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 19\textsuperscript{th} century
  • Venture capitalists to support IT start-ups in 20\textsuperscript{th} 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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