Fighting Financial Crises

Professor Andrew Metrick, Yale University

November 22, 2024

Presentation at FRB-Cleveland/OFR Conference

Fighting Financial Crises

- A financial crisis is a breakdown in financial intermediation: a significant reduction in the efficient flow of savings into investment.
- Crises happen when the financial system is undercapitalized. And crises don't end until the system has been recapitalized.
- Crises are very damaging: economically, politically, and socially. In a financial crisis, governments are under enormous pressure to do "something". Furthermore, it is not possible for any government to irrevocably tie their hands in the present to prevent such actions in the future.
- So what should they do? And how exactly should they do it? And don't we all think it would be useful to think about these things before the next crisis?

Crises: Why do they keep happening?

- A main function of the financial system is to provide transaction services by producing money-like instruments. Checking accounts, asset-backed securities, repo – all these things (and more) provide a "convenience yield" to their holders.
- What enables something to be treated like money and provide a convenience yield? Money is accepted "no questions asked". The technical term for it is "information insensitive" (Gorton and Pennacchi, 1990).
- A debt instrument will be information insensitive when there is enough of an equity layer that no counterparty needs to study the balance sheet before accepting the debt. What does "enough" mean? It depends on the uncertainty of asset values.
- Because intermediaries can earn the convenience yield by producing debt, profit motives and competition drive the system towards the thinnest layer of equity that will still sustain a convenience yield. If we regulate this layer in one place (e.g. banks), then it will migrate elsewhere (e.g. shadow banks). This dynamic is intrinsic to financial capitalism.

Crises Phases:
Acute (“Panic”) vs. Chronic (“Debt Overhang”)

- When debt loses its “moneyness”, we are in an acute phase of a crisis, also called a “panic”. **When fighting a panic, government interventions are trying to affect the behavior of bank counterparties.** We want to stop them from running.
- But a financial crisis can last well beyond an acute phase. Even in cases where a panic is averted, the system can remain undercapitalized for a long time, and needs to play defense against run risk. Furthermore, an undercapitalized bank suffers from a classic problem of “debt overhang”. For these reasons, undercapitalized banks will not be able to efficiently perform its other main function of making loans. This is the chronic phase.
- **In the chronic phase, government interventions are trying affect the behavior of banks themselves.** We want them to raise private capital, restructure and clean-up their balance sheets, and make more loans.
- The strategy and tradeoffs of crisis interventions is different in the acute vs. chronic phases.

Crises: How to Fight Them?

- Replace the runnable debt with government loans as the “lender of last resort” and hope that asset-uncertainty falls enough to fix the problem.
- Have a credible government or third-party guarantee the debt.
- Add new equity, from private or public sources.
- Convert some debt to equity.
- Reduce uncertainty about the asset values.
- Change some legal/regulatory rules to buy some time to do everything else.

Assets | Equity & Liabilities

Asset management

Ad hoc asset management (**AHAM**)

Broad-based asset management (**BBAM**)

Guarantees

Account guarantee (**AG**)

Other liability guarantee (**OLG**)

Blanket guarantee (**BG**)

Asset guarantee (**ASG**)

Lending

Ad-hoc emergency lending (**AHEL**)

Broad-based emergency lending (**BBEL**)

Market liquidity assistance (**MLA**)

Restructuring

Restructuring or resolution (**RES**)

Stakeholder bail-in (**BAIL**)

Capital injections

Ad hoc capital injection (**AHCI**)

Broad-based capital injections (**BBCI**)

Rules

Suspensions or bank holidays (**SBH**)

Debt or payment moratorium (**DPM**)

Credit rules (**CRL**)

Other rules (**ORL**)

Other

Major communication (**MC**)

Stress test (**ST**)

Other (**other**)

Some Core Concepts

- Acute vs. Chronic (already discussed)
- Illiquidity vs. Insolvency
- Bail-out vs. Bail-in
- Moral Hazard vs. Participation

Illiquidity vs. Insolvency

- This is a false distinction. Short-term debt gets illiquid (“runs”) when the equity layer gets to small relative to uncertainty about asset values.
- Institutions do not become illiquid in a vacuum. Debt becomes information sensitive well before the underlying institution becomes insolvent. All we need is that the probability of insolvency gets high enough that counterparties can no longer accept the debt “no questions asked”.
- Furthermore, asset values can be very misleading during a panic. Do we define solvency with those panic values, or with a pre-crisis value? What does solvency even mean here?
- This means that, after the fact, if you determine that a troubled institution was actually solvent at the time, you cannot conclude that this was “just a liquidity” problem.

Bail-out vs. Bail-in

- The term “bail-out” has come to mean “any government spending during a crisis”. This is an unfortunate linguistic twist which implicitly assumes that the total value in the economy is fixed and any policy will necessarily have some winners and some losers.
- For this discussion, we define a bail-out as being a transfer of (expected) value from the government to bank stakeholders (either debt or equity). Not all interventions represent such a transfer, and it will typically be very hard to know if that is true in the moment. The best interventions will actually increase value for both sides. Indeed, that seems to be the case for the most well-studied crisis intervention, the United States in fall 2008. (Veronesi and Zingales, 2012). And sometimes, a program can appear to be a bail-out at first glance, only to end up as a win for everyone.
- The term “bail-in” has come to specifically mean a conversion of debt into equity. In post-GFC regulations, bail-ins are often required prior to the use of any fiscal resources. There is no obvious value transfer here. Instead, it acts something like a pre-packaged restructuring plan. Bail-ins also have the potential to increase the total value for all sides, by fixing an otherwise intractable debt-overhang problem. But a poorly executed bail-in can also make the whole crisis worse, especially if that bail-in is a “surprise” during an acute phase. Bail-out and bail-in are not strictly either/or.

Moral Hazard

- If the government intervenes during a crisis, then intermediaries will learn to expect such interventions.
- The expectation will affect intermediary behavior in a variety of ways. For example, they will take more risk than they otherwise would ("heads I (bank) win, tails you (government) lose".) This can make crises more likely to happen in the first place.
- Such bank behavior is colloquially known as "moral hazard", which is an unfortunate misuse of technical terminology.
- "Too Big to Fail" is an extreme version of this phenomenon. But the problem exists for institutions of any size.

Reducing Moral Hazard

- To reduce moral hazard, the traditional solution is to extract some pain from any institution that makes use of government programs. This can be through a “penalty” rate on lending, harsh terms on capital injections, and punitive measures on firm management.
- If such measures are expected, then there will be an ex-ante reduction in moral-hazard risk. Even if such measures are not expected, there can be a political need to not make terms seem too generous.
- If a bank voluntarily accepts punitive terms to participate in a government program, then counterparties will correctly infer that the bank did not have better options. This creates “stigma” for use of the programs.
- Many people believe that the existence of stigma is a further benefit, creating an additional incentive for banks to avoid trouble in the first place, and also to fix problems on their own without asking for a “bail-out”.
- But stigma can also create new problems, as banks that should be taking assistance sometimes won’t.

Moral Hazard vs. Participation

- If we step away from a “fixed-pie” view of the world, then it is possible that government programs can increase to the total size of the pie. In this case, we should all want at least some banks to participate. But penalties (including stigma) can keep that from happening.
- **The main tension in almost every government intervention is the balance between moral hazard and participation.**
  - Make penalties credible and high enough, and you have no moral-hazard problem. But you also get no participation.
  - Make terms generous, and you increase the moral-hazard concerns. You also get lots of people angry at bankers and politicians, which is not helpful if further policy actions are needed.
- This tradeoff is unavoidable. Don’t pretend you will only get one side of it. You will always get both. And be aware that the tradeoff might be very different in acute vs. chronic phases.

Discussion