Effective Regulation and Financial Stability

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SBIF/UDP Conference on
Banking Development, Stability and Sustainability
November 5, 2015, Santiago, Chile

Why Banking Regulation is Important?

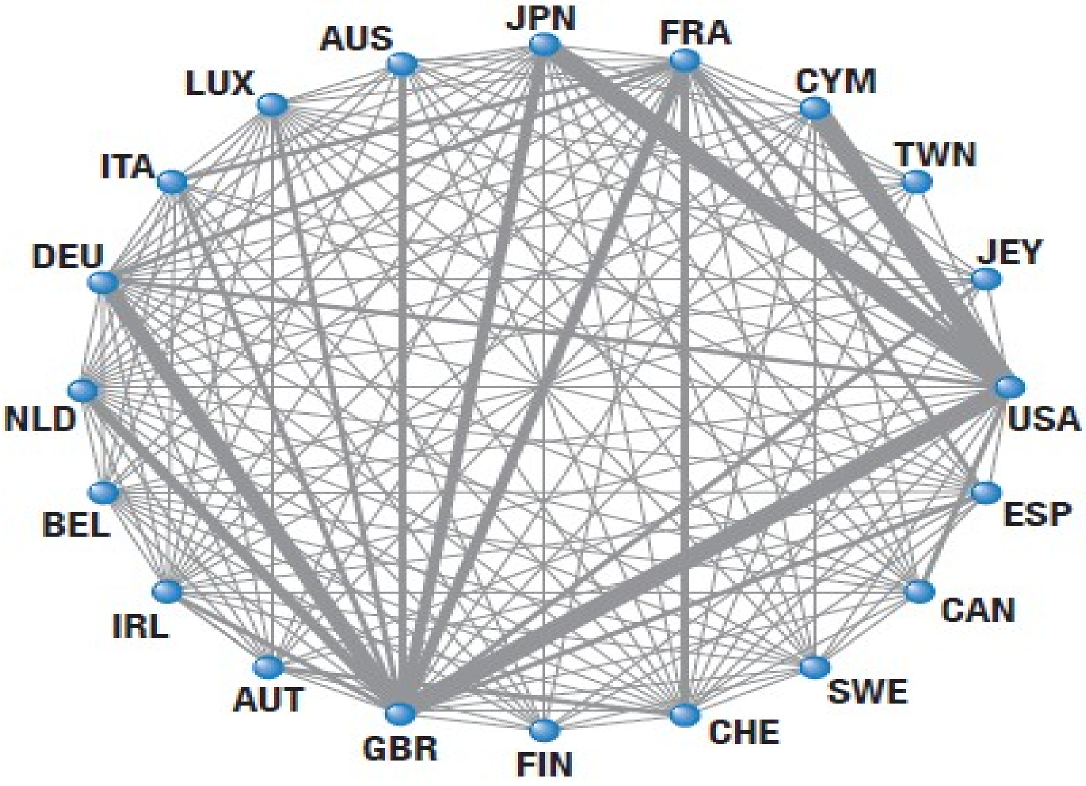
- Free markets fail to create financial stability
  - Depositors are passive creditors
  - Costly defaults means banks become privileged (central bank support, debt guarantees)
  - Intense incentives and ability to borrow too much
- *Fragile financial system is very harmful for the economy.*
- *Only effective regulation can solve this problem.*

The Largest Corporations in the World by Asset Size (Forbes, 5/2014)

- Fannie Mae
- ICBC
- HSBC Holdings
- BNP Paribas
- Mitsubishi UFJ Financial
- China Construction Bank
- JPMorgan Chase
- Agricultural Bank of China
- Bank of China
- Deutsche Bank
- Barclays
- Credit Agricole
- Bank of America
- Freddie Mac
- Citigroup
- Mizuho Financial
- Royal Bank of Scotland
- Société Générale
- Wells Fargo
- Banco Santander
- Sumitomo Mitsui Financial
- ING Group
- Lloyds Banking Group
- UniCredit Group
- UBS
- AXA Group
- Credit Suisse Group
- Allianz
- Bank of Communications
- London Stock Exchange
- Goldman Sachs Group
- MetLife

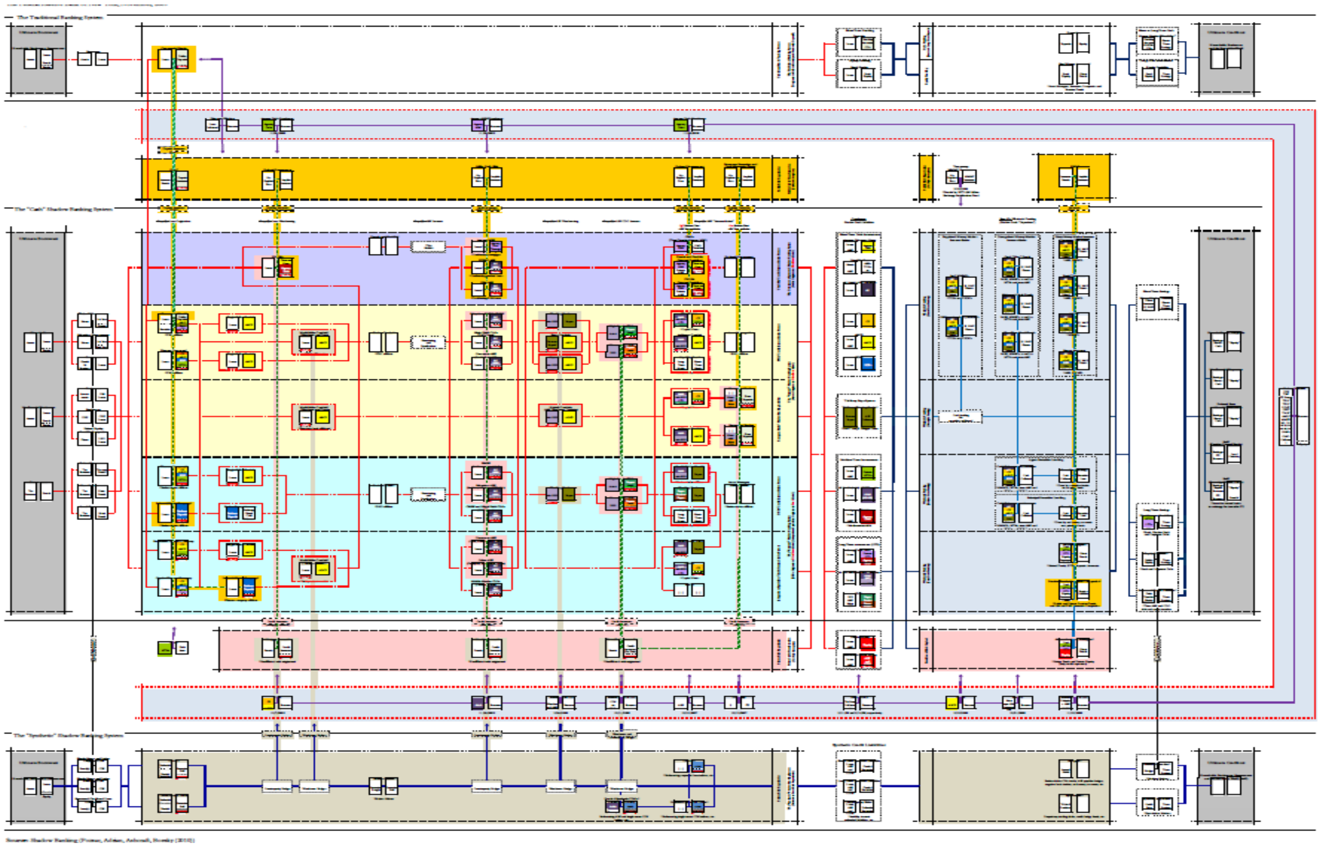
Global Banking Network

(Cross-Border Banking Claims)

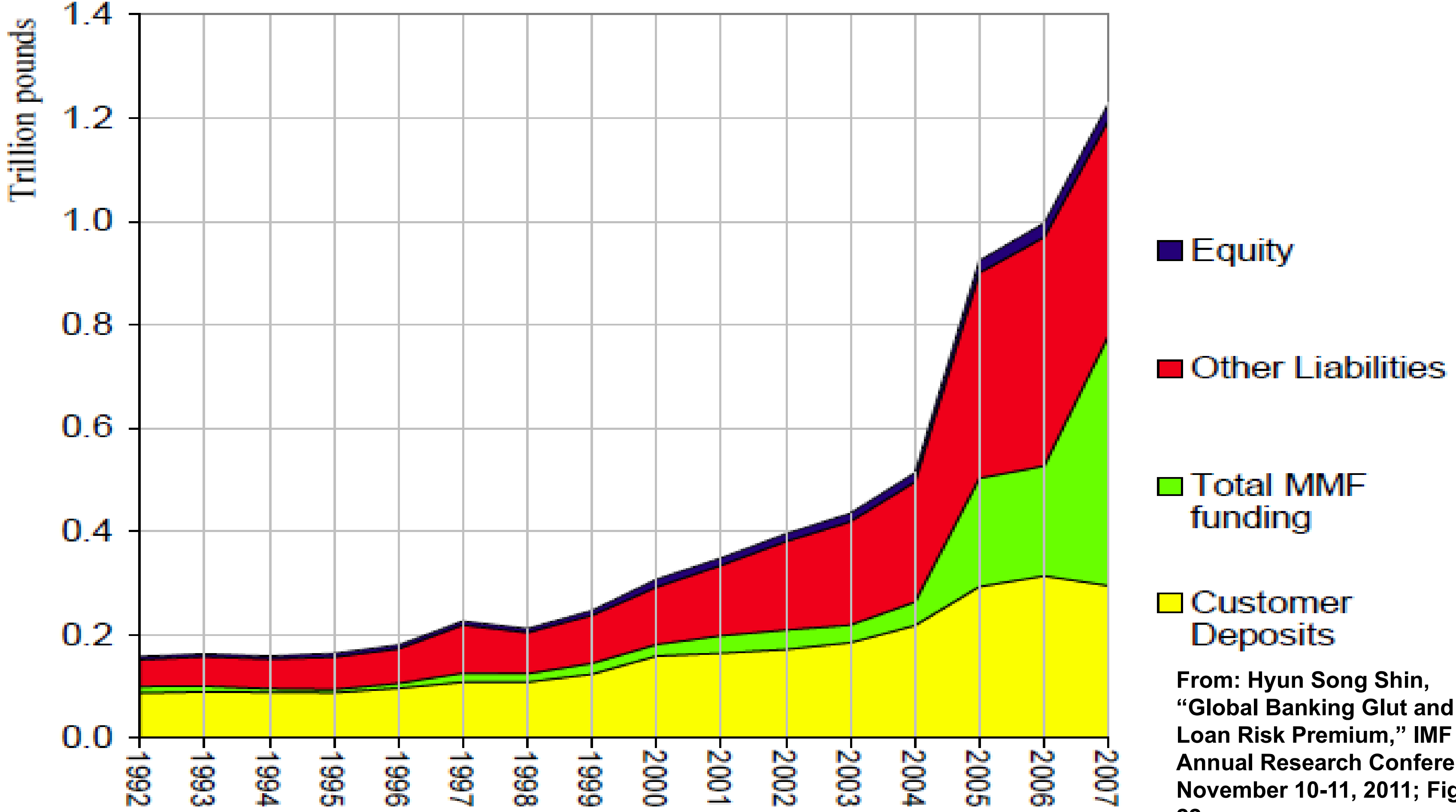


IMF Global Stability Report, April

“Shadow Banking,” Pozsar, Adrian, Ashcraft and Boesky, 2010



Total Liabilities and Equity of Barclays 1992-07 (Source: Bankscope)



From: Hyun Song Shin, "Global Banking Glut and Loan Risk Premium," IMF Annual Research Conference, November 10-11, 2011; Figure 22.

Derivatives for 21 Banks

2006: $409 trillion (notional)

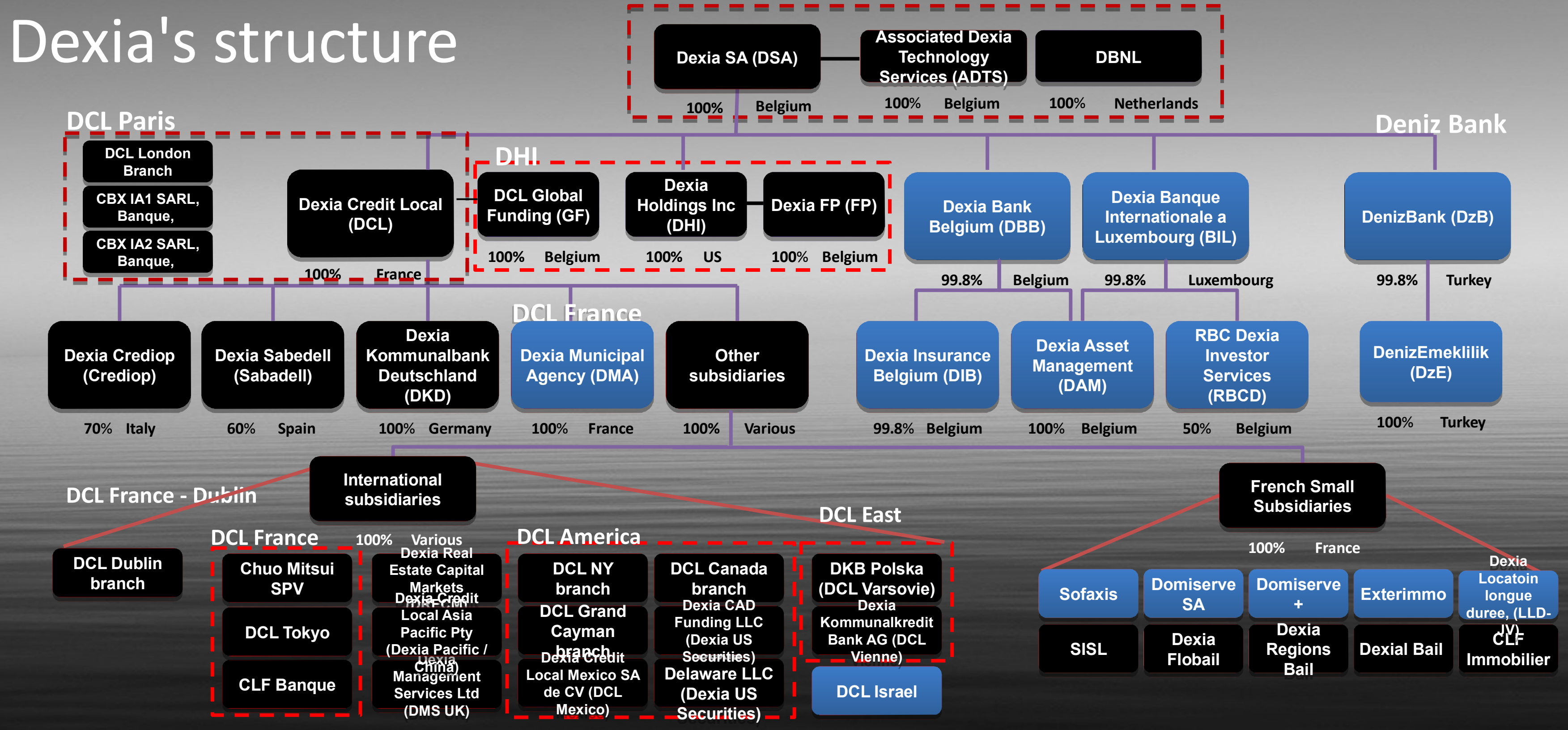
Average
$19 trillion

2013: $661 trillion (notional)

Average
$31 trillion

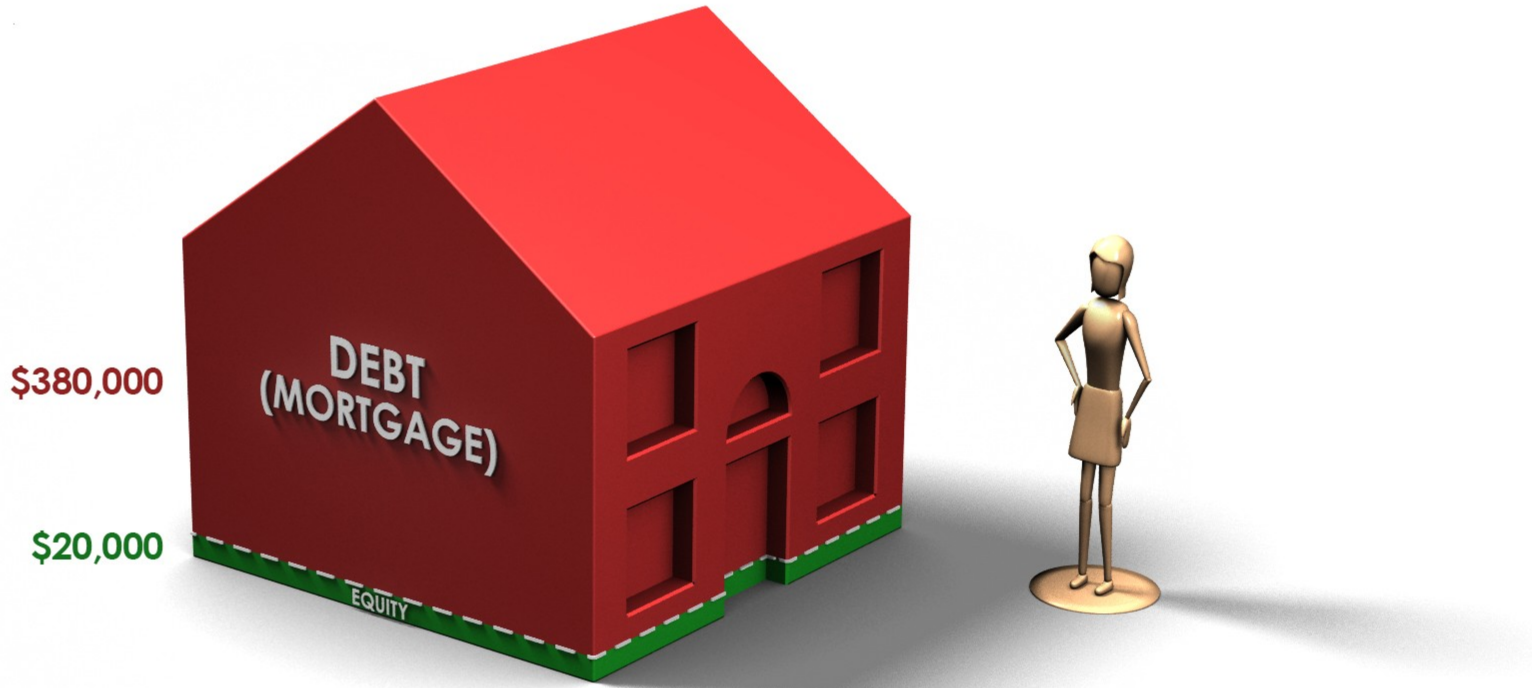
Sources: SNL Financial, FDIC, bank annual reports, Bank of England calculations.

Too complex to Resolve?



Let Big/Many Banks Fail?

- "Fail" is too late: instability would precede insolvency
- Bankruptcy/resolution disruptive and costly even if possible.
- Won't work if entire industry is weak.
- Enormous legal challenges cross border.
  - FSB 2014 "Key Attribute of Cross-Border Resolution" has huge wish-list of legal/regulatory steps.
  - IMF '14, FSB '15: cross-border SIFI failure *not viable option*
  - Ring fencing and bailouts are likely, *possibly at large cost*.


$380,000
$20,000
DEBT
(MORTGAGE)
EQUITY


+2.5%
DEBT
(MORTGAGE)
$30,000
$20,000
EQUITY


+5%
DEBT
$40,000
$20,000
EQUITY

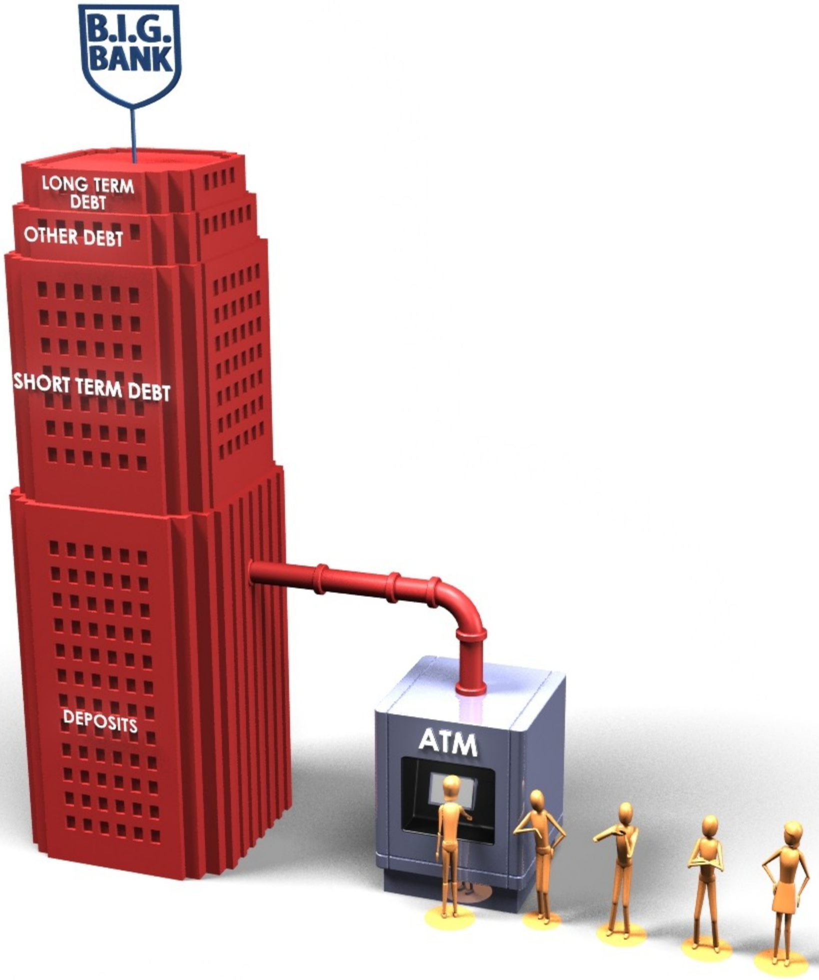

+10%
DEBT
$60,000
$20,000
EQUITY

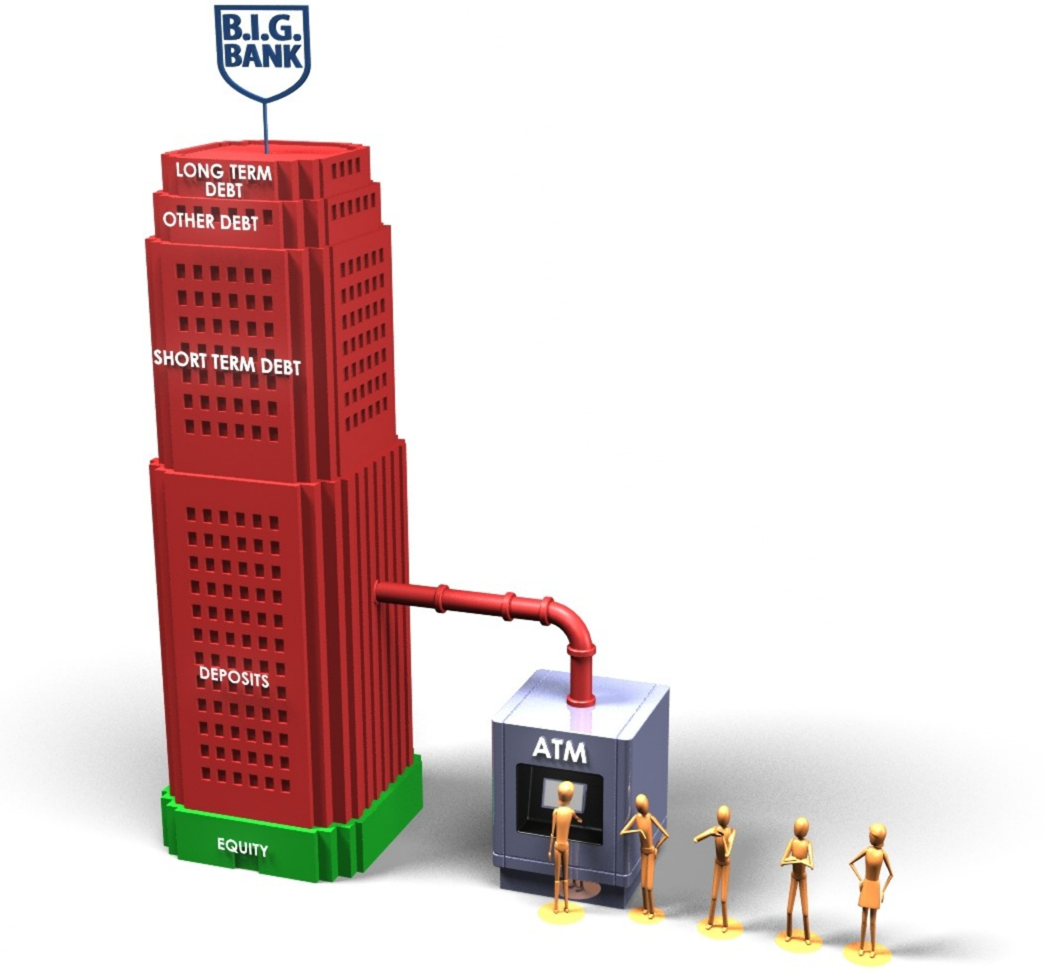

-2.5%
DEBT
EQUITY
$20,000
$10,000


-5%
DEBT
$20,000
$0


-10%
DEBT
$20,000
-$20,000


B.I.G.
BANK
DEPOSITS
ATM


B.I.G. BANK
LONG TERM DEBT
OTHER DEBT
SHORT TERM DEBT
DEPOSITS
ATM


B.I.G. BANK
LONG TERM DEBT
OTHER DEBT
SHORT TERM DEBT
DEPOSITS
EQUITY
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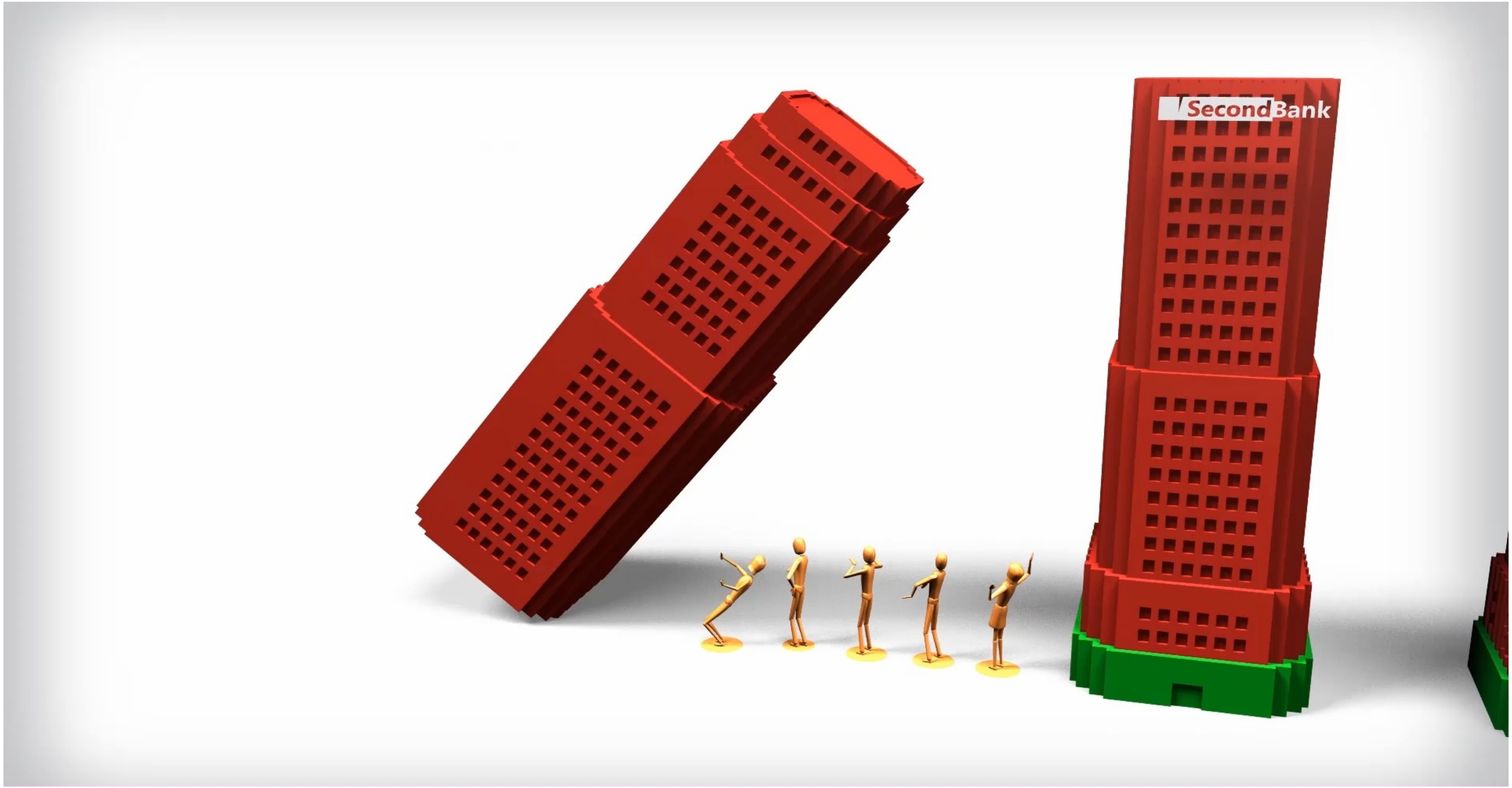
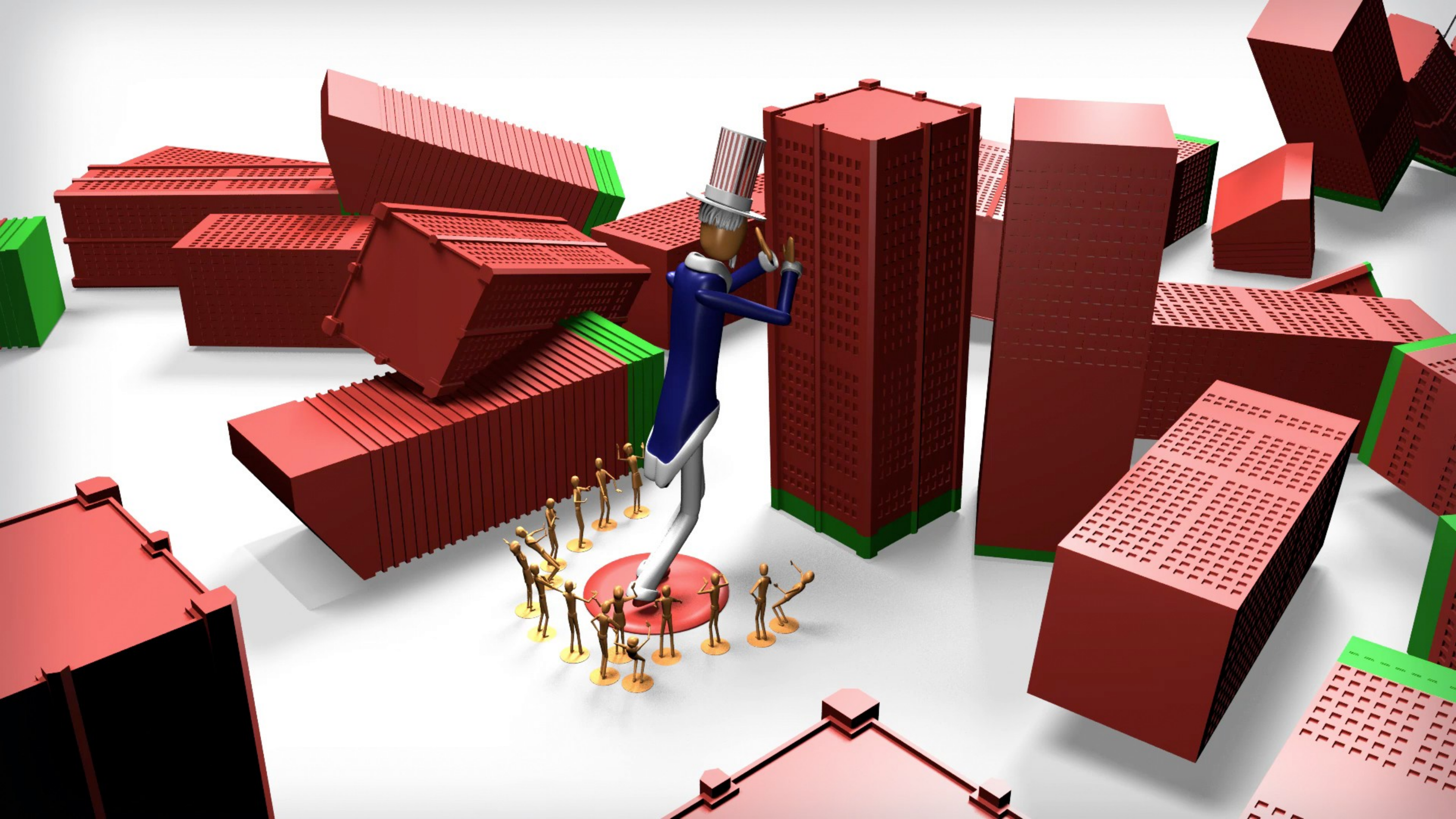
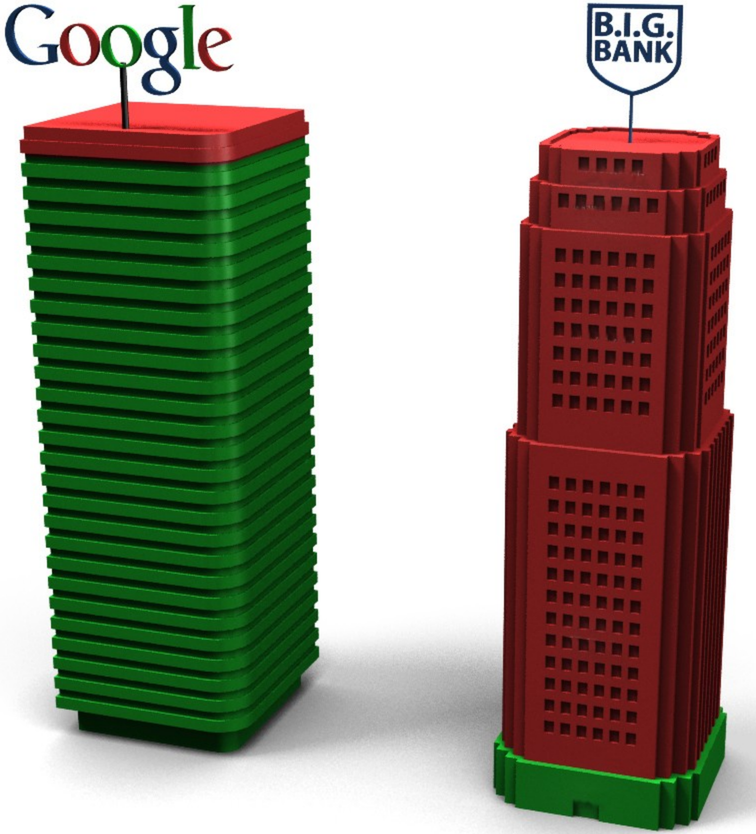
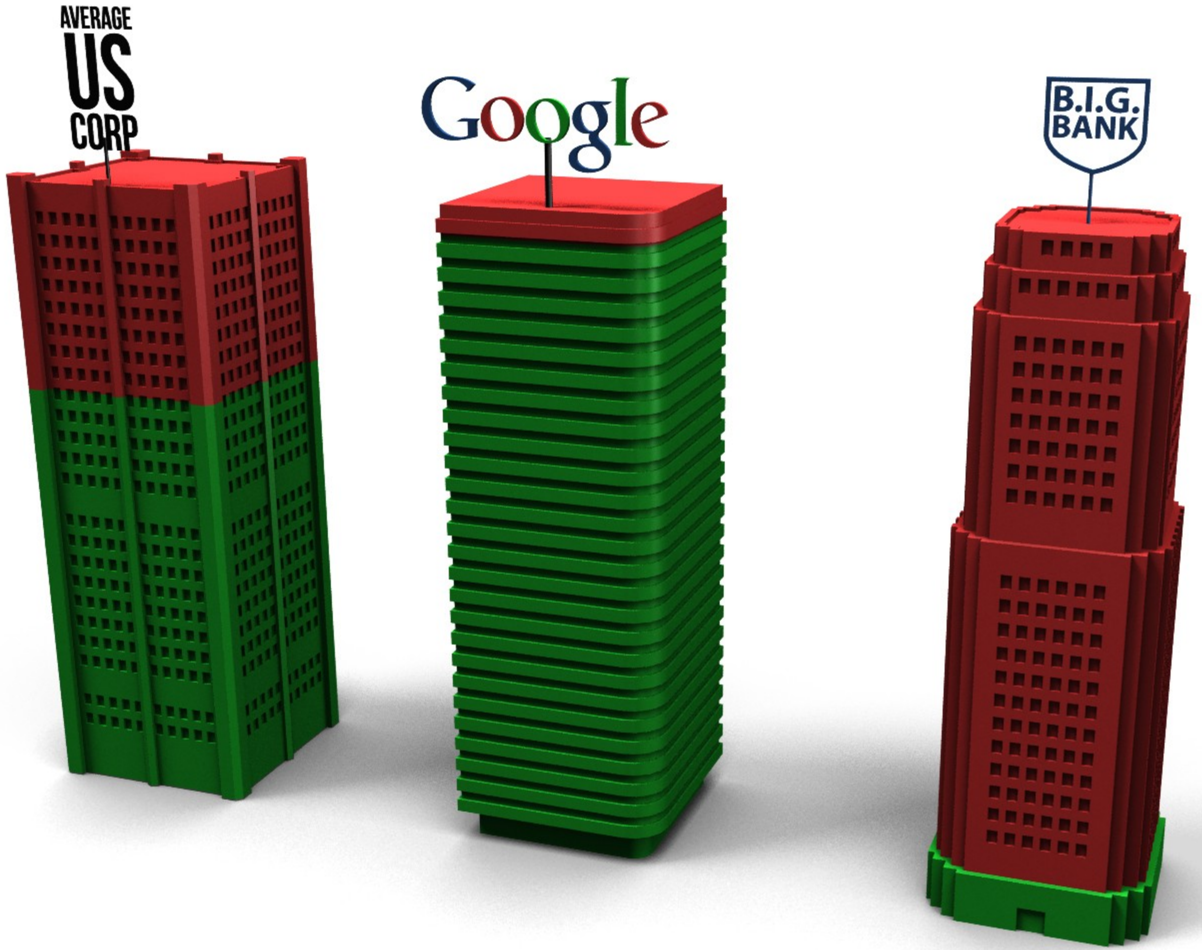
BANK

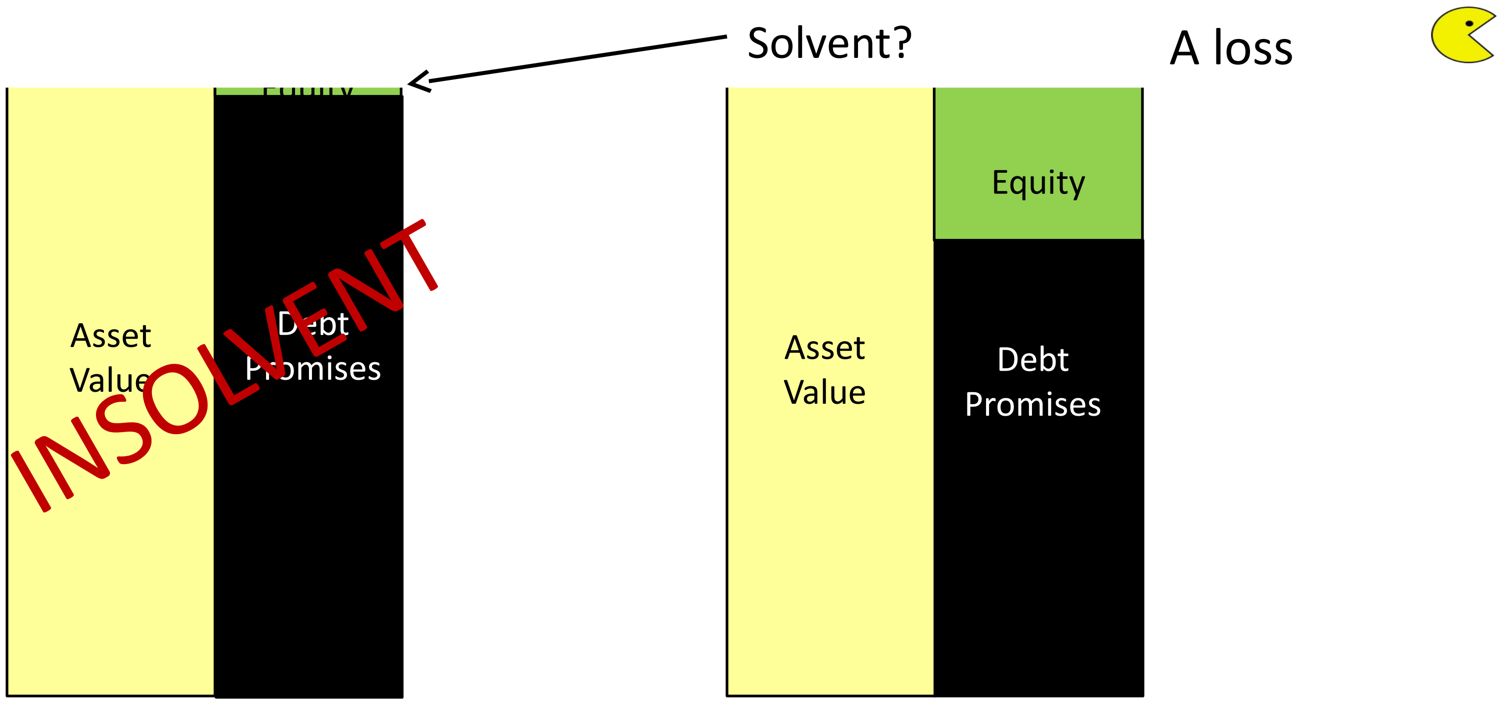

SecondBank




Google
B.I.G.
BANK


AVERAGE
US
CORP
Google
B.I.G.
BANK

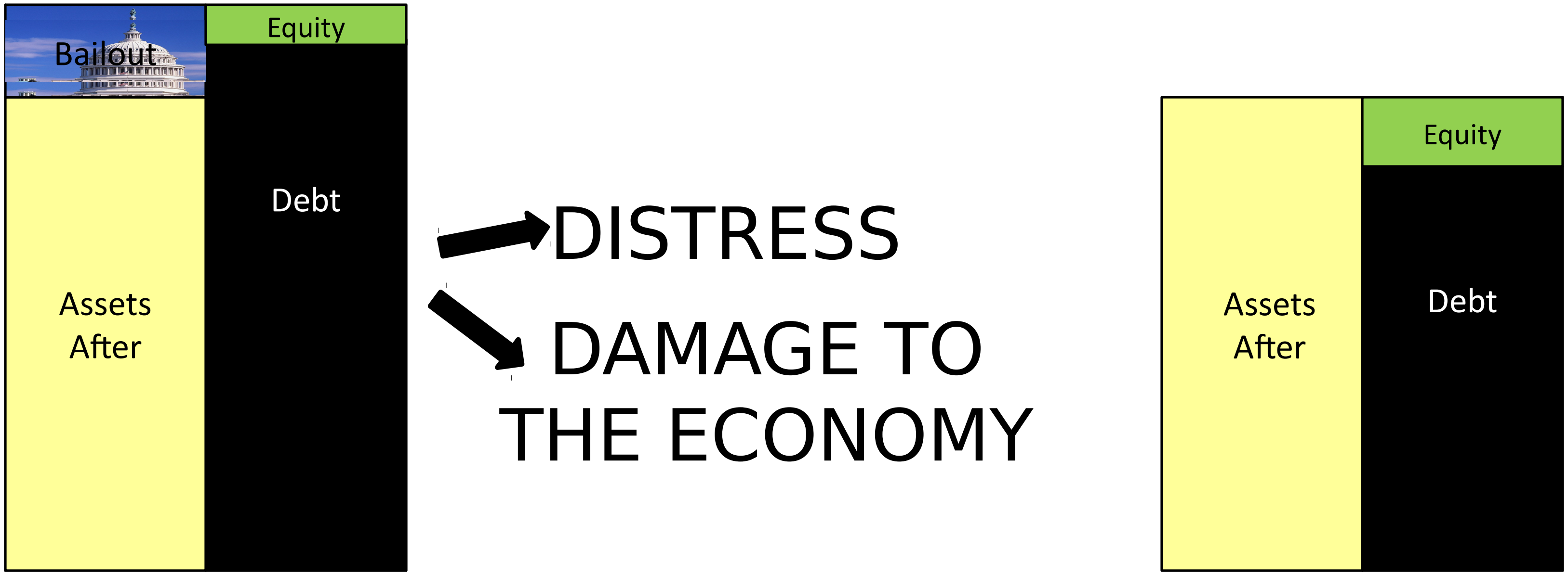
An ounce of prevention is worth a pound of cure



Too Much Leverage

More Equity

Equity Lowers Chance of Distress, Crisis, Harm



Too Much
Leverage

More Equity

Equity: Self Insurance at Market Prices; Huge Benefits

- Reduces likelihood of distress, default, crisis, bailouts.
- Reduces likelihood of liquidity problems and runs.
- Shifts downside risk to shareholders who get upside.
- Reduces "deleveraging multiples," distress sale intensity.
- Reduces TBTF subsidies, counters perverse incentives.
- Improves investment decisions: reduces excessive risk taking, likelihood of credit crunch from debt overhang.
- Helps "transmit" monetary policy to real economy.

The Mantra

"Equity is Expensive"

To whom? Why?
Only in banking?

From Banking Textbook

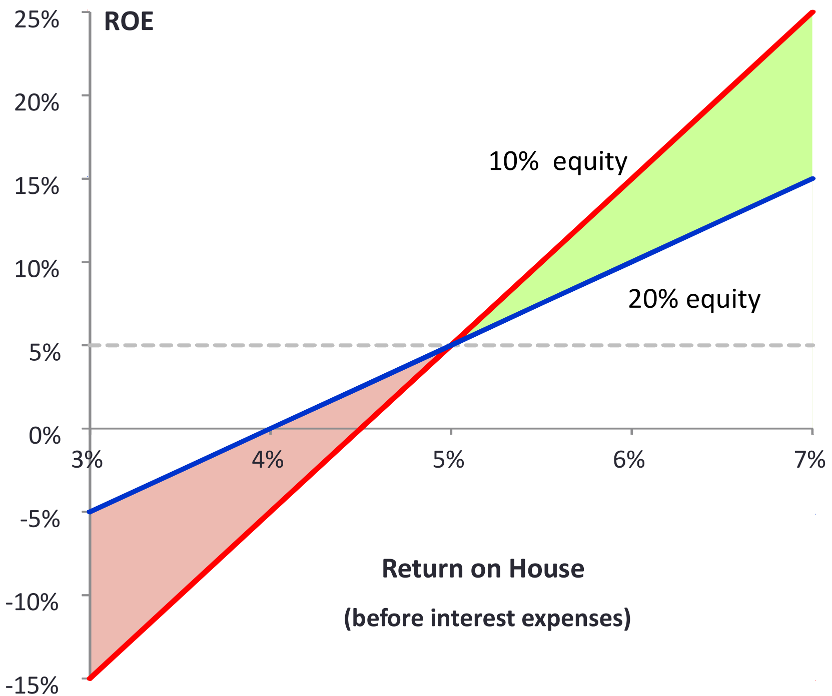
"Bank capital is costly because, the higher it is, the lower will be the return on equity for a given return on assets."

FALSE

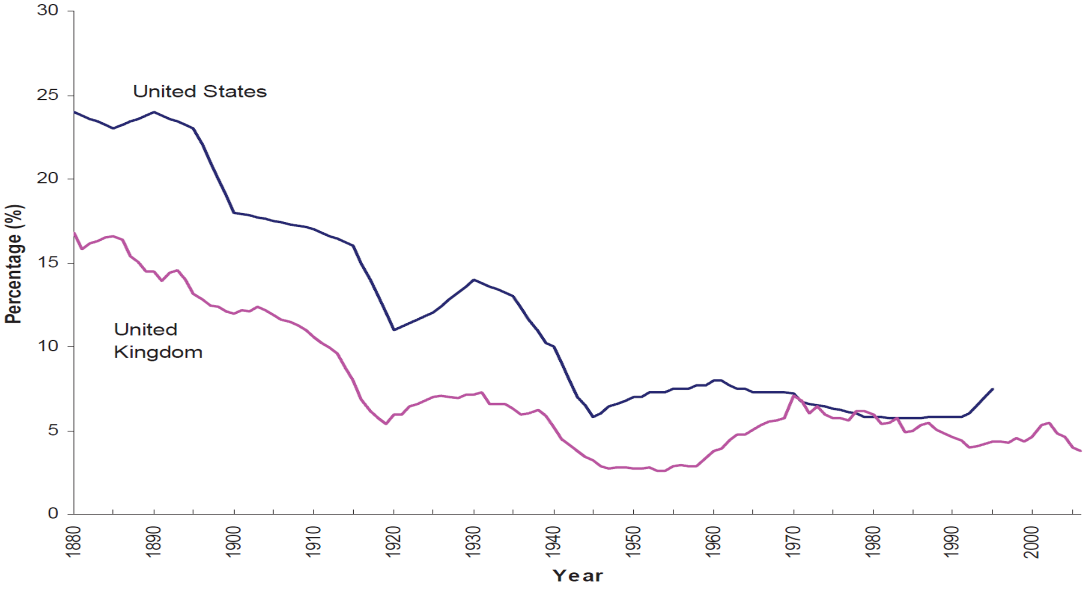
Frederic S. Mishkin, 2013, *The Economics of Money, Banking and Financial Markets,* 3rd Edition, p. 227,

Equity, Risk, and Return on Equity (ROE)

- More equity in mix
  - Reduces ROE in good times, *and raises ROE in bad times*
  - Reduces risk
  - Reduces *required ROE*.
- ***ROE does not measure shareholder value!***
  - Targeting ROE may harm shareholders (Ch. 8 *BNC*)
  - Shareholders can create leverage on their own.



History of Banking Leverage in US and UK



- 19th century: banks were partnerships with unlimited liability; equity often over 50% of assets.
- Bank equity did not have limited liability everywhere in the US until 1940s.
- Equity ratios declined consistently to single digits.
- Growing “safety nets” played a role.
- Similar patters elsewhere.

Alesandri and Haldane, 2009; *US: Berger, A, Herring, R and Szegö, G (1995). UK: Sheppard, D.K (1971), BBA, published accounts and Bank of England calculations.*

Government and Taxpayers

Shareholders

Bond Holders

Depositors

Debt Creates Conflicts of Interest

- Once debt is in place, shareholders no longer maximize total firm value and may overinvest or underinvest:
  - take negative NPV projects that benefit themselves, harm creditors and lower the value of the firm.
  - forego positive NPV projects that would benefit creditors and increase total value of the firm.
- Covenants attempt to counter the incentives, otherwise inefficiency reflected in cost of borrowing.

More Distortions from High Indebtedness

- Conflict with creditors distorts *funding* decisions; once debt is in place, shareholders
  - resist reducing indebtedness (retained earnings, new shares) even when it would enhance firm value.
  - increase indebtedness (dividends, buyback, more borrowing) more even if it reduces firm value.
- *Intense conflict about risk and debt especially in distress.*
- See "The Leverage Ratchet Effect," Admati, DeMarzo, Hellwig and Pfleiderer (2015, still revised)

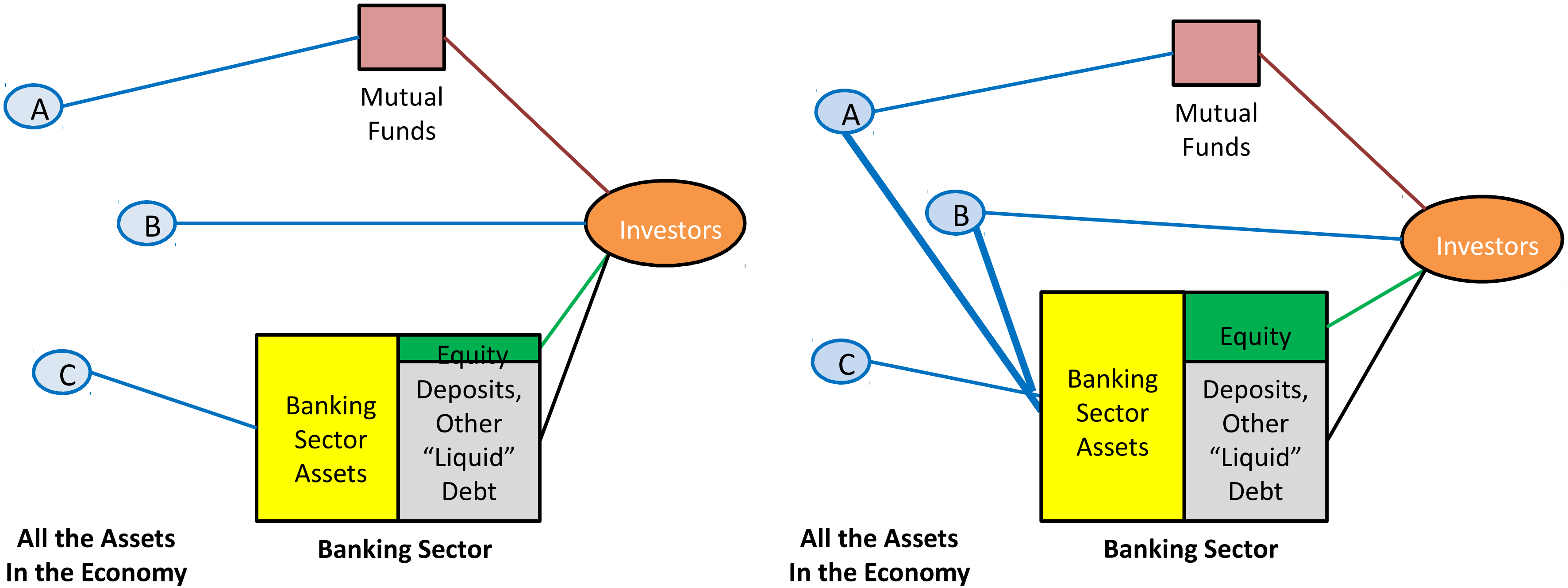
Facts

- Non-banks make risky, long term, illiquid investments.
- Without regulations
  - US average: 70% equity/assets (market value).
  - Nonbanks, even in financial industry, rarely have less than 30% equity (if healthy)
- Profits are popular source of unborrowed funding.
  - Berkshire Hathaway, Google, Microsoft.
- Banks with (sometimes much) less than 10% equity make routine payouts to shareholders.

Liquid "Production" and Equity

- When banks take risk, who should bear the downside?
- Is 75% debt not "high" enough leverage? Why 95%?
- High leverage *harms* "liquidity production:" *Default prospect increases likelihood of runs*.
- *Liquidity, like risk and credit, should be priced in markets; mispricing can cause excessive production*.
- See *Bankers New Clothes (BNC)*, Chap. 10, Admati et al, "Fallacies, Irrelevant Facts and Myths," (2013, Section 7).

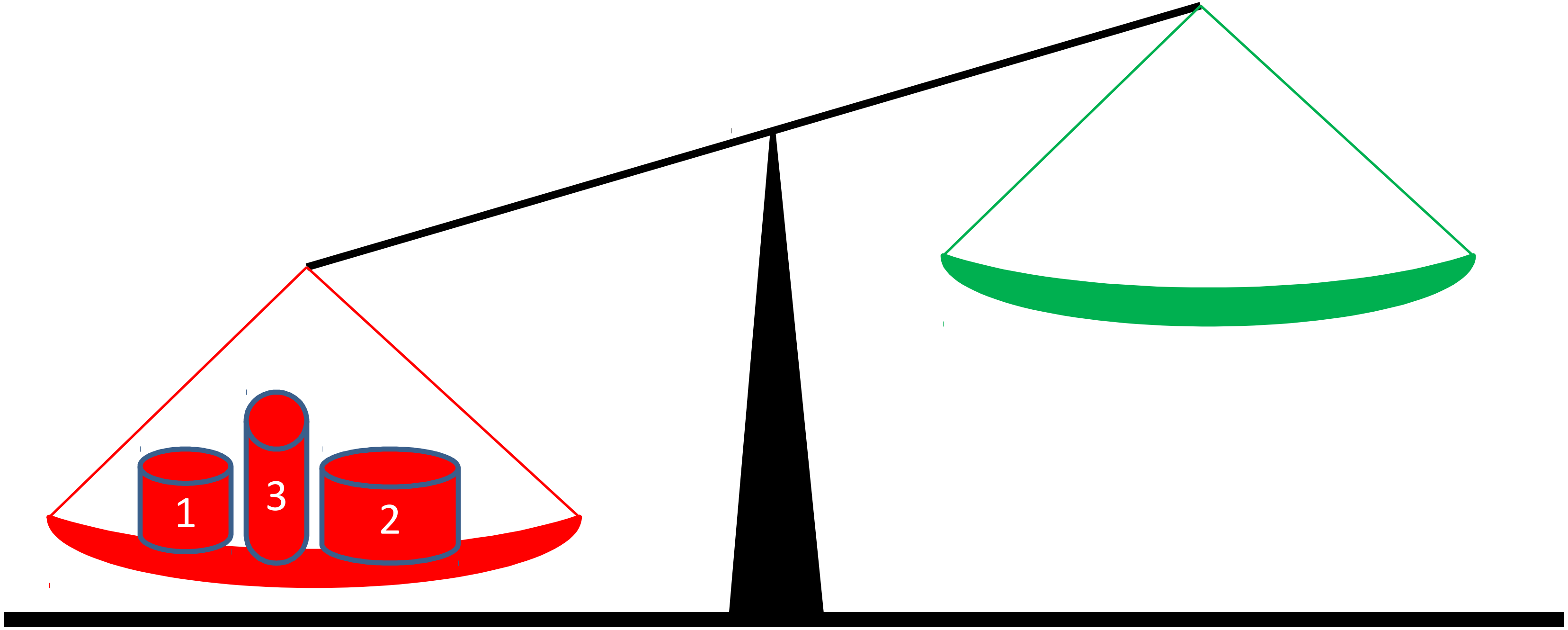
A Beneficial Shuffle of Claims



- *Rearranging claims aligns incentives, reduces distortions, corrects mispricing.*
- *Size of financial firms and industry should be determined in undistorted markets.*


B.I.G.
BANK
DEPOSITS
EQUITY
SAFER
BANK
DEPOSITS
EQUITY

Private Considerations

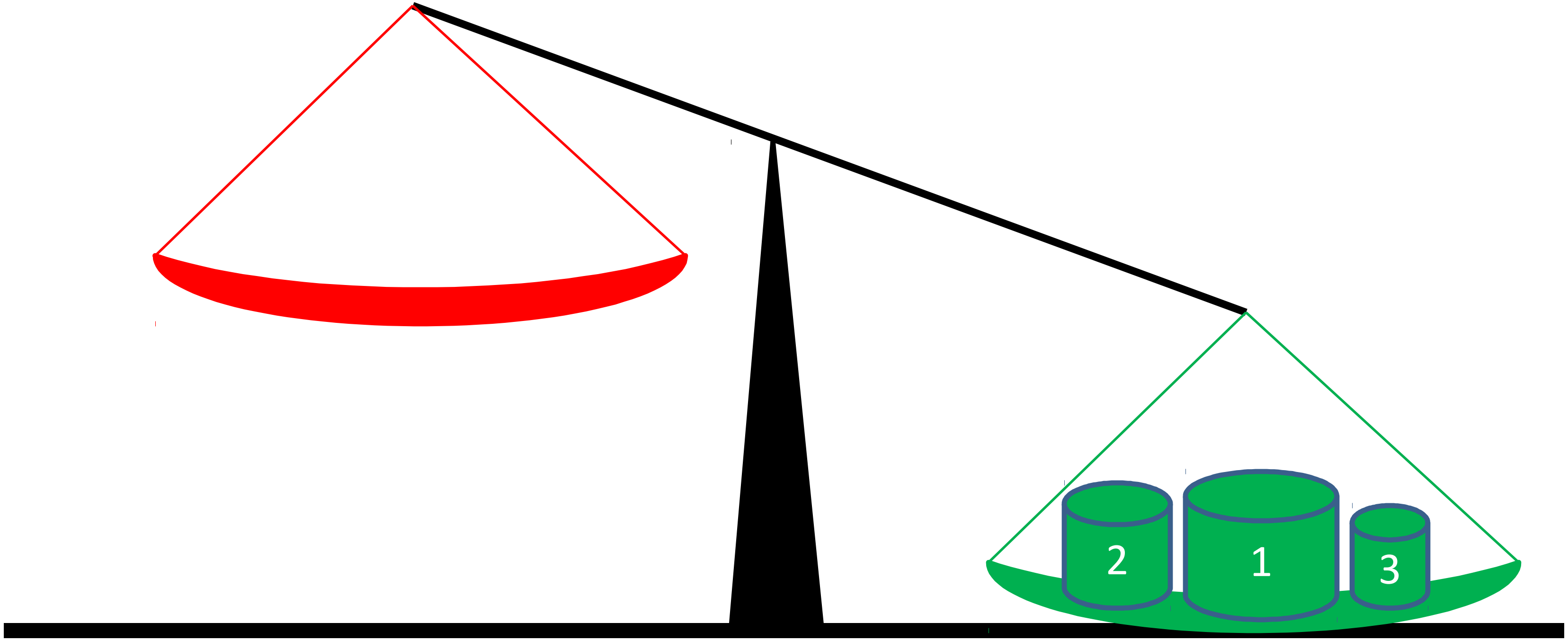


DEBT

1. Leverage Ratchet
2. Tax subsidies
3. Safety net benefits
4. ROE fixation

EQUITY

For Society, Excessive Leverage is "Expensive!"

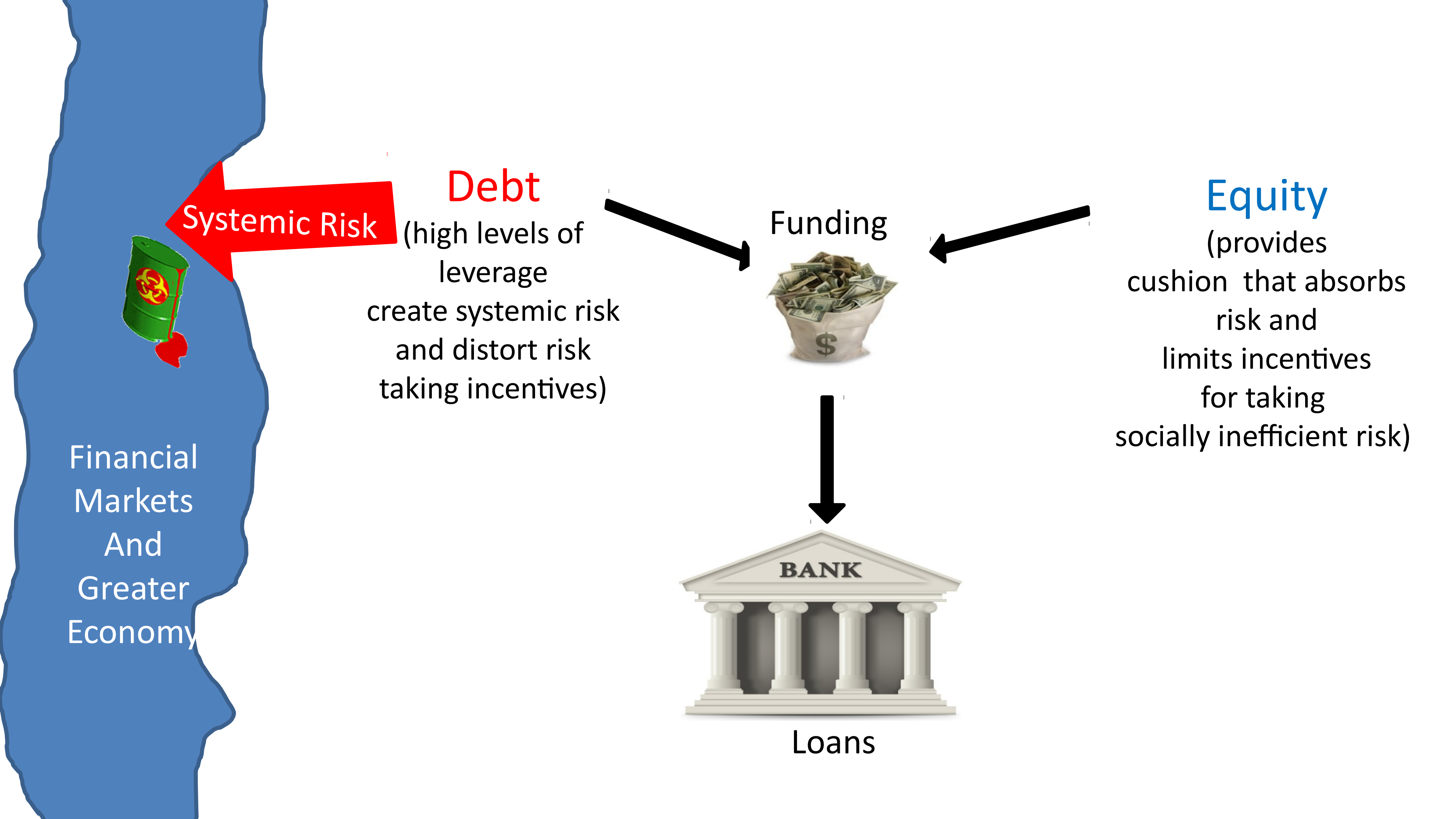


DEBT

1. ~~Leverage Ratchet~~
2. ~~Tax subsidies~~
3. ~~Safety net benefits~~
4. ~~ROE fixation~~

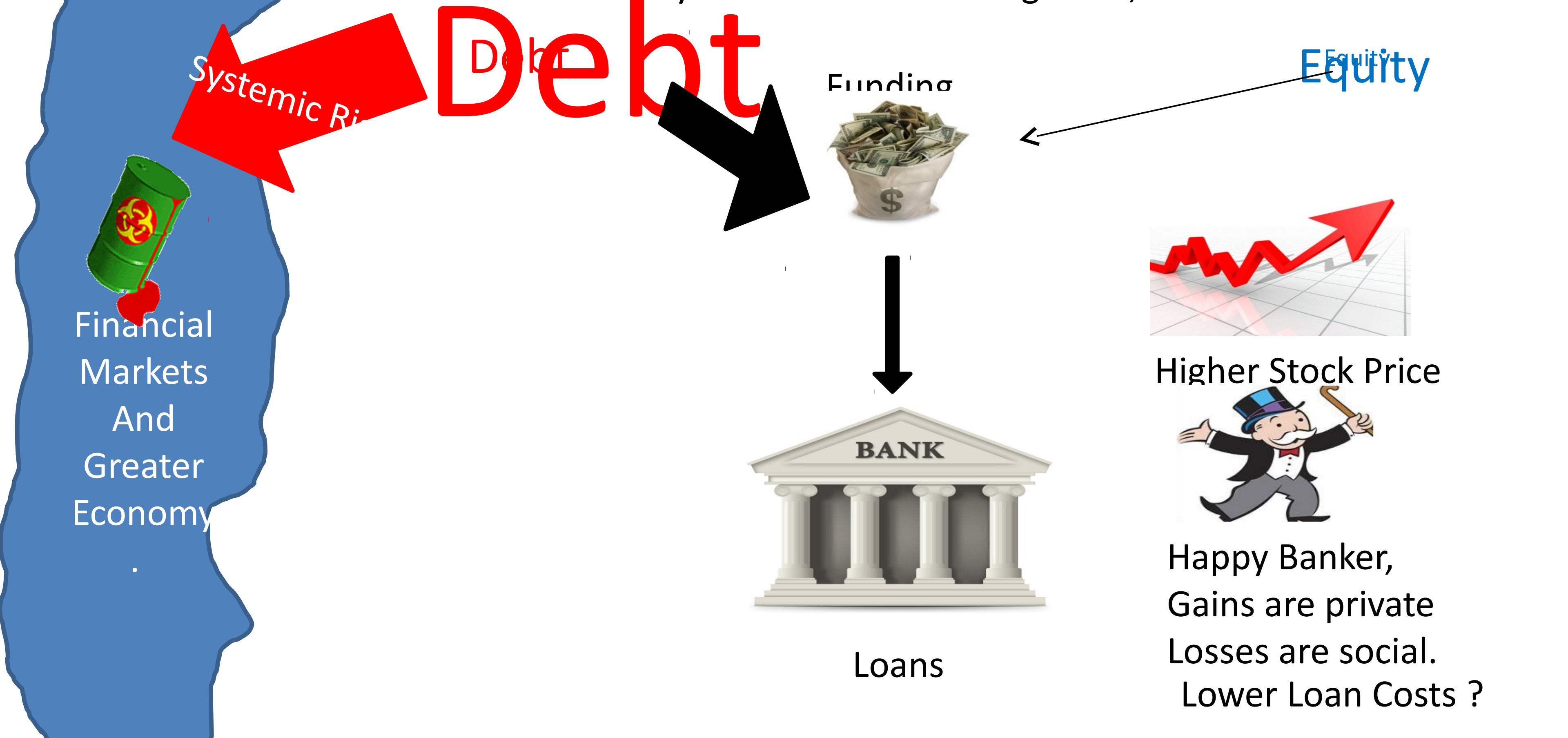
EQUITY

1. Reduces systemic risk
2. Reduces cost of distress, default, crisis
3. Reduces excessive risk taking incentives
4. Better able to lend after losses


Systemic Risk
Debt
(high levels of
leverage
create systemic risk
and distort risk
taking incentives)
Funding
Equity
(provides
cushion that absorbs
risk and
limits incentives
for taking
socially inefficient risk)
BANK
Loans
Financial
Markets
And
Greater
Economy

Government Subsidies to Debt:

1. Tax shield (interest paid is a deductible expense but not dividends)
2. Subsidized safety net lowers borrowing costs; bailouts in crisis.



Banks are Special Because…

- they have passive creditors, e.g., depositors, who don't monitor like normal creditors (including banks!)
- their failure is more disruptive and harmful
- they have many privileges: central bank support, explicit or implicit guarantees for much of their debt.
- **Unless regulation is effective**, banks get inefficiently indebted, fragile and dangerous.

Perverse Implicit Subsidies

- *Reducing subsidies is not a social cost*.
- Blanket subsidies distort competition, markets; enable and reward inefficient growth, leverage, recklessness.
- If subsidies are deemed desirable we should find different and more targeted delivery methods.
- *More equity reduces excessive subsidies, bring market discipline, corrects distortions in credit markets*.

How Much Equity?

- Basel II and Basel III Capital Requirements
  - Tier 1 capital Ratio: Relative to risk-weighted assets:
    - Basel II: 2%,
    - Basel III: 4.5% - 7%.
    - Definitions changed on what can be included.
  - Leverage Ratio: Relative to total assets:
    - Basel II: NA
    - Basel III: 3%.
    - US: 5% for large BHC, 6% for insured subs.
- Requirements based on flawed analyses of tradeoffs.

Is Basel III "Tough?"

"Tripling the previous requirements sounds tough, but only if one fails to realize that tripling almost nothing does not give one very much."

"Basel III, the Mouse that Did Not Roar," Martin Wolf, *Financial Times*, Sep 13, 2010

"How much capital should banks issue? Enough so that it doesn't matter"

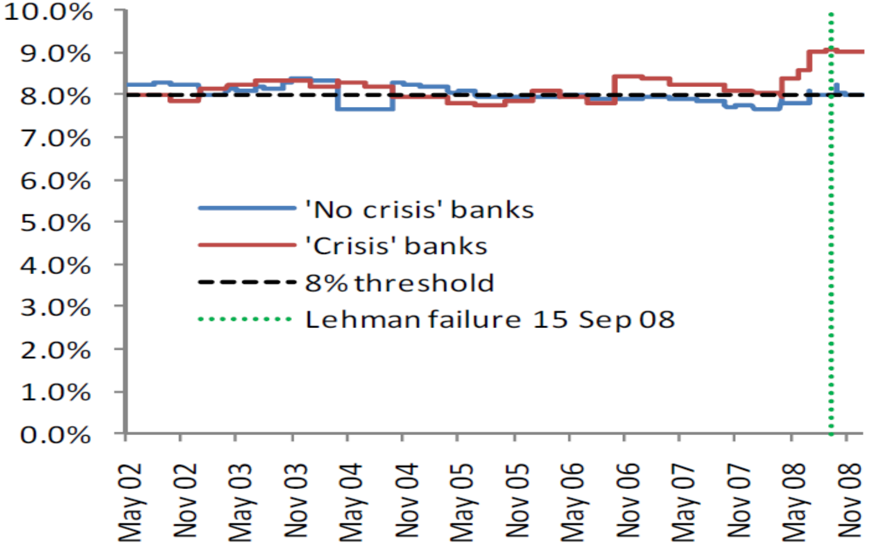
"Running on Empty," John Cochran, *Wall Street Journal*, March 1, 2013

Can "Regulatory Capital Ratio" Reassure?

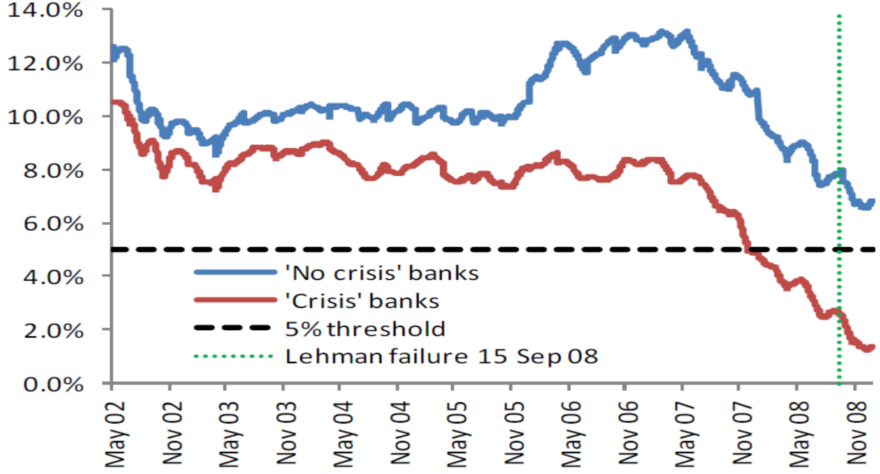
- Risk weights are highly problematic:
  - Complex, yet key risks and correlations ignored.
  - Manipulable via internal models, credit ratings, off balance sheet exposures, and derivatives.
  - Distort decisions, e.g., favor government over business loans.
  - Add fragility and interconnectedness.
- *Measurement issues plague leverage ratio too.*

The "Fortress Balance Sheet" Myth

Accounting measures don't show crisis



High market values can mislead



From: Andrew Haldane, "Capital Discipline," January 2011)

(See also "The Law of the Opposite: Illusionary Profits in the Financial Sector," Godron Kerr)

Risk weighting is highly problematic

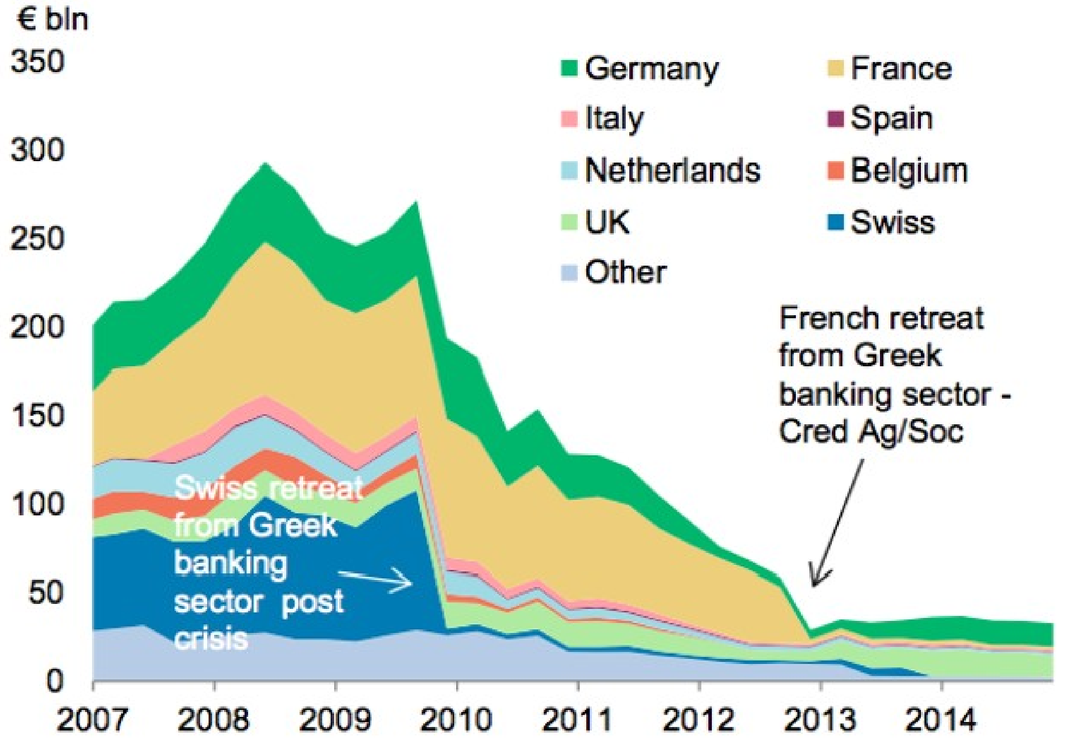
- Complex, illusion of “science,” key risks and correlations ignored.
- Manipulable
  - internal models
  - inflated credit ratings
  - off-balance-sheet commitments;
  - Derivatives; credit insurance
- Distort investments, e.g., favor government over business lending
- *With equity levels so low, risk weights intensify leverage and risk ratchet effect .*
- Added fragility and interconnectedness (see, e.g., *BNC*, Chap 11).

Basel Regulations and the 2010 “Greek Bailout”

Capital regulations view government debt as risk-free.

“Greek” bailout rewarded French, German, other banks for recklessness.

Similar: AAA rated securities, position protected by CDS.

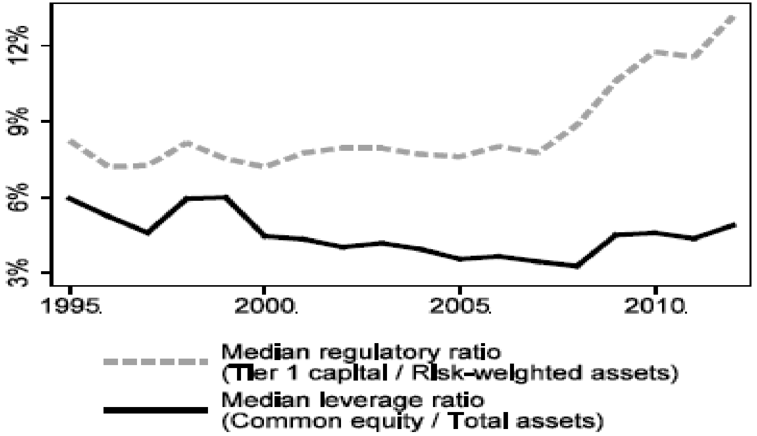


Source: BIS (2Q14), company data, EBA (for 2010-11 Greece exposure data), German Bankers Association, Morgan Stanley Research

Basel Regulatory Ratios (“Capital” to Risk-Weighted Assets) Don’t Measure Leverage!

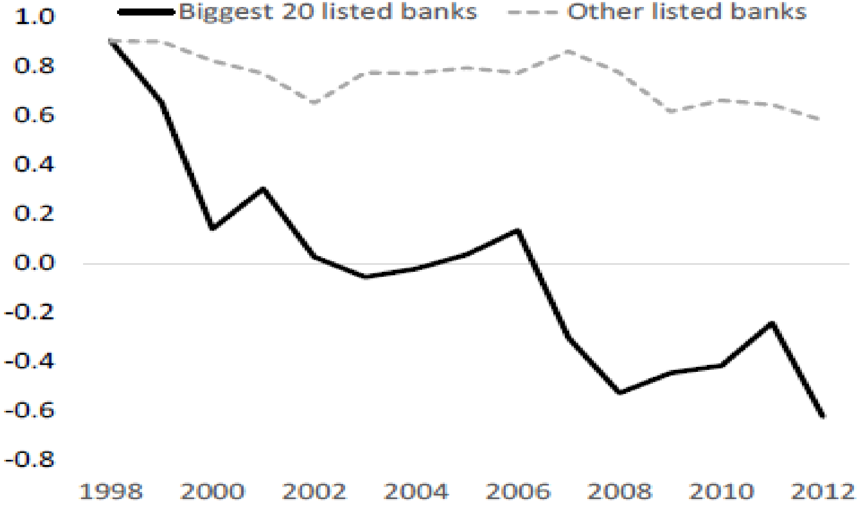
ESRB Academic Scientific Committee report, June 2014

Figure 14: Book leverage ratio versus regulatory capital ratio (median of top 20 banks)



Source: Bloomberg. Note: The plotted lines show the median regulatory ratio and median leverage ratio in a balanced sample of the largest 20 EU banks.

Figure 15: Correlation of E/TA and T1/RWA

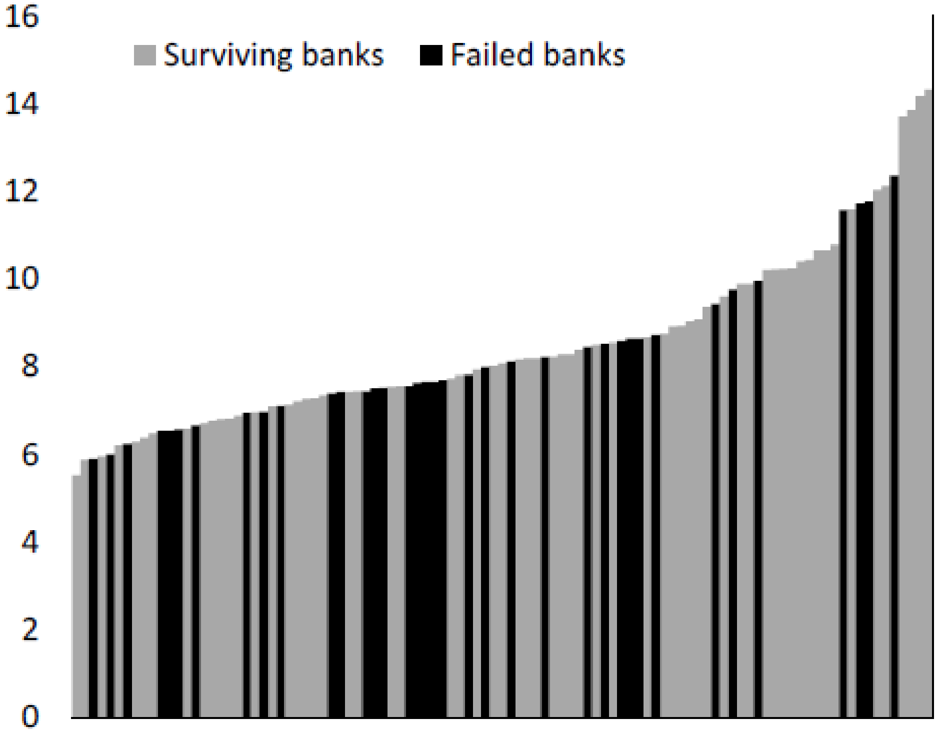


Source: Bloomberg.

Basel Regulatory Ratios Don't Predict Failure!

ESRB Academic Scientific Committee report, June 2014

Figure 17: Global banks' T1/RWA (%) in 2006

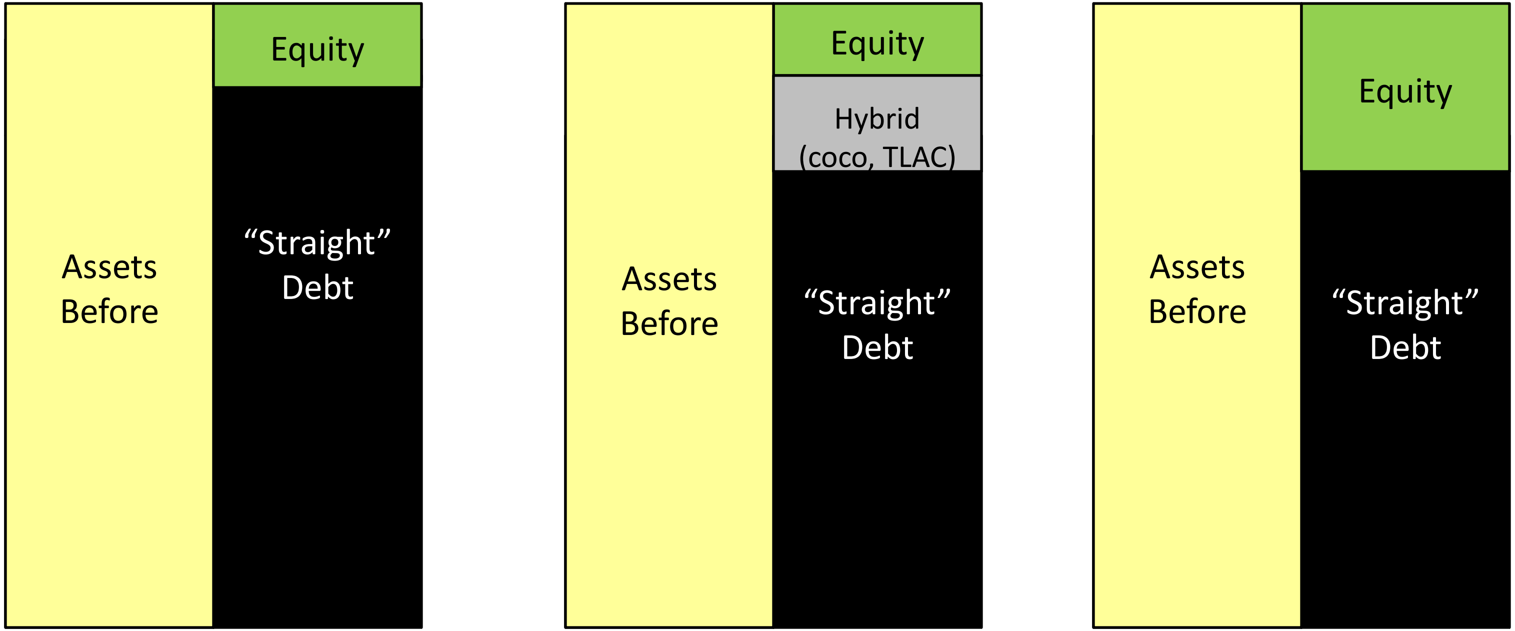


Source: Haldane and Madouros (2012), Capital IQ, SNL Financial, published accounts, Laeven and Valencia (2010) and Bank of England calculations. Special thanks to Andy Haldane and Vas Madouros for providing their data.

More Flaws in Basel Approach

- Hybrid alternatives are complex, unreliable, unnecessary.
  - Unreliable loss absorption; haven't worked in the past.
  - Maintain overhangs and inefficiencies.
  - Triggers are problematic and destabilizing
  - Must worry about whether holders can absorb losses
  - *Dominated by equity for purpose of regulation*.
- If hybrids create equity "just in time," prevent costly bankruptcy, should all firms use them instead of equity?

“Anything but Equity”



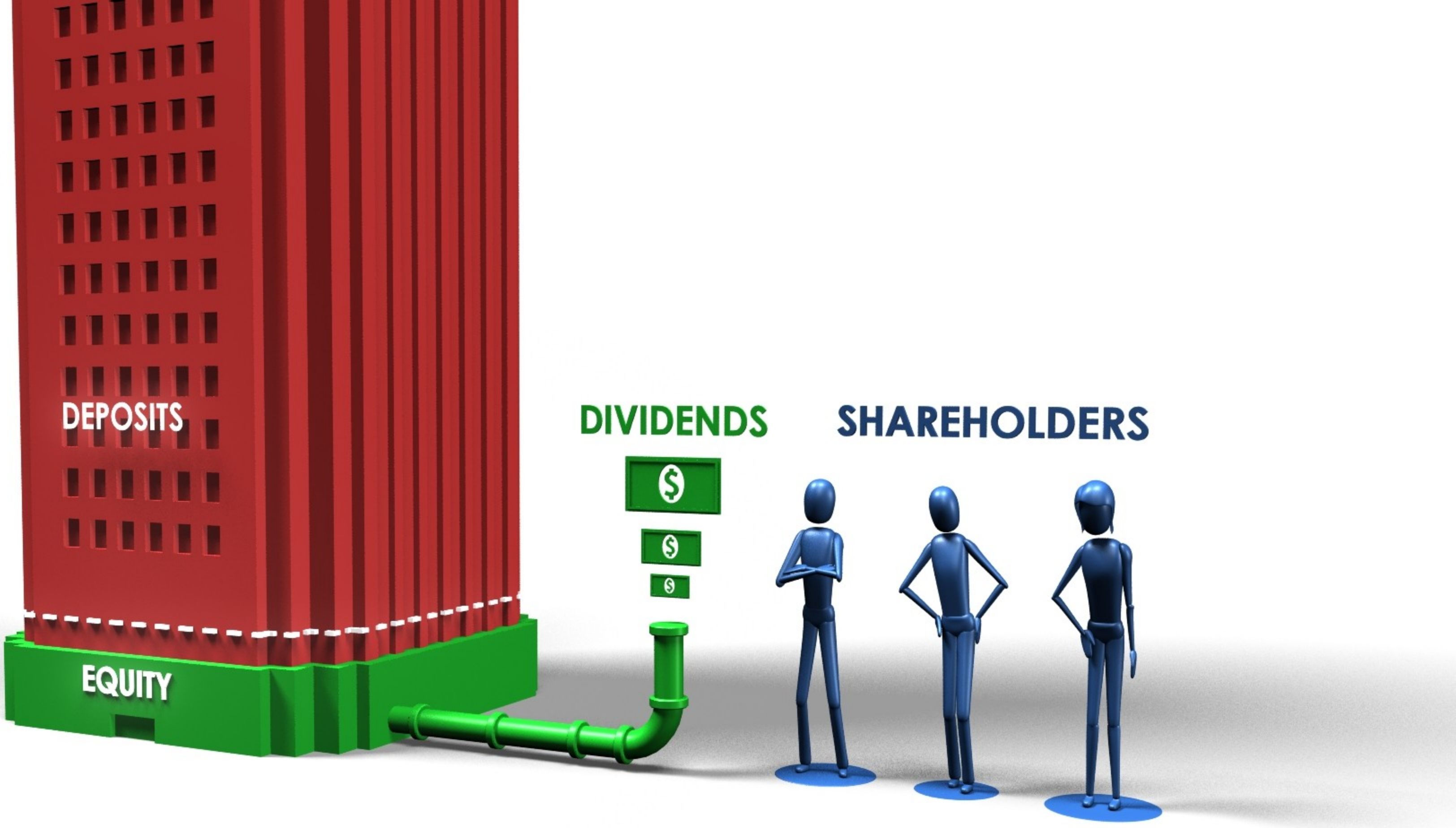
Too Much Leverage

Hybrids

Simply Have More Equity!

Making Equity Regulation Work

- Aim for, e.g., 30% equity/total, allow drop to 20%.
  - Crude, safe and stable
  - *Current numbers are arbitrary and dangerous*
  - *Conservation buffers are key, manage adjustments*
  - *Measurement challenges remain.*
  - Market signals to guide "*prompt corrective action.*"
- Viable banks can raise new equity at appropriate prices.
  - Market "stress test" of business model.
  - Inability to raise equity clear signal of weakness


DEPOSITS
EQUITY
DIVIDENDS
SHAREHOLDERS

Failed Approaches

- Excessive forbearance (“just a liquidity problem”)
  - Solvency problems are more harmful, dangerous and costly than liquidity problems; must be recognized and dealt with promptly.
  - Weak/zombie banks are dysfunctional; lending suffers from lenders’ debt overhang.
  - *Supporting banks with more debt may not help*!

Are Stress Tests Reassuring?

- Projected ratios are poor indicators of health.
- Tests don’t properly address contagion dynamics.
  - Huge opacity and layers of connections.
  - Endogenous correlations (counterparty/underlying).
- Models prone to fail.
  - See “No Stress: The flaws in the Bank of England’s stress testing programme,” by Kevin Dowd, 2015.
- Benchmarks based on false presumption that equity is scarce and “costly.”

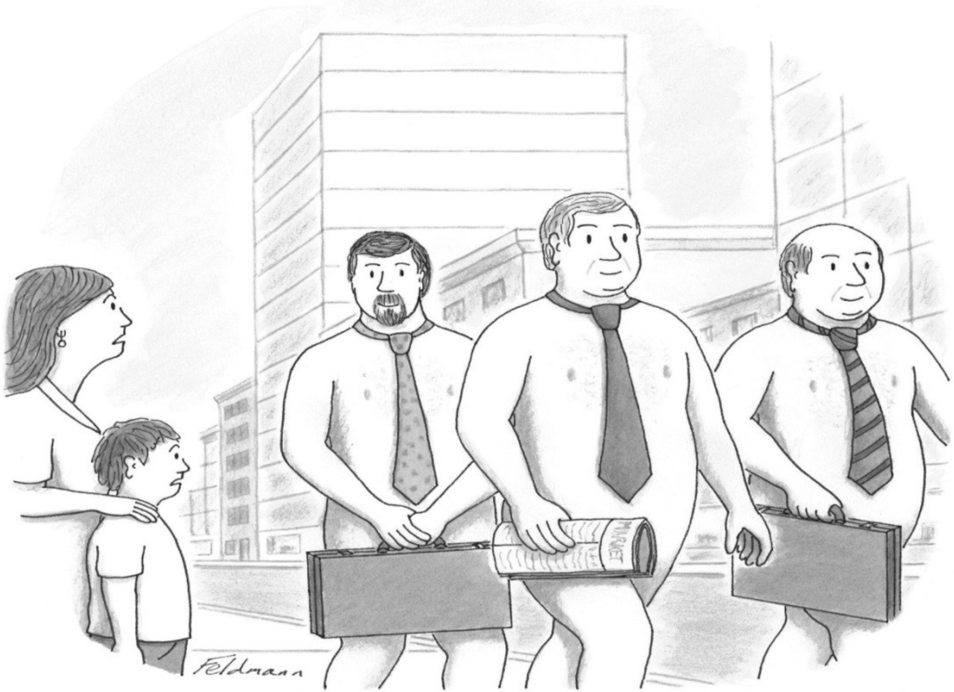
Invalid “Level Playing Field” Argument

- *Basel III is a minimum*
- Regulators must protect their citizens, not “their” banks!
- Banks compete with other industries, including for talent; *Outsized subsidies distort markets*.
- Banks can get “too big to save” (Ireland, Iceland, Cyprus).
- The argument creates a harmful “race to the bottom.”
- See e.g., Chapter 12 *Bankers New Clothes*.

Shadow Banking is a Flawed Excuse

- "Regulatory arbitrage" is key to system complexity.
  - Regulated banks sponsor entities in the "shadows."
- The largest institutions are "shadow hedge funds."
- Some institutions/activities, e.g., money market funds, need better regulation; some don't need much.
- *Enforcement challenge is invalid argument against essential and highly beneficial regulation.*
  - Allow robbery? Give up tax collection?

Confusions and Politics: Toxic Mix



bankersnewclothes.com

https://www.gsb.stanford.edu/faculty-research/excessive-leverage

“US banks forced to hold $68 billion i cash”

FALSE

Telegraph, April 8, 2014

The Lobbying Cry

"Every dollar of capital is one less dollar working in the economy."

Steve Bartlett, Financial Services Roundtable, Sept 2010

NONSENSE

"This rule will keep billions out of the Economy"

Tim Pawlenty, Financial Services Roundtable, July 2015

“Credit and Growth will Suffer”

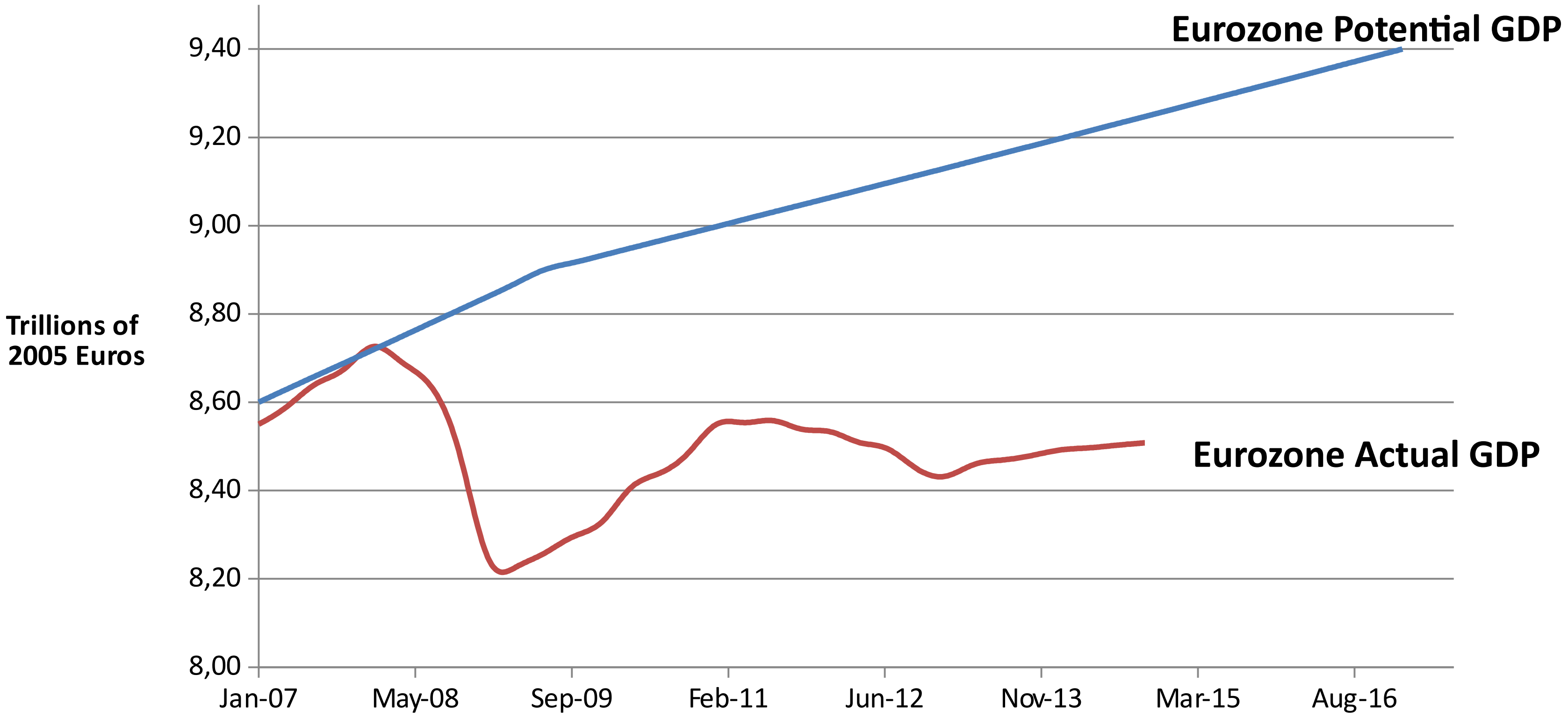
Credit and growth suffered dramatically in the crisis and haven’t fully recovered. Was “too much” equity the cause?

“just about whatever anyone proposes, no matter what it is, the banks will come out and claim that it will restrict credit and harm the economy…. It’s all bullshit.”

Paul Volcker to Senator Ted Kaufman, Jan. 15, 2010

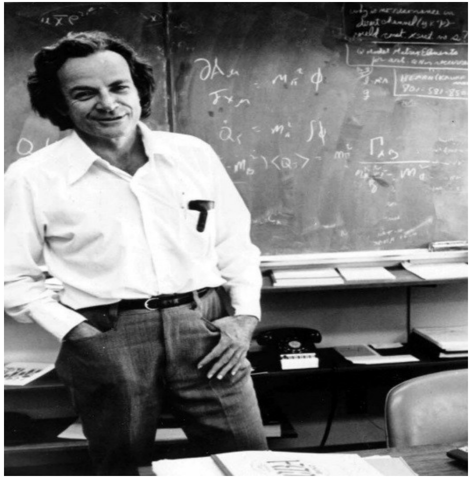
The Payoff: Why *Wall Street Always Wins*, Jeff Connaughton, 2012

Financial Instability Has Harmed Growth



“Science is what we have learned about how to keep from fooling ourselves.”

Richard Feynman



True for economists?

See “Chameleons: The Misuse of Theoretical Models in Finance and Economics,” Paul Pfleiderer, 2014

Distorted maps are bad at guiding travel.

“It is difficult to get a man to understand something when his salary depends on not understanding it.”

Upton Sinclair, author

politician

regulator

journalist

campaign contribution

future job

access to news

“Banks are still the most powerful lobby on Capitol Hill. And they frankly own the place.”

Senator Richard Durbin (D-Ill), 2009

Regulatory Discretion and Capture

- US: Regulators/supervisors have lots of authority, not always *will* to use it or enough information.
  - Political pressure, ideology (Greenspan) revolving doors...
- Europe: symbiosis banks/governments; bad situation.
- Basel Pillar 2 allows supervisory discretion to intervene.
  - Essential for enforcement, dealing with "shadow banking," manipulation of risk weights.
- Regulators/supervisors need stable, appropriate funding, high quality, motivated people.
  - Life long career or one way from industry?

“While it often seems that financial stability has no natural constituency, that constituency is actually all of us … including policy makers as well as businesses, households, [and] financial firms.”

Eric Rosengren, President & CEO, Federal Reserve Bank of Boston, “Money Market Funds Still Need Reform,” *Wall Street Journal*, April 26, 2012


FLIGHT RECORDER
DO NOT OPEN
AC
AMPERS
LINE IN
AUXILIARY
FLIGHT RECORDER
Serial No.
Model No.
Issue Date.
Service Date.


ATF

Summary

- Financial stability is very important for the economy, should not be compromised for other political objective
- There are incentives for inefficient fragility in banking.
- Maintaining equity to absorb future loss is key to healthy banking.
- Effective regulation is essential for achieving financial stability.

https://www.gsb.stanford.edu/faculty-research/excessive-leverage

http://bankersnewclothes.com/