

FEDERAL RESERVE BANK OF CHICAGO  
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Achieving Financial Stability: Challenges to Prudential Regulation

# Innovation & Regulation

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# Innovation & Regulation

- Central to growth but hides new risks
- Innovation is inherently disruptive
- Cycles of history
- Dangers (in both directions)
  - Miss systemic risks
  - Lock in dinosaurs



# Financial Stability

- Theory
- Risk data
- Risk analytics
- Risk management (structure, incentives, supervision, etc.)
- Authority & will to act

Innovation disrupts all of these.



# Analytics

- Metrics
- Counter-factual (stress testing)
- Matrix
- Networks
- Complex systems
- Agent-based modeling
- Crowdsourcing
- Analogies (e.g., evolutionary biology)
  - Adaptive, Modular, Redundant, Diverse



# Challenges

- Are capital levels high enough? Simple enough? Risk-based enough? Macro enough?
- Who holds TLAC? What about knock-on effects?
- Global coordination (capital, resolution, derivatives)
- CCPs
- SFT haircuts & collateral rules, triparty repo
- Shadow banking (MMFs, GSEs, Wholesale Funding, Hedge Funds, Asset Management)
- Cumulative, interactive effects of complex regulation
- Values: accountability, transparency, democracy



# Regulating in Uncertainty: Innovation

- When and how will regulators balance innovation and risk?
  - ETFs
    - ETFs can be diversified & tax efficient but also can be prone to runs
    - Synthetic and inverse derivatives amplify and spread risk
  - High-Frequency Trading
    - High-Frequency Trading adds liquidity but does it undermine financial market stability? Fairness? Efficiency?
  - FinTech
    - Consumer protection, payments, bank charter?

# What is the frame?

- Idiosyncratic vs. systemic risk
  - What is the tradeoff between insulating and adaptability?
- Banking and shadow banking
  - What is the regulatory perimeter?
- National and International
  - Who's in charge of global finance?

# Five Ways The Financial System Will Fail Next Time

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- Amnesia (leverage, liquidity, bubbles)
- Regulatory arbitrage
- Analytic & management failure
- Innovation/disruption
- Choices & accidents





# Five Things We Don't Know

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- What we once knew but have now forgotten
- What is knowable but is kept hidden
- What we know, but don't know what it means
- What we don't know that we don't know
- What we should do about things we know



# Building a More Resilient Financial System

- Vertical buffers
- Horizontal buffers
- Regulatory checks and balances
- Transparency
- Accountability
- Corporate governance
- Monetary, fiscal, regulatory, tax, social welfare policies
- Resiliency vs. other values (cost, growth, access, innovation)

# Regulatory Innovation

- Crowdsourcing
- Smart defaults
- Private sector pilots with safe harbors
  - CFPB Project Catalyst
  - UK FCA
  - OCC Office of Innovation
- Data innovations
  - LEI
  - Consumer ownership of financial data in machine-readable form



# Regulation Innovation: the case of consumer financial services

- Goal: competition, innovation, meeting needs of consumers & businesses
- Consumer ownership of financial data
- Data package of identity, usage & relationships
- Account switching
- Overdraft regulation
- Good funds availability
- Instant payments
- KYC/AML
- Payments systems rules & procedures



# Regulatory Innovation

- Reg Tech
- Regulatory Sandbox
- Big Data & Big Analytics

