BANK OF ENGLAND

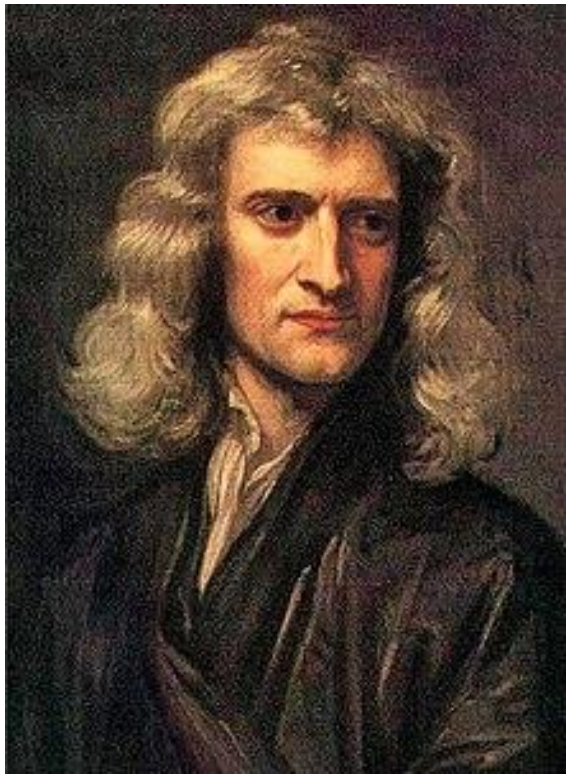
The Grand Unifying Theory (and Practice) of Macroprudential Policy

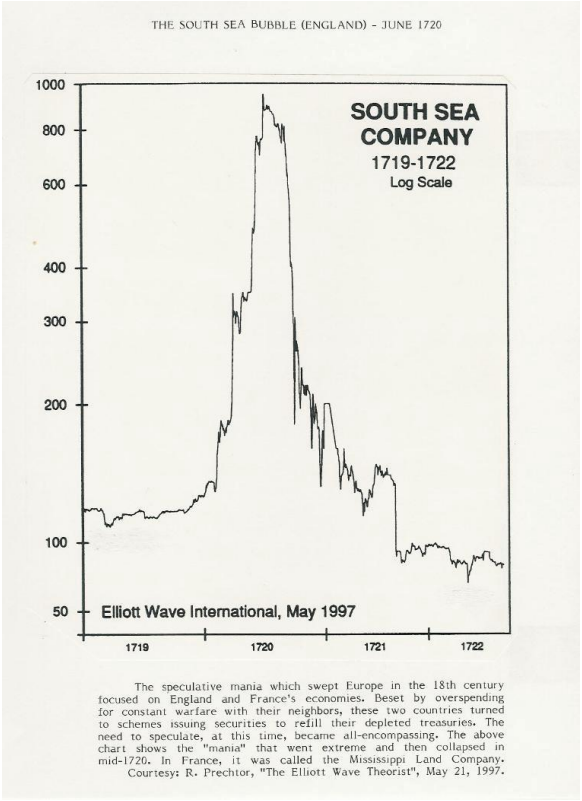
Mark Carney

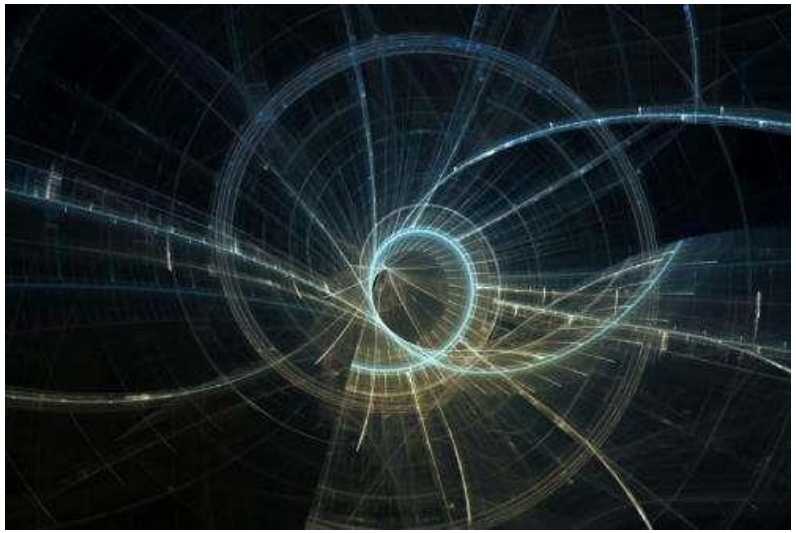
Governor, Bank of England

5 March 2020

Newtonian Mechanics… and Madness







Triumph (and Tragedy) of Monetary Policy

Time inconsistency: resolved by society choosing preferred rate of inflation, then delegating operational responsibility to the monetary authority.

MPC's monetary policy remit: achieve price stability, defined by the Government as 12-month CPI inflation of 2%. Target is symmetric and applies at all times.

Temporary deviations from target: recognised explicitly in remit since 2013; Bringing inflation back too rapidly could cause undesirable volatility in output and employment.

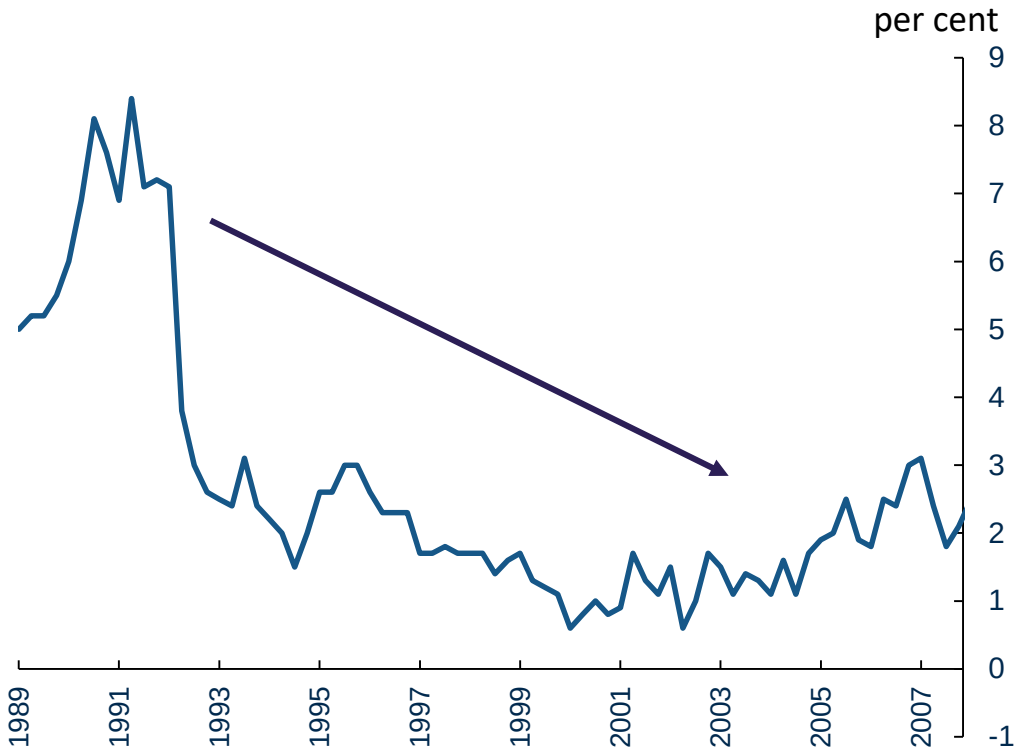
Triumph (and Tragedy) of Monetary Policy

Monetary policymaker's loss function

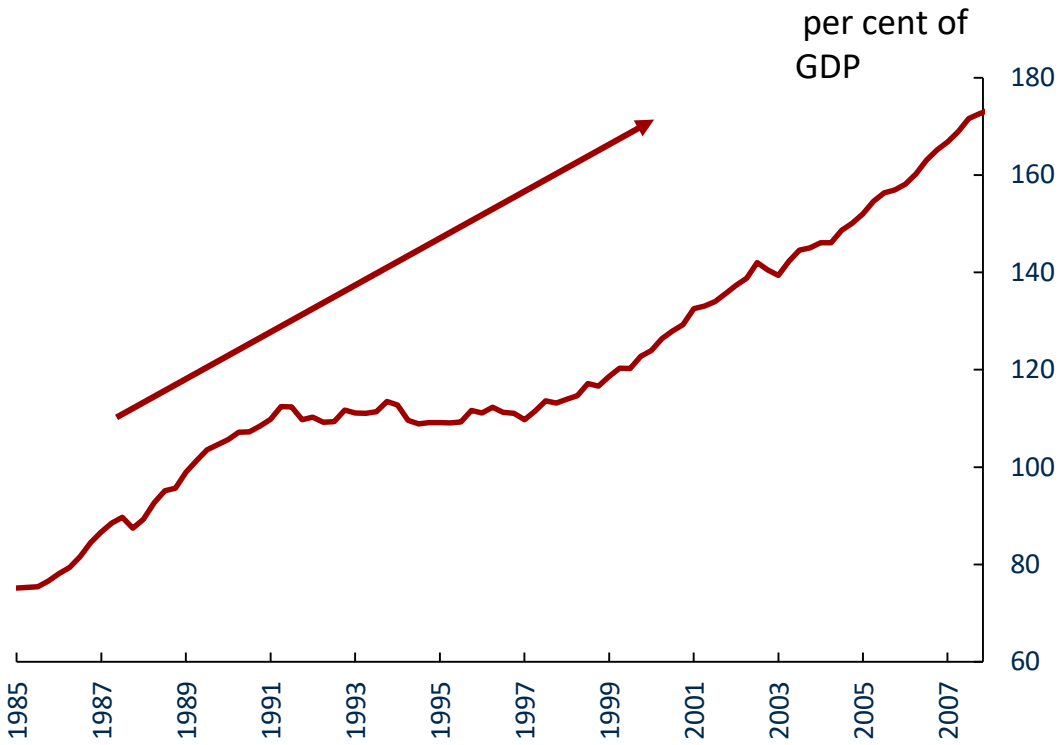
$$\min_{\{r_{t+i}\}_{i=0}^{T}} \mathcal{L}_t \equiv E_t \left\{ \sum_{i=o}^{H} \beta^i [(\pi_{t+i} - \pi^*)^2 + \lambda (y_{t+i} - y^*_{t+i})^2] \right\}$$

Central banks won the war only to lose the peace

UK Inflation

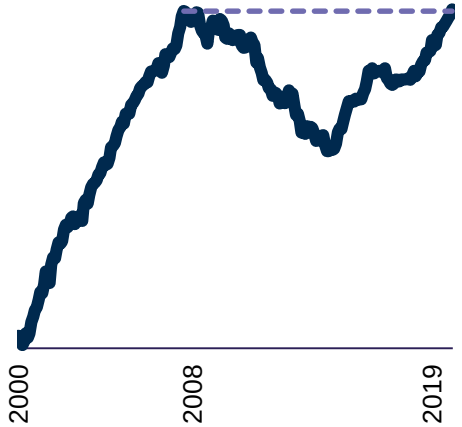


Total UK private non-financial sector credit growth



Financial crisis powerful reminder of imperative of financial stability

$15 trillion to backstop the system in 2008



UK real wages have only just surpassed their 2007 level

Trust in the system collapsed

Advent of Macroprudential Policy

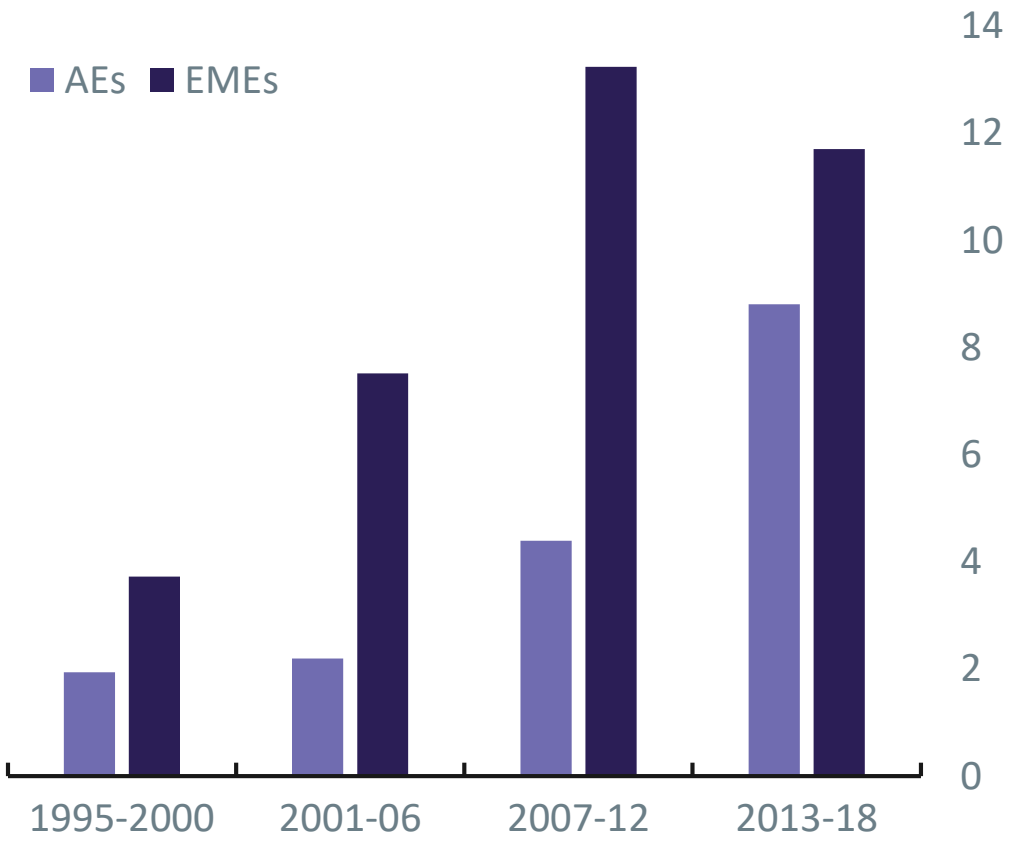
Raison d’être is to ensure the financial system supports the economy by

Lending to households and businesses when economic shocks occur

Ensuring downturns not made worse by unsustainable debt burdens

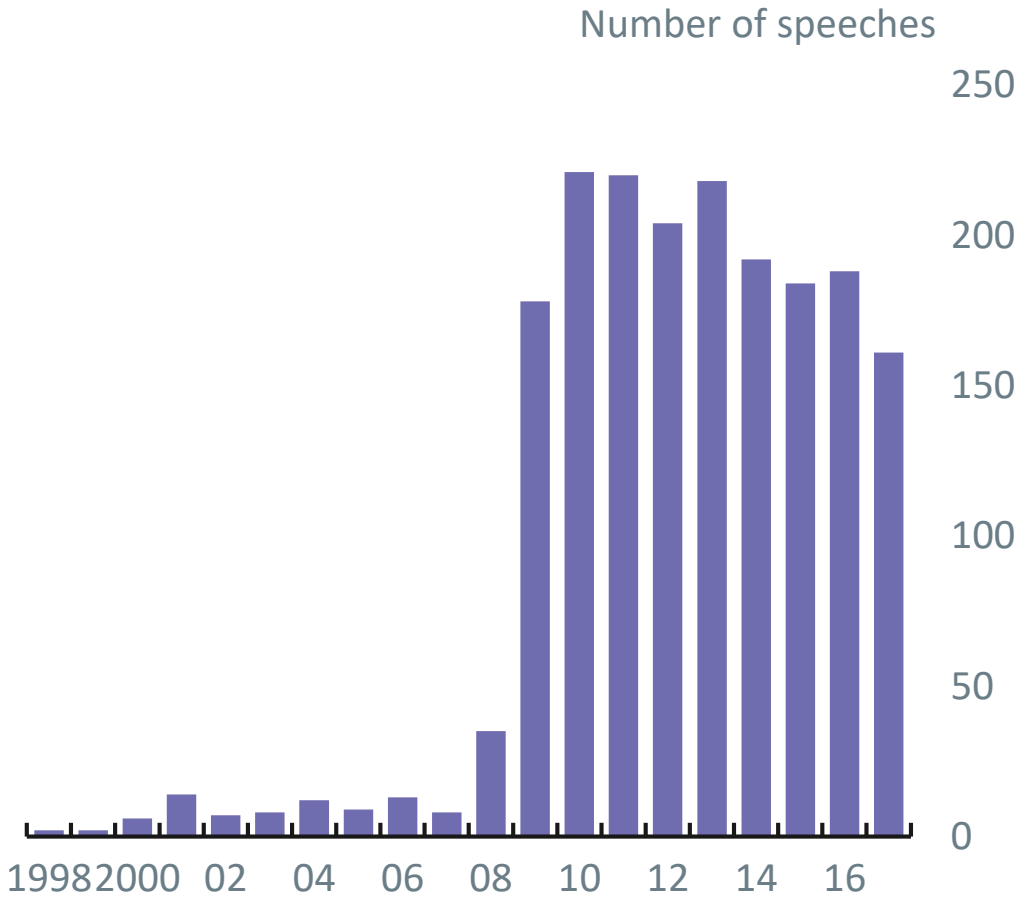
Advent of Macroprudential Policy

Increasing use of macroprudential measures over time



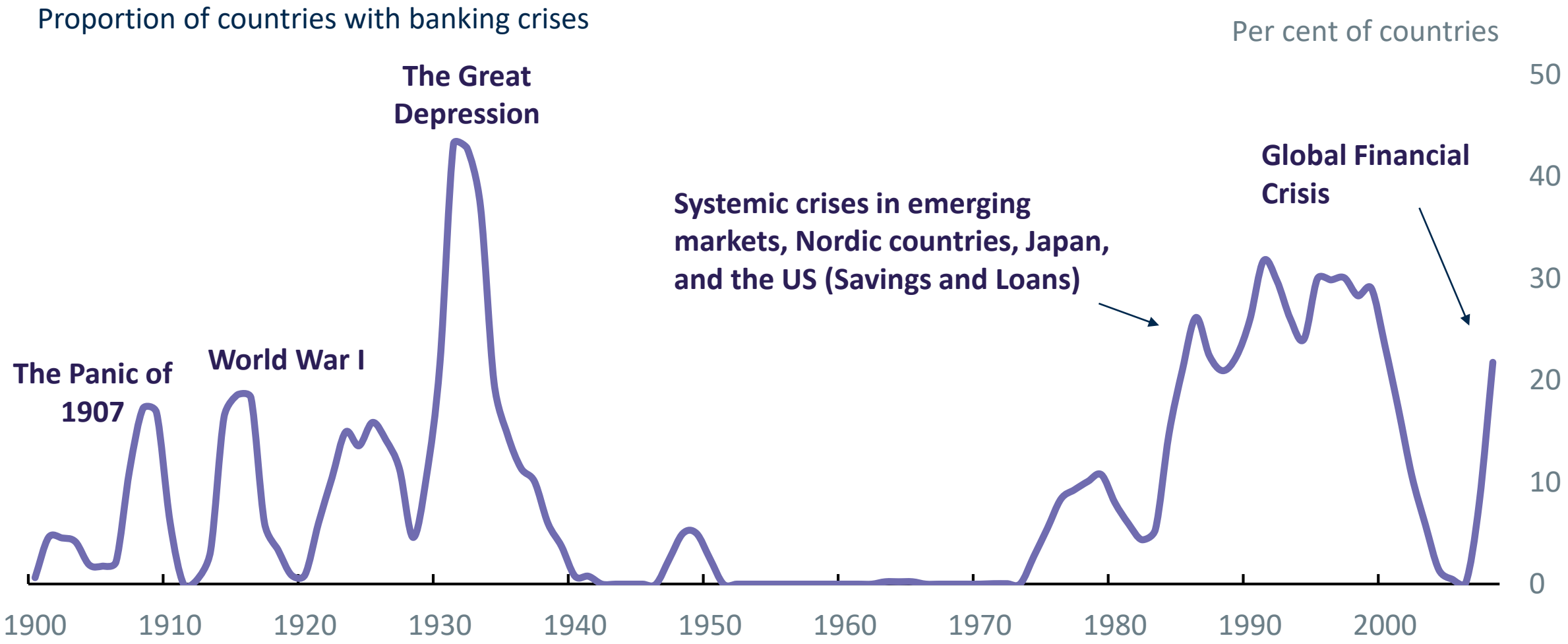
Sources: Bank of International Settlements

And speeches mentioning “macroprudential”



Sources: Bank of International Settlements

When it comes to financial stability, success is an orphan



Grand Unifying Theory of Macroprudential Policy

Primary objective

To identify, monitor and take action to remove or reduce systemic risks with a view to protecting and enhancing the resilience of the UK's financial system

Secondary objective

Support the economic policy of Her Majesty's Government, including its objectives for growth and employment.

And…

Not required or authorised to exercise functions in a way that would in its opinion be likely to have a significant adverse effect on the capacity of the financial sector to contribute to the growth of the UK economy in the medium or long term.

Grand Unifying Theory of Macroprudential Policy

Macroprudential policymaker's loss function

$$\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^{T} \beta^i \left[f(G@R_{t+i}) - \phi y_{t+i} \right] \right\}$$

Monetary Policy vs Macroprudential Policy

Clarity of objectives: MPC's primary objective readily measured; FPC's primary objective only estimated

Impact on growth: MPC limited ability to influence trend growth. FPC policies potentially important for trend growth given permanent scarring from crises and influence on productive finance

Time horizon: Longer horizon means discount rate more important for FPC

Monetary Policy vs Macroprudential Policy

Monetary policymaker's loss function

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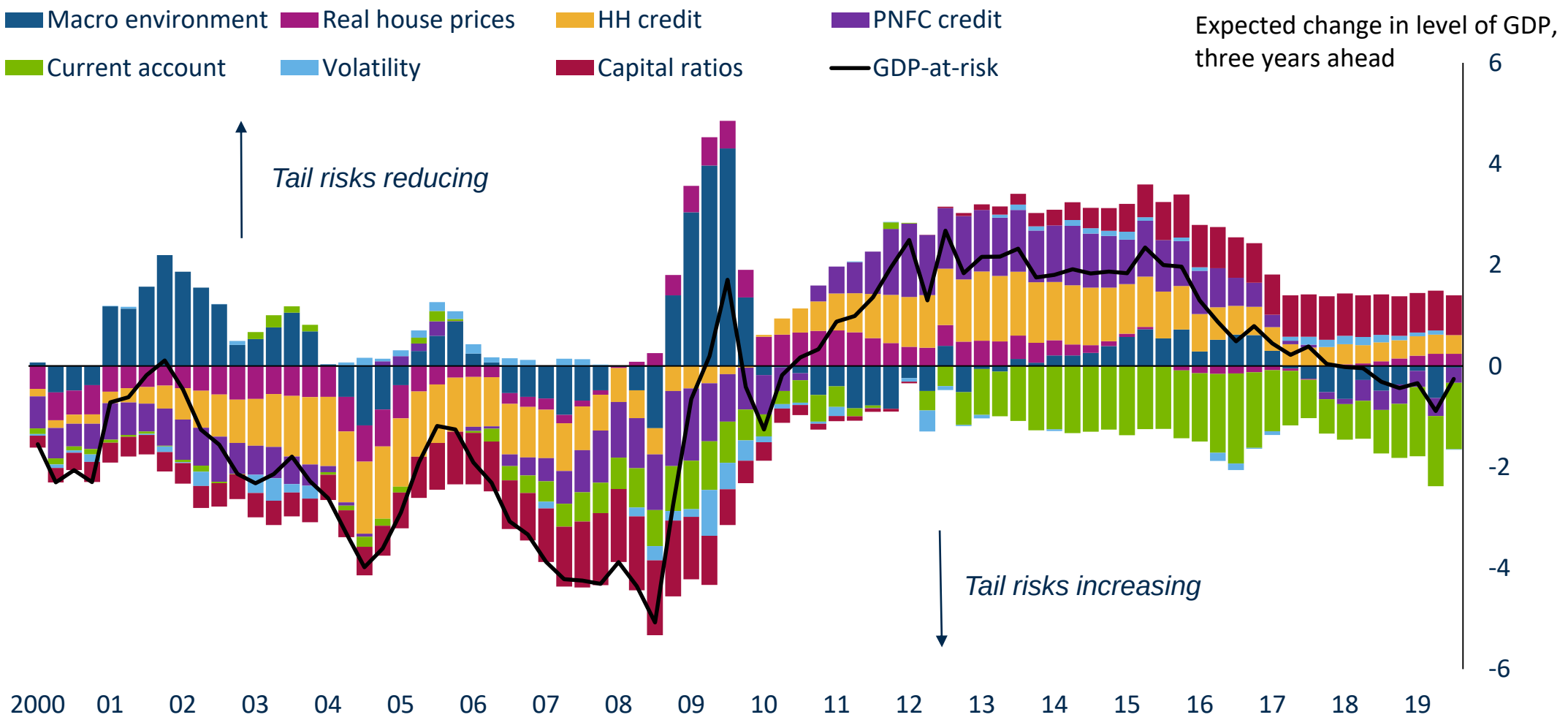
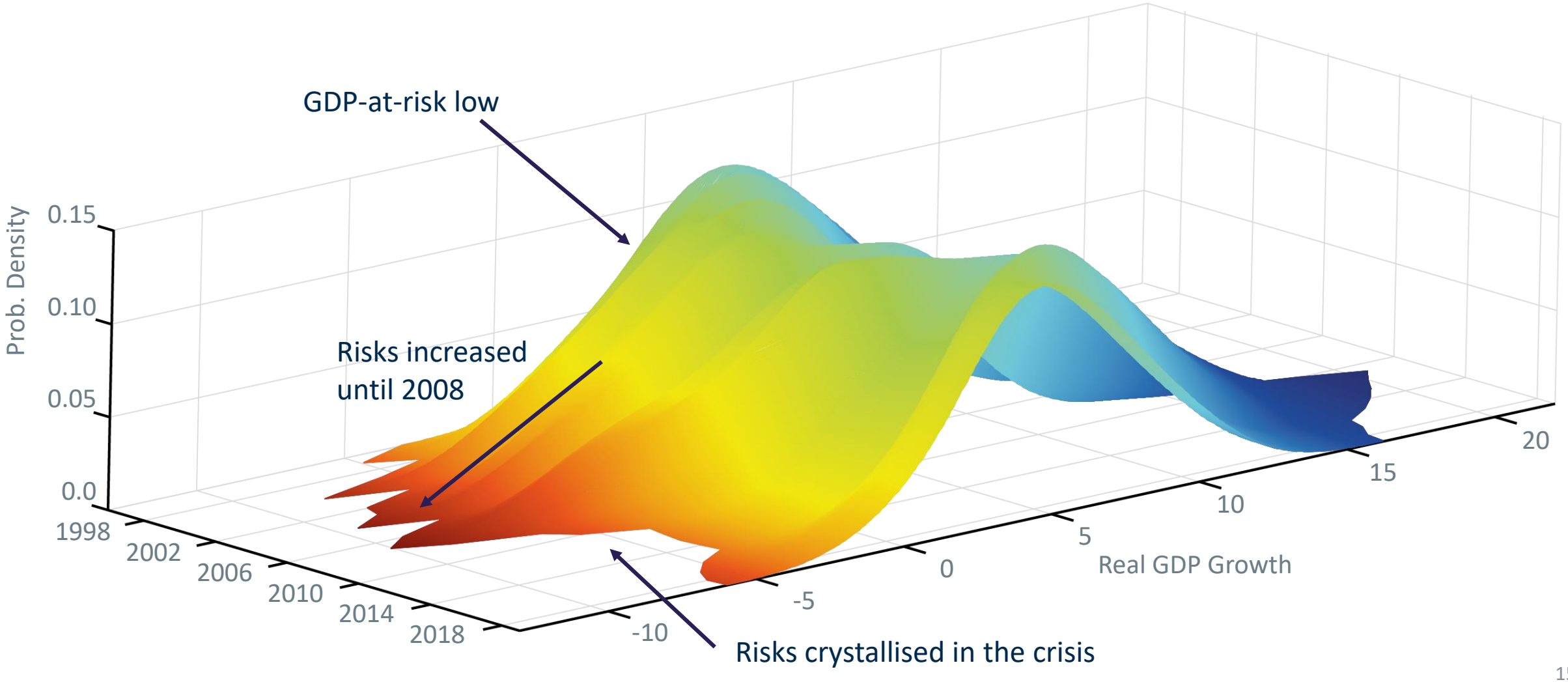
Intermediate indicators suggest UK risks around standard



Sources: BIS, OECD, Datastream, ONS, Bank calculations.

Risks surged during the Great Moderation, now standard



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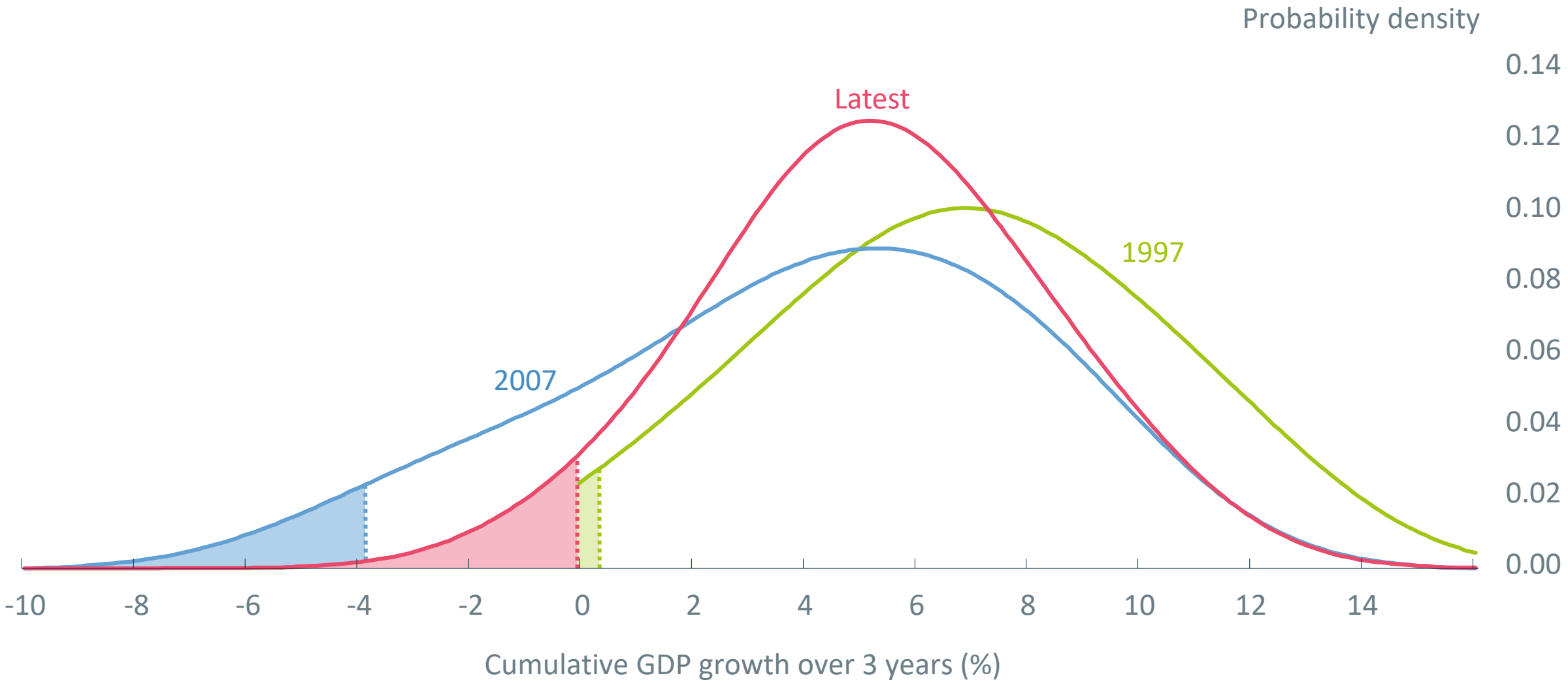

Monetary Policy vs Macroprudential Policy

Monetary policymaker's loss function

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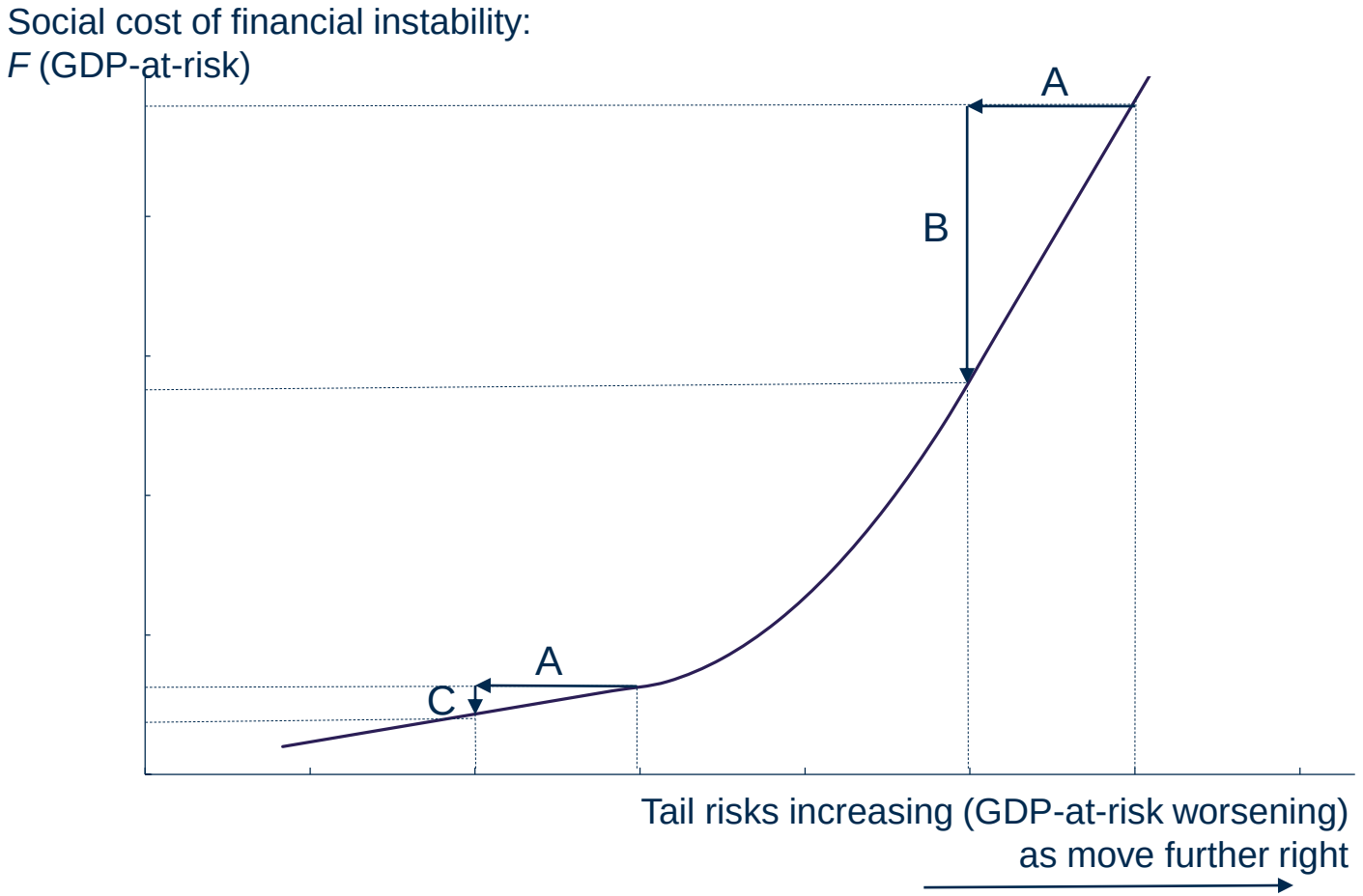
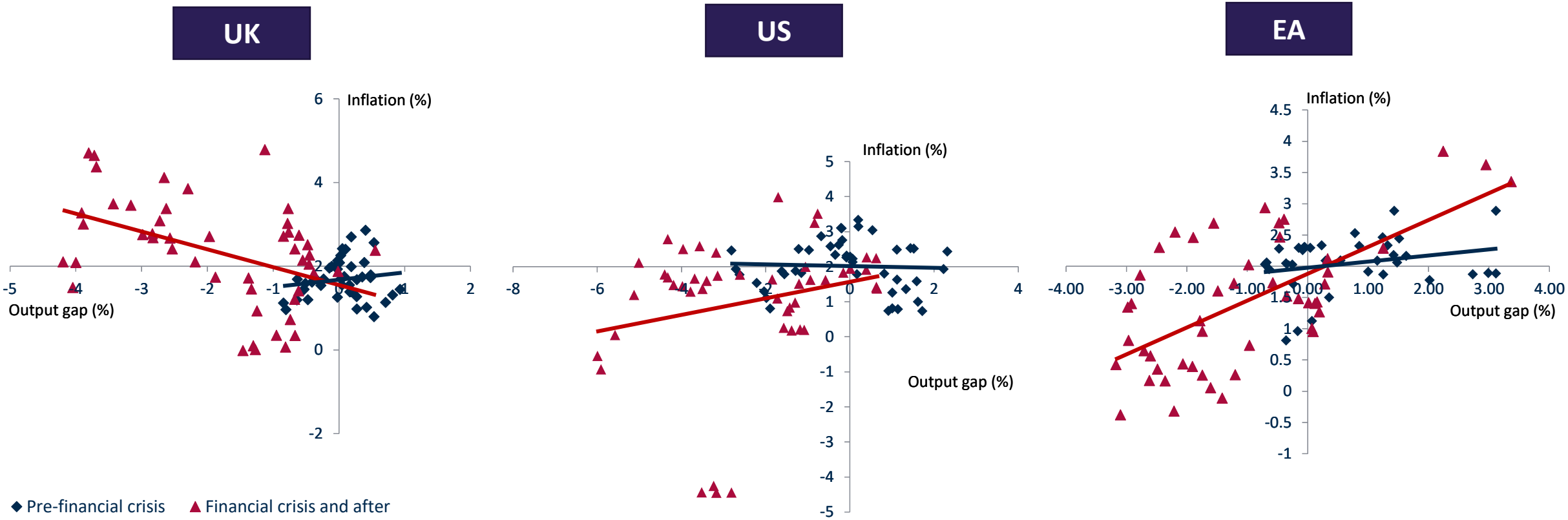
Reducing GDP-at-risk more valuable at higher levels of GDP-at-risk



Divine Coincidence generally held in US, Euro area but rarely for UK post-crisis



Sources: Bureau of Economic Analysis, CBO, Eurostat, IMF and Bank calculations.

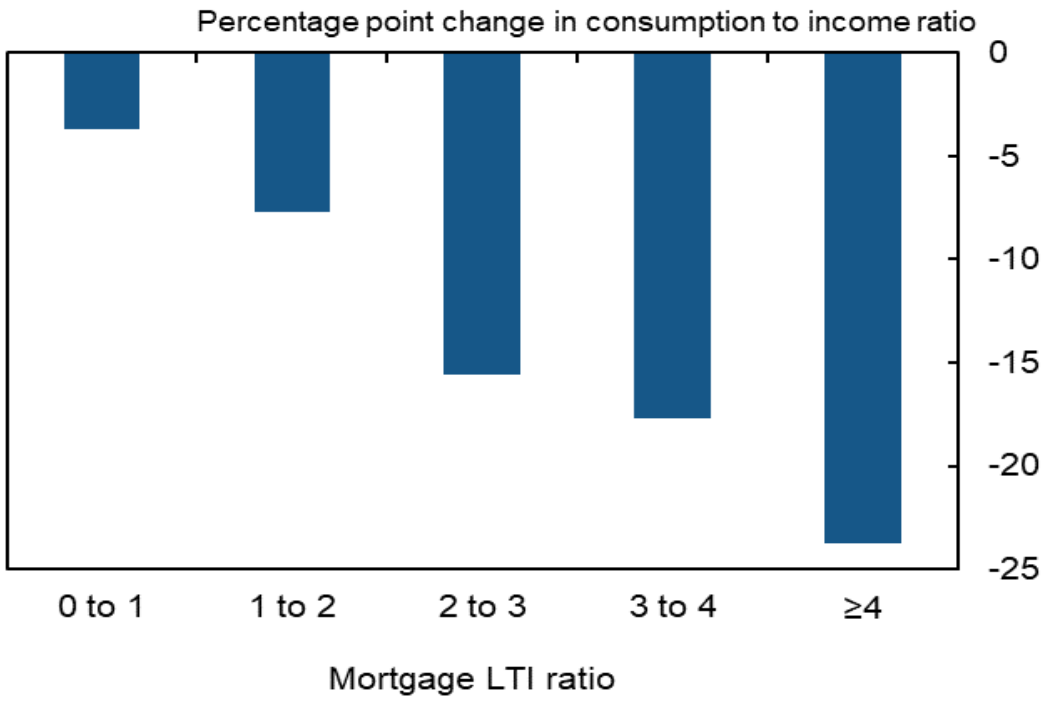
FPC's housing tools reduce GDP-at-risk

$$\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^{T} \beta^i \left[f(G@R_{t+i}) - \phi y_{t+i} \right] \right\}$$

Housing tools reduce GDP-at-risk whilst minimising negative impact on central GDP forecast. Example of targeted, efficient policy tool.

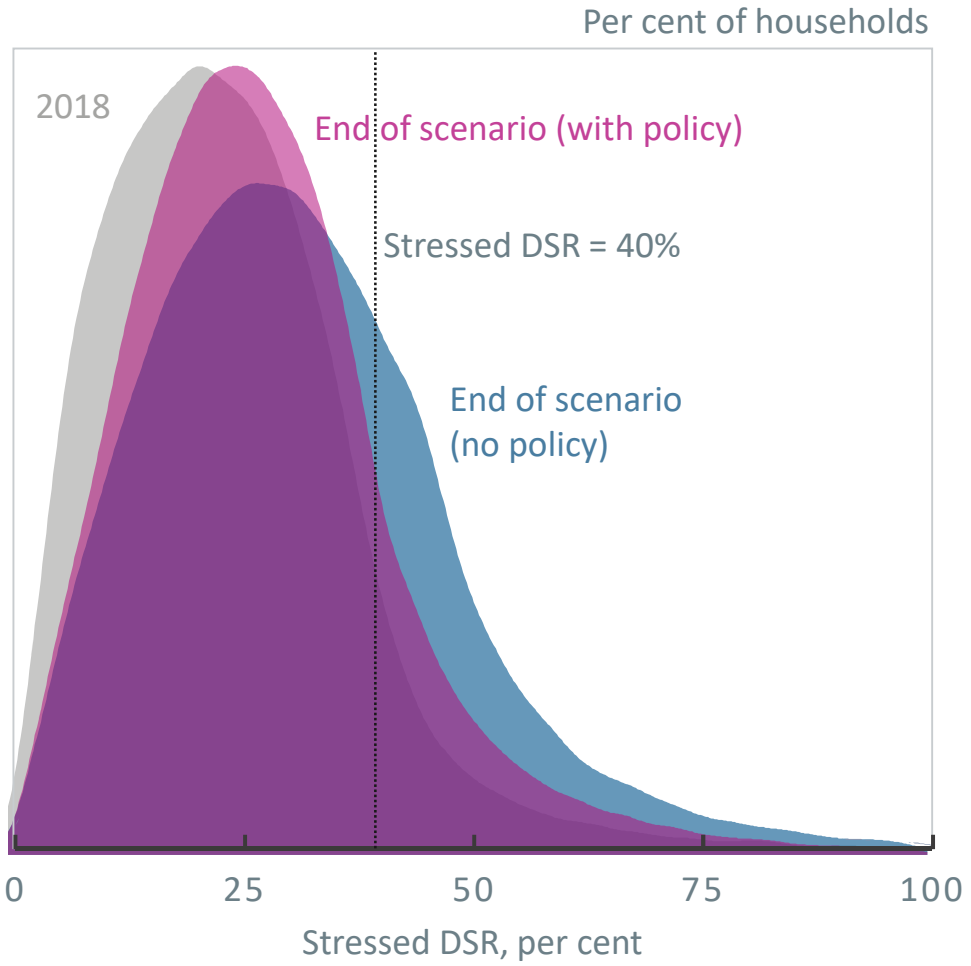
FPC housing tools reduce GDP-at-risk

Changes in consumption relative to income among mortgagors with different LTI ratios (2007-2009)



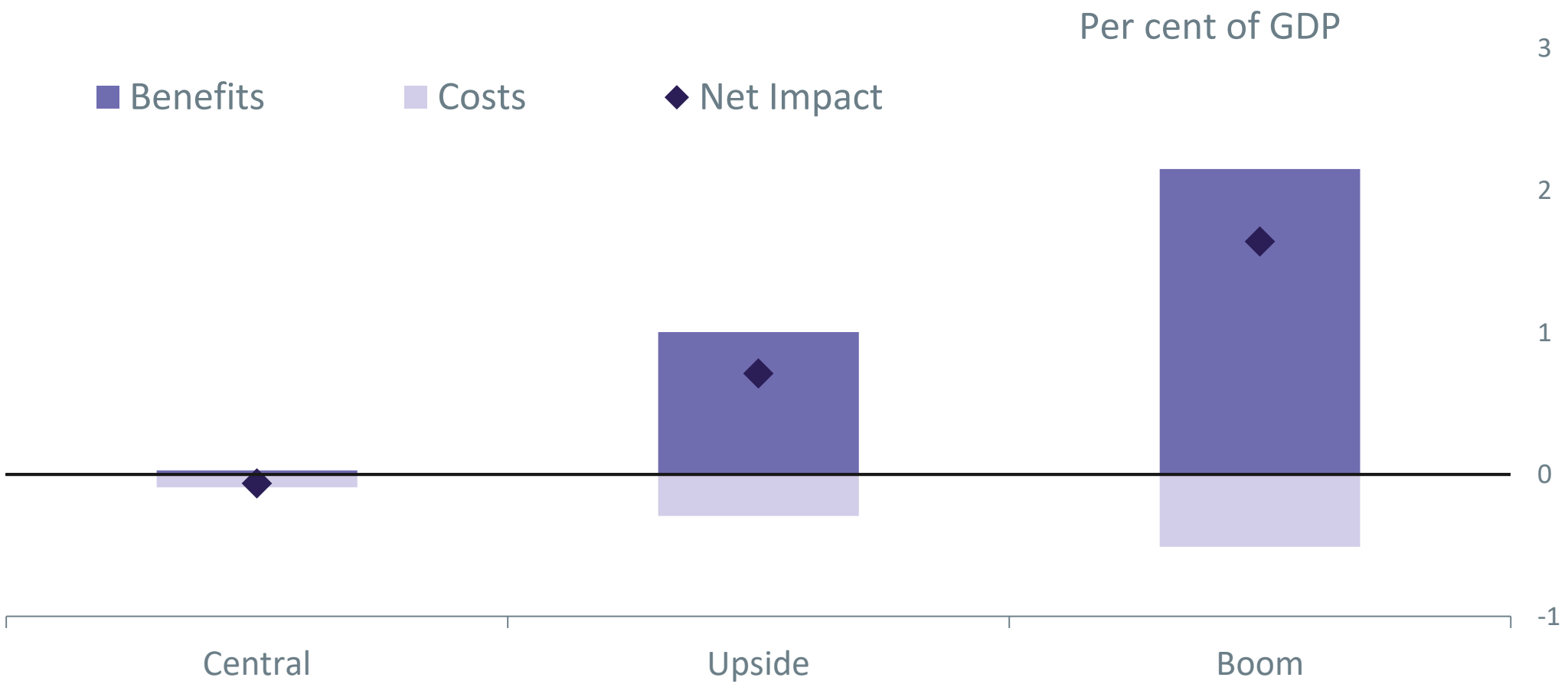
Sources: Living Costs and Food (LCF) Survey, ONS and Bank calculations

Per cent of households with stressed debt-servicing ratios above 40%



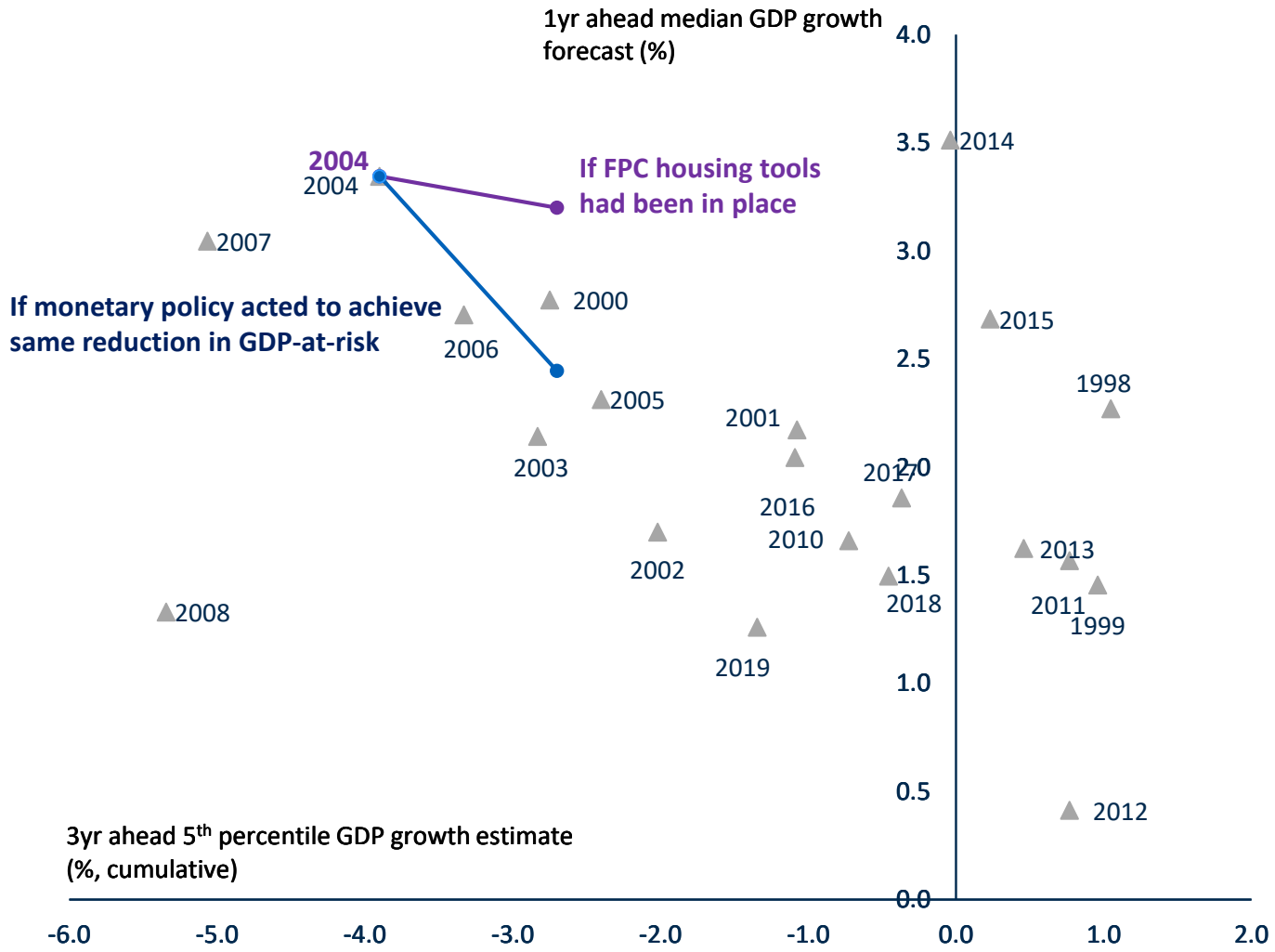
FPC tools have positive net benefits

Costs and benefits of the housing tools under different scenarios



Sources: FCA Product Sales Database, ONS, Bank calculations.

FPC housing tools more efficient than monetary policy to address risks from household debt



Sources: BIS, OECD, ONS and Bank calculations.

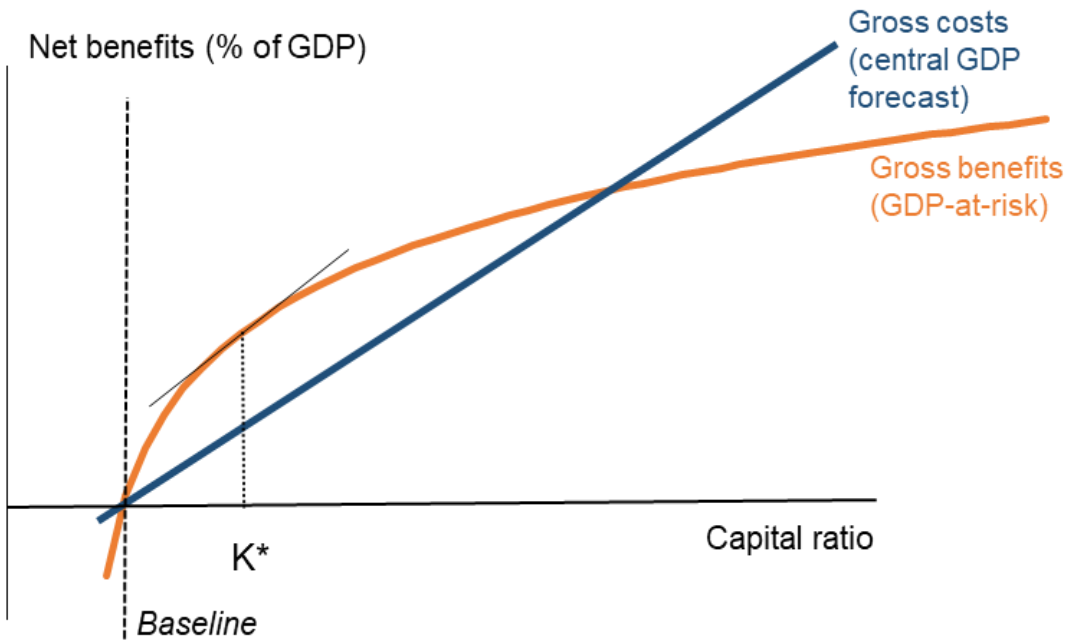
Optimal bank capital ratios balance impact on GDP-at-risk and trend growth

$$\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^{T} \beta^i \left[f(G@R_{t+i}) - \phi y_{t+i} \right] \right\}$$

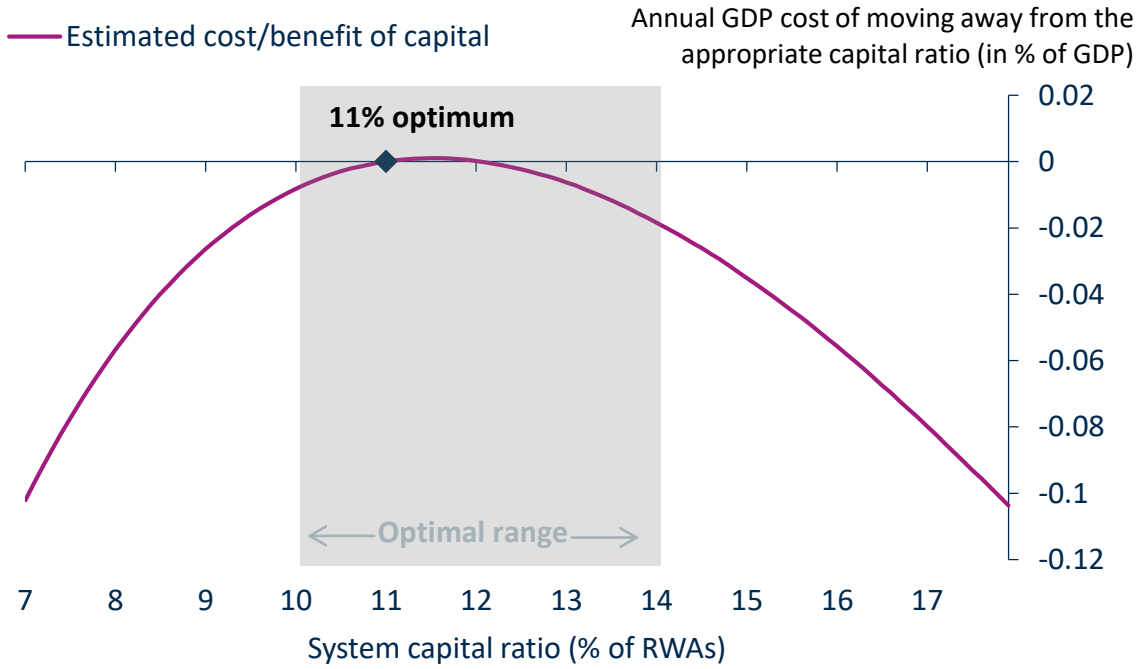
Bank capital requirements balance reducing GDP-at-risk vs dampening investment and productivity. CCyB cushions shocks in a downturn, and matches resilience to risk environment.

Optimal bank capital ratios balance impact on GDP-at-risk and trend growth

Conceptual illustration of how the FPC calibrated the optimal capital ratio



Estimated net cost of higher capital requirements



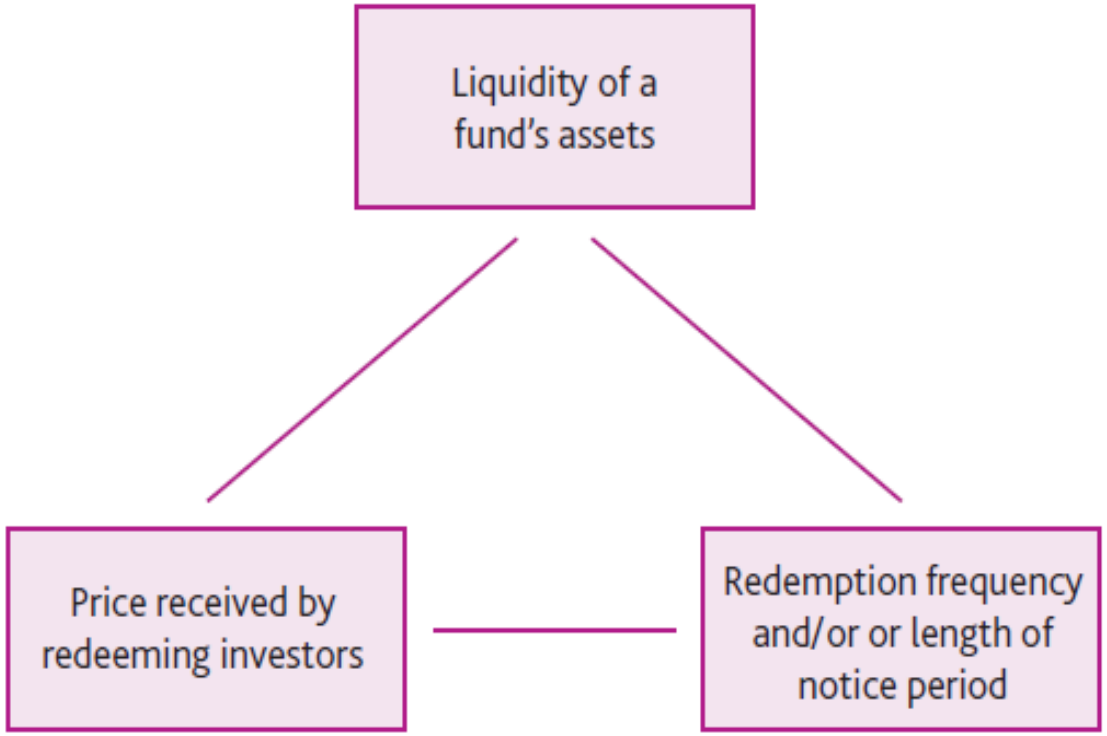
Fund reforms possible macroprudential Divine Coincidence

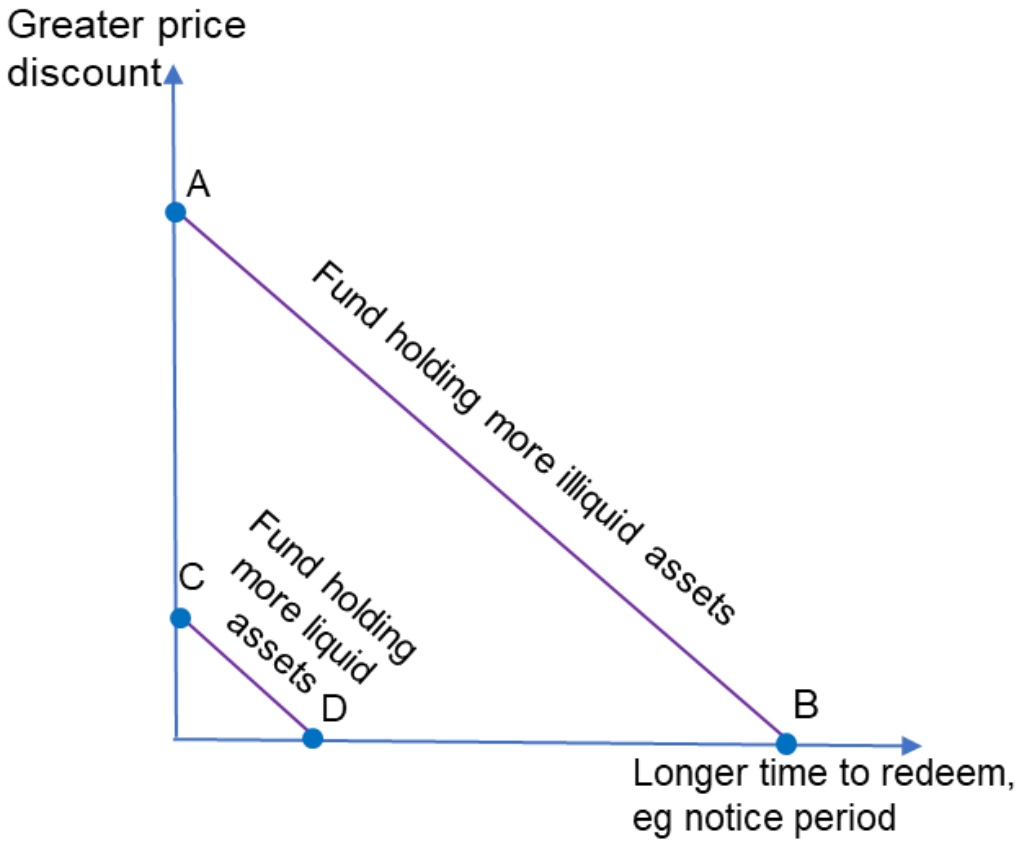
$$\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^{T} \beta^i \left[f(G@R_{t+i}) - \phi y_{t+i} \right] \right\}$$

FPC's principles to reduce structural liquidity mismatch in funds could increase investments in productive finance.

FPC's principles deliver consistency between liquidity and redemption terms

Funds should apply a pricing tool, a notice period or a combination of both that reflects the liquidity of their underlying assets



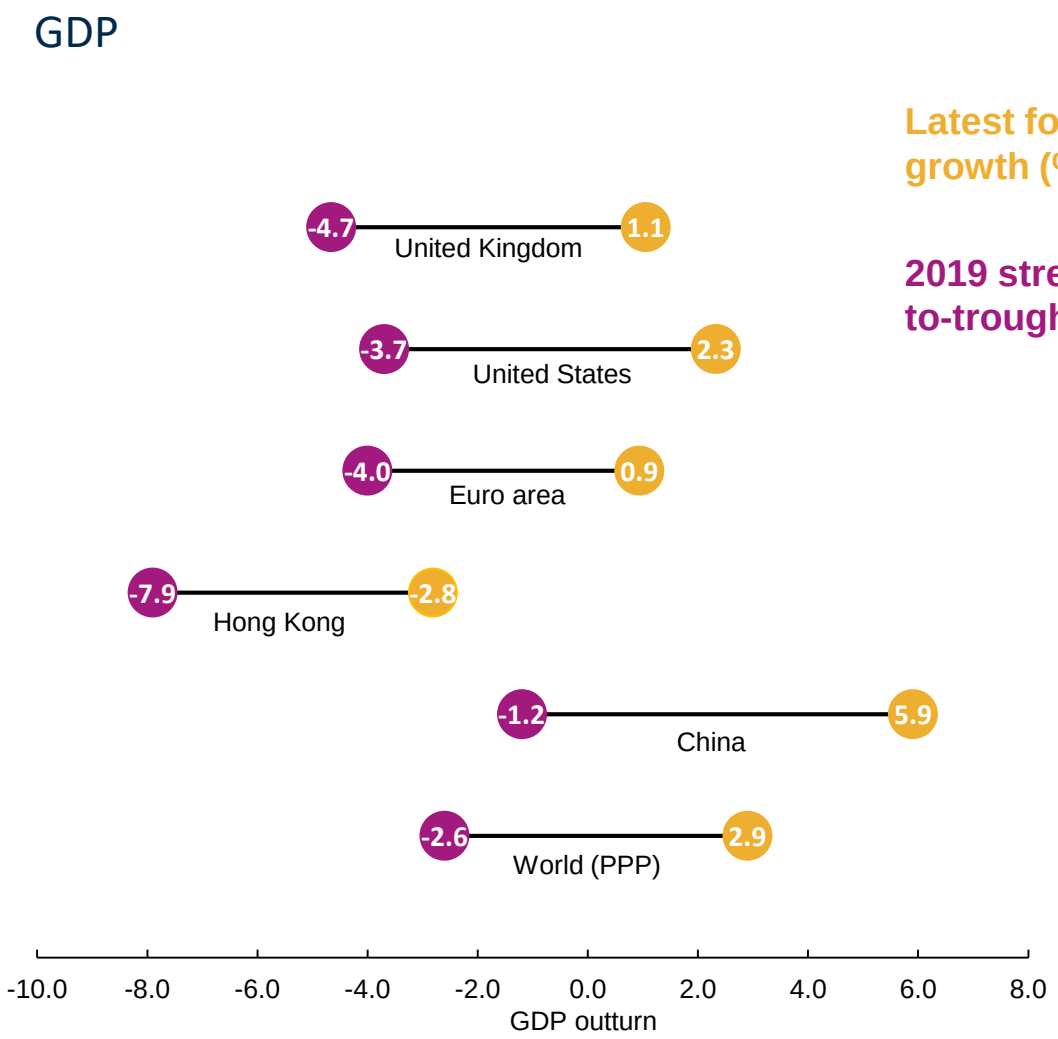


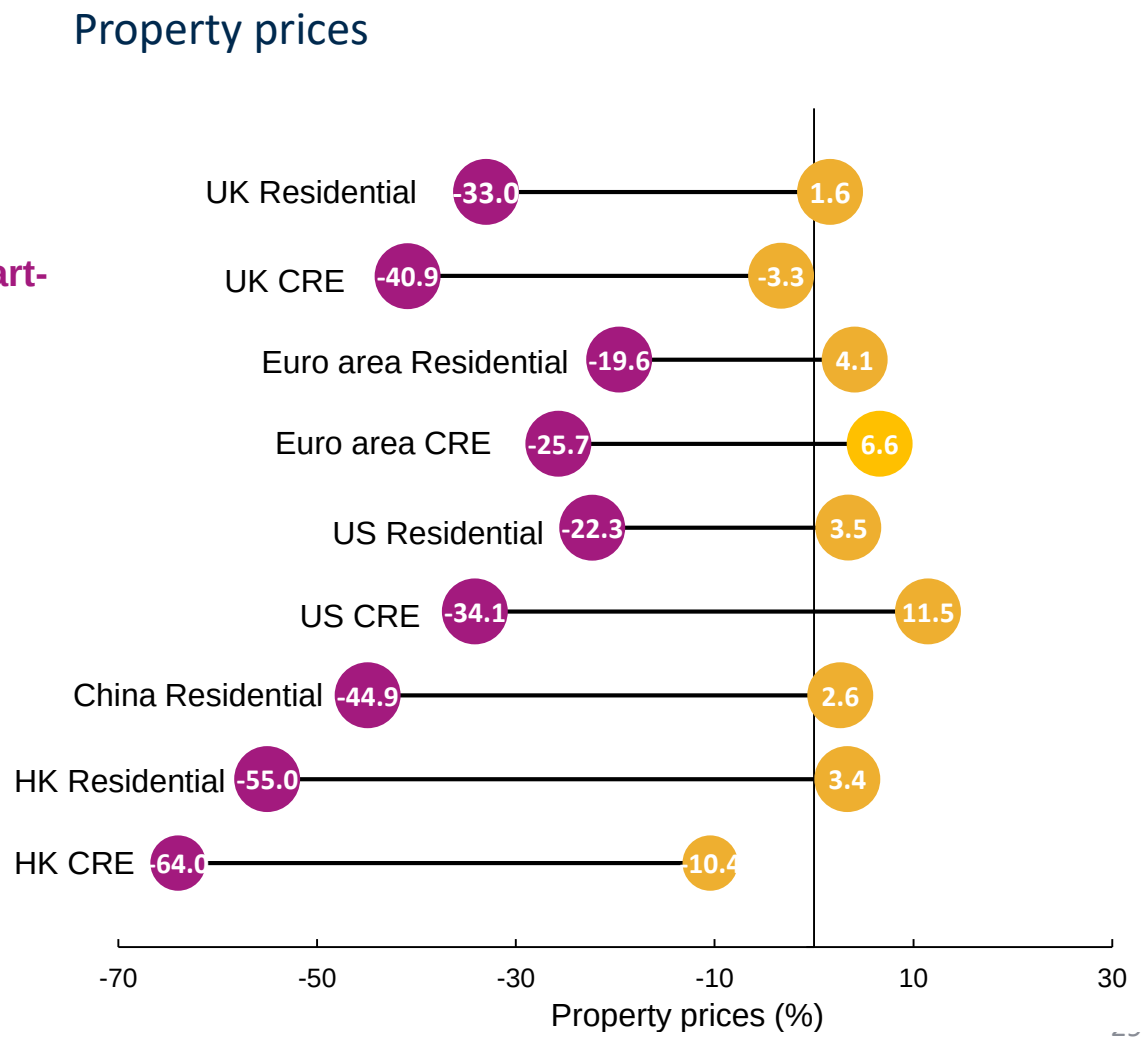
Reducing discount rate helps break Tragedy of the Horizon

$$\min_{\rho_t} \mathcal{L} \equiv E_t \left\{ \sum_{i=0}^{T} \beta^i \left[f(G@R_{t+i}) - \phi y_{t+i} \right] \right\}$$

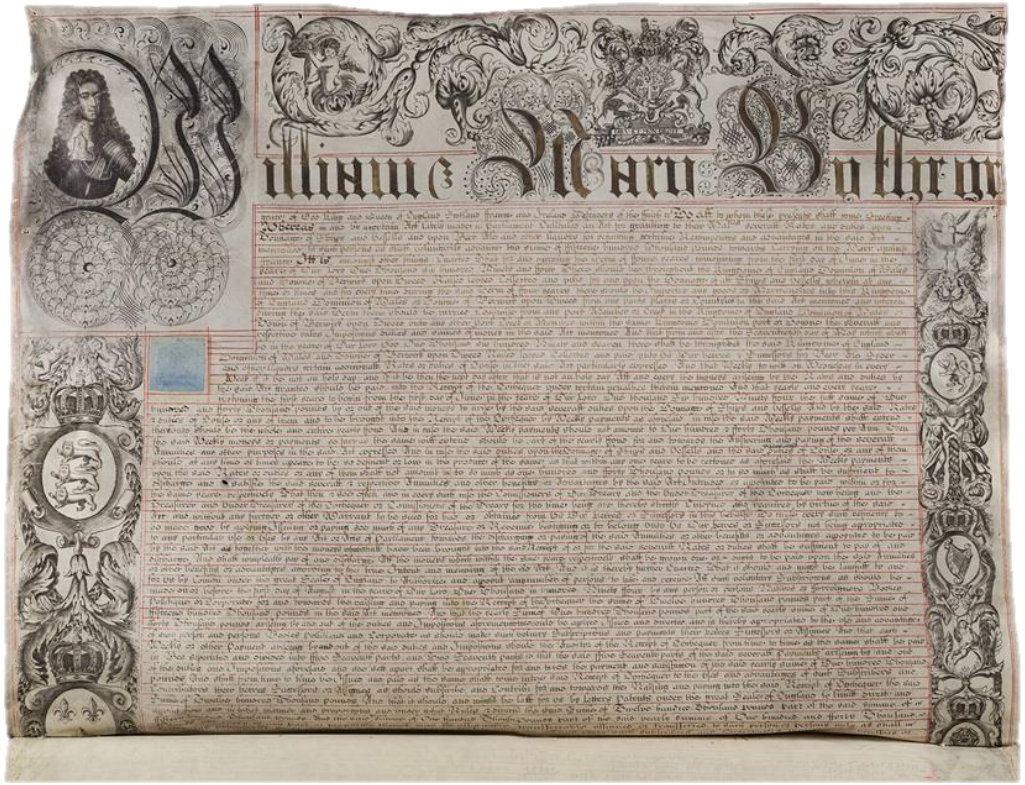
Government reduced discount rate by committing to Net Zero by 2050 and including climate risks in FPC remit.

The Bank's annual stress test more severe overall than the financial crisis





The Bank of England's single timeless mission since 1694



"to promote the good of the people of the United Kingdom"

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