The Global Financial Crisis: Lessons for Monetary Economics and Monetary Policy

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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 of 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 which have called into question institutional frameworks (independence)

There is not a general consensus yet on

- Why it failed so badly
  - Flawed models
  - Flawed judgments
  - Too low interest rate (Taylor)
  - Flawed regulatory policies
- What it should have done in the run up to the crisis
- What is should have done in response to the crisis
- Changes in policy framework
- Changes in governance
  - Though there is a political consensus *against* the Fed
  - Reflected in recent votes in Congress

Flawed policy framework

- 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
- Markets, by themselves, are efficient, self-correcting
  - Can therefore rely on self-regulation
- In particular, there cannot be bubbles
  - Just a little froth in the housing market

- Even if there might be a bubble, couldn’t be sure, until after it breaks
- 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
- Less expensive to clean up a problem after bubble breaks

IMPLICATION: DO NOTHING

Expected benefit small, expected cost large

EACH OF PROPOSITIONS FLAWED

1. 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

- *Inflation targeting risks shifting attention away from first order concerns*

2. Markets are neither efficient nor self-correcting

- 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)
  - Greenspan should not have been surprised at risks—they had incentive to undertake excessive risk
  - And systemic consequences (which market participants will not take into account) are the reason we have regulation
  - Especially significant when government provides (implicit or explicit) insurance
    - Problems of too big to fail banks had grown markedly worse in previous decade as a result of repeal of Glass-Steagall

3. There cannot be bubbles

- 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 policy is 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
- Had instruments
- Congress had given them additional authority in 1994
- If needed more authority, could/should have gone to Congress to ask for it
- 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 broke in hundreds of billions
- Loss after the bubble in trillions

Flawed models

- Key channel through monetary policy affects the economy is 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 micro-economics 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?

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
    - Stiglitz, AER 2010, Journal of Globalization and Development, 2010

- 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 risk 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, fml has been associated with less lending to SME's

- 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

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
        - Extension of Grossman-Stiglitz
        - 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 in general 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 decentralizibility
  - 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)?

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, should be 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

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

- 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)

- 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

- 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