



Navigating by r^* : safe or hazardous?

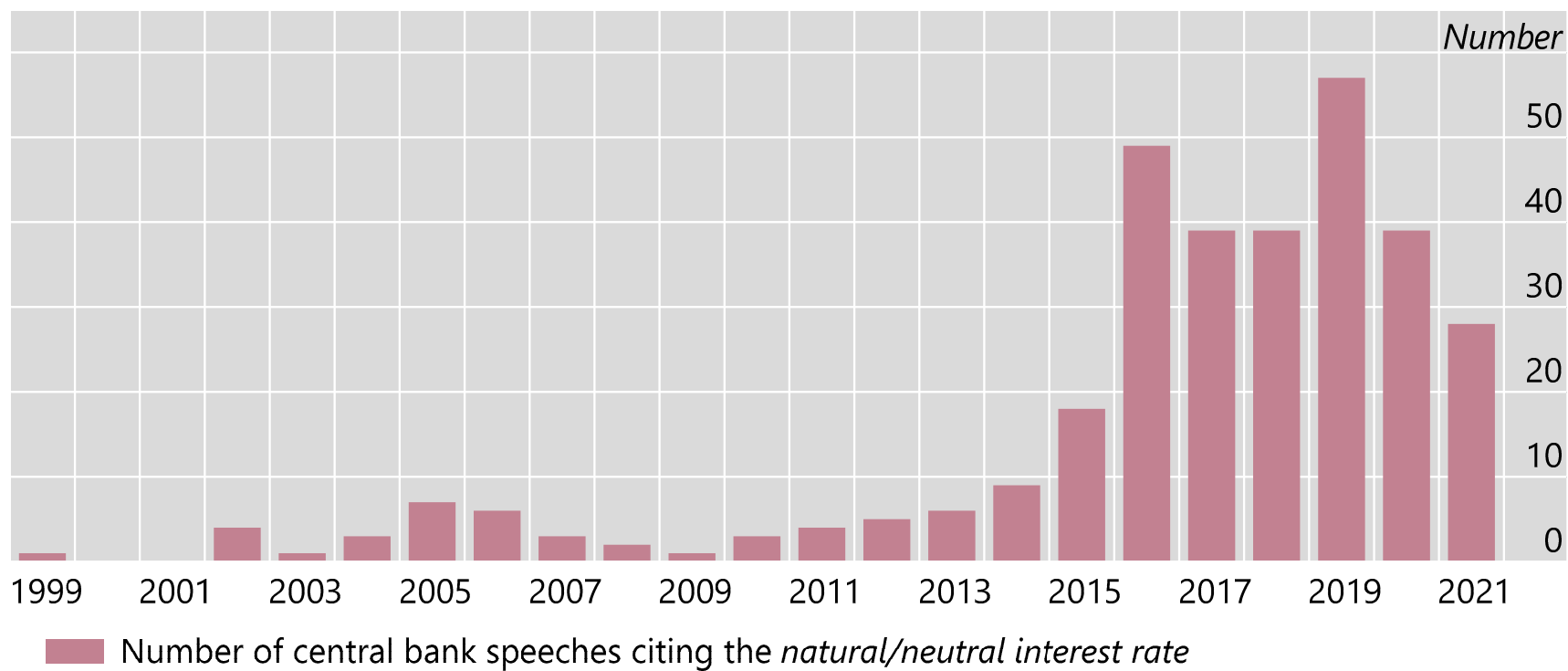
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SUERF, Bocconi, OeNB Workshop on "How to raise r^* ", 15 September 2021

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

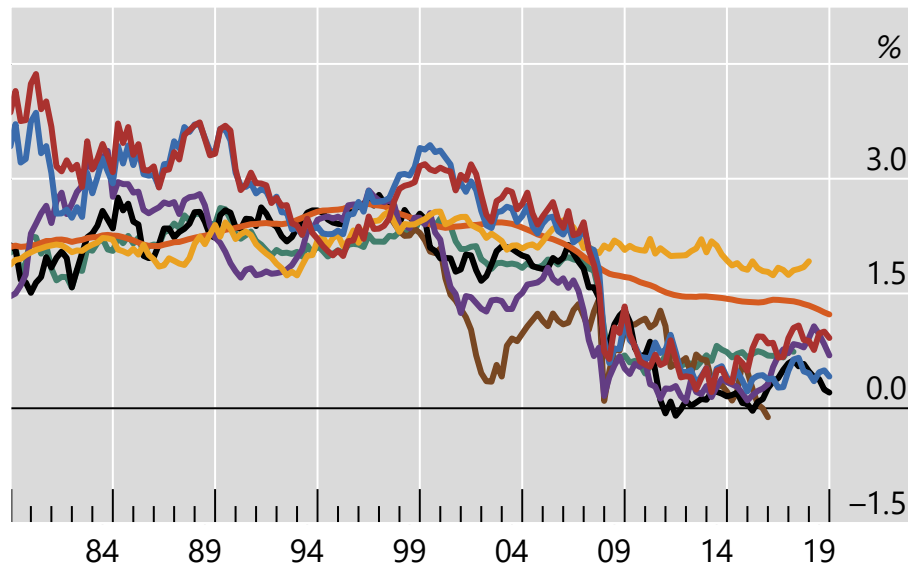
Central bank speeches mentioning the natural rate of interest



Sources: BIS central bankers' speeches database; author's calculations.

Estimates of natural interest rates

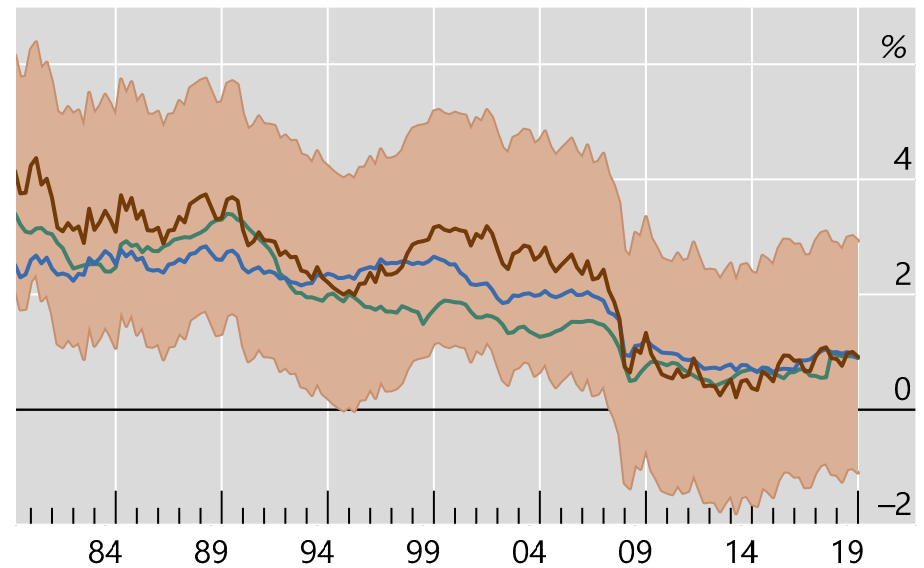
Variation across estimates



r* estimates for US:

- Laubach and Williams
- Johanssen and Mertens
- Del Negro et al – VAR
- Christensen and Rudebusch
- Holston et al
- Lubik and Matthes
- Del Negro et al – DSGE
- Kiley

Average estimates have drifted down over time

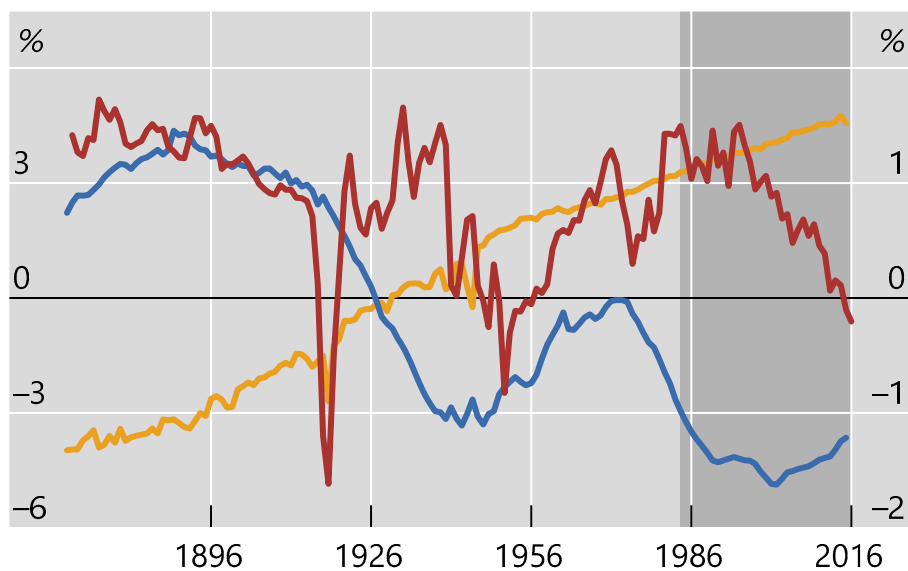


- Laubach-Williams estimates with ± 1 -std confidence band
- Mean of US estimates
- Mean of non-US estimates

Sources: Armelius et al (2018); Carter et al (2019); Christensen and Rudebusch (2019); Del Negro et al (2017); Fries et al (2018); Holston et al (2017); Johanssen and Mertens (2016); Kiley (2015); Laubach and Williams (2003); Lubik and Matthes (2015); McCrick and Rees (2017); Sudo et al (2018); Bank of England (2018); BIS calculations.

r-star and its determinants

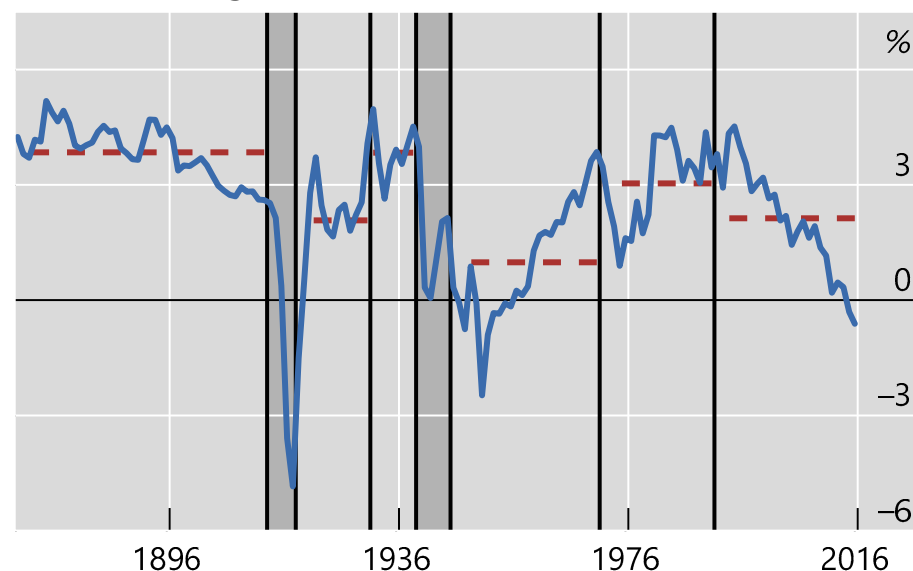
Demographic variables



Lhs: — Long-term real rates

Rhs: — Dependency — Life expectancy

Median long-term rate across countries



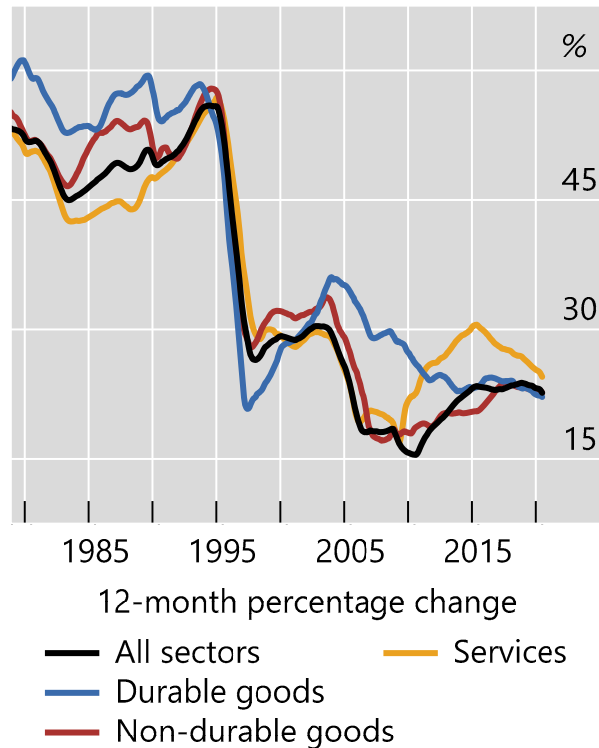
— Median

- - Average

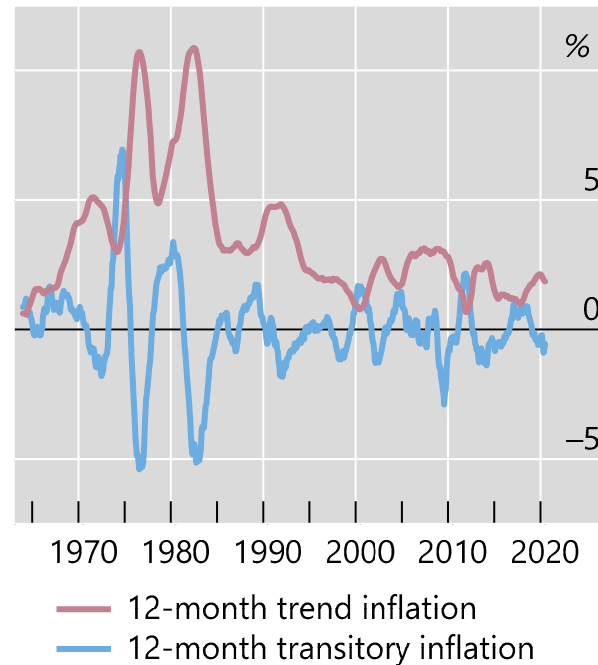
Source: C Borio, P Disyatat, M Juselius and P Rungcharoenkitkul, "Why so low for so long? A long-term view of real interest rates", *BIS Working Papers*, no 685, December 2017.

The common component of inflation drops

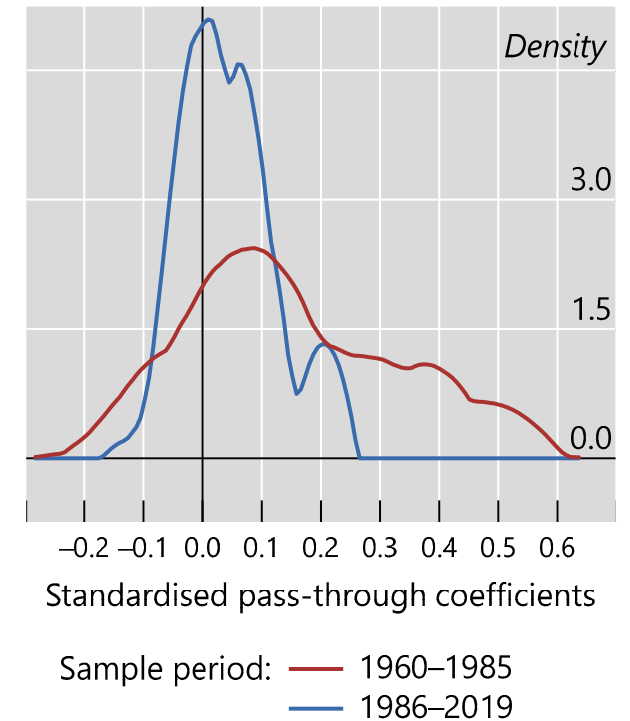
Time-varying fraction of variance attributable to the common component



US headline PCE components



The pass-through of “salient” relative price increases to core PCE has declined



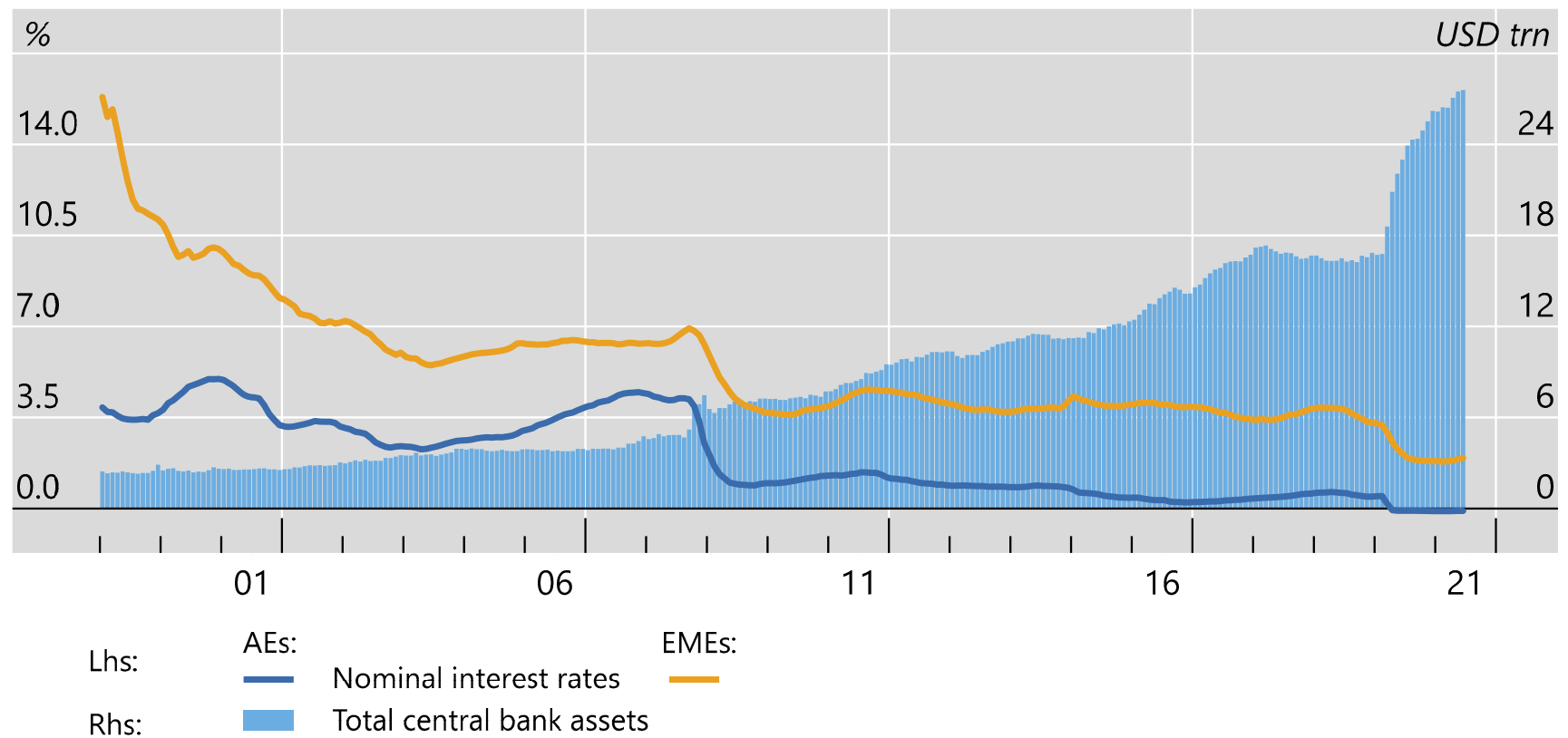
Source: C Borio, P Disyatat, D Xia and E Zakrajšek, “Monetary policy, relative prices and inflation control: flexibility born out of success”, forthcoming.



Annex

Narrowing room for policy manoeuvre

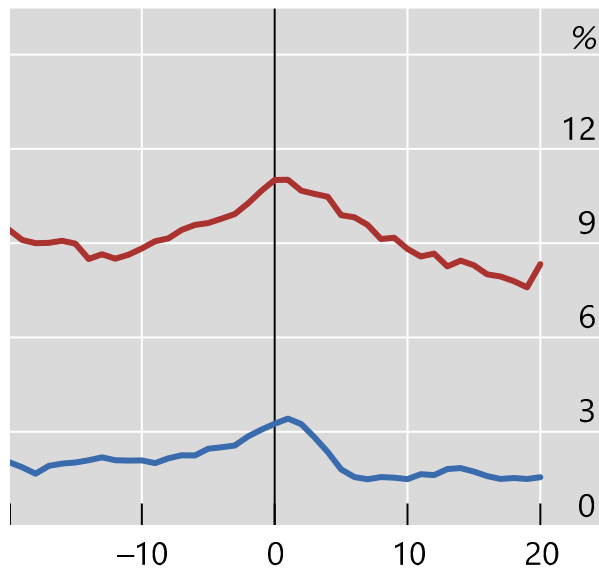
Interest rates and central bank balance sheets



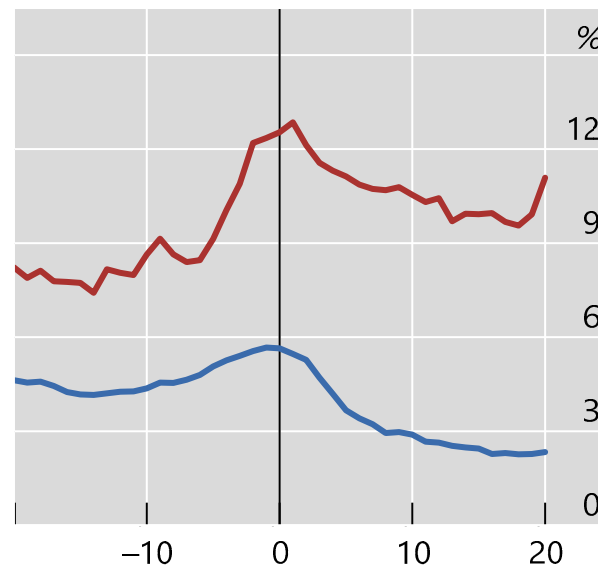
Source: BIS, *Annual Economic Report: Editorial*, June 2018, pp ix–xvi.

The changing nature of business cycle

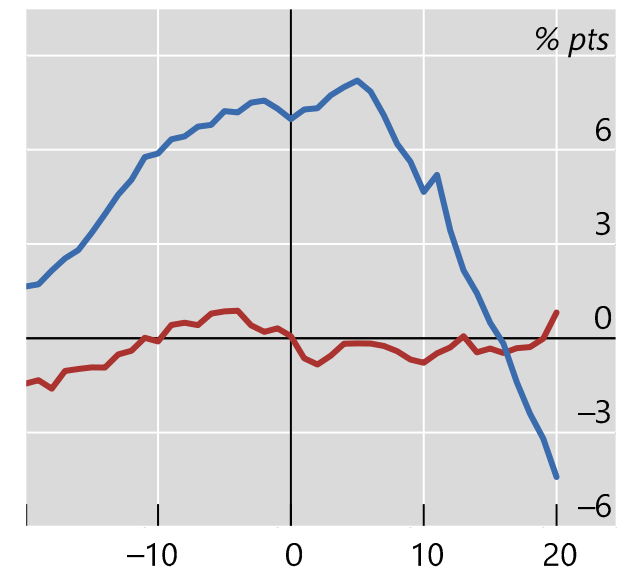
Inflation



Short-term interest rate



Credit-to-GDP gap



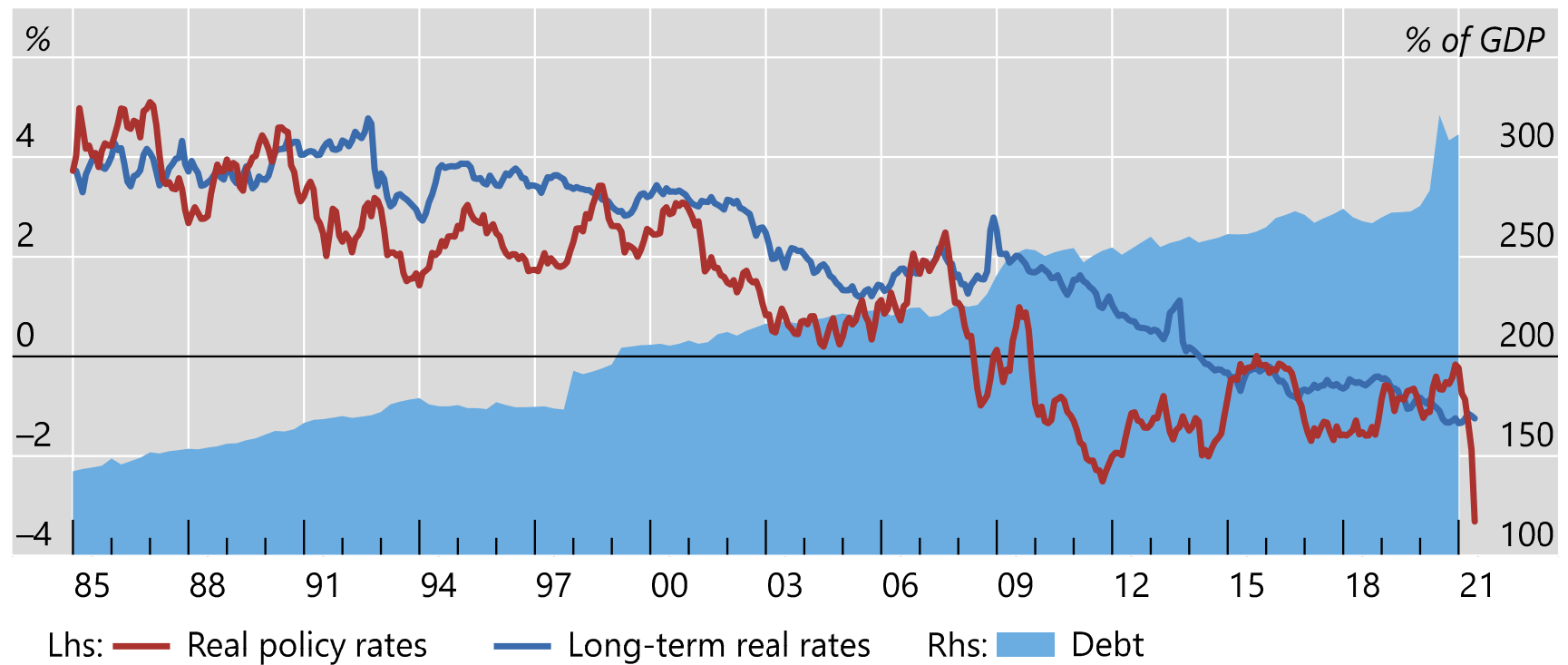
Quarters around beginning of recessions

— 1970–85 — Since 1985

Source: C Borio, M Drehmann and D Xia, "The financial cycle and recession risk", *BIS Quarterly Review*, December 2018, pp 59–71.

The debt trap

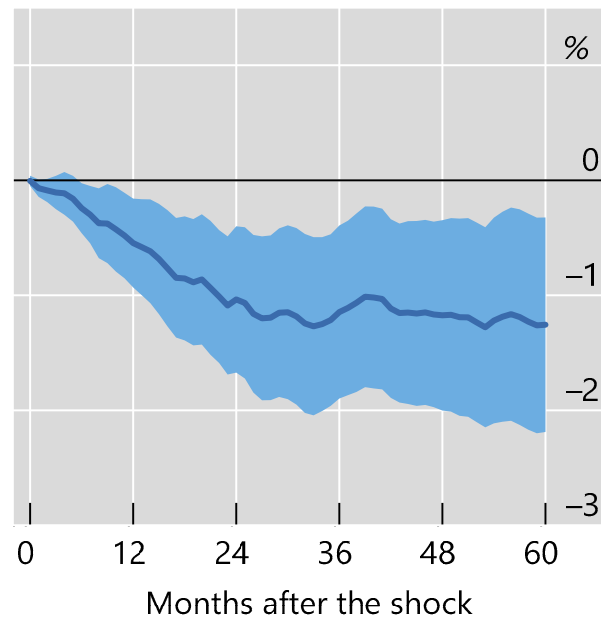
Interest rates sink as debt soars



Sources: Bloomberg; Datastream; national data; author's calculations.

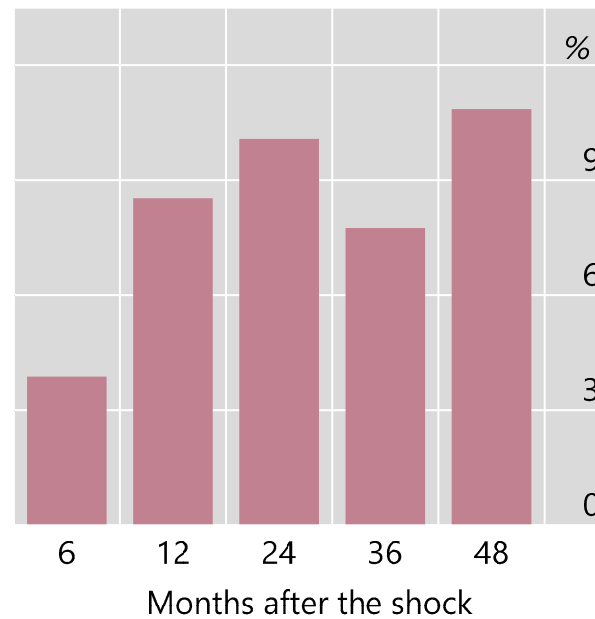
Monetary policy loses traction

Response of the common component of sectoral price changes

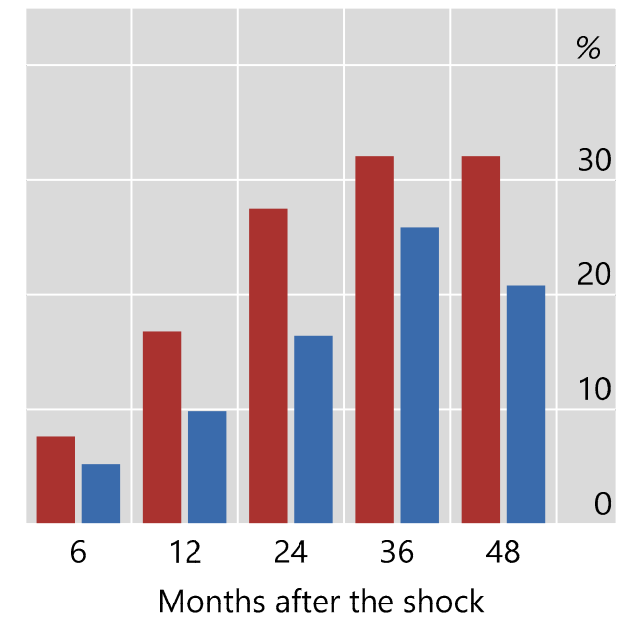


— Estimate
 ■ 90% confidence interval

Percentage of sectors with significant sector-specific price response



Percentage of sectors with significant price response



■ PCE sectors
 ■ Weighted by expenditures

Source: C Borio, P Disyatat, D Xia and E Zakrajšek, "Monetary policy, relative prices and inflation control: flexibility born out of success", forthcoming.