

# Monetary Policy and the Risk-Taking Channel: Theory and Policy Implications



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The views expressed here are those of the authors and do not necessarily represent those of the IMF or the IMF Board

# Presentation roadmap

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- Per-crisis view
- How the crisis changed the consensus
- A survey of theoretical views
- Policy implications

# Before the crisis ... A theory gap

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## □ Macro literature:

- Financial intermediation seen as macro neutral
- Asset prices (including property prices) did matter. They could accentuate the cycle through financial accelerators
- But macro model largely ignored their impact on bank risk taking. In equilibrium, no bank defaults

## □ Banking literature

- Focused on excessive risk taking by intermediaries operating under limited liability and asymmetric information
- Defaults/crises in equilibrium
- But there was little attention to macro and monetary policy conditions

# Before the crisis ...A policy gap

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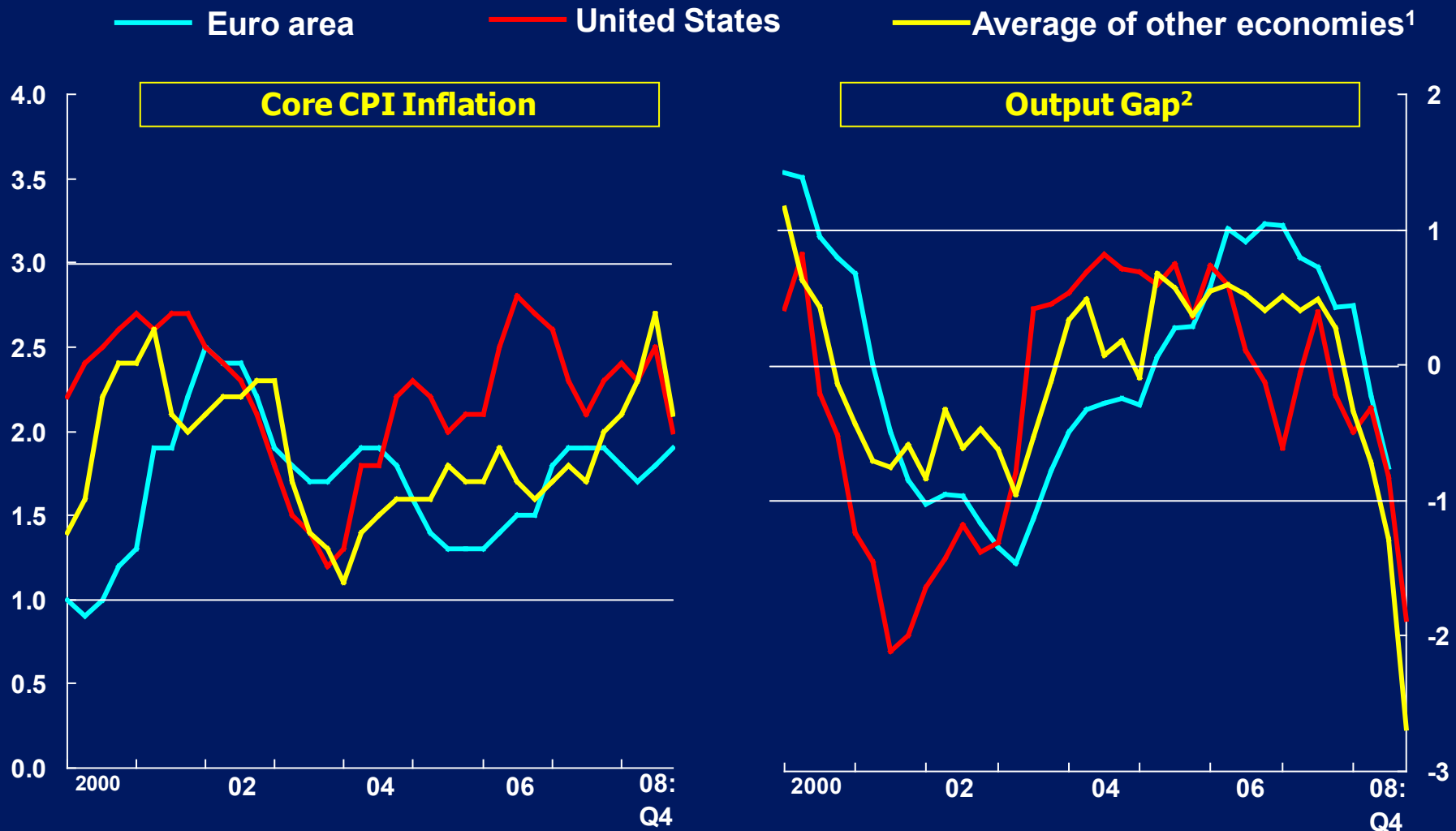
- Monetary policy to focus on inflation (and output gap): “divine coincidence”
- Asset prices and credit aggregates a concern only through their impact on GDP and inflation (exceptions RBA, Riksbank, some EMs)
- Benign neglect approach to boom/busts:
  - Bubbles difficult to identify
  - Costs of clean up limited and policy effective
  - → Better clean up than prevent
- Bank risk taking important, but job of regulators

# Before the crisis ... A policy gap

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- Regulatory policy focused on individual institutions
- Limited attention to credit aggregates or asset price dynamics
- Ill equipped to deal with booms:
  - Correlated risk taking
  - Fire sales and other externalities
  - Few regulators had necessary tools (exceptions: Spain/Colombia)

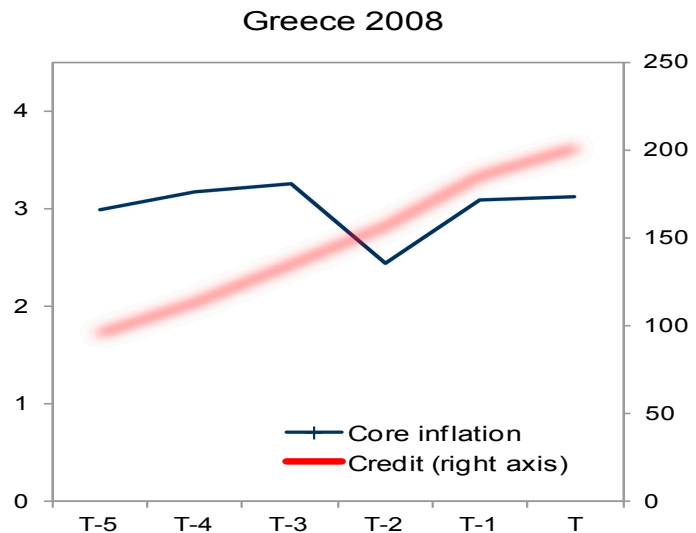
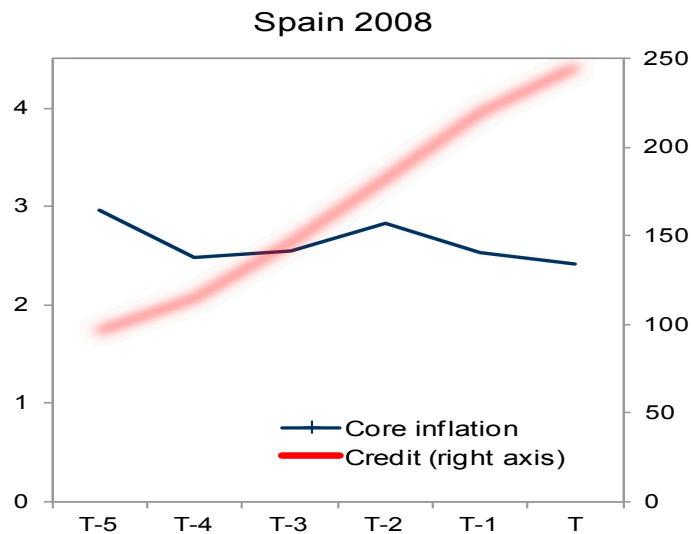
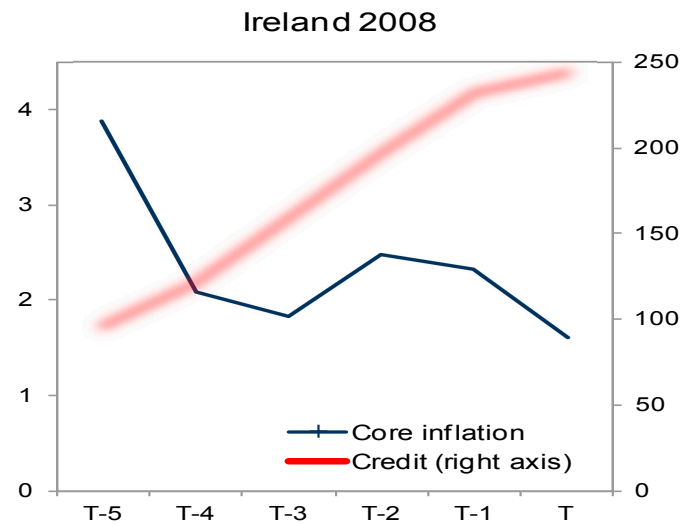
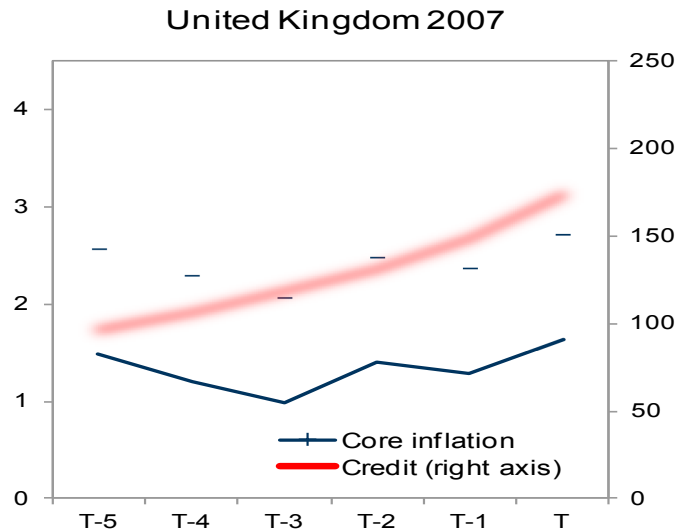
# Before crisis ... Macro looked OK



<sup>1</sup> Japan omitted.

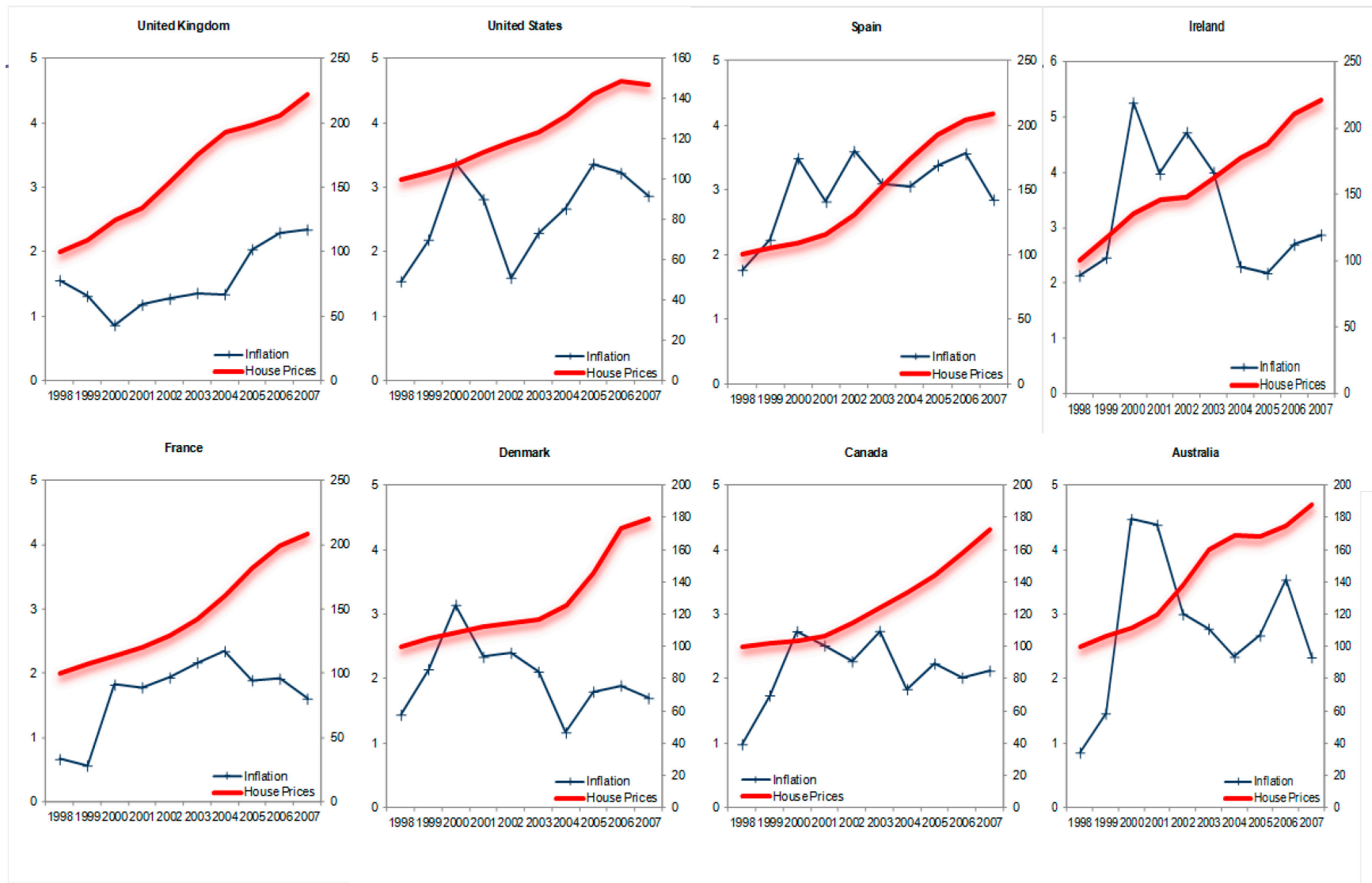
<sup>2</sup> Estimate of output gap using rolling Hodrick-Prescott filter.

# Credit Growth and Core Inflation



Sources: IMF *International Financial Statistics*, World Economic Outlook; staff calculations.  
 Notes: Credit is indexed with a base value of 100 five years prior to the crisis.

# House Prices and CPI Inflation (1998-2007)



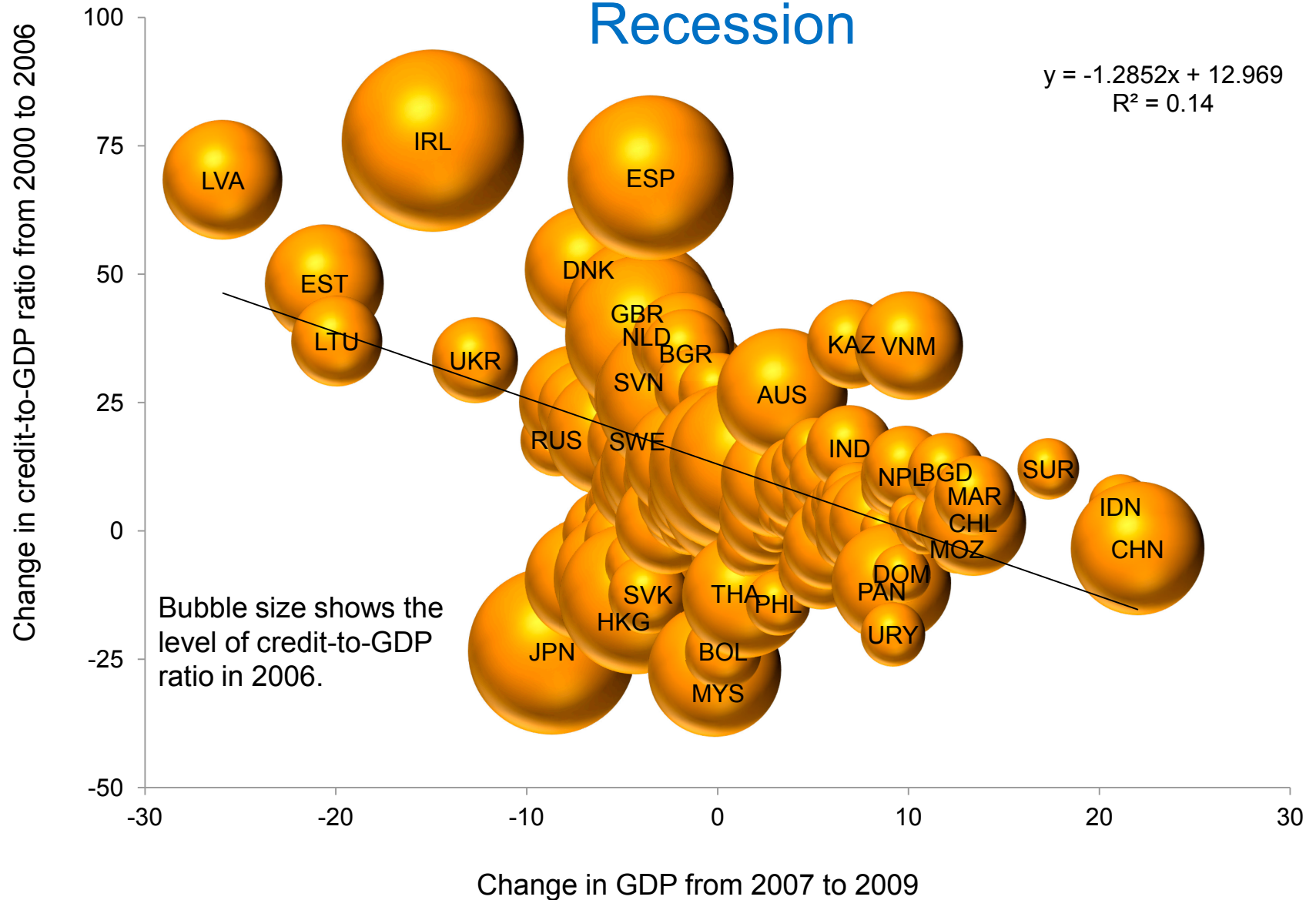


# Then the crisis came ...

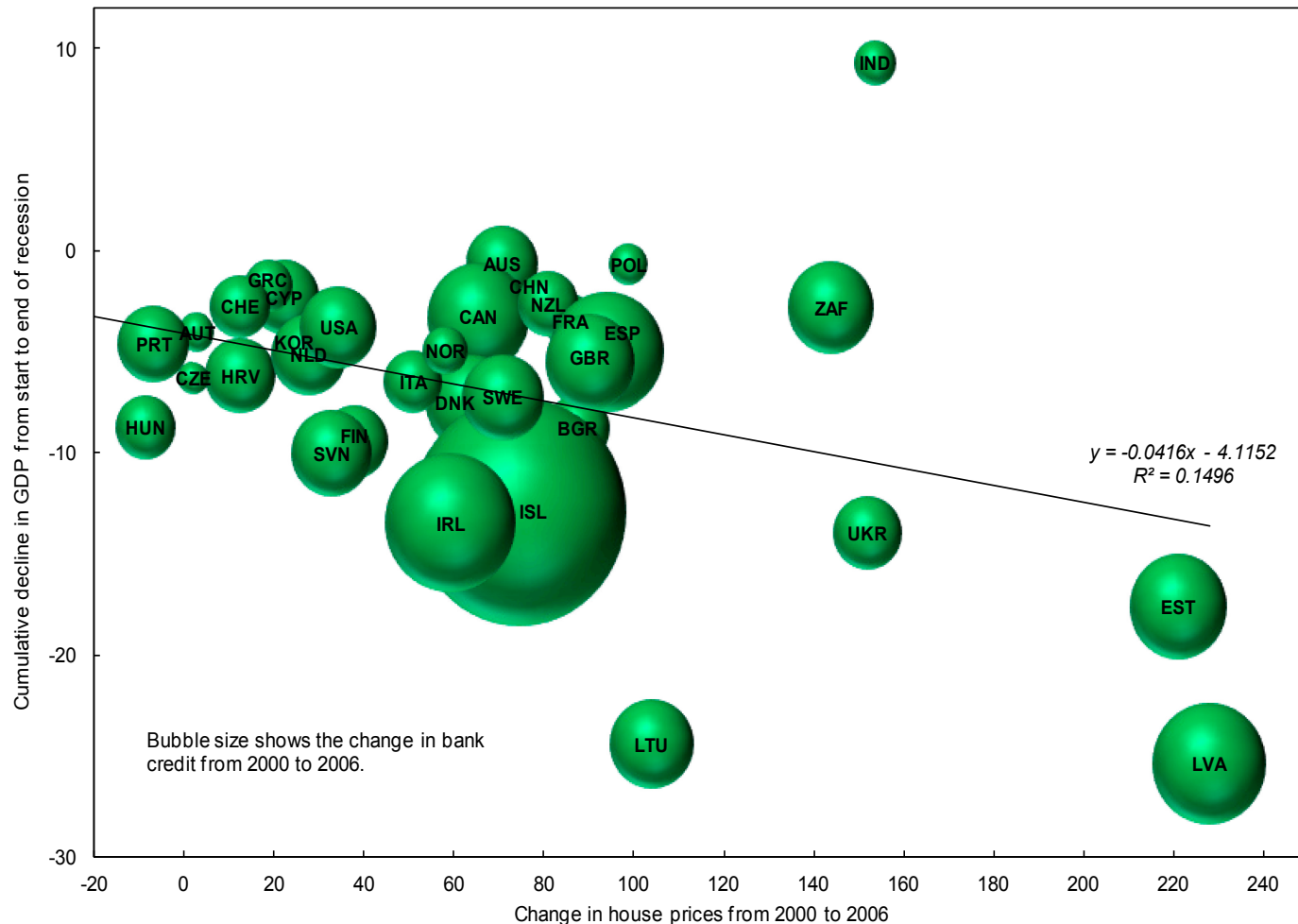
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- Standard policies rapidly hit their limits
- Limited effectiveness of less traditional policies
- Large fiscal and output costs
- Multiple banking crises; especially in countries with their own credit and real estate booms

# Credit Growth and Depth of Great Recession

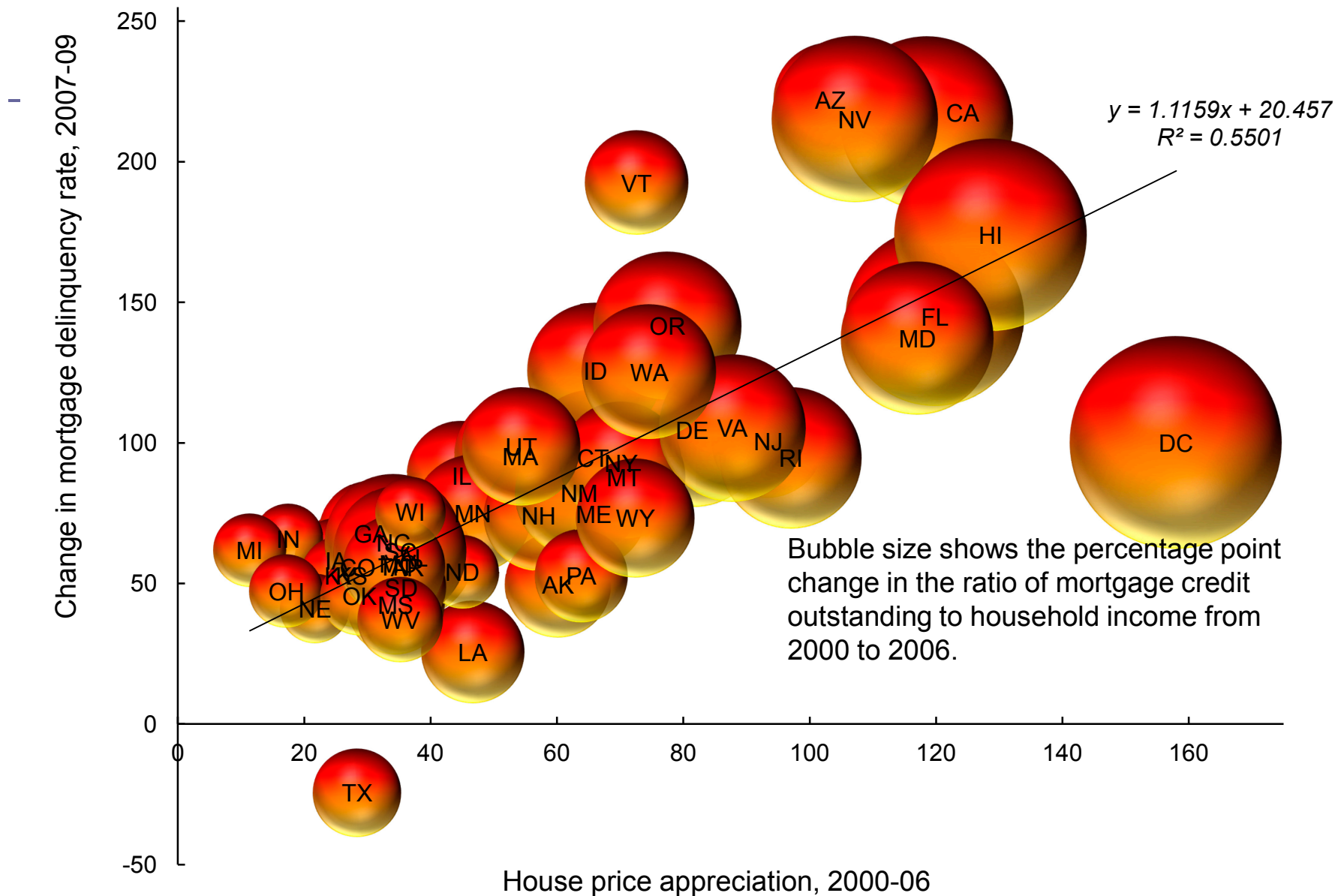


# House boom/busts and great recession



Source: Claessens et al (2010).

# Subprime Boom and Defaults

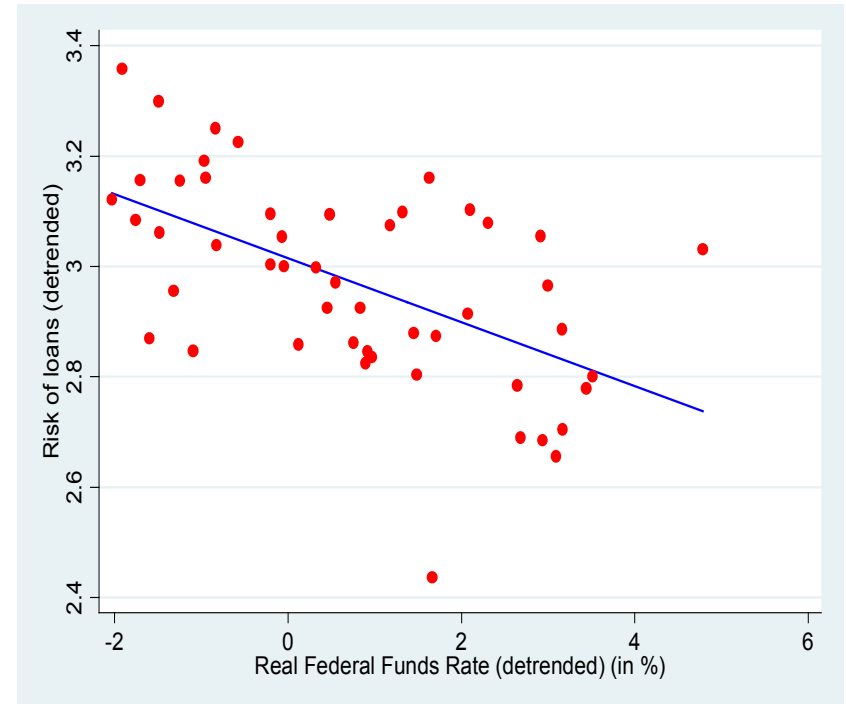
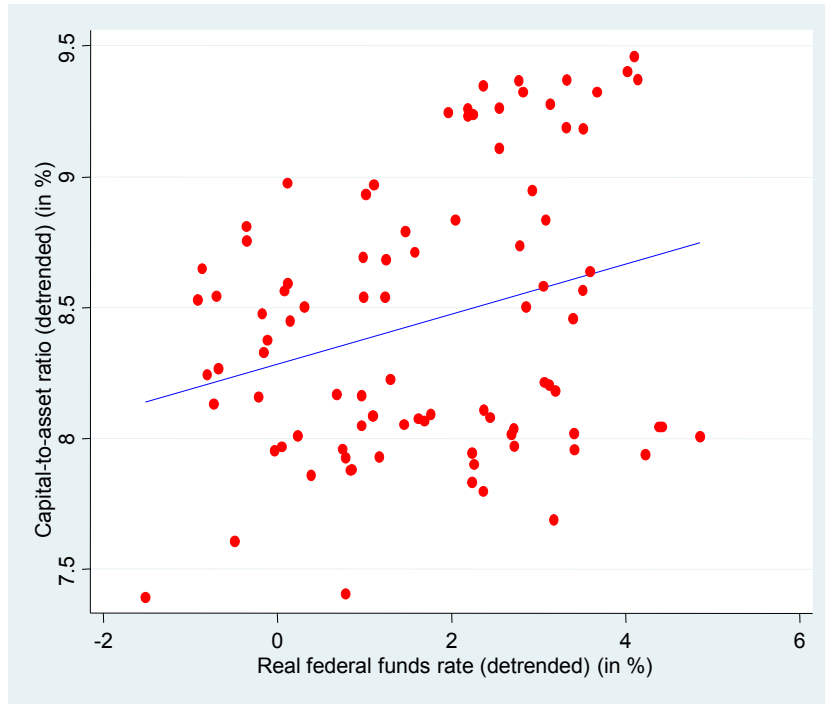


# The crisis challenged existing consensus

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- ❑ Many stories/theories linking interest rates and risk taking
- ❑ Some compatible others opposite to each other
- ❑ Often implications for different types of agents/intermediaries
- ❑ Few entail views about “excessiveness” of risks
- ❑ Empirically: growing evidence that low rates imply greater risk taking. But magnitudes unclear

# Stylized facts



Source: Dell'Ariccia, Laeven, and Suarez, 2013

# The risk taking channel: Theory

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- Many argued that monetary policy provided intermediaries with the wrong incentives (Borio et al., 2008)
  
- Several stories associate low interest rate environment to crisis
  - Overly loose monetary policy (Taylor, 2009)
  - Abundant liquidity – search for yield (Rajan, 2005)
  - Risk-shifting: what matters are transitions (Landier et al., 2011)
  - Liquidity risk (Acharya and Naqvi, 2010, Freixas et al., 2011)
  - Adverse selection and strategic effects in credit booms (Allen and Carletti, 2011, Dell’Ariccia and Marquez, 2006, Ruckes, 2004)
  - Increase in leverage (Adrian and Shin, 2008, 2009...Dell’Ariccia et al., 2011)
  
- Others focus on how expected macro bailout and risk externalities seed ground for new crises
  - Diamond and Rajan (2010), Farhi and Tirole (2009), Acharya and Yorulmazer (2007)

# Implications for monetary policy

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## □ Is the “divine coincidence” dead?

- We already knew short-term trade-off inflation/output
- Is there also one between output/inflation eqlb and financial stability?
- Financial frictions imply that low/stable inflation is not enough any longer (assuming systemic risk taking is excessive)

## □ Other tools?

- Macroprudential (LTVs, DTIs, dynamic provisioning, cyclical CARs)
- But unlikely to work perfectly
- Potential need to lean against the wind

## □ Many questions:

- What metrics (leverage, asset-prices, credit growth,...)
- Rules versus discretion
- General overhaul of IT and Taylor rules or case-by-case practical approach?



# Relationship with other policies

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- How many agencies in charge of MoP/MaP?
  - Two instruments (Policy rate, MaP)/ Two objectives (Inflation/output, Stability)
  - Each instrument affects both objectives
  - If perfectly functioning, design does not matter
  
- But, if not, separation improves credibility
  - Especially if CB's mandate very clear
  - Similar to fiscal/monetary policy divorce (think Barro/Gordon)
  - At potential cost of second-best policy mix
  
- Example, in a recession:
  - CB cuts rate aggressively to stimulate demand
  - FA reacts by tightening macro-prudential regulation to reduce risk-taking → CB eases even more → FA ....
  - Result: a policy mix with too low interest rates and too tight macro-prudential measures

# Governance issues

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- Outsourcing monetary policy to independent CBs was “easy”
  - A clear and measurable objective: low and stable inflation (sometimes with some attention to short-term output)
  - A clearly understood (almost mono-dimensional tool): the policy rate
  - Accountability led to properly designed incentives for central bankers
  
- But financial stability much more complicated
  - Is there as a too stable banking system?
  - Multiple objectives, difficult to measure
  - Nobody sees the crises that do not happen
  - Accountability complicated, potential for poor incentives
  - Systemic nature makes problem worse than for MiP (no yardstick)

# Implications for regulatory design

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- How many agencies in charge of MaP/MiP?
  - Is it conceivable to keep macroprudential and microprudential regulators separate?
  - MaP could set level of certain ratios over the cycle
  - MiP enforcement and bank level variations
  
- Yet, things are more multidimensional and there can be conflicts
  - Set  $P(X)$ =probability that bank X fails
  - Then probability of joint failures:  $P(X \cap Y) = P(Y | X)P(X) = P(X | Y)P(Y)$
  - So you could have measures that lower  $P(X)$ ,  $P(Y)$ , but increase  $P(X \cap Y)$
  
- Think about completely separated versus integrated systems (Allen/Gale)
  - Hedging across banks/Cross-border links
  - What kind of strategic game can emerge between MiP and MaP agencies?

# Cross-border issues

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## □ Low interest rates in core countries

- Spillovers through capital flows
- Not a major issue if ER not a target
- But problem if ER volatility is an issue
- K-controls and macroprudential measures may help

## □ Are unconventional measures any different?

- QE1 opposite effect of QE2 & QE3
- Not clear if UMP causes more/less spillover than standard interest rate policy (carry trade?)

## □ Macroprudential policy with open k-accounts?

- Cyclical CARs vs Basel I
- Borrower or activity based measures
- Especially an issues within currency areas

# Conclusions

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- Growing evidence and analysis suggest a role of monetary policy stance in financial sector risk taking
- Potentially important implications for the way we want to run MoP and its relationship with MaP/MiP
- Yet, channels and magnitudes are much less clear
- Effectiveness of MaP also remains unclear
- Practical approach based on discretion rather than rules