

**Taxing Banks Properly:
The Next Regulatory Frontier**

Mark J. Roe and Michael Tröge

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Since the 2008–2009 financial crisis regulators have sought to strengthen the banking system with higher capital requirements and other safety measures. Yet a core source of weakness, namely the tax system, subsidizes unsafe debt while taxing safer bank equity, making safer loss-absorbing equity less desirable. This tax distortion both weakens the banks' corporate governance capacity and encourages the very activities that regulation is seeking to rein in. The magnitude of the safety benefit that could come from taxing banks properly rivals the size of all the post-crisis regulation to date.

First, debiasing the tax system for financial firms would make existing regulation more effective. Second, while the tax bias for debt has beneficial corporate governance features for industrial firms as higher debt levels induce greater managerial discipline, it lacks these mitigating benefits for banks; indeed, the tax bias seriously aggravates the excessive risk-taking incentives inside the banking organization. Third, the debt bias for banks does more than degrade banks one-by-one, as it does for industrial firms: by pushing banks into a more dangerous zone than it pushes most industrial firms, it weakens the entire financial system.

We analyze here the best means to debias bank taxation—moving from a system-wide overhaul down to adjustments for the next dollar of equity raised and the next dollar of debt incurred—and examine the proposals now on the table in the United States and around the world. Most bank tax proposals on the table degrade financial safety, some seriously. While the best reforms are economy-wide, broad, and politically unobtainable, we outline, first, how and why the best broad proposals have unanalyzed safety effects for the financial system that have not yet been brought forward and, second, how several of the most prominent proposals would work well for industrial firms but deeply undermine systemic financial safety if applied to financial firms. We then bring forward sharply targeted reform ideas that have not previously been proposed or analyzed; they should reach much of the safety goal without being politically unattainable.

By triangulating the goals of financial regulation, the problems of bank corporate governance, and the ways bank taxation can be improved, we show how best to promote regulatory goals, improve bank governance, and tax banks wisely. The best trade-off of goals and practical possibilities is our targeted proposal of reducing the tax burdens on safe equity above the regulatory-required minimum. This benefit to equity can be made revenue-neutral by making up the tax elsewhere, such as by reducing the deductibility of some or all bank debt. Banks resist most mainstream command-and-control safety regulation, often successfully; they have less reason to resist a tax benefit to equity.

Properly taxing banks is the next regulatory frontier for financial safety.

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Table of Contents

Introduction.....	1
I. Why Regulation Is Necessarily Incomplete	5
A. Capital Levels Before and After the Crisis	5
B. Increasing Banks' Loss Absorption Capacity and Other Safety Initiatives	6
C. Limits to Bank Regulation and Limits of the Regulator	8
II. Taxing Banks Properly to Make them Safer	10
A. The Basic Pro-Debt Bias Stated	10
B. Fixing the Basic Pro-Debt Bias	12
C. Taxing Banks Properly as a Complement to Regulation	13
D. Taxing Banks Properly as Regulatory Substitute	14
E. The Evidence: Tax Incentives Change Behavior.....	16
III. Taxing Banks Properly as Corporate Governance Strategy	18
A. Agency Cost Benefits for Industry, Agency Cost Degradation for Banks.....	19
B. Debt-Equity Conflict in Banks	19
C. Baseline Corporate Governance Debilities in Banks	20
IV. Implementation: Fixing the Debt-Based Tax Bias for Banks.....	21
A. Ending the Deductibility of Interest for Banks	22
B. A Deduction for the Cost of Bank Equity.....	24
C. A Deduction for the Cost of Non-Regulatory Bank Equity.....	27
D. Limits to Effectiveness: Tax Arbitrage and Its Own Limits.....	29
E. The Cost of Finance When Taxing Banks Properly	32
V. Taxing Banks in American Presidential Politics and Around the World	32
A. Pigovian Taxation.....	33
B. Taxing Banks Improperly: Bank Levies Around the World.....	34
C. Taxing Banks Improperly: Poor Proposals in American Presidential Politics.....	36
D. Taxing Banks Around the World: Tobin Taxes and Improper Surcharges.....	37
E. The Propitious Political Economy of Taxing Banks Properly	38
Conclusion	40

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INTRODUCTION

While well-capitalized banks generally handled the 2008 financial crisis well,¹ weakly-capitalized financial institutions failed during the financial crisis; others tottered and would have collapsed without massive government support. Those that failed, those that were bailed out, and many of those that struggled were unable to smoothly absorb losses stemming from turmoil in the American real estate market and, as a consequence, the weakened major financial institutions cut back their lending. Economic activity then slowed, first in the United States and then around the world, with the world's lost economic output exceeding \$10 trillion.²

Regulators and analysts concluded that if banks had been better capitalized, they could have better withstood the pressures, better handled the losses from real estate mortgages, and better performed their essential economic functions.³ Lehman Brothers, Bear Stearns, and Citigroup for example, had less than 4% of their value in equity, meaning that relatively small losses could, and did, cripple those firms.⁴ The first failed, the second was bailed out in a merger, and the third the government bailed out more directly. A major regulatory initiative after the crisis has been to raise capital levels at the world's major financial institutions.⁵

But critics of the reforms see the mandated increases in capital and new restrictions in activities as insufficient for safety, too readily reversible by new policymakers, and prone to end-runs by the regulated.⁶ Several of the

* Professors, Harvard Law School and ESCP-Europe, respectively. Thanks go to Hilary Allen, Hal Scott, Stephen Shay, David Schizer, and Alvin Warren for discussion on the paper's subject.

¹ See, e.g., Asli Demirguc-Kunt, Enrica Detragiache & Ouarda Merrouche, *Bank capital: Lessons from the Financial Crisis*, 45 J. MONEY, CREDIT & BANKING 1147–64 (2013); Andrea Beltratti & René M. Stulz, *The Credit Crisis Around the Globe: Why Did Some Banks Perform Better?* 105 J. FIN. ECON. 1–17 (2012).

² See U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-1380, FINANCIAL REGULATORY REFORM: FINANCIAL CRISIS LOSSES AND POTENTIAL IMPACTS OF THE DODD-FRANK ACT (2013), available at www.gao.gov/assets/660/651322.pdf.

³ Alan Greenspan argues, "If average bank capital in 2008 had been, say, 20 or even 30 per cent of assets (instead of the recent levels of 10 to 11 per cent), serial debt default contagion would arguably never have been triggered." Alan Greenspan, *More capital is a less painful way to fix the banks*, FIN. TIMES, Aug. 17, 2015; Daniel K. Tarullo, Governor, Federal Reserve System, *Capital Regulation Across Financial Intermediaries* (Sept. 28, 2015), available at <http://www.federalreserve.gov/newsevents/speech/tarullo20150928a.htm> ("Strengthening the . . . capital held by banks has been a central element of post-financial crisis reform.").

⁴ Adrian Blundell-Wignall & Paul Atkinson, *The Subprime Crisis: Causal Distortions and Regulatory Reform*, in RESERVE BANK OF AUSTRALIA, LESSONS FROM THE FINANCIAL TURMOIL OF 2007 AND 2008 (2008). See Appendix I: Major institutions' capital before and after the financial crisis.

⁵ Capital level rules for commercial banks come from bank regulators, often guided by international accords—the Basel agreements, referred to regularly in these footnotes. Capital level rules for investment banks come from the Securities and Exchange Commission. For insurers, they come from state regulators in the United States and from the European Commission and national regulators in Europe.

⁶ Binyamin Appelbaum, *Skepticism Prevails on Preventing Crisis*, N.Y. TIMES, Oct. 5, 2015, at B1 (reporting Federal Reserve conference's prevailing wisdom that a crisis like that of 2008 can readily recur);

nation's primary financial system regulators are skeptical that the regulatory reaction arrests the chance of another financial crisis⁷ and many academics conclude the same. Overall, there is good reason to believe that the current regulatory program thus far is either incomplete or will face future challenges. New systemic risks will eventually emerge and, when the system is off its high-alert of the past few years, the authorities are less likely to react fast enough and perspicaciously enough.

Further command-and-control regulation will have diminishing safety returns. Banks and other financial firms resist regulation that reduces their profitability, lobby against it, and innovate to work around it. This regulatory avoidance then requires new regulation to maintain safety. These counter-efforts create spiraling complexity, which induces regulators and banks to spend more economic resources, with each side's spending often neutralizing the other's effect on profitability and safety.⁸ These persistent efforts distract top bank management from creating real economic value—because more private value can often be created by avoiding regulatory impact than by improving financial channels for lenders and borrowers.

Regulators can and should consider an additional strategy, one that acts directly on bank incentives rather than increasingly micro-managing banks' business decisions by barring banks from the risks that the bankers find profitable. A core of the real incentives for banks is the corporate tax system, which pushes banks toward more debt and less capital. Policymakers should think of the tax system as a variable, one that can support capital adequacy rules and even to substitute for further command and control regulation.

Surprisingly, although it is well known that the corporate tax system subsidizes debt, analysis of how this feature yields a major regulatory strategy is largely unexamined, particularly when compared to the deluge of command-and-control proposals.

* * *

The basic pro-debt bias in the tax system arises because the cost of debt is deductible while the cost of equity is not.⁹ Because debt is tax-favored, all firms use more debt and less equity than they otherwise would. But this pro-

Dan Wilchins & Jonathan Stempel, *Citigroup Gets Massive Government Bailout*, REUTERS, Nov. 25, 2008, www.reuters.com/article/us-citigroup-idUSTRE4AJ45G20081125.

⁷ *Id.*; Binyamin Appelbaum, *Federal Reserve Executive Says Banks 'Are Still Too Big to Fail'*, N.Y. TIMES, Feb. 17, 2016, at B1. Cf. Andrew Haldane & Vasileios Madouros, *The Dog and the Frisbee* (Aug. 31, 2012), www.bankofengland.co.uk/publications/Documents/speeches/2012/speech596.pdf (Bank of England official's speech at Federal Reserve economic policy symposium).

⁸ See Rym Ayadi, Sami Ben Naceur, Barbara Casu & Barry Quinn, *Does Basel Compliance Matter for Bank Performance?* 3 n.5 (Int'l Monetary Fund, Working Paper No. 15/100, 2015). "By the end of 2014, Citigroup had nearly 30,000 employees working on regulatory and compliance issues (an increase of 33 percent since 2011). . . . Similarly, JPMorgan Chase expanded its risk control staff by 30 percent since 2011." See also Charles I. Plosser, *Simplicity, Transparency, and Market Discipline in Regulatory Reform*, Speech at Federal Reserve Bank of Philadelphia Conference, *Enhancing Prudential Standards in Financial Regulations* (Apr. 8, 2014), <http://www.philadelphiafed.org/publications/speeches/plosser/2014/04-08-14-frbp.cfm>. Andrew Haldane, a British financial regulator, emphasizes how complexity in financial regulation undermines effectiveness. Haldane & Madouros, *supra*, at 1–3.

⁹ Franco Modigliani & Merton H. Miller, *Corporate Income Taxes and the Cost of Capital: A Correction*, 53 AM. ECON. REV. 433 (1963). See also *Ending the Debt Addition: A Senseless Subsidy*, ECONOMIST, May 16, 2015, at 19–22; Mark J. Roe & Michael Troege, *How to Use a Bank Tax to Make the Financial System Safer*, FIN. TIMES, Mar. 25, 2014.

debt bias is particularly pernicious for financial firms that pay the corporate tax. For industrial firms, the higher leverage induced by the tax bias does not directly pose systemic problems; the debt bias for financial firms does. It raises their incentives to undermine capital adequacy safety regulation, either transactionally or by inducing repeal and regulatory reversal. This systemic degradation due to the tax-induced bias for debt is particularly severe for American banks, because the American corporate tax rate is noticeably higher than elsewhere in the developed world.¹⁰

Calls to change how financial firms, and corporations generally, are taxed are on the table in the United States and around the world:¹¹ U.S. presidential candidates have all made major tax proposals that would reduce or eliminate the pro-debt bias for non-financial corporations. This is laudable but peculiar, in that the proposals generally exempt financial institutions; yet eliminating the pro-debt bias inside these institutions is what would most benefit the economy. Some candidates' proposals focus on bank taxation directly; several of these are poor proposals, several are neutral, none reach the best possible result. Moreover, we show that the general reform that in recent years has obtained congressional attention would work for industrial firms but not increase financial firms' safety; we show how to remedy this defect.

We address our policy proposal here to bank regulators and other financial policymakers, and not directly to the tax authorities. General corporate tax reform to reduce or eliminate the debt-bias, such as by eliminating the corporate tax or otherwise, has thus far proven an elusive policy goal. But if banking regulators pushed for a revenue-neutral reform targeted for financial firms, Congress may listen and act. If Congress did, regulators would reach their regulatory goals more efficaciously. While we discuss several comprehensive bank corporate tax reforms and recommend them to policymakers, we also show how an incremental, targeted tax reform that ends the tax penalty for increasing equity above the regulatory requirements can achieve a high portion of the safety-inducing goals of the comprehensive reforms, but without the disruptions of economy-wide change that may be politically unattainable.

Although no regulatory regime today seeks to specifically debias the taxation of debt and equity exclusively for financial firms, there is enough international experience with these types of taxes for general corporations to analyze their impact on financial firms and see that they would likely voluntarily lower debt and increase equity. The magnitude of its safety benefit on capital could, we show, rival the size and beneficial effect of all the post-crisis regulation to date. Properly taxing banks is the next regulatory frontier for financial safety.

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¹⁰ See U.S. Dep't of the Treasury, Treasury Conference on Business Taxation and Global Competitiveness: Background Paper (July 23, 2007), *available at* www.treasury.gov/press-center/press-releases/Documents/07230%20r.pdf.

¹¹ See Joint Hearing on Tax Reform and the Tax Treatment of Debt and Equity Before the H. Comm. on Ways & Means and the S. Fin. Comm., 112th Cong. (2011), *available at* <http://www.waysandmeans.house.gov/joint-hearing-on-tax-reform-and-the-tax-treatment-of-debt-and-equity/>. See *infra* Part V.

A roadmap for this Article: In Part I, we examine how weak capital in financial institutions makes financial institutions and the economy both vulnerable to economic reverses. We then review the major regulatory efforts in response to the financial crisis to improve financial safety and explain why critics see the current efforts as incomplete.

In Part II, we show first how the unequal treatment of equity and debt generates the pro-debt bias of taxation and, second, how a symmetric tax treatment of debt and equity can eliminate this problem. We analyze the international evidence to see that it indicates that the safety benefits of these tax incentives are quite high, rivaling the strength of post-crisis regulation.

In Part III, we compare the corporate governance distortions from the tax system in industrial corporations and in banks, and argue that the distortions are much higher for the latter. For industrial firms, the tax-induced preference for leverage mitigates managerial debilities in large firms. Debt can make managers and directors try harder and work smarter, because managers, who might otherwise slack off in the large public firm lacking strong stockholders, feel the pressure to meet debt repayment schedules. But for banks there is no comparable beneficial corporate governance undertow. The extra debt encourages banks' managers and boards to take on more risk, which is just what regulators want the banks to avoid doing.

In Part IV, we show how the tax reform should work. The unequal treatment of debt and equity can either be addressed by treating debt the way equity is treated today (i.e., by ending debt's deductibility) or by treating equity the same way we treat debt today (i.e., by allowing deductibility for the cost of equity as well). Done properly, the tax reform will be revenue neutral: it will burden bank debt with more tax but boost bank equity with less tax.

The simplest measure—ending the corporate tax—is politically unattainable and questionable policy without difficult changes to the taxation of individual shareholders. The next simplest measure is to end the deductibility of interest for financial firms and instead tax the firms' gross income. That change would by itself greatly increase bank taxation because the interest expense is such a large portion of financial firms' expenses. To keep the impact revenue neutral, the tax rate on banks' pre-interest operating revenue would be much reduced. The rate would be quite low, because the taxable base would be made so large. This system, while not without problems, would comport with the general American policy perspective that the tax base should be expanded, deductions reduced, and rates lowered.

We then progress through several other implementation mechanisms and end with a targeted, but in our view largely efficacious change: allow financial firms to deduct an imputed cost of their equity that exceeds the level of equity that regulation requires (and, since revenue neutrality will likely be required, reduce their allowed interest deduction, to maintain revenue neutrality). This effort is viable mechanically and politically, modest in its incremental scope, and greatly beneficial for financial safety. It would make many difficult-to-implement safety regulations more viable and some of them unnecessary.

In Part V, we evaluate the relevant tax proposals in policy circles and American presidential politics thus far. Some are better than others, but all fall well short of what can and should be done. For taxation to be capital-structure neutral, the tax must not increase as the banks increase their safety-enhancing

equity. The tax proposals we outline here accomplish that neutrality. Many of the presidential aspirants' proposals fail this test, as do financial tax reform proposals from around the world. The most prominent congressional corporate tax reform in this area will work well for real economy firms but would be disastrous for systemic financial safety if applied to financial firms, in that it would *encourage* a pernicious decapitalization of financial firms.

The tax bias toward debt may have not attracted the attention it deserves because of how the financial crisis of 2008–2009 played out.¹² No immediate pre-crisis change in corporate or debt taxation occurred that made the system less safe than it had previously been. Policymakers and academic analysts accordingly focused on the proximate causes—a housing bubble, poorly capitalized financial institutions, and a financial system that could not absorb losses in the real estate mortgage sector without general lending freezing up. But the preexisting levels of debt were higher than appropriate for safety due in large measure to the tax-based debt bias. If one observes a fall off a cliff after an unexpected gust of wind, one might blame the weather and the wind; we blame the decision to walk near the cliff's edge.

We conclude simply: fixing bank taxation is the next regulatory frontier for systemic financial safety.

I. WHY REGULATION IS NECESSARILY INCOMPLETE

Since the financial crisis, regulators have sought more than before to make the financial system safer by requiring banks to have more capital and take on less risk. But this regulation is necessarily incomplete as long as banks' baseline incentives for low equity and high risk are left unaddressed.

Moreover, government officials lack the full contextual knowledge for understanding which regulatory commands are efficacious and which are onerous. They must predict inherently uncertain future economic conditions and their impact on banks. While the regulated have better contextual knowledge, enhanced risk-taking is too often privately profitable and systemically dangerous. Regulation is needed in the financial sector, but will never be perfect, and will often lead to over- and under-regulation.

A. Bank Capital Levels Before and After the Crisis

Bank capital at the time of the crisis was particularly weak at the large and systemically important banks.¹³ Lehman Brothers, the large investment bank whose failure during the crisis was iconic, had equity of little more than

¹² See Int'l Monetary Fund, *Debt Bias and Other Distortions: Crisis-Related Issues in Tax Policy* (Fiscal Affairs Dep't, June 12, 2009), available at www.imf.org/external/np/pp/eng/2009/061209.pdf. The IMF abandoned that fine first foray for minor bank levies and a financial transactions tax on trading turnover. IMF, *A Fair and Substantial Contribution by the Financial Sector*, Final Report for the G-20 (June 2010), available at www.imf.org/external/np/g20/pdf/062710b.pdf. Policymakers worldwide prefer a bank levy or a financial transactions tax, and not overhauling the corporate tax and the interest deduction. For strong academic analysis of an overhaul, see Hilary J. Allen, *Let's Talk About Tax: Fixing Bank Incentives to Sabotage Stability*, 18 *FORDHAM J. CORP. & FIN. L.* 821 (2013). Cf. Mark J. Roe & Michael Troege, *How to Use a Bank Tax to Make the Financial System Safer*, *FIN. TIMES*, Mar. 25, 2014; Mark J. Roe, *Structural Corporate Degradation Due to Too-Big-to-Fail Finance*, 162 *U. PA. L. REV.* 1419, 1452–53 (2014).

¹³ See IMF, *Detecting Systemic Risk*, Global Financial Stability Report 111–49 (Apr. 2009), available at <http://www.imf.org/external/pubs/ft/gfsr/2009/01/pdf/text.pdf>; Greenspan, *supra* note 3.

3% of its total assets, as did Bear Stearns which collapsed and was merged into JPMorgan Chase. That is, a decline of only 3% in its business's value rendered Lehman insolvent. Smaller reverses would still have made it unwieldy, vulnerable to a run, unlikely to survive, and shunned as a trading partner.

Banks' low equity level was not the only reason for the financial crisis, but it exacerbated the problems emanating from the housing market. When housing prices dropped sharply, equity levels of most large banks were too weak to smoothly absorb the losses in their investments tied to housing without knock-on effects that degraded the economy overall. Even banks that did not fail and were not bailed out cut back their lending. Only government bailouts prevented the financial system from more fully collapsing.

A major post-crisis regulatory initiative has accordingly been to raise equity levels, in particular at the biggest, most systemically important financial institutions.¹⁴ In the United States, Congress mandated enhanced bank capital requirements as part of the Dodd-Frank Act, the government's primary regulatory response to the financial crisis.¹⁵ A similar initiative is under way at the international level.¹⁶ The tax reform we push forward and analyze here would push banks more willingly toward such constructive results.

B. Increasing Banks' Loss Absorption Capacity and Other Safety Initiatives

Despite the substantial post-crisis increase, equity levels are not yet high enough to fully absorb losses of the level observed during a crisis, according to common analysis.¹⁷ The Financial Stability Board, a major post-crisis international regulatory consortium, estimates that the crisis losses for three-quarters of the large international banks that failed or were supported during the crisis exceeded 7% of total risk-weighted assets. Even a 7% equity requirement would have stabilized no more than one-quarter of the largest banks.¹⁸ Observers such as Alan Greenspan have consequently argued for equity levels in the 20 to 30% range.¹⁹

¹⁴ See Bank for International Settlements, Basel Committee on Banking Supervision Reforms—Basel III (2014), available at www.bis.org/bcbs/basel3/b3summarytable.pdf. See also Hal Scott, *Interconnectedness and Contagion—Financial Panics and the Crisis of 2008* 10–11 (2014), available at <http://ssrn.com/abstract=2178475>. For a critical evaluation of the international capital requirements, see ANAT ADMATI & MARTIN HELLWIG, *THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT* 179–91 (2013).

¹⁵ And American bank capital has increased. See Appendix I; Dodd-Frank Wall Street Reform and Consumer Protection Act § 171, 12 U.S.C. § 5371 (2010); Darryl E. Getter, *U.S. Implementation of the Basel Capital Regulatory Framework* (Cong. Res. Serv., Apr. 9, 2014), www.fas.org/sgp/crs/misc/R42744.pdf.

¹⁶ Basel Committee on Banking Supervision Reforms—Basel III, *supra* note 14.

¹⁷ “Merrill Lynch . . . lost 19% [of its value]. It would have needed a core-capital ratio of 23% to avoid falling through the 4% floor. UBS lost 13%, implying that it would have required a ratio of 17%.” *Reforming banking: Base camp Basel, Regulators are trying to make banks better equipped against catastrophe*, *ECONOMIST*, Jan. 21, 2010, at 68.

¹⁸ The Financial Board analyzed thirteen large international banks that failed or received support during the crisis and found that losses and recapitalization needs were as high as 25 percent of risk weighted assets. Fin. Stability Bd., *Historical Losses and Recapitalisation Needs Findings Report*, at 23 tbl. A2 (Nov. 9, 2015), available at www.fsb.org/2015/11/historical-losses-and-recapitalisation-needs-findings-report/.

¹⁹ Greenspan, *supra* note 3.

But banks see sharply higher equity levels to be incompatible with their business models, because they see equity as a more expensive source of funding than debt.²⁰ Regulators, facing resistance, have been searching for other ways to increase banks' loss absorption capacity beyond basic common equity. One major strategy has been to require the banks to have more debt that the bank can write off if the institution weakens and fails.²¹

Regulators have two other major measures to reduce systemic risk. The first is to reduce the operating risk of banks, by banning risky activities or reducing these activities' scope and level. Second, regulators have built mechanisms to reduce the impact of bank failures on the economy.

Post-crisis inquiries concluded that too many banks had taken on too much risk.²² The so-called Volcker Rule bars banks from trading such derivatives for their own profit and loss (as opposed to trading them as agents for customers). New U.S. rules also bar banks from owning or sponsoring hedge funds and private equity funds²³ and require more bank liquidity—that make the banks keep good levels of easily saleable assets so that, regulators hope, make banks less likely to fail.²⁴ Similar efforts are underway in the United Kingdom and the European Union.²⁵

The last major regulatory strategy seeks to make the failure of a major financial institution acceptable, one that would not generate major negative spillovers for the economy or lead to government-financed bailouts. Banks would build structures that allow the banking complex to fail, with designated

²⁰ Bank consultants and industry associations argue that more equity will raise banks' cost of funding, induce them to raise their lending rates, and then reduce overall economic growth. See Int'l Inst. of Finance, *The Cumulative Impact on the Global Economy of Changes in the Financial Regulatory Framework*, 12 tbl. I.2. (Sept. 2011), www.iif.com/file/7080/download?token=CwKXtHfb.

²¹ See Total Loss-Absorbing Capacity, Long-Term Debt, and Clean Holding Company Requirements for Systemically Important U.S. Bank Holding Companies and Intermediate Holding Companies of Systemically Important Foreign Banking Organizations; Regulatory Capital Deduction for Investments in Certain Unsecured Debt of Systemically Important U.S. Bank Holding Companies, 80 Fed. Reg. 74926 (proposed Nov. 30, 2015) (to be codified at 12 C.F.R. pt. 217, 252), www.federalregister.gov/articles/2015/11/30/2015-29740/total-loss-absorbing-capacity-long-term-debt-and-clean-holding-company-requirements-for-systemically. See also Press Release, Fin. Stability Bd., FSB issues final Total Loss-Absorbing Capacity standard for global systemically important banks (Nov. 9, 2015), available at www.fsb.org/2015/11/tlac-press-release/. Similar efforts in the past required that the banks have more preferred stock, which can absorb losses like common equity. Basel Comm. on Banking Supervision, *International Convergence of Capital Measurement and Capital Standards* 6, 19 *et seq.* (July 1988), <http://www.bis.org/publ/bcbs04a.pdf>. The strategy failed.

²² See Fin. Crisis Inquiry Comm'n, *Final Report of the National Commission on the Causes of Financial and Economic Crisis in the United States* 38–51 (Jan. 2011), available at http://cybercemetery.unt.edu/archive/fcic/20110310173545/http://c0182732.cdn1.cloudfiles.rackspacecloud.com/fcic_final_report_full.pdf

²³ Dodd-Frank Wall Street Reform and Consumer Protection Act § 619, 12 U.S.C. §1851 (2010); see *The Volcker Rule*, SKADDEN NEWSLETTER, July 9, 2010, http://www.skadden.com/newsletters/FSR_The_Volcker_Rule.pdf.

²⁴ Bank for Int'l Settlements, *Basel III: The Net Stable Funding Ratio* (Oct. 2014), www.bis.org/bcbs/publ/d295.htm; Bank for Int'l Settlements, *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools* (Jan. 2013), <http://www.bis.org/publ/bcbs238.htm>.

²⁵ See UK Vickers Report, *supra* note 18 (recommending “ring-fencing” the bank's key operations, such as deposits, separately from the riskiest operating activities, such as derivatives trading); Report of the High-level Expert Group on Reforming the Structure of the EU Banking Sector (Oct. 2, 2012) (the “Liikanen Report”), available at http://ec.europa.eu/finance/bank/docs/high-level_expert_group/report_en.pdf.

investors taking the loss. The bank may be too big, but if the policy succeeds it would not be too big to fail.²⁶

C. Limits to Bank Regulation and Limits of the Regulator

While this regulatory effort has made the system safer, the effort is reaching its limits. First, the regulators face limits in their own perspicacity. And the regulated have reason to stop the regulators from being effective.

1. *Limits to regulatory perspicacity.* Command-and-control regulation puts much of the economic onus for error on the regulators. They may mistakenly ban a profitable activity that poses minimal risks to the bank. Conversely, they may misunderstand how, say, credit derivatives can put a financial firm at substantial risk.²⁷ Such misjudgments are common and contributed to the 2008–2009 financial crisis. Regulators allowed banks to keep risky mortgage security investments off their balance sheets, despite the fact that the banks guaranteed those investing in these structures:²⁸ banks were at risk, but their basic financial statements did not reveal the extent that they retained the risk, and the regulators did not require that they keep capital to back up the real risks that they were bearing. Regulators similarly underestimated the risks that banks were taking via trading and, hence, required too little capital for the trading activities. Only later did the regulators see their misjudgments and adjust their regulations.²⁹

These mistakes are neither isolated nor unlikely to recur. Regulators have limited information and the information that they have is often distorted, because it is mismeasured and because the regulated players are often the source of the information. The classic statement of the limits of centralized information and the value of decentralized decisionmaking comes from Friedrich Hayek.³⁰ And once regulation is in place, banks have an incentive to find transactions that the rules do not penalize but accomplish the same thing; they have little reason to advertise to the regulators that the transactions are close to, but not identical to, those running through the regulated channel.³¹

²⁶ Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy, 78 Fed. Reg. 76614 (Dec. 18, 2013), https://www.fdic.gov/news/board/2013-12-10_notice_dis-b_fr.pdf; see also JOHN F. BOVENZI, RANDALL D. GUYNN & THOMAS H. JACKSON, ECONOMIC POLICY PROGRAM, TOO BIG TO FAIL: THE PATH TO A SOLUTION: A REPORT OF THE FAILURE RESOLUTION TASK FORCE OF THE FINANCIAL REGULATORY REFORM INITIATIVE OF THE BIPARTISAN POLICY CENTER (May 2013), www.bipartisanpolicy.org/wp-content/uploads/sites/default/files/TooBigToFail.pdf.

²⁷ Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 HARV. L. REV. 1151, 1182–98 (2010).

²⁸ Viral V. Acharya, Philipp Schnabl & Gustavo Suarez, *Securitization Without Risk Transfer*, 107 J. FIN. ECON. 515 (2013); see also Peter Thal Larsen & Paul J. Davies, *Trouble Off Balance Sheet Raises Concerns*, FIN. TIMES, Aug. 23, 2007.

²⁹ Basel Committee on Banking Supervision, Guidelines for computing capital for incremental risk in the trading book (July 2009) (colloquially referred to as “Basel II.5”); *Half-cocked Basel: Stop-gap rules on banks’ trading books may add perilous complexity*, ECONOMIST, Jan. 7, 2012, at 69.

³⁰ Friedrich Hayek, *The Use of Knowledge in Society*, 4 AM. ECON. REV. 519 (1945). Decentralized decisionmaking in banks with a thin equity layer has decisions made by those lacking good incentives to use their better information well for systemic safety. The proposals here aim to reduce those misaligned incentives.

³¹ See Donald J. Smith, *Hidden Debt: From Enron’s Commodity Prepays to Lehman’s Repo 105s*, 67 FIN. ANAL. J. 15 (2011).

2. *Limits of the new resolution system.* The new resolution systems have yet to be well tested and may not work well in a crisis. Investors who regulators think should bear losses may well seek to avoid them when the time comes. Similar prior efforts to designate loss-absorbing capital layers did not function as originally expected: banks convinced European governments to bail out the owners of these supposedly loss-bearing securities, arguing that imposing losses would further destabilize financial markets and exacerbate the 2008–2009 financial crisis.³²

Careful analysts of the regulations have not uniformly endorsed them as likely to work well in crisis.³³ Stalling litigation is plausible, incomplete regulatory authority is likely,³⁴ and, given the global nature of the largest financial institutions and markets, may be unworkable because the capacity for international regulatory coordination is still low.³⁵ Regulators may, fearful of unforeseeable consequences, decide not to test the new resolution structures³⁶ and wait until it is too late and they feel compelled to bailout banks again.³⁷

3. *Regulatory weakness and regulatory reversals.* As the 2008–2009 crisis fades from memory, regulators will lose political support for strong safety regulation. And they themselves will see the need for strong safety regulation as less pressing as the economy strengthens. As time passes, the regulated can more easily stop, stall, or reverse existing and impending regulation.³⁸

³² Basel Committee on Banking Supervision Consultative Document Proposal to Ensure the Loss Absorbency of Regulatory Capital at the Point of Non-viability (Aug. 2010), available at <http://www.bis.org/publ/bcbs174.pdf> [“Basel Banking Supervision, Loss Absorbency”].

³³ See Howell E. Jackson & Stephanie Massman, *Options for Resolving Distressed Financial Conglomerates* (Harvard Law Sch., Working Paper, May 3, 2015); Paul H. Kupiec, *Is Dodd-Frank Orderly Liquidation Authority Necessary to Fix Too-Big-to-Fail?* (SSRN Working Paper, Oct. 22, 2015), available at www.ssrn.com/abstract=2678234; Steve Strongin, *Does Being More Resolvable Make a Firm More Resilient? It Depends! (Fed. Res. Bank of Richmond presentation, Oct. 18, 2013)*, available at www.richmondfed.org/conferences_and_events/banking/2013/pdf/resolution_conf_panel_5_strongin_doesbeingmoreresolvable.pdf.

³⁴ Cf. *State Nat’l Bank of Big Spring v. Lew*, 795 F.3d 48 (D.C. Cir. 2015) (bank challenges regulators’ authority under the Dodd–Frank resolution regime, with appellate court deferring decision as not ripe until an emergency contemplated by the statute arose); Note, *D.C. Circuit Limits Prospects for Challenging Dodd-Frank’s Orderly Liquidation Authority*, 129 HARV. L. REV. 835 (2016).

³⁵ Emiliós Avgouleas & Charles Goodhart, *Critical Reflections on Bank Bail-ins*, 1 J. FIN. REG. 3 (2015); Federico Lupo-Pasinbi & Ross P. Buckley, *International Coordination in Cross-Border Bank Bail-ins: Problems and Prospects*, 16 EUR. BUS. ORG. L. REV. 203, 203 (2015) (“bail-in suffers from complex coordination problems which, if not addressed, might lead to regulatory arbitrage and lengthy courts battles, and, ultimately, may disrupt resolutions.”).

³⁶ John Gallemore, *Does Bank Opacity Enable Regulatory Forbearance?* (2013) (unpublished dissertation, University of North Carolina).

³⁷ For the generality of bailouts as inevitable, see CHARLES P. KINDLEBERGER & ROBERT Z. ALIBER, *MANIAS, PANICS AND CRASHES: A HISTORY OF FINANCIAL CRISES* (2011). For specifics in EU regulation, see Luca Enriques & Gerard Hertig, *Shadow Resolutions as a No-No in a Sound Banking Union*, in *FINANCIAL REGULATION. A TRANSATLANTIC PERSPECTIVE* 150–66 (Ester Faia et al. eds., 2015).

³⁸ Yalman Onaran, *Volcker Rule is Next for Bank Stealth Attack, Hoenig Says*, BLOOMBERG, Apr. 1, 2015, <http://www.bloomberg.com/news/articles/2015-04-01/volcker-rule-is-next-target-for-bank-stealth-attack-hoenig-says>. See also Peter Eavis, *Fed’s Delay of Parts of Volcker Rule is Another Victory for Banks*, N.Y. TIMES DEALBOOK, Dec. 19, 2014, http://dealbook.nytimes.com/2014/12/19/feds-delay-of-parts-of-volcker-rule-is-another-victory-for-banks/?_r=0. “[T]he world’s leading investment bankers, noted for their cleverness and agility in advising clients on how to restructure companies and even industries however complicated, apparently can’t manage the orderly reorganization of their own activities in more than five

* * *

The post-crisis regulatory effort may have crested. Yet because of the slowing, dilution, and reversal, analysts³⁹ and some major regulators⁴⁰ see safety regulation as still incomplete. Moreover, regulators just cannot know enough to regulate the financial system ideally.

Stronger alternatives now need to be sought. Because the tax system now boosts debt, depresses safety, and can be fixed to do the contrary, it needs further examination as a regulatory strategy.

II. TAXING BANKS PROPERLY TO MAKE THEM SAFER

Using the tax system to incentivize a policy goal is hardly a new idea. And, for the financial sector, several types of bank levies, taxes on transactions, and tax surcharges have been proposed to shape banks' decisions. We discuss and evaluate the range of extant proposals in the United States and around the world in Part IV. Our purpose here in Part II is to demonstrate that although some of these initiatives are laudable (and others harmful), nearly all of them miss the most important fiscal source of financial instability. As long as the fundamental pro-debt bias persists in the tax system, these additional taxes cannot have a major effect on banks' decisionmaking as to how much safe equity and how much risky debt to use. Financial safety requires that regulators correct the fundamental flaw of our tax rules—namely their strong pro-debt and anti-equity bias.

Most financial tax proposals on the table aim to deter a specific difficulty. The problem with this strategy is that it requires both that the regulator correctly identify the risky activity and that the tax not be readily end-run by the regulated. Neither is assured or even likely. Better to change banks' incentives directly, by relieving the pro-debt bias in bank taxation.

First we state the basic tax bias toward debt and then outline a simple example of an alternative way to raise taxes that reverses the bias. In Part IV we analyze more nuanced and potentially more effective measures.

A. The Basic Pro-Debt Bias Stated

The basic tax bias toward debt arises from the American corporation paying a 35% tax on its net profits. The corporation deducts its interest expense on debt from its gross profits, but cannot deduct its costs for common equity, such as the dividends and capital gains that stockholders expect.⁴¹ While both interest and dividends compensate investors, debt creates the potential for

years," Mr. Volcker said, "Or, do I understand that lobbying is eternal, and by 2017 or beyond, the expectation can be fostered that the law itself can be changed?" *Id.*

³⁹ Alan Blinder, *Five Years Later, Financial Lessons Not Learned*, WALL ST. J., Sept. 11, 2013, at 15.

⁴⁰ Peter Olson & David Wessel, *Fed's Tarullo on Financial Stability: We're Safer, But Are We Safe Enough?*, BROOKINGS, Nov. 19, 2015), available at <http://www.brookings.edu/blogs/up-front/posts/2015/11/19-tarullo-financial-stability-are-we-safe-enough-wessel>.

⁴¹ Sven Langedijk, Gaëtan Nicodeme, Andrea Pagano & Alessandro Rossi, Debt Bias in Corporate Income Taxation and the Costs of Banking Crises (Eur. Comm'n Taxation Papers, Working Paper No. 50-2014, Oct. 2014) available at http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_50.pdf.

financial stress—bankruptcy for operating firms, failure for financial firms. Together these two effects are the basis of the “tradeoff theory” for finance,⁴² which explains the choice of debt and equity levels as trading off the costs of high leverage (principally from potential financial stress and bankruptcy) against the tax benefits to the firm from interest’s deductibility.⁴³

To exemplify debt’s tax advantage, consider two firms—XYZ and TUV—that are operationally identical, with one raising its funding only via equity, while the other raises its funding via significant borrowing. Both earn \$100,000 from operations. At a 33 $\frac{1}{3}$ % tax rate, the unlevered firm, XYZ, has \$66,667 to return to its capital-providers.⁴⁴

The second firm, TUV, borrows and pays \$25,000 in interest. It returns \$75,000 to its capital-providers (\$50,000 to stockholders and \$25,000 to creditors). It thus returns about \$8,000 more to its capital providers. Hence, unless fully offset by the potential for bankruptcy or operational degradation, the total value of the second, indebted firm’s capital should be higher than that of the first firm. The income statements below show the calculations.

XYZ:	
Earnings from operations:	100,000
Corporate income tax:	(33,333)
After-tax income to SH of XYZ:	<u>66,667</u>
Income to creditors of XYZ:	<u>0</u>
Total income to XYZ’s investors:	66,667
TUV:	
Earnings from operations:	100,000
Deductible interest:	<u>(25,000)</u>
Net income before corp. taxes:	75,000
Corporate income tax:	<u>(25,000)</u>
Income to SH of TUV:	50,000
Income to creditors of TUV:	<u>25,000</u>
Total income to TUV’s investors:	75,000

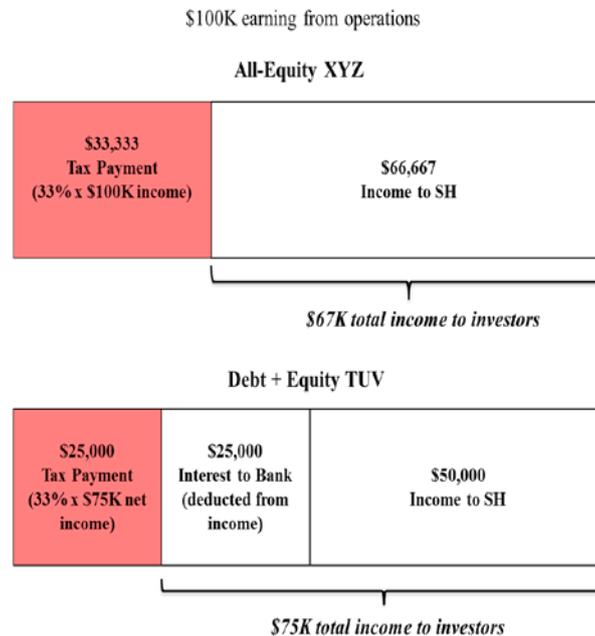
The bias can be diagrammed. An all-equity firm is diagrammed in the top half of Figure 1. The Internal Revenue Service’s tax bite is in darkened, to the left, in red. The second figure is the debt-using corporation; the government’s tax bite, also toward the left and darkened in red, is smaller. Although the shareholders’ part of the cash flows has been reduced, overall more cash is available for the firm’s capital owners.

⁴² Alan Kraus & Robert H. Litzenberger, *A State-preference Model of Optimal Financial :everage*, 28 J. FIN. 911 (1973); James H. Scott, Jr., *A Theory of Optimal Capital Structure*, 7 BELL J. ECON. 33 (1976).

⁴³ Modigliani & Miller, *supra* note 9; Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958); RICHARD A. BREALEY, STEWART C. MYERS & FRANKLIN ALLEN, *PRINCIPLES OF CORPORATE FINANCE* 18–25 (11th ed. 2014).

⁴⁴ The marginal American rate is 35%, but using one-third or 33 $\frac{1}{3}$ % is more intuitive.

**Figure 1: Traditional Corporate Tax
All-Equity Capital Structure v. Debt Financing**



Tax aficionados know that the asymmetry of deductible interest and non-deductible dividends is not the whole story. While equity is more costly to the firm's tax bill, individuals are often taxed more favorably on equity than on debt, via favorable taxation rates on dividends and lower effective capital gains rates for the taxes paid when common equity is sold profitably. This tax advantage of equity for investors partially offsets its tax disadvantage at the firm level. The offsetting effect of individual income tax rates has become less important, however, because institutional investors that are typically untaxed have become much more important in recent decades.⁴⁵

Balancing out these pluses and minuses yields a mixed analytic, but the consensus is that when all factors are added, the tax system is biased toward debt, due primarily to the deductibility of interest.⁴⁶

B. Fixing the Basic Pro-Debt Bias

The pro-debt bias originates in the corporate tax. If the corporation paid no tax, and if all returns to investors, whether from debt or equity, were taxed equivalently, then the tax system would no longer have its pro-debt bias.

⁴⁵ The same principle reduces the investor-level tax disadvantage of debt. While interest income is taxed to investors as a baseline rule, but investments held in untaxed or weakly taxed entities, do not bear that disadvantageous tax on interest. That is, when tax exempts hold debt, the earnings on the debt instruments are never taxed, but are still deducted from the issuer's tax bill. That is not so for equity; the earnings attributable to equity are not taxed, but the issuer of that equity enjoys no tax deduction.

⁴⁶ John R. Graham, *How Big Are the Tax Benefits of Debt?*, 55 J. FIN. 1901 (2000); Brealey, Myers & Allen, *supra* note 43, at 441-43.

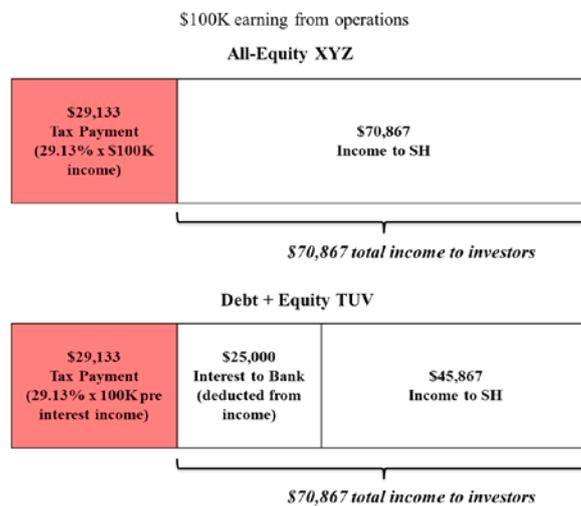
Full-scale reform of the corporate tax has been proposed, considered in Congress, but thus far rejected. It may be politically unattainable.

The next simplest measure is to eliminate the deductibility of interest for financial firms. This reform would increase banks' corporate tax greatly because interest is a large portion of financial firms' expenses; to be revenue neutral, the overall rate would be reduced greatly. This system would comport with the general American policy perspective that the tax base should be expanded, deductions reduced, and rates lowered.

Consider revoking interest deductibility for the company in the above example. This broadens the tax base for the levered company, TUV, and its tax paid would rise, if the same rate would apply to a larger base. To keep total tax revenue unchanged, the authorities would lower the tax rate. Before reform, the government raises an overall tax income of $\$33,333 + \$25,000 = \$58,333$. To keep the system revenue neutral, both companies should contribute $\$58,333/2 = \$29,166$. This can be achieved with a tax rate of 29.16% on the expanded base, as, without interest deductibility the tax base is now \$100,000 in both the levered and unlevered company.

The levered firm's tax would increase while the unlevered firm's tax would decrease. Incentives would push firms from the first category to the second. The levered firm would yield the same tax revenue as the company with \$25,000 in deductible interest today. The reform would take away the effect of increasing leverage, which would no longer increase the post-tax income available for creditors and shareholders. Figure 2 illustrates.

**Figure 2: Leverage-Neutral Tax
All-Equity Capital Structure v. Debt Financing**



C. Taxing Banks Properly as a Complement to Regulation

Such a tax change would make existing regulation more effective.

Regulators use command and control rules, instructing banks on what they can and cannot do, and how much capital they must have. Regulators do so because banks lack the incentives to take into account the risks to the

economy emanating from their business; banks do not want to fail but are not as cautious as the public authorities want them to be.⁴⁷ So regulators require bankers to hold more capital than the banks naturally would and to disengage from risky activities that they naturally would want to engage in.⁴⁸

But, as explained above, command and control regulation has limits: It is rigid and often under- and over-regulates. It requires both regulators and banks to deploy much talent and effort to its implementation. It depends on the perspicacity of the regulated, which is imperfect. And it is subject to lobbying and manipulation by the regulated. A properly-taxed bank will be less subject to these limitations of command and control regulation.

To be clear here: Bank safety regulation instructs banks to act in ways that banks would prefer not to act. Because compliance often cuts bank profits—more safe equity means less of a tax deduction for interest paid, for example—bankers comply, but tend to comply minimally. And they fight back, transactionally and politically. If banks were taxed properly, banks would find using debt to be no longer as profitable. Tax policy can increase financial stability by directly shaping the incentives of a corporation to avoid the most fundamental of financial system risks: too much debt.

Better banker incentives would reduce the pressure on regulators to get the specifics exactly right. The regulator could underestimate a serious risk and sometimes—one hopes often—the organizational incentives of the properly-taxed bank will make the risk one that doesn't threaten systemic safety. The properly-taxed bank would be better capitalized and better able to withstand a reversal. And the better capitalized bank bears more of the cost of the downside of an unregulated but risky activity than a poorly capitalized bank. Hence, it would be more likely to avoid overly risky activities or undertake the activity in small doses, even if regulators fail to bar an overly risky activity. Financial stability would thus depend less on regulatory measures.

Lastly, the improved tax system will reduce bank pushback to reverse regulation. For the properly-taxed bank, keeping it less well capitalized and riskier would not be as profitable as it is for the improperly-taxed bank. Banks will push back less intensely, because their incentives will have changed.

Taxing banks properly will make existing regulation more efficacious, less likely to be opposed, and less likely to be end-run.

D. Taxing Banks Properly as Regulatory Substitute

We analyzed in the prior section how taxing banks properly can make existing and future regulation more successful. Here we analyze how taxing

⁴⁷ DAVID S. HOLLAND, WHEN REGULATION WAS TOO SUCCESSFUL—THE SIXTH DECADE OF DEPOSIT INSURANCE: A HISTORY OF THE TROUBLES OF THE U.S. BANKING INDUSTRY IN THE 1980S AND EARLY 1990S (1998); George G. Kaufman, *Depositor Liquidity and Loss Sharing in Bank Failure Resolutions*, 22 CONTEMP. ECON. POL'Y 237 (2004). European regulators have been less willing to bail out noninsured depositors than American regulators have been. Christopher Kobrak & Michael Troege, *From Basel to Bailouts: Forty Years of International Attempts to Stabilize Bolster Bank Safety*, FIN. HIST. REV. (forthcoming 2015).

⁴⁸ Markus Brunnermeier, Lasse Pedersen, Andrew Crockett, Charles Goodhart, Avinash D. Persaud & Hyun Shin, *The Fundamental Principles of Financial Regulation*, GENEVA REPORTS ON THE WORLD ECONOMY 11 (2009).

banks properly can reduce the need for new, untested, and complex regulatory efforts, particularly questionable safety initiatives that are mostly motivated by the current tax code.

1. *Non-equity loss absorption as contorted design due to the existing tax structure.* Given banks' aversion to more equity, a major regulatory foray requires financial firms to have more loss absorbing non-equity securities. Labels and specifics change over time: once the goal was for preferred stock and subordinated long term bonds.⁴⁹ Later regulators called for more contingent convertible debt (or "coco's" for short), which would convert to equity when the firm suffered a financial reverse.⁵⁰ These hybrid efforts—recur today, despite the fact they failed to accomplish its mission before.⁵¹ The latest iterations are bail-in debt (which the creditor must write off or convert to equity before government authorities bail out the firm), particularly in Europe, and, particularly in the U.S., so-called "single-point-of-entry" structures which anticipate that debt at a non-operating company affiliated with the finance the bank subject to the risk of being written off if the bank is at risk.

The central idea in each is to combine characteristics of equity—namely, having the investment absorb losses in a crisis—with debt, which is said to have a lower cost to the bank.⁵² But from where does that lower cost come? Much of the lower cost to the bank from these hybrids comes from the simple fact that motivates this article: the interest paid on that loss-absorbing debt is deductible from the bank's tax bill. Stripped of niceties and countervailing considerations,⁵³ these hybrids seek to increase the banks' functional capital, while preserving the tax deduction for debt.⁵⁴ They induce complex capital structures.⁵⁵

Worse for financial safety purposes, the loss-absorbing quality of the hybrids will be challenged when they are needed,⁵⁶ because those owning the hybrid will not want their debt converted to worthless equity. They will

⁴⁹ Basel Comm. on Banking Supervision, International Convergence of Capital Measurement and Capital Standards 6, 19 *et seq.* (July 1988), available at <http://www.bis.org/publ/bcbs04a.pdf>.

⁵⁰ Jeremy Bulow & Paul Klemperer, *Equity Recourse Notes: Creating Counter-cyclical Bank Capital*, 125 *ECON. J.* 131 (2015).

⁵¹ Paul Davies, *The Fall and Rise of Debt: Bank Capital Regulation after the Crisis*, 16 *EUR. BUS. ORG. L. REV.* 491, 491 (2015) (regulators' counting subordinated debt for regulatory capital "is a surprising concession to banks In the financial crisis . . . subordinated debt singularly failed to discharge this role. . . . Bail-out by the state pre-empted loss falling on creditors.").

⁵² Anat Admati, Peter DeMarzo, Martin Hellwig & Paul Pfleiderer, *Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Socially Expensive* (Rock Ctr. for Corporate Governance at Stanford Univ., Working Paper No. 161), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2349739.

⁵³ Regular debt can have monitoring and risk-avoidance motivations that equity lacks. But assigning bail-in debt this role may or may not work, as the bail-in debt's incentive structure differs from that of ordinary corporate debt.

⁵⁴ For an excellent analysis of the safety limits of hybrids such as preferred stock and contingent convertible debt, and their tax justifications, see Allen, *supra* note 12, at 844–66.

⁵⁵ Oliver Hart & Luigi Zingales, *A New Capital Regulation for Large Financial Institutions*, 13 *AM. L. & ECON. REV.* 453–90 (2011).

⁵⁶ Emiliios Avgouleas & Charles Goodhart, *Critical Reflections on Bank Bail-ins*, 1 *J. FIN. REG.* 1 (2015).

challenge the regulators⁵⁷ and they may succeed. Litigious vulture investors will pounce on ambiguities, as occurs in industrial firm bankruptcies,⁵⁸ and delay the resolution process. Regulators facing delay and worried about a crisis may respond with a full-scale bailout.

2. *The shadow banking system as a tax avoidance strategy.* Proper taxation should also reduce the scope of the shadow banking system and the scope of the need to further regulate it. Non-bank intermediaries such as hedge funds, private equity funds, loan funds, money market funds, and securitization vehicles have grown greatly in recent decades. This “shadow banking sector” now carries out tasks of financial intermediation, which traditionally was handled solely by banks. Many see it as a source of systemic risk.

Banks initiate and manage major parts of the shadow banking industry. They do so via tax-free structures, which can be more profitable. Banks place loans in separate trusts that are taxed more favorably than banks, because the loans reside outside the taxable corporation.⁵⁹ While some shadow banking entities are heavily indebted, many, such as mutual funds and real estate investment trusts, have no or low leverage. This suggests a tax divide: the shadow banking system contains major unlevered and untaxed entities, while the banks are all heavily-levered and are taxed. Evening up the tax differences between the two will reduce one reason why activities migrate out from regulated banks into the less-regulated shadow banking sector.

E. The Evidence: Tax Incentives Change Behavior

The taxation of banks varies from country to country. Even among countries that have the same basic corporate tax with interest deductible, tax rates differ, making the pro-debt bias stronger where the tax rate is higher, such as the United States. In countries where the relative tax advantage of debt is small, banks have a higher equity level. Similarly, when tax rules change and increase the tax advantage of debt, bank capital decreases.

The effects are sizeable: A recent International Monetary Fund study covering 82 countries shows that a decrease in the corporate tax rate of 10 percentage points leads to an increase in equity of 0.98 percentage points of the bank’s risk weighted assets in the short run and 2.7 percentage points in the longer run.⁶⁰ A linear extrapolation points to the ending of the corporate tax

⁵⁷ Martin Arnold & Thomas Hale, *Investors Cry Foul Over Bank Bail-ins*, FIN. TIMES, Jan. 7, 2016 (bail-in effort prompts threats of lawsuits from bondholders).

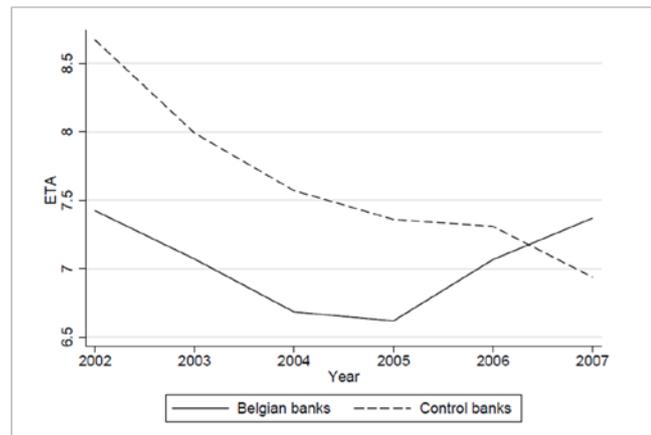
⁵⁸ See generally Daniel C. Hardy, *Bank Resolution Costs, Depositor Preference, and Asset Encumbrance* 4-7 (Int’l Monetary Fund Working Paper No. 13/172, 2013), available at <http://www.imf.org/external/pubs/ft/wp/2013/wp13172.pdf>.

⁵⁹ Joongho Han, Kwangwoo Park & George Pennacchi, *Corporate Taxes and Securitization*, 70 J. FIN. 1287 (2015).

⁶⁰ Michael Keen & Ruud de Mooij, *Debt, Taxes, and Banks* 16 (Int’l Monetary Fund Working Paper No. 12-48, 2012), available at www.imf.org/external/pubs/ft/wp/2012/wp1248.pdf (“[T]he tax effect on the leverage ratios is in all specifications positive and highly significant. . . . [A] 10 percentage point increase in the corporate tax rate [seems to] increase[] the leverage ratio, in the short run, by 1.8 percentage points.”); see also Thomas Hemmelgarn & Daniel Teichmann, *Tax Reform and Capital Structure of Banks* 17 (Eur. Comm’n Taxation Papers, Working Paper No. 37, 2013), www.ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_37.pdf (finding that each 10% of corporate tax “result[s] in an increase of leverage of 0.27 [percent] in the short-run and of 1.04 [percent] in the long-run, with a [full] adjustment period [of] 3.85 years”).

bias increasing bank capital by nearly 10%, approximately doubling it.⁶¹ Similar effects arise from differences in state-by-state corporate taxation in the United States. Banks typically increase their debt (thereby raising their interest deduction) in the year before a state's tax rate rise goes into effect and they thereafter decrease their equity.⁶²

Figure 3: Evolution of the equity ratio for the Belgian banks and the control group of banks



Additional evidence comes from Belgium, which before the financial crisis changed its tax system overall to be neutral between debt and equity. Equity levels had been falling all through the European bank sector before the crisis and were falling in Belgium as well. After the change in tax law, equity levels in Belgian banks rose substantially. Equity levels continued to fall in comparable European banks.⁶³ The graphic illustrates.⁶⁴

Another study is similar: “a 10 percentage point increase in the marginal tax rate will lead to a 4 percentage point increase in leverage.” Michael P. Devereux, Giorgia Maffini & Jing Xing, *Corporate Tax Incentives and Capital Structure: Empirical Evidence from UK Tax Returns* (Oxford Ctr. for Bus. Taxation Working Paper 15/07, 2015), available at www.sbs.ox.ac.uk/sites/default/files/Business_Taxation/Docs/Publications/Working_Papers/Series_15/WP1507.pdf.

⁶¹ The linear extrapolation is that the rate would be lower not by 10%, but by three and one-half times that (the highest rate is 35%), resulting in a capital increase of 3½ times 2.7%, or about 9.5%, which would approximately double current bank capital. See Appendix 1.

⁶² Alexander Schandlbauer, *How Do Financial Institutions React to a Tax Increase?* 39–40, tbls. 5–6 (Vienna Graduate Sch. of Fin. Working Paper, 2014), available at, <http://ssrn.com/abstract=2397030>. The impact on non-bank firms’ leverage is similar: “when North Carolina raised its top corporate income tax from 7% to 8.06% . . . , [North Carolina firms] increased long-term leverage from 18.8% to 20.8% on average.” Florian Heider & Alexander Ljungqvist, *As Certain as Debt and Taxes: Estimating the Tax Sensitivity of Leverage from State Tax Changes*, 118 J. FIN. ECON. 684, 685 (2015). Cf. Raghuram G. Rajan & Luigi Zingales, *What Do We Know About Capital Structure? Some Evidence from International Data*, 50 J. FIN. 1421 (1995) (firms in countries with higher corporate tax rates use more debt).

⁶³ Glenn Schepens, *Taxes and Bank Capital Structure*, J. FIN. ECON. (forthcoming), available at www.ssrn.com/abstract=2519533 (MS at 2) (the research “compares the evolution of the capital buffers of Belgian banks that were subject to the change in tax legislation with a group of matched banks in other European countries that did not experience such a change. . . . [R]educing the tax discrimination of equity funding vis-a-vis debt funding increases the equity ratio of the average treated bank in the baseline setup with 0.94 percentage points, which corresponds with an increase of more than 13 percent.”).

⁶⁴ The graphic is from Figure 1 in Schepens, *supra* note **Error! Bookmark not defined.** Doubts about the reform’s durability weakened its impact. It was passed by a Parliament by a very small majority

While the experience of one country cannot be conclusive, and Belgium experienced its share of bank failure during the crisis, it suggests that tax reform for banks could well be an under-utilized regulatory strategy.

Complementary empirical evidence on the effect of introducing a tax penalty for debt is similar.⁶⁵ Several European nations added small levies on bank borrowing, inducing European banks to borrow less.

Lastly, evidence from a recent cross-country study examining bank riskiness across nations with differing corporate tax rates “confirm[s] that higher corporate income tax rates increase both the credit and insolvency risk of banks, [which] regulatory policies such as capital requirements, supervisory power and restrictions on bank activities can mitigate”⁶⁶

Some studies, however, see the size of the beneficial effect as more uncertain. The impact can be stronger in banks that are already comparatively well-capitalized banks.⁶⁷ Banks with very high leverage thus far stay highly indebted. While stronger tax incentives like those advocated in this paper should more strongly affect their behavior, the supporting on-the-ground evidence is there for many, but not every, configuration.

Thus, despite the small size of the real world tax differences available for analysis, the beneficial effect seems likely not to be small. If a full-scale regulatory tax effort were implemented, larger effects than those now seen could be anticipated. A linear extrapolation of the observed basic results predicts banks would double their current level of bank equity⁶⁸ and thereby reach a level beyond that which is thought viable via command-and-control regulation. Equity would rise to a level much higher than regulation requires.

III. TAXING BANKS PROPERLY AS CORPORATE GOVERNANCE STRATEGY

Thus far we have analyzed properly taxing banks as a means to make safety regulation more effective. In this Part we interpret the problem through the analytic lens of corporate governance and organizational efficiency. We make two related points: First, the pro-debt tax bias has important mitigating *positive* benefits for *industrial* firms, but these benefits are missing—or in fact detriments—for banks. Second and related, taxing banks properly can make banks run better and more efficiently.

and has been regularly challenged. It survived but concessions were made to opponents, reducing the benefit to equity.

⁶⁵ Michael Devereux, Niels Johannesen & John Vella, Can Taxes Tame the Banks? Evidence from European Bank Levies (Oxford Univ. Center for Bus. Taxation, Working Paper No. 1325, 2013), www.ssrn.com/abstract_id=2563634.

⁶⁶ Yun Luo & Sailesh Tanna, *Taxation and Bank Risk-taking*, in TAXING BANKS FAIRLY 31, 32 (Sajid M. Chaudhry & Andrew W. Millineux, eds., 2014).

⁶⁷ Grace Weishi Gu, Ruud de Mooij & Tigran Poghosyan, *Taxation and Leverage in International Banking*, 22 INT’L TAX & PUB. FIN. 177, 184 (2015); Michael Keen & Ruud A. de Mooij, *Debt, Taxes, and Banks* 21 (Int’l Monetary Fund Working Paper No. 12-48, 2012).

⁶⁸ See *supra* note 61 & accompanying text. See generally Gu et al., *supra* note 67, at 184; Keen & de Mooij, *supra* note 67, at 21.

A. Agency Cost Benefits for Industry, Agency Cost Degradation for Banks

The large public firm has two core corporate governance conflicts, one between senior executives and stockholders, and the other between debt and equity. Because industrial firms typically have much less debt than banks, the first conflict should be deeper for them than the second. Industrial firm debt typically is between 35% and 50% of overall firm value, while for banks debt typically is 90% of total assets.⁶⁹ Debtor-creditor conflict is potentially more serious as the level of debt increases.

When the first conflict, between shareholders and executives, arises, senior executives do not work faithfully for stockholders. Managers of the publicly-held firm have slack, since stockholders are insufficiently cohesive, attentive, and powerful to hold managers accountable for failing to produce corporate value. Yes, at a severely pernicious level of managerial misdirection, managers and boards will suffer consequences—such as a takeover or other shareholder activism to replace the managers, reduce their compensation, or embarrass them, for example—but these limits are not tight.

However, an industrial firm that heavily uses debt affords executives less slack. The managers must produce enough cash to meet the interest payment and pay the debt when due. If they do not, unforgiving creditors have remedies that stockholders lack. Hence, managers scramble to meet debt payments more earnestly than they do to satisfy stockholders.⁷⁰ And with its equity layer thinner, private equity firms can more readily own the firm, with the incentives and means to monitor the firm's managers.

Although taxes encourage industrial firms to take on more debt than is appropriate, that extra debt comes with a mitigating benefit, because the extra debt often reduces managerial slack. To be clear, these reduced managerial costs cannot justify favorably taxing debt. The point is that there is a mitigating benefit.

B. Debt-Equity Conflict in Banks

For banks, there is no such mitigating benefit. First, banks will have high levels of debt regardless (if only because bank assets—loans—are debts to the bank and a sensible business structure matches these assets with debts due to the bank);⁷¹ the question is only whether the bank's debt will so high as to be systemically dangerous. Second, in banks the second major conflict, between debt and equity, is severe. As the bank's equity level declines, stockholders have reason to turn their firm into a riskier operation because the stockholders enjoy all of the upside if the risks pay off, but are not exposed to the full costs on the downside because of corporate limited liability: they can only lose their investment. This conflict is well-known.⁷² Much bank

⁶⁹ Acharya et al., *Robust Capital Regulation*, in 18 CURRENT ISSUES IN ECON. & FIN. 1–9 (2012).

⁷⁰ Michael C. Jensen, *Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers*, 76 AM. ECON. REV. 323 (1986); Alan J. Auerbach, Michael P. Devereux & Helen Simpson, *Taxing Corporate Income*, in DIMENSIONS OF TAX DESIGN 837, 858 (Stuart Adam et al., eds. 2010) ["Mirrlees Review"].

⁷¹ Harry DeAngelo & René Stulz, *Why High Leverage is Optimal for Banks*, 116 J. FIN. ECON. 21 (2015).

⁷² Brealey, Myers & Allen, *supra* note 43, at 459.

regulation tries to dampen this conflict in banks by reducing the riskiness to which stockholder-managers are allowed to subject the bank.

Active creditors can play a positive role in industrial firm corporate governance. But big banks' underlying too-big-to-fail guarantee—even if only a probability—weakens their creditors' basic incentives and efficaciousness in imposing positive corporate governance as compared to industrial firm creditors. Depositors are typically the largest creditor class for banks, but depositors with government insurance fund guarantees are weak corporate governance players, because they rely on the government insurance fund if the bank fails. The government insurance fund is de facto the creditor; and government regulation is de facto the creditor-based corporate governance channel for the insured bank. This is not a channel that makes banks' private creditors useful in bank corporate governance.

How about banks' non-deposit financial creditors? They adjust to the fact that the regulator is the bank's biggest de facto creditor, which weakens the creditors' incentives and capacities as corporate governance players. Bank creditors know that (1) their incentives are similar to those of the regulators (so, why bother duplicating the government's work?) and (2) they, the creditors, cannot ordinarily displace the regulators' result if the two disagree on strategy for the financial firm. These sharp limits to the positive effects of debt governance are absent for industrial firm creditors.

In addition, (3) much of the financial firm's debt is owed to short-term creditors who do not participate in bank governance but instead refuse to re-lend when a bank shows weakness. Lastly, (4) banks are notoriously opaque, making serious governance require a boardroom position, which is awkward for bond creditors and inconceivable for the overnight lenders that finance so much of bank debt.

Thus the mitigating corporate governance benefit of debt in the industrial corporation is absent in financial institutions. The overall corporate governance costs of high debt should be higher in banks than the corporate governance costs of the banks having too little debt. For banks, the biggest governance concern is not managerial slack from weak shareholder oversight (as it is in the industrial firm), but managerial-equity incentives to take excessive risk, take the excess compensation when the risk yields good returns, and share the pain or abandon the firm if the risk yields reversals and failure.⁷³ We next examine that problem further.

C. Baseline Corporate Governance Debilities in Banks

The high debt levels in banks degrade equity-based corporate governance in banks. Changing the tax incentives away from debt and toward equity should reduce these debilities.

When the firm is heavily leveraged, equityholders have reason to push their firms to take on more risk. If the risky bet pays off, the equityholders profit; if the bet fails, creditors disproportionately suffer. This is well-known.

⁷³ See E. JONATHAN BERK & PETER DEMARZO, *CORPORATE FINANCE* 553 *et seq.* (2014), for a discussion of risk shifting, and Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers' Pay*, 98 *GEO. L.J.* 247 (2009), for risk shifting in the context of banking; Stewart Myers, *Determinants of Corporate Borrowing*, 5 *J. FIN. ECON.* 147 (1977) (debt overhang).

Because banks are naturally going to be heavily indebted, this problem is more severe for banks than for industrial firms.

The tax system, by biasing the bank to more debt, thereby further degrades the bank-level corporate governance by more strongly incentivizing stockholders and managers to take on unwarranted risk. By reversing the tax incentives, regulators could reverse the corporate governance debility. (Since this debility is lower in the better-capitalized industrial sector, this benefit to a better tax structure is stronger for banks than for the corporate sector generally.) Thinly capitalized banks take on more risk and did worse during the financial crisis.⁷⁴

Industrial conglomerates that have grown too bulky face internal and external corporate pressures to resize the firm. Executive compensation, board direction, and shareholder action all can press in this direction. But large, heavily indebted, and equally bulky banks lack major governance correctives when the too-big-to-fail funding advantages are large and a resized firm will have less of that funding advantage. That is because once the bank is downsized it may fail, but it would no longer be too big to fail.⁷⁵

Lastly, we have effective means to rehabilitate failed industrial firms, namely, chapter 11 of the Bankruptcy Code. We generally have not been able to rehabilitate truly failed financial firms without a government bailout. The costs of failure in finance are greater than the costs in industry.

Reversing the tax bias would reduce these corporate governance debilities in banks.

* * *

Thus the corporate governance problems of banks are more susceptible to being improved by debiasing the debt-equity distortions in the tax system than they are to being improved in industrial firms. Moreover, we must recall the comparative costs of corporate failure: failure in either industry or finance is rarely to be welcomed. Failure in industry is often a tragedy for the firm itself, its employees, its executives, and its financiers. Failure in finance is costly for all of these players and channels and, if the firm is important enough, has major spillover costs to the overall economy.

IV. IMPLEMENTATION: FIXING THE DEBT-BASED TAX BIAS FOR BANKS

There are only are two general ways to fully correct the unequal treatment of debt and equity: either treat both debt and equity the way equity is treated today, i.e., end debt's deductibility, or treat them the way debt is treated today, i.e., make the cost of equity tax deductible.

⁷⁴ See Beltratti & Stulz, *supra* note 3; Daniel Ferreira, David Kershaw, Tom Kirchmaier & Edmund Schuster, *Shareholder Empowerment and Bank Bailouts* (London Sch. Econ. Working Paper, 2012), www.ssrn.com/abstract=2170392; Reint Gropp & Matthias Köhler, *Bank Owners or Bank Managers: Who Is Keen on Risk? Evidence from the Finance Crisis* (European Bus. Sch. Res. Paper No. 10-02, Feb. 23, 2010), available at www.ssrn.com/abstract=1555663. Cf. John Armour & Jeffrey N. Gordon, *Systemic Harms and Shareholder Value*, 6 J. LEGAL ANALYSIS 35 (2014).

⁷⁵ See Roe, *supra* note 12, at 1428–31.

Repealing the corporate tax (and taxing owners of equity and debt similarly) can achieve that equalization. While repeal has been a major academic and policy project for decades, implementation is not near. Yet a full restructuring of the corporate tax system would be best for financial safety: First, for banks, it would reduce tax distortions directly. Second, if industry could not deduct interest from its tax bill, then its capital base would shift further from rigid debt toward flexible equity. The demand for debt from the financial sector would decrease.

This last point deserves emphasizing, because as far as we know it has not figured in financial safety analytics thus far, but it is quite important. An economy-wide fix to the corporate tax debt bias would lower the system-wide use of debt, making firms more stable as is well-known *but also* making the financial system more stable. Thus far we focused here on the tax incentives *inside* the financial institution to favor debt over equity. But the debt bias *outside* in the real economy raises *outside* demand for financial institutions to grow, lend, and finance themselves via debt. This artificially increased demand for debt induces an artificially large debt-based financial sector. (The deductibility of interest on personal debt, such as on household mortgages, has the same systemically-detrimental effect.) Fully fixing the corporate debt bias would shrink an unnaturally large financial intermediation sector.

While we favor system-wide reform, we do not pursue our analysis in that direction for three reasons. First and foremost, no such full-scale reform has proven politically viable.⁷⁶ But debt-equity tax reform for the banks is both more urgent and simpler to implement. Second, a full-scale reform implicates issues beyond financial system safety. Third, analytic work for a full-scale repeal of the corporate tax has been done; we have just provided an important additional reason for the full-scale repeal: financial system safety. Instead, we pursue a vital, and we think politically viable, analytic: whether and how the financial sector can be taxed differently to end the tax-induced bias toward systemically unsafe debt.

The first of the two alternatives, analyzed in Section A, is to end the tax deductibility of bank-paid interest. The second, in Section B, is to allow banks to deduct a calculated cost of equity. These two systems have been examined in the academic and policy literature, and the second has been implemented in several nations for corporations generally, although not aiming to fix banks specifically, as we propose to do.

In Section C, we offer our most targeted solution: allow banks to deduct a calculated cost of equity for their equity exceeding regulatory requirements. By focusing on the marginal cost of equity, we expect to have the most efficacious results with the least disruption of the ongoing tax system.

A. Ending the Deductibility of Interest for Banks

The most direct path is to end the deductibility of interest. Neither the cost of equity nor the cost of debt could be deducted from a company's taxable

⁷⁶ Most corporate tax reforms would reduce the corporate incentive to retain cash, and doing so is not a goal that corporate leaders tend to support, even if analysts see it as efficient in its own right. Jennifer Arlen & Deborah M. Weiss, *A Political Theory of Corporate Taxation*, 105 YALE L.J. 325 (1995).

income. That would greatly expand the taxable base for banks; hence, to avoid a big tax increase, the tax rate for the pre-interest income would decrease.

Consider a simple bank with the following capital structure:

Traditional bank balance sheet	
Loans & investments	100B bonds at 7%
	100B short-term debt at 5%
	700B deposits at 4%
	100B equity

Bank profits are taxed at about 33 $\frac{1}{3}$ %, yielding the tax authorities \$3.3 billion. The bank borrows \$200 billion (in addition to borrowing via deposits), motivated by the fact that equity is hit with a 33 $\frac{1}{3}$ % tax and raising capital via debt shields operating income from tax.

Traditional bank's income statement, traditionally taxed

50B	Gross operating profit (income from loans & investments)
(7B)	Bond interest
(5B)	Short-term interest
<u>(28B)</u>	Deposit interest
10B	Net profit
(3.3B)	Corporate tax

The IRS can obtain that same \$3.3 billion from this bank by taxing the gross operating profit of \$50 billion, instead of the net profit of \$10 billion. To yield the tax authorities the same \$3.3 billion, the tax rate on the gross operating income of \$50 billion would be 6.6%.

This tax shift is simple, yields a low tax rate, and encourages the bank to use more equity and less debt. It should make banks safer. It also comports with basic preferences for American taxation, namely, to widen the tax base and lower the tax rate.⁷⁷ The tax also has enough flexibility to further promote safety and cordon off banks' core business. For example, policymakers may wish not to levy the tax on insured deposits and they need not. In our example above, if \$20 billion of the \$28 billion deposit interest went to insured deposits,

⁷⁷ Stephen E. Shay, *U.S. Experience with Interest Deductibility Restrictions*, in EC-IMF CONFERENCE: CORPORATE DEBT BIAS 32 (Feb. 23–24, 2015), available at http://ec.europa.eu/taxation_customs/taxation/gen_info/tax_conferences/corporate_debt_bias/index_en.htm (applying concept to interest deduction and ACE). On the preference to broaden the base and cut the rate, see THE PRESIDENT'S FRAMEWORK FOR BUSINESS TAX REFORM—A JOINT REPORT BY THE WHITE HOUSE AND THE DEPARTMENT OF THE TREASURY 1–2 (Feb. 2012), available at <https://www.treasury.gov/resource-center/tax-policy/Documents/The-Presidents-Framework-for-Business-Tax-Reform-02-22-2012.pdf> (“broaden the base and cut the corporate tax rate”); NAT'L COMM'N ON FISCAL RESPONSIBILITY & REFORM, THE MOMENT OF TRUTH 29 (Dec. 2010), available at www.fiscalcommission.gov/sites/fiscalcommission.gov/files/documents/TheMomentofTruth12_1_2010.pdf (high-profile Simpson-Bowles' “Commission proposes fundamental and comprehensive tax reform that . . . [l]ower[s] rates [and] broaden[s] the base”); OECD, Choosing a Broad Base–Low Rate Approach to Taxation (OECD Tax Policy Stud. No. 19), available at <http://www.oecd.org/ctp/tax-policy/46605624.pdf>. Closely-related are classic concepts of limiting so-called “tax expenditures.” STANLEY S. SURREY & PAUL R. MCDANIEL, TAX EXPENDITURES (1985).

then the tax would be levied on a \$30 billion base, not a \$50 billion base; the tax rate would be 11% of \$30 billion, not 6.6% of \$50 billion.

However, reducing the deduction for interest has drawbacks. First, it will tax banks even if their net profit is zero, and even if they run a loss. If the bank only earned \$40 billion in gross profit, its net profit would be zero, but the tax would still be \$2.6 billion. This could be handled in two ways: one, for which we have sympathy, is to ignore the issue, because banks that do not make money are systemically wounded, are risky to the economy, and should shrink further; the other is to devise a cutoff so that a net-loss bank is not taxed.

The second drawback is that the bank's tax would vary with the level of interest rates. Suppose that inflation increases. When inflation is high, banks' interest income balloons, but so does the bank's interest cost. For a traditional tax, income and deduction both rise, offsetting one another. But when the bank tax is levied only on the "top-line" inflated gross income and there is no offsetting deduction for the inflated interest expense, the tax balloons. This problem is fixable by adjusting the tax rate for inflation.

Academic and policy work in this tax area thus far typically is not designed for financial institutions. To handle this inflation problem, analysts make the cost of finance not deductible and make the income from financial investment non-taxable. This fix works for industrial firms, for which financial investment is a minor part. The resulting system—labeled the Comprehensive Business Income Tax (or CBIT)—was core to the detailed U.S. Treasury 1992 report that then had serious prospects of enactment.⁷⁸ But the fix is not well-suited for banks, because not taxing financial income would exempt banks from taxation. For this reason, proponents exempt financial firms from such proposals. Tax thinking unfortunately stopped there. The better reform is *not* to exempt financial firms from the tax, but to adapt it to work for banks, such as with an inflation deflator or with the next financial firm fix, a tax allowance for the cost of corporate equity.

B. A Deduction for the Cost of Bank Equity

A less intuitive, but promising, way to debias bank taxation is to accord an interest-like deduction for the cost of equity. The idea is that the firm "rents" debt for its operations and *also* "rents" equity. Financial-oriented readers may think of firms paying up for their "cost of capital" and that intuition accords well with this tax idea, an allowance for corporate equity (or ACE): equity capital, like debt, has a cost. Under traditional corporate taxation, that cost of equity is not tax deductible; under an ACE system, it is.⁷⁹

The ACE tax system was developed to reduce investment and

⁷⁸ Dep't of the Treasury, Integration of the Individual and Corporate Tax Systems: Taxing Business Income Once (Jan. 1992), <http://www.treasury.gov/resource-center/tax-policy/Documents/integration.pdf>.

⁷⁹ The ACE idea was first proposed in Robin Boadway & Neil Bruce, *A General Proposition on the Design of a Neutral Business Tax*, 24 J. PUB. ECON. 231 (1984), and further developed in the IFS Study, INST. FISCAL STUDIES CAPITAL TAXES GROUP, EQUITY FOR COMPANIES: A CORPORATION TAX FOR THE 1990S (1991) ["IFS Study"], available at <http://www.ifs.org.uk/comms/comm26.pdf>. The most recent major review and endorsement of the ACE tax is the Mirrlees Review. DIMENSIONS OF TAX DESIGN (Stuart Adam et al., eds., 2010). For analysis of the ACE technique, see Alvin C. Warren, *The Business Enterprise Income Tax: A First Appraisal*, TAX NOTES, Feb. 25, 2008, at 921–26; Alvin Warren, Corporate Cash-Flow Tax Bases (unpublished manuscript, Sept. 24, 2015).

financing distortions in nonfinancial corporations and was not intended for financial institutions.⁸⁰ However, ACE can be adapted for taxation of financial institutions and, if done properly, can reverse the tax subsidy to debt.

The basic concept is to make the cost of equity deductible from the firm's taxable income, just as the cost of debt is deductible. Mechanically in most renditions, the deduction is calculated by multiplying the accounting, book value of equity by the long-term return on government bonds; that would leave much of the return on equity untaxed. Debt and equity would be taxed similarly even if not identically, this time by benefiting equity as compared to the status quo. Note that this is not a deduction for dividends paid—an important issue to which we shall return.

The following financial statements illustrate a straightforward 6% allowance for corporate equity of \$100 billion on a bank's tax payments:

The bank	
Loans & investments	100B bonds at 7%
	100B short-term debt at 5%
	700B deposits at 4%
	100B equity

Income Statement with ACE	
50B	Gross operating profit (income from loans & investments)
(7B)	Bond interest
(5B)	Short-term interest
(28B)	Deposit interest
10B	Pre-tax profit
(6B)	ACE at 6% of the \$100B equity
4B	Taxable profit
(1.3B)	Taxes
8.7B	Net profit

The bank receives an allowance of \$6 billion for the cost of its \$100 billion equity, which it deducts from its gross operating income alongside its interest expense. By deducting that \$6 billion, the allowance leaves the bank with a corporate tax base of \$4 billion of taxable profits. The deduction can be a fixed percentage, can be formulaic, or can be that of the same amount of long-term government debt.

This reform would make equity less expensive and the bank would have less reason to prefer debt over equity. This the major safety effect from the reform, but there are others.

First, because long-term interest rates are typically higher than short-term rates, the bank would have an incentive to add more of the increasingly

⁸⁰ Institute of Fiscal Studies, *Setting Savings Free: Proposals for the Taxation of Savings and Profits* 31 (unpublished report, 1994), <http://www.ifs.org.uk/comms/r44.pdf>.

deductible equity and decrease its debt with a lowest tax benefit, namely the risky, less stable but lower interest shorter-term debt, for which the tax deduction is less than for longer-term debt. This tendency away from riskier, unstable short-term debt to stable long-term debt would itself be safety-enhancing.

A second safety-inducing effect has not, as far as we know, been brought forward, namely that the current tax system discourages banks from holding low risk liquid securities like U.S. Treasuries. Consider the possibility that regulators require that banks like Citibank to hold low-risk government securities. For concreteness, assume it must hold \$100 billion of U.S. Treasury bonds with a 3% interest rate. Citi could finance these bonds by borrowing \$100 billion or by raising \$100 billion of equity. If the bank finances the bonds by borrowing, the interest earned on the bonds can be offset by the interest paid to the financing source, yielding no tax under the current system. But if the bank is required to finance the bonds by increasing its equity today, then the bank would pay about \$1 billion in additional tax, from 35% of \$3 billion. Equity markets will understand that they will obtain only \$2 billion of that \$3 billion, with the rest going to the Internal Revenue Service. Equity investors in the bank today would see the investment as a useless, loss-generating part of the bank's portfolio. Hence, banks for their own private reasons resist this type of safety-enhancing regulation.

But if the bank deducted against its income the cost of equity, then the bank would no longer have a tax reason to run from equity financing here. Tax reform thereby helps the regulators facilitate safety by affecting the banks' asset mix (low-risk government debt) and financing structure (stable, safety-enhancing equity).

The allowance for equity mechanism has a third advantage over other tax reforms: it has been implemented in several countries, including a handful of wealthy European nations with tax and financial systems similar enough to the United States—those of Austria, Belgium, and Italy—to allow American policymakers to study the details of their experience and avoid pitfalls.⁸¹ And Germany and the United Kingdom have both had major studies done to implement ACE, although they have not yet acted.⁸² Hence, easy-to-make mistakes requiring later correction would be less likely and smaller in scope.

* * *

The allowance mechanism has disadvantages, and the basic one is not small: the allowance would reduce bank taxes greatly. But first the secondary disadvantages: determining the cost of equity is potentially difficult and, as a consequence, lobbying and mistake may prevail. This problem can be

⁸¹ Brazil, Croatia, and Latvia have also used ACE. Serena Fatica, Thomas Hemmelgarn & Gaetan Nicodeme, *The Debt-Equity Tax Bias: Consequences and Solutions*, 52 REFLETS ET PERSPECTIVES DE LA VIE ÉCONOMIQUE 5, 5–18 (2013); Alexander Klemm, *Allowances for Corporate Equity in Practice*, 53 CESIFO ECON. STUD. 229 (2007).

⁸² For Britain, see the IFS Study, *supra* note 79. The idea is regularly on the European agenda. The German Council of Economic Advisors in 2005 suggested an ACE corporate tax and, more recently, an Expert Commission from the German Ministry of Economy also did so. Sigmar Gabriel, *Stärkung von Investitionen in Deutschland. Bericht der Expertenkommission im Auftrag des Bundesministers für Wirtschaft und Energie* (Apr. 2015), www.bmwi.de/BMWi/Redaktion/PDF/I/investitionskongress-report-gesamtbericht-englisch,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf.

alleviated by fixing a formula in advance, such as via a strict rule based on U.S. Treasury rates of a specified (or weighted) maturity.

Second, the political headline of a bank-specific allowance for corporate equity might be that the banks, unlike everyone else, are being favored with a deduction for profits that should really be taxed. Or lobbying by banks may yield no offset to the allowance and lowered tax bill. (I.e., “Thank you for the deduction for equity; but let’s just stop there.”⁸³)

As said, the biggest disadvantage of allowing a deduction for corporate equity is that it would greatly reduce the taxable income base for banks. In our running illustration, if banks continued to be taxed at traditional rates, the bank would pay only \$1.3 billion in tax, instead of the \$3.3 billion from a traditional tax. Taxing bank equity less would have two offsetting effects: it would bring forth more equity (which is safety-enhancing) and it would unnaturally attract more assets into finance (which is not).

Revenue neutrality would require that the \$2 billion in tax relief be raised elsewhere from the banks. Raising the tax rate would not work, because raising the rate on corporate tax would reverse the purpose of the reform: namely, to even up the taxation of debt and equity. Equity would be disadvantaged as before. Second, the required rate would be extremely high and not viable politically or otherwise.

The solution would be to tax the banks otherwise than on equity. The most obvious tax would be on bank liabilities, as discussed in the prior section.⁸⁴ But first we show that most of the safety advantage can be achieved without according banks the full allowance for the cost of equity, but rather to target it for equity above the regulatory-required level. This will greatly reduce the make-up needed for the revenue neutrality needed to make the fix viable politically and otherwise. Then we return to a tax on liabilities.

We now come to our central proposal, to apply the allowance not to the entire equity base, but to that equity which exceeds regulatory requirements.

C. A Deduction for the Cost of Non-Regulatory Bank Equity

Allowing the banks a deduction for corporate equity for only that portion that exceeds the regulatory minimum will avoid major implementation and transition problems without severely compromising the safety benefit. Suppose that the required regulatory minimum equity is 8% of assets. The \$1 trillion bank in the example above has \$100 billion of equity, meaning that it has \$20 billion of capital in excess of the regulatory minimum. The minimally

⁸³ Critics would argue, however, that: “Bank taxation hugely subsidized bank debt via the interest deduction and encouraged risky banker behavior. So policymakers now are giving bankers *another* deduction—a gift—of more deductions for equity.” Lost in the political rhetoric back-and-forth would be the offsetting taxes that could make the change revenue-neutral.

⁸⁴ Other thorough-going corporate tax reforms have been brought forward. One major proposal would allow a deduction to the corporation for dividends paid, which would punish equity less than the current tax system does. For general corporate purposes, Reuven Avi-Yonah and Amir Chenchinski show that the dividend deduction does much that is needed. Reuven S. Avi-Yonah & Amir C. Chenchinski, *The Case for Dividend Deduction*, 65 TAX LAW. 3, 3–4 (2011). While the reform is attractive for industry, it is not desirable for banks. See *infra* note 119 & accompanying text.

disruptive allowance then would be to allow the same percentage cost of equity, 6%, but only for the \$20 billion excess.

That would yield the bank a deduction of \$1.2 billion, which would decrease its tax by \$400 million instead of \$2 billion. Revenue neutrality could be more easily achieved more easily.

50B	Gross operating profit (income from loans & investments)
(7B)	Bond interest
(5B)	Short-term interest
(28B)	Deposit interest
10B	Pre-tax profit
(1.2B)	ACE at 6% on \$20B equity
8.8B	Taxable profit
(2.9B)	Taxes (at 33% of adjusted profit)
5.7B	Net profit

The missing \$400 million of tax revenue can be made up via a low .04% levy on the bank's full \$1 trillion of assets, a .4% levy on \$100 billion of its short-term debt, or a .2% levy on its \$200 billion of non-deposit debt.⁸⁵ Thus far, our goal has not been to tax liabilities (although some might conclude it makes the banks safer through another anti-debt channel); it has been to reduce the tax burden on equity and then to find the best revenue source to offset the equity allowance.

Revenue-neutrality could be achieved and safety further enhanced with an analogous incremental concept but this time for the deductibility of interest: limit the deductibility of the bank's interest payments to the risk-free rate, proxied by the rate on U.S. Treasuries of the same duration as the bank debt. The bank debt's interest would remain deductible, but only up to the risk-free rate. Proposals to limit the interest deduction generally in this way have arisen on theoretical grounds.⁸⁶ The safety addition here could be substantial, although we do not make that case here:⁸⁷ low-risk banks would presumably pay interest approximating that on U.S. Treasuries; they could deduct most of their interest paid. But as a bank took on more debt and more risk, its borrowing rate would rise but the tax allowance for its interest paid would not. Such a well-designed tax system would thereby penalize the riskier bank and reward the safer one.

⁸⁵ Our core proposal thus parts company with that of Allen, *supra* note 12, at 875–83, 886–87, who seeks an ACE-like deduction for regulatory capital and perhaps more. But, in our view, the slice to keep disadvantaged, if any, is that which regulation requires *anyway*, with the ACE rollback advantaging the *extra* equity on top of what regulators already require.

⁸⁶ Boadway & Bruce, *supra* note 79; Edward D. Kleinbard, *Beyond Good and Evil Debt (and Debt Hedges): A Cost of Capital Allowance System*, 67 TAXES 943, 946, 955–62 (1989); EDWARD KLEINBARD, DESIGNING AN INCOME TAX ON CAPITAL 180–82 (2007).

⁸⁷ Cf. Johnson, *supra* note **Error! Bookmark not defined.** (recommending that there be no deduction for the risk component of the interest paid).

By favorably taxing the slice of equity above the level that regulation requires, the authorities would not simply favor a random slice of equity that would have only a weak impact on safety-increasing equity. The authorities would be favoring the “marginal,” extra equity above that which is already required. The favored slice would be the slice that the better taxation is most likely to push to grow and that is most important for financial safety.

Our conclusion: The incremental deduction for non-regulatory corporate equity has several advantages. It can be added to the current tax structure without completely reconstructing it across the entire economy and all of corporate America. It does not benefit the regulatory equity that banks are already required to hold, but rewards the banks for adding more safe equity on top. It thereby has a substantial safety-enhancing effect.⁸⁸ Safer capital structures would be relatively less expensive and risky structures with risky debt would become more expensive. Revenue neutrality is probably politically necessary and perhaps wise policy overall. The incremental allowance reduces the tax base less than alternatives, allowing for more astute and less intrusive measures to maintain revenue neutrality.

D. Limits to Effectiveness: Tax Arbitrage and Its Own Limits

One should not naively expect that firms will refrain from gaming the system. If the allowance for equity applied to the portion of equity above the regulatory allowance, then the affected firms would have reason to argue that their regulatory-required equity was low, so that their tax benefit would be higher. (Administrability might thus demand that the regulatory level above which equity benefits be stabilized at the regulatory amount at the time the allowance was implemented at, say, equity of 8% of total assets, and not adjusted as regulation shifts. But this is a secondary implementation issue.)

The tax arbitrage problem, while real, can be exaggerated. Life insurance companies, mutual funds, and savings banks are already taxed differently than other corporations.⁸⁹ Moreover, there are at least two countervailing aspects: First, the changes will *reduce* adjacent gaming and boundary problems that now occur. Because debt is tax-favored and equity is not, firms seek out de facto equity-like instruments that look like debt for the tax benefit. Reducing the differential tax impact of the two will reduce existing incentives for gaming. Second, some of the gaming issues are already in play and countermeasures already exist. But nevertheless there is a widespread fear,

⁸⁸ Steve Bond & Michael Devereux, *Generalised R-Based and S-Based Taxes Under Uncertainty* (Inst. Fiscal Stud. Working Paper, 1999), available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.25.5224&rep=rep1&type=>. They argue for using the risk-free rate of return as the allowance for corporate equity. And, in more complex versions, the deduction for interest could be reduced downward to the same risk-free rate of return, proxied by the rate on long-term government debt. Edward D. Kleinbard, *The Business Enterprise Income Tax: A Prospectus*, 106 TAX NOTES 97 (JAN. 3, 2005).

⁸⁹ For insurance companies, see Subchapter L of the Internal Revenue Code, I.R.C. §§ 801-848; for mutual funds, Subchapter M, I.R.C. §§ 851-860H; for savings banks, Subchapter H, Pt. II, IRC §§ 591-601. Commercial banks are already taxed differently than industrial firms via Subchapter H, Pt. I, I.R.C. §§ 581-586. And other nonregulated financial firms, such as hedge funds and private equity firms can organize themselves as Subchapter K partnerships, which are taxed differently than corporations. I.R.C. §§ 701-777.

or at least argument, that incremental changes for banks will drive more activity into the shadow banking system.

1. Tax reduction via hybrid instruments. Tax planning strategies now blur the distinction between debt and equity, in order to create loss-absorbing, risk-bearing securities that are tax deductible. We have seen how this is in play in banking. A leverage-neutral tax system will render these strategies pointless.

But a changed system will open up new possibilities. If banks are taxed differently from industrial firms, then players will move some transactions from the real sector to the financial sector. Activity restrictions on banks will reduce this, but not eliminate it.

Banks might create fictitious equity that gets the tax allowance. In the country where the system has been most deeply implemented, such efforts have been made. A company invests in the equity of a subsidiary and then the subsidiary invests this money back in equity of the parent. The net cash balance of the offsetting equity investments is zero, but the transaction allows the corporation to present what appears to be equity at the parent-company level to the tax authorities and insist on a deduction for that equity. This tax gambit requires a countermeasure: the offsetting equity needs to be zeroed out when calculating the allowance.⁹⁰ An American ACE for banks can learn from the experience and put countermeasures in place in advance.

A tax reform targeted at a specific group such as banks opens up the possibility of arbitraging between different corporate forms. As we showed above, this is already the case with a major part of shadow banking *now* being migration out from the taxed and regulated banks and into the tax-free shadow banking environment. Hence, the safety proposal would not create migration opportunities that do not already largely exist.

Overall a tax reform favoring equity in financial institutions and debt in non-financial corporations should lead equity to migrate from non-financial companies to the financial system, with debt migrating in the opposite direction. Because we see financial risk in the financial system as more dangerous than the debt-based risk in non-financial corporations, this migration is not detrimental and will, on balance, lead to a more robust economy. Hence, we view the first-order arbitrage possibility as beneficial.

Where to draw the initial line for the equity allowance among financial firms is also relevant, but is neither crucial nor a task we complete here. The incremental allowance for equity would initially and at a minimum apply to commercial banks and investment banks; it could (and in our view should) be expanded over time to other financial firms that are organized as corporations and subject to corporate taxes, such as insurance firms and financial firms.

⁹⁰ The general problem and the Belgian and Italian resolution are analyzed in OECD, OECD TAX POLICY STUDIES: TAX POLICY REFORM AND ECONOMIC GROWTH (2010); Shafik Hebous & Martin Ruf, Evaluating the Effects of ACE Systems on Multinational Debt Financing and Investment (Univ. of Frankfurt Working Paper, 2015), available at https://ideas.repec.org/p/ces/ceswps/_5360.html; Ernesto Zangari, Addressing the Debt Bias: A Comparison between the Belgian and the Italian ACE Systems (Eur. Comm'n Taxation Papers Working Paper N.44-2014, 2014), available at www.ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_44.pdf.

(Private equity firms, hedge funds, and mutual funds are generally not taxed as corporations.⁹¹) But the place to begin is with the banks.

2. *International arbitrage.* International tax competition—a race to the bottom—is a problem. Multinational firms quickly shift income to less-taxed jurisdictions. And they can change their core tax domicile.⁹²

This objection—common for other corporate tax reform proposals—is much weaker for the bank tax reform. A tax reform favoring low leverage should be beneficial for the country initiating this reform: Banks with low leverage should move to this country whereas banks with high leverage should register in countries where the debt still provides tax shields. This should result in a reduction of financial risk for the country initiating the reform.

But multinational banks operating globally will minimize their tax bills by allocating their debt and equity to where each is taxed least. A multinational bank can exploit a tax on gross income by lodging its debt in an affiliate taxed by a nation where interest is fully deductible.⁹³ Regulators can react and undo these arbitrage strategies with countervailing taxes in the no-deduction country to offset the tax saving that would be gained in the tax deduction country. In general, because the extent of tax deductibility and the rates at which interest is deducted differ *now* among nations, this arbitrage issue is *already* in play (albeit at lower stakes). Mechanisms to handle this arbitrage problem are already understood and believed to be viable.⁹⁴ They could be viable for the proposal here as well.

Overall, this tax arbitrage should yield major stability benefits for the initiating nation: If debt migrates to other countries where it has a tax advantage, these nations should want to imitate the initiating nation. The impact could well be a self-sustaining coordination as most nations converge on the same debt-biased tax system for banks.

3. *Reaction and further reform.* Tax reform is a learning process. The authorities will need to counter tax avoidance strategies that arise. Gradually expanding the new tax regime would reduce arbitrage. Our fourth and core tax reform proposal—for an allowance on bank equity above the regulatory minimum—has this character of an initial, gradual start.

Because there are good reasons to tax industrial firms so that debt is not so heavily favored over equity, the path for add-on reform should be easier than for other reforms. If arbitrage opportunities arise, the authorities can expand the new tax system to the hybridized institutions. If tax law can be unified across non-financial as well as financial institutions, including shadow banks, tax arbitrage will be less of a consideration than it is today. Banks are the

⁹¹ See Part II.D.2 for why arbitrage into shadow banking, many of whose institutions are untaxed, is not assuredly a serious problem.

⁹² Kimberly A. Clausing, *The Effect of Profit Shifting on the Corporate Tax Base in the United States and Beyond* (SSRN Working Paper, Nov. 7, 2015), available at www.ssrn.com/abstract=2685442 (“profit shifting is likely costing the U.S. government between \$77 and \$111 billion in corporate tax revenue by 2012”).

⁹³ See Mihir Desai & Dhammika Dharmapala, *Interest Deductions in a Multijurisdictional World*, 68 NAT'L TAX J. 653 (2015).

⁹⁴ See *id.*; Mihir A. Desai & Dhammika Dharmapala, *Corporate Tax Avoidance and High-Powered Incentives*, 79 J. FIN. ECON. 145 (2006).

best and most urgent place to start tax reform but we are not forced to stop there.

E. The Cost of Finance When Taxing Banks Properly

When regulators seek to raise the capital required of banks, the bankers' principal counter-argument is that equity is an expensive; debt is cheaper.⁹⁵ Hence, regulation that forces banks to use more costly equity will lead the banks to face higher financing costs, which they would have to pass on to their clients by charging borrowers more and paying depositors less.

Whatever the appropriateness of these counters for command-and-control regulatory capital requirements (and we have reservations on their persuasiveness), for the tax debiasing proposals we push forward, the counters are largely irrelevant. Because the goal is to make capital choices neutral between debt and equity, with the overall tax bite the same, the overall cost of funding to the banks should remain unchanged.

When banks say equity is cheaper than debt, they are largely pointing to the fact that debt is cheaper on an after-tax basis than equity. But the proposal here is to even up the score, not to raise their cost of capital overall.

* * *

The reforms would redistribute tax benefits within the industry. Banks with high leverage would be taxed more; banks with low leverage would be taxed less. Thus some banks already with low leverage would be favored. This impact is an advantage of the proposal. Industry-wide, the tax take would remain unchanged, leaving the total industry-wide cost of capital unchanged. But the tax reform would favor safer banks.

The cost of finance for banks could rise if the banking sector is made safer, if the biggest banks are getting a too-big-to-fail funding boost and the tax reform would make them safer. That is, in a crisis, the authorities are more likely to bail out bank debt than bank equity. This makes bank debt cheaper relative to bank equity. If the tax reform here made banking safer, then banks that lost the too-big-to-fail boost would have a higher cost of capital. But this is a legitimate increase, not an illegitimate one.

V. TAXING BANKS IN AMERICAN PRESIDENTIAL POLITICS AND AROUND THE WORLD

Banks are visible enough that presidential aspirants and other politicians propose to tax banks. And around the world, different means to tax banks—levies on debt, taxes on financial transactions, surcharges on profits—regularly arise. For the most part, these tax proposals are misguided because they fail to address the fundamental underlying problem, namely the mismatch between the taxation of debt and equity in the financial sector.

⁹⁵ Douglas J. Elliott, Higher Capital Requirements Would Come at a Price (Feb. 20, 2013) (Brookings paper), available at <http://www.brookings.edu/research/papers/2013/02/20-bank-capital-requirements-elliott>. For other sources to this effect and criticism of the viewpoint, see Admati et al., *Fallacies*, *supra* note 52, at 23; Admati & Hellwig, *supra* note 14, at 100–14.

A. Pigovian Taxation

First we address an attractive tax analytic, which while conceptually correct has done mischief in its implementation.

The idea behind a well-known general tax corrective, the Pigovian tax, is simple: A firm pollutes and damages its neighbors. If the polluting firm were made to bear a tax equal to the cost of its pollution, then it would seek to avoid or lessen the tax by reducing its pollution, investing in anti-pollution machinery, or taking other corrective actions. A simple Pigovian tax would thereby correct the pollution problem.⁹⁶

The Pigovian tax in the financial sector is analogous. As several banking analysts have astutely stated,⁹⁷ systemic risk is like pollution emanating from banks and, hence, is a candidate for a Pigovian tax. Bank “pollution” is the expected possibility that widespread bank failure will damage the economy and lead to taxpayer-financed bailouts. By taxing the banks appropriately, the banks would be made to account internally for the costs that they probabilistically impose on the rest of the economy. Important analyses now apply the theory to banking.⁹⁸

We have considerable sympathy for the theory. Our reservations are in how it has been implemented thus far and in whether it can be implemented effectively as an alternative to command-and-control regulation. A targeted application would identify the riskiness of each bank and the expected value of the costs imposed on the economy and the taxpayers by its failure; a commensurate tax would then be levied. But assessing the number is not easy. The tax authorities would have to estimate the systematic risk that the banking sector creates, apply this measure on a bank-by-bank basis, adjusting each bank’s tax appropriately. Academics have showed theoretically how to do this, but the results are approximate and disputed.⁹⁹

Because of this implementation problem, an alternative Pigovianesque proposal is to tax the specific features of banks that are thought to be most risky. For example, there is widespread agreement that banks’ short-term, nondeposit debt is particularly risky. That then, proponents say, is an appropriate target for a Pigovian tax.¹⁰⁰ The problem is that this is not the only Pigovian problem for banking.

⁹⁶ Famous among legal economists is the Coasian counter: if victims can readily negotiate with the polluter, they would pay the polluter to pollute less. Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). This analytic counter is not important to the taxation analysis.

⁹⁷ Enrico Perotti & Javier Suarez, *A Pigovian Approach to Liquidity Regulation*, 7 INT’L J. CENT. BANKING 3 (2011); see Joel Slemrod, *Lessons for Tax Policy in the Great Recession*, 62 NAT’L TAX J. 387 (2009); Douglas A. Shackelford, Daniel N. Shaviro & Joel Slemrod, *Taxation and the Financial Sector*, 63 NAT’L TAX J. 781 (2010).

⁹⁸ See sources in note 97.

⁹⁹ Viral V. Acharya, Lasse Heje Pedersen, Thomas Philippon & Matthew P. Richardson, *Measuring Systemic Risk* (Fed. Res. Bank of Cleveland Working Paper No. 10-02, 2010), available at <http://ssrn.com/abstract=1595075>. Difficulties with measuring risk here are analyzed in Gunter Löffler & Peter Raupach, *Robustness and Informativeness of Systemic Risk Measures* (Apr. 2, 2013), available at www.ssrn.com/abstract=2264179; Sylvain Benoit et al., *Where the Risks Lie: A Survey on Systemic Risk* (HEC Paris Res. Paper No. FIN-2015-1088, Apr. 13, 2015), available at www.ssrn.com/abstract=2577961.

¹⁰⁰ Perotti & Suarez, *supra* note 97. Cf. Brunnermeier et al., *supra* note 48, at 11. An objection would be lodged that the tax on the risky debt may only drive that debt to nonregulated shadow banking.

We have three reservations about these Pigovian alternatives. First, the extant Pigovian efforts to shape bank risk particulars make little sense if the overall tax framework is heavily subsidizing debt. The big problem is too much debt and too little equity; the Pigovian taxes being discussed do not get to this core problem. Second, the Pigovian taxes now discussed in policy proposals are mild add-ons. Because they are moderate add-ons—we cannot tax the banks, one might believe, at confiscatory total rates, by *adding a major* Pigovian tax to the corporate tax—the Pigovian rate must be mild. Because the rate is mild, the impact is mild. The deeper safety problem persists. Third, the Pigovian tax to be effective must target specific bank assets, specific liabilities, or specific activities. But recall the regulator’s limits: the regulator has to know where to regulate, know how to do so effectively, and know how to fight back against the regulated’s lobbying and transactional maneuvers. The targeted Pigovian tax faces the same problem of limited government knowledge. A more general effort should be sought.

Still, the concept of Pigovian taxation should guide the *overall* design of the corporate tax system. The proper place for a Pigovian reconstruction of the bank tax is to end the overall pro-debt tax bias embedded in the corporate taxation of banks and the advantage accorded debt over equity.

The fundamental problem is that there is too much debt in the financial sector and too little equity. The existing widespread deduction of interest is effectively the reverse of a Pigovian tax. The tax authorities allow the financial firm to deduct interest paid, which encourages it to use more debt, which makes the financial institution and the financial system more unstable, leading to costs that outsiders—the economy and the taxpayer—incur.

B. Taxing Banks Improperly: Bank Levies Around the World

The Pigovian concept has helped to justify and propel bank levies, which have been proposed and, in some cases, implemented.

Bank levies tax the bank’s overall size, or the size of the bank’s debt.¹⁰¹ Influential American policymakers have proposed a bank levy—President Obama in 2010¹⁰² and again in 2015,¹⁰³ the Republican Chair of the House Ways and Means committee in 2014,¹⁰⁴ and presidential candidate Hillary Clinton in 2015¹⁰⁵—and several European nations have enacted them.

¹⁰¹ See IMF, *A Fair and Substantial Contribution by the Financial Sector*, Final Report for the G-20 (June 2010), www.imf.org/external/np/g20/pdf/062710b.pdf.

¹⁰² Press Release, The White House, Financial Crisis Responsibility Fee Fact Sheet (2010), www.whitehouse.gov/sites/default/files/financial_responsibility_fee_fact_sheet.pdf; Richard T. Page, *Foolish Revenge or Shrewd Regulation? Financial-Industry Tax Law Reforms Proposed in the Wake of the Financial Crisis*, 85 TULANE L. REV. 191 (2010).

¹⁰³ See Press Release, The White House Office of the Press Secretary, Fact Sheet: A Simpler, Fairer Tax Code That Responsibly Invests in Middle Class Families (Jan. 17, 2015); Mark J. Roe & Michael Tröge, *A Smarter Way to Tax Big Banks*, WALL ST. J., Feb. 1, 2015, at A11.

¹⁰⁴ Tax Reform Act of 2014, H.R. 1, 113th Cong., 2d Sess. (2014).

¹⁰⁵ The campaign document is *Hillary Clinton: Wall Street Should Work for Main Street*, THE BRIEFING, <https://www.hillaryclinton.com/p/briefing/factsheets/2015/10/08/wall-street-work-for-main-street/> (last visited Jan. 16, 2016) [“Clinton: Wall Street Should Work for Main Street”].

These levies have had two major justifications. One was payback, the other to bolster Pigovian incentives for safety. President Obama originally justified his proposal as payback: “the largest and most highly levered Wall Street firms . . . [should] pay back taxpayers for the extraordinary assistance provided, so that the TARP [Troubled Asset Relief Program, the government’s bank support during the financial crisis] program does not add to the deficit.”¹⁰⁶ The main objective for Ways and Means’ chair Camp’s proposal was to raise government revenue to allow Congress to lower other taxes. It had no articulated prudential motivation.¹⁰⁷

President Obama justified later proposals in safety terms.¹⁰⁸ The 2016 budget included a small fee of 7/100 of a percent on the liabilities of large financial institution.¹⁰⁹ Again, such a levy is too small to improve safety much.

Since 2010, fourteen of the twenty-seven European Union member countries have enacted bank levies.¹¹⁰ Some articulated a Pigovian rationale to reduce leverage and risky debt; for others the articulated motivation was to tax banks to recover the costs of having supported them; for some it was both.¹¹¹ Germany justified its bank levy as a reserve fund to ensure that taxpayers’ money could not be used for bailouts.¹¹² Still another motivation was to downsize the largest banks, as the levies typically increase in percentage terms with the size of the bank.¹¹³

The tax rates for the levies, proposed and enacted, are all too low to seriously improve financial safety, suggesting that political rhetoric in attacking banks is more important for some proponents than is achieving financial safety. It is a minor offset, not a serious regulatory tool. While the levies disadvantage debt, they disadvantage it at only about one-tenth of the

¹⁰⁶ Press Release, The White House, President Obama Proposes Financial Crisis Responsibility Fee to Recoup Every Last Penny for American Taxpayers (Jan. 14, 2010), available at www.whitehouse.gov/the-press-office/president-obama-proposes-financial-crisis-responsibility-fee-recoup-every-last-penn.

¹⁰⁷ See Jeremy Scott, *Comparing the Camp and Obama Bank Taxes*, FORBES, Mar. 4, 2014, www.forbes.com/sites/taxanalysts/2014/03/04/comparing-the-camp-and-obama-bank-taxes/.

¹⁰⁸ THE WHITE HOUSE, BUSINESS TAX REFORM AND ECONOMIC GROWTH, ECONOMIC REPORT OF THE PRESIDENT 225–29 (2015), www.gpo.gov/fdsys/pkg/ERP-2015/pdf/ERP-2015-chapter5.pdf.

¹⁰⁹ DEP’T OF THE TREASURY, GENERAL EXPLANATIONS OF THE ADMINISTRATION’S FISCAL YEAR 2016 REVENUE PROPOSALS 160 (2015), available at www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2016.pdf. For a strong effort at justifying a similarly-sized liabilities levy for prudential regulation, see Hyun Song Shin, Policy Memo: Non-Core Liabilities Tax as a Tool for Prudential Regulation 7–8 (Feb. 19, 2010), available at <http://www.princeton.edu/~hsshin/www/NonCoreLiabilitiesTax.pdf>.

¹¹⁰ For a survey of the different levies, see Michael Devereux, Niels Johannesen & John Vella, *Can Taxes Tame the Banks? Evidence from European Bank Levies* (Oxford Univ. Ctr. for Bus. Taxation, Working Paper No. 1325, 2013), available at www.ssrn.com/abstract_id=2563634.

¹¹¹ Communication from the Eur. Comm’n to the Eur. Parliament, the Council, the Eur. Econ. & Soc. Comm. and the Eur. Econ. Comm. of the Regions, Taxation of the Fin. Sector 3 (2010), available at www.ec.europa.eu/taxation_customs/resources/documents/taxation/com_2010_0549_en.pdf.

¹¹² Patrick Bernau, *Bankenabgabe: Der Staat nimmt die Banken jetzt in die Pflicht*, FRANKFURTER ALLGEMEINE ZEITUNG (Ger.), Mar. 29, 2010, available at <http://www.faz.net/aktuell/wirtschaft/wirtschaftspolitik/bankenabgabe-der-staat-nimmt-die-banken-jetzt-in-die-pflicht-1954671.html>; Claudia M. Buch, Bjorn Hilberg & Lena Tonzer, *Taxing Banks: An Evaluation of the German Bank Levy* (CESifo Working Paper No. 4704, Mar. 2014), available at <http://ssrn.com/abstract=2425501> (low tax rate for German bank levy has only a modest impact). Formally it is a fund for failed banks.

¹¹³ For a full presentation, see Eur. Comm’n, *Tax Reforms in EU Member States: Tax Policy Challenges for Economic Growth and Fiscal Sustainability* (Taxation Papers, Working Paper No. 34, 2012).

level that the current deductibility of interest advantages debt. (To see the numbers: The bank levies aim to tax the principal amount of bank debt by between five-hundredths and three-tenths of a percentage point for each dollar of targeted debt the bank has on its books. So a levy on a \$100 million, 3% interest loan to a bank would range from \$50,000 to \$300,000 annually. But with corporate tax rates in the United States at 35%, the basic corporate tax deduction for interest reduces the cost of the 3% loan to the bank by about \$1,000,000 annually, because the \$3,000,000 in interest reduces the firm's gross taxable income, which is taxed at 35%. That \$1 million tax saving is between three and twenty times larger than the tax cost from the levies that have been enacted or are being actively discussed.)

Therein lies the limit for bank levies: they do not reverse the tax distortion arising from the deductibility of interest and, unless they do so, their impact will be weak. To have a major safety impact, the levy must be high and targeted at the riskiest bank activities. But if high, it will weaken banks unless they are given other tax relief.

C. Taxing Banks Improperly: Poor Proposals in American Presidential Politics

In American presidential politics and in governments around the world, bank taxation is garnering interest. We here briefly examine several prominent proposals. Only a few of the proposals will foster safety, and not by much; a few will make no significant change to the current state of affairs; and some will degrade financial safety, perhaps in a major way.

Democratic contender Hillary Clinton has the most detailed proposal.¹¹⁴ Taxes on larger banks would rise, with a fee tied to bank risk and the level of short-term debt. As we noted above in Pigovian discussion, even if such an effort points in the right direction, its impact must be weak because it retains the basic corporate tax system, which means the levy rate must be low. Even if the consensus of targeting short-term debt is correct, which it may well be, other sources of risk will appear over time. A Pigovian tax requires that regulators and tax authorities be able to find, target, and tax the next source of bank risk. But if they can identify and tax banks on their targeted risks, they can also do that when regulating banks with command-and-control rules. Regulatory perspicacity is limited, and a feature of the tax reform is that it demands less of it than targeted taxes and command-and-control rules.

Marco Rubio¹¹⁵ and Jeb Bush before him¹¹⁶ proposed to lower the corporate tax rate and eliminate the interest deduction. So far, so good. But Rubio's tax plan would fully exempt financial institutions, i.e., no elimination of the interest deduction for banks—a common but as we have seen misguided aspect of current corporate tax reform thinking. Because it would apply a lower

¹¹⁴ See Clinton: Wall Street Should Work for Main Street, *supra* note 105. Cf. Tim Worstall, *Hillary Clinton's Excellent Idea for a Wall Street Bank Levy*, FORBES, Oct. 10, 2015, www.forbes.com/sites/timworstall/2015/10/10/hillary-clintons-excellent-idea-for-a-wall-street-bank-levy/2/.

¹¹⁵ Mike Lee & Marco Rubio, Economic Growth and Family Fairness Tax Plan 13, *available at* www.rubio.senate.gov/public/index.cfm/files/serve/?File_id=2d839ff1-f995-427a-86e9-267365609942.

¹¹⁶ Jeb Bush: Reform & Growth Plan, JEB! 2016 (Sept. 9, 2015), <https://jeb2016.com/background-jeb-bushs-tax-reform-plan/>.

business tax rate to financial institutions, it would make the interest deduction less valuable than it is under today's higher rates. But by taxing finance less, the plan would attract more assets into the financial sector. Which effect would be stronger is hard to know in advance. It is a pro-bank proposal, but not necessarily a pro-safety proposal. Because the plan neither ends the interest deduction for financial institutions nor puts a levy on bank debt,¹¹⁷ it could be greatly improved. Similarly, Ted Cruz's proposed "flat business tax" on corporate sales¹¹⁸ cannot be applied sensibly to financial firms.

* * *

Corporate tax reform is often on the nonpresidential policy agenda and has been there in recent years. The most-likely-to-succeed current proposal would allow corporations to deduct dividends paid, just as they can now deduct interest.¹¹⁹ Such a reform would work well for industrial firms, which tend to retain cash beyond which is efficient, as we analyzed in Part III. But for financial firms, the most-likely-to-succeed proposal is poor, or at best mixed. A dividend deduction would be a safety "plus" in inducing more equity, but a major safety "minus" because to even up the taxation of equity with debt, the bank must declare and pay out a dividend, which drains cash from bank, thereby weakening it. Moreover, there has been a tendency to exempt financial firms from proposed corporate tax reforms.

The current corporate tax reforms, whether in presidential politics or prominent reform circles, hence, either do not deal with financial firm taxation wisely, or at all.

D. Taxing Banks Around the World: Tobin Taxes and Improper Surcharges

The most popular bank tax reform around the world is a financial transactions tax, often called a Tobin-tax for James Tobin,¹²⁰ the Nobel winner who promoted the idea.¹²¹ The concept is that excessive financial trading is destabilizing and believed to increase financial volatility with excessive market swings, so taxing transactions would reduce trading; the tax does not address the stability of banks but the volatility of financial markets. Although prominent and politically popular,¹²² it has sharp limits in promoting overall bank safety.

¹¹⁷ *Id.*

¹¹⁸ Ted Cruz 2016, The Simple Flat Tax Plan, available at https://www.tedcruz.org/tax_plan/ (accessed Mar. 10, 2016).

¹¹⁹ U.S. Sen. Comm. on Finance, The Business Income Tax, Bipartisan Tax Working Group Report 34–38 (July 2015), available at www.finance.senate.gov/imo/media/doc/The%20Business%20Income%20Bipartisan%20Tax%20Working%20Group%20Report.pdf; Stephen K. Cooper & Kaustuv Basu, *Finance Committee May Soon Unveil Corporate Integration Draft*, 150 TAX NOTES 300 (Jan. 18, 2016).

¹²⁰ James Tobin, *A Proposal for International Monetary Reform*, 4 EAST. ECON. J. 153 (1978). Tobin's proposed tax targeted foreign currency trading.

¹²¹ EU Comm'n, Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of [a] Financial Transaction Tax (Feb. 14, 2013), http://ec.europa.eu/taxation_customs/resources/documents/taxation/com_2013_71_en.pdf; Lawrence H. Summers, *When Financial Markets Work Too Well: A Cautious Case for a Securities Transaction Tax*, 9 J. FIN. SERV. RES. 261 (1989).

¹²² See Editorial, *The Need for a Financial Trading Tax*, N.Y. TIMES, Jan. 28, 2016, at A24 (endorsing the presidential campaign proposals to do so); Shelley Marshall, *Shifting Responsibility: How the Burden of the European Financial Crisis Shifted Away from the Financial Sector and Onto Labor*, 35 COMP.

First, banks can take on large risk without trading. A risky loan portfolio, which need not trade at all, is all it takes. Second, the tax is easy to avoid, by moving the locus of the trade.¹²³ If Washington taxes a Wall Street transaction, the transaction can go forward through the traders' London desks; several European nations enacted Tobin taxes that gathered little revenue, because the trading went abroad.¹²⁴ Third, evidence indicates that the tax makes finance more volatile (because trading is thinner).¹²⁵ Fourth, to the extent that the tax aims at preventing a major institution from weakening itself by poor trading, the better tax solution is to encourage the trading bank to be better capitalized. For that, the relative taxation of debt and equity is what counts, which is this article's core thesis. The Tobin tax taxes liquidity and trading, which in some say enhances safety, but is not a tax that leads to more soundly constructed financial institutions.

Today's tax direction in some nations actively weakens financial firms. In Britain, the current government last fall moved away from its previous halting steps toward taxing its banks properly. Britain had previously introduced a small bank levy—one subject to the reservations on size and effectiveness we have already seen. But at least the levy was on debt, not equity. But last autumn the government halved the bank levy and plans to phase it out entirely by 2021. It replaced that tax with an 8% surcharge on bank profits,¹²⁶ which will incentive British banks to reduce their equity levels. This reform is exceedingly unwise.

E. The Propitious Political Economy of Taxing Banks Properly

This is a good place to briefly consider the reform's political viability..

Further regulation—and even keeping current efficacious regulation in place—suffers from the reality that banks are players in making their own regulation. They influence Congress as it passes the laws and authorizes the regulators to act. They lobby regulators away from regulation that will be privately costly to the banks. They litigate against regulatory authority, asserting that it is not within the ambit of congressional authorization. And they find transactional mechanisms to reverse the regulatory impact.

LAB. L. & POL'Y J. 449, 472 (2014) (“support across much of Europe [for a] financial transaction tax . . .”); David Spencer, *International Tax Cooperation: Centrifugal vs. Centripetal Forces*, 21 J. INT'L TAX 38, 46 (2010). Cf. Burton G. Malkiel, *The Bernie Sanders Tax Attack on Stock Trades*, WALL ST. J., Jan. 22, 2016, at A13 (long-term popularity of a trading tax).

¹²³ *Stuck on Tobin Again*, ECONOMIST, June 30, 2011 (“The principal objection to Mr. Tobin's idea was that unless it were applied universally, transactions would migrate to jurisdictions without the levy.”).

¹²⁴ *Do Tobin Taxes Actually Work?*, ECONOMIST, Sept. 9, 2013. For a review of the academic literature, see Gunther Capelle-Blanchard & Olena Havrylchyk, *The Impact of the French Securities Transaction Tax on Market Liquidity and Volatility* (SSRN working paper, Feb. 1, 2014), available at www.ssrn.com/abstract=2378347. Better enforcement might make a transaction tax effective, but thus far has not. Cf. Bernadette Ségol, *Europe's Tobin Tax is Designed to Work*, FIN. TIMES, Apr. 17, 2013.

¹²⁵ Anna Pomeranets & Daniel G. Weaver, *Securities Transaction Taxes and Market Quality* (Bank of Canada Working Paper 2011-26, Feb. 8, 2013), available at www.ssrn.com/abstract=1980185.

¹²⁶ Finance (No. 2) Act 2015, c. 33 (Eng.), <http://www.legislation.gov.uk/ukpga/2015/33/contents/enacted>. Section 16 of the Act lowers the levy on bank liabilities in steps, from 2016 to 2021. Section 17 adds the 8% surcharge on bank profits.

1. How strongly will banks oppose? Banks have less incentive to oppose being taxed properly than to oppose equally efficacious regulation. Because the tax fix should not take more money out from the banks, it will cause banks less pain than does tighter capital and activities regulation.

True, banks will not powerfully promote a debiasing of bank taxation; they and their executives are accustomed to current bank taxation (and may worry that changes will ultimately not be as revenue-neutral as they can be). Properly taxing banks will also reduce any too-big-to-fail subsidy to banks, which benefits bank equity and, derivatively, bank management. But regulators should expect that bank incentives to oppose new capital regulation will be higher than for opposing proper taxation of the banks. Perhaps if regulators persuaded banks that the regulators would forgo the next level of command-and-control regulation, then banks might be enticed to go along.

2. Deposits are politically untouchable. Bank liabilities consist of deposits and other borrowings. While a safety-oriented tax reform would not necessarily distinguish insured deposits from other borrowings, there are reasons to do so. On safety, insured deposits do not run as quickly in a crisis as other bank debts. On practical politics, regulators may well not want to tax retail deposit liabilities unfavorably. Reform may require that increased taxation of bank debt not affect the taxation of insured deposits.

Overall, U.S. banks have half of their funding coming from deposits, equity funding nearly 10%, and with the remainder coming from non-deposit debt.¹²⁷ At this proportion, the nondeposit debt on which the tax reforms would operate amounts to a hefty four times the level of equity, meaning that even a deposit-exempt proper taxation of banks can be efficacious.

3. Fix it all. Purists might object to changing how banks are taxed with the view that *all* of corporate tax needs to be fixed, not just that for banks.

We sympathize with this view, but would not want to make the perfect the enemy of the very good. Focusing on a full-scale corporate tax reform may mean that no tax reform will occur. Substantial corporate tax reform proposals emerged from the U.S. Treasury in 1992, but did not move through Congress. The best political economy explanation for the failure was not that highly motivated interests killed the proposal, but that executives slightly preferred the current corporate tax, which discourages distributions and encourages cash retention, which executives prefer.¹²⁸

Banks are already taxed differently than other corporations, and a reformed corporate tax system would quite likely need to treat banks differently anyway. Hence, a strong place to begin corporate tax reform is with bank tax reform. In addition, for fixing the taxation of banks, regulators have reason to weigh in and one can imagine that if regulators were behind the push, the tax change could become law.

A practical impediment to the proposal is related. Different congressional committees handle bank legislation from those that handle tax

¹²⁷ See Kevin Buehler, Peter Noteboom & Dan Williams, *Between Deluge and Drought: The Future of US Bank Liquidity and Funding—Rebalancing the Balance Sheet During Turbulent Times 3*, ex. 1 (McKinsey Working Papers on Risk, No. 48, July 2013), available at http://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/Risk/Working%20papers/48_Future%20of%20US%20funding.ashx.

¹²⁸ Arlen & Weiss, *supra* note 76. The issue then was integration of corporate and personal taxation.

legislation—e.g., the House Committee on Financial Services for the former, Ways and Means for the latter.¹²⁹ Our proposal is addressed to the financial regulators, but they, even if convinced, may be less able to influence congressional tax committees than congressional banking committees.

CONCLUSION

The next regulatory frontier for making finance safer is to restructure the corporate taxation of financial firms. Simply put, interest should no longer be taxed favorably while equity is taxed unfavorably. Evening up the two will create better incentives for safety in finance.

The reform will support safety regulation by reducing banking opposition, both in lobbying and in finding transactional counters, because banks will find that using more equity will no longer be expensive in tax terms. The tax change will incentivize banks to use more equity and less debt.

We analyzed four tax reforms that would greatly increase financial safety, in a sequence moving from the most general (and most effective) to the most targeted and most politically and technically viable. The first would repeal the corporate tax generally in ways that have been well-analyzed. But the added rationale we offer for the repeal is financial safety via two channels: the financial sector would lose the tax-based bias for debt, and separately the real sector would demand less lending from the financial sector (and, concomitantly, would demand more safe equity).

The next most general tax reform would only reform bank taxation. By eliminating the deduction for interest, the tax base would widen and rates could drop precipitously. That base-widening and rate-lowering comports with prevailing American tax norms. The third reform would focus on equity, allowing the bank to deduct much of the cost of equity, presumably at the long-term risk-free rate, as proxied by the rate on government securities. Its basic structure would narrow the tax base greatly and, if no offsetting tax were added, would greatly reduce bank taxation. An obvious offset would be a levy on bank liabilities. Its safety benefit would be substantial: if the authorities gave banks an allowance for the cost of equity, banks would have no tax-based reason to prefer raising their funding from debt instead of from equity.

Our preferred solution's core is an incremental allowance for corporate equity above the regulatory minimum, leaving the rest of the tax system unchanged and thus avoiding major system-wide implementation problems. That deduction would make additional bank equity as tax-attractive as debt. This fix has the best combination of safety enhancement, minimal disruption to the extant tax system, and political viability.

If implemented alone, the allowance for equity above the regulatory minimum would lower the tax take from financial firms (because it would allow the banks a new deduction). To keep the result revenue-neutral, offsets would be needed. Because the reform would only apply to incremental, above-the-regulatory-required equity, the offset would be contained, but it would be real. One offset would be that levy on bank debt. An alternative offset would

¹²⁹ Rules of the House of Representatives, 112th Cong. §10(h), (t) (2011).

disallow the deduction of nondeposit interest above the risk-free rate, as represented by the rate on government securities with a similar duration.

The result would better align the incentives of bank shareholders and bank executives with the public interest in financial safety and stability. Wider proposals to restructure corporate taxation failed in part because widespread business support was lacking. But there are political economy possibilities here: regulators can often work their will and here big banks could be neutral, of at least less vociferously opposed, as the tax could be revenue-neutral and the change would make the need for more command-and-control regulation (or even some existing regulation) unnecessary. And small banks, which are politically powerful, tend to be better capitalized already, so they could well support the reform. Such a change would reduce the too-big-to-fail subsidy, which bankers would like to keep, but which public policy should seek to eliminate.

We conclude by restating the article's basic thesis: fixing the taxation of banks is the next frontier for financial regulatory reform. We have outlined why this should be done and how.

Appendix 1

Anemic bank capital: Banks' capital ratios before and after the financial crisis

This table shows the ratio of equity to total assets of various financial institutions during the crisis; the lowest figure for each institution is highlighted. Data comes from SEC 10-Q filings.

Equity as % of total assets											
	2007: Q3	2007: Q4	2008: Q1	2008: Q2	2008: Q3	2008: Q4	2009: Q1	2009: Q2	2009: Q3	2009: Q4	2010: Q1
Morgan Stanley	2.97%	2.99%	3.05%	3.34%	3.62%	7.82%	7.86%	7.60%	6.78%	6.84%	6.73%
Bear Stearns	3.27%	2.98%	2.98%	-	-	-	-	-	-	-	-
Lehmann	3.29 %	3.25%	3.15 %	4.11 %	-	-	-	-	-	-	-
Goldman Sachs	3.74%	3.82%	3.58%	4.06%	4.21%	7.28%	6.87%	7.06%	7.40%	8.33%	8.28%
Citigroup	5.39%	5.19%	5.82%	6.49%	6.15%	7.42%	8.00%	8.34%	7.57%	8.35%	7.68%
Washington Mutual	7.25%	7.49%	7.02%	8.42%	-	-	-	-	-	-	-
JP Morgan	8.10 %	7.88%	7.65%	7.50%	6.48 %	7.67 %	8.18%	7.64%	7.95%	8.14%	7.71%
Bank of America	8.77%	8.55%	9.00%	9.47%	8.79%	9.73%	10.31%	11.32%	11.45%	10.41%	9.82%
Wachovia	9.3%	9.8%	9.64%	9.24%	6.54%	-	-	-	-	-	-
AIG	9.7 %	9.03 %	7.58	7.44 %	6.96%	7.06 %	6.49 %	7.48 %	9.06 %	11.57	11.78%