

How *Effective* Capital Regulation can Help Reduce the Too-Big-To-Fail Problem

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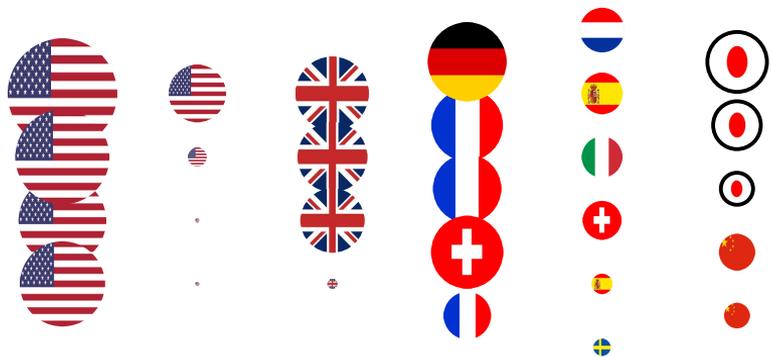
Federal Reserve Bank of Minneapolis Conference
Ending Too-Big-to-Fail
April 4, 2016

“Too Big To Fail” is a Symptom

- It's not just about crises
 - System is inefficient and distorted every day.
- It's not just about bailouts
 - “Fail” can cause large collateral harm whoever pays direct cost.
- It is about **basic safety to protect the public**
 - We won't allow reckless speed even if cost of ambulances is covered by “industry.”
- It is about **basic liability and accountability**
 - Private gains and social losses = crony capitalism

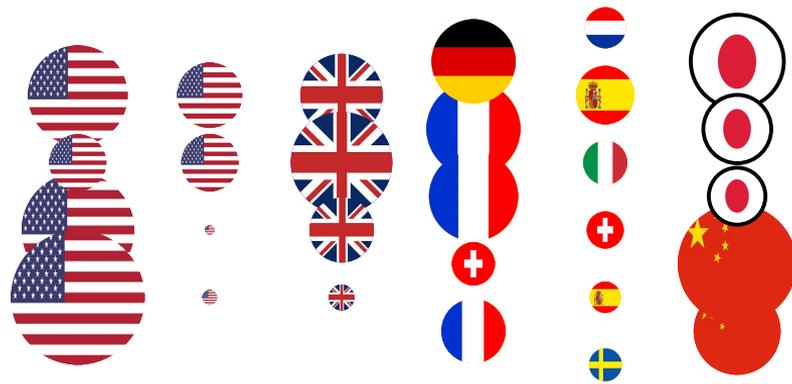
Size of 28 Global Banks

2006: \$37.8 trillion total



Average
\$1.35 trillion

2013: \$49.2 trillion total

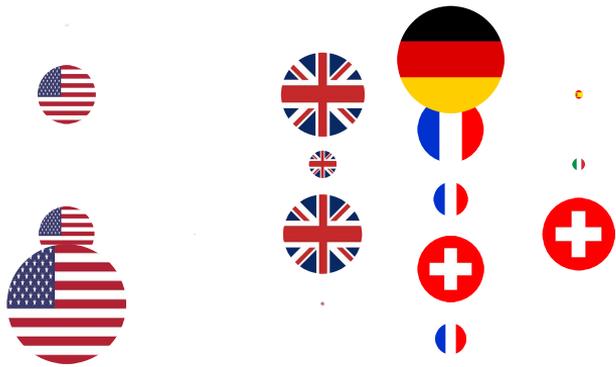


Average
\$1.76 trillion

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

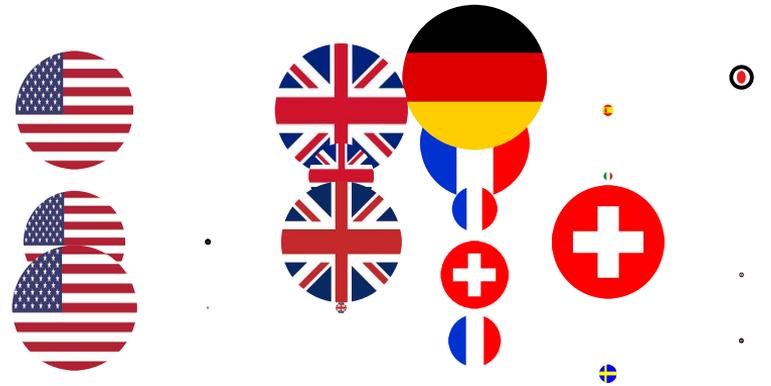
Derivatives for 21 Banks

2006: \$409 trillion (notional)



Average
\$19 trillion

2013: \$661 trillion (notional)



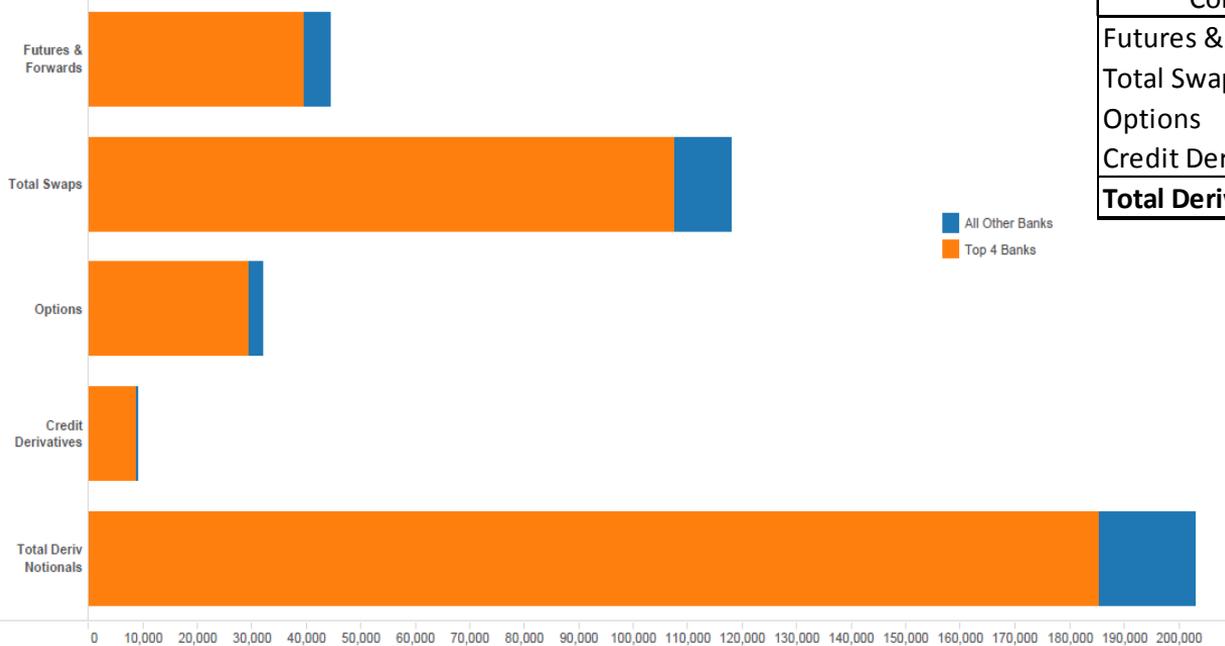
Average
\$31 trillion

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

Notional Derivatives Exposures (OCC, July 2015)

4 insured Institutions (JPM, BoA, Citi, Goldman) in Orange

Four Banks Dominate in Derivatives
Insured U.S. Commercial Banks and Savings Associations



Type of Contract	Top 4 Banks (Billions)	All Banks (Billions)
Futures & Forwards	39,585	44,537
Total Swap	107,605	117,711
Options	29,555	31,855
Credit Derivates	8,712	9,017
Total Deriv Notionals	185,457	203,120

Large Banks are Opaque

“banking remains too much of a black box... for many investors scarcely an investible proposition.”

Andrew Haldane, BoE, Nov 2011

“Investors can’t understand the nature and quality of the assets and liabilities... The disclosure obfuscates more than it informs.”

Kevin Warsh, Jan. 2013

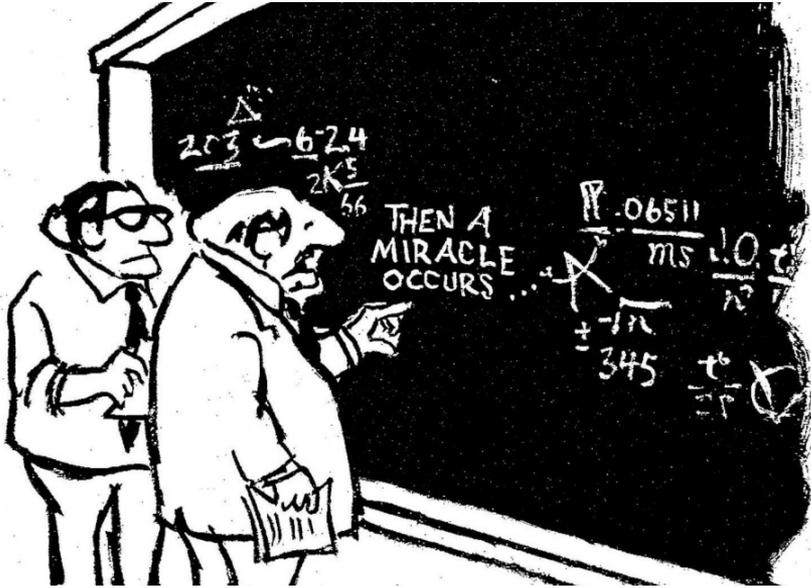
“The unfathomable nature of banks’ public accounts make it impossible to know which are actually risky or sound. Derivatives positions, in particular, are difficult for outside investors to parse.”

Paul Singer, Jan. 2014

Dodd Frank Act:

“No More Bailouts!!!”

Living Wills: A Charade



"I think you need to be more explicit here in step two."

© Sidney Harris

- August 5, 2014: Fed and FDIC required 11 banks to make “significant improvements” by July 2015
 - “Unrealistic or inadequately supported assumptions, e.g., about the likely behavior of customers, counterparties, investors, central clearing facilities, and regulators.”
 - “Failure to make, **or even to identify**, the kinds of changes in firm structure and practices that would be necessary to enhance the prospects for **orderly resolution**.”
- *It is impossible for G-SIFIs to pass the test credibly today.*

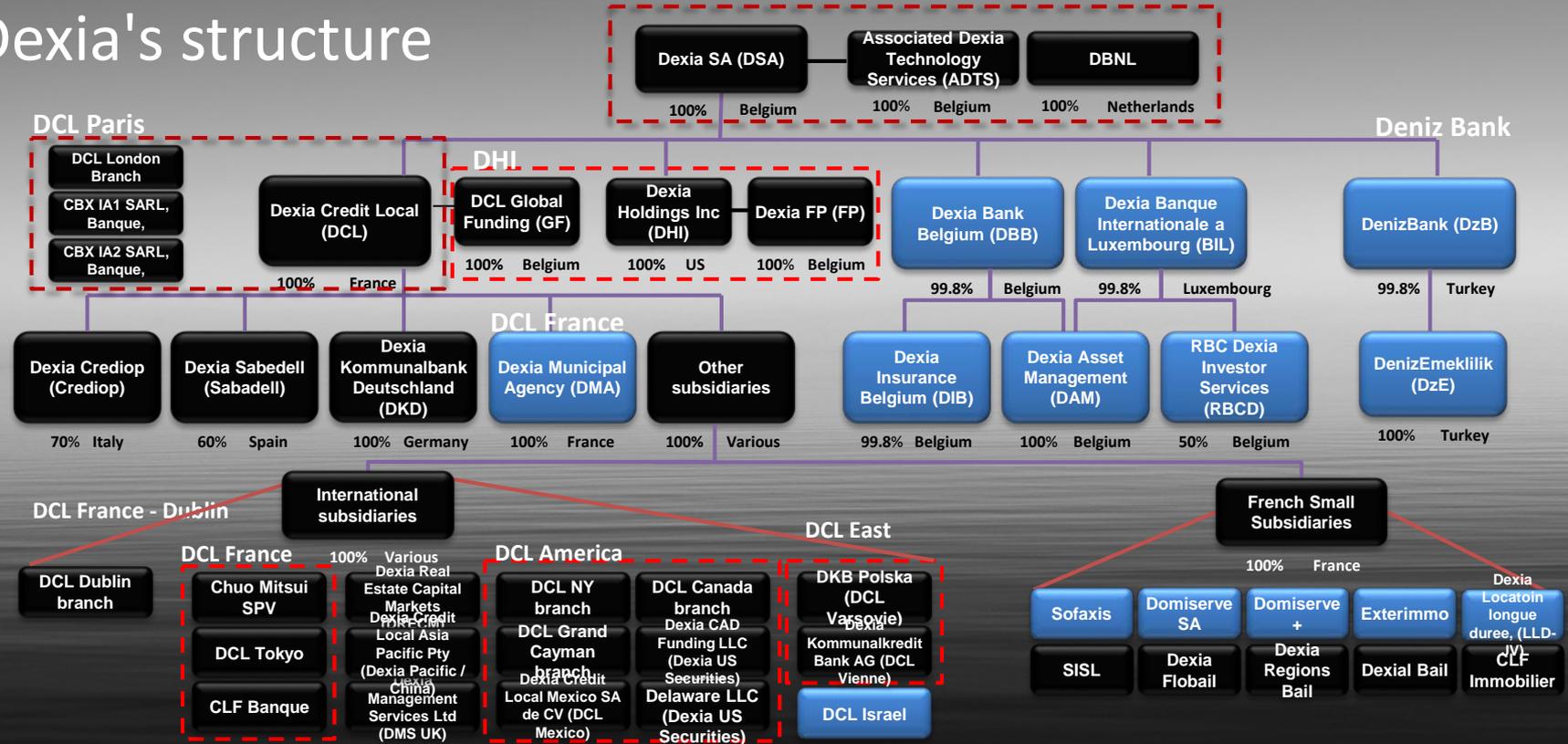
Does Dodd Frank Act Title 2 (FDIC Resolution) End TBTF?

“Some nurture the view that the government should rely on other means to resolve systemically important firms that fail.... These alternative approaches only perpetuate ‘too big to fail.’”

Thomas Hoenig (FDIC), August 5, 2014

Too complex to Resolve?

Dexia's structure



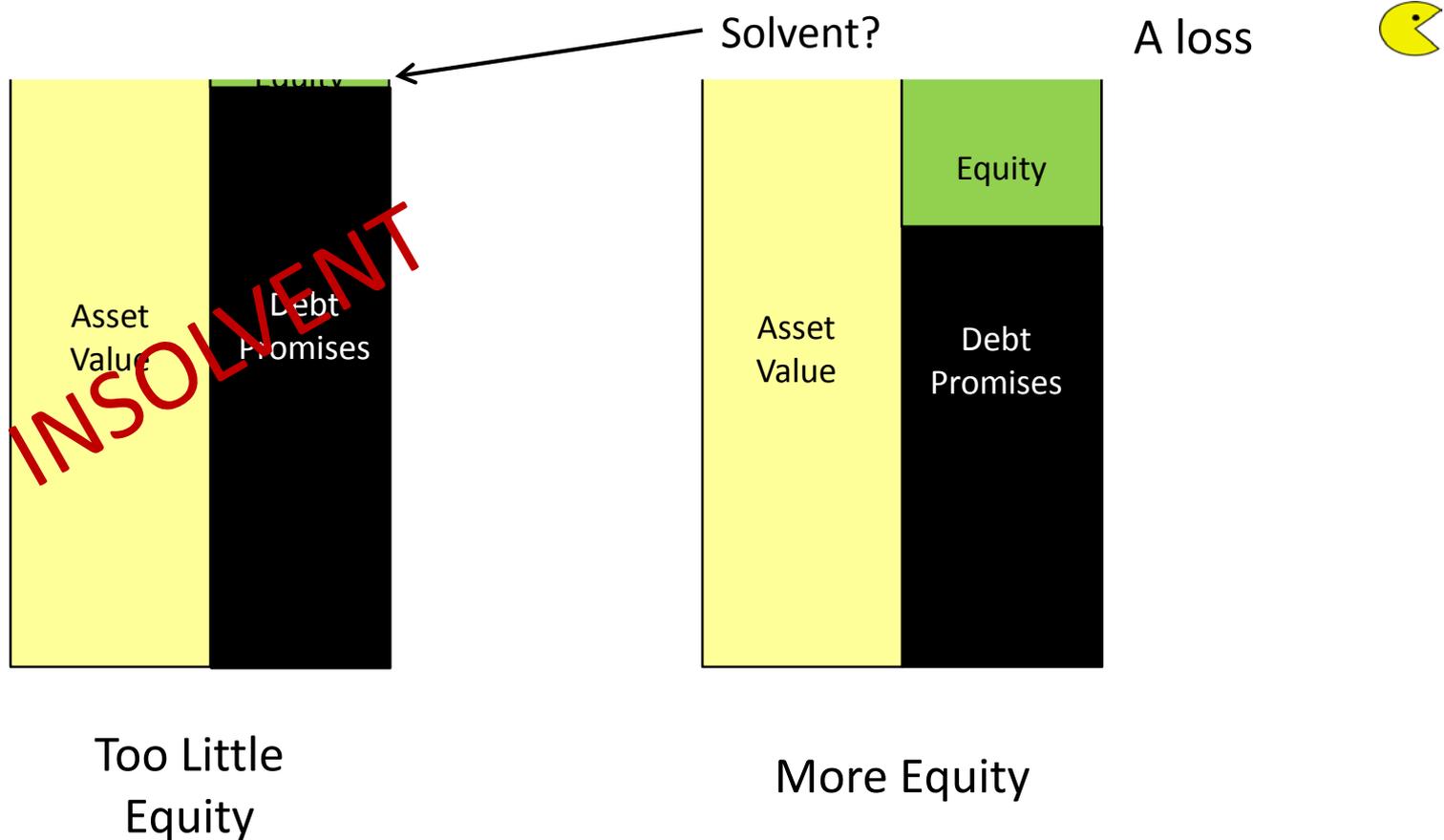
“Fail” is Too Late, Too Costly

Can we do more to prevent it at reasonable cost?

YES!!

(and get more benefits besides)

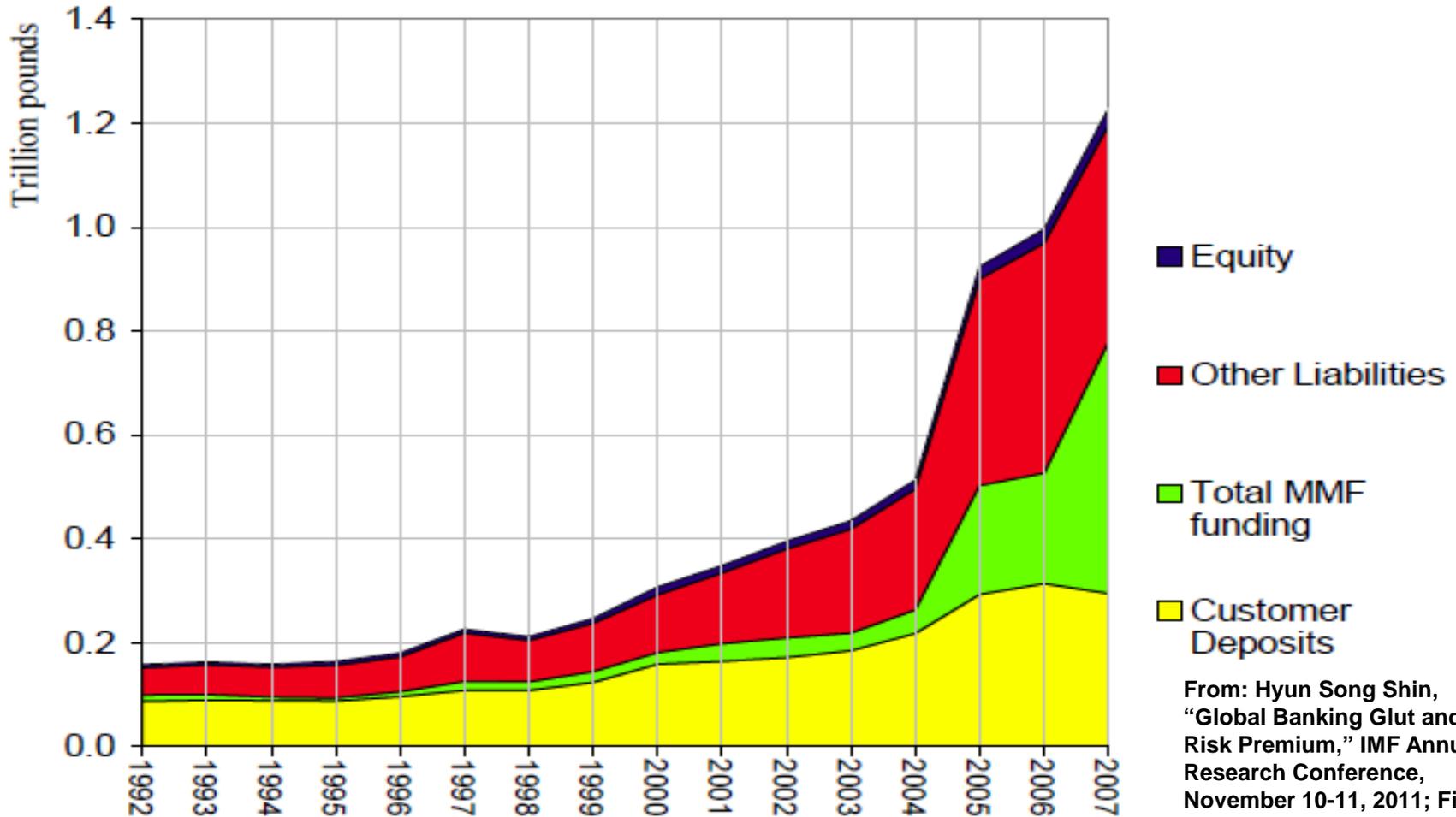
An ounce of prevention is worth a pound of cure



An ounce of prevention is worth a pound of cure



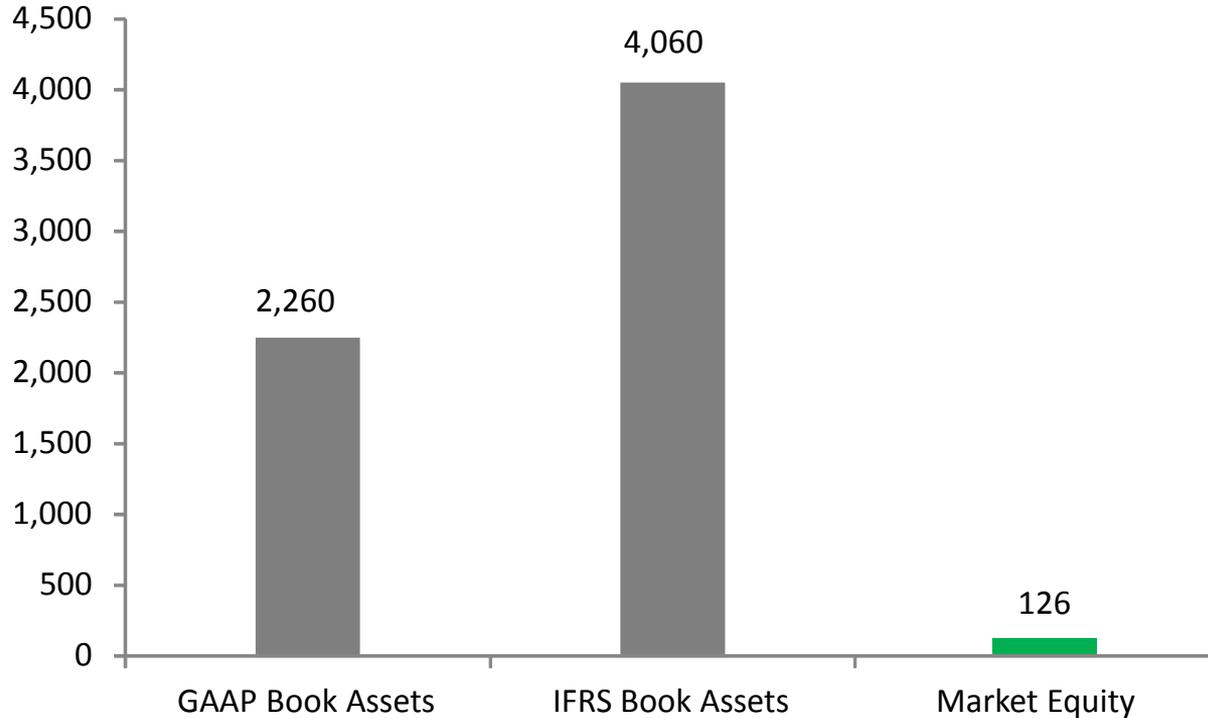
Total Liabilities and Equity of Barclays 1992-07



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

JPMorgan Chase

Dec. 31, 2011 (in Billions of dollars)



The Mantra

“Equity is Expensive”

To whom? Why?

Only in banking?

Banks vs Non Bank Corporations Funding

Non Banks

Without regulation

- Have risky, long term, illiquid assets
- Can use retained earnings (or new shares) to invest and grow

- Rarely maintain less than 30% equity/assets, often much more
- Sometimes don't make payouts to shareholders for extended periods (Google, Berkshire Hathaway).

Banks or BHC

With "Capital Regulation"

- Ditto
- Ditto

- Rarely have more than 6% equity/assets, sometimes less
- Make payouts to shareholders if pass "stress tests" (unless indebted to government)

Borrowing and Downside Risk

Heavily Indebted Non Banks

No safety net

- May become distressed/insolvent
- Inefficient decisions
- May default or file for bankruptcy
 - Shareholders are wiped out
 - Lenders are paid by seniority.
 - Assets are depleted
- **Lenders try to protect themselves when lending, hard to borrow.**

Heavily Indebted Banks

Many supports

- Ditto
- Ditto
- May remain insolvent
 - Depositors maintain balances
 - Secured lenders are protected
 - Access to Fed, Bailouts in crisis
- **Can keep finding lenders despite opacity, risk, and extreme debt.**

Zombie (Insolvent) Banks



Symptoms

- Unable to raise equity.
- “Gamble for resurrection” (bad, risky investments)
- Anxious to take cash out
- Avoid equity
- Sell assets, even at fire-sale prices
- Underinvest in worthy “boring” assets
- Try to hide insolvency in disclosures
- Lobby policymakers for supports



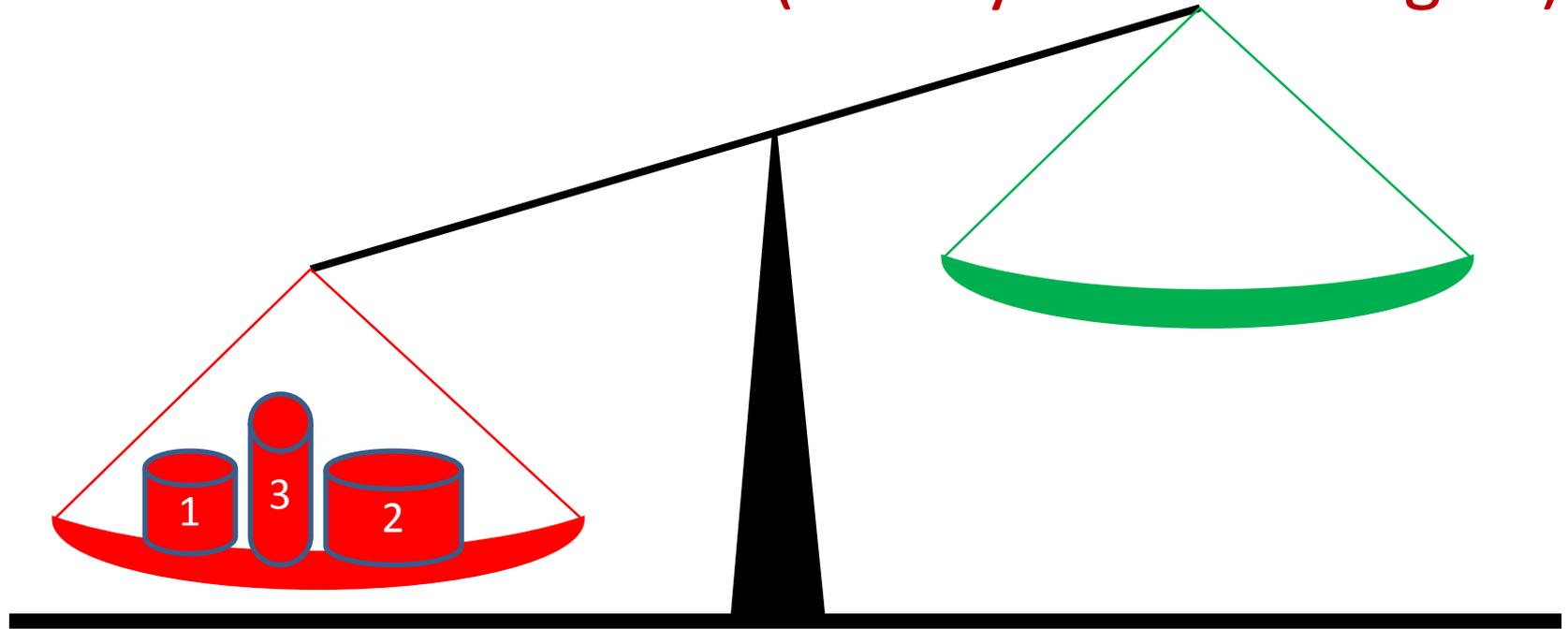
FDIC, Government, Fed
(Taxpayers)

Shareholders

Short-term secured lenders
Long-term lenders

Depositors
(unsecured, insured)

Private Considerations (Mostly Bank Managers)

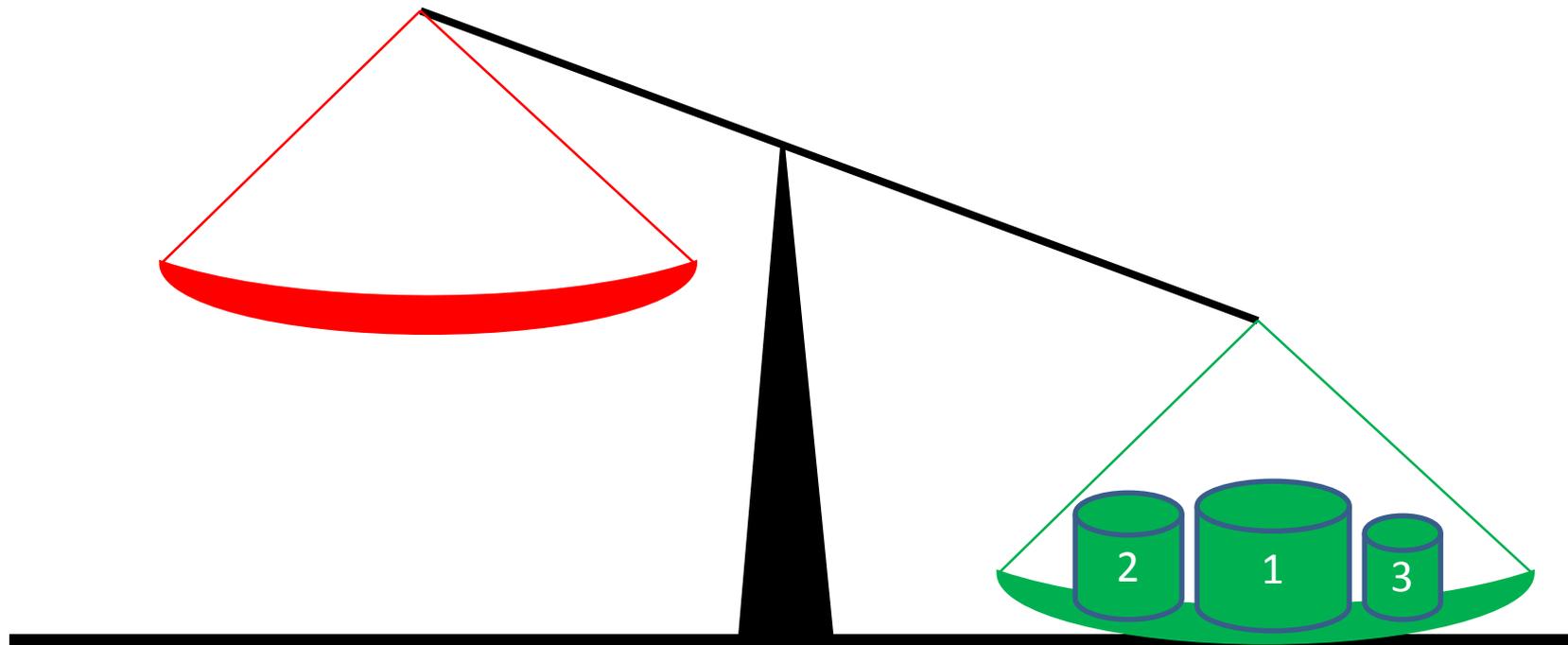


DEBT

1. Leverage Ratchet
2. Tax subsidies
3. Safety net benefits
4. ROE-based bonuses

EQUITY

For Society, Excessive Leverage in Banking 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

Funding

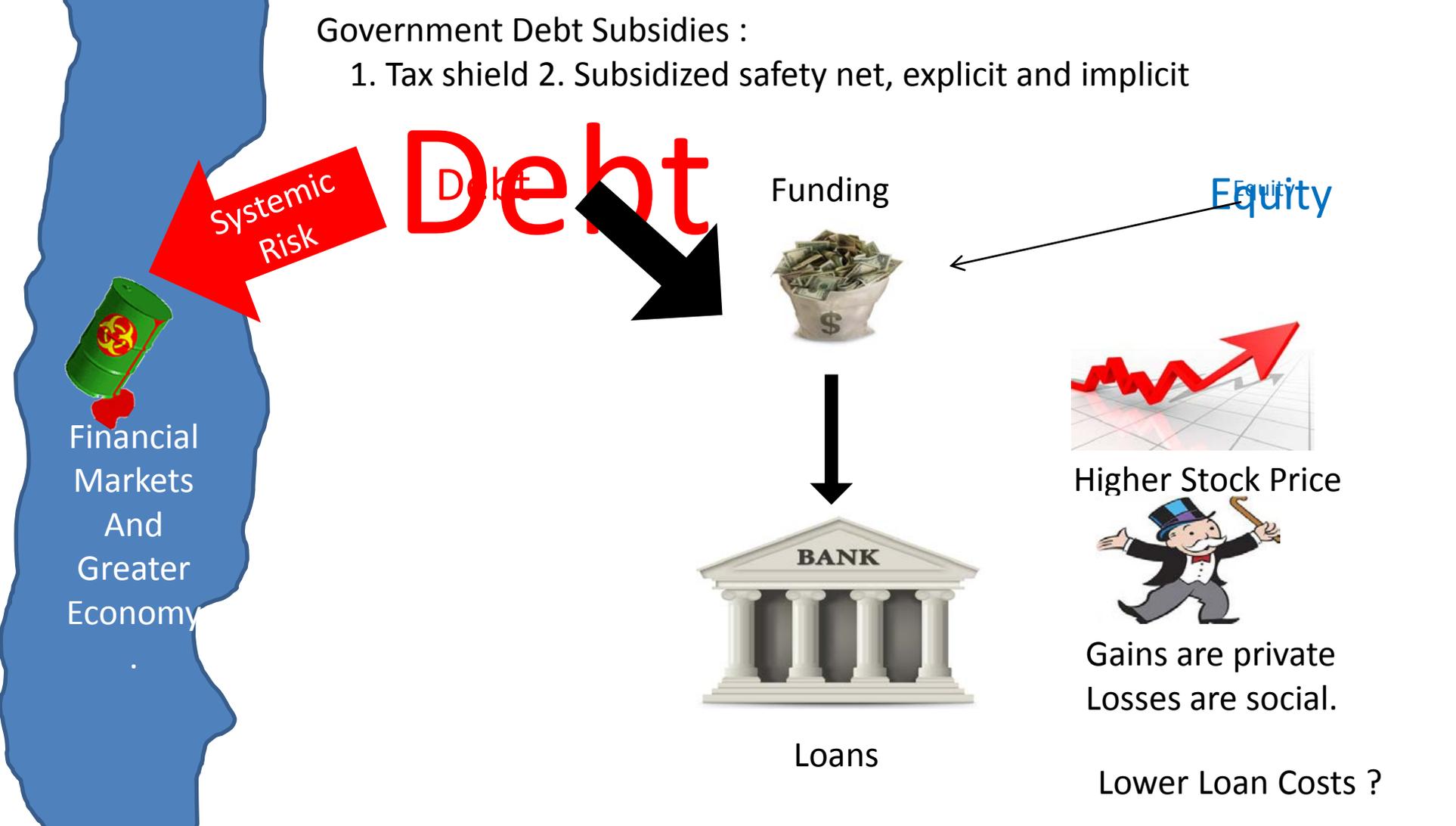
Equity



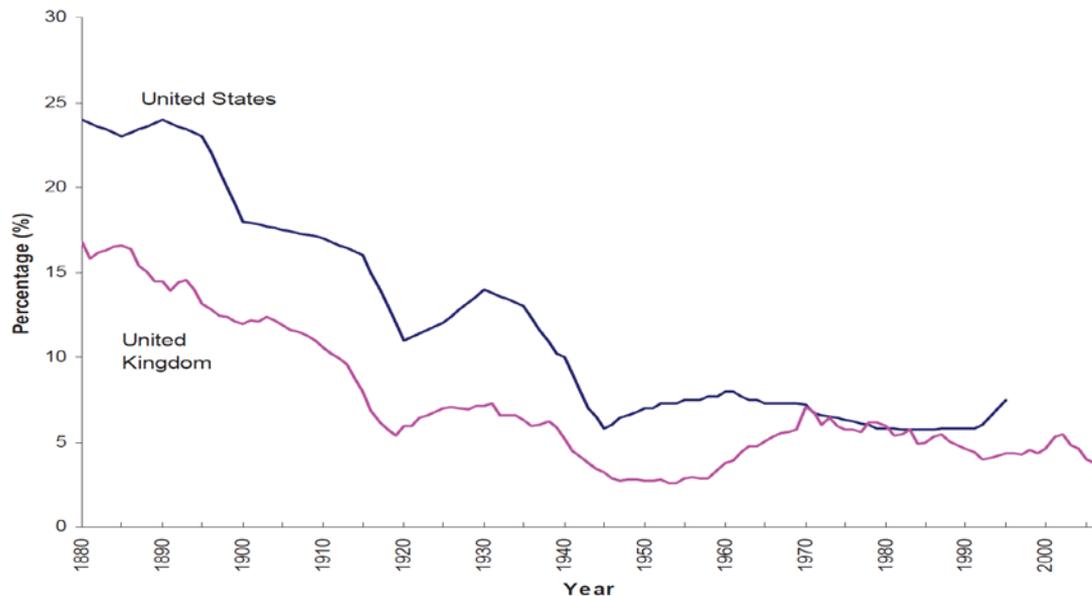
Loans

Government Debt Subsidies :

- 1. Tax shield
- 2. Subsidized safety net, explicit and implicit



Historical Equity/Asset Ratios in US and UK



- Mid 19th century: 50% equity, unlimited liability
- After 1940s, limited liability everywhere in US
- “Safety nets” expand
- Equity ratios decline

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.

Basel Capital Regulation

(No Science, highly complex)

Basel II

- “Common equity Tier 1 capital” to risk-weighted assets: 2%
- “Tier 2” Loss-absorbing debt

Basel III

- “Common Equity Tier 1 Capital” to risk-weighted assets (RWA): 4.5%
 - Plus 2.5% conservation buffer
 - Plus 1.5% “Tier 1” to RWA
- Leverage Ratio: “Tier 1” to total
 - Basel III: 3%
 - US: BHC: 5%, insured banks: 6%
- “Tier 2”/TLAC loss-absorbing debt.

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 Cochrane, *Wall Street Journal*, March 1, 2013

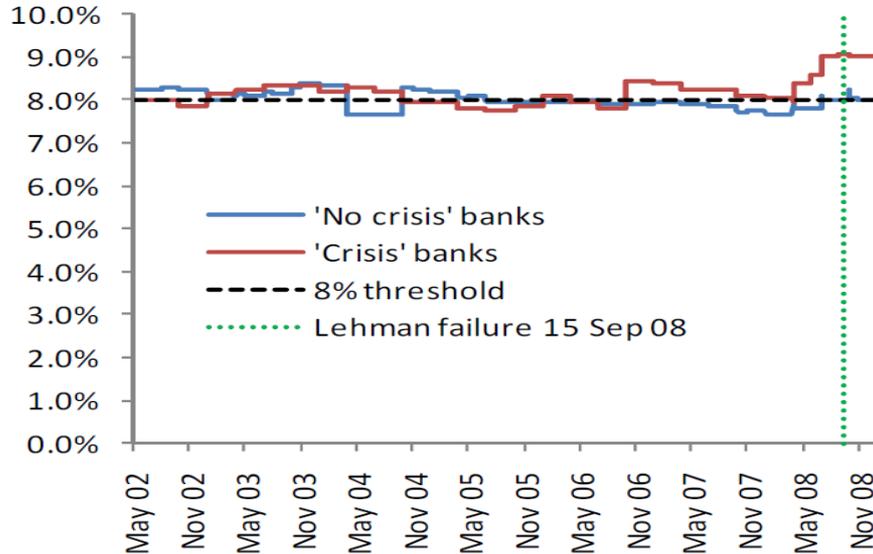
“Healthy Banking System is the Goal, not Profitable Banks,”
Financial Times, November 9, 2010

“If a much larger fraction, at least 15%, of banks’ total, non-risk-weighted, assets were funded by equity, the social benefits would be substantial. And the social costs would be minimal, if any.”

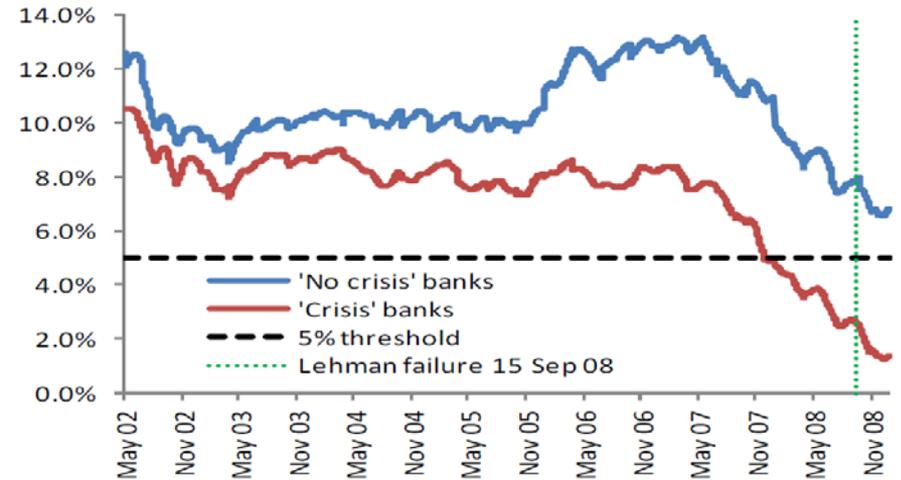
Anat R. Admati, Franklin Allen, Richard Brealey, Michael Brennan, Markus K. Brunnermeier, Arnoud Boot, John H. Cochrane, Peter M. DeMarzo, Eugene F. Fama, Michael Fishman, Charles Goodhart, Martin F. Hellwig, Hayne Leland, Stewart C. Myers, Paul Pfleiderer, Jean Charles Rochet, Stephen A. Ross, William F. Sharpe, Chester S. Spatt, Anjan Thakor .

Regulatory Capital Measures Uninformative

Tier 1 capital ratios don't show crisis



Market value/book assets ratios



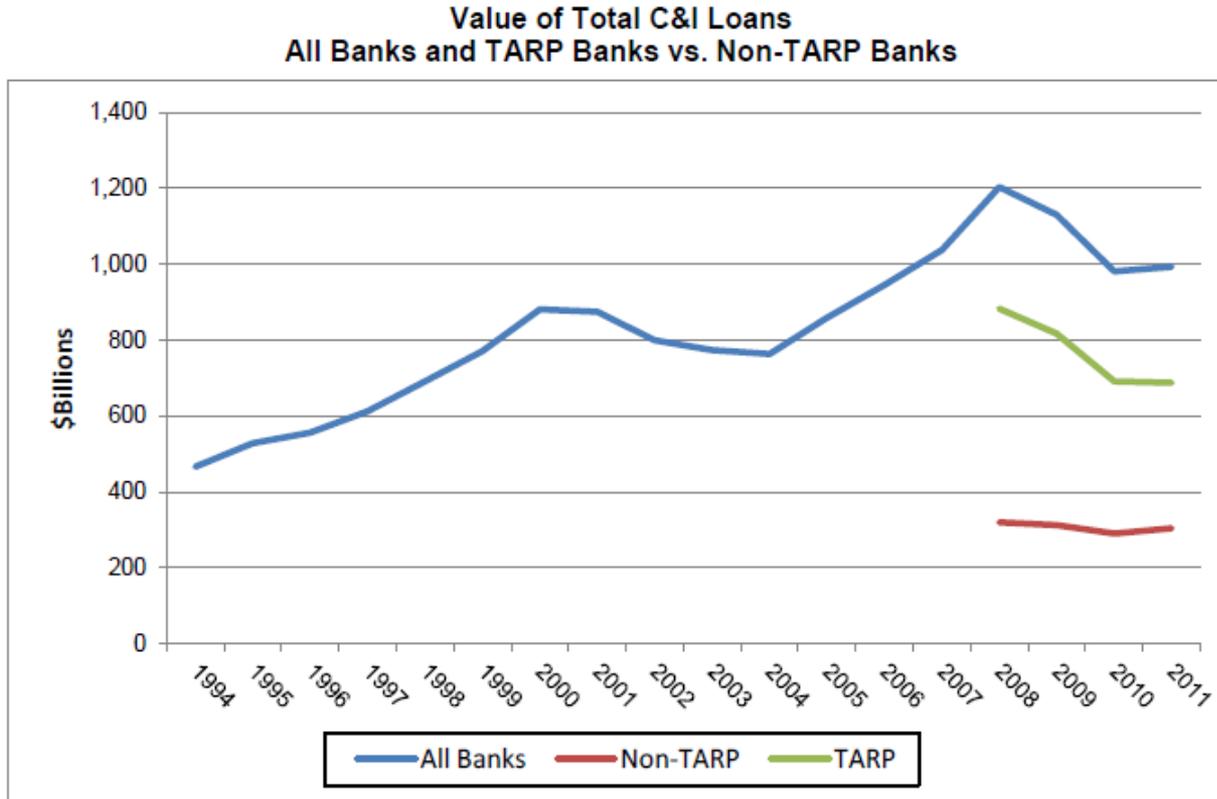
From: Andrew Haldane, "Capital Discipline," January 2011)

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

Lessons Learned?

- 2006 was a great year in banking.
- Between summer 2007 and end of 2008 -- through start of subprime crisis, Bear Stearns, Lehman Brothers, fall 2008 -- Largest 19 US institutions paid out nearly \$80B to shareholders.
- Largest 19 institutions received ≈\$160B under TARP.
- Fed committed \$7.7 trillions in below-market loans to 407 banks.
- Tier 2 capital proved useless to absorb losses for most banks; massive guarantees and other supports.

TARP Failed to increase Business Lending



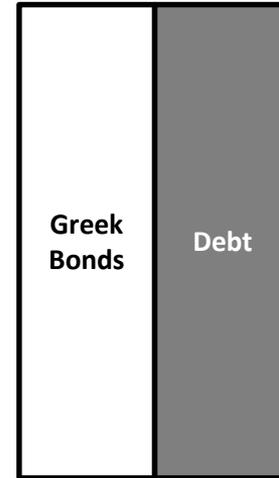
“How Did the Financial Crisis Affect Business Lending in the US?” Rebel Cole, 2013

How (Zero) Risk Weights Work

“Well Capitalized”

???????

“Well Capitalized”



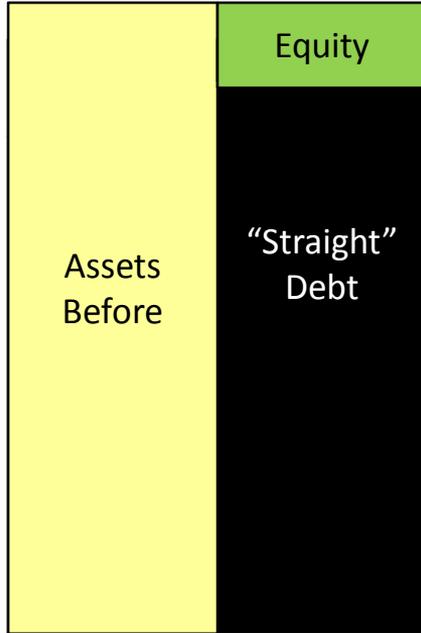
“Well-Capitalized” Banks Fail on “Riskless” Assets



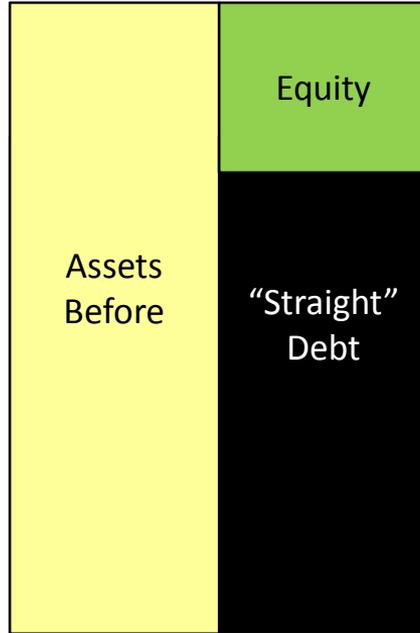
Assets	Equity
	Debt
Greek Bonds	Debt

(This case: Dexia and Cypriot banks. French/German banks left bad loans to citizens.)

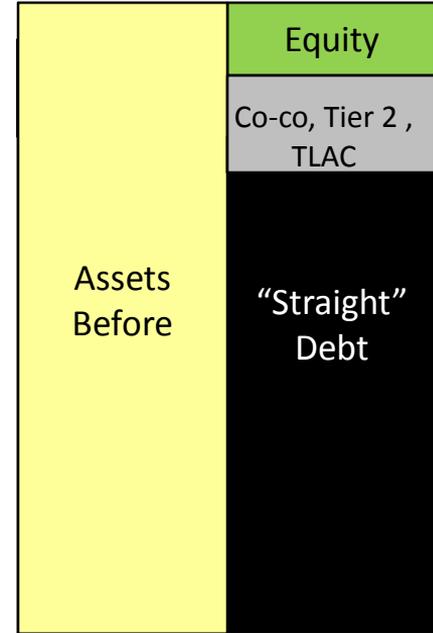
“Anything but Equity” Why?



Too Little Equity



Much Safer



Will it Work?
Why do we need it?



The Bad News

Regulatory reform is an unfocused, complex mess.

“Without reform... another crisis is certain.”

Mervyn King, *End of Alchemy*, March 2016

We Can Do Something Now!

- Senate resolved unanimously to eliminate TBTF subsidy (March 22, 2013).
- Senators Brown (D, Ohio) and Vitter (R, La) bill
 - 15% equity/assets for banks over \$500 billion
 - 8% equity/assets for those over \$50 billion
 - A step towards ending TBTF
- *Fed can and should act under DFA Title 1*
 - **E.g., stop payouts to shareholders for SIFIs!**

The Main Obstacle

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

Senator Richard Durbin (D-III), 2009

How *Effective* Capital Regulation can Help Reduce the Too-Big-To-Fail Problem (Part 2)

Anat Admati

Stanford University

Federal Reserve Bank of Minneapolis Conference

Ending Too-Big-to-Fail

April 4, 2016

JPMorgan Chase Balance Sheet

Dec. 31, 2011

**Loans = \$700B less than
Deposits = \$1.1T**

Other debt (GAAP): \$1T
Other debt (IFRS): \$1.8T

Equity (book): \$184B
Equity (market): \$126B

Significant off-balance-sheet
commitments

GAAP Total \$2.26Trillion

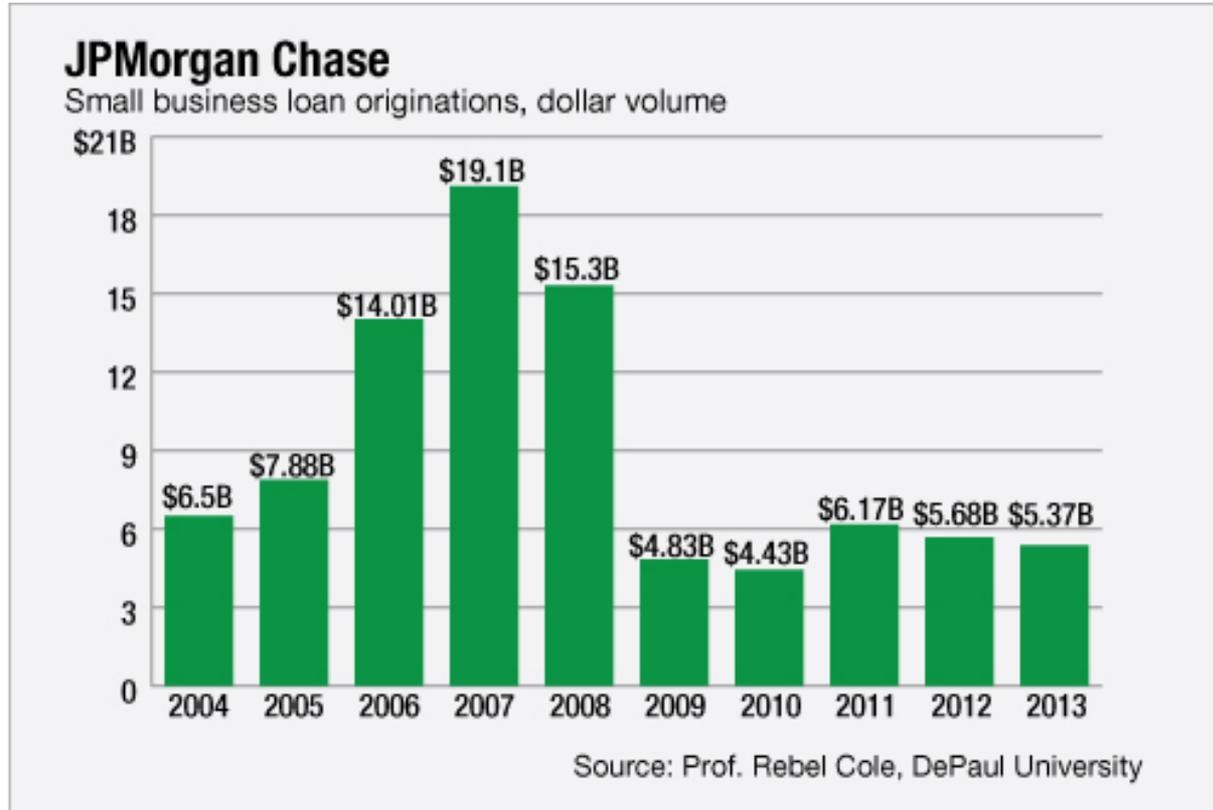
Cash	
Loans	Deposits
Trading and Other Assets	Other Debt (mostly short-term)
	Long-Term Debt
	Equity

IFRS Total \$4.06 Trillion

Cash	
Loans	Deposits
Trading and Other Assets	Other Debt (mostly short-term)
	Long-Term Debt
	Equity

JPM Small (up to \$1m) Business Loans

(Data from bank reports per CRA)



London Whale: Trading with “Excess Deposits”

“The portfolio hedge was complex, poorly reviewed.. and poorly monitored... Controls were not in place”

Jamie Dimon, JPMorgan CEO

“Masked by Gibbrish, the Risks Run Amok,”

Floyd Norris, *NY Times*, 5/13/2013

(Reading Senate Committee Report on London Whale)

G-SIFIs are Not “Banks”!!

Majority-Owned Subsidiaries of 13 G-SIFIS that Survived Crisis

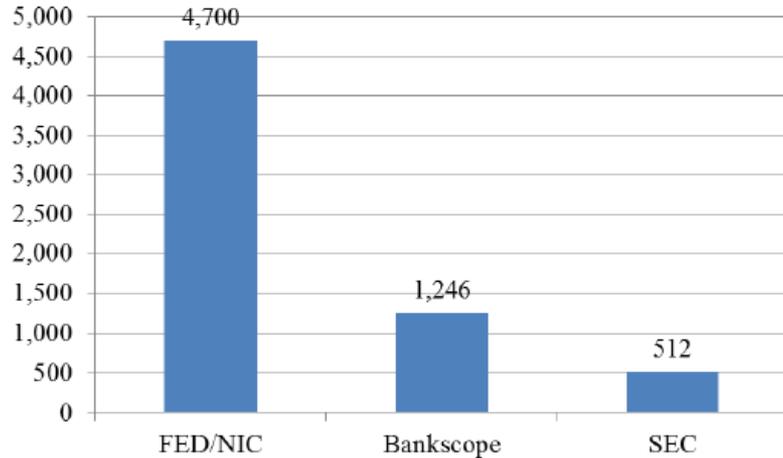
	Banks	Insurance	Mutual/pension	Other Finan.	Non-Financial	Total
JPM 2013	54 (5%)	13 (1%)	305 (28%)	205 (19%)	518 (47%)	1095
Total % 2013	4%	1%	22%	25%	47%	100%
JPM 2007	38 (3%)	17 (2%)	229 (21%)	145 (13%)	375 (34%)	804
Total % 2007	5%	2%	22%	27%	43%	100%

See “Corporate Structures, Transparency and Resolvability of Global Systemically Important Banks” Jacopo Carmassi and Richard J. Herring, Aug. 2014.

Source: Bankscope.

G-SIFIs: Complex Structures, Opaque Disclosures

JPM Chase: 30 business lines, at least 55 countries



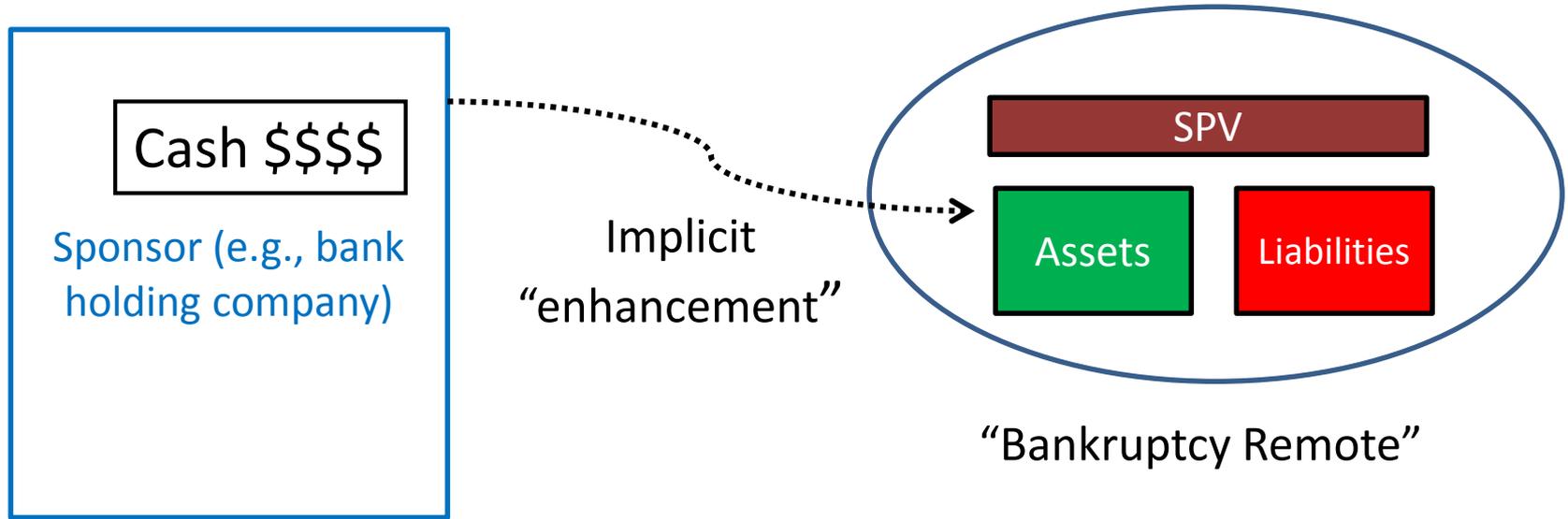
Wells Fargo: Quaint?

“What’s Inside America’s Banks?” Eisinger and Partnoy, *Atlantic*, Jan 2013

Special Purpose Vehicles (SPVs)



SPVs Hide Exposures to Risk



The sponsor's creditors have no access to assets of SPV if sponsor fails.

“Let Them Fail?”

- FSB 2014 “Key Attribute of Cross-Border Resolution” huge wish-list of legal and regulatory steps.
- IMF 2014: failure of cross-border SIFI “not a viable option”
- Hoenig: “It would be foolish to assume that countries will not protect their domestic creditors and stop outflows of funds when crisis threatens.”

Stress Tests: False Reassurances

- Inadequate benchmarks using “regulatory capital” measures
- Cannot predict contagion dynamics in interconnected markets
 - Common and correlated large exposures (see OFR, 2016)
 - Opaque derivatives, CCPs (see OFR, 2015)
 - Impose large costs
 - Depend on numerous assumptions; Should models be trusted?
- Why not be safer and reduce distortions at bargain price?

Market-Based Stress test

Raise new equity!

Inability or significant dilution flag excessive dependence on subsidies, weak business model, opacity (“uninvestible”)

New TBTF Problem: Derivatives Central Clearing Houses

- No clear insolvency mechanism (e.g., Lubben, 2016).
- Risk management highly opaque (e.g., OFR, 2015).

“Non-Bank Competition?”

- TBTF institutions...
 - are themselves non-banks.
 - have competitive advantage over everyone else in the economy: easiest funding!
 - can (and often do) buy the competition and more.

“Not Enough Equity for TBTF banks?”

- Plenty of debt-issuance capacity by non-financials.
- Equity is available for viable corporations at appropriate prices.

Conflicts of Interests Distort Funding Decisions

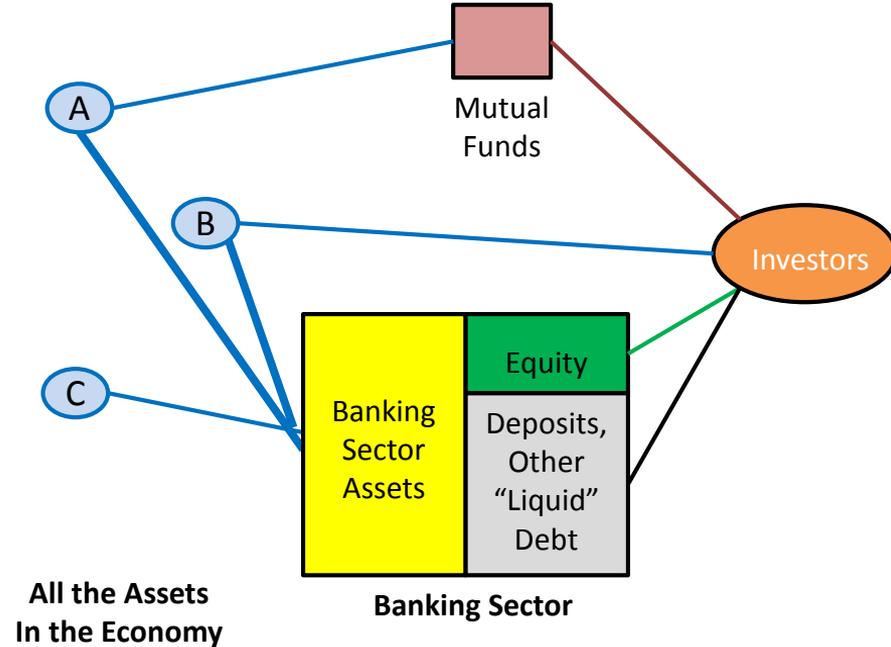
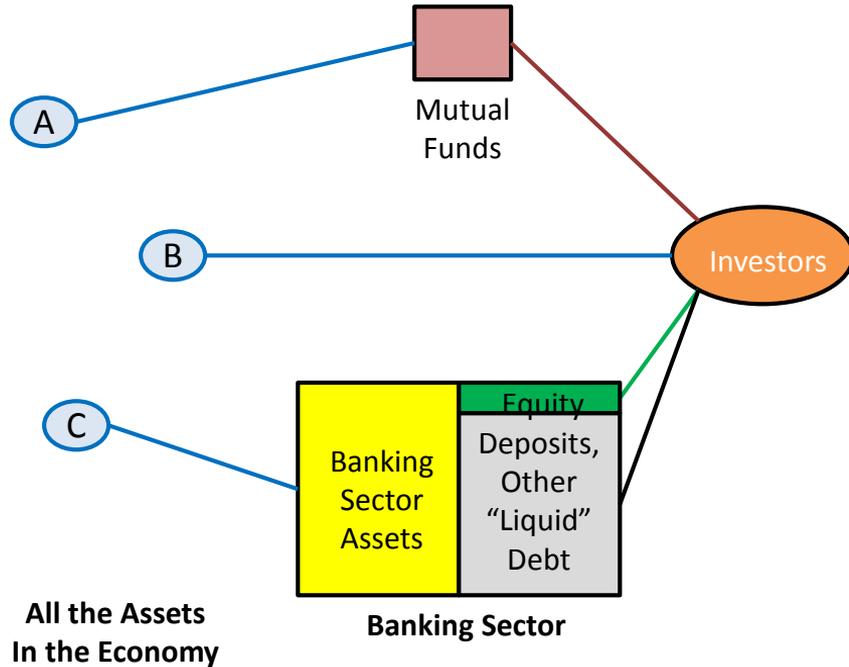
“The Leverage Ratchet Effect,” Admati, DeMarzo, Hellwig and Pfleiderer (rev. Dec. 2015)

- Once debt is in place, shareholders/managers prefer to avoid equity and shift risk to existing creditors (or others).
 - Heavy indebtedness becomes addictive and grows inefficiently unless countered, e.g., by debt covenants or regulations.
- In banking, the conflict about risk is with the public
 - Guaranteed lenders (depositors) have no protective covenants.
 - Market fails to counter incentives for excessive borrowing
 - Debt addiction is fed and enabled; **good regulation is essential.**
 - Intervention may mandate equity *amounts* not ratios.

Making Equity Requirements Work

- Safe target, e.g., 30% allowed down to 20%
- Prompt corrective action based also on market signals
 - Stopping payouts is prudent if risk builds up
 - Focus on amounts, not ratios, in transition
 - Asset sales can be useful
- Signs that regulation is working
 - Fewer “zombie” symptoms
 - Ideally: Better governance, fewer scandals, natural breakup and simplification

A Beneficial Shuffle of Claims: Where's the "Cost?"



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

“I don’t know how to measure this subsidy...
That’s why they say it’s invaluable.”

Mark Zandi, Moody’s Analytics, April 2009

Charging for TBTF Guarantees: Flawed Focus

See Admati senate testimony, July 31, 2014.

- The counterfactual (with no guarantees) is impossible.
 - Would TBTF institutions survive in current size, leverage, and opacity without implicit guarantees? (No!)
- Reliable measurements of cost to taxpayers too difficult to make
 - Impact of distortions unmeasurable.
 - Poor disclosures, system opacity
 - Sector-wide subsidies; bailouts flow through system
- Distortive guarantees must and can be reduced whatever the size.

Adequate Equity Helps Correct Distorted Incentives

“It is paradoxical to subsidize debt that generates systemic risk and then regulate to try to limit debt. Debt and equity should at least compete on even terms.

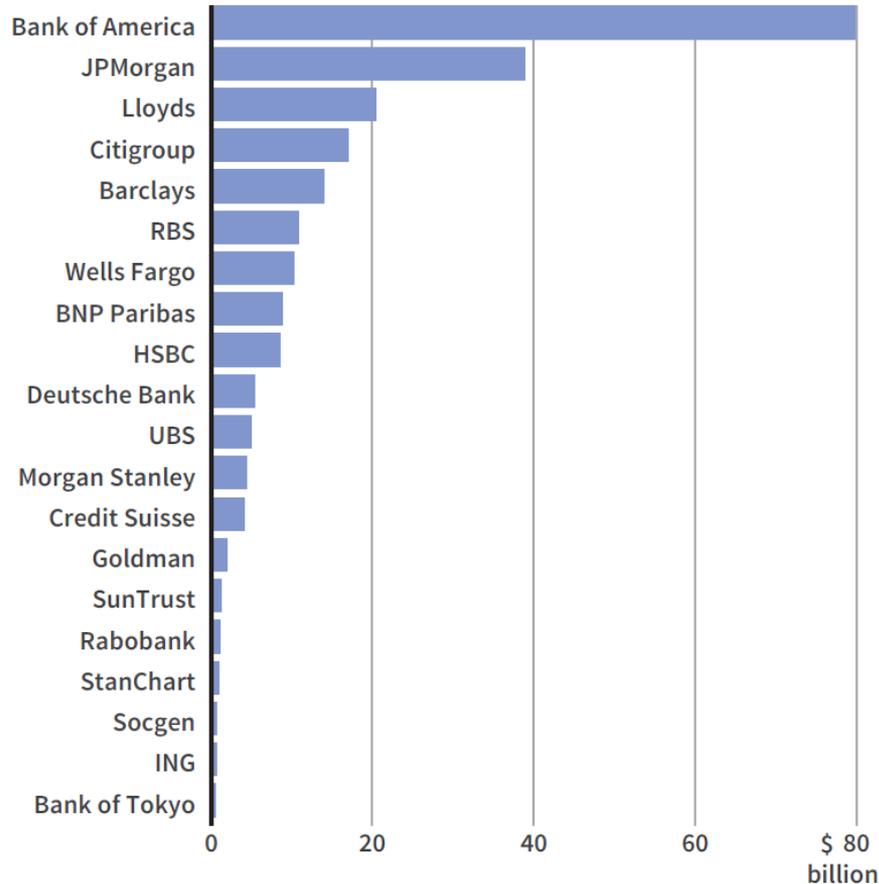
Proposals to impose a bank tax to pay for guarantees are problematic. High leverage encourages excessive risk taking and any guarantees exacerbate this problem. If banks use significantly more equity funding, there will be less risk taking at the expense of creditors or governments.”

Letter of 20 academics, Nov. 2010

More Equity: Best Bargain, but no Silver Bullet

- Fix counterproductive bankruptcy and tax codes
- Make deposits secured by collateral
- Separate activities and tailor regulations accordingly
 - BHCs' scope is much too broad; numerous distortions
- More personal liability of executives and boards for misconduct and losses.

TOTAL FINES BY BANK



TBTF Enables Recklessness, Broken Governance

Top 20 banks paid more than \$235B since 2008.

- Whose money?
- “Cost of doing business?”
- Have incentives changed?
- Who’s accountable?
- Too big to manage?
- Is this an efficient system for society?

*Traders, Guns and Money: Knowns and Unknowns in the
Dazzling World of Derivatives, Satyajit Das, 2010*

[Describing 'sell side'] “beautiful lies are the lies that we like to believe.... The salespeople lie to clients. Traders lie to sales and to risk managers, risk managers lie to those who run the place – correction, who think they run the place. **The people who run the place lie to shareholders and regulators...** Clients... lie mainly to themselves,”

(Later chapter: “True lies; The ‘Buy Side’”)

Also from Das, 2010

“Traders risk the bank’s capital.... If they win they get a share of the winning. If they lose, then the bank picks up the losses.... the money at risk is not their own, it's all OPM --- other people’s money.... Traders can always play the systemic risk trump card. It is **the ultimate in capitalism --- the privatization of gains, the socialization of losses....** Traders are **given every incentives to take risk** and generate short-term profits.”

(see also books by Partnoy, Michael Lewis, Luyendijk, Kay...)

A Distorted and Dangerous System

“The Empty Cockpit”

Swimming with Sharks, My Journey into the World of the Bankers
Joris Luyendijk, 2015 (last chapter)

“It’s a time bomb”... “shady stuff is going on” “the whole world economy may collapse,” “nobody is paying attention” “they are all asleep at the wheels” “nobody went to jail”

“The Big Short” movie, 2015

Beautiful Lies, Diversions and Excuses Pervade Debate

- “A lot has been done”
- “It’s very complicated”
- “There will be unintended consequences”
- “The cost is too high”
- “We must maintain level playing field”
- “We need more models”
etc etc.....

“The Parade of Bankers New Clothes Continues: 31 Flawed Claims Debunked,” Anat Admati and Martin Hellwig, updated Dec. 2015

It Takes a Village to Maintain a Bad System

- It's worse than “just” unpunished fraud
- Too many among “crew” -- including policymakers -- don't *want* to protect passengers
 - Those within the system benefit when the system is fragile and regulations very complex.
 - Numerous enablers stand by or are powerless.
- *It's all legal and nobody is personally accountable.*
- Narrow interests and flawed claims win, the public loses.





FLIGHT RECORDER
DO NOT OPEN



FLIGHT RECORDER
Serial No. _____
Model No. _____
Issue Date _____
Service Date _____

LINE IN

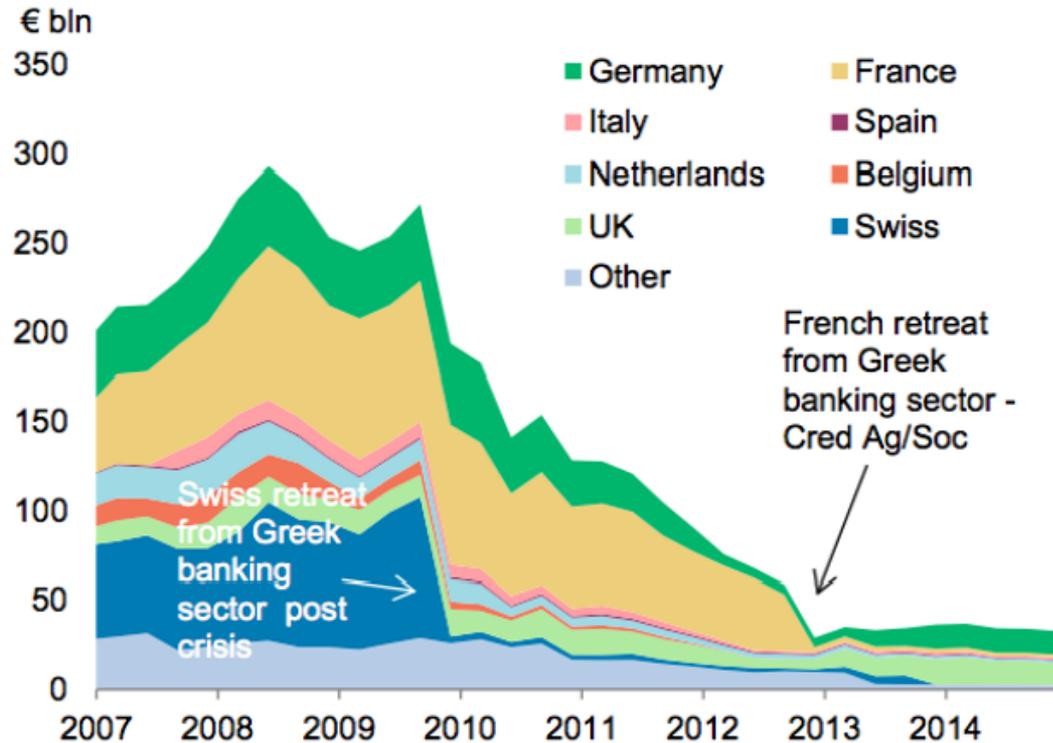
AUXILIARY

“Just a Sudden Liquidity Problem” (?)



Bad Regulations Matter: The Awful Case of Greece

- Swiss abrupt retreat.
- Fraction of Greek government debt in French Banks: 40% in 2010, 0.6% in 2015,
- “Greek” 2010-2011 bailouts rewarded French and German banks for reckless lending to Greece.
- **Similar to AAA-rated securities or AIG.**



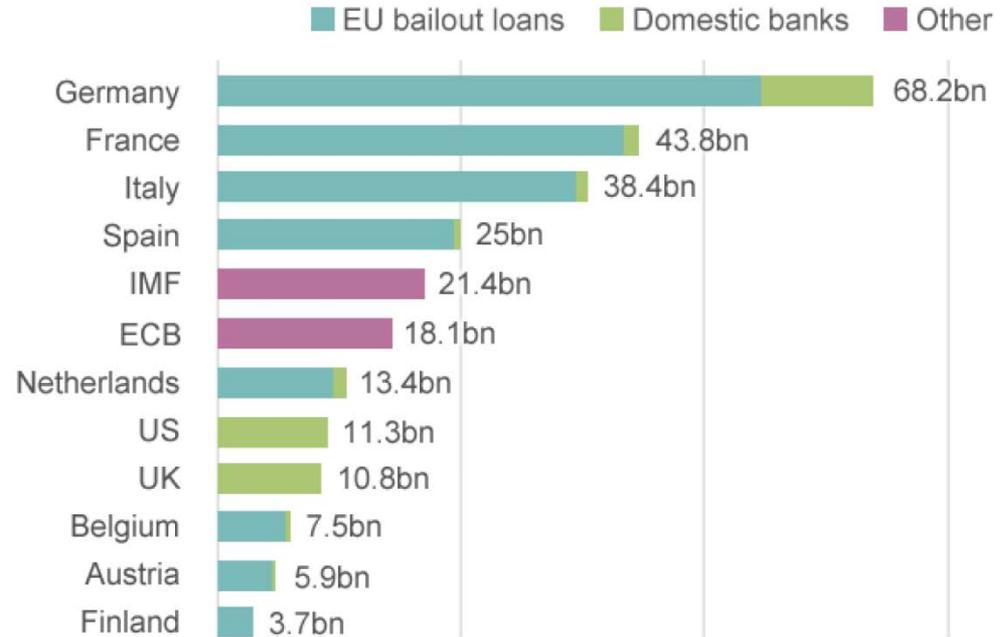
Source: BIS (2Q14), company data, EBA (for 2010-11 Greece exposure data), German Bankers Association, Morgan Stanley Research

Who Owned Greek Government Debt in July 2015? Mostly Innocent European Citizens!

The pattern:

- Banks made bad loans, tolerated and encouraged by bad regulations (zero risk weight assumes safe!)
- The public is left with losses and huge collateral harm.
- Regulatory failures are obscured and persist.

Leading creditors (in euros)



Additional writings and materials are available at these websites

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

<http://bankersnewclothes.com/>