The objectives of macroprudential mortgage measures

David Aikman

King's College London

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Outline

- The benefits of macroprudential mortgage measures

- The potential costs of these measures

- Conclusions and open issues

Remarks draw on:

- **Aikman, Kelly, McCann and Yao (2021)**, 'The macroeconomic channels of macroprudential mortgage policies', Central Bank of Ireland Financial Stability Notes, Vol. 221, No. 11. Available [here](#).

- **Aikman (2021)**, 'The objectives of macroprudential mortgage measures: an exploration', QCGBF Working Paper No. 2021/2. Available [here](#).

# The benefits of macroprudential mortgage measures

The benefits of macroprudential mortgage measures

The academic literature highlights two potential channels via which macroprudential mortgage measures can be beneficial:

- The **debt deleveraging** channel

- The **bank resilience** channel

The debt deleveraging channel

Basic idea: Highly-indebted households or those who have increased their borrowing rapidly may cut back sharply on spending during a period of stress, which can amplify economic downturns

Negative shock	→	Highly indebted households cut back on spending sharply	→	Overall aggregate demand falls
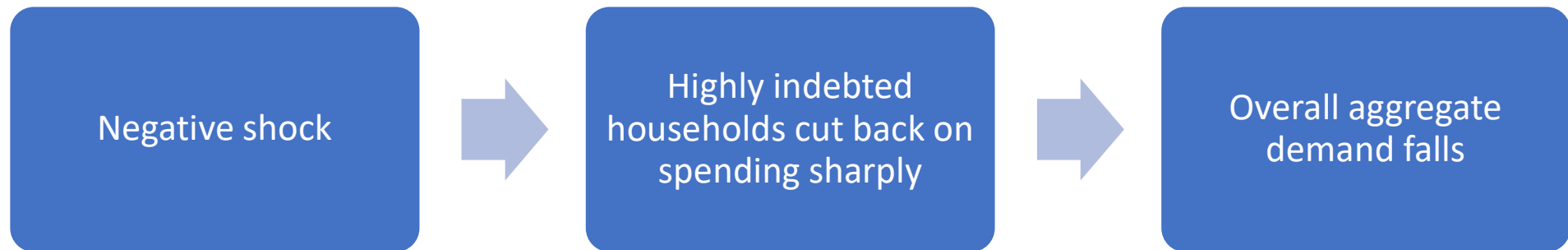
'**Borrower resilience**' = **Resilience of household spending**

Household debt growth in booms is strongly correlated with the severity of economic downturns
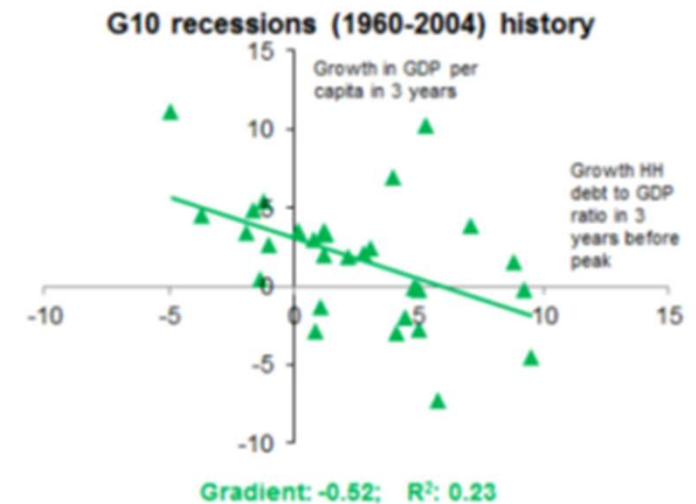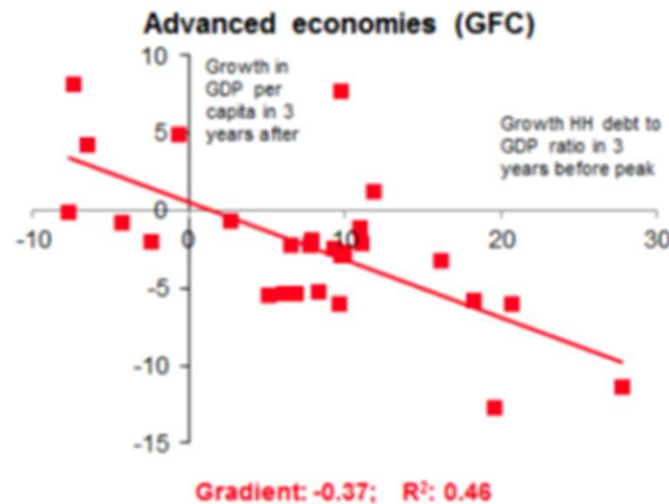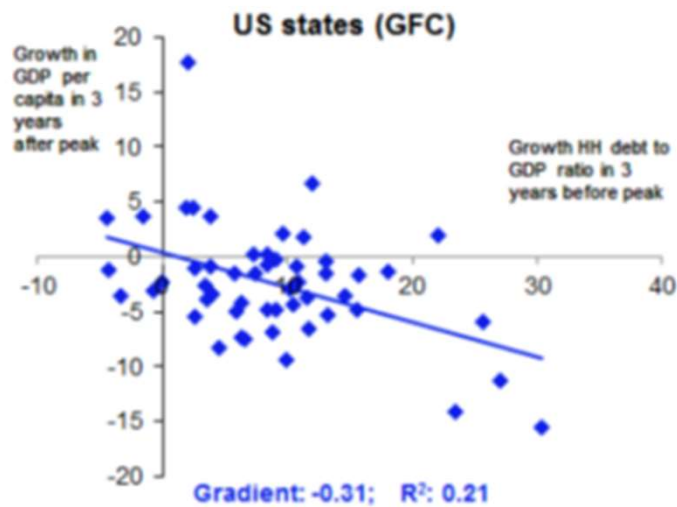
Source: Aikman, Bridges, Kashyap and Siegert (2019)

Key point: Higher debt growth is associated empirically with deeper recessions

Why might this happen?

- **Debt overhang:** Highly-indebted households may cut spending sharply in a downturn to pay down debt – either voluntarily to reduce leverage, or in response to a tightening in bank credit conditions

- **Credit conditions and cash flow:** Highly-indebted households are more sensitive to tightening credit conditions in a downturn, reducing their cash flow and hence consumption

Eggertsson and Krugman (2012) explore this in a general equilibrium model and find it leads to a decline in the equilibrium real interest rate, which can cause a "liquidity trap"

The empirical evidence on this channel is mixed

Many papers find a link between household debt and consumption growth:

- Dynan (2012): spending by highly leveraged US households in the GFC fell by more than that of less leveraged counterparts, controlling for wealth effects (also Mian Rao and Sufi (2011))

- Fasianos and Lydon (2021): UK households with high debt-service ratios are more sensitive to negative income shocks than others

- Le Blanc and Lydon (2019): Irish households with more debt were more sensitive to changes in income and wealth during the GFC, particularly for durables spending

But some have argued this relationship reflects over-consumption driven by excessively optimistic expectations (e.g., Andersen, Duus, and Jensen (2016), Svensson (2019))

The role for macroprudential policy

Key idea – **'Aggregate demand externality'**:

- Borrowers will tend to take on too much debt in a boom because they will not take into account the impact their deleveraging has on aggregate demand and output

- This provides a rationale for policies that slow down the accumulation of debt in a boom (Korinek and Simsek (2016))

This mechanism is likely to be especially important for an economy where **monetary policy is constrained by a fixed exchange rate** – ie where there is no scope for monetary policy to cushion the contraction

Impacts of macropru actions on credit and consumption (from Alam et al (2019)

Figure 6. Causal Effects of One Percentage Point Tightening in LTV limits
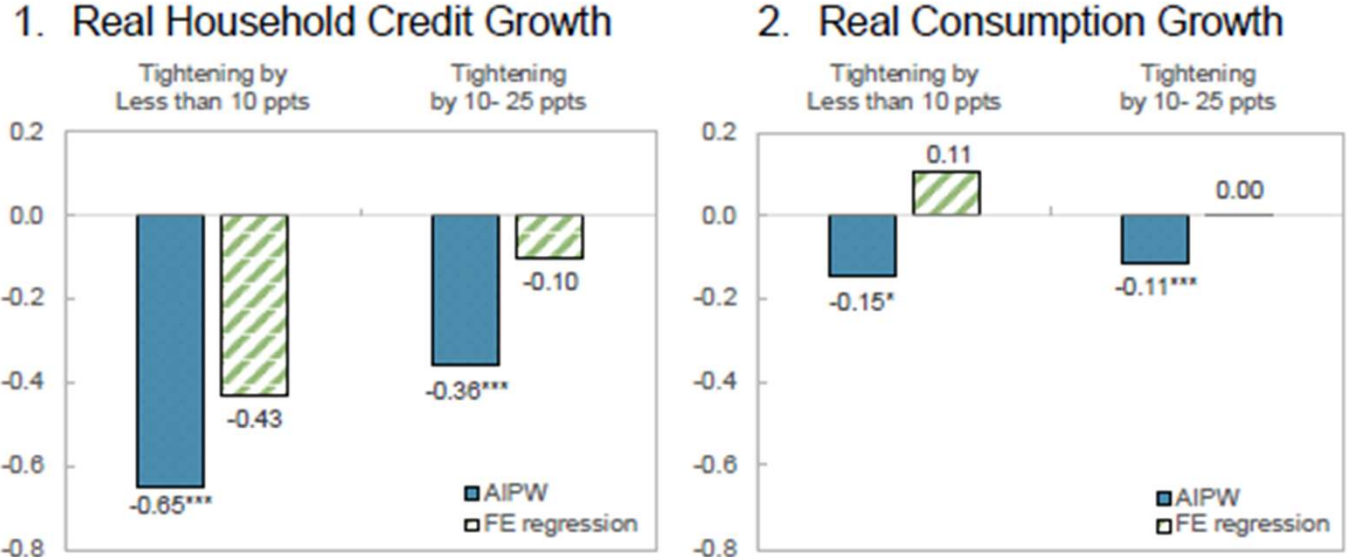
Sources: The iMaPP database, Bloomberg, BIS, OECD, others (see Appendix IV), and the authors' estimation.
Notes: The figure reports the cumulative effects of a one-ppt LTV tightening after four quarters, obtained by the augmented inverse propensity-score weighted ("AIPW") estimation and the fixed effects estimation with the timing assumption ("FE regression"), which are explained in detail in Appendices VI and VII, respectively. The FE regression uses the interaction terms of ΔLTV with the dummy variables for each bucket (i.e., a tightening by less than 10 ppts and a tightening by more than or equal to 10 ppts and less than 25 ppts). To mitigate the influence of outliers, observations with ΔLTV less than or equal to -25 ppts are excluded for the estimation. Confidence levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors are clustered by country.

The bank resilience channel

Basic idea: Highly-indebted households may instead choose to or be forced to default on their mortgage debt

Given the banking system's large direct exposure to the housing market, an increase in mortgage defaults can erode its equity capital, restricting bank loan supply and reducing overall economic activity

Increase in mortgage defaults	→	Bank equity is eroded	→	Bank loan supply falls	→	Economic contraction
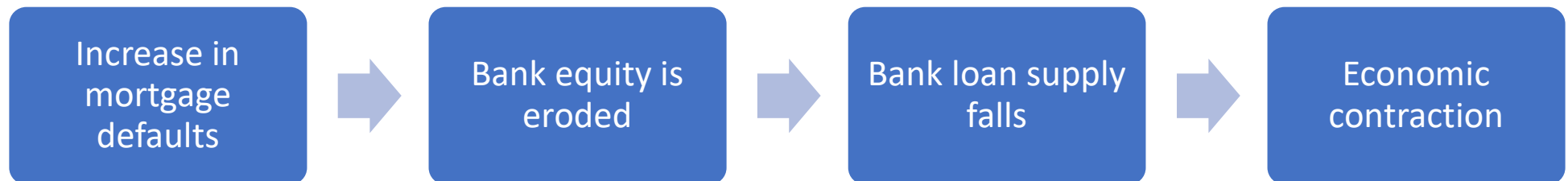
'**Bank resilience**' = **Resilience of bank loan supply**

The bank resilience channel

Macroprudential mortgage measures can help improve banks' resilience

- There is substantial evidence that the **probability of default (PD)** and the **loss given default (LGD)** on mortgages are influenced by the **LTV, LTI and debt service ratio at origination**

- So macroprudential policies that influence LTV, LTI and debt service ratio at origination will make banks' mortgage portfolios less risky

The bank resilience channel

But some of these bank resilience benefits will be **undone by the endogenous response of the bank capital framework**

- For banks using "internal models" to calculate risk weights on their mortgage portfolios, there will be a corresponding fall in modelled PD and LGD, and hence in the equity capital based are required to maintain

- The macroeconomic benefits of the policy regime (less severe recessions, less volatile house prices) will not be automatically offset in this way – but they can be undone if supervisory stress test scenarios are made less severe on account of the policies

Key point: **the impact of these policies on bank resilience rests on the response of the bank capital framework**

Potential costs of macroprudential mortgage measures

The costs of macroprudential mortgage measures

The paper considers the following channels that might result from a policy tightening:

Channel	Impact on aggregate demand	Impact on potential supply
Consumption by would-be homeowners forced to remain in the expensive rental sector	**Negative**	None

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Small business investment financed by housing equity withdrawal	**Negative**	**Negative**

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Consumption financed by housing equity withdrawal	**Negative**	None
Small business investment financed by housing equity withdrawal	**Negative**	**Negative**
Lower housing construction	**Negative**	**Negative** or **positive**

Key point: macroeconomic theory would suggests **these effects are likely to be temporary** because their impact on the capital stock and labour productivity is likely to be limited

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Summary

Remains a clear case for applying macroprudential mortgage limits

- Rationale centres on reducing debt deleveraging ("borrower-resilience")

- Impact on bank resilience depends on bank capital framework

These policies do have potential macroeconomic costs, but these costs are likely to be temporary (although scant empirical evidence)

Open issues

How should distributional impacts be taken into account?

Can this framework be used to inform the appropriate calibration of macroprudential mortgage measures?