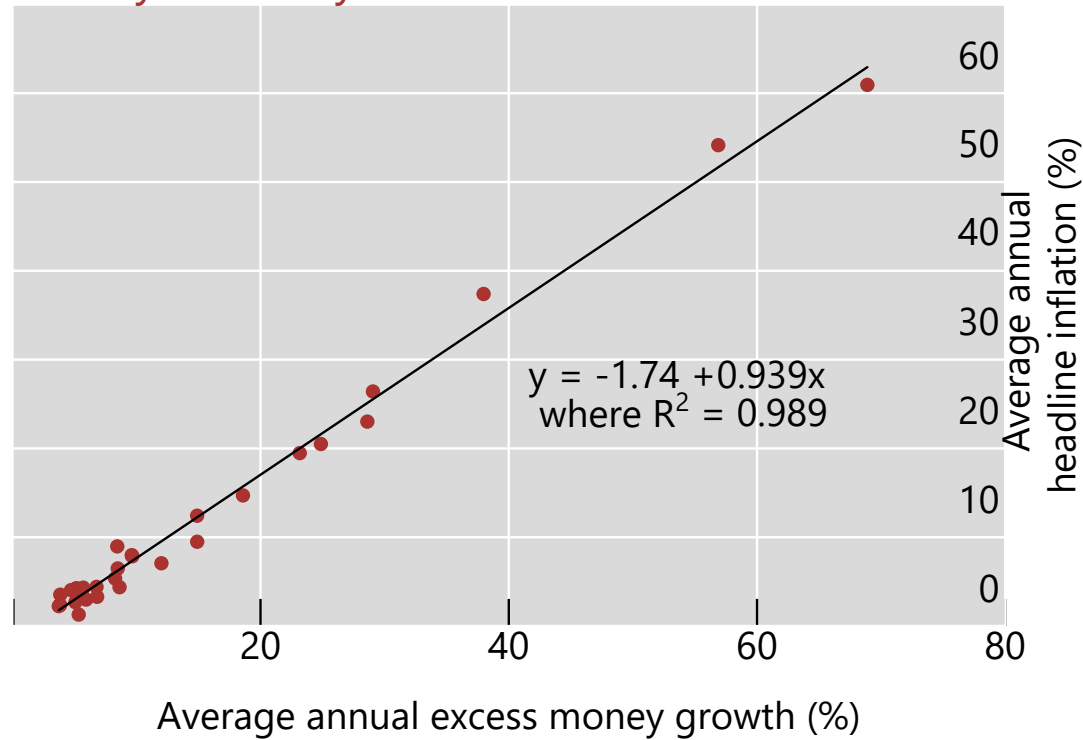
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The forecasting inflation challenge

A taxonomy of inflation indicators

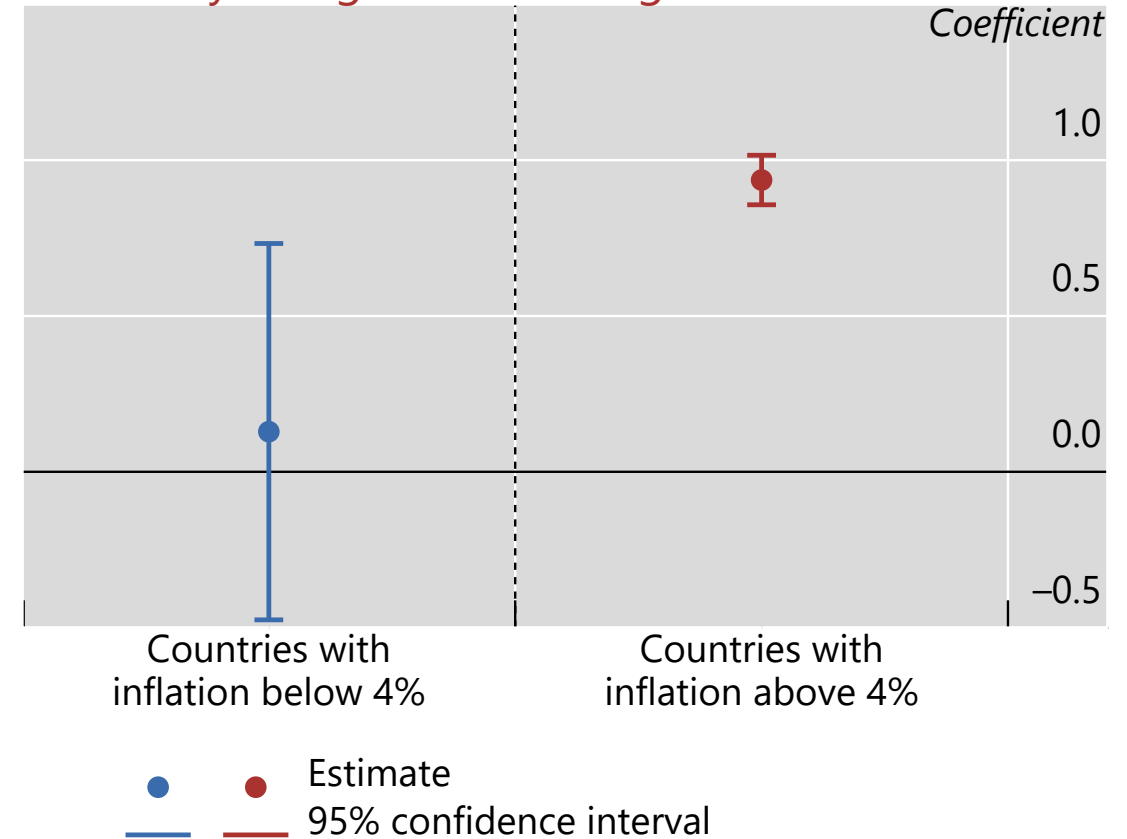| Indicator	Timeliness	Informativeness on drivers (diagnosis)	Forecasting ability (prognosis)	Robustness to regime shift
1. Current inflation, including narrower measures	High	None	Often hard-to-beat benchmarks	May reflect an ongoing regime shift
2. Granular measures (eg price similarity, spillovers)	Generally high	Mostly suggestive	Unknown	Greater commonality may help detect turning points or regime changes
3a. Expectations: markets-based	Very high	None	Good but can also incorporate shifts in risk appetite	Changes in the distribution may help predict a regime shift
3b. Expectations: survey-based	Generally low	Relevant, esp. under unanchored expectations	Good but might come with biases	Looking at the full distribution may reveal signs of a shift
4a. Models: Time series	Very high	Limited	Typically good	May be unstable around regime shifts
4b. Models: (semi)-structural	Low	High	Varies	Low

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Inflation: Always and every where a monetary phenomenon?

Money and inflation in low- and high-inflation regimes
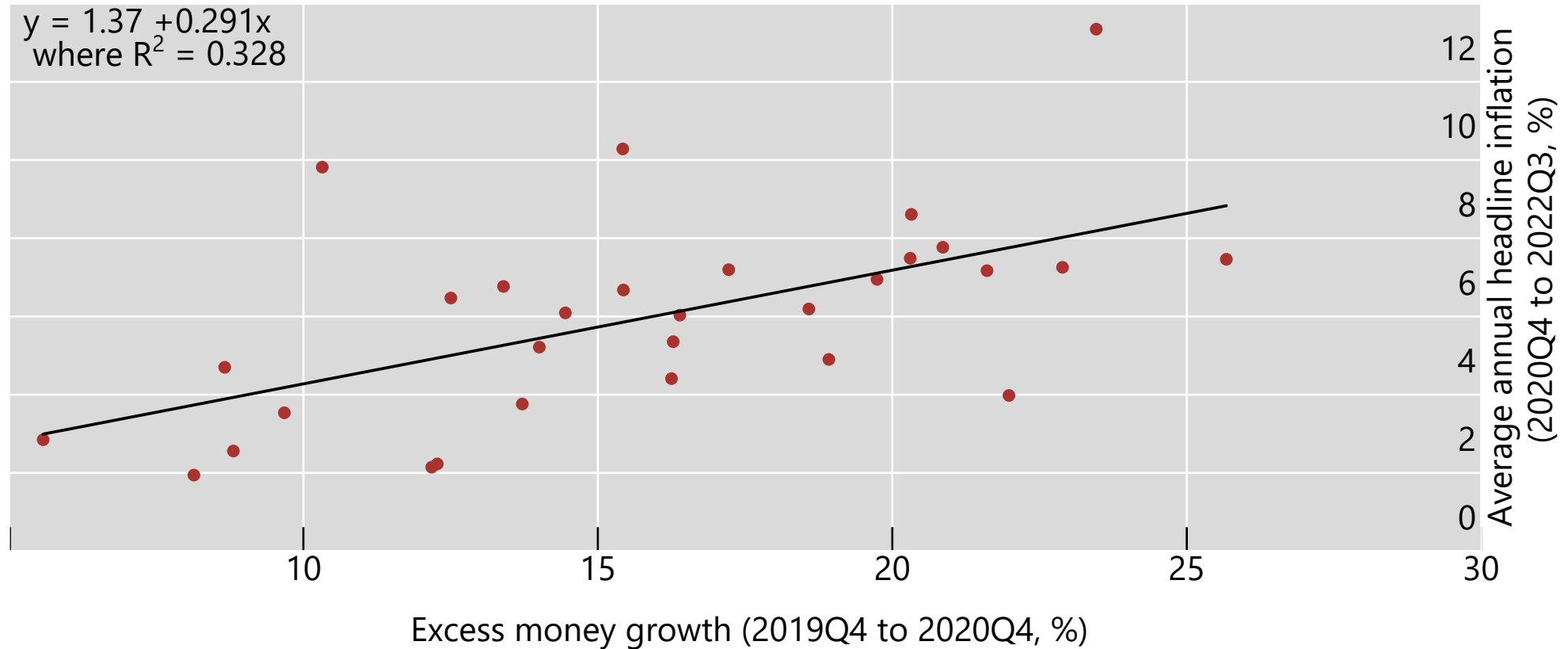
Money is closely linked to inflation...

$y = -1.74 + 0.939x$
where $R^2 = 0.989$

Average annual headline inflation (%)

Average annual excess money growth (%)

...but only in high-inflation regimes

Coefficient

Countries with inflation below 4%

Countries with inflation above 4%

● ● Estimate
── ── 95% confidence interval

Note: Excess money growth is defined as the difference between broad money growth and real GDP growth.

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Money helps predict the post-pandemic inflation surge

$y = 1.37 + 0.291x$
where $R^2 = 0.328$

Average annual headline inflation (2020Q4 to 2022Q3, %)

Excess money growth (2019Q4 to 2020Q4, %)

Inflation: global or local?

US inflation spillovers to other countries' inflation
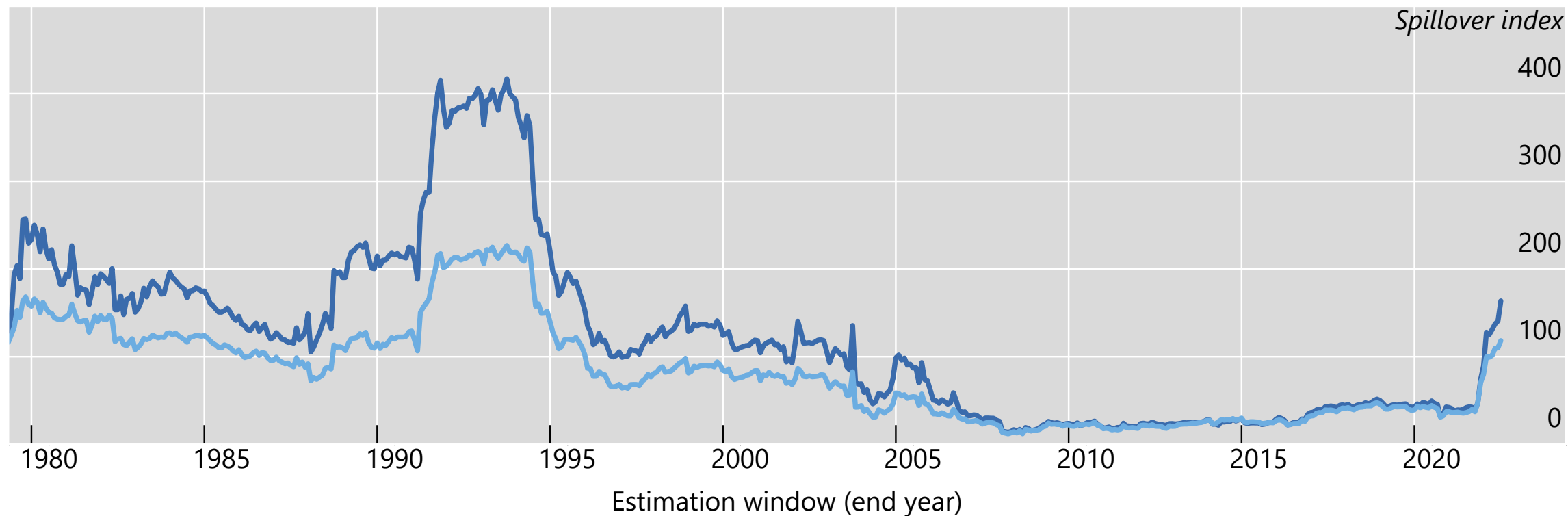
Variances share from 15 years rolling regressions for 23 countries.
Sources: IMF; OECD; World Bank; Refinitiv Datastream; national data; BIS.

Conclusions

- Forecasting inflation is challenging

- Clear breaks in the dynamics of inflation post-Covid
  - Unusual shocks, including global ones
  - Evidence of change in «slope parameters»: eg faster pass-through

- Mixed evidence from various indicators and models
  - So far limited evidence of unanchoring of inflation expectations (and forecasts)
  - The quantity theory of money strikes back when inflation is high
  - Some evidence that international inflation spillovers resume