Financial Crises: Why They Occur and What to Do about Them

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• current financial crisis only latest in long sequence
• history of financial crisis in U.S. goes back to 19th century
• probably crises will continue in future
  – each crisis somewhat different from predecessors
  – even if we fix mortgage loan market in U.S.(where current crisis started), something new will happen
  – even if anticipated, not all crisis may be preventable
• however, can do much better at *limiting* crises
Today’s topics

• Why does credit market have repeated crises and other markets do not?
• Why does credit market require substantial *ex post* intervention (and others do not)?
• What can be done *ex ante* to prevent/limit crises?
To understand what caused this crisis (and other crises) should first eliminate factors that were *not* causes

- irrationality
  - on part of bankers
  - on part of borrowers
- panic
- greed
- lack of ethics
- overconsumption in U.S./ oversaving in China
- opaqueness of derivatives
- bankers’ bonuses
- banks too big to fail
Why is credit market different?

(1) credit *lifeblood* for rest of economy
   - if crisis in market for rice, won’t bring down market for automobiles
   - if credit market doesn’t work, enterprises in *all* markets will have trouble investing and meeting payrolls

(2) small shock to credit market often *magnified*
   - if some rice growers fail, won’t cause other growers to fail
   - if some banks fail, may well cause other banks to go under

(3) credit market not *self-correcting*
   - if some rice growers fail, others will step into breach
     no outside intervention needed
   - if some banks fail, credit market can get “stuck” - - no banks willing to lend
Elaboration on points 2 and 3

• Suppose flood wipes out rice crop in Yunan
• What will happen?
  – immediate effect is fall in overall rice output
  – but demand hasn’t changed - - less rice to go around
  – so price of rice will be *bid up*
  – induces other rice suppliers in Yangtze River Valley to grow and sell *more*
• So rice market “self-correcting”
  – crop failure hurts consumers in short run - higher prices
  – but high prices induce suppliers to expand output
  – so effect of drought mitigated in long run
• Government intervention not needed
• Government interference in rice market likely to make things worse
• Suppose puts cap on rice price or taxes “windfall” profits
  – discourages expansion of output that can make up for crop failure
  – this creates rice shortage or black market in rice
• Credit market is just the opposite
• Suppose a few banks get into trouble
  – made risky subprime mortgage loans
  – borrowers can’t repay loans
  – banks highly leveraged – don’t have enough capital to maintain other operations
• these banks have other borrowers
  – have to call loans in on these borrowers
  – so borrowers have to scale back activities that depended on these loans
  – thus will have harder time repaying loans from other banks
• so these other banks now get into trouble
  – have to call in loans from their borrowers
  – refuse to make new loans
• what started as local problem (subprime mortgage lending) spreads to entire credit market (systemic risk)
• initial problem not self-correcting (as in rice market)
  – gets aggravated
  – end up with credit crunch
  – not due to panic, but to rational responses by bankers and borrowers
• in economics terminology, bank exerts an *externality* on other banks by being highly leveraged and making risky loans
  – externality: effect your actions have on others that you don’t take into account
  – when bank highly leveraged and makes risky loans, puts other banks in jeopardy
  – but doesn’t factor this effect in when leverages itself and makes loans (not harmed by it)
  – not *irrational* or *unethical* or overly *greedy*
• markets with significant externalities often don’t work well on own
  – take clean air, for example
• Why isn’t there a market for clean air?
• in fact, there is such a market, but so limited we hardly see it
• suppose laundry next door to steel plant
  – smoke from steel plant interferes with laundry
  – laundry may offer to pay steel plant to reduce smoke (so market for smoke reduction exists)
  – but smoke doesn’t just affect laundry - - affects many other enterprises
  – by paying for reduction, laundry confers benefit on other enterprises (externality)
  – laundry doesn’t take this into account
  – so likely to underpay for reduction - - smoke not reduced as much as should be
• solution: government imposes cap or fine on smoke emissions by steel plant
Need two solutions for credit market
  • *ex post*: after banks get into trouble
  • *ex ante*: to prevent crisis in *first* place
*Ex post* solution for credit market:
If some banks get into trouble,

- government can bail them out
  - infuse with capital so can continue to lend
- but bailout important primarily for *other* banks that would be hurt if bailed-out banks failed
Bailout policy comes at cost:

- if banks anticipate being bailed out when get in trouble
  - have incentive to take on highly risky loans, e.g., subprime mortgage loans (moral hazard)
- so *ex post* solution to financial crisis actually makes crisis more likely!
- so also need *ex ante* solution:
  - regulation
  - constraints on what banks can do
Actually, \textit{two} reasons why regulation needed

- prospect of bailouts induces banks to make too-risky loans (moral hazard)
- bank ignores externality imposed on other banks by too-risky loans and leverage - - undervalues cost of these loans and leverage
Principal forms of regulation

- minimum standards for loans
  - borrowers must be sufficiently credit worthy
- limits on leverage / capital requirements
  - given lending, need minimum capital level
  - limiting leverage limits bank’s liquidity
  - another way of accomplishing same thing: increasing interest rate
  - leverage limitations $\leftrightarrow$ monetary policy
• restrictions on derivatives
  - derivatives allow risks to be shared with others
  - risk-sharing useful
  - however, encourages riskier lending
  - so, because of externality, should restrict derivative trading
• regulation of bankers’ bonuses
  - many complaints about these bonuses
  - however, bonuses *per se* not problem
  - problem: rewarding bankers for success without punishing failure – encourages risky lending
  - solution: bankers must return bonuses (or other punishment) if loans fail
• regulating size of banks
  - problem with big banks *not* too big to fail
  - several small banks failing has same effect as one big bank failing
• problem with big banks:
  because of externality
    - bank takes too much risk
    - in particular, doesn’t *diversify* sufficiently
    - so too likely to fail
    - small banks also too likely to fail
    - but several small banks less likely to fail than one big bank, because each does something different
• Have argued that can understand current financial crisis without appealing to
  - irrationality
  - panic
  - greed
  - lack of ethics
  - opaqueness of derivatives
  - bonuses
  - too big to fail
• Crisis brought on by
  - externality (one bank’s risk-taking affects other banks)
  - moral hazard (prospect of bailouts)
• Solution
  - bailouts
  - regulation
    needed to correct
    externality
    moral hazard created by bailouts
• Well-designed regulation/bailout package
  – can prevent many crises from getting started -- rules against subprime loans would have prevented this one
  – can resolve them if do occur
  – historically, regulation worked from 1940~1980

• Can’t hope to prevent credit crises completely and still allow for creativity
  – can’t anticipate all possible innovations by banks
  – so can’t have rules that prevent only harmful innovations

• But can do a lot better than we’ve done this time