Financial innovation and regulation

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Financial innovation

- What is financial innovation: new financial products and services, new financial intermediaries or markets, and new delivery channels
  - Examples: ATM, mobile money, peer-to-peer lending, new securities
- *Innovation-growth view*: financial innovations help reduce agency costs, facilitate risk sharing, complete the market, and ultimately improve allocative efficiency and economic growth, thus focusing on the bright side of financial innovation
  - Investment banks to finance railroad expansion in US in 19th century
  - Venture capitalists to support IT start-ups in 20th century
- *Innovation-fragility view:* financial innovations contribute to systemic risk
  - Allows bank to take more risk
  - Better risk diversification might result in higher systemic risk
  - Financial innovations as the root cause of the recent Global Financial Crisis,
  - Financial innovation used for regulatory arbitrage (example: SPV)

Trade-off obvious in literature

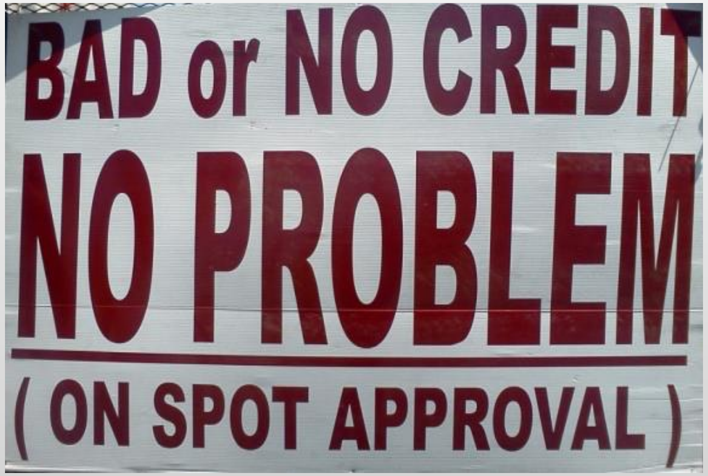
- “it is financial innovation that boosts the speed with which economies converge to the growth path of the economic leader”

Laeven, Levine and Michalopoulos (2015)

- “analyses of financial crises show that credit booms, excessive risk-taking, and financial innovation have been considered key drivers of systemic financial crises”

Freixas, Laeven and Peydro (2015)

What is financial innovation? (1)



What is financial innovation? (2)

- 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?

The "effects" of financial innovation

- Beck, Chen, Lin and Song (2016)
- Data available, 32 countries (o/w 26 OECD), almost all high-income. 1996 to 2006
- Several indicators
  - *Financial R&D Intensity (Value Added)*
  - *Securitization/GDP*
  - *Off-Balance-Sheet Items/Total Assets*
- Bank –level comparison
  - In countries with higher levels of financial innovation, banks grow faster, but are also more fragile
  - Effects are stronger in countries with larger securities markets and more restrictive regulatory frameworks
- Bank profitability during current crisis
  - Banks in countries with higher levels of financial innovation suffered higher profit reductions during recent crisis
- GDP per capita growth and growth opportunities
  - Countries with higher levels of financial innovation convert growth opportunities more strongly into GDP per capita growth
- Growth and growth volatility of industries with different growth opportunities
  - Industries with higher growth opportunities grow faster

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
- Critical distinction across different types of financial services
  - Transaction services vs. intermediation services

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
  - Europe: sovereign exposure (risk weight, concentration limit); leverage ratio too low
- Complement micro- with macro-prudential regulation
  - Both cross-sectional and time-series dimensions
  - Learning by doing
- 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

Conclusions

- Financial innovation is critical for financial deepening and economic development
- Financial innovation is often the core cause for financial fragility
- Need balance, need to adjust regulatory framework accordingly
- Dynamic regulatory framework and architecture

Thank you

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