



Shock identification and optimal monetary policy responses in an uncertain and complex environment

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

Outline

- Shock identification: Which tools worked?
 - Primitive analytical frameworks and indicators gave signal before the inflation surge in a complex environment
 - ❑ Very basic empirical demand-supply framework gave signal that the inflation surge was driven by strong demand hitting tight supply conditions (Eickmeier/Hofmann 2022)
 - ❑ Money growth predicted the inflation surge (Borio/Hofmann/Zakrajsek 2023)
- Policy responses: How did we get here?
 - Cumulative effects of sequential policy responses can take policies to the limit (Carstens 2023)

Shock identification: Which tools worked?

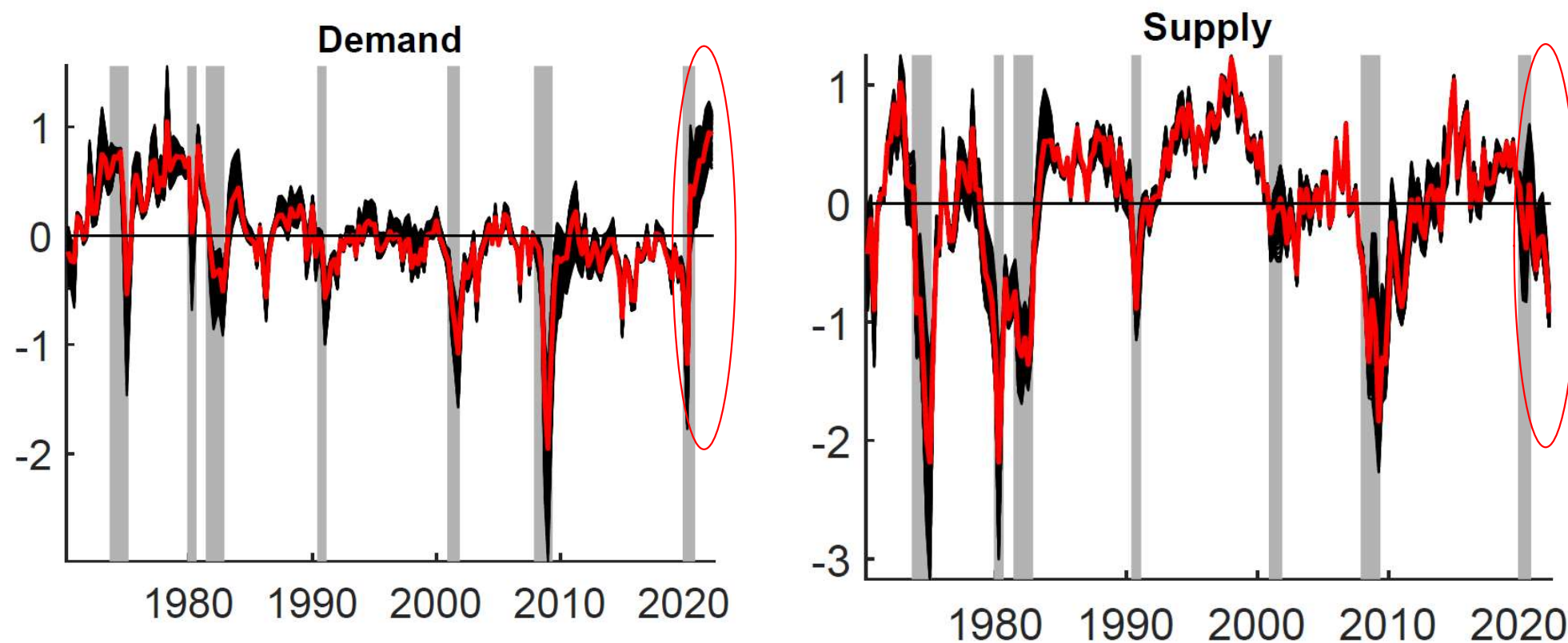
A primitive framework to identify demand and supply indicators (Eickmeier/Hofmann 2022)

- Basic economics
 - Supply expansion boosts economic activity and lowers inflation
 - Demand expansion boosts economic activity and pushes up inflation

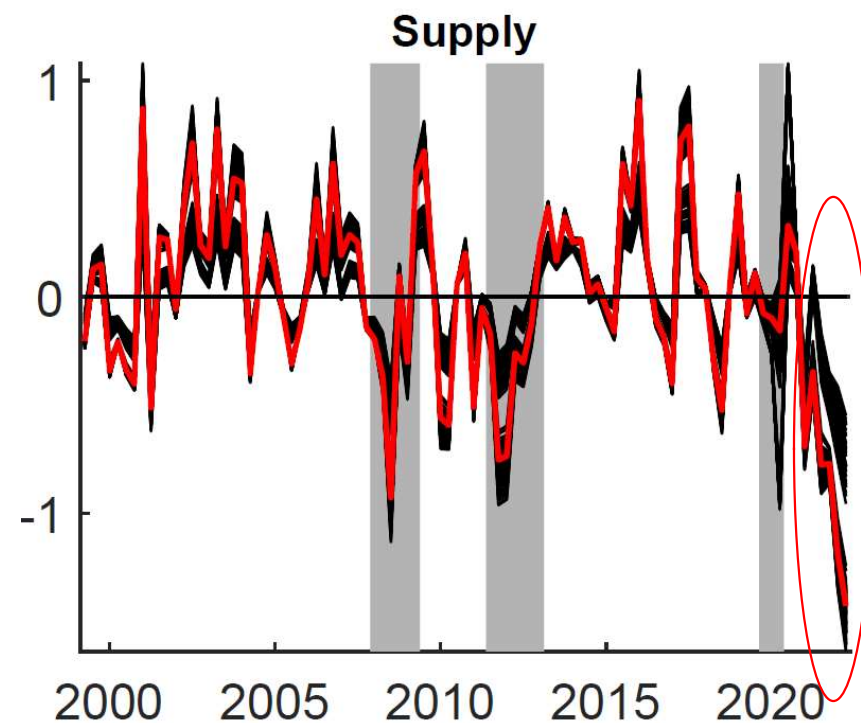
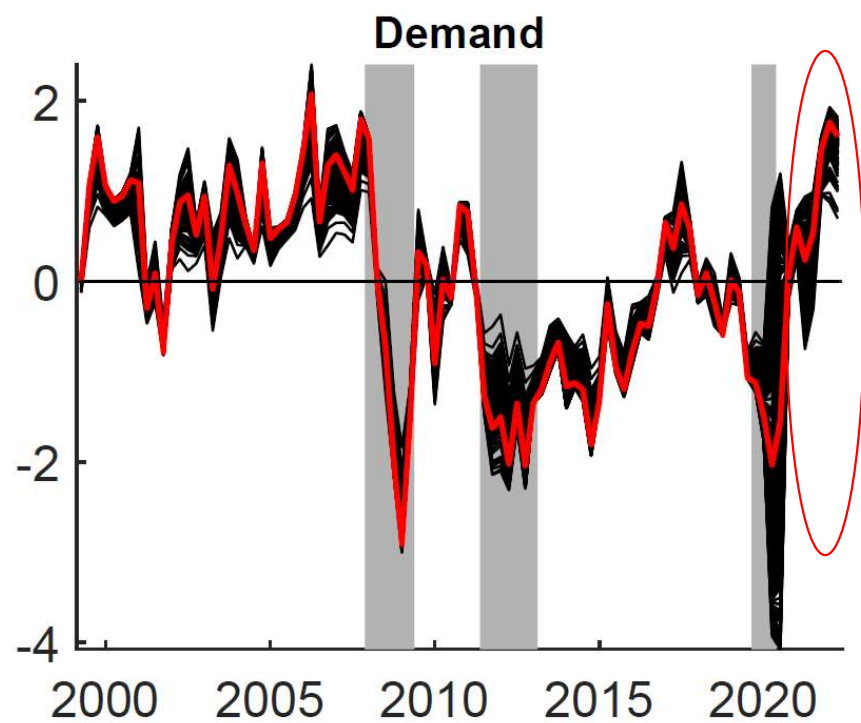
	Economic activity	Inflation
Supply	+	-
Demand	+	+

- Sign restrictions applied to factor loadings to identify demand and supply factors from a dataset with a large number of inflation and real activity measures

Demand and supply factors in the U.S. 1970-2022

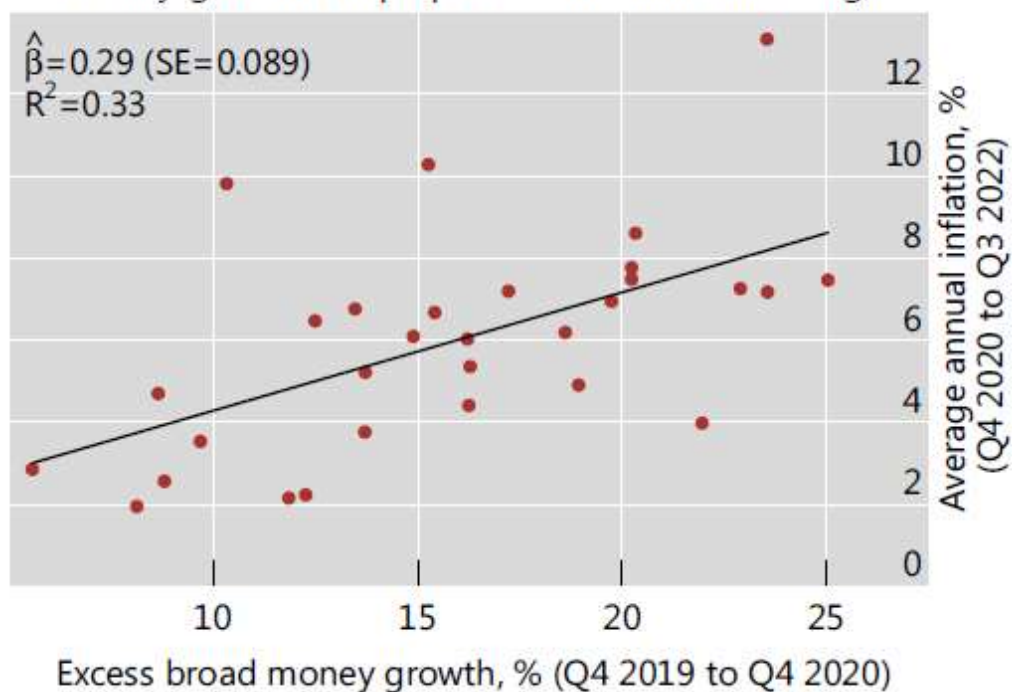


Demand and supply factors in the euro area 1999-2022

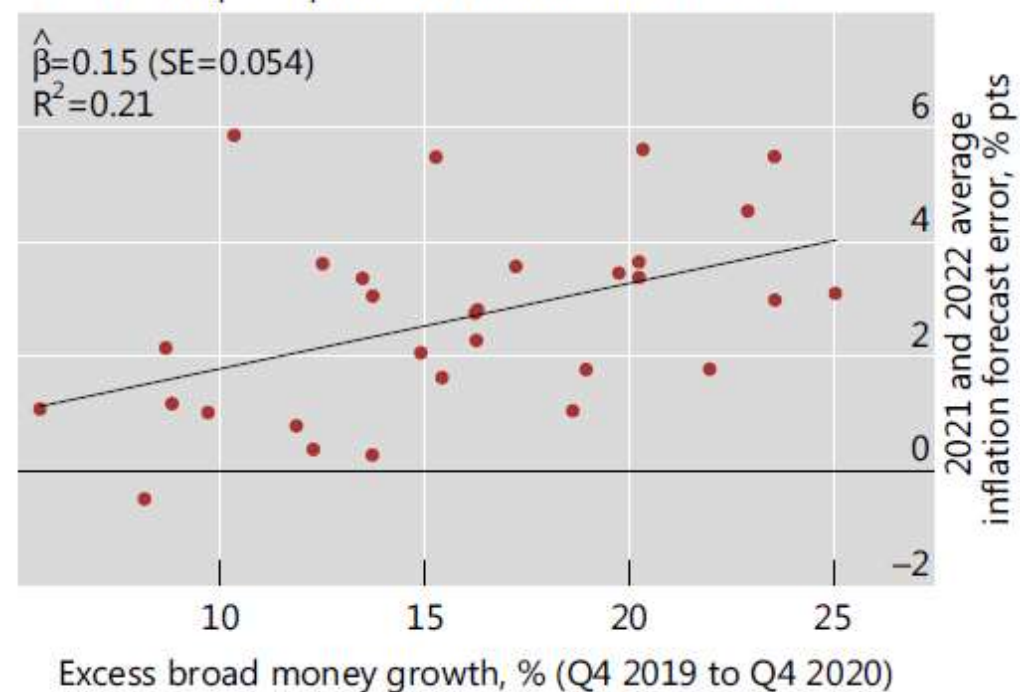


Money growth gave signal, too (Borio/Hofmann/Zakrajsek 2023)

A. Money growth helps predict the inflation surge...

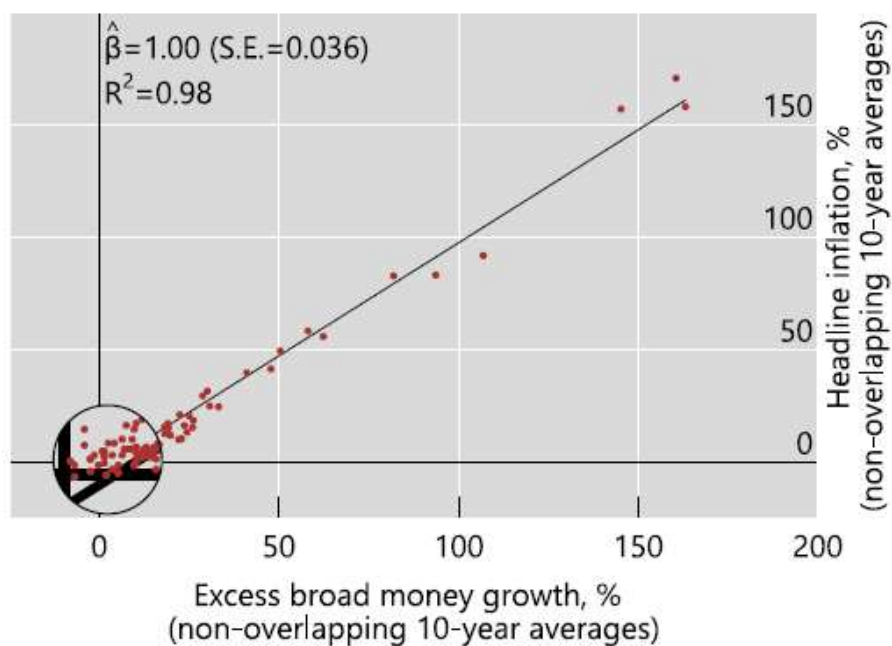


B. ...and helps explain inflation forecast errors²

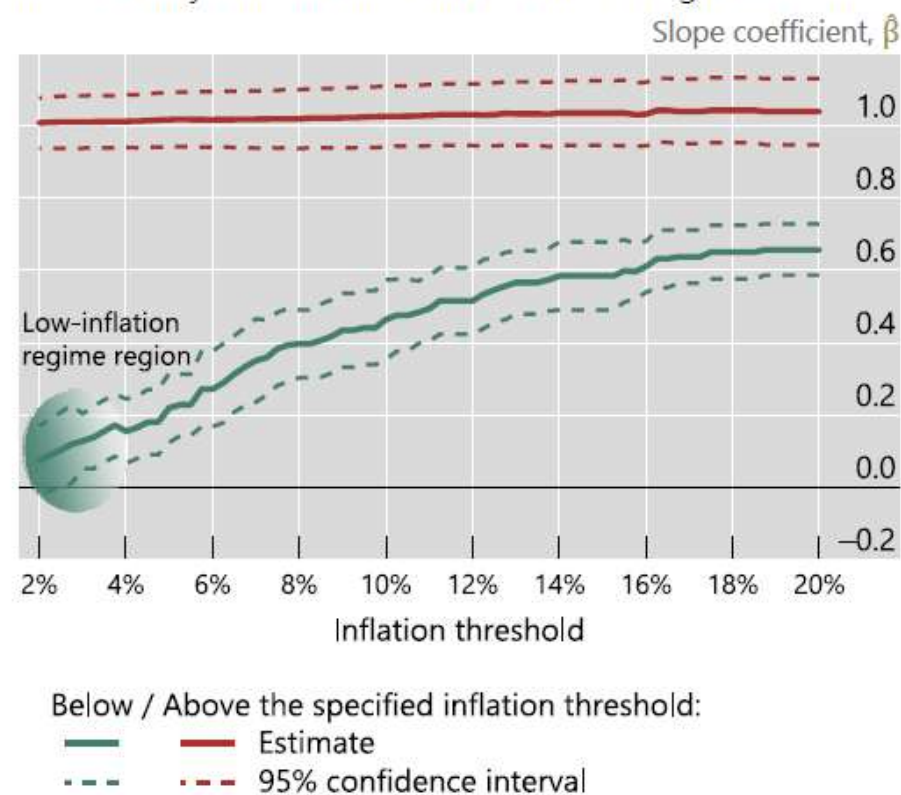


.....possibly reflecting the dependence of the link on the inflation regime

A. Inflation is closely linked to money growth...²



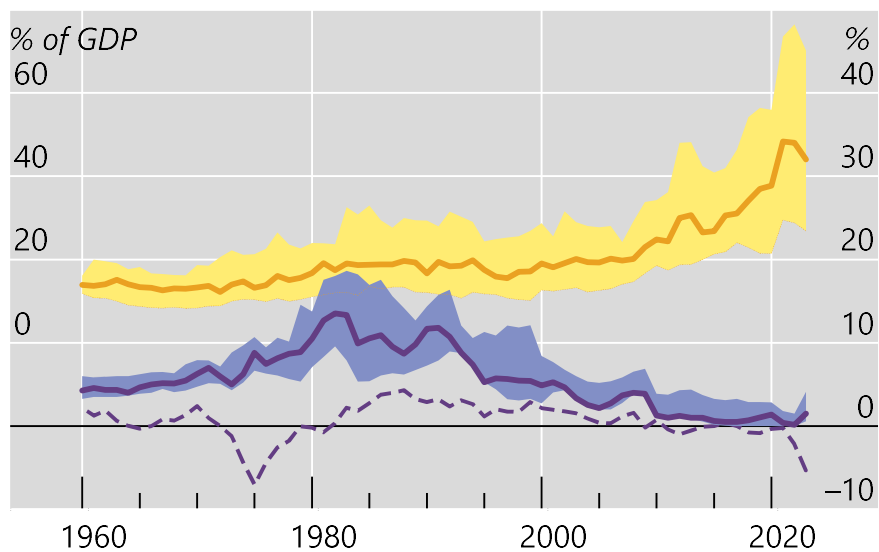
B. ...but only in countries and in times of high inflation³



Policy responses: How did we get here?

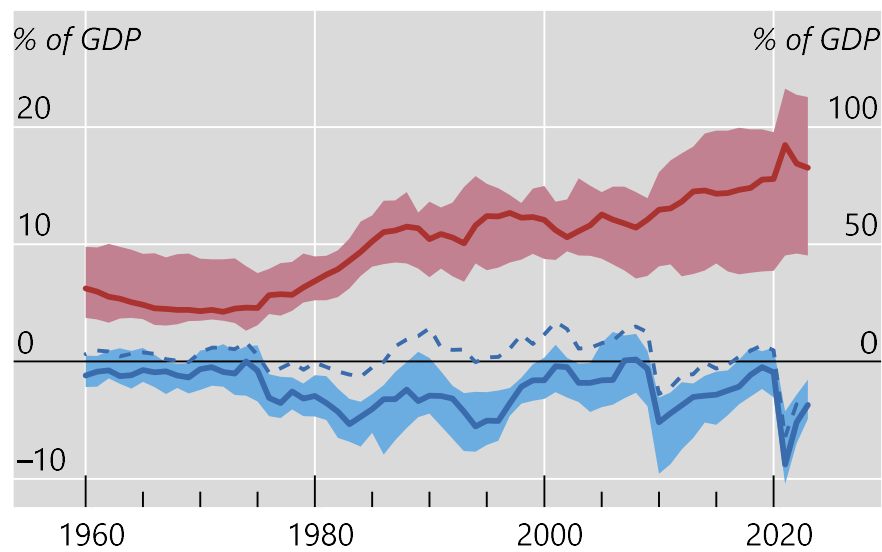
Monetary and fiscal policy in historical perspective

Policy rates and central bank balance sheets



Lhs: Total central bank assets:
 — Median
 ■ Interquartile range
 Policy rate:
 ■ Interquartile range (nominal)
 - - - Median (real ex-post)

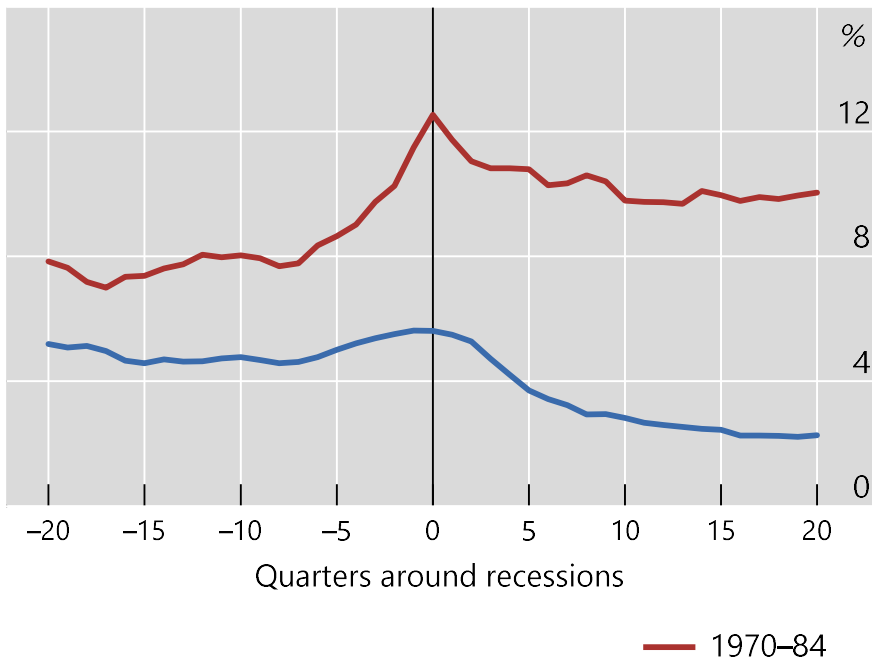
Fiscal deficits and government debt



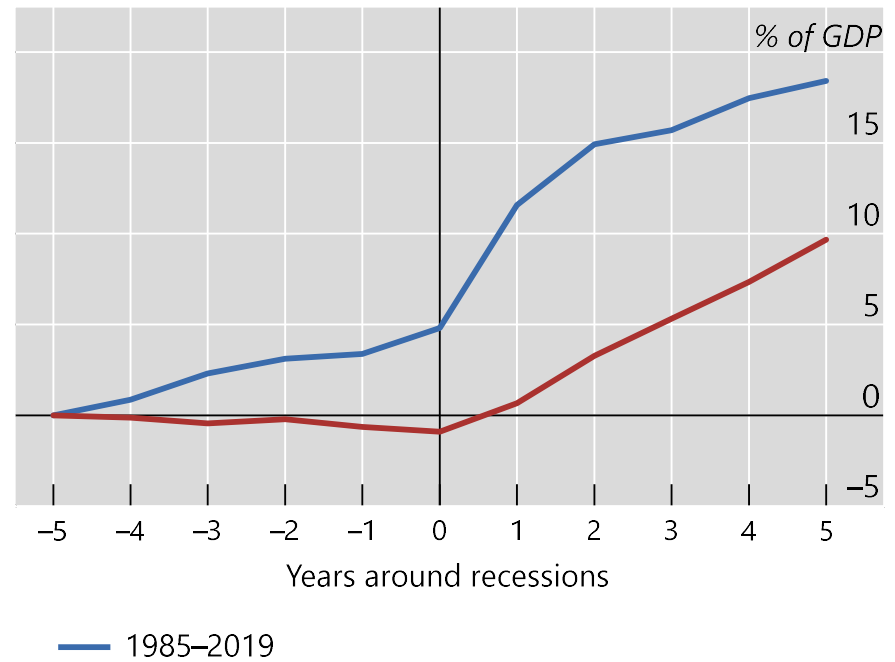
Lhs: Fiscal deficit:
 — Median
 ■ Interquartile range
 - - - Median (primary)
 Rhs: Government debt:
 — Median
 ■ Interquartile range

More accommodative policy responses over the cycle

Short-term interest rate



Cumulative change in government debt



Conclusions

- Simple analytical frameworks and indicators gave signal of demand/policy-driven inflationary pressures building up
- Cumulative effects of policies should be taken into account in policy conduct
 - Policy responses were always compelling in each point in time, but cumulatively pushed policies to the limit
 - Need to look beyond the challenge of the day and preserve policy buffers over the cycle

References

Carstens, A (2023): “Monetary and fiscal policies as anchors of trust and stability”, speech at Columbia University, New York, 17 April 2023.

Borio, C, B Hofmann and E Zakrajšek (2023): “Does money growth help explain the recent inflation surge?”, BIS Bulletin, no 67.

Eickmeier, S and B Hofmann (2022): “What drives inflation? Disentangling demand and supply factors”, BIS Working Paper, no 1047.