Lessons Learned from the Crisis and Implications for the Federal Reserve

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* The views presented here are my own and do not necessarily reflect those of the Board of Governors or its staff.

Primary Central Bank Functions of the Federal Reserve

- Financial stability and lender of last resort (1913)
- Monetary Policy
  - Dual mandate for price stability and maximum employment (1977)
- Primary supervisor for state member banks and bank holding companies

Lesson 1: Regulatory policies not sufficient for financial stability

- Built around safety and soundness of DIs, but regulatory gaps and no resolution process for systemic firms
- Missed systemic risk externalities, such as fire sales, contagion and complexity
  - (Bernanke and Gertler, 1989; Allen and Gale, 2005; Brunnermeier and Pederson, 2008; Caballero and Krishnamurthy, 2008)
- Missed shadow banking and runs on shadow banks – Broker-dealers, securitization, ABCP, repo market
  - (Pozsar et al, 2010; Adrian and Shin, 2008; Gorton and Metrick, 2011; Covitz, Liang, Suarez, 2009)

Lesson 2: Pursuit of price and economic stability not sufficient for financial stability

- Crisis was preceded by the Great Moderation
- A procyclical regulatory framework amplified risks
- Monetary policy responded to financial factors to the extent they affected the outlook for inflation or real activity
- Bubbles hard to identify and crises hard to predict
- But leverage and maturity mismatch can be monitored, and cleaning up is harder and taking longer than was expected (Woodford, 2011)

Lesson 3: Traditional tools of the Fed not sufficient for the worst crisis

- **Monetary Policy**
  - Monetary policy used in periods of financial stress
  - But limited by zero lower bound (Reifschneider and Williams, 2000)
  - The effectiveness of monetary policy may be lower in stress than normal states (Hubrich and Tetlow, 2011)
  - Nontraditional tools can provide stimulus, but may entail costs

Lesson 3: Traditional tools not sufficient for the worst crisis (cont.)

- **Discount Window**
  - Backstop source of short-term funds to DIs
  - In the crisis, the "stigma" appeared to intensify
    - Reduced the spread of the primary to fed funds rate and extended terms
    - Term Auction Facility (TAF) - pre-determined amounts were auctioned against a broad range of collateral

Lesson 3: Traditional tools not sufficient for the worst crisis (cont.)

- **Discount window-like lending** was provided to non-DIs in "unusual and exigent" circumstances
  - Term Securities Lending Facility (TSLF) - primary dealers could exchange less-liquid securities at an auction-determined fee
  - Primary Dealer Credit Facility (PDCF) - allow primary dealers to borrow at a standing facility
  - Backstops for MMFs (AMLF) and commercial paper issuers (CPFF)

Lesson 3: Traditional tools not sufficient for the worst crisis (cont.)

- **Lender of Last Resort**
  - Reflects Bagehot's dictum to "lend freely at a high rate, on good collateral"
  - Special facilities were priced to not be attractive in normal times, and to unwind automatically as conditions improved
  - But whether collateral is good or not may depend on the success of the actions
  - Fire sale effects can last a long time once financial risks spillover into real economic activity

Lesson 3: Traditional tools not sufficient for the worst crisis (cont.)

- Timely, sophisticated valuation of collateral emerged as important new area of central banking
  - SCAP – legacy assets
  - TALF – new assets
- Liquidity was not enough and fiscal and other authorities were needed
  - TARP capital for banks, and junior position to the Fed in TALF loans
  - HERA for the GSEs
  - Guarantee for the MMFs
  - TLGP for bank debt

Lesson 4: Heightened tension between financial stability and moral hazard in a crisis

- Consequences of financial instability more immediate and apparent
- Should moral hazard be a secondary concern in times of financial crisis? (Caballero, 2010)
- Perpetuation of moral hazard is in fact the principal reason for crises. Policies to support potential market-wide stresses were viewed as bailing out firms (Cochrane, 2010)
- Lender of last resort may not be able to commit not to supply liquidity ex post, even if it might reduce risk-taking incentives (Farhie and Tirole, 2009)

New legislation often follows a major crisis

- DFA has a strong focus on pre-emptive policies, to mitigate moral hazard
- Largely maintains the current structure of the financial system
- No reform for wholesale funding markets
- Proposes to increase resilience of FIs
  - Enhanced prudential standards for banks and designated nonbanks
  - New resolution mechanisms
  - Increased data, standardization, and disclosure requirements
- Created FSOC and OFR
- Expanded financial stability mandate for the Fed

Implications for the Fed - Organization

Be more deliberate about pursuit of financial stability

- Internal organizational changes
  - LISCC and FMU-SC – better microprudential supervision, and incorporate macroprudential considerations
  - OFS - better internal communication and coordination
- External changes
  - As member of FSOC, work with other regulatory agencies

Implications for the Fed - Policies

Be more aggressive on pre-emptive macroprudential tools

- Increase resiliency of FIs and markets (mitigate structural risks)
  - Reduce FI probability of default and losses given default considering interconnectedness
  - Implement effective early remediation, and require good recovery and resolution plans
  - Reform shadow banking -- MMFs, securitization, non-depository institutions -- and short-term funding markets
  - Improve standardization of OTC derivatives markets with centralized clearing

Implications - Policies (cont.)

- Prevent a build-up of excessive risks (mitigate cyclical risks)
  - Monitor build-ups of risks – leverage, maturity mismatch, asset values, new products
  - More emphasis on tail risks
  - Evaluate efficacy of cyclical macroprudential tools, including countercylical risk weights, margins, ltvs, and monetary policy
  - Also reduce build-ups in booms but also avoid increase in volatility in busts

Implications for the Fed – Governance

Financial stability function requires more internal coordination

- Goals of microprudential and macroprudential generally aligned
  - Possible conflicts when economic activity is weak
- Goals of monetary and macroprudential generally aligned
  - Possible conflicts such as when there is both a risk of deflation and signs of excessive credit growth

Implications – Governance (cont.)

- Financial stability function necessarily involves more engagement with other agencies, including fiscal authorities, especially in crisis times
  - DFA changed authorities to use section 13(3) emergency lending powers, and increased the involvement of the Treasury
    - Facilities must be broad-based, with approval of the Secretary
    - Immediate (7 days) disclosure to Congress of use of 13(3) facilities, borrowers and amounts

Implications – Governance (cont.)

- Improvements in clarity about responsibilities, which may be helpful in ex post conflicts over emergency use of public funds
  - DFA - Intent to reduce moral hazard and systemic risk associated with expectation of bailouts
  - Goodfriend (2010) proposes an accord to clarify roles - Intent is not to mitigate moral hazard, but to avoid jeopardizing central bank independence
- But untested in a crisis period

Summary

- Important lessons for the central bank about its tools and functions
- Implications for organization, policies, and governance to promote financial stability
- Need the broader community, to develop risk measures and policy alternatives
- DFA requires strong pre-emptive policies to mitigate systemic risk
- It also could change how the Fed responds as lender of last resort to future crises