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 crises goes back hundreds of years
• 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 could take steps to eliminate crises, not likely to be desirable
• however, can devise mechanisms to reduce *probability* that crises occur and limit *damage* if they do occur
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 current crisis (and others like it) should first eliminate factors that were *not primary* causes

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

(1) credit *lifeblood* of economy
   • if crisis in market for potatoes, won’t bring down market for automobiles
   • if credit market doesn’t work
     – enterprises in *all* markets will have trouble meeting payrolls and paying for inputs
     – economy will stagnate - - little innovation

(2) small shock to credit market often *magnified*
   • if some potato 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 potato 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 blight wipes out potato crop in Ireland
• What will happen?
  – immediate effect is fall in overall potato output
  – but demand hasn’t changed - - fewer potatoes to go around
  – so price of potatoes *bid up*
  – induces potato farmers in other countries to grow and sell *more*
• So potato market “self-correcting”
  – crop failure hurts consumers in short run – higher prices
  – but high prices induce suppliers to expand output
  – so effect of blight mitigated in long run
• Government intervention not needed
• Government interference in potato market likely to make things worse
• Suppose puts cap on potato price
  – discourages expansion of output that can make up for crop failure
  – this creates potato shortage or black market in potatoes
• Credit market 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) may spread to entire credit market (systemic risk)
• initial problem not self-correcting (as in potato market)
  – gets aggravated
  – can end up with credit crunch (as in 2008)
  – not due essentially to panic, but to rational responses by bankers and borrowers
• in economics terminology, bank imposes *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
  – take clean air, for example
• you may think there is no market for clean air
• there is such a market
  – but, because of externalities, is quite dysfunctional
• for example, suppose there is
  – steel plant - - puts out a lot of smoke
  – some laundries nearby - - harmed by smoke
  – so steel plant imposes externality on laundries
  – laundries will probably offer to pay steel plant to reduce smoke (so market for smoke reduction exists)
  – but each laundry would prefer that other laundries do the paying- - that way it enjoys the reduction without incurring cost
  – but since every laundry thinks this way, none will pay much for smoke reduction
  – end up with too much smoke
• corrective mechanism: government imposes cap or fine on smoke emissions by steel plant
• by same logic, end up with too much leverage and too much risk for credit in markets
• this increases probability of severe crisis
• this is what happened in run-up to current crisis
• Need two corrective mechanisms
  – *ex post* : after banks get into trouble
  – *ex ante* : to prevent crisis in *first* place
*Ex post* mechanism:

If some banks get into trouble,

- government can bail them out
  - infuse with capital so can continue to operate
  - or buy up their loans

- but bailout important primarily for *other* banks that would be hurt if bailed-out institutions failed
Bailout policy insufficient by itself

• unless occurs immediately, lending disrupted
  – costly for economy

• so also need *ex ante* mechanism:
  regulation
  – constraints on what banks can do
Reason why regulation needed

• bank ignores externality imposed on other institutions by its risky loans and leverage — so has incentive to take on too much risk and too much leverage
Principal forms of regulation

• limits on leverage/capital requirements
  – given lending, need minimum capital level
  – given capital, cap on how much lending allowed

• minimum standards for loans
  – borrowers must be sufficiently creditworthy
• restrictions on derivatives/securities
  – derivatives allow risks to be shared with others
  – risk-sharing useful
  – however, encourages riskier lending
  – so, because of externality, argument for regulating derivatives trading derivatives market

• regulation of bankers’ bonuses
  – many complaints about these bonuses (rich getting richer)
  – however, bonuses per se not problem
  – problem: because of externality, bankers not sufficiently “punished” for failure - - encouraged to undertake overly risky lending
  – solution: severer punishment if loans fail
• regulating size of banks
  – problem with big banks *not*
    too big too 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 all to fail
    than one big bank, because each does
    something different (though perhaps not *very* different)
• have argued that can understand financial crises without invoking
  – irrationality
  – panic
  – greed
  – lack of ethics
  – opaqueness of derivatives
  – bonuses
  – too big to fail

• crises brought on by externality created by
  – risk-taking
  – leverage

• corrective mechanisms
  – bailouts
  – regulation
• 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 pretty well 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

• So shouldn’t try to eliminate risk of credit crises
  altogether

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