

Less Really Can be More: Why Simplicity & Comparability Should be Regulatory Objectives

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Europe

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Overview



- ✓ Why complexity is a threat to financial stability
- ✓ How complexity contributed to the crisis
 - Complexity in financial instruments
 - Complexity in financial regulation
 - Complexity in financial institutions
 - Complexity in bankruptcy resolution procedures
- ✓ Regulatory reform has generally exacerbated complexity
- ✓ Why simplification is so difficult

How complexity contributed to the crisis

Complexity in Financial Instruments



Example: CDOs

- ✓ An innovation that averted prudential oversight and obscured the transfer of risk
- ✓ Financial institutions sold assets to off-balance sheet entities, SIVs, that funded purchases by selling claims to the cash flows. Mitigated risk thru
 - Diversification
 - Overcollateralization
 - Subordination of tranches
 - Private insurance
- ✓ Each mortgage-backed CDO might contain ca. 750k mortgages*
 - Accompanying might run 30k pages

*Haldane, 2009

Increased vulnerability of system to crisis

- ✓ Inflated volume of debt based on same underlying collateral
 - Implicit leverage defied market or supervisory scrutiny
- ✓ Many of securities were short-term commercial paper
 - Liquidity risk addressed with 364-day lines of credit from banks
 - Maturity limit averted capital requirement for standby line of credit 365 days and over
- ✓ When value of CDOs questioned, markets seized up because of difficulty in linking to value of the underlying collateral

How complexity contributed to the crisis
Complexity in Regulations



The Example of Regulatory Capital

- ✓ Under Basel I, calculation of regulatory capital relatively simple
 - 4* categories of risk assets
 - 2 kinds of capital
 - 2 ratios, easily computed on postcard
 - Facilitated comparisons of capital strength
- ✓ In quest to make capital regulation more risk sensitive, Basel II added considerable complexity
 - Risk buckets expanded to over 200,000**
 - Computation of regulatory capital requirement entails over 200 million calculations**
 - Defies effective monitoring by supervisors or market
 - Impedes comparison across banks or for the same bank over time

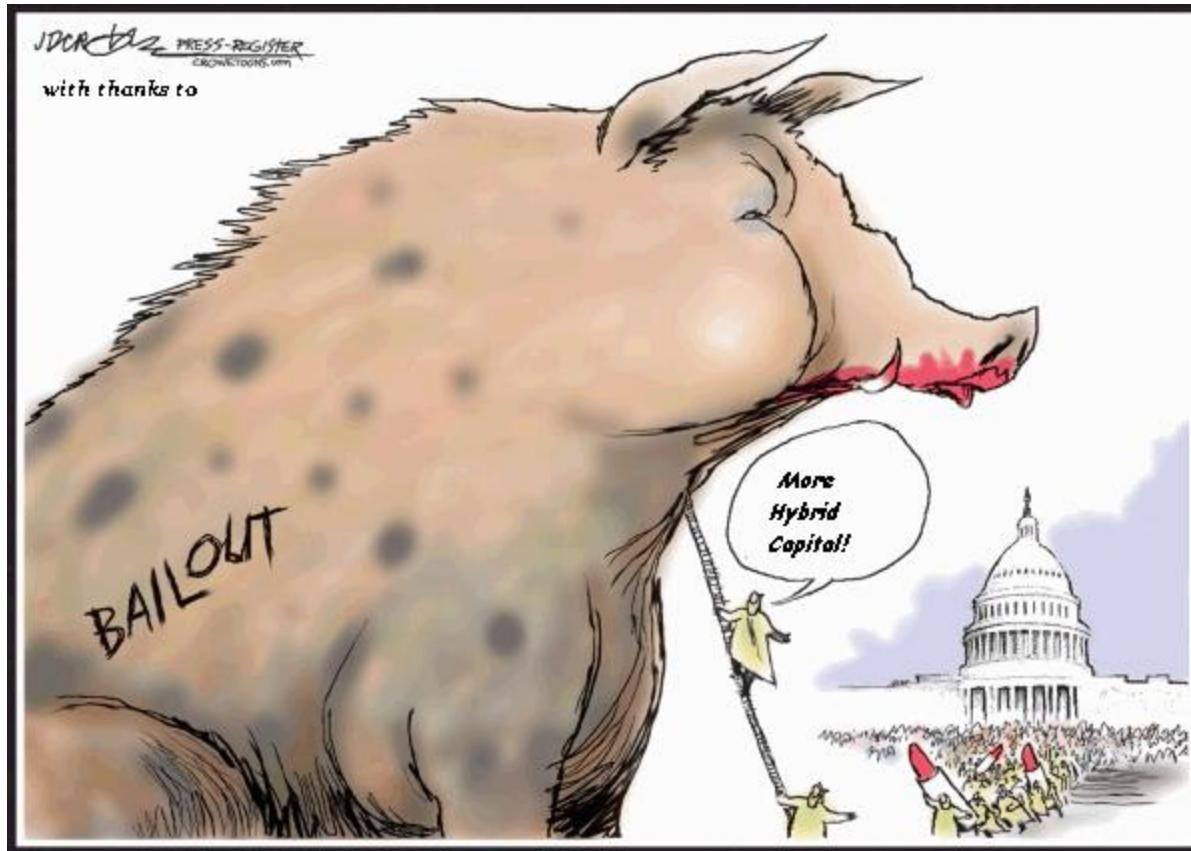
*5 categories in some countries

**Haldane (2011)

Complexity of Definition of Regulatory Capital Invited Lobbying and Innovations to Reduce Burden

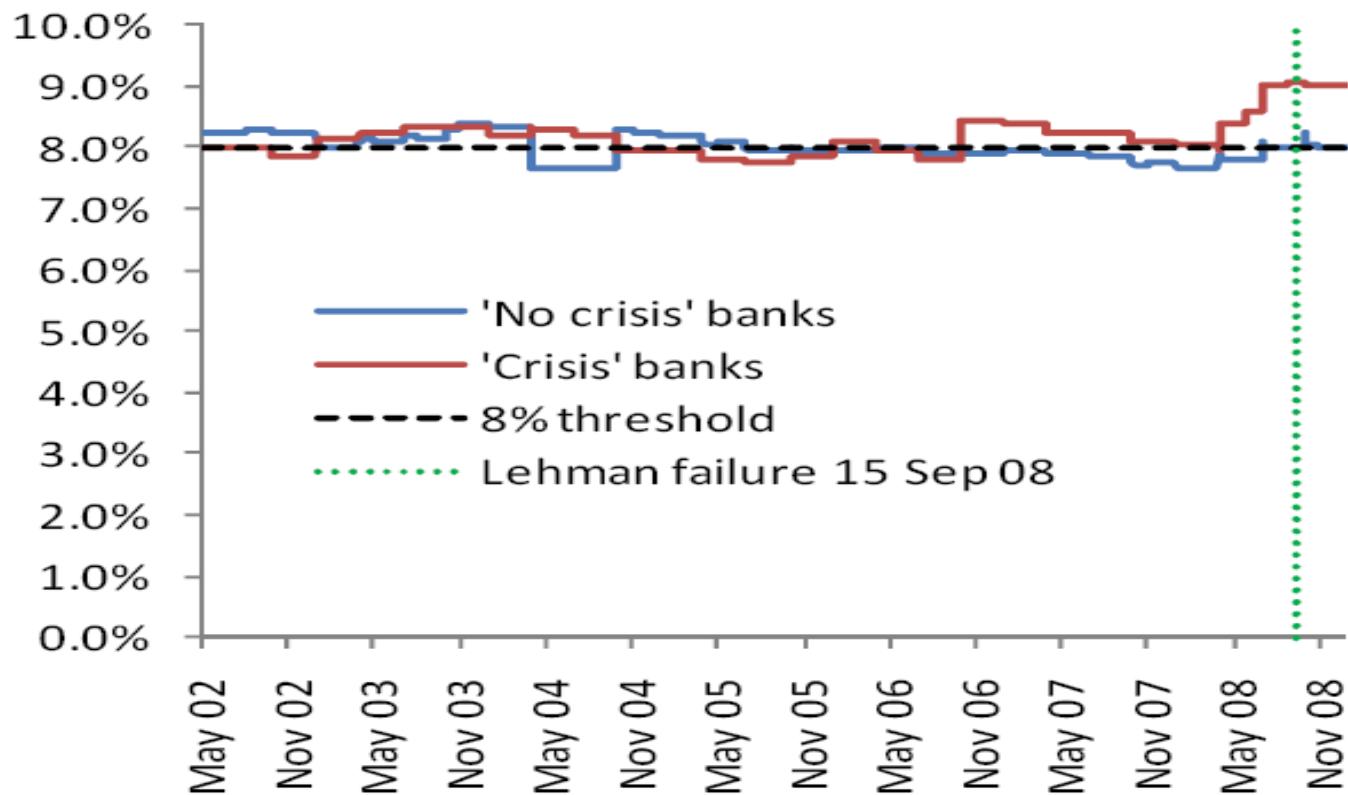
- ✓ Basel I defined two kinds of regulatory capital: Tier 1 and Tier 2
 - Tier 1 capital required to be 4% of RWA, mainly equity
- ✓ Over time Basel Committee took into account innovative capital instruments designed to reduce burden – e.g. TRPS
 - Equity proportion of Tier 1 fell to 2%
- ✓ Implicitly authorized huge expansion in leverage
 - RWAs usually can 50% of RWA
 - Thus permissible leverage increased to 50:1
 - Treated as obscure technical issue
 - No public debate
 - Apparently no realization among regulators about impact on risk

Tier 1 was Degraded by Innovations in Hybrid Capital



Tier 1 RWA Ratio Failed to Warn of Crisis Proved Perverse Indicator of Relative Strength

Citi Tier 1 ratio peaked at 11.8% when market cap was roughly 1% of account value of assets



Source: Capital IQ & Bank of England Calculations. Haldane, Andrew, 2011, "Capital Discipline," January 9, Chart 5.

Problems Arising from Complexity of Regulations

- ✓ Opaque
 - Difficult to verify compliance or exercise effective supervision
 - Impede effective market surveillance and discipline
- ✓ Facilitates lobbying and innovations to undermine regulatory constraints
 - Highly technical regulations largely escape public scrutiny that might otherwise serve as a counterforce
 - Increases danger of regulatory capture
- ✓ Increases costs of implementation, monitoring and compliance
 - Growth in regulatory workforce and in compliance functions in industry should raise questions about opportunity costs
 - Prior to 2008 very difficult to argue that resources enhanced safety and soundness
- ✓ “Regulatory capital ratios may have become too complex to verify, too error-prone to be reliably robust and too leaden-footed to enable prompt corrective action”*

*Haldane's (2011) summary of possible criticisms

How complexity contributed to the crisis

Complexity in Regulatory Structure



The Regulatory Web Pre Dodd-Frank

Partly Deconstructed

US financial system: caught in a regulatory web

The Office of Thrift Supervision (OTS)

A Treasury agency founded in 1989 'on the bedrock of the American dream of homeownership', according to its website. Primary regulator of federal savings associations (thrifts)

State banking regulators

One for each state. Regulate state-licensed and state-chartered financial entities, including domestic banks, foreign agencies, savings institutions and trust companies. Established in 1851, the New York State Banking Department is the oldest in the country

The Office of the Comptroller of the Currency

A Treasury agency established in 1863, it charters, regulates and supervises all national banks. Its remit extends to 50 federal branches of foreign banks in the US

The Federal Reserve

The central bank of the US. Created in 1913, its mandate, broadly speaking, is to promote stable prices and economic growth

The Federal Deposit Insurance Corporation

Created in 1933 following a wave of bank closures, it was designed to ensure individual savings would not disappear when a bank did. Provides deposit insurance of up to \$250,000 per depositor per bank

The National Credit Union Administration (NCUA)

An independent agency set up by FDR in 1934, it supervises and charters federal credit unions and insures savings in federal and most state-chartered credit unions

Banks

Insurance

Commodities /Futures

Securities

OTS

The state banking regulators

OCC

The Federal Reserve

FDIC

National Credit Union Administration

CFTC

Finra

State insurance regulators

The US Securities and Exchange Commission

An independent government agency created in 1934 responsible for overseeing US securities markets, enforcing securities law and monitoring exchanges for stocks, options and other securities

State attorneys - general

Sometimes regulate markets and companies, independent of the SEC. Elliot Spitzer, for instance, a former New York State attorney general, pressed to prosecute several high-profile executive-pay cases

State securities regulators

One for each state. Regulate many of the same activities as the SEC, such as the sale of securities and those who sell them, but only in that state

Financial Industry Regulatory Authority

A self-regulatory body set up in 2007, it oversees all securities firms doing business in the US, including around 4,900 brokerage firms, 173,000 branch offices and 651,000 registered securities representatives

Commodity Futures Trading Commission

An independent agency created by Congress in 1974 to regulate commodity futures and option markets

State insurance regulators

One for each state. Responsible for supervising and regulating all insurance business in that state. The National Association of Insurance Commissioners develops rules and regulations, many of which must be approved by state legislatures

Problems Arising from Complexity of Regulatory Structure

- ✓ System “Rife with duplication, gaping holes, and counter-productive competition among regulators.”*
 - For international banks redundancy and loopholes multiply exponentially
- ✓ Despite emphasis on functional regulation, fragmentation of oversight within functions
 - Financial innovation has trumped statutory definitions of functions
 - Essentially the same product can be regulated very differently depending on structure firm has selected
 - Even holding company oversight tends to focus on a particular function
 - No regulatory authority had overview of risk exposures of large institutions, much less the interplay of risk among them

*Paulson (2013)

Crisis exposed failures in structure of regulation



- ✓ Despite responsibility and power to oversee:
 - **Banks**, FED found it necessary to bailout 3 of 5 largest BHCs
 - **Investment banks**, SEC failed to prevent big five investment banks from taking excessive insolvency risks that led to their demise
 - **Thrift holding companies**, OTS failed to prevent AIG and Washington Mutual from taking on ruinous risks
- ✓ Ability to shift regulatory jurisdictions or to avoid regulation altogether increased vulnerability to crisis and impeded crisis management and resolution

How complexity contributed to the crisis

Complexity in Institutional Structures



G-SIBs Have Grown in Geographic Scope, Legal Complexity and Range of Activities

- ✓ Management structure misaligned with legal structure
 - But legal structure cannot be ignored in event of financial distress
- ✓ Cross-border complexity implies at least two countries must be involved in resolution
 - Laws, processes and procedures vary substantially across countries
 - Most G-SIBs have legal entities in scores of countries
- ✓ Cross-sectoral complexity implies at least two functional regulators must be involved in resolution

Cross-Border Complexity

The broad sample of G-SIBs

G-SIBs have considerable international scope

	Assets	% foreign assets	Total subsidiaries	Number of countries	% foreign subsidiaries	% subs in off-shore centers
Average	\$1.587 trillion	42%	1,002	44	60%	12%
Range high	\$3.100 trillion	87%	2,460	95	95%	28%
low	\$0.243 trillion	5%	56	14	7%	3%

Assets and total subsidiaries as of yearend 2013; number of countries, % of foreign subsidiaries and % of subsidiaries in offshore financial centers as of May 2013; % of foreign assets as of yearend 2012. Source: Computations from Bankscope data and banks' annual reports.

Problems

- ✓ Oversight fragmented across several nations and often several functional regulators within nations
- ✓ Institutional structure opaque to creditors and outside shareholders
 - Inhibited market discipline
- ✓ Institutions global in life, but national in death
 - Insuperable difficulties in coordinating legal proceedings in multiple jurisdiction
 - Information so fragmented that impossible to preserve going concern value the group may have had
 - Provided rationale for bailouts as the only way to save the system

How did regulatory reform address the
problem of complexity?
By introducing still more complications

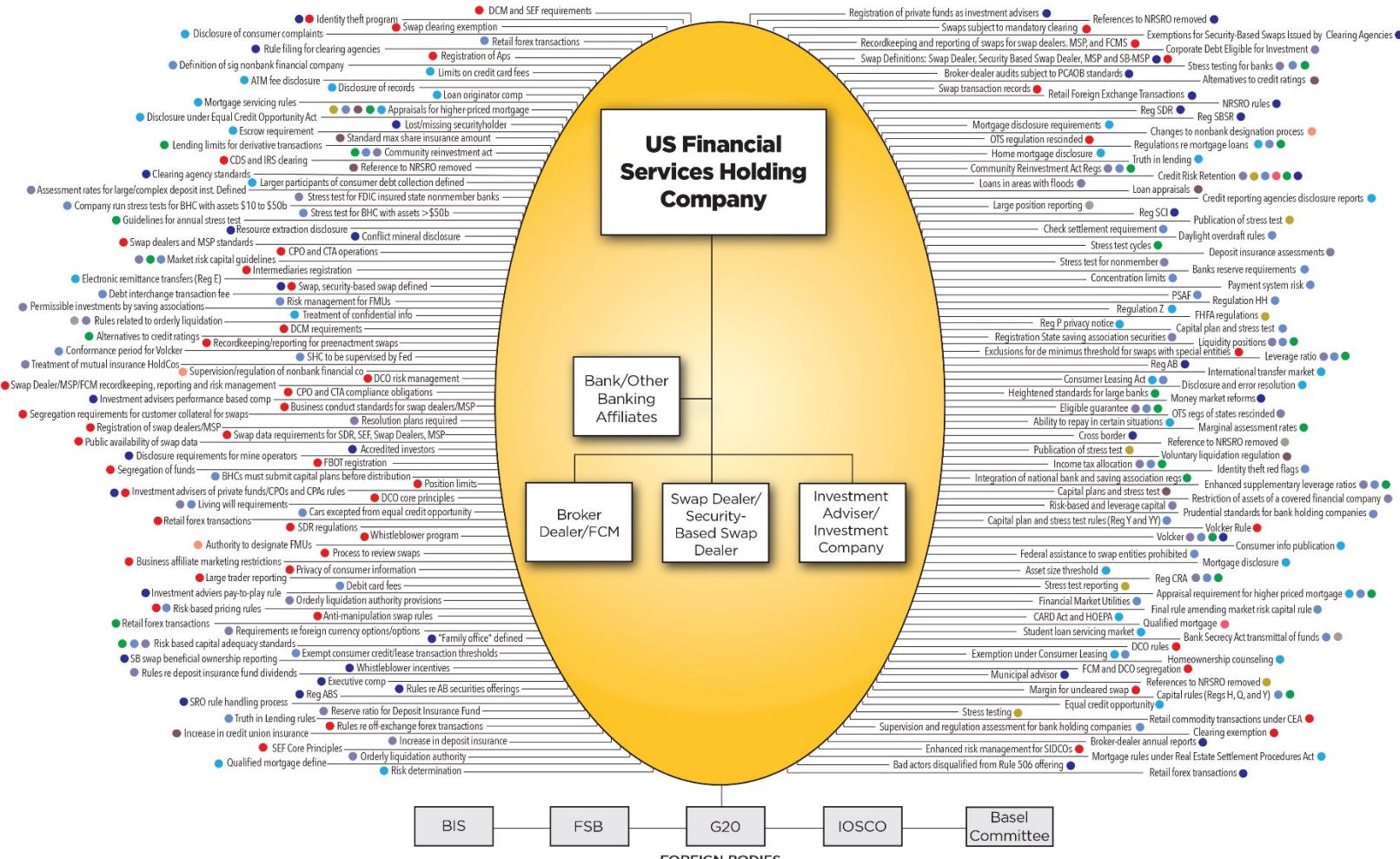


Acceleration of New Legislation & Rulemaking



- ✓ Elaborate financial reforms in virtually every major country
 - Most will affect G-SIBs
- ✓ Dodd-Frank reforms (2010) still being implemented
 - 848 pages vs. 37 pages for Glass-Steagall (1933)
 - Tens of thousands of pages of rulemaking and guidance
- ✓ A virtual blizzard of new legislation and rulemaking since 2010

SEC Commissioner Daniel M. Gallagher
Rules Applicable to U.S. Financial Services Holding Companies Since July 2010



Relevant Regulators Not Depicted

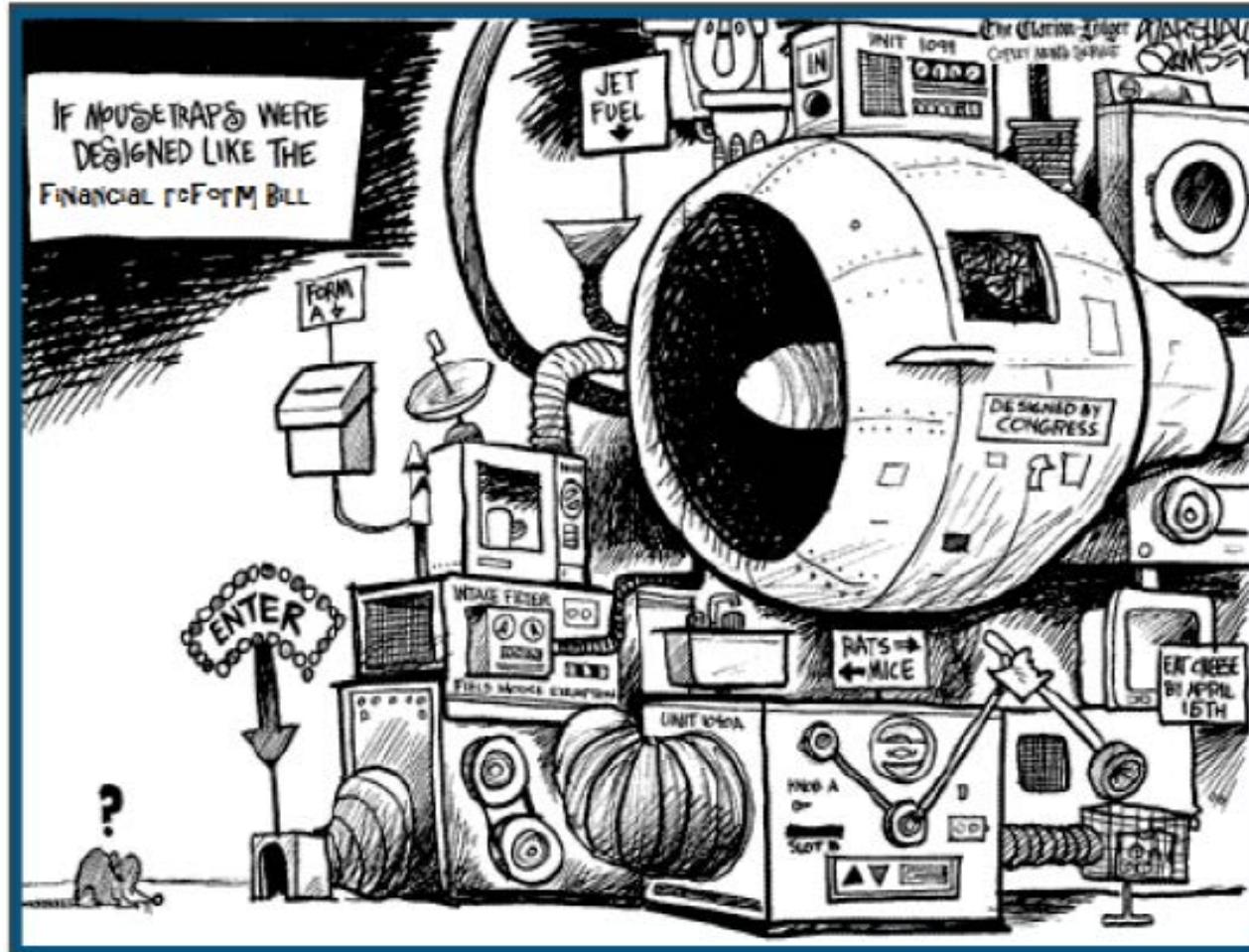
- US SROs (e.g., FINRA, MSRB, NFA)
- Foreign country regulation of domestic activity
- US States

LEGEND	
● SEC-Securities and Exchange Commission	● NCUA-National Credit Union Administration
● CFTC-Commodity Futures Trading Commission	● FSOC-Financial Stability Oversight Council
● OCC-Office of the Comptroller of the Currency	● FHFA-Federal Housing Finance Agency
● FDIC-Federal Deposit Insurance Corporation	● FRB-Federal Reserve Board of Governors
● Treasury-Treasury Department	● HUD-U.S. Department of Housing and Urban Development
● CFPB-Consumer Financial Protection Bureau	● FFIEC-Federal Financial Institutions Examination Council
● OFR-Office of Financial Research	● FinCEN-Financial Crimes Enforcement Network

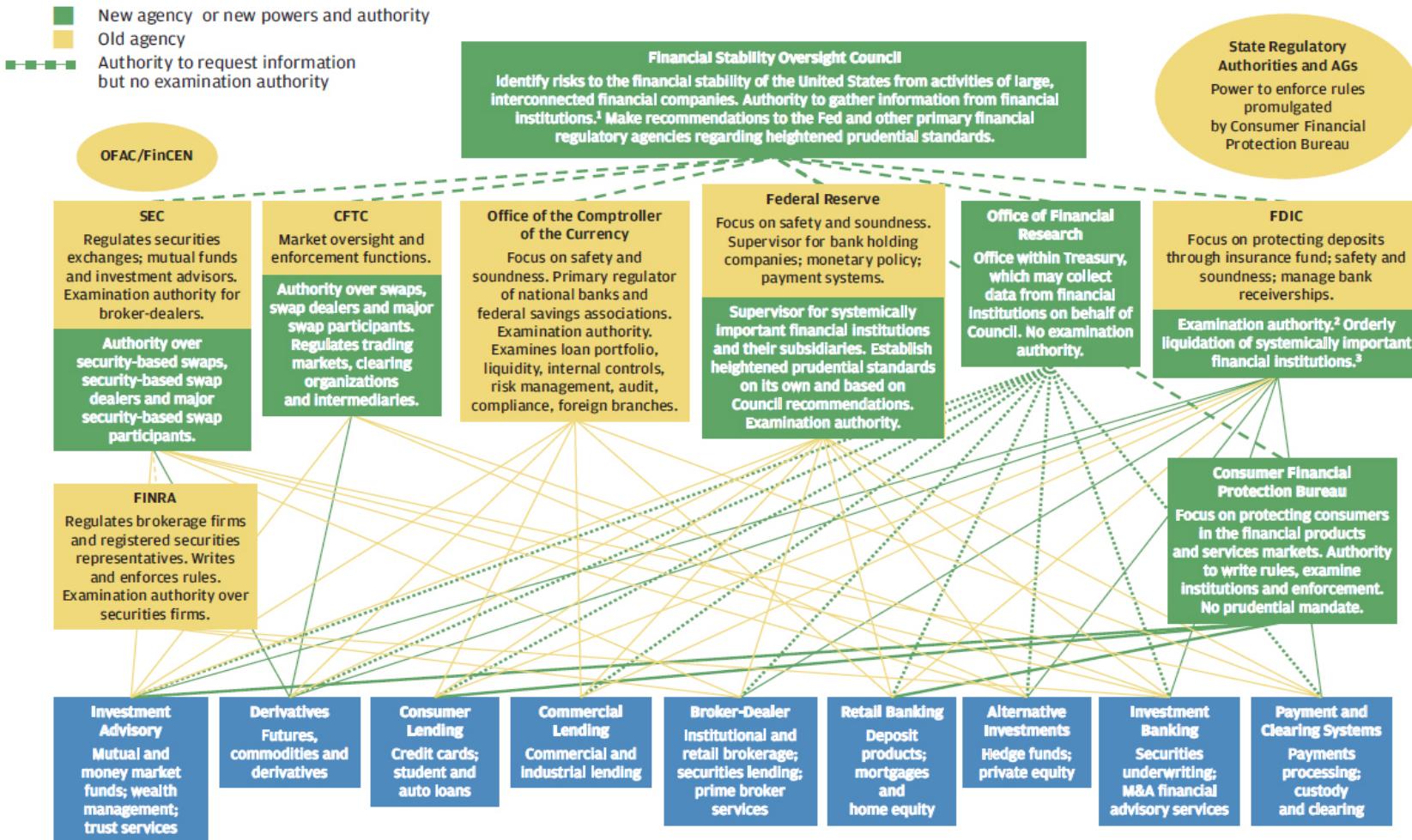
What's happened to the complexity
of regulatory structure?



Rube Goldberg might have designed the outcome



Eliminated OTS, but Introduced New Agencies and Expanded Powers of Others



What's happened with regard to capital regulation?



Tightened Definition of Regulatory Capital but Multiplication of Ratios

- ✓ Tier 1 capital recast as “Going Concern Capital”
 - Purged of innovative instruments that facilitated greatly increased leverage
 - But retains reliance on accounting values that differ across countries and badly lag economic values in an economic downturn
 - Did eliminate some of the most dubious accounting entries such as Deferred Tax Assets
 - Introduces an odd distinction between
 - CET1 (Common Equity Tier 1)
 - Additional Tier 1 (Non-Common Equity Tier 1)
- ✓ Tier 2 recast as “Gone Concern Capital”
 - Importance downgraded, matters only as a component of total capital
 - But still retained
- ✓ Introduced TLAC (Total Loss Absorbing Capital)
 - Equity and debt claims qualifying as Tier 1 and Tier 2 plus other external debt that is unsecured, subordinated to most other claims, with remaining maturity > 1 year
 - Cannot count regulatory buffers
 - Must be 16-20% of RWA and at least 2x the Tier 1 Leverage Ratio*
 - At least 33% of TLAC is expected to be debt other than Tier 1 and Tier 2

*Basel Committee (2014) proposed term sheet

*Increased Complexity in RWA Capital Framework from 2 ratios to >12
 (expressed as % of RWA)*

	Common Equity Tier 1	Tier 1 Capital	Tier 2 Capital	Total Capital
Minimum	4.5%	6.0%	2.0%	8.0%
Conservation Buffer	2.5%			
Minimum <u>plus</u> Conservation Buffer	7.0%	8.5%	2.0%	10.5%
Countercyclical Buffer Range	0-2.5%			
SIFI Add On range*	0-3.5%			
Discretionary Pillar 2 Add On	?	?		?
Minimum <u>plus</u> maximum Basel buffers	13%	14.5%	2.0%	16.5%
TLAC				16-20%
Totals	7.0%-13.0%	8.5%-14.5%	2.0%	36.5% Including TLAC

*US SIFI surcharge will be at least 200 basis points higher, with larger increments based on SIFI index

+ Leverage Ratios

- ✓ Standard Leverage Ratio
 - Tier 1 capital to average consolidated on b/s assets
 - All banks, minimum of 4%
- ✓ Supplementary Leverage Ratio
 - Tier 1 capital to on b/s assets and off b/s exposures
 - Off b/s exposures include derivatives exposures, securities transactions financing exposures, and other off b/s commitments
 - All banks with >\$250 bn in assets or foreign exposure >\$10 bn, minimum of 3%
- ✓ Enhanced Supplementary Leverage Ratio
 - Tier 1 capital to on b/s and off b/s exposures
 - US-based G-SIBs, minimum 5% applied to holding company, 6% applied to insured depository institutions

+ CCAR (Comprehensive Capital Analysis & Review)

- ✓ Banks must show that they can meet 5 different minimum capital ratios under a regulator-specified severely adverse stress test over a 9-quarter period
 - 1. Tier 1 common ratio of 5%*
 - 2. Common equity tier 1 ratio of 4%
 - 3. Tier 1 risk-based capital ratio of 5.5%
 - 4. Total risk-based capital ratio of 8%
 - 5. Tier 1 Standard Leverage Ratio 4%

*Based on Basel I definitions being phased out as Basel III is implemented

What's happened to complexity with regard to the structure of G-SIBs?



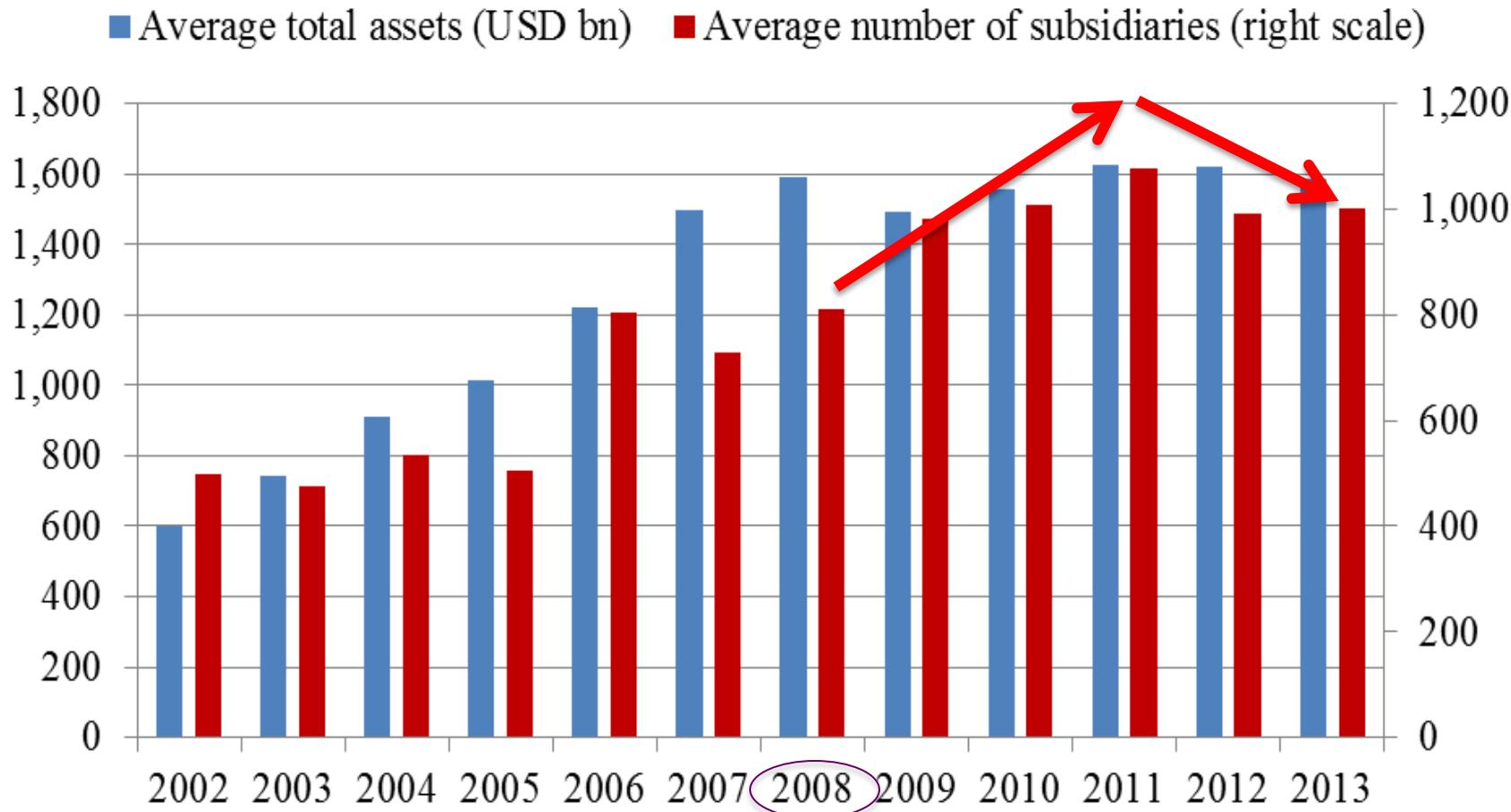
A Concerted Effort to Simplify Structure of G-SIBs



- ✓ Capital surcharges calibrated to increase with G-SIB's size and complexity
- ✓ Enhanced supervision raises compliance costs for larger, more complex institutions
 - E.g., CCAR has both quantitative and qualitative requirements that increase costs with complexity of institution
- ✓ Living Wills and Resolution Plans
 - US authorities have demanded evidence of simplified structures more amenable to resolution
- ✓ **But no attempt to deal with the 2 main causes of complexity**
 1. The regulatory structure
 2. The tax code

Limited Progress to Date

Evolution of Size and Complexity of 29 G-SIBs



Source: Carmassi and Herring (2015) on Bankscope data.

Complexity Has Made the Financial System More Vulnerable to Crisis

- ✓ Complexity impedes
 - Effective risk management
 - Oversight by the supervisory authorities
 - Market discipline
 - Crisis management
 - Resolution of troubled financial institutions
- ✓ Complexity exacerbates costs to the taxpayers
 - Makes crises more likely
 - Provides justification for substantial bailouts as “the only practical way to save the system”

If complexity contributed to the crisis,
why did reform lead to still more
complexity?



Path Dependent Process of Regulation

- ✓ Haldane (2013) “*History locks in idiosyncrasies and complexities of the past, generating a steadily rising tide of red tape.*”
- ✓ Broad resistance to simplification from “experts”
 - Bankers who have most to gain from identifying and exploiting opaque loopholes
 - Great complexity inevitably leads to more and more opaque loopholes
 - Legislators who rely on flows of funding from lobbyists representing regulated firms to fund election campaigns
 - Regulators, lawyers and tax accountants who have invested large amounts of human capital in dealing with complexity

Cost of Increasing Complexity

- ✓ The costs of maintaining and enforcing the system
 - Growth in number of regulators and compliance personnel
 - Much of this is a deadweight cost that should be measured in what these individuals could be doing in the productive sector
 - Oddly, no collection of data that might shed light on compliance costs
- ✓ Complexity advantages large institutions that can afford the fixed costs to identify and exploit loopholes
- ✓ May not produce desired outcome
 - E.g. Did heavy resources devoted to risk-sensitive capital requirements produce a safer system?
 - A simple leverage ratio performed substantially better in separating strong banks from weak

What might be done?



Basel Committee Task Force on Simplicity and Comparability

- ✓ Discussion paper: “The regulatory framework: balancing risk sensitivity, simplicity and comparability” (July 2013)
- ✓ “Potential ideas” included
 - Explicitly recognizing simplicity as an additional objective
 - Enhancing disclosure
 - Utilizing added floors and benchmarks to mitigate the consequences of complexity
 - Reconsider the linkage between internal and regulatory models
 - Limit national discretion and improve supervisory consistency
- ✓ Scant evidence to date that it has had an impact

No shortage of proposals for simplification of the US regulatory system

1. Hoover Commission Proposal (1949)
 2. Hunt Commission Report (1971)
 3. Treasury Department Proposal (1982)
 4. Federal Reserve and Treasury Department Proposal (1994)
 5. Treasury *Blueprint for a Modernized Financial Regulatory Structure* (2008)
 6. Treasury New Foundation: Rebuilding Financial Supervision and Regulation (2009)
 7. Volcker Alliance (2015)
- ✓ Many other countries, with much older regulatory traditions have achieved considerable simplification in recent years
- Why is it so difficult in the United States?

“In physical and natural sciences, complexity is often a fact of life and exogenous, but [*in financial systems*] it is usually a demon of our own design”*

What would it take to exorcise the demon in the United States?

Andrew Lo, “Complexity, Concentration and Contagion: A Comment, 2011