Keynote Address

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Cyber Risks to Financial Stability

Cyber Risk Workshop

Quantitative Supervision and Research
Federal Reserve Bank of Richmond, Charlotte Branch

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March 28, 2019
Cyber Risks to Financial Stability
General Framework

Cyber Risks
1. Internal IT Enterprise
2. External Dependencies
   a. Counterparties and Partners
   b. Outsourced and Contract
   c. Supply Chain
   d. Upstream Infrastructure
3. External Shocks

Transmission from Cyber to Financial
Transmission Channels
How Can Cyber Events Threaten Financial Stability?
1. Lack of Financial Substitutability
2. Lack of IT Substitutability
3. Loss of Confidence
4. Data Integrity
5. Interconnectedness

Financial Stability
1. Fragility
   a. Leverage
   b. Maturity Transformation
   c. Procyclicality of Risk
2. Complexity
3. Adaptability
   a. Innovation
   b. Regulatory Arbitrage

Amplifiers and Dampeners
Can Exacerbate or Alleviate Risks Over Time

Within Environment of
Geopolitical Fragility – Financial Fragility – Technological Fragility – Societal Fragility

Analysis can begin with cyber risks (flowing left to right, like the incident itself); with financial stability and working backwards (right to left), or from the amplifiers and dampeners (bottom up)