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Regulating Maturity Transformation Why? How? At What Cost?

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* The views expressed in this presentation are those of the author and not necessarily those of the Bank of England

Outline

- Why regulate maturity transformation?
- What policy measures are needed?
- What are the macroeconomic costs of regulating maturity transformation?



Why regulate maturity transformation?

- Maturity transformation adds value, but generates fragility (Diamond & Dybvig, 1993)
- Liquidity is different to capital
 - Coordination problem rather than a game against nature
 - Feast-famine problem
- 2 externalities:
 - Fire sales & liquidity hoarding
 - Procyclicality driven by non-core funding



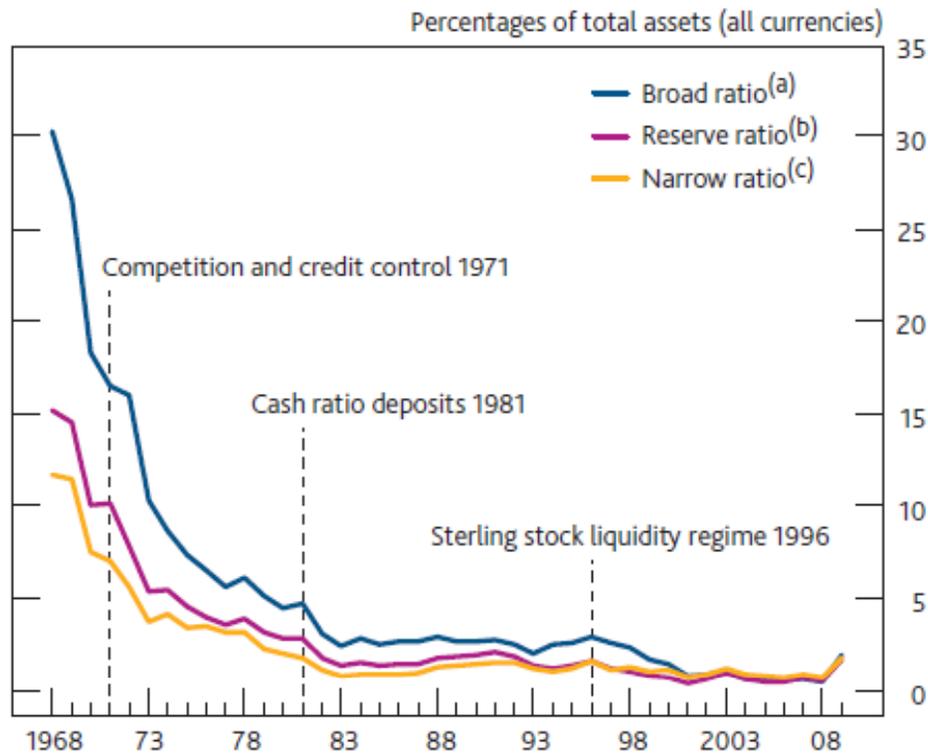
Liquidity Regulation – Past

- Liquidity regulation long recognised as important
 - BCBS February 1975: “the Committee’s main objective was to help ensure bank solvency and liquidity” (Blunden 1975)
 - Sandberg report, 1984: “Banks tend to become over-reliant on flighty liquidity; a need for regulation”
 - 1985: Sub-group on liquidity “give consideration to the possibility of taking a common position towards the need for a strengthening of liquidity adequacy, similar to that undertaken for capital adequacy”
- But soft rather than hard standards
 - BCBS 2000: Sound Practices for Managing Liquidity in Banking Organisations (updated in 2008)
- UK regime
 - Cash ratio deposits introduced in 1981, supplemented by a cashflow-based stock liquidity regime in 1996
 - 2009: FSA liquidity standards (similar to Basel III LCR)



Liquid asset holdings fall

Sterling liquid assets relative to total asset holdings of UK banking sector



Sources: Bank of England and Bank calculations.

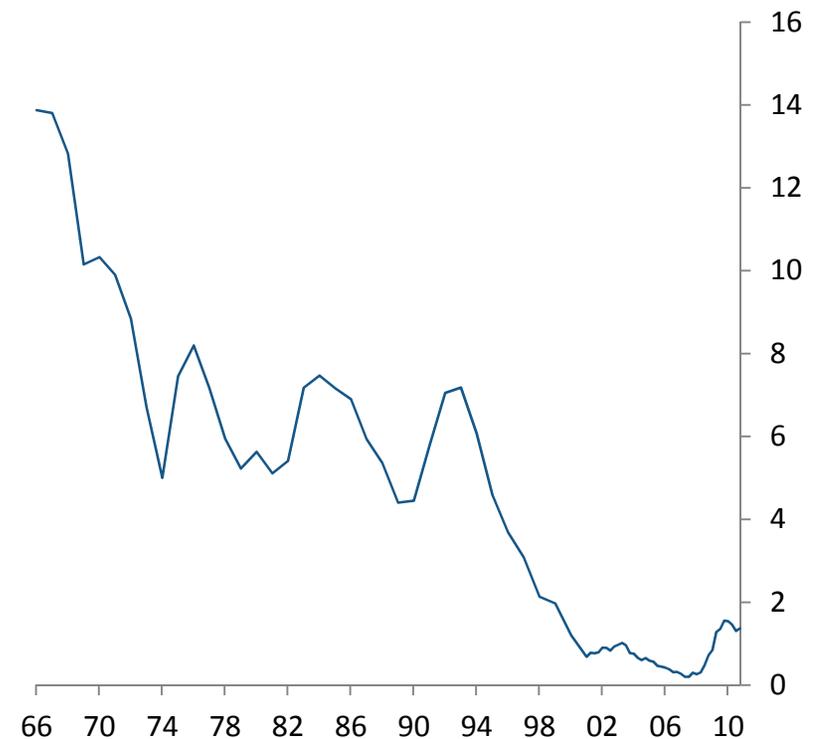
- (a) Cash + Bank of England balances + money at call + eligible bills + UK gilts.
- (b) Proxied by: Bank of England balances + money at call + eligible bills.
- (c) Cash + Bank of England balances + eligible bills.



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US bank holdings of US Treasuries

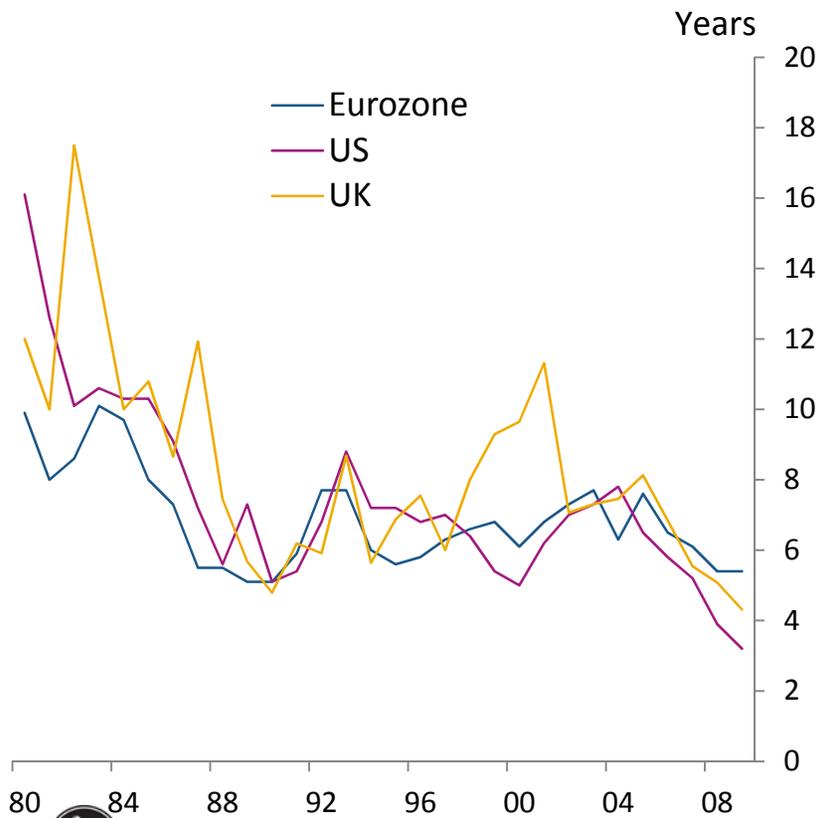
Proportion of total assets, per cent



Source: Bank of England

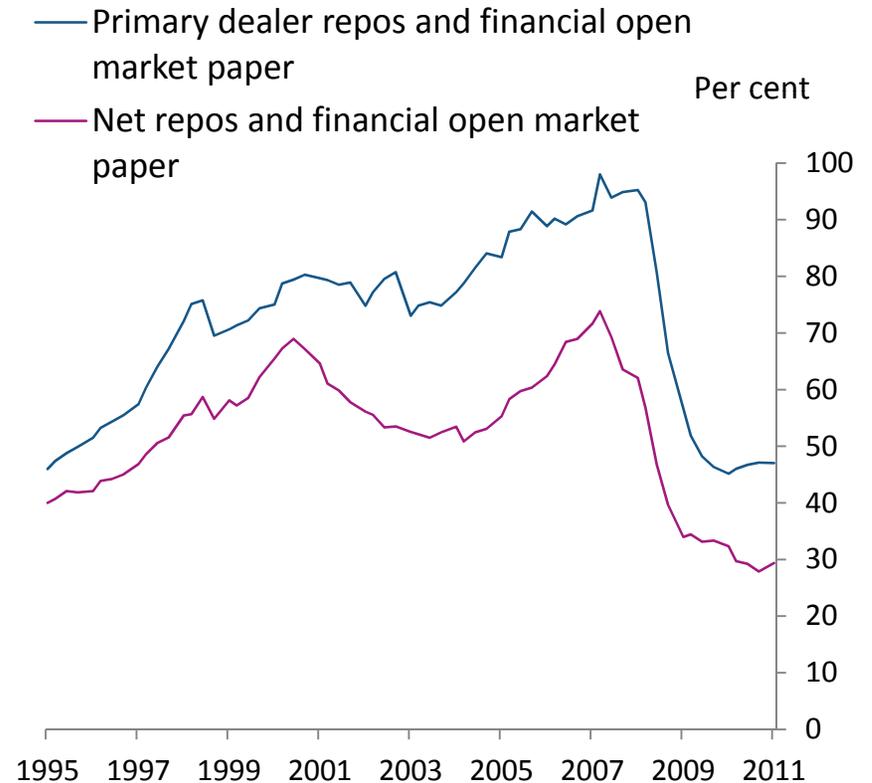
Funding liquidity risks rise

Average maturity of selected debt securities issued by banks



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Repos & financial market open paper as a % of retail deposits in the US



Liquidity regulation – present

- Two pillars of the international liquidity standard (Basel III)
- Liquidity Coverage Ratio (LCR)
 - Robust self-insurance to ensure central bank is lender of last resort
 - Liquid assets need to be “reliably liquid in stressed markets”
 - No inside liquidity
 - Targets ex post fire sale externality
- Net Stable Funding Ratio (NSFR)
 - Control (but not eliminate!) mismatch between maturity of banks’ assets and liabilities
 - Targets ex ante procyclicality externality



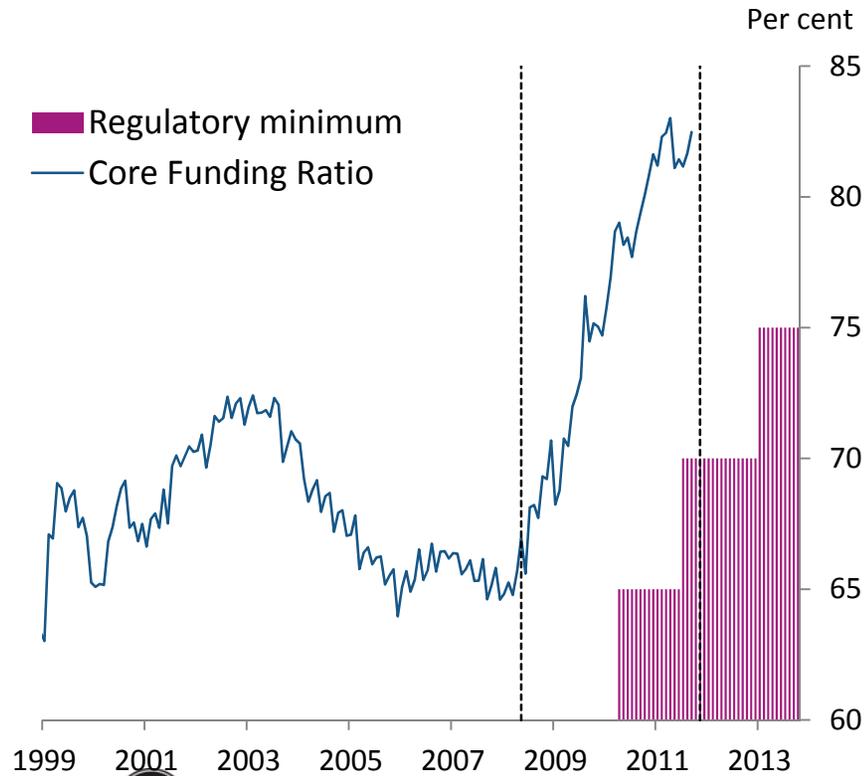
Liquidity regulation – future

- Implementation of microprudential standards
 - Usability of LCR buffer
 - “Cliff effects” in NSFR
- Macroprudential approach
 - Externalities vary through time
 - Countercyclical liquidity requirements
 - UK Financial Policy Committee advice on macroprudential tools



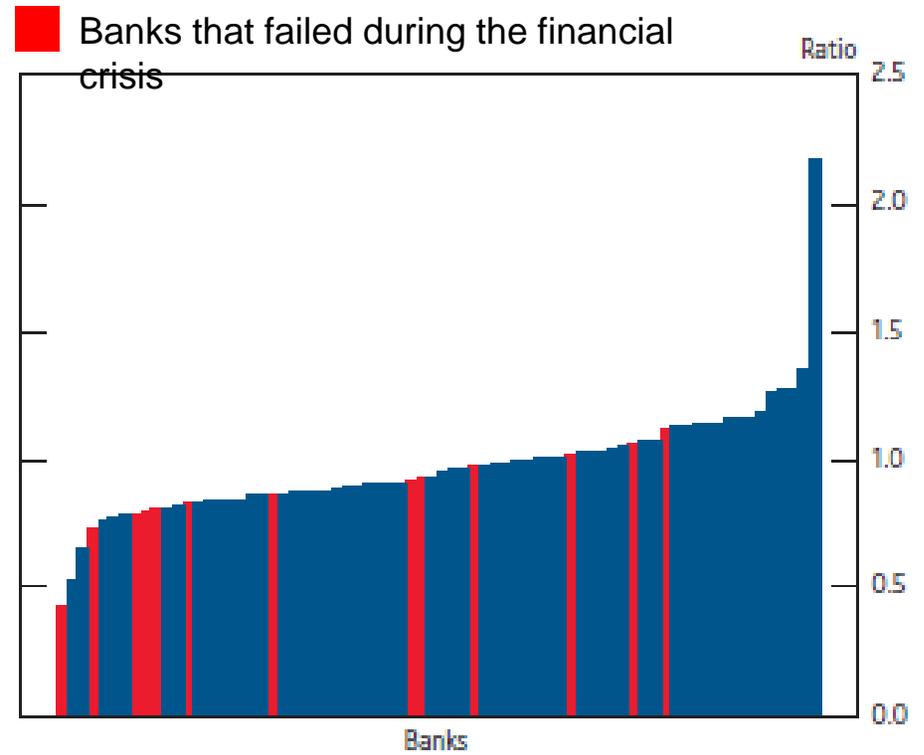
Candidate macroprudential tools

Core Funding Ratio in New Zealand



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Net Stable Funding Ratio and subsequent bank failures



What are the macroeconomic costs?

- Basel QIS (2010): global liquid asset shortfall of €1.7trn for banks not meeting the LCR
- Perception that liquidity regulation is more costly than capital
- Banks can meet liquidity requirements by:
 - Terming out their funding
 - Shifting towards more liquid assets
 - Banks with shortfalls purchase liquid assets from “surplus” banks
- Lengthy transition to new standards



Little consensus in existing studies

Study	MAG, LCR (short-term)	RBNZ working paper, CFR ^(a) (short- term)	IIF, capital <u>and</u> liquidity ^(b) (short-term)
Lending spreads	+ 14bps	+ 0 - 30bps	+ 364bps
GDP	- 0.1%	n/a	- 3.2%

- (a) New Zealand's CFR required banks to fund 75% of their lending with "stable funding". Estimates taken from Ha & Hodgetts (2011): "Macro-prudential instruments for New Zealand: A preliminary assessment".
- (b) The combined effect of capital and liquidity regulation estimated by the MAG falls far short of the IIF estimates, for example capital requirements only result in a 0.2% GDP fall



Macroeconomic costs: a back-of-the-envelope example

- Banks face a £100bn liquid asset shortfall, say
- Raise £100bn of long-term funding to buy £100bn liquid assets
- Assume premium of term debt over liquid assets is 250bps (ballpark estimate from historical UK data)
- Carry cost (per annum) = $100 * 0.025 = £2.5\text{bn}$
- Suppose cost is fully recouped by raising the spread on lending to households and corporates (around £2.7trn of assets in the UK)
 - Cost of bank credit increases by $2.5\text{bn}/2.7\text{trn} = 9\text{bps}$
 - Steady state GDP falls by $0.5 * 0.9\% * 1/3 = 0.15\%$ (Cobb-Douglas)

