

# Global Financial Systems

## Chapter 7

### Banking Crises

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To accompany

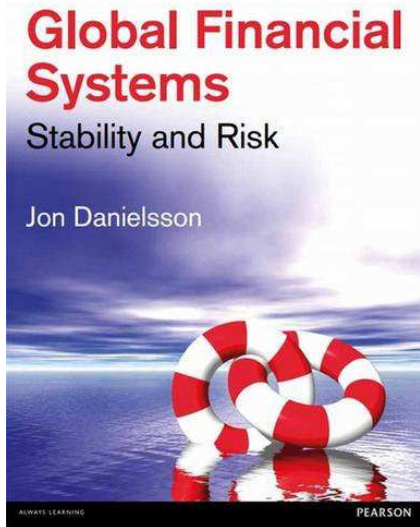
*Global Financial Systems: Stability and Risk*

[www.globalfinancialsystems.org/](http://www.globalfinancialsystems.org/)

Published by Pearson 2013

Version 10.0, August 2023

## Book and slides



- Updated versions of the slides can be downloaded from the book web page [www.globalfinancialsystems.org](http://www.globalfinancialsystems.org)



[illusionofcontrol.org](http://illusionofcontrol.org)

# Banking

Banks act as middlemen between lenders and borrowers. Why can't borrowers and lenders come together without them?

- Search costs
- Verification costs
- Monitoring costs
- Enforcement costs

# Banking

- Pooling of assets provides *diversification benefits*
- Provide *liquidity*
- Engage in *maturity transformation*
- Banks are special as their liabilities are *money*

# Fragility

- Bank *runs* if a sufficient number of depositors wish to withdraw at the same time (next chapter)
- *Fire sale externalities*, result in insolvency
- Failure of one bank may lead to runs on another bank if depositors perceive similarities between the two — *Contagion*
- Alternatively contagion through *network effects*. One channel is *interbank lending* which is usually unsecured so a default by one bank may have an immediate effect on others

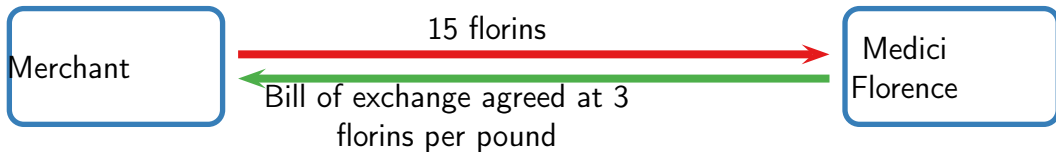
# Early bank — Medici

## 1397–1494

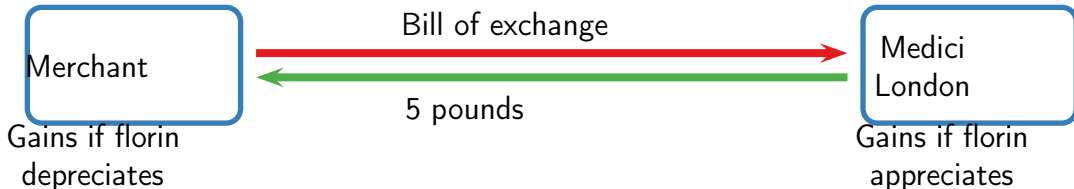
- Diversification
  - Held deposits, discounted commercial obligations (*bypassed usury laws*)
  - Foreign exchange trading (large number of currencies in circulation)
  - Lending to royalty and the Vatican
- One example of profitability: 32% per year 1397–1420

# Bill of exchange transaction

## Initial deal

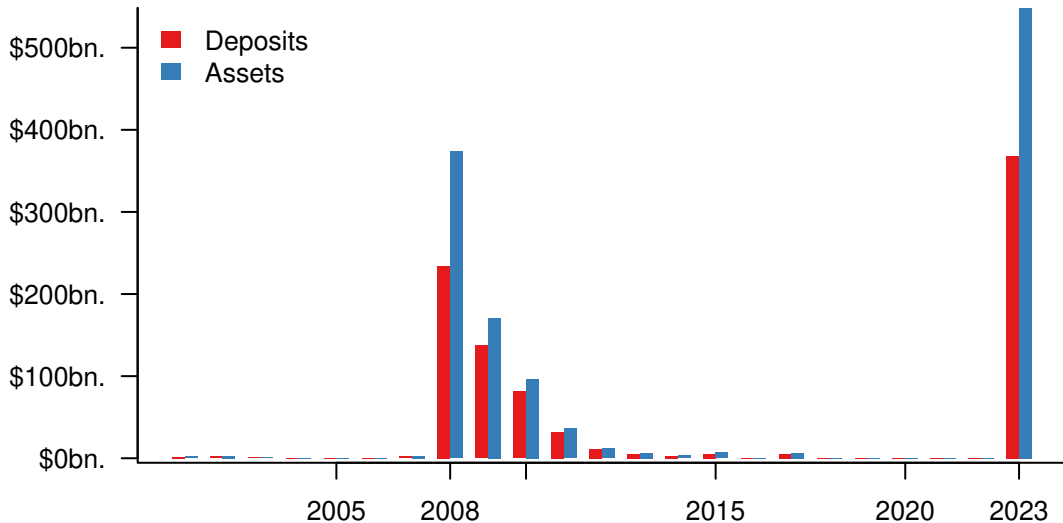


## 3 months later



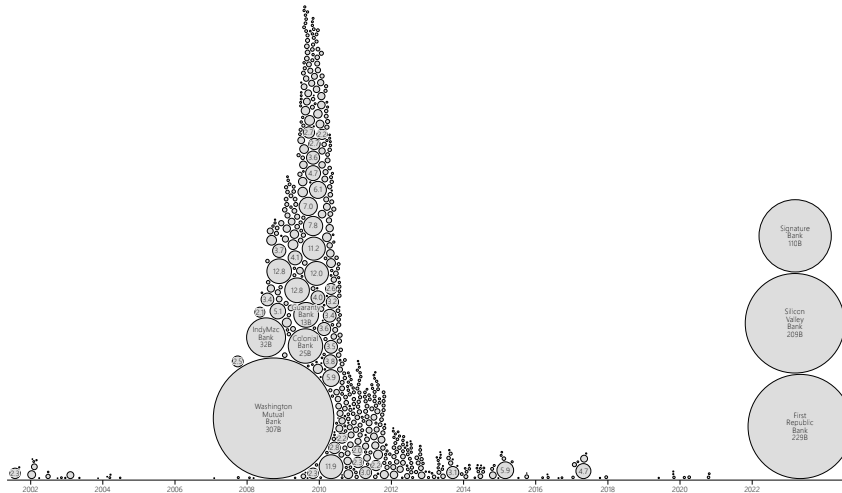


# US bank failures



# US bank failures

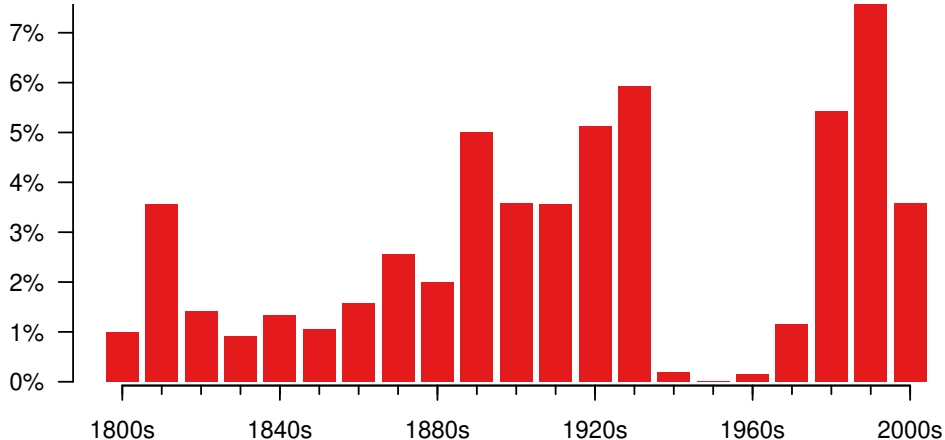
Mike Bostock <https://observablehq.com/@mbostock/bank-failures>



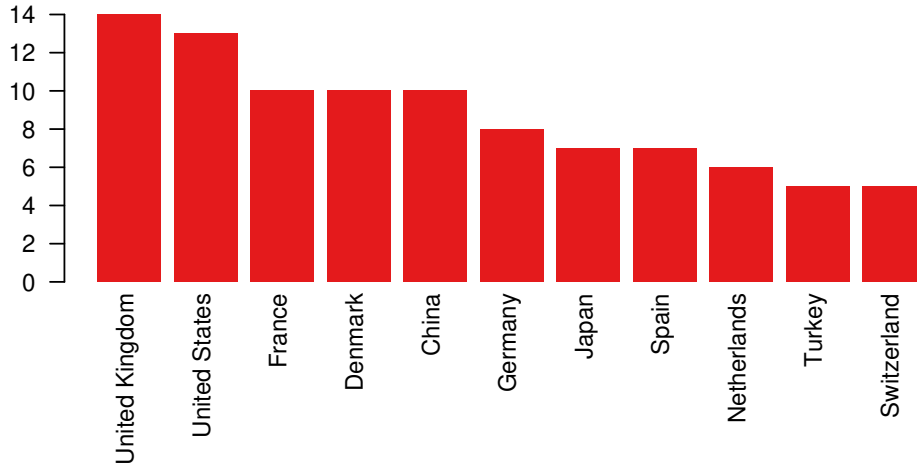
# Data

- Systemic Banking Crises Revisited Author/Editor: Luc Laeven ; Fabian Valencia
- <https://www.imf.org/en/Publications/WP/Issues/2018/09/14/Systemic-Banking-Crises-Revisited-46232>
- Rogoff-Reinhard, this time its different

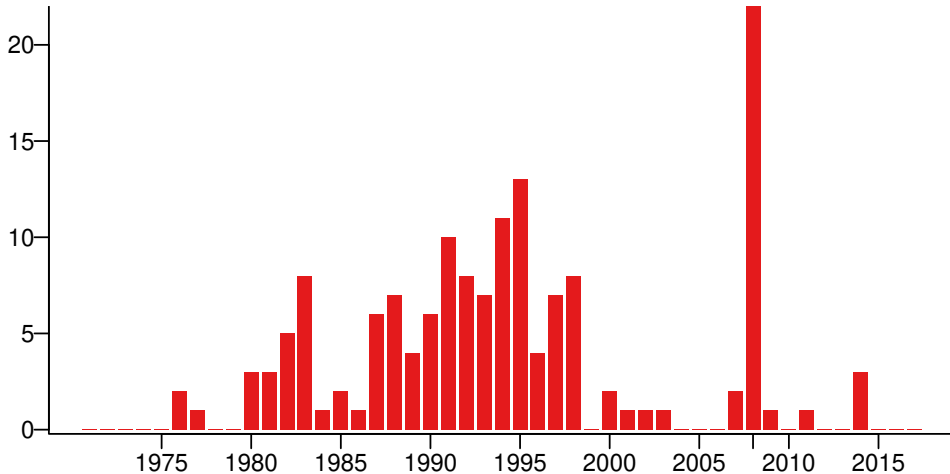
# Probability of a banking crisis in a typical country (per decade)



# Number of banking crises 1800 to 2016



# Number of banking crises 1970 to 2016



# Banking crises 1970–2017

- 4 crises: Argentina
- 3 crises: Congo, Dem. Rep. of, Ukraine
- 2 crises: Bolivia, Brazil, Cameroon, Central African Rep., Chad, Chile, Colombia, Costa Rica, Ecuador, Guinea, Guinea-Bissau, Hungary, Kenya, Latvia, Mexico, Nicaragua, Nigeria, Philippines, Russia, Slovenia, Spain, Sweden, Thailand, Turkey, United States, Uruguay

# Moral Hazard



# Moral hazard

What happens when those taking risk do not have to face the full consequences of failure but get to enjoy all the benefits of success.

The consequence of moral hazard is that those fortunate enough to be in that situation are encouraged to take on more risk than they otherwise would do.

## Do we care?

- Pervasive — insurance contracts
- Not to be eliminated
  - limited liability corporations
- Not a problem when compensated
- However, it is not always compensated

# Government guarantees

- Government guarantees not priced
  - Motivation for financial regulations
  - Externalities from the failure can outweigh moral hazard
  - Risk return trade-off
  - Financial institutions know and exploit this
  - *The bigger, the more dangerous, the worse run and more interconnected a financial institution is, the more likely it is to be bailed out*
- Chapter 14 is on bailouts

# 2021

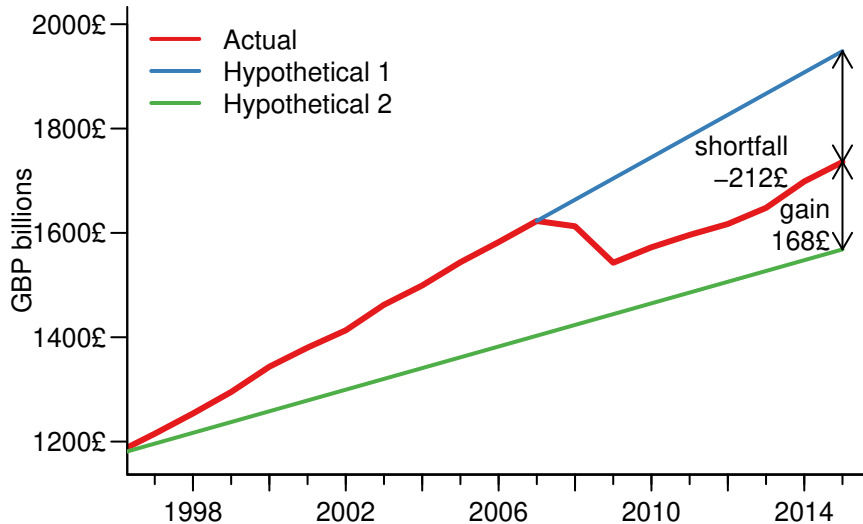
- The central banks have twice bailed out the financial system in the past decade and half
- In 2008 banks were directly bailed out, in 2020 the system was bailed out
- Greenspan put
- Creates moral hazard, encourages more risk-taking in the future
- Which then leads to more bailouts
- And more regulations

# Costs of Banking Crises

# What is the cost?

1. *Direct cost*: the fiscal cost associated with resolution of bank crises or the bail out costs. Can be relatively accurately measured
2. *Indirect cost* on the economy takes many forms, such as contracting government revenues and expanding fiscal expenditures
  - *Hard to measure and subjective*
  - Laeven and Valencia (2008) estimate output losses by extrapolating from the trend of real GDP until the year before the crisis, and calculating the aggregate difference between the trend prediction and actual outcomes. There are many other ways of doing this

## Counterfactuals — UK



# Country systemic banking crisis

Fiscal Cost (gross, as % of GDP). Output loss as % of GDP

		Fiscal cost	Output loss
Argentina	1980	55.1	10.8
Finland	1991	12.8	59.1
Indonesia	1997	56.8	67.9
Korea	1997	31.2	50.1
Mexico	1994	19.3	4.2
Sweden	1991	3.6	30.6
Turkey	2000	32.0	5.4
United States	1988	3.7	4.1
Venezuela	1994	15.0	9.6



# Cost of resolution

Honohan and Klingebiel (2003)

- If countries had not extended *some* of *unlimited deposit guarantees, open-ended liquidity support, repeated recapitalizations, debtor bailouts and regulatory forbearance*
  - The fiscal costs of resolution would be around 1% of GDP on average, 1/10 of the actual costs
- If, however, governments employed *all* of the approaches above, the fiscal costs would be *six times larger* than they are
- Main damage to the economy is not caused by the actual event but rather *inappropriate government responses*

# Causes of Banking Crises

## Some causes

- Separate out fundamentals and specific causes
- Fundamental causes are:
  1. Too many bad loans
  2. Sustainable so long as the good times continue
  3. But lending prolongs and amplifies the good times
  4. Lending expands to the limit of what is sustainable — conditional on things continuing to be good (see Minsky on next slide)
  5. So it takes an increasingly small shock to cause a crisis

# Minsky's three types of financing

1. “*Hedge financing*”, is the safest. This is when firms borrow little, and when they do they can repay the loans directly out of cash flow
2. “*Speculative financing*”, riskier since firms rely on cash flow to repay interest but roll the principle over
3. “*Ponzi financing*” is where the cash flow is not sufficient to repay either principal or interest, so firms are betting that the underlying asset will appreciate enough to repay their liabilities
  - e.g. buy-to-let real estate

# “Stability is destabilizing”

- We start with hedge, and end up with Ponzi
- ““If there is excessive optimism in the boom period, it will lead to an accumulation of conflicts (in the economy), which may end up with a so-called Minsky moment,”
- Zhou Xiaochuan, governor of the People’s Bank of China, October 2017.”

## Some examples of specific causes

- Commodity booms
- Real economy shocks
- Liberalization
- Poor regulation
- Corruption / crime

# Fundamentals and triggers

- Very few fundamentals
- Very many triggers
- Beware of focussing on triggers

# Banking crises in G10

	Real economy	Asset prices	Financial liberalization	Poor regulation	Bank specific
Switzerland (91–96)	✓	✓	✓	×	×
Spain (78–83)	✓	✓	✓	✓	×
UK (91)	✓	×	✓	×	✓
Norway (88–93)	✓	✓	✓	✓	×
Sweden (91–94)	✓	✓	✓	✓	×
Japan (94–02)	✓	✓	✓	✓	×
US(82–95)	✓	✓	✓	✓	✓



# Financial liberalization

- Over-regulated financial sectors can often hold back economic growth, suggesting that financial liberalization is a good policy
- *Execution has to be right*
- A *common mistake* made by governments is to *reduce* oversight and activity restrictions but *maintain* implicit or explicit government guarantees such as deposit insurance
- This creates a *nasty moral hazard problem* because it can enable financial institutions to borrow cheaply and use the money for high-risk activities
- This was at the core of many banking crises, such as the Savings and Loans crisis in the *US* in the 1980s, the *Scandinavian* crisis in the late 1980s and early 1990s and Asian crisis

# Political economy arguments for bubbles

- Prince: “*As long as the music is playing, you’ve got to get up and dance*”
- Public sees the benefits brought by a bubble. Politicians follow
- Bankers also, even if they should know better
- The *technocrats* should be in know, and if they warn, risk being *denounced, losing income or being prosecuted*
- Ultimately this means that it is very difficult to follow William McChesney Martin Jr., former head of the US Fed, who said that the Fed’s most important job is “*to take away the punch bowl just as the party gets going*”
- Jeff Chwieroth, Andrew Walter (2019) “The Wealth Effect: How the Great Expectations of the Middle Class Have Changed the Politics of Banking Crises”

# Corruption

examples: Venezuela in 1994, the Dominican Republic in 2003, Moldova 2014

- The banks did not seem to record deposits as liabilities
- Enabling the insiders to *loot the banks' assets from inside*
- The central bank of each country felt it necessary to make depositors whole, destabilizing the macroeconomy.
- Furthermore, the rogue bank in Venezuela payed high deposit rates, forcing other competing banks to do the same
- In turn that increased overall risk-taking because of risk-shifting

# Some Individual Bank Failures

## Why these examples

- There is a large number of cases to choose from
- But these have had a particularly strong impact on future policy
- Some others worth mentioning include Continental Illinois
  - Which had a major impact in revamping US financial regulations
  - Perhaps making them the best in the world right now
- Failures often cause changes in policy

## Herstatt 1974

- Used to be a large German bank
- Forced it into liquidation, same day banks paid DEM to Herstatt in Germany, expecting USD in New York (next slide)
- Because of time–zone differences, Herstatt ceased operations between the times of the respective payments
- This is an example of *settlement risk*
- The failure of Bank Herstatt was one factor that led to the creation of the *continuous linked settlement platform*, which launched almost 30 years later in 2002

## Herstatt — Settlement Risk

- German bank shut down on 26th June 1974, at 4:30pm local time
- Traded FX (e.g. Deutsche Mark (DM) /USD, see Bretton Woods discussion)
- US paid it DM, and expecting USD following day in Germany or later same day US
- Stopped all dollar payments to counterparties at 4:30. Counterparties did not get paid

# Murder of God's Banker Paramount+

- <https://www.youtube.com/watch?v=DRXIEAmlvzE>



# Banco Ambrosiano 1982 and Roberto Calvi

- The largest private banking group in Italy
- The Chairman, Roberto Calvi, was a member of the illegal masonic lodge Prograganda Due (P2), called “God’s Banker”, due to his close association with the Holy See
- Formed a Luxembourg holding company not subject to Italy’s banking regulations
- Banco Ambrosiano Holding (BAH) in Luxembourg - *Not subject to Italian regulations*
- Through BAH banks in Switzerland, the Bahamas, Peru and Nicaragua, and companies in Panama, Luxembourg and Liechtenstein
- Bank of Italy noted it buying Ambrosiano stock with borrowed foreign funds, then the lira fell
  - Currency mismatch problem

- Calvi was sentenced to jail, fled
- Calvi indicted fled to Austria then England
- Found hanging under Blackfriars bridge dead on 18th June 1982
- Threatened the stability of the entire international banking system
- Brought on changes in the way the world's major banks do business and *new regulations*

## BCCI 1991

- Registered in Luxembourg with head offices in Karachi and *London*
- Failed because of widespread fraud, its financial statements had been falsified from its establishment in 1972
- Failed to record deposit liabilities and created *fictitious* loans that generated *substantial but fictitious profits*
- Used depositors' money to fund trading losses
- BCCI was sometimes mentioned in the press "chiefly for the mystery that surrounded it", financial market participants generally saw BCCI as a bank that had made losses through incompetence rather than fraud

- In 1991, Price Waterhouse became increasingly convinced that the fraud within BCCI was endemic and that published financial statements were grossly inaccurate, informing the BoE of their findings
- The liquidators, Deloitte & Touche, filed a lawsuit against the bank's auditors, Price Waterhouse and Ernst & Young. This was settled for \$175 million in 1998
- BCCI creditors also attempted to sue the Bank of England as BCCI's regulators
- This case demonstrated the *reputation risk for central banks* who also in charge of banking supervision
- One reason for the separation of banking supervision from the BoE in 1997

# Some System–Wide Failures

## Why these failures?

- There are many choices, but these are either particularly illustrative
  - The S&L nicely isolates the main problem from other factors
- Or demonstrate successful resolution
  - Sweden may have done the best job
- Or are recent and relate to this crisis
- A common thread is a relatively straightforward story

# Savings and loans (S&L) in US

sleepy industry — in many countries called savings banks or similar

- Suffered from high interest rates and inflation at the end of the 1970s
- As a consequence the authorities at the time deregulated the industry with the view that the S&Ls could grow their way out of trouble
  - there were widespread deregulations in the US at the time
- Including allowing new activities and lenient accounting rules

- Such policies, combined with an overall decline in regulatory oversight (known as *forbearance*) contributed to the risk-taking in the sector
- The government continued providing deposit insurance, but did not increase oversight of the industry
- This is a classical problem in deregulation
- The final cost of resolving failed S&Ls is estimated at just over \$160 billion, including \$132 billion from federal taxpayers



# Lessons from the S&L disaster

1. Strong and effective supervision needed
2. Industry should not be allowed to have influence over the supervisor who should remain politically independent — *no regulatory capture*
3. Supervisors need adequate financial resources
4. Failed institutions need to be closed down promptly
5. Deposit insurance funds should be strongly capitalized with real reserves, not just government guarantees

# Scandinavian crisis in the 1990s

## Sweden Norway and Finland

- Caused by a huge lending boom in the late 1980s
- Followed by severe *deleveraging* in the 1990s
- Finland had the extra factor of the collapse of the Soviet Union

- The governments liberalized the financial markets and implemented procyclical macroeconomic policies
- Neither banks nor regulators were used to operating in such an environment
- The banks did not develop the necessary risk management systems, so at the time when risk-taking was on the increase by inexperienced banks, government oversight was decreasing
- Having the government as provider of deposit insurance, creates moral hazard
- Dramatic increase in bank assets and asset prices, fueled by leverage

# Resolution

- In order to resolve the crisis, the government employed both monetary and fiscal easing as well as abandoning currency pegs
- Furthermore, the government injected significant amounts of public funds into the banking system, recapitalizing failed banks, splitting them into *good banks and bad banks* (next slide)
- One study: fiscal cost of the banking recapitalization was 8.9% of GDP in Finland, 3.9% in Sweden, and 2% in Norway

# Best practices

## Ideally

- Resolve a failing bank without any losses to the taxpayer
- And without disruption to banking services
- Have shareholders, and creditors loose some or all their money
- A failing institution taken over by a stronger one
- If not a SIFI should be manageable
- If politics does not get in the way

## Good bank — bad bank

- Government splits up a failing bank
  - dodgy assets into one institution
  - bank's operations and solid assets in other
- Eventually sells the good bank
- Holds onto the bad assets, like corporate loans
- If the assets are valued at fire sale prices, government may profit — an argument often used to justify this
- If the original bank was insolvent and the good bank is solvent then the bad bank must by definition have a negative value, so a profit for the government is not the expected outcome
- Taxpayers should expect to lose money — hopefully efficiency gains outweigh the expected loss.

## Cases

- In the 2007/8 crisis did not do this
- China does not do this
- The EU is now trying to moved to such a model
  - Bank Popular Spain summer 2017
  - Italy spent €17 billion it can ill afford to rescue Veneto Banca and Banca Popolare di Vicenza
  - Why not hit junior (subdebt) creditors? Such debt was missold to retail investors in Italy and Spain. Why?



# Zombie banks

- Insolvent but operating because of government policies
- Japanese banking sector
- *Evergreening*
- Banks money to failing companies so they can continue servicing loans
- Channels money from the productive part of the economy to the unproductive
- Stagnation

# What about SIFIs?

## Systemically important financial institutions

- The government shouldn't really allow them to exist
- But most encourage them
  - Financial regulations with high fixed cost
  - Status — governments want to have national champions
  - Internationally active companies like large internationally active banks
    - A small company from Stuttgart can use same bank in Germany and Brazil
- We are trying to use SIFI surcharges and TLAC (see regulation discussion later)