Macroprudential policies to mitigate housing market risks

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Background

- The BIS' Committee on the Global Financial System (CGFS) set up a working group to examine macroprudential policies to mitigate housing market risks

- *Mandate*
  - Take stock of what we have learned on the effectiveness of using these instruments

- *The group*
  - Central banks from 15 jurisdictions
  - Examined experience of using macroprudential instruments over a combined 168 years

- This talk will focus on
  - How those policies were informed
  - Lessons from the experience that could help enhance policymaking going forward

How to set policy: Objectives

Macroprudential authorities follow diverse intermediate objectives

Ranking of intermediate policy objectives to mitigate housing market risks

1 = more important objective, 2 = less important objective[1]   Table 3

	AU	BE	CA	FR	HK	IE	IL	IN	LU	NL	NZ	SA	SG	UK
Maintain lender resilience	1	1	1	1	1	2	1	1	1	1	1	1	1	1
Maintain borrower resilience	1	2	2	1		1				1		1	1	1
Dampen housing credit cycles						1		1	1		2			
Promote the evolution of house prices in line with fundamentals											2		1	

[1] An empty cell indicates that it is not an intermediate objective.

- Consensus on resilience objectives
- Few authorities target cyclical intermediate objectives

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What tools to use?

What tools to use?

Tool	Borrower resilience	Lender resilience	Cyclical objectives
Supervisory expectations	**?** Supervisory expectations may still require follow up with quantitative measures	✓ Stress tests set expectations on loss absorbing buffers	✓ Supervisory expectations can be flexibly dialled up or down
LTV limits	✗ Less effective in holding down DSTI	✓ Improve LGD rates	✓ Active adjustment dampens credit cycles. ✗ Small effect on deviations of house prices from fundamentals
Income-based limits *(eg DTI, DSTI)*	✓ Closely associated with default probabilities	**?** Through indirect effect on LTVs	✓ Smooths credit cycles by dampening credit growth
Capital measures *(eg risk-weight floors, add-ons and multipliers, systemic risk buffers)*	✗	✓ Adds a macroprudential buffer for risks not reflected in micropru requirements	✗ Limited effects on credit cycles and house prices
Investor targeted measures	✓ Raises borrower resilience		**?** Mixed evidence about dampening credit cycles

- Effectiveness of individual tools depends on the specific objective

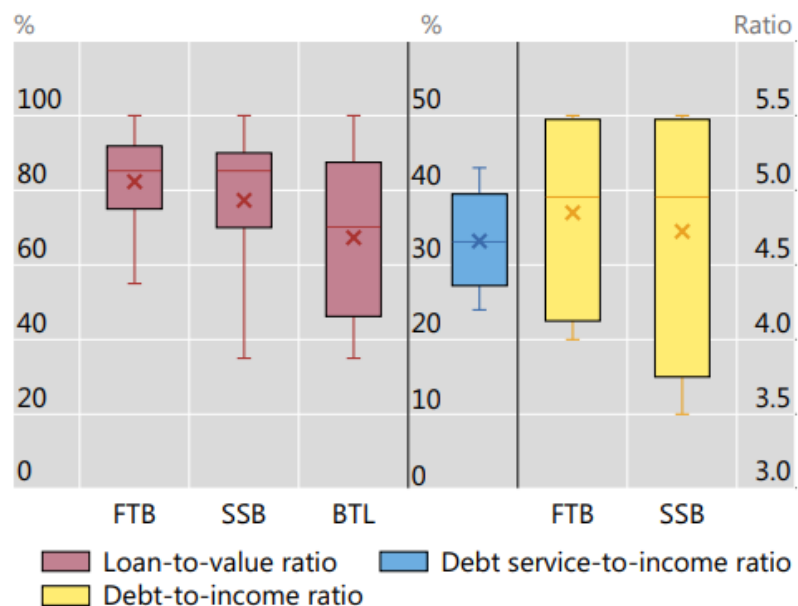How to calibrate tools?

Calibration methods

Method	Description	Advantages	Disadvantages
Early in the cycle	Calibrate to early in the cycle lending standards / capital	Avoids a sudden tightening. Based on lenders' standards	Requires consensus early in the cycle
Benchmark to historical period	Use historical period of prudent lending standards as benchmark	Lenders familiar with benchmark	Historical norms may not be appropriate after structural change
Guardrails	Measures calibrated to only bind in high exuberance scenarios	Avoids a sudden tightening	Requires modelling scenarios and assumptions
Gradual adjustment	Gradual adjustment when uncertain about calibration	Avoids a sudden tightening and risk of overshooting objective	Reliant on expert judgement (eg when to stop)
International benchmarking	Based on calibrations used in other economies	Leverages practical experience from other economies	Might not be appropriate due to difference in housing markets
Stress tests and model simulation	Models used to assess impact on banks, lenders and house prices	Calibrate to meet objective Help guide recalibrations	Requires modelling assumptions, data intensive

Calibration of borrower-based measures
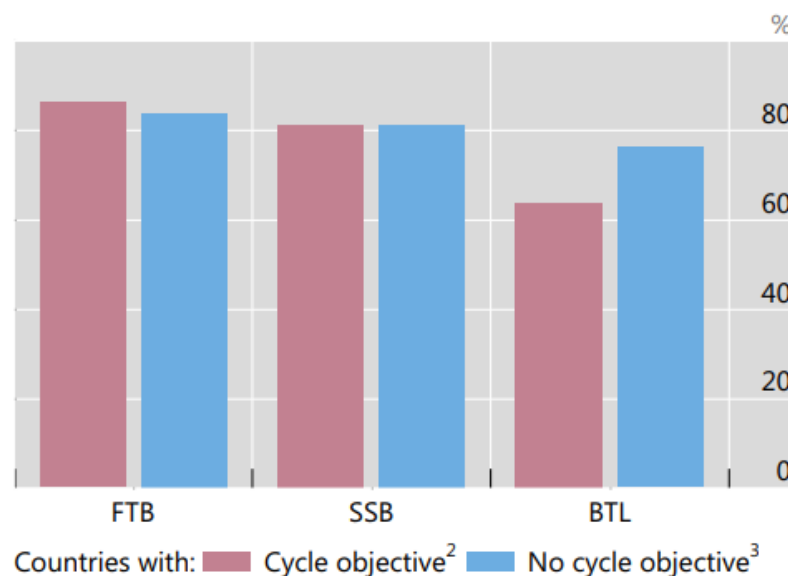

Greater dispersion of borrower-based limits for buy-to-let investors   Graph 3

A. Cross-country heterogeneity of limits[1]

B. Average LTV limits by borrower type

Loan-to-value ratio   Debt service-to-income ratio
Debt-to-income ratio

Countries with: Cycle objective[2]   No cycle objective[3]

BTL = buy-to-let; FTB = first-time buyers; SSB = second-time or subsequent buyers.

[1] AU, BE, CA, FR, HK, IE, IL, IN, KR, LU, NL, NZ, SA, SG and UK, depending on implementation. The crosses, lines, boxes and whiskers respectively show the means, medians, interquartile range and min–max range. LTV coefficient of variation for FTBs: 0.17; SSBs: 0.26; BTL: 0.33. DSTI coefficient of variation: 0.20. DTI coefficient of variation for FTB: 0.15; SSBs: 0.20.   [2] IE, IN, LU, NZ and SG.   [3] BE, CA, HK, IL, NL and SA.

Sources: CGFS study group.

- Common to differentiate across types of borrowers
  - Aim to mitigate costs

- FTB measures more international similarity
  - Less stringent

- Difference in calibration of SSB and BTL internationally
  - Tighter BTL calibration in countries with a cyclical objective (credit or house prices)

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What influences policy effectiveness?

1. Availability of the best tool to meet the objective

- Policy is most effective when the best tools are used to meet the specific objective

- No legal or political backing for specific tools / powers of direction scattered across different agencies
  - Macropru authority resorts to using second best tool

2. Leakages

Leakage	Problem	Mitigation strategy
Lenders out of scope	Financial system vulnerabilities migrates to non-bank lenders Undermines lending standards Cross-border leakages (largely an EU issue)	**Legal basis of regulation on activity not entity** Apply higher risk weights on supervised lenders' credit to non-compliant out of sample lenders **Request supervised entities to terminate relationships with non-compliant lenders** Cross-border reciprocity agreements
Borrowers out of scope	Borrowers set up legal entities to avoid measures targeting households	Apply measures to all mortgage borrowers
Extending loan maturities to loosen DSTI limits	Slows rate of housing equity accumulation, ie household debt stays high for longer	Limits on loan maturities Lower LTV limits on long-maturity loans
Income definition	Unstable incomes, inflated incomes Multiple names on mortgage	Haircuts on less stable incomes Income verification based on taxable income Weighted limits based on full portfolio of borrowers loans
Use of non-mortgage loans	Lower lender resilience as actual LTV higher Lower borrower resilience than captured by loan to income / loan-service to income	Use credit bureaus or credit registries to enable lenders to assess total debt Anti-avoidance clauses

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3. Lags

- Decision making lags
  - Need for consensus

- Implementation lags
  - Long consultations

- Lags in the materialisation of the desired result
 - Measures based on flow of new lending

4. Automatic stabiliser properties of tools

- Automatic stabilisers ➜ tighten and loosen without the need to recalibrate policy

- Tools with good automatic stabiliser properties
  - DTI limits and certain DSTI limits (eg with fixed interest rate floor)
  - Risk-weights dependent on borrower DTI or DSTI

- Tools needing active adjustment
  - LTV
  - Internal ratings-based risk weights?

Policy lessons

Lesson 1: Macroprudential measures are not the only tool in town

House prices to incomes have risen the
most where supply has increased the least
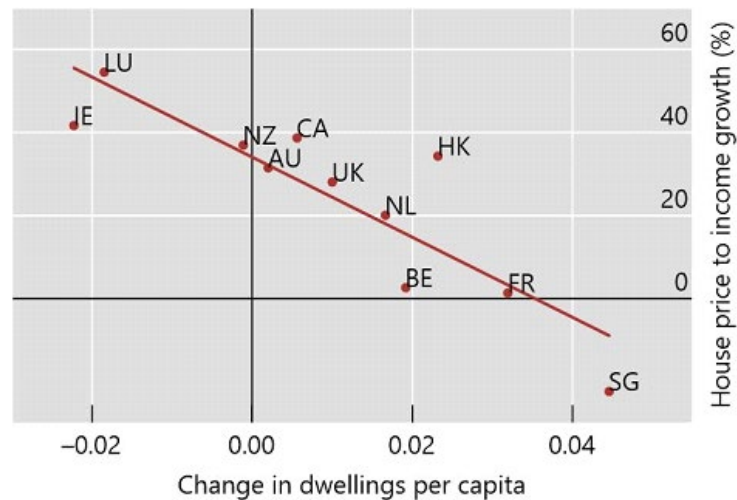
- Tax, planning and land supply policies ➜
    - Demand-supply imbalances in the housing market

- Successful mitigation of the boom-bust cycles ➜
    - Consistency across housing-related policies

Lesson 2: Governance frameworks influence policy effectiveness

- Effectiveness impaired by
  - Not having the best tool for the objective
  - Leakages
  - Lags

- Governance frictions very often at the root of these problems

Aspects of governance frameworks that help mitigate housing risks

Principle	Reason	Example
One body ultimately accountable for financial stability	• Clear assignment of ultimate responsibility	• UK – Financial Policy Committee sole entity responsible for financial stability • France HCSF – tasked with safeguarding financial stability
Clear mandate / objective	• Facilitates accountability • Shields from political influence	• New Zealand – memorandum of understanding
Clear legal basis to introduce tools that address all sources of housing risks	• Multi-faceted sources of housing risks require tools that are best able to mitigate the sources of risk	• Ireland – central bank has broad regulation-making powers, through which it introduced mortgage measures
Operational independence	• Guards against inaction bias	• New Zealand – operational independence facilitated regular policy recalibration
Capacity to monitor housing risks	• Data • Human capital	• Singapore – synergies between macro- and microprudential mandates
Capacity to enforce compliance	• Need legal backing to monitor and enforce	• Singapore – supervisors tend to have more lever to enforce compliance
Mechanism for macropru authority to recommend actions for fiscal, housing or monetary authorities	• Other tools may better target source of problem	• Singapore – changes to stamp duty and land supply • Several jurisdictions – members of macropru authority also members of monetary authority

Governance: smoothing the edges

- Lags
  - Early implement of measures through non-binding recommendations
  - Use tools that meet objectives without requiring adjustment (Risk-weight floors / borrower income-based measures)

- Political economy influencing policy
  - Powers to initiate measures rest with agency whose main objective is financial stability
  - Include external academics on panel to bring an outside perspective
  - Write political considerations explicitly into objectives

- Desired tool has not been granted legal backing
  - Supervisory expectations with a formal "comply or explain" mechanism

Lesson 3: Tools that meet objectives without requiring adjustment are especially effective

- Inaction bias – ever present challenge

- DTI and DSTI instead of LTV

- Capital based tools ➔ Floors on risk weights

- Scope to think more carefully about tool design

Lesson 4: Openness about cost-benefit trade-offs fosters support

- The benefits are largely invisible and dispersed
- The short-term costs are more visible and borne by specific minority

- Transparency about the costs and benefits can help foster long-term support for macroprudential measures
- A few macroprudential authorities now try to assess and communicate their macroprudential stance within cost-benefit frameworks
    - But these cost-benefit frameworks are still nascent

- Report highlights the need to develop these frameworks ➔ signal to the academic community

References

- **Macroprudential policies to mitigate housing market risks,** CGFS papers 69
  - https://www.bis.org/publ/cgfs69.htm

- Country case studies accompanying the report

Australia	India	New Zealand
Belgium	Ireland	Singapore
Canada	Israel	United Kingdom
France	Luxembourg	
Hong Kong SAR	Netherlands	

Additional slides

Variety of housing-specific tools used

- **Borrower-based measures**
  - Directly target lending standards

- **Capital-based measures**
  - Target lenders' buffers

- **Some use many**
  - Multiple objectives
  - Path dependency
  - Mitigate leakages / costs
- **Some use few**
  - Experimentation then streamlining

Borrower- and capital-based measures in place to mitigate housing market risks[1] — Table 1

	AU	BE	CA	FR	HK	IE	IL	IN	LU	NL	NZ	SA	SG	UK
Borrower-based measures														
LTV		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DSTI		✓	✓	✓	✓		✓			✓		✓	✓	
DTI		✓					✓							✓
Amortisation requirements[2]	✓		✓	✓			✓			✓		✓	✓	
Capital-based measures														
Countercyclical capital buffer / sectoral systemic buffer	✓	✓[3]	✓	✓	✓	✓			✓	✓				✓
Risk-weight floors / add-ons / multipliers	✓	✓[3]		✓			✓		✓	✓	✓	✓		
Risk weight linked to LTV	✓						✓	✓		✓	✓	✓		
Risk weight linked to DSTI							✓							
Risk weight linked to loan size								✓						
Floor on credit loss allowance							✓							
Exposure limit on housing loans													✓	
Minimum equity buffer on housing loan portfolio							✓							
Specific capital requirements on loans to mortgage insurers			✓											

[1] Measures in place as of July 2023. [2] Includes maturity limits and/or measures targeting interest-only mortgages. [3] Risk-weight capital buffer until 2022, when it was replaced by sectoral system risk buffer.

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Measuring effectiveness

1. Direct effect on target variables (measuring compliance)

   ▪ Authorities have often had to enhance reporting and monitoring frameworks

2. Indirect effect on other risk characteristics

   ▪ Eg effect of capital based measures on lending standards or credit growth / effect of LTVs on house prices or credit growth

3. Counterfactuals

4. Defaults and other related outcomes

   ▪ Unexpectedly large losses in downturns or large relative to loss absorbing buffers

   ▪ Challenging with limited number of cycles

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Flexibility margins – another calibration margin for BBMs

- Flexibility margins (FR, LU) / speed limit (NZ, BE) / allowances (IE) / flow limit (UK)
  - Exempt a share of new lending from borrower-based measures
- Aim to mitigate costs associated with borrower-based measures
- Sometimes targeted at specific groups (eg FTBs)
- Sometimes used as an additional margin when recalibrating policy (eg New Zealand)
- Lenders tend to keep a buffer

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