Regulatory Challenges for the Future

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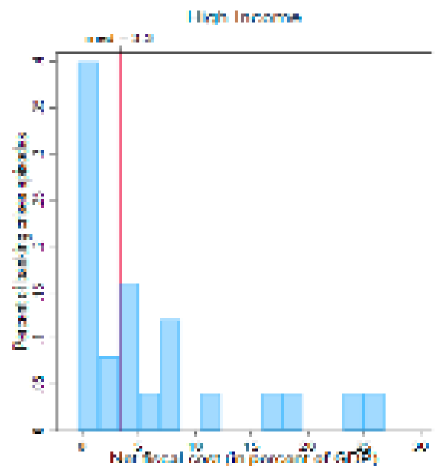
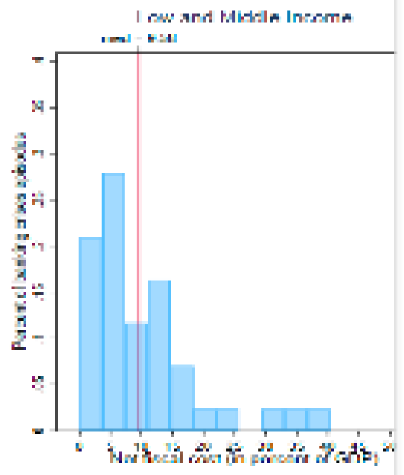
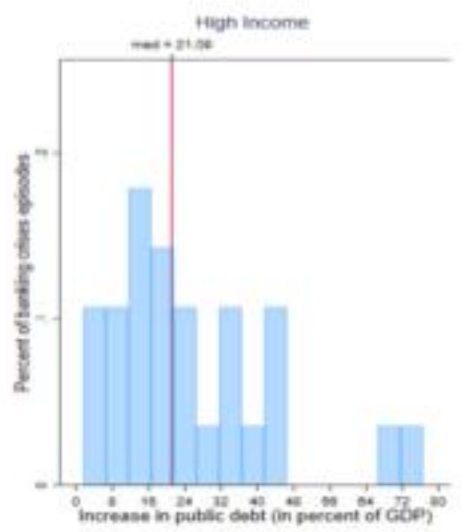
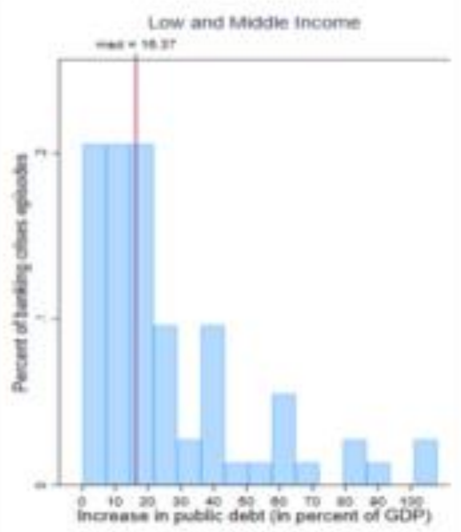
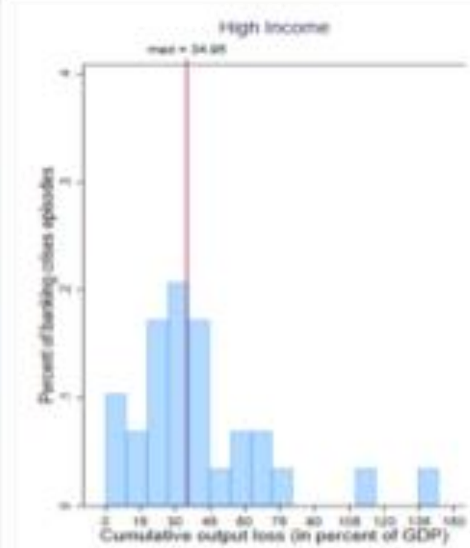
Crises are costly! Laeven and Valencia (2018)

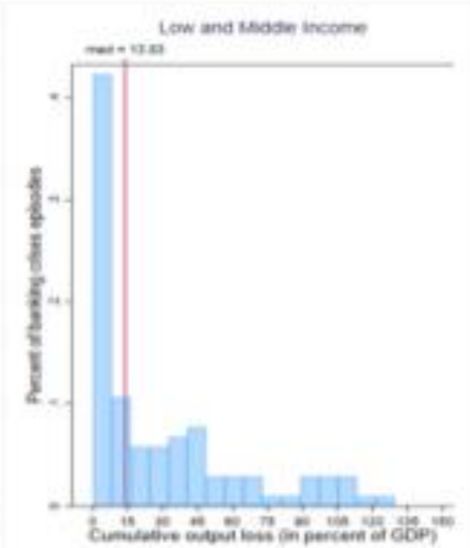


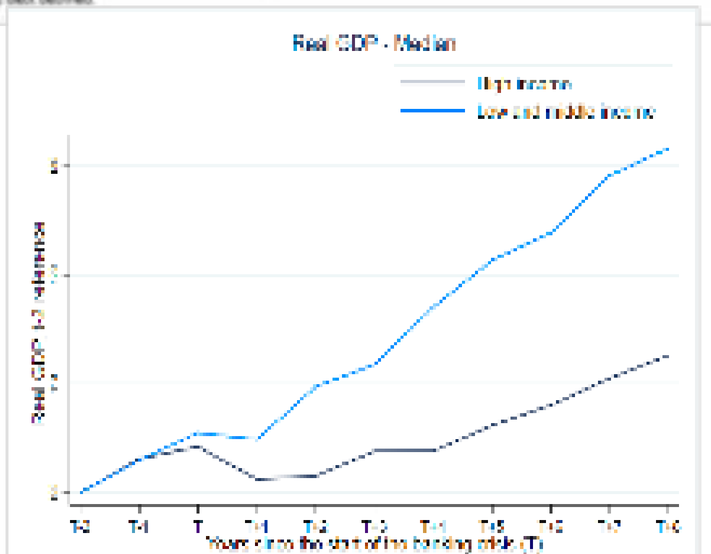












The setting

- Post-2008: an array of regulatory reform initiatives, some of which are being implemented (most prominently new capital and liquidity requirements), while others are still "in-progress", e.g., IFRS 9.
- Objectives:
  - Strengthen banks' resilience to micro and macro shocks
    - Improve effectiveness of supervision
    - Reduce taxpayers' burden in the future
  - Reduce tax evasion, money laundering etc.
  - Adjusting regulatory framework to global footprint of financial intermediation
- Taking place on
  - National level
  - Regional level (e.g. European Union)
  - Global level (Basel, G20 etc.)

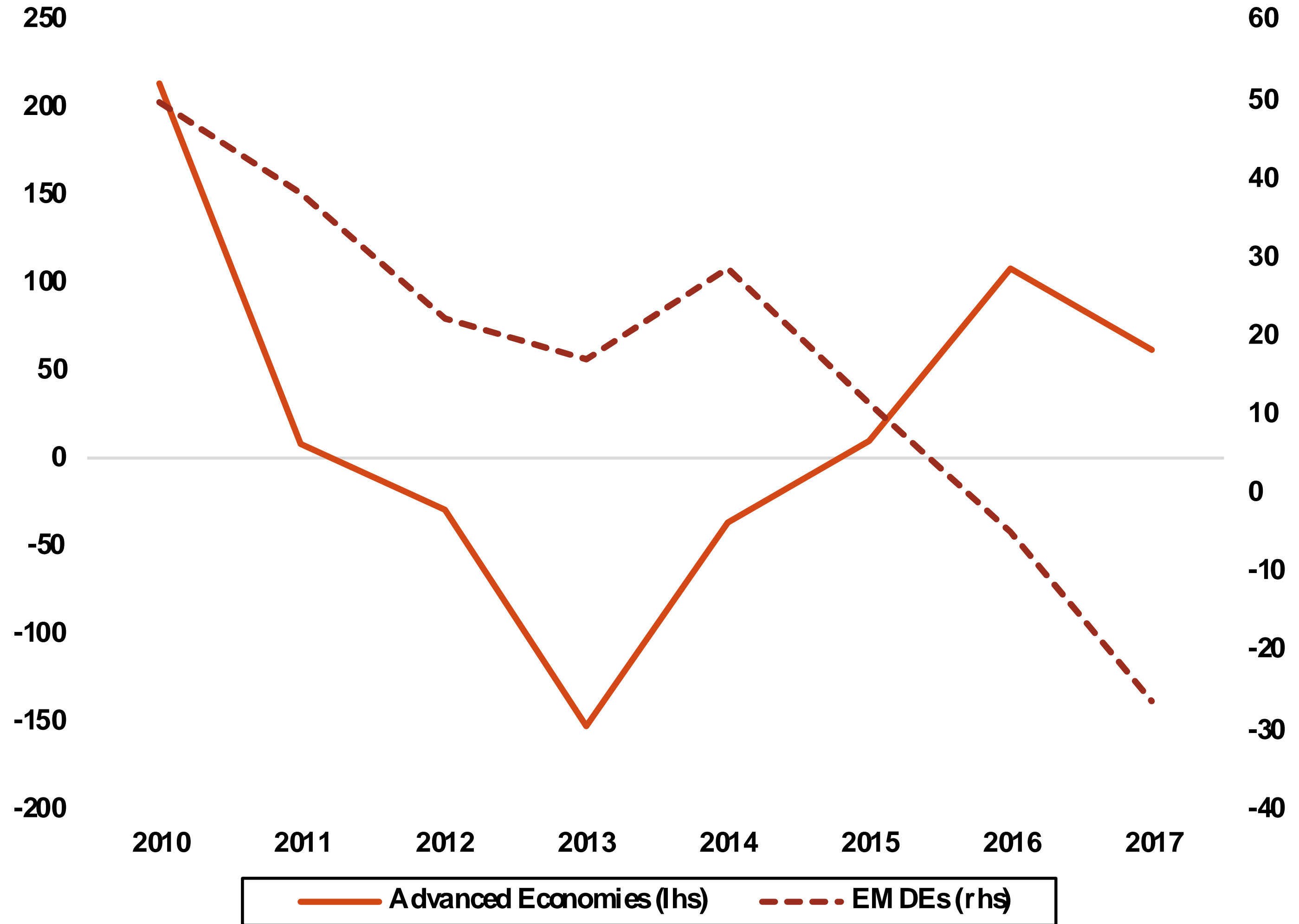
	Capital				
		Pillar 1		Pillar 2	Pillar 3
	Capital	Risk coverage	Containing leverage	Risk management and supervision	Market discipline
All Banks	**Quality and level of capital** Greater focus on common equity. The minimum will be raised to 4.5% of risk-weighted assets, after deductions. **Capital loss absorption at the point of non-viability** Contractual terms of capital instruments will include a clause that allows – at the discretion of the relevant authority – write-off or conversion to common shares if the bank is judged to be non-viable. This principle increases the contribution of the private sector to resolving future banking crises and thereby reduces moral hazard. **Capital conservation buffer** Comprising common equity of 2.5% of risk-weighted assets, bringing the total common equity standard to 7%. Constraint on a bank's discretionary distributions will be imposed when banks fall into the buffer range. **Countercyclical buffer** Imposed within a range of 0-2.5% comprising common equity, when authorities judge credit growth is resulting in an unacceptable build up of systematic risk.	**Securitisations** Strengthens the capital treatment for certain complex securitisations. Requires banks to conduct more rigorous credit analyses of externally rated securitisation exposures. **Trading book** Significantly higher capital for trading and derivatives activities, as well as complex securitisations held in the trading book. Introduction of a stressed value-at-risk framework to help mitigate procyclicality. A capital charge for incremental risk that estimates the default and migration risks of unsecuritised credit products and takes liquidity into account. **Counterparty credit risk** Substantial strengthening of the counterparty credit risk framework. Includes: more stringent requirements for measuring exposure; capital incentives for banks to use central counterparties for derivatives; and higher capital for inter-financial sector exposures. **Bank exposures to central counterparties (CCPs)** The Committee has proposed that trade exposures to a qualifying CCP will receive a 2% risk weight and default fund exposures to a qualifying CCP will be capitalised according to a risk-based method that consistently and simply estimates risk arising from such default fund.	**Leverage ratio** A non-risk-based leverage ratio that includes off-balance sheet exposures will serve as a backstop to the risk-based capital requirement. Also helps contain system wide build up of leverage.	**Supplemental Pillar 2 requirements.** Address firm-wide governance and risk management; capturing the risk of off-balance sheet exposures and securitisation activities; managing risk concentrations; providing incentives for banks to better manage risk and returns over the long term; sound compensation practices; valuation practices; stress testing; accounting standards for financial instruments; corporate governance; and supervisory colleges.	**Revised Pillar 3 disclosures requirements** The requirements introduced relate to securitisation exposures and sponsorship of off-balance sheet vehicles. Enhanced disclosures on the detail of the components of regulatory capital and their reconciliation to the reported accounts will be required, including a comprehensive explanation of how a bank calculates its regulatory capital ratios.
SIFIs	In addition to meeting the Basel III requirements, global systemically important financial institutions (SIFIs) must have higher loss absorbency capacity to reflect the greater risks that they pose to the financial system. The Committee has developed a methodology that includes both quantitative indicators and qualitative elements to identify global systemically important banks (SIBs). The additional loss absorbency requirements are to be met with a progressive Common Equity Tier 1 (CET1) capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance. For banks facing the highest SIB surcharge, an additional loss absorbency of 1% could be applied as a disincentive to increase materially their global systemic importance in the future. A consultative document was published in cooperation with the Financial Stability Board, which is coordinating the overall set of measures to reduce the moral hazard posed by global SIFIs.				

Liquidity
Global liquidity standard and supervisory monitoring
Liquidity coverage ratio The liquidity coverage ratio (LCR) will require banks to have sufficient high-quality liquid assets to withstand a 30-day stressed funding scenario that is specified by supervisors.. **Net stable funding ratio** The net stable funding ratio (NSFR) is a longer-term structural ratio designed to address liquidity mismatches. It covers the entire balance sheet and provides incentives for banks to use stable sources of funding. **Principles for Sound Liquidity Risk Management and Supervision** The Committee's 2008 guidance Principles for Sound Liquidity Risk Management and Supervision takes account of lessons learned during the crisis and is based on a fundamental review of sound practices for managing liquidity risk in banking organisations. **Supervisory monitoring** The liquidity framework includes a common set of monitoring metrics to assist supervisors in identifying and analysing liquidity risk trends at both the bank and system-wide level

Effect of regulatory reforms on banking sector

- Difficult to assess the overall impact of regulatory reforms for lending and investment
  - Many reforms interact with each other
  - Assumptions behind models and calibrations may be unrealistic
  - **Current studies only estimate moderate effects of regulatory changes**
- Trade-off between financial depth vs. stability – we want sustainable financial deepening
- Spill-over effects of regulatory reforms in advanced and large emerging markets (FSB members) to other emerging and developing countries
  - Cross-border lending
  - Playing field issues related to the operation of foreign banks' subsidiaries/branches in EMDEs

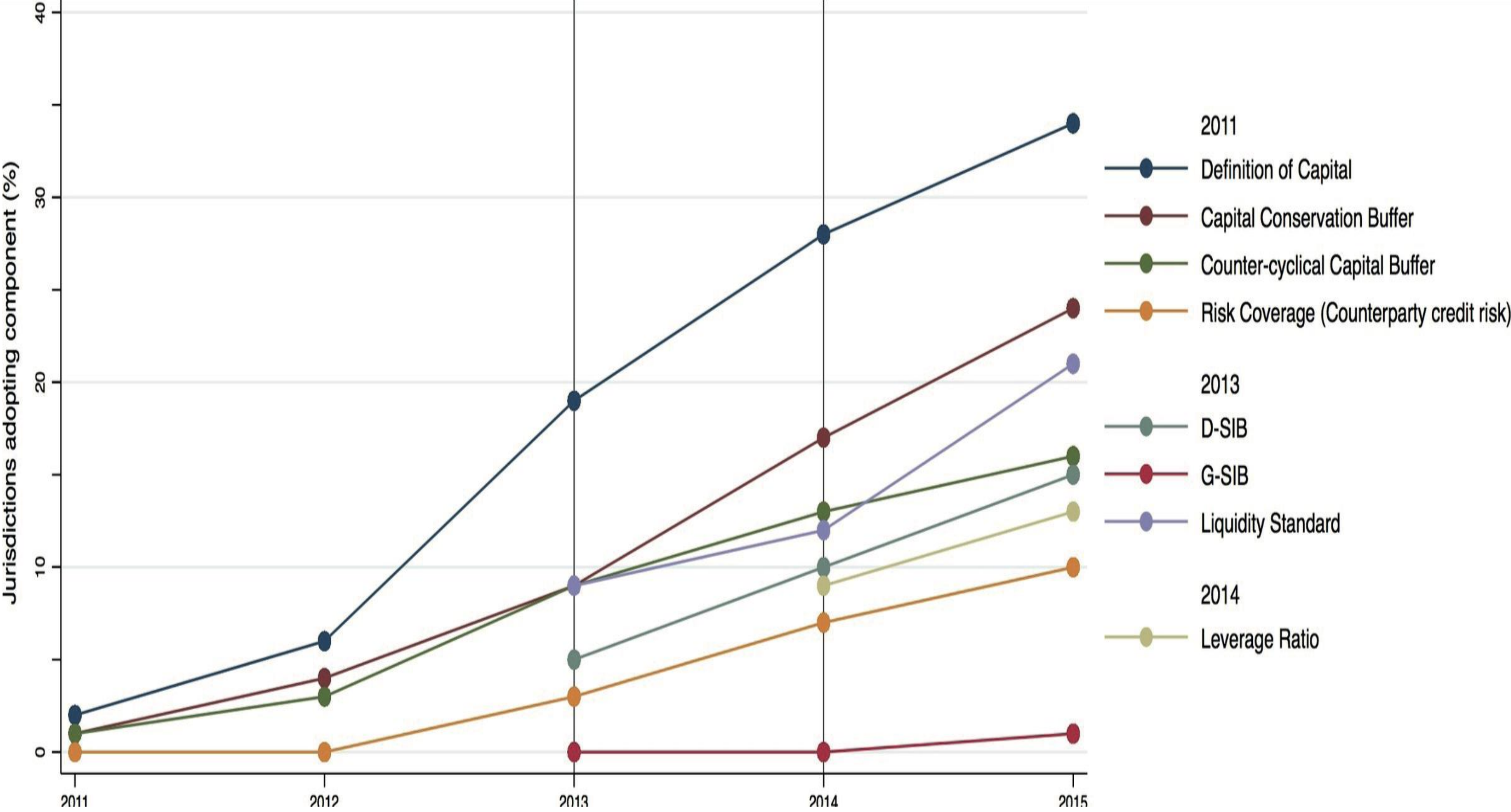
US BIS-Reporting Banks cross-border lending to advanced and EMDEs(USD billions)



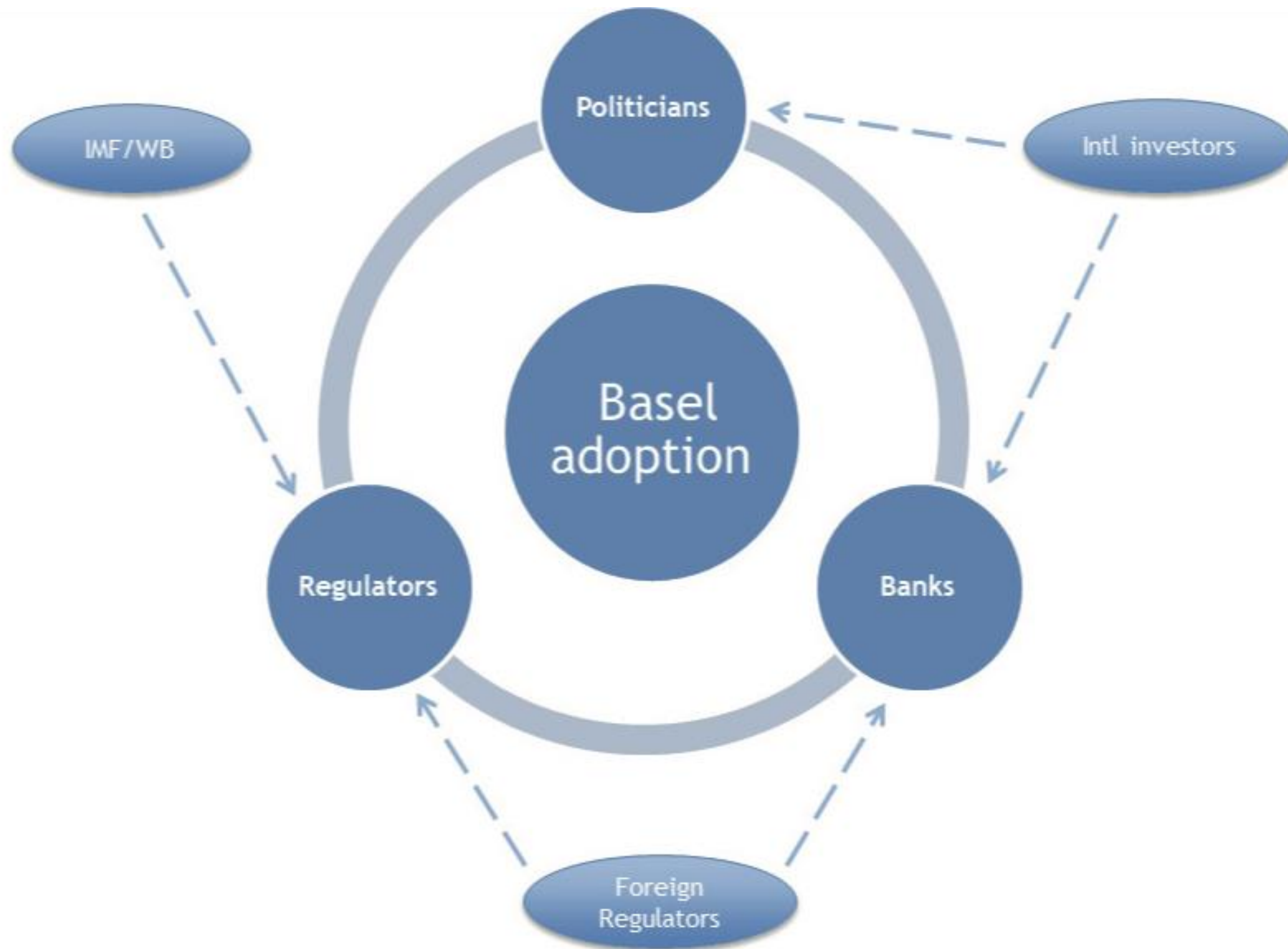
Regulatory reform in developing countries

- While reform process is designed for high-income countries and large emerging markets, they are not designed with developing countries in mind
- Still, big influence, feel pressured to adopt these rules as well, as signalling tool
- Often limited capacity to do so, but also different needs!
  - Additional sources of fragility not addressed in Basel III
- Also: different trade-off between financial stability and financial deepening/inclusion

Adoption by Basel III by jurisdictions outside Basel Committee



Why do EMDEs adopt Basel???



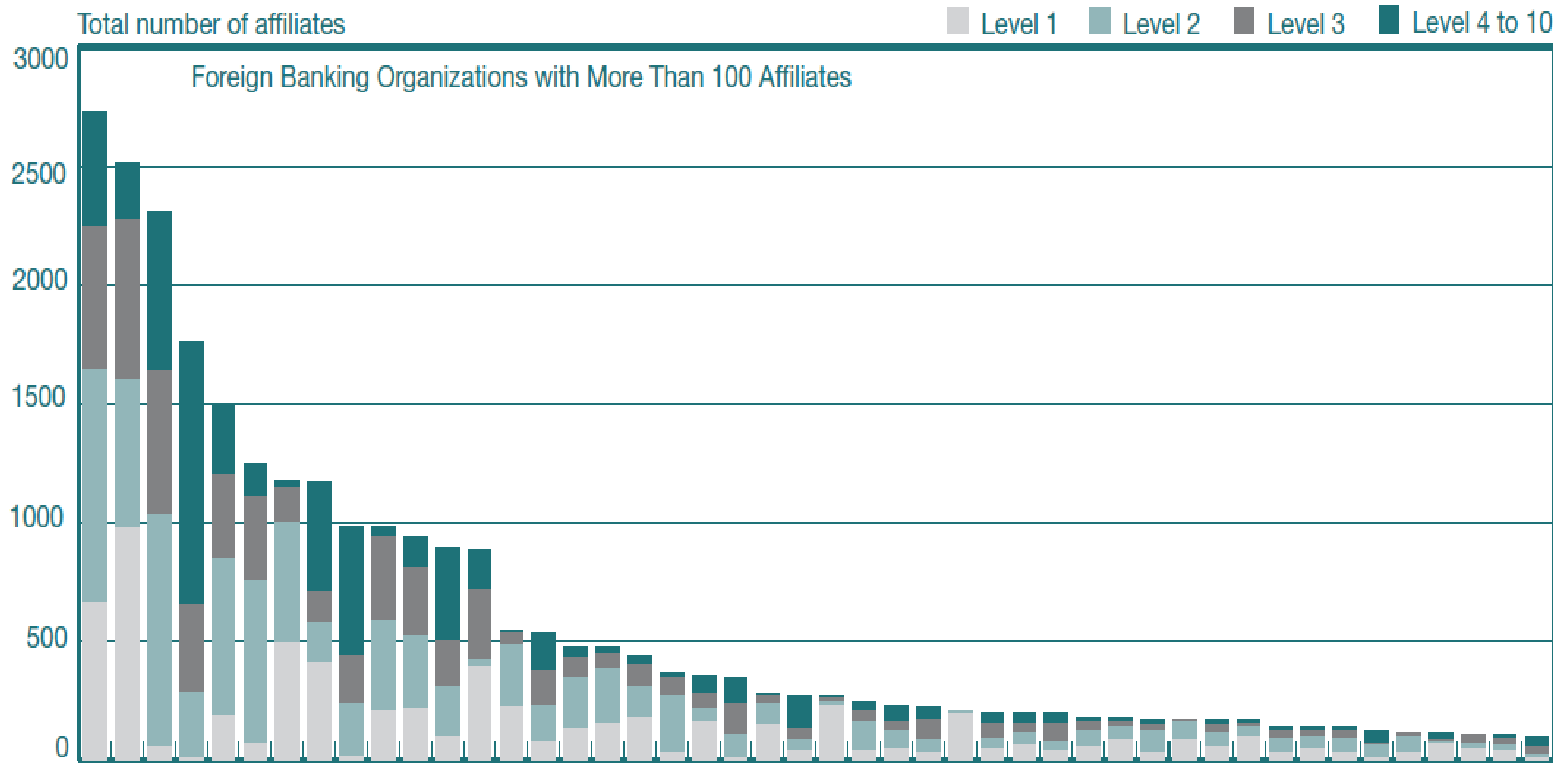
Some broader thoughts: Regulation in finance – a trade-off

- Need vibrant financial system to support real economy
- But there can be too much of a good thing – exuberance, imprudent lending etc.
- Where is the balance? What is the Goldilocks level of finance?
- WANTED: an incentive-compatible regulatory framework that does not impede financial innovation
- Force market participants to internalize all the consequences of their risk decisions

Complexity

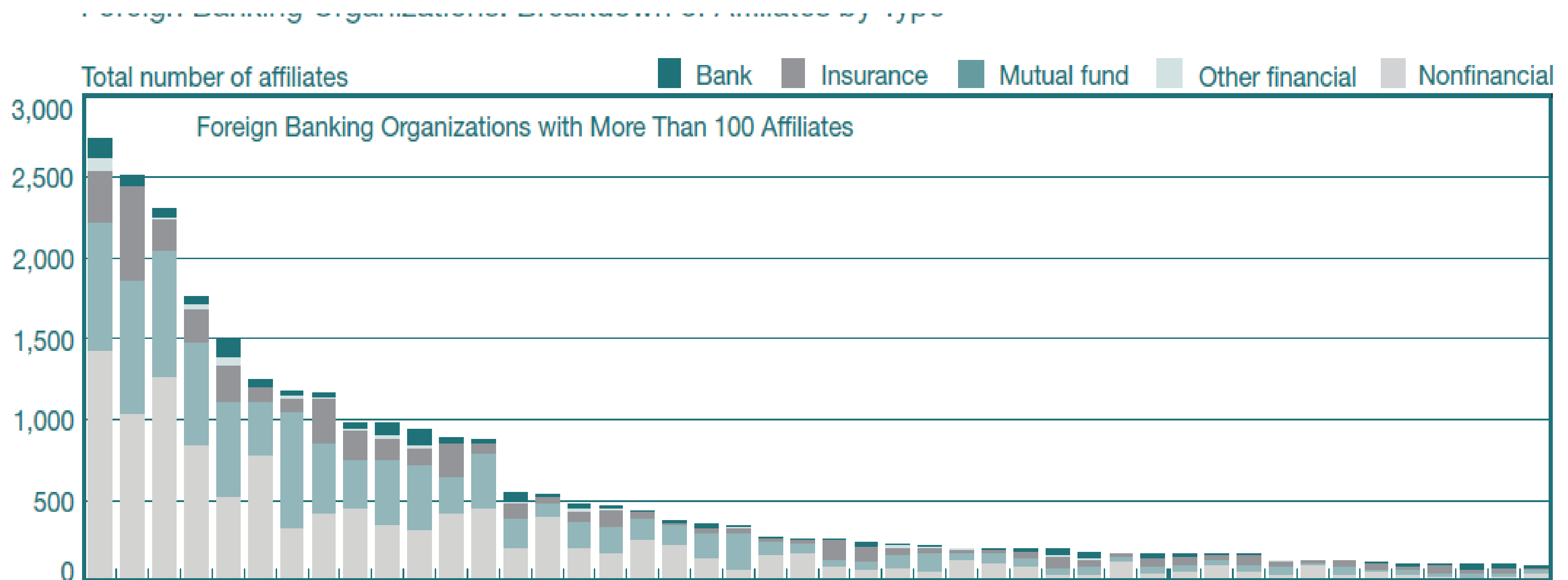
- More complex organizational structure of financial institutions
  - In 1990 only one U.S. bank holding company had more than 1,000 subsidiaries
  - In 2012 at least half a dozen had (Cetorelli and Goldberg, 2014)
  - Structure across up to four layers
- Different dimensions:
  - Number of subsidiaries
  - Different activities
  - Cross-border
- Implications for supervisory efficiency
- Implications for resolution (planning)
- Regulatory capture by sophistication (Hakenes and Schnabel, 2014)

Number of subsidiaries for largest foreign banks in the US



Source: Cetorelli and Goldberg, 2014

Number of subsidiaries across different financial segments for largest foreign banks in the US



Source: Cetorelli and Goldberg, 2014

Financial innovation?

Financial innovation – bright and dark sides

- New process improve efficiency:
  - Credit scoring has enabled more effective screening and therefore going down-market, but: credit overexpansion
  - New delivery channels: mobile banking, agency banking etc.
  - High frequency trading: higher efficiency by arbitraging away price gaps, but: higher volatility? More crashes?
- New products to meet demand:
  - New securities: risk diversification vs. regulatory arbitrage and mis-selling (Lehman Brother certificates, anyone?)
  - Rainfall insurance in developing countries
- New financial institutions to support new investment needs and bring additional competition
  - Investment banks to support railroad expansion
  - Venture capital funds to support IT companies
  - Mobile phone companies offering mobile payment services
  - Internet banks have lower costs, but…. Icesave deposits, anyone?

Regulatory perimeter

- Traditional prudential focus on banks
- Over the years, other financial institutions have started taking on bank-like features:
  - Example: Money market funds (a fixed net asset value)
  - Subject to bank runs
- Repercussion: in systemic crisis, financial safety net might have to be extended to them
- Heavy regulatory focus on banks might push banking activities outside the prudential regulatory perimeter
- Shadow banking system

Where do we stand

- Regulatory reform to prevent the last crisis
- Regulation focused on institutions and markets, less on product
- Financial innovation (potentially welfare enhancing) to evade new regulation
- Financial sector always ahead of regulators – regulatory dialectic (Kane)
- How to create **arbitrage-safe regulatory frameworks** that escapes the feedback loop

Looking beyond the feedback loop – creating arbitrage-safe regulatory frameworks

- **Complexity vs. simplicity:**
  - Fine-tune risk-weights vs. leverage ratio
  - Crude measures where necessary
- **Complement micro- with macro-prudential regulation**
  - Both cross-sectional and time-series dimensions
  - Need for macro-pru liquidity reserve in EMDEs?
- **Focus on resolution**
  - Knowing that you will lose your shirt in case of failure can reduce incentives to take aggressive risk
- **Dynamic approach to regulation**
  - functional rather than institutional regulation "if it looks like frog and it quacks like a frog…."
  - Adjust regulatory perimeter over time

Looking beyond stability– non-financial externalities imposed by banks

What can depositors do about it? Homanen (2018)

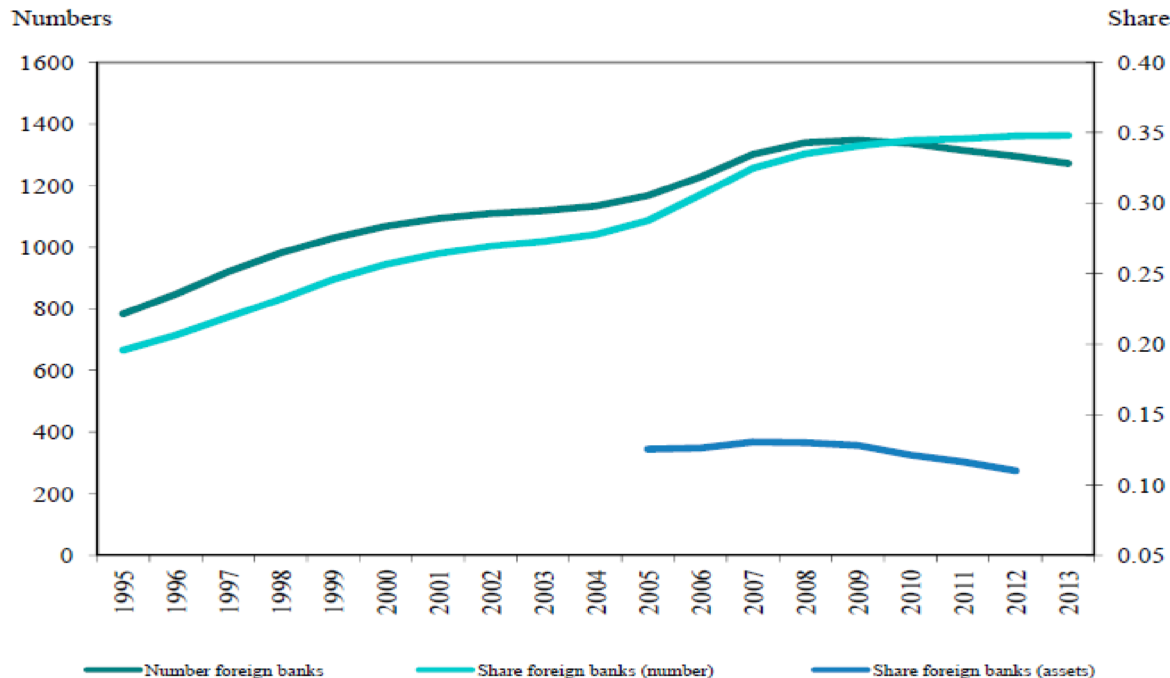
Over 700,000 People Demand Banks Stop Financing the Dakota Access Pipeline

While Trump, Energy Transfer Partners and Sunoco Logistics race to complete the pipeline, over 700,000 people say "No!" to the banks behind the project

Over 700,000 people have signed one of six petitions demanding that the banks financing the Dakota Access Pipeline (DAPL) remove their support of the project. The figure includes individuals who collectively report having over US$2.3 billion invested in these banks through checking, mortgage, and credit card accounts, which they are ready to divest if the banks continue financing DAPL. Thousands have already closed their accounts at those banks, removing over US$55 million and counting.

Cross-border banking

- There has been a high increase in cross-border banking and financial integration in the years leading up to the crisis.
- While we have seen some retrenchment within Europe, other regions of the world have continued with this trend
- International financial integration is with us to stay, though with a changing face! More South-South cross-border banking



Source: Claessens and van Horen (2015)

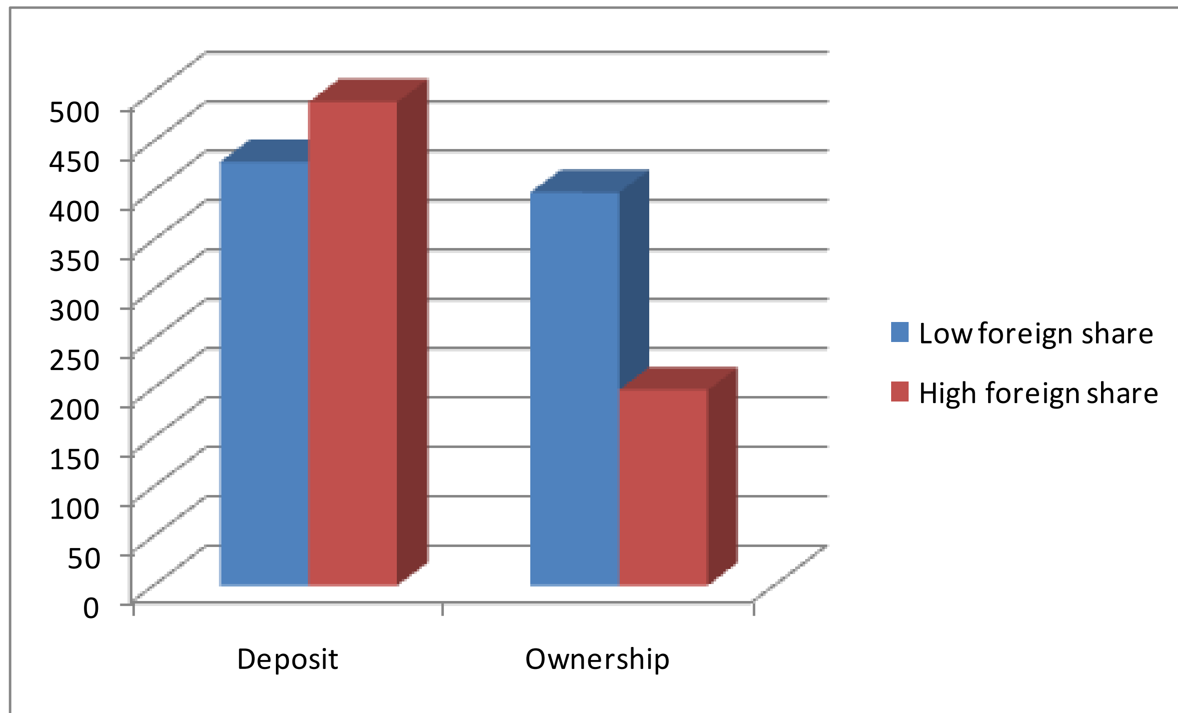
Benefits and risks of cross-border banking

- There are many benefits of cross-border banking
  - Fresh resources and capital, especially after a crisis
  - New technology, innovation and competition
  - Higher efficiency, especially if scale economies can be exploited
- Though pre-conditions have to be in place to actually exploit these benefits
- E.g. differences between Africa and CEE region
- Can carry risks into the country and transmit shocks from host countries

Regulatory implications

- **Failure of cross-border bank imposes costs on foreign stakeholders that are not taken into account by home country supervisor (Beck, Todorov and Wagner, 2013)**
- **Contagion effects through common asset exposures, fire sale externalities, informational contagion, interbank exposures etc**.
  - Does not depend on direct cross-border engagements by banks and – on bank-level – not even on direct exposures to international markets
  - More prominently as banks move towards market finance
- **Regulatory arbitrage**
- **Within-in monetary union: additional externalities**
  - Close link between monetary and financial stability
  - Lack of exchange rate tool exacerbates impact of asymmetric shock
  - Common lender of last resort leads to tragedy of commons problem

Biased supervisory incentives to intervene in cross-border banks



CDS spreads of large (mostly cross-border) banks three days before intervention during 2008/9 crisis; Source: Beck, Todorov and Wagner (2013)

Traditional tools have not worked

- Memorandums of Understanding are not legally binding and their value varies with the value of the bank they refer to.
- Colleges of supervisors are good in good times, in bad times: everybody for themselves
- Multinational banks are global in life, national in death
  - Best example: Fortis, Icelandic banks
- As in the case of national regulatory reform, a stronger focus has to be put on resolution frameworks for cross-border banks
  - Start from end-game!
  - Helps set incentives
  - Internalize externalities

Cross-border externalities are important, but one size does not fit all

- Countries differ in their legal systems (and culture). This makes it hard to specify a common set of rules and standards, forcing cumbersome adaptation of general principles to local circumstances.
- Differences in preferences. Countries may differ in how they view the role of the government in the economy (one consequence being differences in state ownership), focus on fiscal independence or with respect to their risk tolerance.
- Countries differ in their dependence on banks and their market structures in general. This influences the ease with which banks can be resolved and costs which bank failure impose on economy

In reality: Lots of variation across countries

Heterogeneity

Closer cooperation, especially on G-SIFIs, regulatory convergence

Supervisory colleges, MoUs

Asymmetric home-host country interests: stand-alone subsidiaries

Strong ex-ante agreements on resolution and burden-sharing

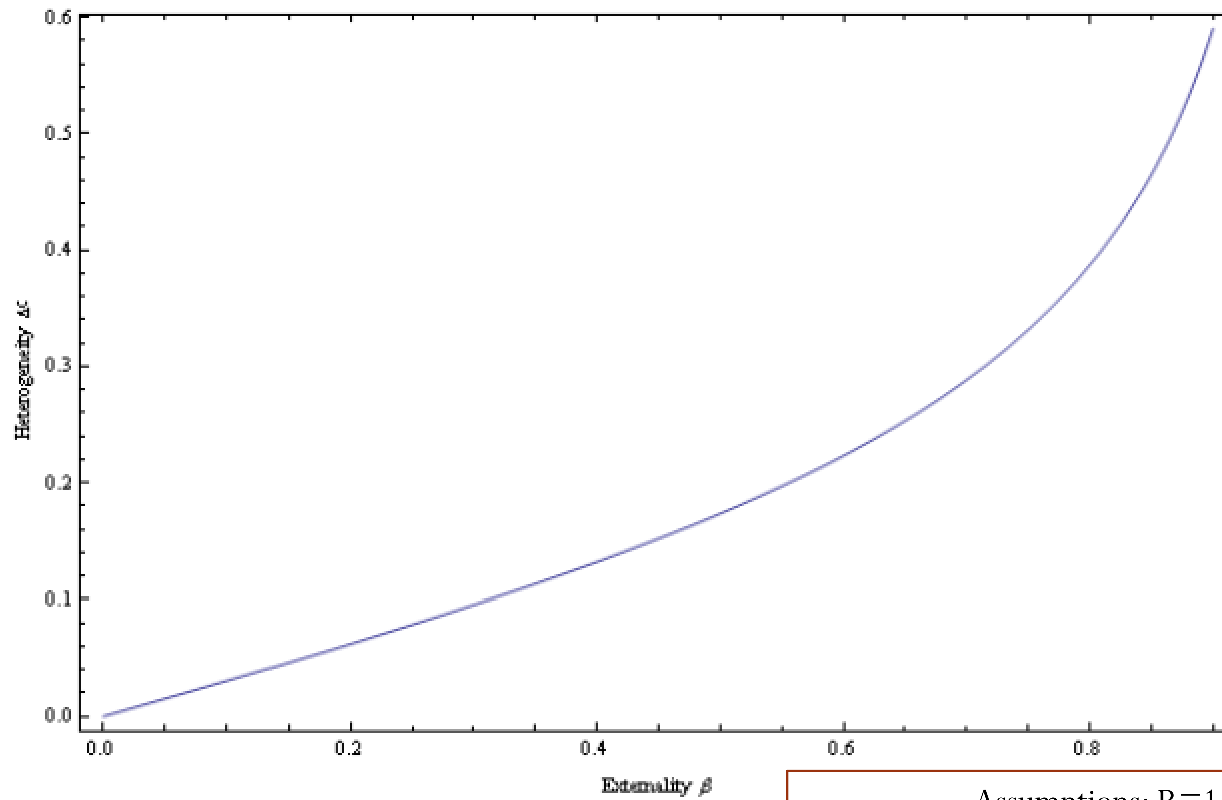
Legal commitments – e.g., Trans-Tasman

Broader cooperation among stakeholders; regulatory convergence

Joint regulatory and supervisory authority

Externalities

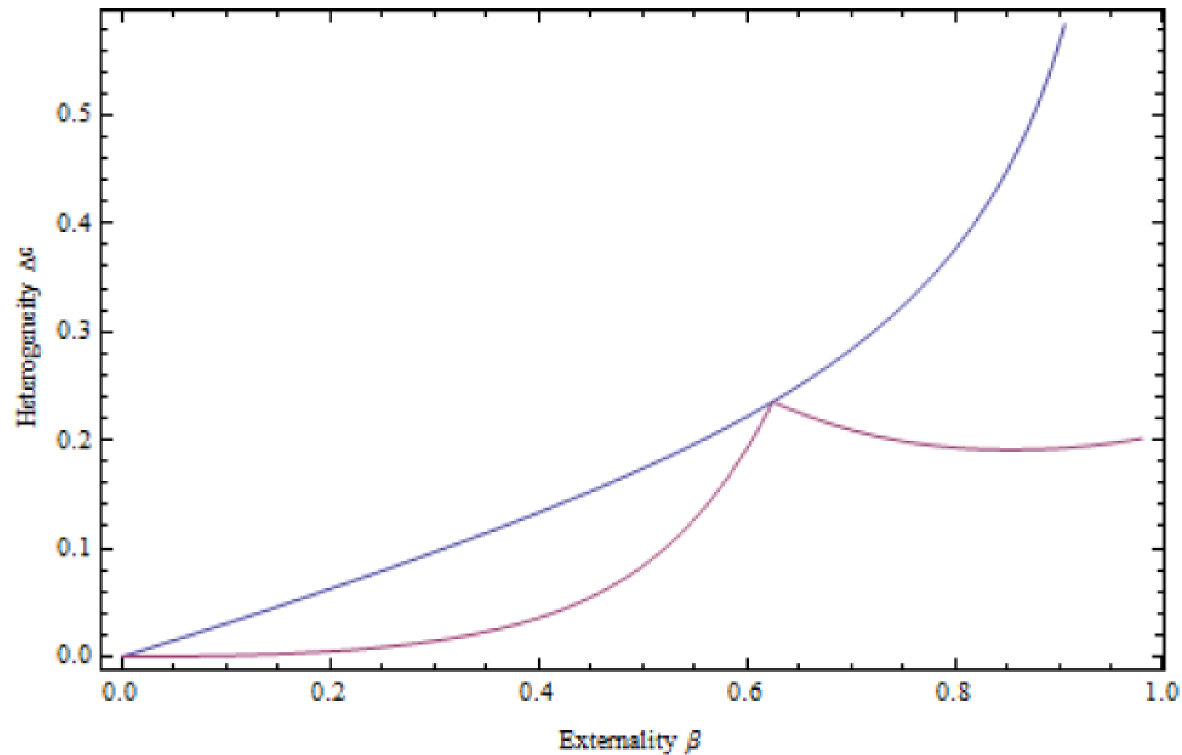
National vs. supranational supervision



Assumptions: R=1.1, c=0.3

Optimality vs. incentive compatibility

Political economy constraints in moving towards optimal solution



Looking beyond the research – some very specific policy challenges

- Should non-Euro EU member states join the banking union?
  - Benefits vs. costs
  - Participation in SSM/SRM but not lender of last resort
  - Case: Nordea – SSM will be home supervisor, (significant) branch in Sweden
- What is the relationship non-EU members (host countries) and SSM/SRM (home countries)?
  - Asymmetries in interest and technical capacity
- Resolution of cross-border banks – single point of entry vs. multiple points of entry
  - Repercussions for MREL (external vs. internal) and for degree of integration

Beck, Silva Buston and Wagner (2018)

- Taking theory to the data
- Hand-collected data on cross-border supervisory cooperation?
- Probability and intensity of supervisory cooperation between two countries
  - Increases in externalities
  - Decreases in heterogeneity

Conclusions

- Crisis has been a wake-up call for regulatory reform and for more cooperation in cross-border cooperation
- Careful balance needed in strengthening regulation – stability needs vs. development needs
- Looking beyond rules and buffers towards incentives!
- How to adjust Basel III for EMDEs?
- Optimal degree of cross-border supervisory cooperation: One Size Does Not Fit All!
- Future research
  - Assess impact of new regulation
  - What works best in macro-prudential regulation?
  - Design features of resolution frameworks
  - Design features of cross-border supervisory cooperation

Thank you

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