Countercyclical Regulation and Its Challenges

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Abstract

Following the 2008 financial crisis, countercyclical regulation emerged as one of the most promising breakthroughs in years to halting destructive cycles of booms and busts. This new approach to systemic risk posits that financial regulation should clamp down during economic expansions and ease during economic slumps in order to make financial firms more resilient and to prick asset bubbles before they burst. If countercyclical regulation is to succeed, however, then policymakers must confront the institutional and legal challenges to that success. This Article examines five major challenges to robust countercyclical regulation – data gaps, early response systems, regulatory inertia, industry capture, and arbitrage – and discusses a variety of techniques to defuse those challenges.

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Countercyclical Regulation and Its Challenges

by

Patricia A. McCoy*

For the most part to date, U.S. financial regulation has been *procyclical*, in that federal regulators and Congress often relax oversight during bull markets, only to crack down after financial crises. After 2008, the wisdom of this approach came under attack. Critics argued that procyclical regulation left financial institutions undercapitalized and unable to withstand financial crises. Other critics asserted that economic downturns could be mitigated and even averted if regulators took action to puncture asset bubbles. In the course of this debate, the concept of countercyclical regulation has been gaining credence in economic policy circles.

Countercyclical regulation responds to both of these critiques. This new approach posits that financial regulation would be more effective if financial regulation clamped down during economic expansions and lightened up during economic slumps, when banks and other financial services firms are struggling financially and are typically at their most risk-averse. One objective of countercyclical regulation is to require financial firms to build up reserves during flush times, so that they can draw on those resources when downturns strike. A second, possible objective is to modulate the growth of easy credit and the asset bubbles that it fuels in order to avoid a domino effect of bank failures following a surge in loan delinquencies.

* Liberty Mutual Insurance Professor, Boston College Law School, and former Assistant Director for Mortgage Markets, Consumer Financial Protection Bureau. I wish to extend my thanks to the law faculties at Boston College, the University of Minnesota, Suffolk University Law School, and the Centre for Commercial Law Studies at Queen Mary, University of London, for kindly hearing out earlier iterations of these ideas. My thanks as well to Boston College Law School and the University of Connecticut School of Law for their generous research support.
Countercyclical regulation is one of the most important breakthroughs in years to ending disastrous cycles of boom and bust. As such, it deserves the utmost consideration. Implementing countercyclical regulation, however, is not as easy as it seems. So far, discussions of countercyclical reforms have been mostly limited to identifying tools to address procyclicality and evaluating the efficacy of those tools. Institutional and legal impediments to the successful implementation of a countercyclical approach, however, have not been given sufficient consideration.

In this Article, I set out to describe the most pressing of those challenges. In my view, countercyclical regulation will not be successful unless serious attention is paid to the organizational and legal settings in which that regulation would unfold. Consequently, in this work, I seek to shift the focus of the discussion of countercyclical regulation to the real-world context it would inhabit in the U.S. and to consider the implications of that context for the likelihood of its success. Throughout this discussion, my focus will be on real estate asset bubbles, which have been the most devastating type of bubbles historically.

The Article proceeds as follows. Section I explores the theoretical underpinnings of countercyclical regulation and the problems that it seeks to correct. Section II moves on to a discussion of the ongoing debate over the proper objectives of a countercyclical approach. For at least twenty years, macroeconomists have disagreed whether central banks should seek to deflate asset bubbles or forego that goal and simply assure that financial institutions are resilient whenever downturns hit. This debate has evolved over time as economists and policymakers have gained a growing appreciation for the broader set of countercyclical tools at regulators’ disposal.
Section III examines those tools in detail. Countercyclical tools are an important part of the emerging field of macroprudential regulation, which focuses on the safety of the financial system as a whole instead of the safety of discrete financial firms. As Section III observes, many current countercyclical instruments are still in their infancy and data are just starting to trickle in on their effectiveness. While many of these methods appear to be promising, the experience of 2008 showed that substantially more work is needed to refine those tools and to ensure that they are used on a timely basis. Nevertheless, there is reason to think that the new panoply of sectoral countercyclical tools is especially well suited to curbing credit-induced asset bubbles. This discussion also sheds light on the vital but wholly underappreciated role of market conduct regulators such as the Consumer Financial Protection Bureau in containing systemic risk through countercyclical regulation.

The heart of this Article is Section IV, in which I discuss the impediments facing any serious attempt to institute countercyclical regulation in the United States. While some of these problems have been acknowledged in the economics literature, other major obstacles have not been adequately addressed. Ironically, for instance, there has been little discussion of the federal government’s lagging efforts to improve its collection of financial system data, despite the key

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importance of data to systemic risk regulation. Similarly, too little attention has been paid to the need for agencies to institutionalize an early response system to address burgeoning financial threats. Financial innovations and how to monitor them pose special problems in that regard and ones that are not well appreciated. Justifying intervention when risks are small is another challenge. While the age-old problems of regulatory capture and inertia continue to persist, even resolute regulators may have difficulty withstanding legal challenges to certain countercyclical rules in the current judicial climate. There is virtually no understanding of these legal hurdles in economic circles today. Finally, countercyclical regulation, like all regulation, has to deal with the ever-present dynamic of industry arbitrage. Innovations introduced by the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act or Dodd-Frank) offer a partial but potentially powerful solution to that nagging problem.

Policymakers have more tools than ever to tackle the challenges confronting countercyclical regulation, if they choose to use them. Those techniques include new tools that can help strike an optimal mix of regulation while warding off the effects of regulatory capture and inertia. The advent of these new tools has also helped make the aims of countercyclical regulation more ambitious over time. Early discussions of the topic focused on the use of monetary policy for countercyclical aims. Because monetary policy is not well-suited for pricking asset bubbles, many commentators were pessimistic about countercyclical regulation’s suitability for that task. But since 2008, economists have come to appreciate other, newer countercyclical techniques, such as sectoral regulation, that are much better tailored to intervening in asset bubbles. The focus on these tools has reinvigorated the debate over the feasibility and wisdom of proactively deflating bubbles, as I will discuss.

I. Problems With Procyclicality
Procyclical regulation refers to financial regulation that moves in tandem with economic cycles by easing in favorable economic times and tightening after financial crises. Since the 2008 debacle, critics have castigated procyclical regulation for intensifying the potential systemic harm from asset bubbles, especially bubbles fueled by easy credit.

Asset bubbles characterized by lax credit pose special dangers to the financial system and the economy at large because those bubbles tend to be financed through lending by banks. When this sort of bubble bursts and loans go into default *en masse*, the ensuing losses can jeopardize bank solvency. This, in turn, raises systemic concerns because banks are linked to one another through reciprocal deposit accounts, payments clearance, and interbank credit, meaning that the failure of one key bank can bring down other banks.

In an effort to protect themselves from this type of contagion, banks usually respond by hoarding resources and severely tightening credit. As businesses and individuals who are otherwise creditworthy find that they cannot get credit to finance their operations or expand them, the chance of a recession grows. Because asset bubble can inflict serious negative externalities on the pathways of finance and on ordinary households in the process, these bubbles have serious implications for the health of the overall financial system and the wider economy.

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Footnotes:


In view of these problems, procyclical regulation has been singled out for criticism on at least two scores. First, “light touch” regulation during asset bubbles can leave financial institutions with insufficient capital and reserves to survive a market crash. Second, deregulation during periods of easy credit can actively feed asset bubbles and cause them to overheat.

Countercyclical regulation seeks to reverse these dynamics by reducing the spillover effects from troubled conditions at one or more financial institutions on the financial system and the economy. This new approach to regulation seeks to address at least three problems that have plagued financial regulation in the United States. The first problem is boom-and-bust nature of the credit cycle, in which easy credit fuels asset sales and causes asset values to overheat and then collapse. The second is the procyclical nature of much of financial regulation, which typically recedes as the credit cycle heats up and overcorrects when lending contracts, thereby exacerbating the swings of the credit cycle. Countercyclical regulation responds by designing rules to become binding at the top of the business cycle, when financial firms are profitable and catastrophic risks seem small, and by easing regulation at the bottom of the business cycle in order to stimulate the economy. The third problem, which is related to the second, is financial regulators’ perennial aversion to intervention in financial markets in flush economic times. The following discussion elaborates on these problems in turn.

A. Credit Booms And Busts

Countercyclical regulation is mainly concerned with asset bubbles and the economic toll that they wreak. Historically, the most damaging asset bubbles have been real estate bubbles.

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6 See Brunnermeier et al., supra note ___, at 31.
7 This aspect distinguishes countercyclical regulation from structural regulation. Structural regulation addresses systemic risks that are constantly present, while its countercyclical counterpart seeks to address threats to financial stability that ebb and flow over time. See Elliott, Feldberg & Lehnert, supra note ___, at 3.
stoked through easy credit by banks. These types of bubbles often culminate in massive loan delinquencies and have been responsible for scores of banking crises around the globe over the years. Usually, banks respond to those crises by cutting back their lending in order to preserve capital, causing financial distress to spread to the economy at large.

Past experience shows that lenders relax their loan underwriting standards when employment and collateral values are on the upswing, making loans on easier and easier terms. Compensation systems can feed this dynamic by rewarding bankers for making higher volumes of loans. The easiest way to make more loans is by loosening lending standards in order to qualify more borrowers. So long as borrowers have the wherewithal to service the debt they incurred to finance their purchases – or so long as they can refinance out of unaffordable loans – the prices of assets financed by those loans will soar. As the cycle nears its top, borrowers, lenders and regulators typically fool themselves into thinking that the economy will not revert to the mean and good times will never end. In the process, market discipline goes out the door.

When asset values rapidly climb, those assets can become so costly that the average borrower can no longer afford a loan of the size needed to finance a purchase. As the pool of

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9 Not all asset bubbles result in systemic threats to the financial system. For example, the technology bubble in the late 1990s and early 2000s resulted in a deep decline in the U.S. stock market, but did not put financial institutions in jeopardy because that bubble did not involve bank lending in any serious way. See Brunnermeier et al., supra note ___, at 32; Reinhart & Rogoff, supra, at xlv-xliv.

10 See, e.g., Brunnermeier et al., supra note ___, at xi (“The crisis which began in the US sub-prime mortgage market in early 2007 and then spread broadly and deeply was not the first banking crisis. It was closer to the 100th.”); Reinhart & Rogoff, supra note ___, at 141-42, 147-55.

11 See, e.g., Reinhart & Rogoff, supra note ___, at 165-67, 171-73.

12 See, e.g., Caprio, supra note ___, at 3-7.


14 See, e.g., Reinhart & Rogoff, supra note ___, at 171-73.
qualified borrowers starts to shrink, demand for the asset will slump and supply will come to exceed demand. Then, like Icarus, asset prices will fall.

As prices drop, distressed borrowers will discover that the traditional escape routes – *i.e.*, refinancing their loans or selling their collateral for enough to retire their debt – are closed off. Many of them will be forced into delinquency, partly because some were poor credit risks to begin with and partly because some of the collateral is now worth less than the outstanding balances on the loans. As defaults precipitate forced sales through foreclosure, asset prices will spiral downward and inflict losses on lenders and the investors who bought the loans. Losses may start to ripple through the financial system as firms that extended credit to the weakened lenders incur losses themselves. Most lenders will respond by severely tightening credit in order to preserve their capital. As some point, however, the lenders who survive realized they overcorrected and the cycle begins anew.

Countercyclical regulation seeks to defuse this boom-and-bust cycle by making financial institutions more resilient during financial crises. Some argue that countercyclical regulation should also serve to discourage lenders from loosening credit standards excessively as the credit cycle expands and from hoarding credit at the bottom of the cycle, as I will discuss.

**B. Reversing Procyclical Design**

Countercyclical regulation has a second goal, which is to correct the procyclical aspects of financial regulatory design. Procyclical design poses concerns because it under-regulates

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15 See, *e.g.*, Judge, *supra* note ___.


when the economy is expanding and over-regulates when the economy slumps, magnifying the volatility of the business cycle.

For examples of procyclical design, consider the much-maligned Basel II capital accord. Basel II governed the minimum amount of capital that banks must hold by requiring them to hold more capital against riskier assets and allowing them to hold less capital against safer ones. This design feature is referred to as “risk-weighting” because it assigns different risk weights to assets such as loans depending on individual assets’ perceived risk.

Which risk weights to assign is not self-evident, however: the risk weights must be derived from somewhere. Basel II specified two methods for selecting risk weights, both of which are procyclical in nature. First, Basel II instructed most banks to base their risk weights on external credit ratings issued by the leading rating agencies, notably Moody’s, Standard & Poor’s, and Fitch. During the bubble culminating in the 2008 crisis, the rating agencies inflated their ratings. As a consequence of Basel II’s decision to incorporate these inflated credit ratings into the risk weights, innumerable banks skimped on capital and were undercapitalized when the financial crisis hit.

The other way of deriving risk weights is similarly procyclical in nature. Basel II had a different set of capital rules for the largest international banks. These megabanks were allowed to estimate their capital requirements using their own internal statistical models and as little as

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18 See Basel Committee on Banking Supervision, Revisions to the Basel Securitisation Framework 4, 6 (Dec. 2012).
five years of data (the so-called Internal-Ratings-Based or IRB approach). Depending on the time period, this five-year look back did not necessarily go back far enough to capture data from downswings revealing the true risk of asset classes. If the five-year period was too short to capture the full economic cycle – and in many cases it was -- those banks ended up underestimating their risk and their minimum capital levels as well.

Accordingly, a second goal of countercyclical regulation is to identify design features that exacerbate procyclicality and excise them whenever possible from financial regulations. In the Basel III initiative, the Basel Committee has undertaken a massive revision of the minimum capital rules designed, in part, to make those rules less procyclical. Similarly, there is vigorous discussion of other ways to remove or tamp down the procyclical aspects of financial regulation. Dodd-Frank took a constructive step in that direction by purging federal banking laws of provisions requiring the use of private credit ratings, which intensify cyclicality.

C. Overcoming Regulatory Inertia

Finally, countercyclical regulation concerns itself with regulatory inaction in the face of financial threats. The United States has struggled with inertia by federal prudential banking

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20 See, e.g., Ren, supra note ___, at 21-22; Rafael Repullo, Jesús Saurina & Carlos Trucharte, Mitigating the Pro-cyclicality of Basel II, 64 ECON. POL’Y 659 (2010); Hugh Thomas & Zhiqiang Wang, Interpreting the Internal Ratings-Based Capital Requirements in Basel II 19-20 (working paper 2004).

21 Caprio, supra note ___, at 38-39.


23 See, e.g., Caprio, supra note ___, at 8-9, 32.


25 For a general theoretical treatment of the problem, see, e.g., W.A. NISKANEN, BUREAUCRACY AND REPRESENTATIVE GOVERNMENT (Aldine Atherton 1971); R.L. Calvert, M.D. McCubbins & B.R. Weingart, A
regulators in recent decades, with limited success.\(^{26}\) Only with the 2008 financial crisis did overcoming regulatory inertia become a high priority for financial policymakers.

Fifty years ago, complacency by regulators was not a pressing concern because state and federal statutes of a command-and-control nature heavily regulated deposit-taking and lending by banks. But in the early 1980s, Congress and state and federal banking regulators began dismantling large swaths of this regulatory framework. In 1980, Congress preempted state usury caps for first-lien home mortgages\(^{27}\) and abolished interest rate caps on deposits.\(^{28}\) The 1980 law also raised the federal deposit insurance limit from $40,000 to $100,000.\(^{29}\) Finally, the law allowed troubled thrifts to mask insolvency, through phony accounting techniques that allowed regulators to lower the minimum net worth required of thrifts.\(^{30}\) This latter provision had the unfortunate added effect of relaxing the triggers for mandatory enforcement actions against undercapitalized thrifts.\(^{31}\)

More deregulation was on the way. Two years later, in the Alternative Mortgage Transactions Parity Act (AMTPA),\(^{32}\) Congress gave the green light to banks and thrifts to offer home mortgages with variable rates, balloon payments, and negative amortization. This set the stage for some of the most toxic forms of mortgages during the recent housing bubble. In the

\(^{26}\) See, e.g., Caprio, supra note \___, at 7.


\(^{28}\) DIDMCA, Pub. L. No. 96-221, Title II, § 202, 94 Stat. 142, 142 (1980).

\(^{29}\) DIDMCA, Pub. L. No. 96-221, Title III, § 308(a)(1), 94 Stat. 132 (1980).


\(^{32}\) 12 U.S.C. §§ 3801 \emph{et seq.}
early 1980s, Congress and the states also liberalized the types of loans and investments that banks and thrifts could make, thereby exposing those institutions to greater risk. ³³

Many of these changes were set in motion when interest rates began to rise in 1978, placing banks and thrifts under heavy financial stress. ³⁴ Back then, Regulation Q capped interest rates on deposit accounts. ³⁵ Depositors responded to the rise in interest rates by shifting their money from banks to money market funds in order to earn higher rates of interest. Meanwhile, banks became reluctant to lend where strict state usury limits prevented them from earning market rates of interest on their loans. ³⁶ Largely due to these dynamics, almost 4,000 U.S. thrift institutions were in the hole by the early 1980s. ³⁷

Given these market developments, in some ways it made sense for Congress to deregulate interest rates on deposit accounts and loans. However, the changes instituted in the early 1980s had the unfortunate effect of allowing banks and thrifts to expand into riskier activities. These activities included high-cost loans to less creditworthy borrowers, direct ownership of real estate which exposed banks to property value declines, and payment of high interest rates on deposits.

Given these growing risks, deregulation put the onus on state and federal banking regulators to oversee bank safety and soundness more closely. But instead of exercising stricter oversight, for much of the 1980s, state and federal banking regulators sat on their hands, keeping failing depository institutions afloat in a doomed attempt to allow those institutions to earn their

³⁴ See generally Barth, Caprio & Levine, supra note ___, at 160-163; White, supra note ___, at 67-69.
³⁶ See generally White, supra note ___, at 67-72.
³⁷ Barth, Caprio & Levine, supra note ___, at 157.
way back into the black. Even worse, between 1981 and 1984, the number of thrift examiners and supervisors was cut; between 1980 and 1983, so was the number of thrift examinations. Over that period, on-site examinations of banks and thrifts became fewer and farther between, particularly in regions with the most troubled institutions.

Meanwhile, scores of thrifts took on too much risk and became insolvent. Those institutions should have been promptly shut down to avoid further losses. Instead, state and federal banking regulators delayed the closure of many of those institutions, sometimes due to political pressure and sometimes because they were hoping for a turnaround. Those delays in closure – which dragged on for months or years – allowed insolvent institutions to gamble for broke, which increased the eventual losses to U.S. taxpayers when the institutions failed. At some of those institutions, no formal enforcement action had ever taken against them despite their deteriorating condition.

Putting off the inevitable inflicted a heavy price. When the 1980s thrift and banking crisis came to a close, approximately 1,300 savings and loan institutions and 1,617 banks had failed. It cost $153 billion to resolve these institutions, much of that at taxpayer expense.

Regulatory inertia roared back in the years leading up to the 2008 financial crisis. The story dates back to 1994, when Congress took action to respond to the first glimmerings of

I FDIC History, supra note ___, at 422-26, 428-30.
See, e.g., I FDIC History, supra note ___, at 428 fig 12.2 (showing numbers of problem banks in the 1980s); White, supra note ___, at 99-115.
For example, pressure from five U.S. Senators – known as the “Keating Five” – delayed the closure of Lincoln Savings & Loan. See Keating Five, N.Y. TIMES.
See, e.g., Barth, Caprio & Levine, supra note ___, at 159, 166-67; I FDIC History, supra note ___, at 439, 454-61.
I FDIC History, supra note ___, at 461. From this, the Federal Deposit Insurance Corporation concluded that there was something “lacking in the enforcement process.” Id.
I FDIC History, supra note ___, at 4 n.1, 15 tbl. 1.1.
abuses in the fledgling subprime mortgage market. That year, Congress prohibited some of the worst practices affecting subprime loans in the Home Ownership and Equity Protection Act (HOEPA).46 However, these provisions of HOEPA covered less than one percent of subprime mortgages47 and did not stop the growing tide of accusations about home loan abuses. By 2007, over thirty states and the District of Columbia had enacted anti-predatory lending statutes of their own in response to HOEPA’s deficiencies.48

These developments by the states triggered a counter-reaction from two powerful federal banking regulators in the form of aggressive preemption rulings. Previously, in 1996, the nation’s federal thrift supervisor, the former U.S. Office of Thrift Supervision (OTS), had promulgated a sweeping regulation asserting federal preemption of state laws regulating residential mortgages with respect to federal thrift institutions.49 In 2004, the Office of the Comptroller of the Currency (the OCC), which oversees national banks, issued a virtually identical preemption rule shielding national banks and their operating subsidiaries from state anti-predatory lending laws.50 Together, by 2004, the OTS and OCC were construing their preemption rules to allow national banks and federal saving associations to ignore most state consumer protection laws on mortgages. To make matters worse, neither federal agency replaced the state laws they preempted with equivalent mortgage regulations of their own for federally chartered banks and thrifts.51

47 EDWARD M. GRAMLICH, SUBPRIME MORTGAGES: AMERICA’S LATEST BOOM AND BUST 28 (The Urban Institute Press 2007).
49 Former 12 C.F.R. § 560.2.
50 Former 12 C.F.R. §§ 34.3 (mortgage lending), 7.4008 (general lending).
51 Engel & McCoy, supra note ___, at 158-59, 162, 164-68; Patricia A. McCoy & Elizabeth Renuart, The Legal Infrastructure of Subprime and Nontraditional Mortgage Lending, in BORROWING TO LIVE: CONSUMER AND MORTGAGE CREDIT REVISITED 110 (Nicolas P. Retsinas & Eric S. Belsky eds., Joint Center for Housing Studies of Harvard University and Brookings Institution Press, 2008).
The one federal regulator with the power to remedy this situation and address reckless mortgage lending across the board was the Board of Governors of the Federal Reserve System. HOEPA had an additional provision that commanded the Federal Reserve to prohibit two types of abuses: (1) unfair or deceptive mortgage acts or practices; and (2) mortgage refinance loans that were associated with abusive lending practices or that were otherwise not in the interest of the borrower. This power was extremely broad in nature because it applied to virtually all mortgage lenders, regardless of their charter type or location, and to mortgages regardless of the interest rate. However, under HOEPA’s terms, the provision could only be activated by regulation or by order. Alan Greenspan, the Fed chairman at the time, refused to adopt a rule to trigger the provision during his tenure. It was not until June 2008, after Ben Bernanke succeeded Greenspan as chair, that the Fed finally adopted a rule implementing the unfair and deceptive acts and practices provision of HOEPA. This sequence of events was a classic case of procyclical regulation because the Federal Reserve tightened regulation only after crisis struck, not before lending problems spun out of control.

Admittedly, U.S. banking regulators did start voicing concerns about the mounting risks from risky home loans starting in late 2005. But for the most part, until mid-2008, their response was muted and limited to non-binding guidances, confidential examination reports, and isolated enforcement actions against small institutions. And, just as in the 1980s savings and loan crisis, the bank examination process was watered down or absent during the run-up to 2008. One regulator – the former OTS – cut its corps of consumer compliance examiners by 17.5

53 Engel & McCoy, supra note ___, at 195-96.
55 See Engel & McCoy, supra note ___, at 168-69.
56 See id. at 164-66, 169-84, 199-04.
percent in 2002. Similarly, it later emerged that the Federal Reserve Board had declined *sub silentio* to regularly examine the nonbank mortgage lenders that were under its jurisdiction pre-crisis.57

This account of the last thirty or so years shows that regulatory inertia is sometimes the result of discretionary decisions and sometimes the result of binding legal constraints. Self-preservation and regulatory capture are often reasons why regulators use their discretion to refrain from action.58 Inaction can seem safer than action because the status quo usually attracts less immediate criticism than taking action. In other situations, inaction is the outcome of conscious deregulation by Congress and/or regulators resulting in laws or rules that prohibit intervention. Ideological opposition to government intervention is another source of government inaction that can manifest itself both through binding laws and discretionary decisions.59

Counter cyclical regulation approaches the problem of inertia in two ways. First, it seeks to correct the tendency of regulators to sit on their hands when action is needed. This discussion intersects with the larger dialogue over rules versus standards60 and looks for ways to remove discretion in the regulatory system. Second, countercyclical regulation seeks to repeal deregulatory commands that prohibit regulators from acting. There is significant debate, however, on exactly how countercyclical regulation should go about these tasks.

II. **Theories Of Countercyclical Regulation**

57 See id. at 175, 199.
59 See, e.g., Engel & McCoy, *supra* note ___, at 175-76, 183, 189-96.
Ultimately, countercyclical regulation seeks to avoid a systemic fallout from a chain of financial institution failures. Its proponents disagree, however, on how to achieve that goal. Their disagreement goes to the heart of the theory underlying countercyclical regulation.

Some economists assert that the sole objective of countercyclical regulation should be to make financial institutions more resilient in order to help the financial system better withstand economic shocks after the fact. This line of thought emphasizes the need for financial firms to build higher capital and reserves in good economic conditions when profits are high, to cushion them from losses when downturns strike.

This goal is relatively uncontroversial, apart from any objections by regulated industries themselves. Minds differ, however, on whether countercyclical regulation should go further and prick asset bubbles. Advocates of this latter approach argue that countercyclical regulation should intervene when the credit cycle heats up to stop the growth of excessive credit and risk. Under this theory, regulators should “lean against the wind” and take action while problems are small and can still be contained.

Initially, the debate over the wisdom of “leaning against the wind” revolved around two questions: whether regulators can detect asset bubbles accurately and whether monetary tools

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61 See, e.g., Brunnermeier et al., supra note ___, at 31-32; Caprio, supra note ___, at 3-7.
63 This movement is part of a larger renewed emphasis on higher minimum capital requirements for banks and other financial firms. See, e.g., ANAT ADMATTI & MARTIN HELLWIG, THE BANKERS’ NEW CLOTHES: WHAT’S WRONG WITH BANKING AND WHAT TO DO ABOUT IT (Princeton Univ. Press 2013).
64 See, e.g., Michael Bordo & Olivier Jeanne, Boom-Busts in Asset Prices, Economic Instability, and Monetary Policy (NBER working paper 8966, June 2002); Borio, supra note ___, at 5-6; Claude Borio & Philip Lowe, Asset Prices, Financial and Monetary Stability: Exploring the Nexus (Bank of Int’l Settlements, BIS working paper 114, July 2002); Brunnermeier et al., supra note ___, at 32; Stephen Cecchetti, Hans Genberg & Sushil Wadhwani, Asset Prices in a Flexible Inflation Targeting Framework (NBER working paper 8970, June 2002); William Dupor, Nominal Price versus Asset Price Stabilization (Wharton School working paper, August 2002); Stephany Griffith-Jones & José Antonio Ocampo, Building on the counter-cyclical consensus: A policy agenda 2-3 (working paper Oct. 2009); Ren, supra note ___, at 4-5.
are too blunt as instruments to deflate them. As I will discuss, there are substantial reservations on both accounts. Over time, however, the debate has become more sophisticated and begun to ask whether other underlying factors that contribute to ruinous asset bubbles – most importantly, lax credit – could be the subject of successful early intervention. In a related vein, experts are examining other regulatory tools that could nip those contributing factors in the bud more successfully than monetary policy.

Former Federal Reserve Board Chairman Ben Bernanke’s own views on the wisdom of attempting to prick bubbles evolved over time. In 2002, while he was a Fed governor under Chairman Alan Greenspan, Bernanke asserted in a speech that “‘leaning against the bubble’ is unlikely to be productive in practice.” Later though, in speeches and press conferences starting in 2010, his views changed. The Federal Reserve Board, he said in 2010, “must remain open to using monetary policy as a supplementary tool for addressing” systemic risk. Later, in a 2013 press conference in which he expressed his preference for a “tripartite approach” of improved monitoring, supervision and regulation, and better communication to markets to deal with asset

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66 See Section ___ infra.

67 See, e.g., Brunnermeier, supra note ___, at 32; Demirgüç-Kunt & Servén, supra note ___, at 30; Griffith-Jones & Ocampo, supra note ___, at 2-3.


bubbles, Bernanke nevertheless hinted that he would consider interest rate hikes too if necessary.\textsuperscript{70}

Bernanke was speaking from the trenches and no doubt his views were shaped by his harrowing personal experience as a top regulator during the 2008 financial crisis and its aftermath. His changing views also reflected the prior decade’s evolving thinking about countercyclical regulation and particularly data that were starting to stream in on the initial results of countercyclical approaches.\textsuperscript{71} Much of this evolution involved a new appreciation for the variety and breadth of possible regulatory tools for countercyclical intervention.

\section*{III. Techniques Of Countercyclical Regulation}

The overriding goal of countercyclical regulation is to address economic conditions that wax and wane during the economic cycle in order to avoid excessive build-ups of risk.\textsuperscript{72} Some countercyclical tools are \textit{time-varying}, in that their parameters fluctuate according to the business cycle.\textsuperscript{73} Other countercyclical tools maintain constant parameters throughout the business cycle and thus are \textit{fixed}.\textsuperscript{74} Despite their fixed nature, these tools are countercyclical in kind because

\begin{itemize}
\item \textsuperscript{72} Claudio Bario has referred to this as the \textit{time dimension}, which deals “with how aggregate risk in the financial system evolves over time.” Bario, \textit{supra} note ____, at 3.
\item \textsuperscript{73} This is also called the “variable approach.” See \textit{Group of Thirty, supra} note ____, at 14, 42-43. Examples include countercyclical capital buffers and dynamic provisioning.
\item \textsuperscript{74} See \textit{id.} Maximum debt-to-income ratios are one example.
\end{itemize}
they address incipient bubbles and often become increasingly binding as credit conditions heat up.\(^75\)

Countercyclical regulation encompasses a variety of policy interventions, including monetary policy, capital adequacy regulation, provisioning, and liquidity regulation.\(^76\) Other countercyclical tools have garnered less attention. Principal among them is sectoral regulation, by which I mean regulatory techniques that are designed to address heightened risks in discrete sectors of the economy such as real estate. In this section, I explore these techniques and discuss the under-recognized potential of sectoral regulation in curtailing real estate bubbles.

Three themes emerge in this overview of countercyclical tools. First, over the past fifteen years, the search for countercyclical methods has wisely moved beyond monetary policy to other, more tailored regulatory tools. Second, some countercyclical techniques, such as debt-to-income and loan-to-value ratios, seek to alter the demand for credit, while others, such as capital and reserve requirements, tackle the supply.\(^77\) Finally, countercyclical design remains in its infancy. The 2008 financial crisis put a number of countercyclical tools to the test and their effectiveness was less than convincing. Other, newer techniques that were not in effect in 2008 have not been fully tested.\(^78\) While the early returns from countercyclical tools are inconclusive, they drive home the need to refine those tools and strengthen them. In addition, these lukewarm

\(^{75}\) For this reason, these latter countercyclical tools are distinguished from *through-the-cycle tools* that seek to make financial institutions more resilient by addressing shared exposures and linkages that can jeopardize financial institutions simultaneously by exposing them to identical risks. Bario refers to this latter issue of interlinkages as the *cross-sectional dimension* of macroprudential regulation. *See* Bario, *supra* note ___, at 3.


\(^{77}\) See Elliott, Feldberg & Lehnert, *supra* note ___, at 3.

results point to the need to identify and address institutional factors that could retard those tools’ success.

**A. Monetary Policy**

Some of the earliest debates about countercyclical regulation involved the propriety of using monetary policy to deflate asset bubbles.\(^{79}\) Fueling this debate are concerns that looser monetary policy can intensify risks to financial stability.\(^{80}\) Accordingly, the focus of that debate has been on two monetary tools for slowing down lending: interest rate hikes and, to a lesser extent, tightening of reserve requirements.\(^{81}\) Traditionally, central banks have moved interest rates in response to inflation in the price of goods, not to buildups in asset prices that could jeopardize financial stability.\(^{82}\) Whether central banks should make financial stability an added goal of their discount rate models has proven to be vexing.

Federal Reserve Board chairmen have varied widely over the years in their willingness to puncture asset bubbles by raising interest rates. William McChesney Martin, Jr., Chairman of the Federal Reserve from 1951 to 1970, teed up the issue when he famously said: “I’m the fellow who takes away the punch bowl just when the party is getting good.”\(^{83}\) Former Chairman Alan Greenspan was considerably less sanguine about monetary policy’s power to halt asset bubbles. In a 2002 speech in Jackson Hole, Wyoming, for instance, Greenspan asserted: “[I]t

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\(^{79}\) *See note ___ supra* and accompanying text.

\(^{80}\) Tobias Adrian & Nellie Liang, Monetary Policy, Financial Conditions, and Financial Stability 1-13 (Fed. Res. Bank of N.Y. Staff Report No. 690, Sept. 2014), available at http://www.newyorkfed.org/research/staff_reports/sr690.pdf (last viewed January 29, 2015); *cf.* Markus K. Brunnermeier & Patrick Cheridito, Measuring and allocating systemic risk 2 (working paper July 2014), available at www.ssrn.com (“Systemic risk can build up during economic booms but only materializes when a crisis erupts. If not taken into account by regulation, this can lead to the situation that a financial system is more vulnerable when observed volatility is low, a phenomenon coined as ‘volatility paradox’...”).

\(^{81}\) For a history of the past use of reserve requirements in the United States to address bubbles, see Elliott, Feldberg & Lehnert, *supra* note ____, at 24-30.

\(^{82}\) *See, e.g.*, Ben S. Bernanke & Mark Gertler, *Should Central Banks Respond to Movements in Asset Prices?*, 91 *AM. ECON. REV.* 253 (2001); Brunnermeier et al., *supra* note ____, at 57; Demirgök-Kunt & Servén, *supra* note ____, at 26.

was far from obvious that bubbles, even if identified early, could be preempted short of the central bank inducing a substantial contraction in economic activity – the very outcome we would be seeking to avoid.”

His successor as Fed chairman, Ben Bernanke, was more receptive to addressing inflated asset prices through monetary tools, but regarded those tools as a second line of defense following monitoring, bank examinations, and dissemination of information to markets.

As Greenspan noted, any attempt to prevent asset booms and busts through interest rate hikes presents a host of difficult issues. First is the problem of which asset bubbles to pop. Arguably, the ones to prick are those fueled by lending. But say securities lending on margin is becoming overheated, while real estate lending is not. Should the Federal Reserve raise interest rates or change the margin requirements in response?

Timing is also a concern. In real time, it can be difficult for a central bank to know whether rising asset prices represent a real increase in fundamental values or a departure. This is particularly true in the early phases of an asset bubble, when intervention would be most useful. Timing errors could come at a high cost, by stunting growth and thwarting the invisible hand of asset prices in properly allocating resources. Raising interest rates to prick asset bubbles, moreover, is a fairly crude way of heading off an asset bubble. Doing so will depress values across the board, including numerous asset classes that present no imminent risk of a

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86 See, e.g., Demirgüç-Kunt & Servén, supra note ___, at 29.

87 See, e.g., Brunnermeier et al., supra note ___, at 57.
bubble. Further, stopping a housing bubble could require such large interest rate hikes that large output losses would result. Because monetary policy is such a diffuse tool for deflating asset bubbles and has such strong ancillary effects, using it for that purpose will often violate Mundell’s assignment principle that counsels banking regulators to pair policy instruments with “the objectives on which [those tools] have the most influence.” Otherwise, Mundell warned, “there will develop a tendency either for a cyclical approach to equilibrium or for instability.”

For these reasons, central banks remain skittish about their ability to accomplish both goals – fighting inflation and assuring financial stability – through monetary tools. Instead, much of central bankers’ discussion of countercyclical regulation has shifted in recent years to other tools that are better tailored to modulating boom and bust cycles, particularly by severing the feedback loop between easy credit and overblown asset prices.

**B. Capital Adequacy**

Minimum capital requirements are a mainstay of the countercyclical arsenal and take center stage in ongoing efforts to institute countercyclical financial reforms. The primacy of this approach is evident from the Dodd-Frank Act in 2010, in which Congress ordered federal prudential banking regulators to overhaul the minimum capital rules to make them “countercyclical, so that the amount of capital required to be maintained . . . increases in times of

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88 See, e.g., Demirgüç-Kunt & Servén, supra note ___, at 30.


economic expansion and decreases in times of economic contraction, consistent with the safety and soundness of the holding company or bank. Currently, efforts are underway to introduce or improve countercyclicality in capital adequacy in two distinct respects: one, by changing the capital requirements themselves and, two, by requiring prompt closure when banks become critically undercapitalized.

1. Countercyclical Capital Requirements

Capital adequacy requirements have two main objectives. One is to ensure that financial institutions have sufficient capital – in the form of shareholders’ equity or other substitutes – to absorb unexpected losses. Capital, in this sense, provides a safety cushion to ensure that any losses fall first on the company’s shareholders. By helping to internalize losses, capital regulation strives to discourage shareholders from shifting the onus of a firm’s bad decisions to creditors such as depositors or lenders or, even worse, to the federal government and taxpayers.

This perverse incentive to shift losses arises from the fact that financial institutions, like all firms, can finance their operations through a mixture of contributions by shareholders (equity) and borrowed funds (debt). Shareholders know that they can improve the return on their investment through leverage: that is, by funding the company’s activities less with equity and more with debt. Commercial banks are much more leveraged on average than non-financial companies because they finance most of their operations with debt in the form of deposits.

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96 For example, take a $10 million firm in which shareholders contribute $5 million of the working funds and debt makes up the other half. Say that the shareholders decide to invest $1 million in a project with a certain 10%
As leverage increases, shareholders are exposed to a smaller and smaller fraction of the potential losses and the safety cushion that is available to protect creditors shrinks as well. For these reasons, when a company becomes too highly leveraged, shareholders have incentives to take outsized risks because any profit will inure to them but any remaining losses will be borne by the firm’s creditors if the shareholders are wiped out. This was precisely the reason for the demise of Bear Stearns and Lehman Brothers in 2008. Capital adequacy rules seek to reverse these shareholder incentives by requiring financial firms to hold more equity compared to debt.  

Early minimum capital requirements were confined to a simple leverage ratio, which is typically defined by dividing shareholders’ equity by average total assets. The beauty of this ratio is that all assets are weighted the same, making it hard to manipulate. In 1988, however, global financial regulators became enamored of the risk-based approach in the Basel I Capital Accord. Under the risk-based approach, financial institutions were allowed to hold less capital against “safer” assets. Basel I divided assets into four categories according to risk and each of those four “buckets” received a different risk weight (ranging from 0 percent for safer assets to 100 percent for the riskiest ones). Banks were required to hold capital of at least 8 percent of their total risk-weighted assets.

Over time, Basel I manifested a number of problems. Ironically, it reduced the total capital held in the financial system because less capital had to be held against assets that were

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97 Whether higher capital levels will reduce risk-taking by banks remains a matter of intense debate. Caprio argues, for instance, that if shareholders and managers have a target rate of return and supervisors cannot observe their decisions on a real-time basis, higher capital requirements might push them toward riskier decision-making. Compare, e.g., Admati & Hellwig, supra note ___, at 115-28 with Caprio, supra note ___, at 23-24.

98 Brunnermeier et al. argue that the denominator should be limited to common equity, not total equity, to better align shareholders’ incentives. Brunnermeier et al., supra note ___, at 34-36.
deemed safe. Similarly, Basel I did not take account of systemic risk.\textsuperscript{99} Finally, the Basel I risk weights were easy to manipulate.

There were numerous ways to game the risk weights.\textsuperscript{100} Those weights underestimated the risk that certain assets posed. For example, U.S. residential mortgages and sovereign debt were seriously underweighted in view of their actual risk, as the 2008 financial crisis and the European Union debt crisis showed. That encouraged banks to concentrate investments in those asset classes. In addition, Basel I’s design encouraged banks to load up on the riskiest assets within a given risk weight bucket. Further, banks did not have to hold full capital against assets that they shifted off their balance sheets via securitization loans or structured investment vehicles (SIVs), even when banks retained exposure to those items through formal or informal guarantees.\textsuperscript{101} This last problem helped fuel the surge in mortgage-backed securities and collateralized debt obligations that nearly brought down the global financial system in 2008.

U.S. banking regulators responded to these problems by unveiling the Basel II approach in December 2007, unfortunately just in time for the financial crisis. Basel II took some initial steps to address operational risk and trading risk, but not systemic risk.\textsuperscript{102} In addition, as mentioned earlier, Basel II altered the risk bucket system for assigning risk weights. Under Basel II, smaller banks had to base their risk weights on ratings by the credit rating agencies,

\textsuperscript{99} See DANIEL K. TARULLO, BANKING ON BASEL: THE FUTURE OF INTERNATIONAL FINANCIAL REGULATION (Peterson Institute, 2008).
\textsuperscript{100} For general discussion of these problems, see Peter King & Heath Tarbert, Basel III: An Overview, 30 BANKING & FINAN. SERVICES POL.’Y REPORT 1, 2 (May 2011); Patricia A. McCoy, Musings on the Seeming Inevitability of Global Convergence in the Regulation of Banking Law, 7 CONN. INS. L.J. 433 (2000-2001).
\textsuperscript{101} Banks that originated mortgages and then securitized them normally agreed to recourse clauses in which they would buy back any mortgages that involved early payment default or fraud. See Kathleen C. Engel & Patricia A. McCoy, A Tale of Three Markets: The Law and Economics of Predatory Lending, 80 TEX. L. REV. 1255, 1288, 1361 (2002); Robert T. Miller, RMBS Put-Back Litigations and Efficient Allocation of Endogenous Risk Over Time, ___ REV. BANKING & FINAN. L. ___ (forthcoming 2015). In a slightly different vein, for reputational reasons in 2007, Citibank voluntarily agreed to take $49 billion in assets from troubled SIVs back onto its books. Dan Gallagher, Citi Plans to Absorb $49 Billion in SIV Assets onto Balance Sheet, MARKETWATCH, Dec. 13, 2007.
while the largest international banks generated their own risk weights using their own internal risk models. These models were only so good as their economic assumptions and inputs and ended up severely underestimating losses in the run-up to the recent crisis. In addition, Basel II gave financial institutions opportunities to rig their models in order to hold less capital. Regulators’ ability to detect these problems and evaluate the models was questionable.

The 2008 crisis revealed another problem, which was the procyclical bent of the Basel rules. At best, Basel I was indifferent to the business cycle and did not require banks to accumulate additional capital when times were good. Basel II went further and was overtly procyclical. As discussed earlier, Basel II’s decision to rely so heavily on private credit ratings and internal models encouraged financial institutions to underestimate their risks significantly in flush times.

For all of these reasons, Basel II came under attack in the aftermath of 2008. Chastened, regulators returned to the drawing board and the G20 endorsed higher capital levels in the new Basel III Accord in November 2010.

As this account suggests, minimum capital regulation has had a checkered history of success. The numbers tell the story. During the housing bubble, from 2005 through 2008, capital levels steadily declined at insured U.S. banks and thrifts. In 2006, overall core capital for the U.S. banking industry stood at 8.25 percent; by 2008, it had dropped to 7.48 percent. Meanwhile, one of the reasons Henry Paulson, Jr., and Ben Bernanke argued so vehemently for TARP bailouts in the late fall of 2008 was that regulators suspected that almost all of the largest

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103 See, e.g., King & Tarbert, supra note ___, at 3. Regulators had allowed major banks to phase in the Basel II system some time before that system was formally unveiled in December 2007.


105 Federal Deposit Insurance Corporation, Statistics on Depository Institutions (computations by author).
U.S. banks were insolvent. Across-the-board capital infusions to the nation’s top banks gave regulators cover to bail out the sickest of those institutions without having to close them down. Despite these cash infusions, by the end of 2008, nearly one quarter of all insured U.S. depository institutions were losing money.

The severity of these losses caused supervisors to rethink capital supervision in Basel III. One of Basel III’s overarching objectives is to boost the amount and quality of capital. In addition, Basel III consciously incorporates countercyclical elements in order to prod financial institutions to build up their capital during economic upswings. One of those elements will require banks to evaluate risks over the entire economic cycle, not just five years. Another element, called a countercyclical buffer, will require banks to hold added capital, over and above the ordinary minimum level, when credit conditions start to overheat. On top of this, Basel III vests regulators with authority to impose an extra capital conservation buffer of up to 2.5 percent in order for global systemically important banks to avoid limitations on dividend payments and

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106 In a private interview with the Financial Crisis Inquiry Commission, then Fed chairman Bernanke stated that only one of the financial firms that came under pressure in fall 2008 “was not at serious risk of failure.” Richard Blackden, Only one US bank was safe from collapse during financial crisis, says Fed’s Ben Bernanke, THE TELEGRAPH (Jan. 28, 2011), available at http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/8287381/Only-one-US-bank-was-safe-from-collapse-during-financial-crisis-says-Feds-Ben-Bernanke.html (last viewed February 9, 2015). Citigroup and Bank of America Corporation were in such dire shape that they each eventually received two TARP bailouts, for a total of $45 billion apiece. See Bailout Recipients, Pro Publica, available at http://projects.propublica.org/bailout/list (last viewed Aug. 26, 2013).

107 Federal Deposit Insurance Corporation, Statistics on Depository Institutions (computations by author).

108 See Ren, supra note ___, at 21-23.

bonuses. The largest banks and bank holding companies must also undergo macroprudential stress tests to determine whether they will have sufficient capital in times of financial stress. Basel III further superimposes a simple 3 percent leverage ratio on top of the risk-based capital ratio. The leverage ratio is an important step forward because it cannot be easily gamed.

In a similar vein, Basel III is the first global framework to impose minimum liquidity standards for risks posed by financial institutions to the financial system as a whole. The centerpiece of that approach is Basel III’s directive to financial institutions to rely more on long-term debt and to hold sufficient liquid assets to offset any runs on their short-term debt. The purpose of these requirements is to push financial institutions to fund their long-term assets with long-term sources of funds, instead of short-term loans of the kind that toppled Bear Stearns and Lehman Brothers.

Despite the Basel III initiative, the jury is out on whether it will succeed, especially given the incremental nature of its reforms. Basel III, for example, leaves the internal-ratings-based

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11 See, e.g., Group of Thirty, *supra* note ___, at 45, 48-50.


2. \textbf{Prompt Corrective Action Rules}

Despite the Basel Accord’s inherent procyclicality, surprisingly one of the earliest U.S. experiments with countercyclical design involved capital adequacy. In the aftermath of the 1980s savings and loan crisis, Congress was disturbed at regulators’ protracted delay in closing down insolvent banks and thrifts. In response, in the Federal Deposit Insurance Corporation Improvement Act of 1989 (FDICIA), Congress enacted a general rule that requires federal banking regulators to close a failing depository institution within ninety days after the
institution’s leverage ratio falls below 2 percent.\textsuperscript{117} This rule – known as the prompt corrective action rule or PCA – was an early attempt by Congress to impose a binding, objective rule on federal regulators in order to constrain their discretion and \textit{force} them to act. Prompt corrective action is countercyclical in that respect.

During the recent financial crisis, prompt corrective action had some partial success. For the most part, federal banking regulators did close critically capitalized banks and thrifts according to the timetable laid out in the prompt corrective action statute.\textsuperscript{118} This suggests that the 1989 law successfully insulated those regulators from political pressure to prolong ailing banks’ survival.

At the same time, the hope was that mandatory early closure would ensure that critically undercapitalized institutions were closed while they still had equity, thereby shielding the Deposit Insurance Fund from any losses. The reality proved otherwise. Although the use of prompt corrective action increased tenfold between 2008 and 2011, every bank closed under PCA during that period inflicted losses on the Deposit Insurance Fund,\textsuperscript{119} sending the Fund into the red in 2010.\textsuperscript{120} This suggests that the 2 percent tripwire for closure was set too low and need to be raised. If that tripwire was raised to a meaningful level, however, there is reason to think that prompt corrective action could work as it was intended.

\textbf{C. Provisioning}

\textsuperscript{117} 12 U.S.C. § 1831o(c)(3)(B), (h)(3).
Provisioning rules require banks to set aside reserves for losses on individual loans. In some sense, these rules resemble capital requirements, except that capital rules address unexpected losses while provisioning rules address anticipated ones. The main purpose of provisioning is to increase the resilience of financial institutions in the event of a crisis.

Traditionally, provisioning rules have had a procyclical effect because they have been computed based on losses already incurred, instead of on projected future losses. This backward-looking approach produces low levels of reserves when economic conditions are favorable and high levels of reserves during economic declines. As a result, by the time that losses begin to mount, banks often have inadequate reserves to cover them. That was exactly what happened while the housing bubble was gathering steam from 2002 to mid-2006, when U.S. banks steadily slashed their loan loss reserves, measured by reserves divided by assets.¹²¹

Countercyclical regulation attempts to reverse this sequence through a new approach known as *dynamic provisioning*. When the economy heats up, dynamic provisioning activates a component in the algorithm for loss reserves that calculates those reserves as if the economy was contracting. Later, if the economy takes a nosedive, that component is set to zero and banks can draw on the reserves that they accumulated during the upswing to absorb their losses.¹²²

It is not yet clear whether dynamic provisioning helps restrain asset bubbles. Spain adopted dynamic provisioning in 2000; later Colombia, Peru, Bolivia and Uruguay followed suit.¹²³ This new approach to loan loss reserves, however, was not enough to stop a credit bubble in the Spanish banking system from bursting after 2008.¹²⁴

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¹²¹ See Engel & McCoy, supra note ____, at 212 figs. 11.1 & 11.2 (computations by authors).
¹²² Caprio, supra note ____, at 22; see also Ren, supra note ____, at 11-19.
¹²⁴ Caprio, supra note ____, at 13-23; Ren, supra note ____, at 11-19; see also Brunnermeier et al., supra note ____, at 37. But see Carlos Trucharte & Jesús Saurina, *Spanish Dynamic Provisions: Main Numerical Features*, 25
The International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB) took a different approach to countercyclical provisioning when they issued their so-called “expected loss provisioning” proposal in 2011. Under that proposal, accountants would estimate loan losses over the loan’s remaining life rather than basing their estimates on losses already incurred. However, a loan’s remaining life may not coincide with a full business cycle, which means that some degree of procyclicality may persist. Additionally, if companies obtain too much discretion under this new approach, they may use provisioning to smooth income in other, misleading ways.125

Suffice it to say, it is too early to tell whether countercyclical reforms to traditional provisioning practices will have their intended effect. Ultimately, FASB elected not to adopt the IAIS proposal in the United States.126 There is evidence that Colombia’s provision helped dampen the credit cycle,127 while Spain’s experience with dynamic provisioning made domestic banks more resilient but did not curb the credit boom.128 More work is needed on how to design countercyclical provisioning for greater success.

D. Sectoral Regulatory Tools

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125 Caprio, supra note ___, at 12-13; Ren, supra note ___, at 11-13, 18-19.
128 Borio, supra note ___, at 6; Caprio, supra note ___, at 13-23; Ren, supra note ___, at 11-19; see also Brunnermeier et al., supra note ___, at 37.
A final set of countercyclical tools targets sectors that are prone to asset bubbles or are likely to exacerbate a bubble’s effects. In the United States and many other countries, the most prominent of those sectors has been real estate finance.

Real estate lending is an obvious sector to target because the most destructive asset bubbles historically have involved real estate. The 1980s savings and loan crisis was driven by real estate credit, as was the 2008 debacle, and both crises sparked prolonged recessions. Across the world and over the centuries, bubbles fueled by real estate loans have had the most devastating economic effect, both in advanced economies and emerging markets.¹²⁹

To date, sectoral tools have mostly been used to prevent real estate lending standards from deteriorating during business cycles. Some of these sectoral tools operate by constraining the demand for credit, including maximum loan-to-value ratios, debt-to-income caps, and other rules governing borrowers’ ability to repay.¹³⁰ Other sectoral tools, especially higher capital risk weights for targeted sectors, seek to restrain the supply of credit.¹³¹ By providing regulatory guardrails, these instruments seek to prevent reckless lending and the resulting impetus for booms and busts in real estate prices.

So far, sectoral tools have not received the attention they deserve. Most of the discussion of countercyclical regulation has focused on monetary policy and on minimum capital standards and rules governing provisioning. In the meantime, the Dodd-Frank Act authorized a new suite of sectoral tools that directly address the types of lax credit conditions that can cause asset bubbles to expand and explode.

¹²⁹ Reinhart & Rogoff, supra note ___, at 158-62; Schularick & Taylor, supra note ___, at 1032.
¹³⁰ The federal government has a long history of using these and other techniques to regulate underwriting standards for loans, mostly directed at depository institutions but sometimes at nonbank lenders as well. While the normal purpose of those rules was safety and soundness or consumer protection, sometimes it was to contain credit bubbles as well. For a thorough history, see Elliott, Feldberg & Lehner, supra note ___, at 9-17.
These sectoral tools are a valuable addition to the countercyclical portfolio for at least two reasons. Unlike monetary policy, sectoral tools are specifically designed to prick asset bubbles while they are inflating. As such, sectoral tools attack incipient bubbles directly. Further, sectoral tools have the potential to dampen systemic risk by stopping imprudent lending and an ensuing race to the bottom in credit standards. In that regard, initial findings have concluded that sectoral tools, when tightened, are effective in restraining the growth of credit during expansions but less successful in encouraging the growth of credit during downturns.132

1. Loan-to-Value Limits

Of all the sectoral tools, caps on loan-to-value ratios have received the most attention. These caps limit how much a debtor can borrow against the value of a parcel of real estate.

Where the maximum loan-to-value ratio is 80 percent, for example, the most that a homeowner can borrow is 80 percent of the appraised value of the home.

It is well-established that higher loan-to-value ratios are positively associated with higher probabilities of default.133 For this reason, federal banking regulators expect banks to limit their commercial real estate loans to stated maximum loan-to-value ratios.134 Currently, however, the federal government has no legally mandated loan-to-value caps for residential real estate loans.

Outside of the United States, a growing number of countries, including Canada, China,

132 See Borio, supra note __, at 6; Elliott, Feldberg & Lehnert, supra note __, at 47.
134 Under federal bank regulatory guidelines dating back to 1992, loans secured by raw land are supposed to be limited to a highly conservative loan-to-value ratio of sixty-five percent, followed by seventy-five percent for land development loans. The top loan-to-value ratio for construction loans for commercial, other non-residential, and multi-family residences is eighty percent, while the maximum ratio for construction loans for 1 to 4 family residences and improved property is eighty-five percent. See 12 C.F.R. pt. 34 subpt. D, app. A; 12 C.F.R. pt. 208 app. C; 12 C.F.R. pt. 365 app. A.
Colombia, the Hong Kong SAR, Malaysia, the Republic of Korea, Singapore, and a number of Eastern European nations, have adopted maximum loan-to-value ratios as part of their countercyclical arsenals.\textsuperscript{135}

Loan-to-value caps have strong potential as a countercyclical tool because lower loan-to-value ratios can keep housing prices in check and also credit growth.\textsuperscript{136} Nevertheless, these caps are not failsafe.\textsuperscript{137} When collateral values are rising, borrowers can take on more debt because the cap normally remains constant. Similarly, a tough cap alone does not prevent a borrower from later incurring additional debt that could impair his or her ability to repay an earlier mortgage. Such debt could be unsecured or take the form of a junior mortgage.\textsuperscript{138} In addition, loan-to-value ratios can be -- and have been -- rigged by inflating the underlying appraisals.\textsuperscript{139}

After 2008, the fate of a U.S. proposal to impose risk retention requirements on securitizers for all residential loans with loan-to-value ratios exceeding 70 percent illustrated the tough social tradeoffs involved in imposing those limits. The proposal provoked fierce controversy -- both from realtors and from consumer groups -- because of the adverse effect

\textsuperscript{135} See Adrian & Liang, supra note ___, at 21; Group of Thirty, supra note ___, at Annex II; International Monetary Fund, Key Aspects of Macroprudential Policy—Background Paper, supra note ___, at 18-19, 22; Ren, supra note ___, at 29. In addition, some countries, including Australia, India, Israel, and Spain, attach higher risk weights to mortgages with higher loan-to-value ratios for purposes of calculating capital adequacy requirements. See, e.g., International Monetary Fund, supra, at 18-19.


\textsuperscript{137} See, e.g., Adrian & Liang, supra note ___, at 20-21.

\textsuperscript{138} See Brunnermeier et al., supra note ___, at 53.

those limits would have had on access to credit.⁴⁰ Very few consumers of modest means can muster a down payment of even 20 percent.⁴¹ These disparities are particularly pronounced for minority borrowers. Researchers at the University of North Carolina (Chapel Hill) and the Center for Responsible Lending concluded, for instance, that 75 percent of African-American borrowers and 70 percent of Latino borrowers with performing loans could not have afforded a 20 percent down payment requirement when they first obtained their mortgages.⁴² Accordingly, a search has been underway in the United States for other, more finely tuned sectoral tools that could help prevent real estate bubbles without impinging so heavily on access to credit.

2. Debt-to-Income Limits

Debt-to-income limits are another common way of reducing default risk. These caps restrict a borrower’s monthly payments for mortgage debt and other extensions of credit to a set

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percentage of the borrower’s gross income. Prior to the housing bubble, for example, under their manual underwriting guidelines, the housing finance giants Fannie Mae and Freddie Mac would not buy a mortgage unless the monthly payment for principal, interest, insurance and taxes was no more than 28 percent of the borrower’s monthly gross income. More recently, the Consumer Financial Protection Bureau (CFPB) imposed a much more liberal maximum debt-to-income ratio of 43 percent on mortgages known as “qualified mortgages” that clothe lenders with favorable legal treatment in its 2013 ability-to-repay rule. Debt-to-income caps are also used in the Republic of Korea and in the Hong Kong SAR.

Lower debt-to-income ratios are positively correlated with better default rates and slower growth in housing credit. But like loan-to-value caps, these ratios are relatively blunt as regulatory tools go. A high-income borrower, for instance, may well be able to repay a loan even with a high ratio of debt to income. Meanwhile, a lower-income borrower who meets the debt-to-income test may still not have enough to live on after the monthly mortgage payment. As this suggests, the debt-to-income ratio does not address the central issue, which is how much residual income a borrower has left to work with each month after sending in the mortgage payment.

143 Under that rule, home mortgages that meet the 43% cap and certain other requirements make the lender eligible for protection from lawsuits by borrowers who claim that the lender failed to make a reasonable determination of the borrower’s ability to repay. See Bureau of Consumer Financial Protection, Ability-to-Repay and Qualified Mortgage Standards Under the Truth in Lending Act (Regulation Z): Final rule; official interpretations, 78 Fed. Reg. 6408 (Jan. 30, 2013); see also Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1412, 124 Stat. 1601 (2010) (giving regulators discretion to include a debt-to-income test in the definition of a qualified mortgage).

144 See Ren, supra note ___, at 29.


check. The only major lending program that uses a residual income test, however, is the Veterans Administration in its guaranteed loan program for military veterans.\(^{147}\)

And like loan-to-value ratios, debt-to-income ratios can be gamed. One way to do that is to falsify the amount of income that is reported.\(^{148}\) Another way is to take on additional unsecured debt after the mortgage is incurred. Due to all of these concerns, attention in the United States has shifted to a third sectoral technique for constraining credit risk, namely, ability-to-repay rules.

3. Ability-to-Repay Rules

Dodd-Frank’s biggest innovation involving sectoral rules was its adoption of an ability-to-repay requirement in 2010.\(^{149}\) That provision states that “no creditor may make a residential mortgage loan unless the creditor makes a reasonable and good faith determination . . . that, at the time the loan is consummated, the consumer has a reasonable ability to repay the loan,” including all associated taxes, insurance, and homeowners’ assessments.\(^{150}\) The Consumer Financial Protection Board issued a final rule implementing this provision in January 2013.\(^{151}\)

\(^{147}\) Bureau of Consumer Financial Protection, *Ability-to-Repay and Qualified Mortgage Standards Under the Truth in Lending Act (Regulation Z): Final rule; official interpretations*, 78 Fed. Reg. 6408, 6486-87 & n.117 (Jan. 30, 2013). In a somewhat different context, the Consumer Financial Protection Bureau’s ability-to-repay rule provides that borrowers with subprime qualified mortgages can prove a violation of that rule “by showing that, at the time the loan was originated, the consumer's income and debt obligations left insufficient residual income or assets to meet living expenses.” *Id.* at 6409; *see also id.* at 6462, 6479, 6485-87, 6511-16, 6525, 6528; 12 C.F.R. § 1026.43(e)(1). Preliminary research suggests that the VA residual income test is successful in lowering default rates. *See* Laurie Goodman, Ellen Seidman & Jun Zhu, *Is residual income the key to the superior performance of VA loans?*, Blog.metrotrends.org (July 16, 2014), available at http://blog.metrotrends.org/2014/07/residual-income-key-superior-performance-veterans-administration-loans/ (last viewed February 15, 2015).


The ability-to-repay rule is of landmark significance in a number of respects. It represents a radical departure from the attitude once held by many federal regulators and members of Congress that it was in lenders’ self-interest to seek to ensure the repayment of loans.\footnote{See, e.g., Engel & McCoy, \textit{supra} note \___, at 192-93.} As the financial crisis sadly showed, that old incentive system broke down with the rise of securitization. Once lenders realized that they could make money upfront from the fees they charged to borrowers and their proceeds from selling loans, they slashed their lending standards, knowing that they could pass bad loans and the heightened default risk that those loans posed on to unsuspecting investors.

The rule also breaks new ground by operationalizing the meaning of a “reasonable determination” of the ability to repay in certain important respects. Now the loan underwriter’s determination must be based on “verified and documented information” regarding the borrower’s income and assets.\footnote{Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1411(a)(2), 124 Stat. 1601 (2010).} This rules out the dangerous practice of low-documentation and no-documentation loans that flourished during the housing bubble. As a result, a lender can no longer approve a mortgage based only on an assertion by a borrower or broker as to the borrower’s wages or assets.\footnote{Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1411(a)(2), 124 Stat. 1601 (2010).} This will fundamentally reduce the opportunities for falsification and for rigging debt-to-income ratios and other underwriting tests. This should also cut default rates on home loans because stated income loans made during the housing boom were associated with markedly higher default rates.\footnote{See, e.g., Adam Ashcraft, Paul Goldsmith-Pinkham & James Vickery, MBS Ratings and the Mortgage Credit Boom (Federal Reserve Bank of New York Staff Report no. 449, May 2010) (mortgage-backed securities with higher rates of low-documentation loans performed worse); Michael LaCour-Little & Jing Yang, Taking the Lie Out of Liar Loans (working paper Aug. 30, 2009), available at http://www.fhfa.gov/webfiles/15048/website_lacour.pdf.}
Still another notable aspect of the rule is its command that lenders must take a borrower’s other indebtedness and any other credit extensions secured by the home into account when ascertaining the ability to repay.\(^\text{156}\) This means that a lender cannot base its underwriting analysis solely on the amount of equity that the borrower has in the home\(^\text{157}\) in the cynical expectation of seizing that equity if the borrower ends up in foreclosure. It also means that every time the borrower seeks to encumber the property with more debt, the new lender must evaluate the borrower’s ability to repay anew. That will help prevent evasion of loan-to-value and debt-to-income tests, as well as a repeat of equity stripping scams that typified the subprime market in the 2000s.\(^\text{158}\)

A sister clause in Dodd-Frank works in tandem with this provision by outlawing the most common ways of artificially rigging the monthly payment to make it appear smaller for purposes of underwriting. Now underwriters must assume that all loans are fully amortizing when evaluating a borrower’s ability to repay, which will have the effect of boosting the size of loan payments for purposes of that determination. Similarly, for adjustable-rate loans, underwriters must use the monthly payment based on the fully indexed rate and not on a low initial teaser rate.\(^\text{159}\)

Dodd-Frank discouraged violations of the ability-to-repay rule with potentially strong oversight and sanctions. Compliance with the rule is subject to federal examination and

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\(^\text{157}\) Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1411(a)(2), 124 Stat. 1601 (2010) (a lender’s determination of a consumer’s ability to repay cannot be based on his or her “equity in the dwelling or real property that secures repayment of the loan”).

\(^\text{158}\) “Equity stripping” refers to schemes where a lender urges a borrower to refinance repeatedly in order to generate successive rounds of closing fees. Usually, the closing fees are financed and tacked on to the principal, which sometimes causes the monthly payments to go up. Equity stripping schemes often occur during periods of rising home prices, where lenders look to the value of the collateral alone, and not to borrowers’ financial capacity, for repayment of the loan.

\(^\text{159}\) Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1411(a)(2), 124 Stat. 1601 (2010). The fully indexed rate is the rate produced by adding the index rate on the date the loan is made to the margin that goes into effect after the teaser rate expires. \textit{Id.}
In addition, Dodd-Frank authorized private relief under certain circumstances. Injured borrowers can bring a private right of action for violations of the ability-to-repay rule in the first 3 years following origination and can also raise a defense to foreclosure based on those violations without time limit. However, lenders enjoy a presumption of compliance with the ability-to-repay rule so long as the loan meets the requirements for a qualified mortgage.

It is too early to know whether these sectoral tools will deflate real estate bubbles. However, there are reasons to think that these tools might succeed where monetary policy, capital regulation, or provisioning rules might be lacking. Sectoral tools directly target the volume of credit by prohibiting specific types of loans or underwriting practices that have been endemic to housing bubbles in the past. In addition, the ability-to-repay standards and the debt-

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160 Authority for supervising institutions for compliance with the ability-to-repay rule is divided between the CFPB, which examines non-depository institutions and depository institutions with total assets of more than $10 billion, and state and federal prudential banking regulators, which are charged with examining smaller depository institutions. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 1024(a)(1)(A), 1025-26, 124 Stat. 1601 (2010). In addition, state attorneys general may sue mortgage lenders, including banks, in court for violations of Bureau rules, including the ability-to-repay rule. Id. § 1042(a).


162 Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1412, 124 Stat. 1601 (2010). The presumption is an irrebuttable presumption for all qualified mortgages except for higher-priced qualified mortgages, which only afford a rebuttable presumption. In order to rebut the presumption of a reasonable determination of ability to repay in a higher-priced covered transaction, a borrower must show that the lender did not make a reasonable and good faith determination of his or her repayment ability at the time of consummation, by showing that his or her income, debt obligations, alimony, child support, and the borrower’s monthly payment (including mortgage-related obligations) on the mortgage at issue and on any simultaneous loans of which the lender was aware at consummation would leave the borrower with insufficient residual income or assets other than the value of the dwelling (including any real property attached to the dwelling) that secured the loan with which to meet living expenses, including any recurring and material non-debt obligations of which the lender was aware at the time of consummation. 12 C.F.R. § 1026.43(e)(1). A higher-priced covered transaction includes most home mortgages with an annual percentage rate that exceeds the average prime offer rate for a comparable transaction as of the date the interest rate is set by 1.5 or more percentage points for a first-lien covered transaction, or by 3.5 or more percentage points for a subordinate-lien covered transaction. 12 C.F.R. § 1026.43(b)(4).

Subject to certain exceptions for government-insured or government-guaranteed loans, in order for a mortgage to be a qualified mortgage, it must be fully amortizing, total points and fees must not exceed 3% of the total loan amount, the debt-to-income ratio may not exceed 43%, and the loan term may not exceed 30 years. In addition, the income and financial resources that the borrower relied on to qualify for the loan must have been verified and documented. Adjustable-rate loans must also be underwritten to the maximum interest rate during the first five years. Any prepayment penalties in qualified mortgages are subject to strong restrictions. Id. §§ 1412, 1414(a); Bureau of Consumer Financial Protection, Ability-to-Repay and Qualified Mortgage Standards Under the Truth in Lending Act (Regulation Z): Final rule; official interpretations, 78 Fed. Reg. 6408 (Jan. 30, 2013) (codified at 12 C.F.R. § 1026.43).
to-income ratios adopted under the Dodd-Frank Act apply to all mortgage originators across the country, whether state- or federally chartered and banks or nonbanks. Consequently, mortgage lenders cannot shop regulators, jurisdictions, or legal regimes in order to escape those standards. Capital rules and provisioning rules, in contrast, are easier to arbitrage because they do not normally apply to nonbank lenders.

The importance of the ability-to-repay rule and the CFPB’s exclusive role in promulgating that rule has another, very different ramification. It is a mistake to ignore the role of market conduct supervisors such as the CFPB in countercyclical regulation. The centrality of consumer financial protection in ensuring sensible loan underwriting standards – particularly for home mortgages – underscores the vital role that market conduct regulators such as the CFPB will play in the federal government’s efforts to prevent future, catastrophic real estate bubbles.

To summarize, the past fifteen years has ushered in an exciting period of exploration and experimentation regarding different types of regulatory techniques to dampen economic cycles. While initial results are generally promising, it is too soon to tell whether these tools will succeed at their task in their current or some modified form. The best way to design these tools – and the choice of the best tool for a given situation – will require more experimentation and evaluation in years to come.

Regulators are also grappling with the fact that the current kit of countercyclical tools is highly bank-centric. Since the late 1980s, the majority of outstanding private debt held in the


United States was originated in the capital markets or by other nonbanks. Consequently, countercyclical requirements that are limited to commercial banks will not bind lending outside of that sector. The Financial Stability Board has floated the idea of time-varying margin or haircut requirements for short-term nonbank loans and repo transactions, but so far the countercyclical aspects of that proposal have not gained traction.

These technical design and coverage considerations are pressing and real. Yet they are not the only challenges facing countercyclical initiatives. As the next section discusses, other, considerable hurdles must be surmounted before robust countercyclical regulation can become a reality.

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In the Securities Exchange Act of 1934, Congress authorized the Federal Reserve Board to limit the leverage on stock purchases by investors by establishing minimum margin requirements. See Elliott, Feldberg & Lehnert, supra note ____, at 17-21; 12 C.F.R. §§ 220.4(b)(1), 220.12(a).
IV. Challenges

Today’s focus on dampening financial cycles is badly overdue and worth the effort being undertaken. It is important to remember, however, that regulatory tools that look promising on paper can encounter problems in implementation.\(^\text{168}\) In this section, I explore five major challenges to the successful execution of countercyclical regulation. These five challenges all involve the institutional settings in which countercyclical regulation would be implemented. If Congress and policymakers are deaf to these hurdles, in all likelihood countercyclical regulation will lack the institutional prerequisites it needs to thrive.

The first of these challenges concerns the federal government’s data collection initiatives. Those initiatives continue to lag and impede efforts to monitor the economy for emerging financial risks. For the most part, this is not for lack of statutory authority but due to delays in implementation.

Second, and in a related vein, financial regulators need to do more to institutionalize an early response system to nascent threats. How to track threats from new financial products and respond to them pose particular challenges.

Justifying intervention through rules when risks are small presents a third obstacle. Not only do regulators need to justify intervention to internal and external audiences, they may have to defend those decisions in court if challenged. The D.C. Circuit’s recent spate of hostile decisions overturning rules by the Securities and Exchange Commission on cost-benefit grounds underscores the difficulty of that task.

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The fourth problem, regulatory capture and inertia, goes hand-in-hand with the third. Countercyclical regulation offers some fresh ideas to deal with that problem, which I will explore.

Finally, countercyclical regulation – like all regulation – must anticipate the prospect of regulatory arbitrage. As I discuss, the Dodd-Frank Act took some first tentative steps toward a new organizing principle for financial regulation – oversight according to risk, instead of entity or product – that could significantly curb domestic arbitrage. Federal financial regulation needs to be reorganized wholesale according to that principle, however, in order for arbitrage to be seriously taken in hand. International arbitrage remains a separate challenge.

These five challenges are not the only hurdles that regulators and society will face in moving to a countercyclical approach. But they are significant ones and ones that have not received sufficient attention. While these obstacles are not insuperable, they must be squarely confronted in order for countercyclical regulation to be a success.

A. Knowledge Requires Data

Countercyclical regulation depends on intervention when risks are small. This sort of early intervention requires a robust ability to monitor the economy and quickly detect mounting risks.169 That, in turn, requires data.

In the aftermath of the 2008 collapse, it became apparent how little data financial regulators had at their disposal in trying to contain the crisis. The two federal authorities at the controls – the Treasury Department and the Federal Reserve Board – were flying blind when Bear Stearns pleaded for a bailout in March 2008. They did not know who had financial exposure to

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the firm and whether those counterparties would fail if Bear Stearns reneged on its debts. The government confronted yet another information black hole when it had to sort through the size and state of over-the-counter credit default swap exposures during AIG’s bailout in the fall of 2008.

In 2008, the federal government also suffered from an information deficit involving residential mortgages. There was no one, comprehensive loan-level data set covering all residential mortgages made in the United States. The government had not assembled those data. Nor could it buy the data in a single data set because the best available data sets each covered only part of the market. To monitor loans bought by Fannie Mae or Freddie Mac, federal agencies had to acquire one data set; to analyze loans packaged into private-label mortgage-backed securities, they had to acquire another. Loans insured by the Federal Housing Administration (FHA) were covered by a third data set, while loans held in portfolio by national banks were the subject of a fourth. Home Mortgage Disclosure Act (HMDA) data afforded the closest thing to full market coverage, but those data lacked numerous crucial data fields on loan origination and did not report on loan performance at all. Accordingly, any regulator wanting an overview of the entire home mortgage market had to piece the picture together from multiple and sometimes incompatible sources.

These residential mortgage data sets had other problems. Publicly available data were scant and federal agencies with better data were not always willing to share those data with other agencies. As a result, federal agencies were heavily reliant on costly proprietary databases that

170 See, e.g., Engel & McCoy, supra note ___, at 89-90.
171 See, e.g., id. at 106; see also id. at 221-23.
were often subject to vendor restrictions. Vendors were known to try to intimidate the federal
government from pursuing certain lines of mortgage research by threatening to cancel their
licenses if the research went forward.

In the Dodd-Frank Act, Congress responded to these problems by empowering and
sometimes requiring federal financial regulators to improve the data that are mandatorily
reported to the government. The new Financial Stability Oversight Council (FSOC), for
instance, may require bank holding companies and nonbank financial companies to submit
periodic or other reports in order to assess “the extent to which a financial activity or financial
market in which the nonbank financial company or bank holding company participates, or the
nonbank financial company or bank holding company itself, poses a threat to the financial
stability of the United States.”173 Under Dodd-Frank, the Federal Reserve Board now requires
reporting by securities holding companies.174 Similarly, the Securities and Exchange
Commission (SEC) has adopted final rules pursuant to Dodd-Frank requiring money market
funds and investment advisers for hedge funds, private equity funds, venture capital funds, and
other private funds to report on their holdings, trading, and exposures.175 The Consumer
Financial Protection Bureau has authority to collect information on “the organization, business

Stat. 1601 (2010); see also id. § 809(b)(2)-(b)(3). Any such data will be collected by the Office of Financial
Research on behalf of FSOC. Id. §§ 112(d)(3)(A), 153(a)(1). The Federal Reserve Board or FSOC may require
certain financial market utilities and clearing entities to submit similar reports. Id. § 809(b)(1), (b)(3).
1601 (2010); Federal Reserve System, Supervised Securities Holding Company Registration: Final rule, 77 Fed.
Reg. 32881, 32884 (June 4, 2012).
1601 (2010); see also id. §§ 407-08; Securities & Exchange Commission, Money Market Fund Reform;
Amendments to Form PF Part II: Final rule, 79 Fed. Reg. 47736 (Aug. 14, 2014); Commodity Futures Trading
Commission & Securities & Exchange Commission, Reporting by Investment Advisers to Private Funds and
Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF Part II – Joint final rules, 76
Fed. Reg. 71128 (November 16, 2011); see also OFFICE OF FINANCIAL RESEARCH, 2014 OFR ANNUAL REPORT 112-
viewed January 29, 2015).
conduct, markets, and activities of covered persons and service providers.”

Congress also instructed the Bureau to expand the mortgage origination data fields reported under HMDA and to establish a publicly available mortgage and default database in conjunction with the Secretary of Housing and Urban Development. Congress further imposed or expanded mandatory reporting requirements on swaps, asset-backed securities, and small business lending.

Ensuring that the government has adequate data to gauge systemic risks is a “moving target,” to quote the Office of Financial Research. In the short run, creating or expanding mandatory government reporting is costly and time-intensive because doing so often requires research into data standards and privacy safeguards followed by a lengthy rulemaking proceeding. In part for these reasons, some of the data improvements that Dodd-Frank mandated are underway but not yet in place. Other crucial data gaps still need to be addressed. Those

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179 Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 721(a)(21), 723(a)(2), 725(e), 727-29, 733, 763(a), (c), (i), 766(a), 124 Stat. 1601 (2010).
184 Cf. Group of Thirty, supra note ___, at 59 (“some of the data that a macroprudential supervisor will require is not currently being collected by central banks, prudential supervisors, or any other entities”).
data gaps involve bilateral repo trading, securities lending, separately managed accounts, captive reinsurers, and mortgage servicing.\textsuperscript{185} These long rollout periods make it important to complete data reforms in one fell swoop. Because new reporting requirements will face inevitable industry pushback, it is important to make comprehensive changes expeditiously instead of repeatedly going back to the well. To pull off a comprehensive overhaul, regulators have to resist the pressure to omit the data fields that they need. In exchange, they should offer an olive branch to industry by limiting the need to alter the firms’ data reporting systems to a one-time change.

Creating data that span the business cycle from peak to trough also takes time. This problem will slowly abate over the coming years as more data are collected. In the meantime, federal regulators will need to merge newly collected data sets with older data sets in order to have a proper historical perspective.

One important feature of Dodd-Frank’s data collection provisions is that they allow federal regulators to address some of the reporting lags that plague the current systems. For instance, under current rules, Home Mortgage Disclosure Act data have long reporting lags, with some home mortgage transactions being over a year old by the time they are reported to the federal government. That is too long a delay for regulators to detect accumulating risks in a timely manner. Other reporting lags are not quite as bad, but also should be revisited. Reducing

these lags will substantially improve the federal government’s capacity to monitor systemic risk. 186

Until these Dodd-Frank reforms are in place and the data are being collected, regulators will face the same obstacles in monitoring for early warning signs of problems as they did in 2008. It is discouraging that so little progress has been made in implementing Dodd-Frank’s data-gathering mandates. Until the quality of the data available to the federal government is substantially improved, there is the danger that the last cycle of regulatory inaction will breed another, as the next section discusses.

B. Fast Response

Government action in the face of threats is the sine qua non of countercyclical regulation. That action requires not only data, but a well-functioning rapid response system as well. 187 Establishing such a system and institutionalizing it will help ensure that senior agency management are apprised of imminent problems and called on to take action.

For a rapid response system to be effective, it must first integrate data flows, both from outside sources and across the agency, and mine those data for developments on a timely basis. Data analysis is not enough, however. In addition, the agency must establish a decision-making process to evaluate new and continuing threats 188 and to decide on the proper course of action.

186 The CFPB’s proposed HMDA rule in August 2014 would significantly reduce the current lag by requiring lenders making larger volumes of home mortgages to report data on a quarterly instead of annual basis. Consumer Financial Protection Bureau, Home Mortgage Disclosure (Regulation C): Proposed rule with request for public comment, 79 Fed. Reg. 51732, 51861 (Aug. 29, 2014) (to be codified at 12 C.F.R. 1003.5(a)(1)(ii)).

187 I am indebted to Ethan Bernstein and Jared English for many long conversations in which we discussed and debated the elements of such a system.

188 The rapid evolution in systemic risk metrics is an important development in that regard. See, e.g., Brunnermeier & Cheridito, supra note ___; Committee on the Global Financial System, Macropu 

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That process must be led by senior managers and report directly to the top. Unless agencies institutionalize a system for promptly examining trends and consciously evaluating the need for action, the danger will persist that data analysis will end up, unread, in the proverbial dustbin.

Of course, such a system assumes that regulators can even recognize threats. Many risks are well-known and eminently capable of tracking. But other hazards emanate from threats that are as yet unknown. Some new perils will catch even the most vigilant regulators unaware.

Nevertheless, there are several things agencies can do to be on the lookout for stealth threats. Most importantly, regulators need to be honest with themselves about what they do not know and how to develop that information. Financial innovations, for instance, are a perennial source of unknown risks. Many financial innovations are socially beneficial, but some, such as securitization and derivatives, also have the potential for harm. Supervisors cannot blithely assume that new products are benign. Instead, they need to track those innovations in order to understand their benefits and drawbacks. In most cases, lack of statutory authority is not a problem because Dodd-Frank gave federal regulators such broad data collection authority. With those data, economists can run simulations to project the performance of new financial products under a wide range of economic conditions.

Market research is likewise essential for identifying new and troubling trends. Analyst reports, securities filings, industry publications, and interviews with industry players can alert supervisors to nascent risks. State and local officials, citizen groups, and outside researchers can

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so” because metrics that measure interlinkages “can provide the wrong signals” as to build-ups in risk over time. Borio, supra note ___, at 6-10, 14 (emphasis in original).
also point regulators to incipient harm. Agencies should similarly cull examination reports, complaint data and other citizen reports for warning signs of problems.

With regard to these types of individual reports, if countercyclical regulation is to work, regulators must avoid succumbing to certain instinctive fallacies. One such fallacy is the tendency of regulators to assume that anecdotal reports of harm are inconsequential. During the credit boom that led up to the near-meltdown of the financial system in 2008, there were ample anecdotal warnings of impending problems. Federal regulators were aware of many of those incidents, but dismissed them as isolated pockets of harm.\textsuperscript{190} If regulators had started tracking those incidents and amassed the data to analyze their growth, the 2008 crisis might have been averted. The enormity of that fallout underscored the need to treat anecdotal reports as cause for further inquiry, not as something to be ignored.

Another, related fallacy is the failure to analyze or even consider the possibility of correlated risks. In recent years, the best example of this was Federal Reserve Board Chairman Ben Bernanke’s statement in June 2007 that “[t]he troubles in the subprime sector seem unlikely to seriously spill over to the broader economy or the financial sector.”\textsuperscript{191} As his statement suggested, Bernanke was well aware that the subprime mortgage market was imploding by mid-2007. But he seemed blind to the fact that the default of one mortgage made other mortgage defaults more likely. Similarly, he was tone-deaf to the possible detrimental effect of cascading mortgage defaults on mortgage-backed securities, credit derivatives, financial asset prices, the solvency of banks, and the economy at large.

The last fallacy is regulators’ propensity to treat small-scale problems – and sometimes even larger ones -- as problems that are already under control by virtue of their size and thus in

\textsuperscript{190} See, e.g., Engel & McCoy, \textit{supra} note \_, at 9, 61-64.
need of no attention. As the subprime crisis demonstrated, however, some small problems can mushroom rapidly into catastrophic proportions.

C. Justifying Action When Problems Are Small

Countercyclical regulation advises taking action when problems are manageable. However, when social harm is unknown or limited in size, federal banking regulators have displayed almost a visceral reluctance to taking action. Sometimes this may result from industry capture.\textsuperscript{192} In other cases, though, regulators may be trying to balance legitimate tradeoffs between preventing systemic harm and stunting beneficial growth.

Regulators can have good reasons for a “hands-off” approach during economic upswings, particularly where intervention could distort an otherwise healthy market. Still, the truism “small is good” does not invariably hold. Subprime residential mortgages, for example, comprised only 7.4 percent of the U.S. mortgage market in 2002, but grew large enough by 2006 (reaching a market share of 23.5 percent)\textsuperscript{193} to nearly bring down the financial system. We do not want to repeat that gambit. Nevertheless, to the extent regulators use countercyclical tools to lean against the wind, questions will “naturally arise whether and how far [those tools are] stifling innovation and growth.”\textsuperscript{194}

Given these vagaries, taking countercyclical measures to deflate an asset bubble or advance other goals will present issues for regulators. Many countercyclical techniques require regulators, in the face of uncertainty, to decide which small problems are likely to grow. Prognostication of this sort is never assured. However, there are harbingers of later, major

\textsuperscript{192} See Section IV.D. infra.
\textsuperscript{193} \textit{FINANCIAL CRISIS INQUIRY COMMISSION, THE FINANCIAL CRISIS INQUIRY REPORT} 70 fig. 5.2 (2011).
problems and supervisors should watch out for them. Rates of growth are key in that regard. Small risks that are growing at accelerating rates should be cause for concern. That is especially true for risks that pose a high degree of harm if they materialize. Additionally, regulators should look out for signs of a race to the bottom in which loose practices by questionable firms force reputable competitors to loosen their standards as well in order to preserve market share. We saw such a race during the housing bubble, when risky hybrid adjustable-rate mortgages with lower initial payments crowded out safer fixed-rate loans.¹⁹⁵

In a related vein, regulators should keenly monitor correlated risks that could produce a domino effect of harm to the financial system if those risks materialize. We only need recall that trillions of dollars in mortgage-backed securities, collateralized debt obligations and credit default swaps depended on the performance of deteriorating home mortgages during the last run-up in credit. That edifice crumbled when droves of mortgages went into default.

Finally, certain lax loan underwriting practices are perennial in nature and crop up in virtually every real estate bubble. Sectoral tools are well-designed to identify and curb those practices. Once regulators detect signs of a mounting asset bubble, there remains the question of what to do. Often they lack data on the underlying cause of the harm. Is it misaligned compensation? Flawed contracting mechanisms? Information asymmetries? Something else? If they cannot ascertain the cause, it may be hard to know what to fix. Similarly, data on the net effects of intervention versus inaction are even less common. The financial crisis revealed a dearth of data of this kind in retail credit markets and eventually propelled the prominence and

growth of research on the economics of household finance. In the short run, however, that
dearth of empirical findings is very real.

Figuring out whether to intervene and how often is just the start of the process, not the
end. In some cases, the agency will still have to satisfy a statutory standard for the consideration
of costs and benefits. Doing so in the current judicial climate may be difficult and any
regulations that are issued may attract legal challenge.

Recent case law developments on cost-benefit analysis of financial rules are not
encouraging. In 2011, the Court of Appeals for the District of Columbia Circuit struck an
activist stance and overturned the proxy access rule that had recently been adopted by the SEC
for failing to satisfy the applicable statutory standard for review. Even though Congress in the
Dodd-Frank Act expressly directed the SEC to adopt a proxy access rule, the D.C. Circuit ruled
that the final rule was arbitrary and capricious because the Commission had failed to “adequately
to assess the economic effects” of that provision. In the view of the court:

See, e.g., John Y. Campbell, Howell E. Jackson, Brigitte C. Madrian & Peter Tufano, Consumer Financial

For instance, the Commodity Futures Trading Commission is required to “consider the costs and benefits”
of newly issued rules and must evaluate “the costs and benefits . . . in light of . . . considerations of the efficiency,

Business Roundtable v. SEC, 647 F.3d 1144 (D.C. Cir. 2011). The standard in question required the SEC
to “consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and
capital formation.” Securities Exchange Act of 1934 § 3(f), 15 USC § 78c(f); Investment Company Act of 1940 §
2(c), 15 U.S.C. § 80a-2(c); Securities Act § 2(b), 15 U.S.C. § 77b(b). As James Cox and Benjamin Baucom have
thoughtfully argued, this standard does not impose a cost-benefit test, one, because Congress considered and
rejected imposing a cost-benefit test on the SEC when it first adopted this standard in 1996, and, two, because all the
standard requires the Commission to do is “consider” the four factors, not to reach a conclusion about the rule’s
likely effect. James D. Cox & Benjamin J.C. Baucom, The Emperor Has No Clothes: Confronting the D.C.
Circuit’s Usurpation of SEC Rulemaking Authority, 90 TEX. L. REV. 1811, 1818-24 (June 2012).

Business Roundtable, 647 F.3d at 1148-49. This was not the first time the D.C. Circuit had invalidated an
SEC rule under that standard. Previously, in Chamber of Commerce of U.S. v. SEC, 412 F.3d 133 (D.C. Cir. 2005),
the D.C. Circuit had struck down another SEC rule, this one on the makeup of mutual fund boards of directors,
under the Administrative Procedure Act for failing to satisfy the same test. The Business Roundtable decision came
as a surprise because there, the SEC adduced substantially more evidence in favor of its proxy access test than it had
Life Ins. Co. v. SEC, 613 F.3d 166, 177 (D.C. Cir. 2010), invalidated the SEC’s attempt to regulate fixed indexed
annuities for lack of a reasoned basis regarding its conclusion about the “competition” factor.
[T]he Commission inconsistently and opportunistically framed the costs and benefits of the rule; failed adequately to quantify the certain costs or to explain why those costs could not be quantified; neglected to support its predictive judgments; contradicted itself; and failed to respond to substantial problems raised by commenters.

The Business Roundtable decision later came under blistering attack for countermanding Congress’ commands, for grafting a cost-benefit requirement onto the SEC’s statutory review standard with no statutory justification, and for privileging inaction.200

Now consider a countercyclical rule promulgated when the immediate harm is small and the likelihood and magnitude of later harm is large but not certain. Further assume that the D.C. Circuit – however wrongly – expects the agency to conclude that the benefits of that rule outweigh the costs, based on quantitative analysis, in order to survive attack. On that evidentiary record, it could be hard to persuade a skeptical D.C. Circuit that the benefits of intervention merit the expense. This is largely because countercyclical intervention presents a special case of the general evidentiary quandary that proof of benefits is harder to come by than proof of costs. Measuring future benefits in financial regulation is often intractable, particularly because a “crisis that is successfully averted by macroprudential policy leaves no traces.”201 Measuring costs, while easier, is by no means free from difficulty.202 Thus, it is hard in general to make a cost-benefit case for regulating existing problems and even harder when the data on those problems are scant.203 These evidentiary problems become even more protracted when there are

new, emerging threats with little past data for analysis. Such threats could emanate from financial innovations with a short track record or little-understood changes in the structure of the financial landscape.

Countercyclical rules adopted in the throes of a crisis, when evidence of benefits is more plentiful, may be able to surmount these problems with cost-benefit tests. But when times are calm, rules addressing new perils may be more difficult to defend in court. Fortunately, some financial rules do not require cost-benefit analysis at all. For those that do, normally the statutory test only requires “consideration” of costs and benefits and not a conclusion as to their relative weight.\footnote{See note \_\_ supra.} However, if the D.C. Circuit continues to construe these and other statutory review standards aggressively to nevertheless impose a strict, quantitative cost-benefit test in derogation of the statutory text, regulators may not have enough solid proof of harm to satisfy the courts.

In the long run, Congress or the Supreme Court may have to resolve this conundrum in order for countercyclical regulation to fully work. In the short run, this problem may force agencies to resort to other, more limited regulatory tools – such as enforcement, non-binding guidances, or pilot projects\footnote{In this regard, Cox & Baucom recommend pilot projects where regulators could phase in regulation in order to generate data on an initial foray’s effects. See Cox & Baucom, \textit{supra} note \_\_, at 1842-44. For a kindred proposal for “staged regulation,” see Charles K. Whitehead, \textit{The Goldilocks Approach: Financial Risk and Staged Regulation}, 97 CORNELL L. REV. 1267, 1295-1307 (2012).} -- in order to thwart unfamiliar threats before they spin out of control.

\section*{D. Capture and Regulatory Inaction}
So far, I have assumed that the regulator in question is committed to a countercyclical course of action. But in halcyon times, industry capture\(^{206}\) and lobbying by other affected constituencies\(^{207}\) can weaken regulators’ resolve. It is hard enough to amass support for needed safeguards immediately after a crisis. Doing so when economic conditions are bright can threaten a regulator’s career. When memories of disasters grow dim, officials who predict tail event catastrophes based on limited problems are often dismissed as Cassandras. Under those circumstances, many officials will take the path of least resistance and sit on their hands because any eventual harm will not appear on their watch.\(^{208}\) It takes a brave regulator to tighten regulation under these conditions.

Careful thought needs to be given to capture dynamics when overhauling regulation to dampen financial cycles. In this regard, it is helpful to view countercyclical tools along a continuum, ranging from self-executing techniques to those that require a discretionary decision by regulators (or even regulated entities) before they can be deployed. Dynamic provisioning is self-executing in nature because the level of provisioning it requires at any particular time is hard-wired into a mathematical algorithm.\(^{209}\) Monetary policy, on the other hand, requires an exercise of judgment by the Federal Open Market Committee to intervene in an overheated economy, based on its evaluation of asset price movements. Still other tools fall – or could be designed to fall -- in the middle of the continuum. Prompt corrective action, for instance, uses


\(^{209}\) That is not to say that the algorithm cannot be manipulated. But if the algorithm is administered in good faith, it should be self-executing.
objective numerical triggers but relies on regulators to take the actions mandated by those triggers. Similarly, countercyclical capital buffers could fall on the discretionary end or in the middle of the spectrum, depending on how they are designed.210

The most effective way to overcome regulators’ propensity toward inertia at the top of the business cycle is to tie their hands in advance through rules that automatically kick in when markets heat up.211 Some of these rules will be fixed rules that only become economically binding when credit conditions relax or losses mount.212 Such rules will not constrain credit conditions during recessions, when lending is already tight; instead, whether those rules are binding will depend on the point in the business cycle. Other times, Congress or agencies can mandate time-varying statutes or rules that require regulators to take specific actions when objective tripwires go off. The prompt corrective action rules emulate this model and other examples can be envisioned.

When designing pre-commitment devices, consideration should also be given to incorporating objective tests. Any time-varying countercyclical device that requires supervisors to make judgments about whether and when to pull the trigger reintroduces the problem of regulatory discretion and likely inaction. Of course, objective triggers have potential drawbacks. They may over-regulate or under-regulate (which was the problem with the prompt corrective action triggers). And they may make regulatory arbitrage easier. But given the disastrous systemic harm from the last financial crisis, these risks may pale in contrast to doing nothing. And, with experience, objective triggers can be refined over time.

211 See, e.g., Borio, supra note __, at 11; Brunnermeier et al., supra note __, at 57.
212 Dynamic provisioning is one example; the ability-to-repay rule is another. When the ability-to-repay rule was introduced, private lending standards were so tight that the rule did not tighten them any further. However, as credit conditions become looser, the rule will exercise a real constraint on the market.
In order for these pre-commitment devices to best work, they should be adopted in advance, in a favorable political climate. Usually this is in the aftermath of a financial crisis. This approach works well for recurrent problems, such as the tendency to loosen lending standards. In other ways, though, this approach to regulation suffers from rear-view vision. It is not well suited to new and unknown perils, such as those posed by some new financial products.

This means that our system will have to find other ways of reversing the traditional “hands-off” mentality towards new and unfamiliar financial products. Requiring financial innovations to be registered and tracking their performance through mandatory reporting would not be terribly intrusive and would be a first step toward better risk assessment. If a product proved harmful, mandatory reporting would allow regulators to detect that harm and justify action going forward. Reporting is not a panacea because informal rulemakings still require a long lead time. But not tracking the performance of new products would be even worse.

Some types of countercyclical regulation may not be amenable to the pre-commitment devices that I describe. Monetary policy is one example. Similarly, Brunnermeier, et al., argue that executive pay reforms counsel a large dose of regulatory discretion in order to avoid

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213 In a recent speech, Federal Reserve Board Governor Daniel Tarullo cast doubt on the practicality of time-varying countercyclical tools, in part because he doubted “the speed with which measures might realistically be implemented and take effect.” See Speech by Governor Daniel K. Tarullo At the Office of Financial Research and Financial Stability Oversight Council’s 4th Annual Conference on Evaluating Macroprudential Tools: Complementarities and Conflicts, Arlington, Virginia, January 30, 2015, at 2, available at www.federalreserve.gov. Careful implementation decisions, however, can address Tarullo’s concerns about speed. Designing time-varying provisions with objective triggers and authorizing them soon after a financial crisis through implementing legislation and rules can insure that the measures are available and activated when needed.


215 Daniel Carpenter and I have proposed instituting prior registration and reporting requirements to track new financial products through unique product identifiers. See Carpenter & McCoy, supra note ___.

216 For example, witness the ability-to-repay rule. Even though it was a fast-track rule prescribed by Congress in July 2010, the rule was not promulgated in final form until January 2013 (in time for its statutory deadline).
distorting the healthy aspects of the market for executives and discouraging executives and employees from taking personal initiative.\textsuperscript{217}

All is not lost, however. Here, conscious use of other techniques to spur regulators into action can be helpful. Some regulatory standards, for example, establish a minimum federal floor which state regulators may exceed if they conclude that the floor is too low.\textsuperscript{218} This type of statutory design encourages regulators to compete with one another for more optimal regulation (so long as the state and federal rules are not inconsistent) when federal rules under-regulate.

Checks and balances in the form of multiple centers of enforcement can also serve to prod laggard agencies into action. The U.S. federalist system affords a variety of different types of governmental actors – with varying incentives and degrees of susceptibility to influence – who can serve as checks and balances, if so empowered. In recent years, the New York Attorney General’s Office and the New York Department of Financial Services have served that role, taking an aggressive stance against financial sector misconduct and lighting a fire under the SEC and the federal prudential banking regulators in the process on more than one occasion.\textsuperscript{219} Dodd-Frank institutionalized a similar approach by giving state attorneys general and state banking regulators the power to enforce federal consumer financial protection statutes, on top of the enforcement authority vested in the federal government.\textsuperscript{220}

The integrity of countercyclical regulation also underscores the importance of safeguarding the independence of the financial regulators who administer them.\textsuperscript{221} This is why the funding of every federal banking regulator is independent of the Congressional

\textsuperscript{217} Brunnermeier et al., supra note ___, at 49-53.


\textsuperscript{219} Examples include the mutual fund market timing scandals in the early 2000s, the mortgage servicing settlement in 2011 and 2013, and payday lending in 2013.

\textsuperscript{220} Pub. L. No. 111-203, §§ 1042, 1422, 124 Stat. 1601 (2010). Private rights of action may also have power to shame agencies into action.

\textsuperscript{221} See Duff, supra note ___, at 202-08; Group of Thirty, supra note ___, at 61-63.
appropriations process. While there are campaigns from time to time to eliminate that independence, doing so would increase industry capture.

Agency independence, however, must go hand-in-hand with greater transparency. Such transparency can vest hard decisions with more legitimacy and help obviate the back-room lobbying that causes agencies to drag their feet. Central banks and other prudential bank regulators balance independence with transparency in a number of ways, including solicitation of public comments on proposed rules, agency hearings, public release of deliberations and explanations of monetary and other decisions, and legislative testimony. Requiring agencies to timely publish online summaries of the contents of their private meetings with lobbyists is one more measure that could expose agency inaction to scrutiny.

Because countercyclical regulation is premised on early intervention, it has no chance of succeeding unless it comes to grips with regulatory inertia and capture. This is not a lost cause, however. Pre-commitment devices, monitoring of new financial products, multiple centers of regulation and enforcement, agency independence, and greater transparency are methods that can help turn inaction into action.

E. The Boundary Problem and Regulatory Arbitrage

The final hurdle to effective countercyclical regulation that I will discuss is the so-called boundary problem. This problem is intrinsic to financial regulatory schemes that supervise according to entity or product instead of risk. Federal prudential banking regulation, for example, regulates depository institutions and their parent companies and affiliates, but not other

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222 See, e.g., Bureau of Consumer Financial Protection Accountability Act of 2013, H.R. 3192, 113th Cong., 1st Sess. (a bill to subject the CFPB to regular appropriations).
223 See Group of Thirty, supra note ___, at 62.
types of nonbank entities that offer banking services. Under this fragmented regulation, banks may seek to circumvent countercyclical requirements by shifting their business operations to other types of firms that escape those requirements.\textsuperscript{226} Possible tactics include outsourcing operations to special investment vehicles (known as SIVs) or to nonbank affiliates.\textsuperscript{227} Such arbitrage is of particular concern given the bank-centric nature of the current set of countercyclical tools.\textsuperscript{228}

Regulating according to product in the U.S. is even more ubiquitous than regulating according to entity and also leaves space for arbitrage. For example, the Office of the Comptroller of the Currency (OCC) supervises “the business of banking” by national banks\textsuperscript{229} and the SEC regulates “securities,” while the Commodity Futures Trading Commission (CFTC) oversees “commodities.”

Recasting a financial product as something else may successfully evade a regulatory model based on product line. For instance, lenders can try to circumvent rules on lending by recasting loans as sales. Examples include sale-leaseback arrangements and sale-repurchase transactions in the repo market, which are both the functional equivalents of loans.

Congress, agencies, and courts have struggled with circumvention of product boundary lines for years.\textsuperscript{230} To some extent, Congress can discourage such evasion by including anti-

\textsuperscript{226} See OFFICE OF FINANCIAL RESEARCH, 2013 OFR ANNUAL REPORT 40 (2013), available at http://www.treasury.gov/initiatives/ofr/about/Documents/OFR_AnnualReport2013_FINAL_12-17-2013_Accessible.pdf (last viewed January 29, 2015). In the United States, very few financial firms go completely unregulated these days. Instead, the intensity of regulatory oversight depends on the nature of the entity and product being regulated, the identity of the regulator, the types of rules that apply, and whether those rules are nationwide in scope.

\textsuperscript{227} See, e.g., Caprio, supra note ___, at 26-28.


\textsuperscript{229} 12 U.S.C. § 24 (Seventh).

evasion clauses in legislation and by drafting statutes flexibly to place both traditional financial products and their functional substitutes under supervision. Courts have also repeatedly construed agency statutes to regulate according to a product’s function and not just according to its form.\textsuperscript{231}

While regulatory arbitrage cannot be completely eliminated, Congress and regulators can do more to discourage it. The most important step that Congress could take would be to scrap product and entity categories altogether and regulate solely according to risk.\textsuperscript{232} Extending regulation to all financial firms that present a given risk, without regard to the type of entity, charter or location, would substantially close the loopholes for outsourcing to domestic nonbanks.

Congress made a stab in that direction in the Dodd-Frank Act when it gave the Consumer Financial Protection Bureau jurisdiction to promulgate market conduct rules governing virtually all providers of consumer finance, regardless of entity type.\textsuperscript{233} This broad jurisdiction is nationwide and covers bank and nonbank providers alike. As a consequence, the CFPB has an important and unique role to play in stemming systemic risk – particularly those in the residential


\textsuperscript{233} Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 1002(6), 1022, 124 Stat. 1601 (2010). This approach echoed Borio’s suggestion to address procyclicality by applying macroprudential tools across-the-board to all extensions of credit to specific sectors of the economy, in order to make that regulation “less vulnerable to regulatory arbitrage.” Borio, supra note ___, at 10-11.
mortgage market – which federal prudential banking regulators cannot fully replicate, given the statutory limitations on their jurisdiction.

Expanding regulation according to risk to other agencies would require wholesale revamping of the federal government’s financial services regulatory architecture. In the Dodd-Frank Act, Congress had that opportunity but passed it up. Instead, Dodd-Frank did not disturb the traditional division of federal bank regulatory power among the Federal Reserve Board, the OCC, and the Federal Deposit Insurance Corporation, apart from reassigning oversight of consumer financial protection to the CFPB. While Congress did fold the former and discredited Office of Thrift Supervision into the OCC, that change was of second-order importance. Similarly, Congress did not make fundamental changes to the messy division of product-line authority between the SEC and the CFTC. If Congress declined to tackle this task in Dodd-Frank, in the wake of the worst U.S. financial crisis since the Great Depression, the prospects for future structural change are daunting.

Dodd-Frank’s systemic risk provisions offer a way to bypass this problem. Under Dodd-Frank, FSOC has the authority to make recommendations to primary financial regulatory agencies to apply new or strengthened safeguards to financial activities or practices that could create a risk of financial contagion. While these recommendations are not binding, they have substantial practical force and can serve to trigger systemic risk regulation across product lines and industries.

A final example of the boundary problem – international arbitrage -- is arguably the most intractable. Many firms will try to escape the territorial jurisdiction of the United States by

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235 Already, FSOC has invoked this authority to initiate changes on systemic risk regulation of the asset management area. FSOC used the threat of unilateral action to successfully lean on the SEC to adopt new money market fund rules on systemic risk and to consider analogous rules for other types of asset management activities.
sending operations abroad. Bilateral cooperation is not a panacea because there will always be 
some jurisdiction that is willing to host those operations in exchange for revenue and jobs. To 
the extent that firms use overseas affiliates to market products in the United States, the 
government can often intervene at the point of entry. Thwarting cross-border regulatory 
arbitrage is much harder where the foreign operations do not market themselves domestically, 
but nevertheless threaten systemic spillover effects that could harm large U.S. financial 
institutions.

The only immediate solution to such arbitrage lies in international cooperation and 
standards.236 In the financial arena, the Financial Stability Board (spearheaded by the leaders of 
the G-20 nations), the Bank for International Settlements, and, to a lesser extent, the International 
Monetary Fund have become fora for harmonizing global macroprudential standards.237 
Nevertheless, absent a supranational regulator with binding enforcement powers, opportunities 
for overseas arbitrage will continue to abound. Complicating this challenge, imposing 
macroprudential measures cross-border may not always work because different jurisdictions may 
find themselves at different points in the business cycle.238

In closing, the boundary problem is palpably real and will live on without comprehensive 
reforms. While agencies and courts are not powerless to fight arbitrage through liberal

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236 One encouraging example of such cooperation is the reciprocity principle incorporated in the Basel 
Committee’s countercyclical capital buffer. Under that principle, if U.S. banking regulators impose a 
countercyclical capital buffer requirement on U.S. banks, then foreign regulators must impose the same requirement 
on their regulated banks with respect to the banks’ U.S. exposures. See International Monetary Fund, Key Aspects 
of Macroprudential Policy—Background Paper 17 (June 10, 2013), available at 
RESEARCH, 2013 OFR ANNUAL REPORT 41 (2013), available at 
http://www.treasury.gov/initiatives/ofr/about/Documents/OFR_AnnualReport2013_FINAL_12-17- 
2013_Accessible.pdf (last viewed January 29, 2015). This reciprocity has its limits, however, because it does not 
require foreign regulators to impose a countercyclical capital buffer on non-U.S. exposures. 
237 See Group of Thirty, supra note __, at 63.

238 See Committee on the Global Financial System, Macroprudential instruments and frameworks: a 
stocktaking of issues and experiences 7 (CGFS Papers N. 38, May 2010), available at www.bis.org (last viewed 
February 2, 2015).
interpretation of regulators’ authorizing statutes, there are limits to that strategy. Dodd-Frank’s decision to give rulemaking authority to the CFPB over consumer financial protection, regardless of entity or product type, was a step in the right direction. A more comprehensive approach to regulating according to risk, not to entity or product, is needed to seal off arbitrage opportunities effectively.

V. Conclusion

In financial regulation, innovation comes seldom if ever. Countercyclical regulation is the rare exception. If countercyclical regulation is given the chance to take root, refine itself, and thrive, it has the potential to accomplish what procyclical regulation has never been able to achieve: *i.e.*, modulating future financial crises and possibly preventing them. Given the fact that procyclical regulation has actually made asset bubbles worse, the stakes are too high to ignore the benefits of a countercyclical approach.

If countercyclical regulation is to succeed, then any serious effort to implement it must confront the institutional hurdles to that success. In this Article, I have identified five major obstacles in that regard, including data gaps, the need for early response systems, issues in determining whether and when to take action, industry capture, and regulatory arbitrage. These obstacles, however, are not insuperable. With each passing year, the necessary data to monitor systemic risk are improving and the new Office of Financial Research (OFR) has emerged as a powerful advocate for further data changes. Meanwhile, the annual systemic risk assessments by FSOC and OFR are informing early response initiatives across the federal government.

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239 OFR’s annual reports, for instance, each devote a lengthy section to existing data gaps and initiatives for improving data. *See, e.g.*, OFFICE OF FINANCIAL RESEARCH, 2014 OFR ANNUAL REPORT (2014), available at
In the meantime, countercyclical regulation provides tools to address two of the other challenges, which are counteracting regulatory inertia and justifying action when problems are small. The expanding countercyclical toolkit makes it easier for regulators to justify early intervention by deploying more tailored techniques, such as sectoral tools, to single out lax practices that are known to fuel credit bubbles without impairing healthy credit. Similarly, countercyclical regulation offers pre-commitment devices and objective tests to help insulate regulators from political pressure to refrain from action. Empowering the states to exceed federal standards and to enforce federal laws can reinforce incentives for federal regulators to be proactive as well. Finally, regulation according to risk and international harmonization of systemic risk standards promises to make inroads into the ever-present problem of arbitrage.

No one ever said that change is easy. But countercyclical regulation is a change worth fighting for. By grappling with these five challenges, policymakers can lay the ground for more robust countercyclical regulation and, with it, a safer financial system.

