The Global Financial Crisis:
Lessons for Economic and Financial Theory and Policy

Swiss Finance Institute

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Joseph E. Stiglitz
General Consensus

• Federal Reserve fell down on the job in
  – Anticipating the downturn
  – Taking actions to prevent the crisis
• Given kudos for bringing the economy back from the brink
  – But measures have failed to restart lending
  – Shadow banking system remains in shambles
  – Potential fiscal costs (with pass through of profits/losses to Treasury) are huge
  – Policies engendered large redistributions that have called into question institutional frameworks (independence)
Not Yet a General Consensus...

• On why the Fed failed so badly
  – Flawed models
  – Flawed judgments
  – Too low interest rate (Taylor)
  – Flawed regulatory policies
• On what the Fed should have done
  – In the run up to the crisis
  – In response to the crisis
• On changes in policy framework
• On changes in governance
  – Though there is a political consensus against the Fed
  – Reflected in recent votes in Congress
Some Broad Lessons
Some new, some old that need to be relearned

• *Old lesson:* Markets, by themselves, may not be either efficient or stable
  – Theory had already explained that with imperfect information and incomplete risk markets, market equilibrium is not in general (constrained Pareto) efficient
  – Self-regulation doesn’t work

• *Old lesson:* Hard to reconcile observed behavior with hypothesis of rationality, rational expectations
  – Ideas that have played central role in economic theory
Some Broad Lessons
Some new, some old that need to be relearned

• *New lesson*: Macroeconomic models need to do a better job of modeling financial sector
  – Banking sector, shadow banking sector
  – Understanding better the limits to monetary policy
Flawed Policy Framework

1. Maintaining price stability is necessary and almost sufficient for growth and stability
   – It is not the role of the Fed to ensure stability of asset prices
2. Markets, by themselves, are efficient, self-correcting
   – Can therefore rely on self-regulation
3. In particular, there cannot be bubbles
   – Just a little froth in the housing market
Flawed policy framework

4. Even if there might be a bubble, we couldn’t be sure until after it bursts

5. And in any case, the interest rate is a blunt instrument
   – Using it to break bubble will distort economy and have other adverse side effects

6. Less expensive to clean up a problem after bubble breaks
Flawed policy framework

• Implication of this framework: DO NOTHING
  – Expected Benefit is small
  – Expected Cost is large

EACH of the propositions was FLAWED
1. Inflation targeting

- Distortions from relative commodity prices being out of equilibrium as a result of inflation second order relative to losses from financial sector distortions
  - Both before the crisis and—even more—after the bubble broke
  - Clear that ensuring low inflation does not suffice to ensure high and stable growth
  - Bubbles themselves give rise to relative price distortion, given that different prices adjust in different ways

- **Inflation targeting risks shifting attention away from first order concerns**
2. Markets are efficient and self-correcting

- Flawed
- **General theorem**: whenever information is imperfect or risk markets incomplete (that is, always) markets are not constrained Pareto efficient
  - Pervasive externalities
  - Pervasive agency problems
  - Manifest in financial sector (e.g. in their incentive structure)
2. Markets are efficient and self-correcting

- Greenspan should not have been surprised at risks – financial sector had incentives to undertake excessive risk
- Systemic consequences (externalities, which market participants will not take into account when making decisions) are the reason we have regulations
- Especially significant when government provides (implicit or explicit) insurance
  - Problems of too-big-to-fail banks had grown markedly worse in the previous decade as a result of the repeal of Glass-Steagall
3. *There cannot be bubbles*

- False
- Bubbles have marked capitalism since the beginning
- Bubbles are even consistent with models of rational expectations
- Collateral-based credit systems are especially prone to bubbles
4. “Can’t be sure...”

• All policies are made in the context of uncertainty

• As housing prices continued to increase—even though real incomes of most Americans were declining—it was increasingly likely that there was a bubble
5. “We had no instruments...”

• False – they had instruments
• Congress had given them additional authority in 1994
  – Could have gone to Congress to ask for more authority if needed
• Could have used regulations (loan to value ratios) to dampen bubble
  – Had been briefly mentioned during tech bubble
• Ideological commitment not to “intervene in the market”
• But setting interest rates is an intervention in the market
  – General consensus on the need for such intervention
  – “Ramsey theorem”: single intervention in general not optimal
6. **Less expensive to clean up the mess**

- Few would agree with that today
- Loss before the bubble burst in hundreds of billions
- Loss after the bubble in trillions
Flawed Models

• Key channel through monetary policy affects the availability of credit (Greenwald-Stiglitz, 2003, *Towards a New Paradigm of Monetary Policy*)
  – And the terms at which it is available (spread between T-bill rate and lending rate is an endogenous variable, which can be affected by conventional policies and regulatory policies)
Insufficient Attention to Microeconomics of Banks

• Banks are critical to the provision of credit to small and medium sized enterprises (source of job creation)
• Especially important in understanding how to recapitalize banks, in order to
  — Restart flow of credit
  — Determination of spread between T-bill rate and lending rate
• Need to understand both role of incentives and constraints
  • At organizational level ("too big to fail banks")
  • At individual level
  • And relations (corporate governance)
    — What role did change in organizational form (from partnerships to joint stock companies) play?
The Limits of Monetary Policy

- Monetary policy may have stopped systemic collapse, but it has not been able to restore economic growth
  - Keynes’ argument: pushing on a string
  - But situation is markedly different from Keynesian liquidity trap
  - Relates to behavior of banks
  - Clearly “real interest rate” as measured by T-bill is not the driving force
  - Considerable uncertainty about the conduct of monetary policy
Fiscal Policy

• Whole world were Keynesians—for a moment
• Worked in stimulating the economy
  – US stimulus was too small, not well-designed
    • But impacts were reasonably accurately anticipated
  – Highlights importance of the design of the stimulus
  – Worries about “crowding out” were misplaced
    • Record low levels of interest rates
• For the U.S. a second stimulus is needed
  – The U.S. can finance
  – A well-designed stimulus (focusing on investment) would lower long term national debt
Other Failures of Prevalent Models

• Insufficient attention to “architecture of risk”
  – Including analysis of how systemic stability can be affected by policy frameworks

• Insufficient attention to “architecture of information”
  – Including an analysis of how moving from “banks” to “markets” predictably led to deterioration in quality of information
Insufficient Attention to “Architecture of Risk”

- Theory was that diversification would lead to lower risk, more stable economy
  - Didn’t happen: where did theory go wrong?
  - Mathematics: Assumed concavity; world marked by convexities
    • In former, spreading risk increases expected utility
    • In latter, it can lead to lower economic performance
  - Two sides reflected in standard debate
    • Before crisis—advantages of globalization
    • After crises—risks of contagion
  - Standard models only reflect former, not latter
    • Should reflect both
    • Optimal electric grids
    • Circuit breakers
Insufficient Attention to “Architecture of Risk”

– Market incentives both on risk taking and risk sharing distorted
– Can show that there is systematically too much exposure to risk
– Can give risk to bankruptcy cascades
– Giving rise to systemic risk
Can Be Affected by Policy Frameworks

• Bankruptcy law (indentured servitude)
  – Lenders may take less care in giving loans

• More competitive banking system lowers franchise value
  – May lead to excessive risk taking

• Capital market liberalization
  – Flows into and out of country can give risk to instability

• Financial market liberalization
  – May have played a role in spreading crisis
  – In many LDC’s, financial market liberalization has been associated with less lending to SME’s
Can Be Affected by Policy Frameworks

- Central banks need to pay attention to systemic stability which is affected by
  - Exposure to risk
  - The extent to which shocks are amplified and persist
  - The extent to which there are automatic stabilizers and destabilizers
  - Changes in the structure of the economy can lead to an increase or decrease in systemic stability
    - Movement from defined benefit to defined contribution old age pension system
Key Controversy in Regulatory Reform

• Senate Committee: FDIC-insured institutions should not be engaged in swaps trading
  – Fire insurance important for mortgages
  – But banks should not be in business of writing fire insurance
  – And if they are, make sure that they have adequate capital—not underwritten by US taxpayer

• Banks, Bernanke, Administration wanted to continue exposure to risk, implicit subsidy
  – But several regional Presidents supported Senate Committee
Insufficient Attention to “Architecture of Information”

• Moving from “banks” to “markets” predictably led to deterioration in quality of information
  • Shadow banking system not a substitute for banking system
  • Leading to deterioration in quality of lending
    – Inherent problems in rating agencies
  • But also increased problems associated with renegotiation of contracts
  • Increasing litigation risk
  • “Improving markets” may lead to lower information content in markets
    – Problems posed by flash-trading (In zero sum game, more information rents appropriated by those looking at behavior of those who gather and process information)
Market Equilibrium Is Not Generally Efficient

• Derivatives market—an example
  – Large fraction of market over the counter, non-transparent
  – Huge exposures—in billions

• Undermining ability to have market discipline
  • Market couldn’t assess risks to which firm was exposed
  • Impeded basic notions of decentralizability
    – Needed to know risk position of counterparties, in an infinite web

• Explaining lack of transparency:
  • Ensuring that those who gathered information got information rents?
  • Exploitation of market ignorance?
  • Corruption (as in IPO scandals in US earlier in decade)?
Some Implications

• Cannot rely on self-regulation
  – And even less so on rating agencies
    • Distorted incentives
    • Competition among rating agencies made matters worse

• Need to focus on shadow banking system as well as on banking system
  – New role for Fed, over $1.2 trillion in mortgages
  – Two are related in complex ways
  – Going back to Glass-Steagall is not enough—a failure of investment banks can put economy in jeopardy
Some Implications

• Need to use full gamut of instruments—conventional instruments as well as regulatory instruments to affect lending
• There are supply side and demand side effects of monetary policy
• Bank behavior may not depend just on amount of capital
  – Bank managers’ interest may differ from that of bondholders and shareholders: have to look at their incentives
  – Private bank owners’ interests may differ from that of other suppliers of capital (including government)
  – Increasing capital adequacy requirements may not lead to less risk taking (reduced franchise value)
Some Implications

• More attention needs to be focused on dealing with failed financial institutions
  – Especially in the presence of systemic failure
  – Miller/Stiglitz argued for a “super-chapter 11” for corporations in event of systemic crisis
    • Need to think about how to handle mortgages
    • Need to think about how to handle banks
      – Failure to restructure mortgages will contribute to slow recovery of America
      – Way banks were bailed out led to less competitive banking system and exacerbated problems of moral hazard
      – Regulatory reform bill did not fix the problem—key issue was not resolution authority
Conclusion

• Models and policy frameworks many Central Banks used contributed to their failures before and after the crisis

• Fortunately, many Central Banks are now developing new models and better policy frameworks
  – Focus not just on price stability but also in financial stability
  – Credit availability/banking behavior
  – Credit interlinkages
    • Gallegati et al, Greenwald-Stiglitz, Haldane, Haldane-May
Conclusion

• Less likely that a single model, a simple (but wrong) paradigm will dominate as it did in the past
  – Trade-offs in modeling
  – Greater realism in modeling banking/shadow banking may necessitate simplifying in other, less important directions