DEFINING THE RESEARCH FRONTIER FOR MPP – WHERE TO GO FROM HERE?

THORSTEN BECK

EUI FLORENCE SCHOOL OF BANKING AND FINANCE

FINANCIAL STABILITY – SYSTEMIC RISK

- Financial stability can be defined as a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances. *Source: ECB*

- Why do we care?
  - Disruption of credit flow and payment services can bring economies to a halt
  - Loss of access to savings can put depositors in precarious situation
  - Very high fiscal and output costs of banking crises (up to 55%)

IT NEVER RAINS, IT ALWAYS POURS….

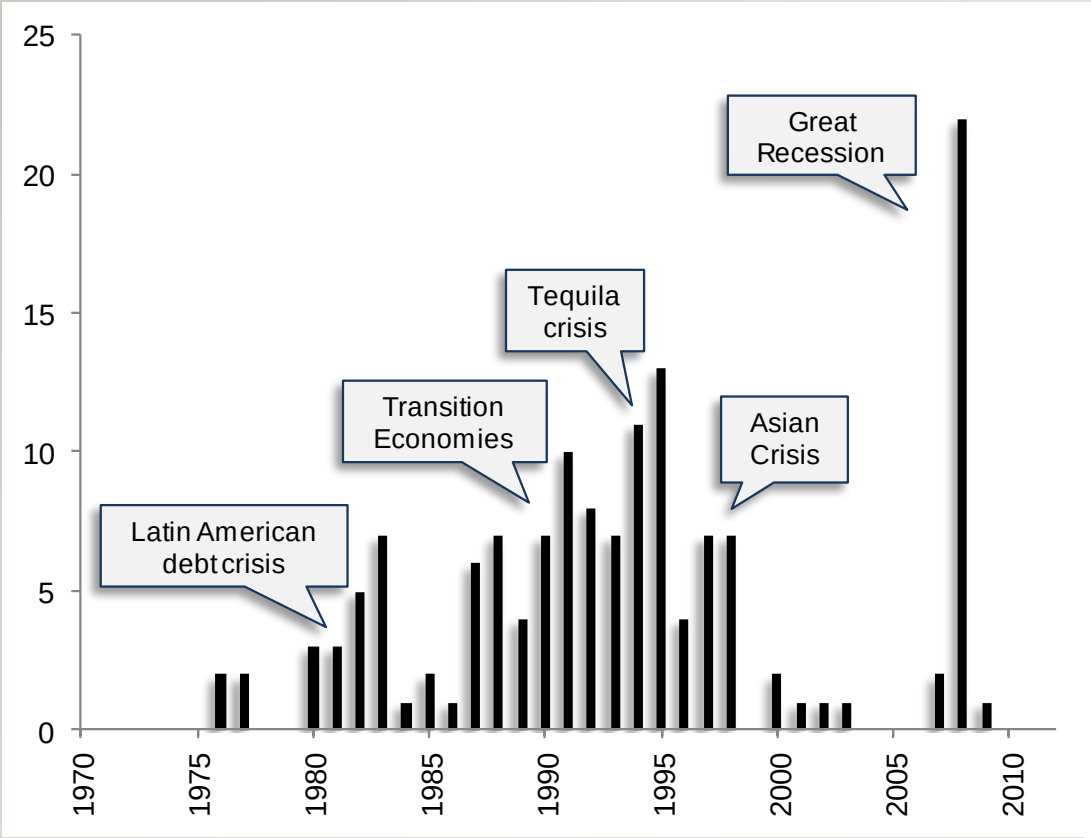


Figure 6. U.S. Bank Failures: Fraction of Failed Banks

Over the period 1934 to 2010

Note: The figures include all failures and assistance transactions across 50 U.S. states and Washington DC, as percent of total number of institutions. 2010 includes data up to April. Source: FDIC.

MPP – THE OBJECTIVES

- Macroprudential policies have objective to
  - prevent the excessive build-up of risk, resulting from external factors and market failures, to smoothen the financial cycle or make financial system more resilient to the cycle (time dimension)
  - make the financial sector more resilient to failure of systemically important financial institutions and limit contagion effects (cross-section dimension)
  - encourage a system-wide perspective in financial regulation to create the right set of incentives for market participants (structural dimension)

  - Assessing different dimensions implies different evaluation techniques

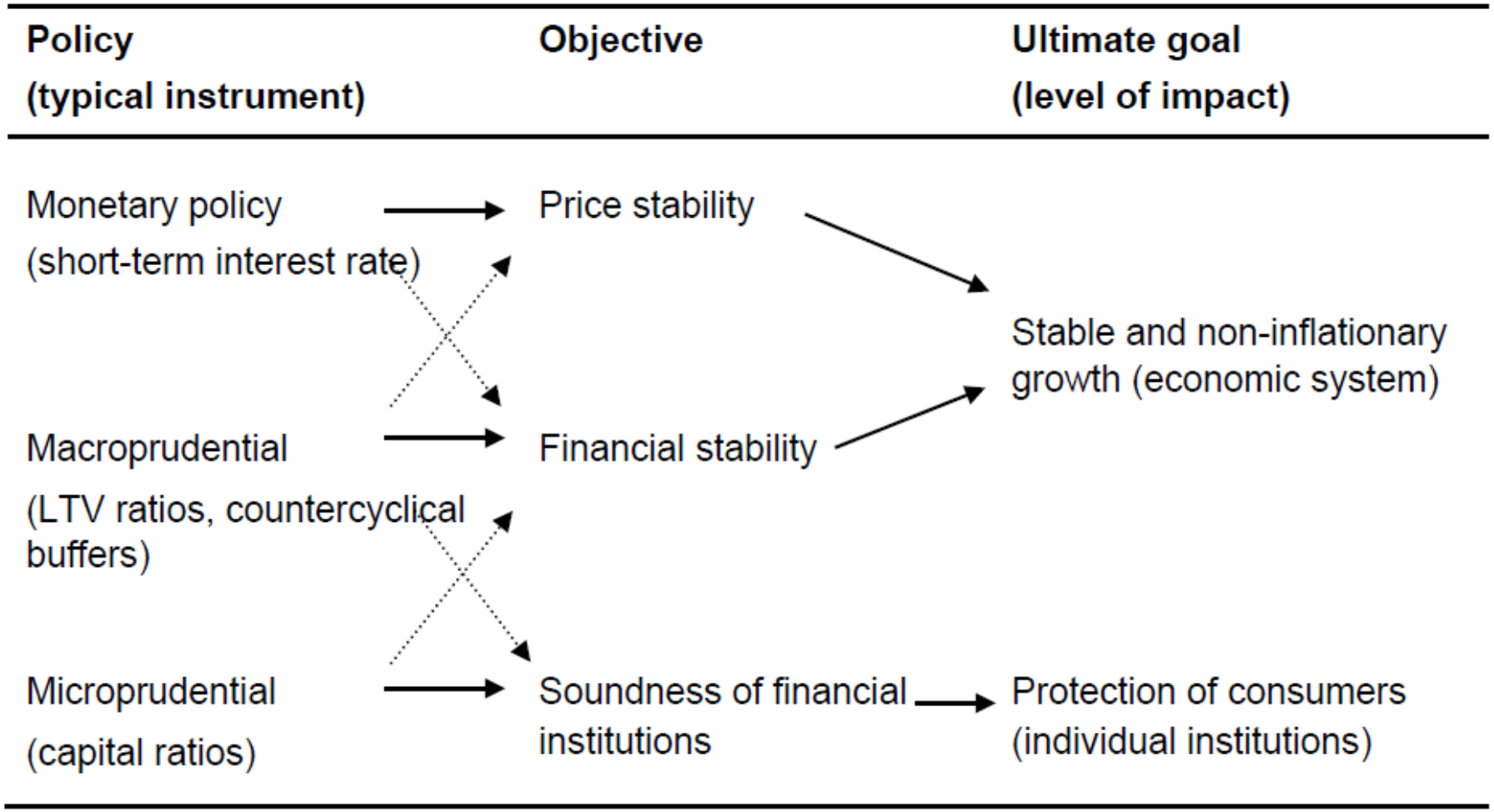
MICRO- VS. MACRO-PRUDENTIAL REGULATION/SUPERVISION

The macro- and microprudential perspectives compared

	Macroprudential	Microprudential
Proximate objective	limit financial system-wide distress	limit distress of individual institutions
Ultimate objective	avoid output (GDP) costs linked to financial instability	consumer (investor/depositor) protection
Characterisation of risk	Seen as dependent on collective behaviour ("endogenous")	Seen as independent of individual agents' behaviour ("exogenous")
Correlations and common exposures across institutions	important	irrelevant
Calibration of prudential controls	in terms of system-wide risk; top-down	in terms of risks of individual institutions; bottom-up

MPP – INSTITUTIONAL STRUCTURE

Figure 1 Policy framework for the financial and economic system



Source: Schoenmaker and Wierts (2011).

THE 'HISTORIC' VIEW

- Toolbox has changed over the decades; EMDEs have longer tradition in macroprudential ~~repression~~ regulation
- Pre-Global Financial Crisis: inflation targeting paradigm in advanced countries
  - Monetary policy to target specific inflation rate (2%), thus monetary stability
  - (Micro) prudential policies to target financial stability ensuring no individual bank takes large risks
- BUT: monetary policy has impact on financial stability
  - Risk-taking channel of monetary policy
  - Financial instability can force the hand of monetary policy authorities
- BUT: Fallacy of composition: if all individual financial institutions are safe, this does NOT imply systemic stability
- Post-2008: adoption of some macro-pru measures (including in Basel 3), including counter-cyclical capital buffers
- Pandemic: another wave of MPPs – capital releases, dividend restrictions

MICRO VS. MACRO – A FALSE DEBATE?

- Where does micro-pru end and where does macro-pru start?
- Example: dividend restrictions 2020 – SSM and ESRB
- Institutional overlap!
- Difference: analytical approach

MACRO-PRU – THE SKY IS THE LIMIT?

Table 1. The Macro-Prudential Toolkit

	Restrictions related to borrower, instrument, or activity	Restrictions on financial sector balance sheet (assets, liabilities)	Buffer based policies	Other	
				Taxation, levies	Other (including institutional infrastructure)
Expansionary phase	Time varying caps/limits/rules on: - DTI, LTI, LTV - margins, hair-cuts - lending to sectors - credit growth	Time varying caps/limits on: -mismatches (FX, interest rate) - reserve requirements	Countercyclical capital requirements, leverage restrictions, general (dynamic) provisioning	Levy/tax on specific assets and/or liabilities	- Accounting (e.g., varying rules on mark to market) -Changes to compensation, market discipline, governance
Contractionary phase: fire-sales, credit crunch	Adjustment to specific loan-loss provisioning, margins or hair-cuts (e.g., through the cycle, dynamic)	Liquidity limits (e.g., Net Stable Funding Ratio, Liquidity Coverage Ratio)	Countercyclical capital requirements, general (dynamic) provisioning	Levy/tax (e.g., on non-core liabilities)	-Standardized products -OTC vs. on exchange -Safety net (Central Bank/Treasury liquidity, fiscal support)
Contagion, or shock propagation from SIFIs or networks	Varying restrictions on asset composition, activities (e.g., Volcker, Vickers)	Institution- specific limits on (bilateral) financial exposures, other balance sheet measures	Capital surcharges linked to systemic risk	Tax/levy varying by externality (size, network)	- Institutional infrastructure (e.g., CCPs) - Resolution (e.g., living wills) - Varying information, disclosure

Enhancing resilience
Dampening the cycle
Dispelling gestation of cycle

ASSESSING MPP – THE EMPIRICAL CHALLENGES

- Gauge effects of macroprudential policies on credit growth, asset price growth, risk-taking
  - Problem: Endogeneity concerns – authorities react to macro-financial development
  - Problem: demand vs. supply channels
  - Problem: other policy measures adopted at same time
- Hard to overcome these issues in cross-country context
  - Limits of synthetic control group in macro
- Needed: micro-level data, such as credit registry, firm-level survey etc.
- Micro-level data allows to differentiate between
  - Extensive and intensive margins
  - Price and quantity effects
  - Volume and risk-taking effects

ASSESSING MPP – THE EMPIRICAL CHALLENGES (2)

- Micro-data allow to exploit variation
  - Across banks, lending to same firm, but affected differently by prudential measures
  - Across borrowers below and above threshold
  - Borrowers/banks borrowing/lending in different geographic areas
- Isolate macroprudential shock?
  - Anticipation effects?
  - Compare with monetary policy: use of surprises, focusing on market reactions
- External vs. internal validity
  - Focus on broad cross-country panels with weak identification and crude indicators vs.
  - Focus on one country and one specific policy, possibly well identified

INTERACTIONS WITH OTHER POLICY AREAS

- Research on macro- and microprudential and monetary policy all need access to high frequency and micro data
- Micro-prudential: overlap with cross-sectional dimension of macro-prudential
- Monetary policy: conflict of interest? Complementary? - concerns mostly time-series dimension of macro-prudential
- Crisis situation – need close coordination
  - Example: joint announcement of COVID-19 crisis measures by MPC, FPC and PRC in the UK
- Overlap/coordination also with
  - Fiscal policy
  - Competition policy (SIFIs, competition and stability, foreign vs. domestic players)
  - Consumer protection policy

WHAT HAVE WE LEARNED?

- Macro-prudential policy can be successful if binding,…
- …but more so in upturn than downturn (asymmetry)
- Continuous challenge of leakages (foreign branches, NBFIs, fintech etc.)
- Borrower-based measures seem to work better than in lender-based measures for credit cycle effects; lender-base measures for resilience
- Differential effects across firms of different sizes and households of different income levels as well banks with different capital strength
- Consequently important distributional effects
- Actual measures not necessarily the optimal ones

ASSESSING THE PANDEMIC MPP

- Capital release
  - Aggressive release of capital buffer (counter-cyclical, conservation buffers, Pillar II)
  - Objective: support lending to real economy
  - Successful, but not as much as hoped (important to focus on counterfactual)
  - Banks reluctant to reduce capital buffers too much (signalling to investors, future reversal, provision for future losses?)
- Dividend restrictions
  - Avoid risk shifting, preserve capital
  - Overall successful (debt up, equity down)
- To which extent should such policy measures become part of permanent toolbox? Should they be restricted to extreme, once-a-century situations?

INSTITUTIONAL SET-UP

- Mandate:
  - In difference to monetary policy, there is no clear-cut goal (inflation target)
  - Target is negative: no systemic risk
    - How to define systemic risk?
    - What is counterfactual?
  - Alternative: focus on specific indicators
  - Type I vs. Type II errors
  - Regulatory perimeter
  - With well-defined mandate comes transparency and accountability
- Independence from political interference, but accountability

MONETARY AND PRUDENTIAL POLICY - SYNERGIES AND CONFLICT OF INTERESTS

Synergies

- Supervisors can benefit from the independence and reputation of the central bank (efficiency gains linked to political independence)
- Mitigate supervisory capture

Risks

- Reputation of the two functions are more strictly linked
- Bad reputation of supervisors due to a bank failure can transfer to the central banking function
- BUT: Not clear that a separated structure would prevent from this risk (e.g., Northern Rock) especially in crisis times since the central bank is in charge of LOLR

MONETARY AND PRUDENTIAL POLICY - SYNERGIES AND CONFLICT OF INTERESTS (2)

Synergies

- Allows to internalize the spill-overs existing between monetary and prudential policies and objectives (*push-me/pull-you* conduct)

Risks: Price stability and financial stability may pursue conflicting objectives. Managing these conflicts may be challenging

- ***Financial dominance***: temporary deviation from the main objective of monetary policy; inflation bias
- Reduction in efficiency and effectiveness of supervisors (***excessive forbearance***)

SYNERGIES AND CONFLICTS OF INTEREST: EMPIRICAL EVIDENCE

- Is an integrated model of a central bank in charge of monetary policy and supervision more conducive to ***price and financial instability***?
  - ➢ Empirical analysis using data from 98 countries worldwide during the period 1999-2012
  - ➢ Investigate the link between the institutional structure of supervision and
    - ✓ Economic growth and inflation
    - ✓ The likelihood that a credit boom turns into a crisis.
    - ✓ Ampudia et al. (2019), ECB Discussion paper

SYNERGIES AND CONFLICTS OF INTEREST: EMPIRICAL EVIDENCE

- In countries with an integrated structure for monetary policy and supervision, there is a lower unconditional probability of credit booms turning into banking crisis (16% vs 30%).

	Ind. Bank Supervisor		CB bank supervisor	
	No Crisis	Crisis	No Crisis	Crisis
No Boom	243	62	447	73
Boom	86	26	149	24

Note: Credit booms defined as in Dell'Ariccia et al. (2015) using credit-to-GDP ratio excessive growth criteria

No evidence that an integrated structure is related to more financial instability

SYNERGIES AND CONFLICTS OF INTEREST: EMPIRICAL EVIDENCE (2)

Where supervision is inside central bank, LTV was used in 25% of times, while it was used in 9% of all times in countries where supervision is outside central bank

	Separated Model		*Integrated Model*	
	No LTV	*LTV*	*No LTV*	*LTV*
No boom	207	67	363	126
boom	50	5	78	26

MPP – THE POLITICS

- Taking away the punch bowl? Relevant especially for borrower-based measures
- Does institutional independence help?
- Conflict with fiscal policy and political objectives (most prominently, housing market)

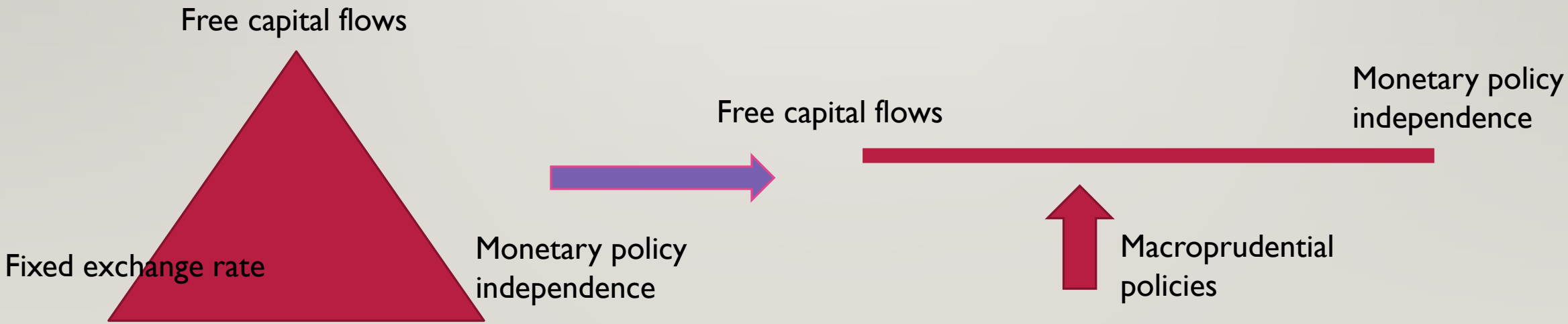
THE POLITICS OF BORROWER-BASED MEASURES – EXAMPLE OF IRELAND

- Central Bank faced widespread frustration and contestation by the population when introducing in 2015 LTV and LTI caps designed to rein credit and housing cycles. "The Irish Times view on banks' mortgage policies: time for a little understanding" … "no-one wants a return to the loose lending of the past but a little understanding of the stresses being experienced by customers who simply want to put a roof over their head wouldn't go amiss either". This was acknowledged by the Central Bank: "Housing is a very emotive issue. (…) Lots of people aspire to own their own home. (…) People would have a strong interest in the measures and have strong views on the effectiveness of the measures and the impact of the measures"
- Ministry of Finance argued that the measures would push up rents and frustrate potential homebuyers, and that they "will also have wider economic and social impacts which will have to be taken into account" and were taken "with undue focus on the LTV aspects as opposed to the issue of affordability"
- in the run up to the 2019 elections, Irish Prime Minister Leo Varadkar called on the Central Bank to loosen the mortgage measures to help young couples caught in the "rent trap", saying the measures were "very tough" and noting that "I know the Central Bank is independent, I know it's going to look at these things but as supply increases I hope they would consider changes in that area so that people can get out of that rent trap and be able to buy"

THE CROSS-BORDER DIMENSION

Domestic financial cycle driven, at least partly, by global financial cycle

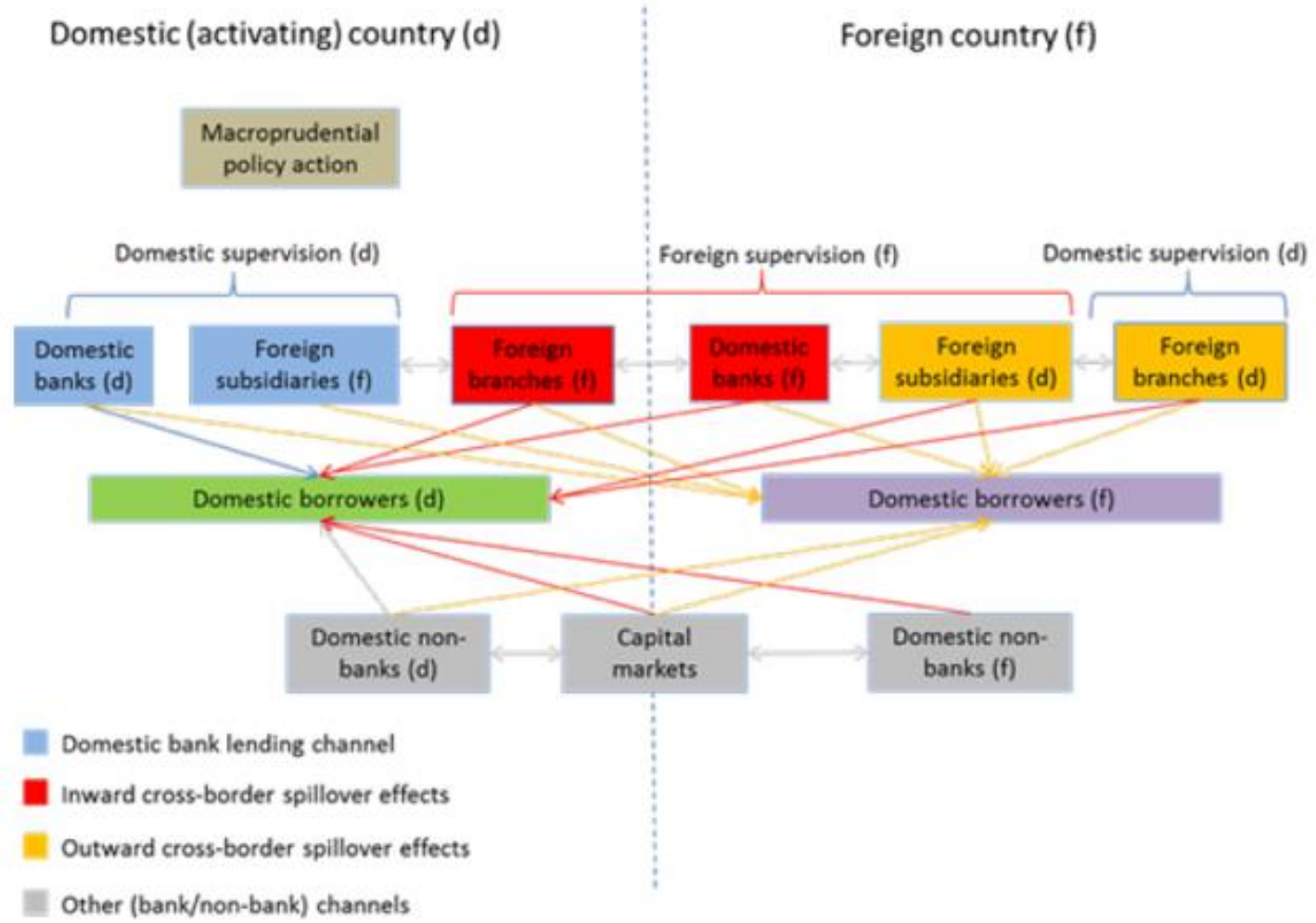
- The global financial cycle is characterised by a high degree of co-movement in credit, house prices, returns on corporate bonds and equity prices
  - Factors driving global financial cycle: VIX, US monetary policy stance (plus monetary stance in other core countries: euro area, Japan, increasingly China)
- Flexible exchange rates cannot insulate the domestic economy from the global financial cycle; the "trilemma" of monetary is reduced to a "dilemma"



CROSS-BORDER SPILL-OVERS OF POLICIES

- Inward spillovers (leakages): domestic macroprudential measures can give rise to policy leakages if bank activities migrate to areas/institutions not subject to the measures (e.g., foreign branches, NBFI); render domestic macroprudential policy less effective
- Outward spillovers: domestic macroprudential measures can induce externalities in other countries through adjustments in the lending behaviour of domestic banks towards foreign borrowers (e.g., tightening of macroprudential policies at home might result in domestic increasing their lending abroad via subsidiaries or direct cross-border lending).

Stylised view of spillovers and leakages with the presence of foreign subsidiaries and branches



Source: European Central Bank (2019b).

CROSS-BORDER SPILL-OVER OF MACRO-PRU – DO WE NEED MORE COORDINATION?

- Monetary policy on euro area level (ECB)
- Micro-prudential policy on euro area level (SSM)
- Macro-prudential policy?
  - Different circumstances, but important spillover effects (finacnial, economic, policy)
  - Coordination? Role of ESRB

RESEARCH AGENDA – LOOKING AT THE OTHER DIMENSIONS

- Focus so far on time-series dimension – what about cross-sectional and resilience dimensions
  - Cross-sectional: too-big-to-fail (see BIS report, see Credit Suisse); are we picking the right institutions?
  - Structural: CCPs – have they become more resilient? Resolution frameworks?
- Looking beyond buffers: crisis management plans:
  - Cyber-attacks
  - Geopolitical risks turning into disasters

RESEARCH AGENDA - METHODS

- Focus on specific instrument and policies using micro-data (trees) and regression analysiis
- Can we look at trees beyond countries' borders? Yes! IBRN
- Macro-prudential policy stance (the forest)
  - Structural, quantitative models
- A plea for more theory (examples!)
- Leakages, spill-overs, regulatory arbitrage

RESEARCH AGENDA – YOU NEVER WALK ALONE

- Interaction of MPP with other policy areas
  - Monetary policy (when in same, when in different directions)
  - Fiscal policy (political economy)
  - Additional supply-side/political constraints
- The politics of MPP, institutional design
- The law and regulations….

RESEARCH AGENDA – WHERE ARE ALL THE TREES?

- From banks to non-banks – increasing focus outside the banking sector
- Liquidity risks; do we need macro-pru liquidity measures?
- Climate risks:
  - just another macro-risk?
  - Higher capital buffers vs. need for more funding for green transition
- With digitalisation – new types of systemically important ~~financial~~ institutions
  - Cloud providers, platforms etc.?
- Distributional effects – trade-off: financial deepening vs. financial stability
  - Relates back to the political economy of MPP

THE OPEN QUESTIONS

- Carefully calibrated policy tools vs. crude, but binding measures
- How can regulators/supervisors get ahead of market participants and regulatory arbitrage?
- Should technocrats rule?

THANK YOU

THORSTEN BECK

WWW.THORSTENBECK.COM

@TL_BECK_FIRENZE