Prudential Financial Regulations that Work

Charles W. Calomiris

IAES Meetings, Washington, D.C.

October 2016

The Jury Is In: Reform Is a Flop!

- Virtually no entry into banking
- Large banks refusing deposits (unprecedented)
- MVE/BVE remains depressed understandably (Calomiris Nissim 2014)
- Systemic risk remains (Acharya et al. 2016; declining value of banking business is risky for our financial system)
- Loss of liquidity in corporate debt markets is a major market problem traceable to Volcker Rule and misapplication of leverage requirements to low-risk debt inventories (Calomiris et al. 2016)
- Risk weights and IRB models are easily gamed by banks, making book value capital standards ineffectual (Vig et al. 2016; Plosser Santos 2016)
- Shadow banking growing
  - Migration of risky credit card receivables as a result of the Card Act (Elliehausen Hannon 2016)
- QM and QRM lobbying scandal has undermined prevention of excessive risk (Gordon Rosenthal 2016). FHFA under Watt adds to problem.
- Interchange fee backfire (Kay et al. 2016)

One of these people is a banker, and the other one a politician/regulator.

"These new regulations will fundamentally change the way we get around them."

New Yorker, March 9, 2009, p. 52.

Prudential Regulation Overview

- What is wrong with prudential regulation?
- How can those problems be fixed? 6-point, **incentive-robust** plan.
  - Loan risk measurement using pricing
  - Accountable NRSROs
  - High market-trigger CoCos (Calomiris-Herring).
  - Simple cash requirement
  - Rules-based macro-prudential regulation
  - Eliminate mortgage credit subsidies

Why Post-Crisis Reforms Often Fail

- Reformers construct laundry lists but ignore core incentive problems that gave rise to crisis (e.g., new rules on derivatives, securitization, proprietary trading, etc.).

- Worse, they ride decades-old hobby horses (Glass, Volcker), or just use the crisis to accomplish other objectives (Dodd-Frank imposes new quotas for hiring women and minorities in the financial sector, which was unrelated to the crisis).

- Successful reform requires identifying **fundamental incentive problems of S&R and bankers,** and addressing them in ways that are **incentive-robust,** by which I mean that the design of reforms takes into account and is robust to the incentives of market participants, supervisors and politicians.

The Big Lie

- Regulation is necessarily a very complicated technical problem which requires massive numbers of people, many impossible to understand models, and rocket science to understand.
- No, it's mainly a difficult but simple political problem. Regulatory design must take politics and incentives into account to be successful, but simplicity is the only way to do so, because simplicity is the only road to accountability.
- Is it possible for regulations to be simple and effective? **Yes.**

Risk Management Failings

- Cross-sectional evidence shows that there was **not a common crisis experience**.
- Safety net interacted with purposefully bad risk management. (Ellul and Yerramilli 2010; Fahlenbrach, Prilmeier, and Stulz 2011; Aebi, Sabato and Schmid 2010, Agarwal and Ben-David 2012).
- Creating incentives that reward good risk management (through the various reforms I propose) is part of the solution.

Ineffective Banking and IB Regulation

- Prudential Regulation's failure to measure risk and maintain capital accordingly:
  - Not leverage arbitrage but **risk mis-measurement**
    - On balance sheet risk measurement failings
    - Off-balance risk measurement failings.
- After March 2008, **too-big-to-fail** problems prevented proper increases of capital in response to losses, **which were feasible**.
- ***Failure to recognize losses and timely replace lost capital.***

Main Reform Issues

- Micro prudential reform should focus on **credible measurement of risk**. "Capital, capital, capital" is not enough; many failed banks had more than newly mandated required capital (Citibank vs. Goldman Sachs).
  - Unbelievably, **we still just ask banks themselves and rating agencies to tell us what the risk is!**
- Capital must be observed credibly and **replenished** in a timely way when it is lost.

Why Don’t Banks Manage Risk Properly without Regulation?

Protection Removes Market Discipline on Risk Taking

Incentive Robustness

- The problems of inadequate measurement of risk ex ante and loss ex post reflect two sets of agents incentives to hide information.
- Bankers will pursue regulatory arbitrage (either due to value-maximization or agency)
- Supervisors have their jobs at stake, not their own money. They will forebear and permit evergreening, particularly because political equilibrium favors that.
- **An incentive-robust reform is one that works in spite of these two sets of agents incentive problems.**

Risk-Measurement Reforms

1. Use loan interest rates in measuring the risk weights applied to loans for purposes of setting minimum capital requirements on those loans. (Ashcraft, Morgan 2003, Argentine experience in 1990s). This would have made a big difference in subprime crisis.

2. Reform the use of credit ratings to require their use and require NRSROs to predict PD, rather than give letter grades, and hold them accountable for accuracy using "sit outs." (Calomiris 2009)

Ratings Shopping

- Incentive to inflate ratings from **buy side**, due to regulatory use of ratings.

- Congress: Eliminated automatic relationship between regulation and ratings. Better approach: Failed Boxer amendment, lobbied against by buy side.

- **Proposed Rule:** For each class of rated debt (e.g., credit card securitized debts) BBB is defined as an estimate of a 2% 5-year PD, and A as an estimate of a 1% 5-year PD. If a 5-year moving average of actual PD for the rated BBB instruments in this class exceeds 4%, then the NRSRO will have a six-month "sit out" in rating that class of debts. (2% ceiling for A-rated)

CoCos (Calomiris and Herring 2011)

3. Establish a minimum uninsured CoCo requirement for large banks (a specially designed class of contingent capital), which improves risk management and capital raising incentives. (Calomiris, Herring 2011 based on Flannery)

- If designed properly (with sufficient conversion dilution risk), CoCos would incentivize **timely recapitalization** of bank to avoid dilutive conversion of CoCos.
- **Key point:** A combination of common equity and CoCo requirement can achieve more than a common equity requirement alone, and at a lower social cost.

Contingent Capital's *Proper* Motives

- Contingent capital can be designed to accomplish several objectives, but these objectives conflict in their implications for CoCo design.
- CoCos cannot be all things to all people; we must choose what we want them to accomplish.
- If you begin with the list of important regulatory challenges listed on the prior slide, that implies the desirability of a particular CoCo design.

Possible CoCo Motives Conflict

- a. Signalling (debt must be risky).
- b. Loss absorption/bail in (triggered near insolvency point).
- c. Incentivizing prompt replacement of losses via voluntary new issues of equity to avoid triggering dilutive conversion of large amounts of CoCos.
  - Early trigger not a bail in, debt not risky so little signalling, trigger is out of equilibrium event so loss absorption minimal.

Prompt Issuance Objective Is Key

- Set trigger high (issuance is not occurring near failure point)
- Conversion should be dilutive (to encourage alternative of voluntary issuance)
- Make amount of CoCos large (to encourage alternative of voluntary issuance)
- Timely (costly) replacement of lost capital will not only protect against insolvency ex post, it will incentivize good risk management ex ante.

Details of Our Proposal

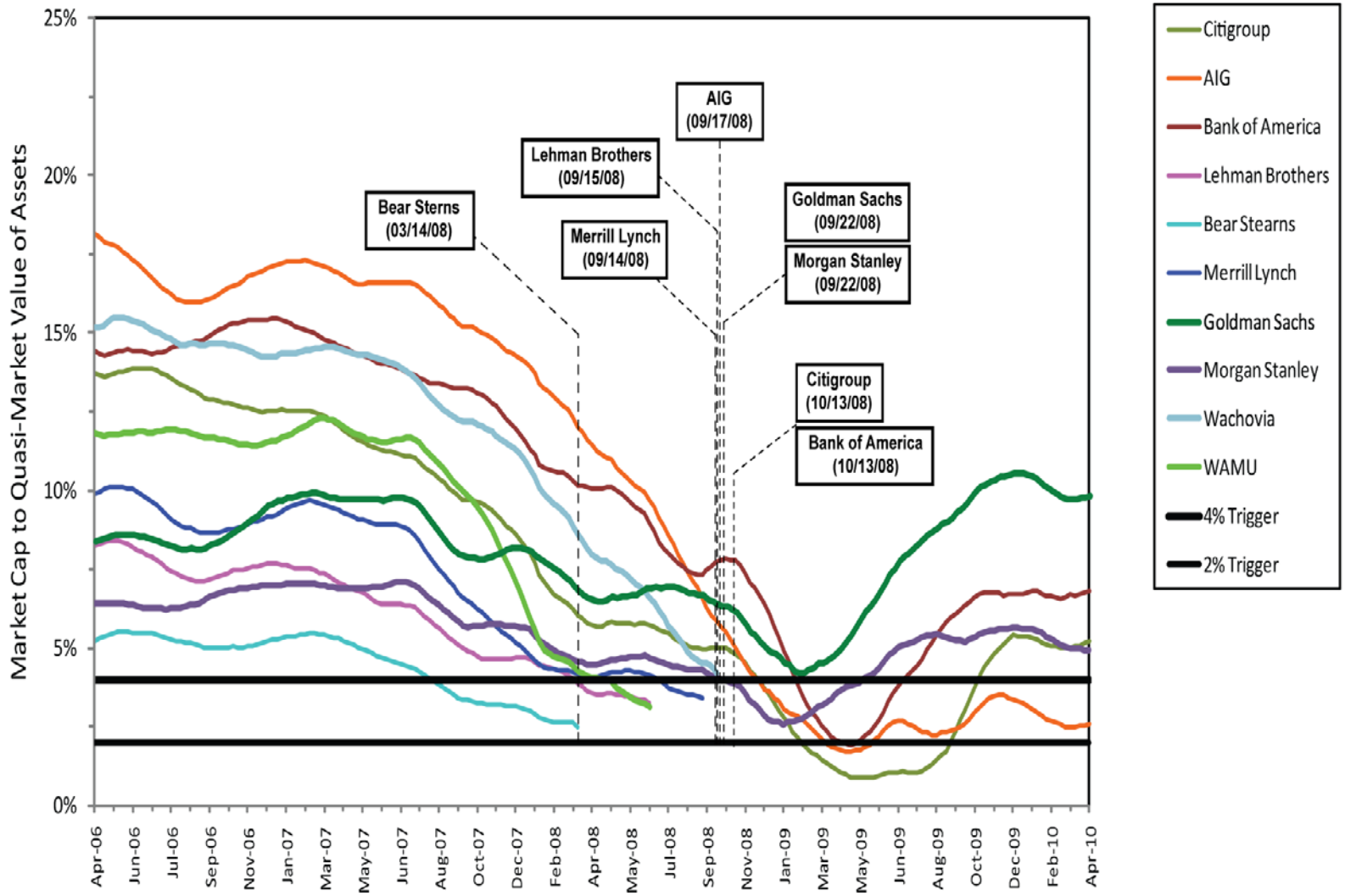
Primary Goal	Prompt Recapitalization
Min Amt of CoCos	10 percent of risk-weighted assets
Trigger	QMVER of 9%, using 90-day MA
Conversion ratio	5 percent dilutive of stockholders
Conversion amt	All CoCos convert on hitting trigger
Holders	Qualified institutions, no shorts
PCA trigger	If 9 % trigger is breached twice
Time to replace	If converted, within one year

Would This Have Prevented Crisis?

- Crisis did not occur overnight; losses accumulated over long time and were visible in declining market values of bank equity.
- Lots of moments of calm in which capital could have been raised (fall-winter 2007, April-August 2008).
- Equity market was wide open to banks ($450 billion was raised prior to September 2008).
- Institutions limited offering because of dilution (my breakfast with senior manager).

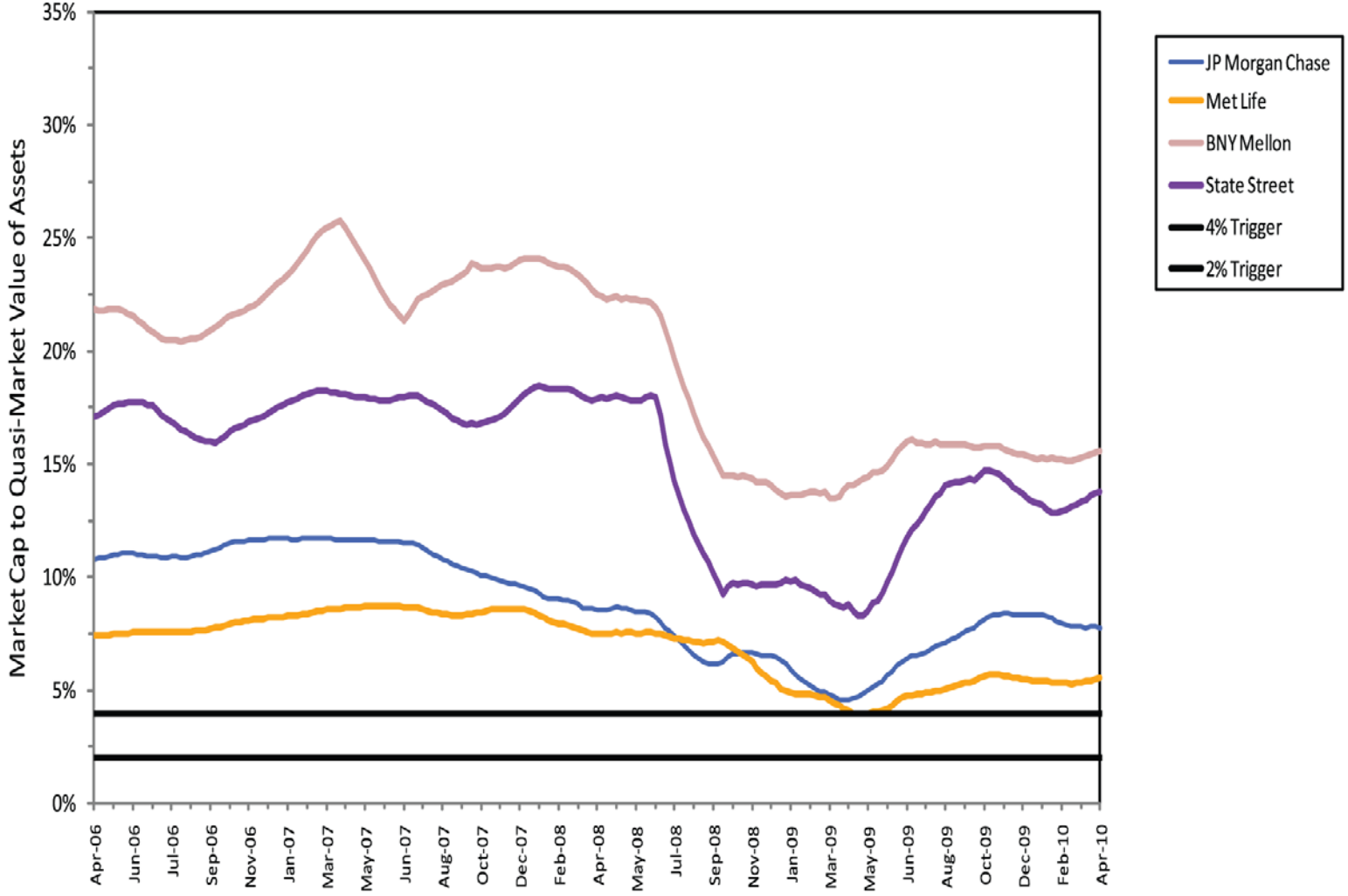
90 Day Rolling Market Cap to Quasi Market Value of Assets

U.S. SIFIs that Failed, Were Forced into Mergers or Received Major SCAP Infusions



90 Day Rolling Market Cap to Quasi-Market Value of Assets

For large American financial institutions that did not receive major subsidies



Why Not Just More Equity?

- Equity alone is costlier than equity and CoCos
  - Adverse selection costs (lots of room for signalling costs even with regulation)
  - Agency costs
  - Taxes
  - Huge literature provides evidence of these costs (bank capital crunches associated with equity scarcity; Aiyar, Calomiris and Wieladek 2014, 2015)
- Pure equity is less effective
  - Book equity losses are not recognized timely (Citi's 11.8%)
  - Less incentive timely replacement of lost capital
  - Less incentive for risk management
- Why not just a market equity ratio requirement?
  - Less effective; third party contract cuts forbearance risk.

Liquidity Requirement? Theory

- Why restore liquidity requirements' importance?
  - **Observability of cash and its risklessness incentivizes good risk management, especially after unrecognized losses** (Calomiris-Heider-Hoerova 2011)
  - **Lack of substitutability of debt capacity for cash during times of need** due to financing frictions associated with asymmetric information. **This is especially true of banks (ABCP, repos, Libor)!**
  - **Reduce dependence on LOLR** (self-insure against liquidity risk).

Liquidity Requirements

- **Basel III points to two new liquidity ratios to deal with systemic liquidity risk. But three problems:**
  - Systemic liquidity risk results from counterparty (solvency) risk. That was, and is, the source of all known banking crises. No Basel III integration of cash and capital requirements.
  - Banks *should* create liquidity; it is not desirable to eliminate it from the system!

- **4. Simple 20% of bank debt as cash reserve requirement (continually at central bank).**

Proper Design of Requirements

- Remunerative (no reason for a new tax).
- No complex Basel formulas or politicized substitutes for cash (like covered bonds).
- Relaxed by regulator during crisis.
- Imposed on banks, and on non-bank intermediaries for whom liquidity risk is high (safe harbor for non-banks that don't rely heavily on repos or CP, but check derivatives).

Macro Prudential Regulation

- Act preemptively to deflate credit-driven asset price bubbles with time-varying rule.
- ***NB:*** Having strict micro-prudential regulation takes enormous pressure off of macro-prudential regulation (need to intervene with time-varying requirements is much less likely)
- **5. Vary capital, provisioning, not liquidity requirements, using simple dual threshold model of credit growth and asset price growth (Borio and Drehman 2008), based on an "enforce or explain" mandate => accountability. (*Mainly relevant for EMs*.)**
- Preserves **accountability** of monetary policy by keeping things separate and rules-based.

Mortgage Lending

- Post-1970 global boom in risky mortgages (Jorda et al. 2016a). Recent banking crises often due to real estate (Jorda et al. 2016b). The U.S. is one of many examples.

- Subsidized real estate borrowing is large, cyclical, and assets are hard to liquidate in a downturn.

- Real estate lending banned for national banks until 1913. Great Depression push for subsidizing housing finance (Fannie Mae and FSLIC). Insurance companies and building and loans had specialized in mortgages, which were not less risky and funded by equity and long-term debt (Fleitas, Fishback and Snowden 2016).

- Association of real estate lending with lower growth-outcomes of financial deepening (Cournede and Denk 2015).

Perspectives on the Subprime Crisis

- CRA compliance and bank mergers 1992-2007 ($2.4 trillion), purposefully boosted by the 1992 GSE Act.
- Deposit insurance, TBTF, guarantees of GSE debts, predictably lax prudential regulation necessary to support the merger wave / CRA / GSE deal.
- Regulators were reliably not going to limit subprime lending with adequate capital and risk measurement because CRA exams trump prudential exams. (Note bank balance sheet patterns, plus off-balance sheet.)
- Similarly, Fed Board never objected to the extortion racket of the bank merger hearings (and recently allowed debasement of QRM standard).

Lax Regulation was Part of the Deal

Large U.S. Banks (First Week of Year)

	Cash+Treas +Agen/TotAss.	RealEstLoans/TotAss.
1987	19.9%	20.0%
1994	25.8%	26.8%
2001	17.2%	26.1%
2008	**13.5%**	**32.6%**
2015	30.4%	22.8%

The U.S. Since the Crisis

- CDARS on steroids and sub debt protection now assumed.
- No GSE reforms. Appointment of Mel Watt to head FHFA results in immediate reduction in GSE minimum down payments from 5% to 3%, and decrease in FHA insurance premium. Volcker Rule exempted GSE debts.
- Weakening of QM and QRM standards with safe harbors. (Same coalition that gave us the crisis: "Coalition for Sensible Housing Policy"). GSEs = alternative safe harbor.
- Since appointment of Watt, as of February 2016, 53.3% of new purchase mortgages are "high risk." There has been a rise of 13 percent in the mortgage risk index in past two years.

Real Estate Policy Reform

6. Limit total depository institution exposure to real estate (which will also spur small business lending), expecting mortgages to migrate to insurance companies, REITs, etc., where they belong. Introduce alternative housing subsidies.

- Privatize GSEs credibly and eliminate FHA, CRA, FHLBs.
- Phase in a substantial increase in minimum down payments (to at least 10%). And find a way to make these credibly persist.
- Political constraints? Introduce means-tested down payment matching for low-income borrowers. (Less price impact, more stability, more impact on home ownership for poor.)
- Will RE brokers and activists allow this to happen? Antoniades and Calomiris (2016) suggests some reason for optimism if you pick the timing properly.

Incentive Scorecard: Six Proposed Prudential Reforms

Proposal	Market Incentives?	Political /S&R Incentives?
1. Require NRSROs to use numerical forecasts of PD, with "sit out" penalties for egregious errors.	Rating agencies will have strong incentives to make estimates accurate, and will resist buy-side pressures to inflate ratings.	Avoids micro-managing NRSROs; ensures transparency, accountability of enforcement.
2. Use loan interest rates to help set capital ratios.	Loan pricing reflects risk, and will continue to do so.	Standards are transparent and rule-based, and therefore, credible.
3. Require CoCos with high market triggers.	Banks preemptively raise equity.	Automatically converts before intervention, will not be bailed out.
4. Remunerative 20% liquid reserve requirement.	Improves risk management.	Clearly observable => enforced.
5. Macro prudential changes based on dual threshold.	Anticipation improves incentives to manage risk.	Easy to enforce => credibly enforced.
6. Eliminate mortgage credit subsidies and replace with means-tested matching	Crowds in equity, less price impact, more impact on homeownership.	Easy to enforce, if you can pass it.

Process Reform

- Once regulation is effective, we can also make it more cost effective.
- Reduced emphasis on internal modeling of risk for regulatory purposes.
- Reform of stress tests to make Fed accountable and to rely mainly on new prudential rules.
- Reform CFPB (on budget) to focus on transparency and honesty in setting and enforcing (higher) standards. Use of testers.
- Reduced compliance burden for all banks. Less micromanagement of their business.
- Eliminate Volcker Rule.

Importance of Simplicity

- Avoiding discretion requires constructing simple rules that do not depend on regulators' or supervisors' discretion and can be observed publicly.
- Automatically enforced, transparent rules are incentive robust for regulators.
- They also permit reductions in the cost of compliance.