

Implications of the Crisis for Regulation

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Themes

- Public debate: What is the one culprit?
 - Many candidates, I offer a different emphasis
 - Not narrow, careful empirical research. Sniff tests.
- Financial engineering as the bad guy? Not the main problem, so not much time on that.
- We are captives of some scribbler...
 - Improving our ideas is a prerequisite for effective improvement of the financial system
- Prevention? Will be difficult.
- We are left to focus on crisis management

What's the problem?

- Or: Why is this the worst financial crisis since the Great Depression?
- Not:
 - Financial engineering
 - Bad risk-management models
 - Subprime mortgage credit losses
 - Inadequate financial institution capitalization
 - Inept prudential supervision
 - Moral hazard from deposit insurance & related
 - Insufficient capital (in the U.S.) or Basel 2
- Instead:
 - Financial industry incentives
 - Incomplete regulatory model for crisis management
 - Liquidity liquidity liquidity, sunspot runs

Why care about what's-the-problem?

- Regulatory systems based on an incomplete understanding of the market failures are not likely to work as intended.

Not, but...

- Though the next six slides describe popularly perceived source of the crisis as not-the-main-source, some of them did contribute.
- Some reforms related to each would be useful if done with the main sources in mind.

Not financial engineering

- Financial engineering has been a favorite target of many of those worried about financial crises for 20 years.
 - Correlation is not causality.
 - Yes more frequent advanced-economy turmoil.
 - But if financial engineering contributed, it was because of an interaction with incentive problems, not because engineering itself is bad.
- Fails to pass sniff tests:
 - Credit derivatives and other derivatives have not blown up.
 - Hedge funds have not blown up.
 - Only securitization arguably has blown up, and not all types.

Not bad risk management models

- On-the-shelf risk-management technology, implemented well, was perfectly capable of highlighting all the really big credit risk exposures that have damaged major banks.
 - But too many in the private sector did not want it implemented well.
- Subprime mortgage rating failures were largely elementary model-risk failures.
- Exception: We have learned we don't know how to model liquidity risk.

Not subprime mortgage credit losses

- They are only the hand grenade in the huge room full of (liquidity) dynamite.
- Estimates of ultimate losses on all loans to individuals secured by U.S. residential real estate are around \$500 - \$600 billion, realized over a few years.
- Ultimate losses on a subset of the large corporate debt (loans+bonds, held by leveraged investors) that defaulted during 2000-2003 were around \$183 billion, and the financial system barely burped.

Not Inadequate Capital

- Nor by extension, excessive leverage
- Suppose we say the credit losses are \$1 trillion, much bigger than on previous slide.
- Far less than Western financial institution capital
- Bloomberg WDCI page: \$600+ billion in global writedowns, \$600+ billion in capital raised to date.

Not inept prudential supervision

- Conventional prudential supervision of very large banks is hampered by technical and political hurdles:
 - Political: As a practical matter, during the boom, supervisors' ability to restrain the herd is limited. They have done a good job within their constraints.
 - Example of a success: Federal Reserve CRE guidance.
 - Too easy for opponents to make arguments about efficiency gains of innovation.
 - Technical: Examiners are dependent on large banks' own information systems, and have limited ability to force improvements.
 - If the CEO (or business line managers) do not want to “know” the risks they take, examiners can win a few battles but not enough.
 - I thought Basel 2 had a chance of improving the dynamic, but I am now much less optimistic.
 - Capital was systemically adequate going in

Not moral hazard from deposit insurance or other official support

- The argument is that, because holders of *debt* of financial institutions do not bear all downside risk, *equityholders* will move “too far” out along the risk-return tradeoff.
 - Sniff test #1: Who has been destroyed? Bank equityholders, not the public sector.
 - Sniff test #2: Do we really believe the shareholders control major banks? For large U.S. commercial banks, large blockholders are rare.
 - Not to say we can ignore this problem: It’s important. But it’s not the primary culprit today.

Yes: Financial industry incentives

- Everyone except final savers is an “agent” with asymmetric compensation. There are too few “principals.”
 - Agents take a share of the profit during booms.
 - Especially major financial institution CEOs and a few traders.
 - Fired during the bust, but with a new job very soon (or, retired on the winnings).
 - Evidence: How could they forget the lessons of LTCM so fast?
- Final savers, the ultimate “principals,” have no control rights via “exit” because they have almost no alternatives.
- Exceptions: Family-owned banks; partnerships.
- Not blaming individuals: CEOs and others are not evil, just people responding to incentives.
- Financial engineering does contribute to this problem by making banks opaque. Tail risk can be hidden.

Yes: Incomplete regulatory model

- Too narrow a view.
- Over the past 20 years, the regulatory model has increasingly been targeted on the conventional moral-hazard view.
 - It is trying to encourage discipline by agents with the wrong incentives or no control rights.
 - It requires supervisors to have more power than they do.
 - It is built for the U.S. crisis of 1980s-1990s.
- Focused largely on prevention at the expense of crisis management.

Focusing on the U.S. regulatory model for commercial banks: Problem #1

- Theory: Higher capital (than in the 1980s) and prompt corrective action (PCA) will limit the moral hazard problem and will permit resolution of distress in an orderly manner, so there will be no panic.
 - PCA: 2% closed; 4% 6%; 8% adequate; 10% “well”
- Reality:
 - The U.S. well-capitalized threshold is now treated by the market as the insolvency point.
 - Uninsured creditors know they *could* lose something.
 - So they run. Orderly PCA never gets a chance.
 - The classic fire-sale-of-assets scenario occurs.

Focusing on the U.S. regulatory model for commercial banks: Problem #2

- Theory: Solvent but illiquid banks will be able to borrow from their central bank until the market becomes confident they are solvent.
- Reality: Being seen to go to the primary credit facility (discount window) is Death.
 - This is the lesson of Northern Rock.
 - Even if central bank disclosure is eliminated, there is a danger of leaks.

Liquidity liquidity liquidity

- Almost every major financial institution that has failed (or been acquired at a fire-sale price) died due to a run.
- True solvency did not matter. Solvent a week or two before? Evaporates in the fire sale.
- No real-money investor will put equity into an entity that could die in an instant due to a “sunspot run” when sunspots are common.
 - Certification effects have been very short-lived.

U.S. is (not) the main sinner

- ABCP facts from Arteta Carey Correa Kotter (2008)'s "Revenge of the Steamroller..."
- Flight from ABCP caused global money market shock in August 2007...interbank markets never recovered.
- Who sponsored credit arb vehicles?
 - **Mostly major universal banks (& Landesbanks)**
 - 80% sponsored by European banks. Without Citi, 90%. (But at least three-quarters of assets and liabilities were in U.S. dollars.)
 - Rough guess: At least \$400 billion had to be raised fast in money markets by entities not naturally dollar-funded.

What's the productive way forward?

- Not:
 - More market discipline (dominated by “agents”)
 - Mandatory sub debt (60 bps was price by the “agents”)
 - Preventive intervention (infeasible in real boom)
- Perfect but likely impossible:
 - Put principals in control of major banks, not agents
 - Alter compensation schemes
- What's left:
 - Capital *buffers* might help
 - Creatively redesigned central bank liquidity provision
 - Move supervisory authority back into central banks.

Not market discipline

- As noted previously, the potential discipliners are all agents with weak incentives to care about tail risk
 - Small debtholders cannot monitor at reasonable cost
 - Money-market and bond-market investors are institutional employees
 - Equityholders are mainly institutions

Not preventive intervention (by the official sector)

- As noted, the politics are challenging
- Signal extraction problem
 - Think in terms of deflate-the-bubble-early
 - Any policy, whether discretionary or “automatic,” must be conditional on a measure of bubble size.
 - Such measures are very noisy even for the easiest markets and instruments
 - Even the best send a clear signal only when the bubble is already too big.
 - We cannot be confident benefits outweigh costs.

Fix compensation?

- Schuermann's idea: Financial industry senior management compensation in the form of knockout options.
 - If the firm blows up later, compensation for past effort vanishes.
- Many practical problems.
 - Among them, which firms have to use such compensation schemes? All worldwide?
 - Arbitrage of financial activity into “nonfinancials”

Maybe capital buffers would help

- Meaning, in the U.S., a buffer above the well-capitalized PCA threshold that rises in good times and is allowed to fall back in bad times.
 - Maybe this escapes the signal extraction problem.
- If money market investors agree to such an element of the game, it confers time to adjust.
- (But I have already heard senior bankers, looking ahead to the next boom, unambiguously oppose this idea.)

Surely creatively redesigned central bank liquidity provision

- The central bank community has only begun to feel its way toward this.
- A danger:
 - For those wedded to the moral hazard view of “the problem,” there will be much temptation to design facilities to encourage “market discipline.”
 - Going too far in that direction could render facilities ineffective.
 - We need a balance.

Maybe supervisory authority back into central banks

- Reversing the recent trend.
- Pro:
 - The central banks have to clean up the mess, so they have more incentive to try to limit it. And their memory is long.
 - They may have more political power to restrain the herd than standalone supervisory agencies.
 - They MUST have good information during the crisis, and supervision is a key channel.
- Not without problems:
 - Supervision can be the poor stepchild.
 - Might increase undesirable pressure on monetary policy.

Concluding Remarks

- Get clear about the core problems.
 - Even if we cannot implement perfect solutions, we will not be effective if we do not properly assess the problems.
 - Again, not saying bank CEOs are “bad.” They are pressured by other financial industry agents and respond to incentives.
 - Think *hard* and creatively about how to fix incentives.
- No illusions about efficacy of fighting yesterday’s war.
 - Yes fix specific broken things, but broader things too.
- We must have a more complete mental model of how the financial world works and its vulnerabilities.
 - There is not enough “real money”
 - Arbitrage fails without *commercial* bank risk-taking.
- Work on incentive problems without losing what is good about the current setup.
- Get ready to more effectively clean up the next mess.