Taxing Banks Properly:
The Next Regulatory Frontier

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February 20, 2016

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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 it 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. While the overall corporate tax pro-debt bias is well-known, it is particularly pernicious for banks, can be fixed for banks without restructuring the economy's entire corporate tax system, and, if done perspicaciously, can be implemented nearly immediately.

Several reasons make this tax fix needed. 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.

Bank taxation has become an issue in American presidential politics and is on the European reform agenda. 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 proposals respond to deep-seated anti-bank political impulses and some would seriously degrade financial safety. For example, political calls to surcharge the taxation of excess bank profits have the perverse result of weakening banks and putting the economy at risk, by making safe equity more expensive and unsafe debt relatively cheaper. While the best reforms are economy-wide, broad, and politically unobtainable, we outline, first, how and why the broad proposals have unanalyzed safety effects for the financial system that have not yet been brought forward. We then, second, 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 and reducing the tax benefits of risky debt by eliminating the deduction above the risk-free return. The reform should be quite effective and, because it reduces tax on equity while raising it on debt, can be structured as a revenue-neutral reform. As such banks would have less reason to resist these reforms than they resist most mainstream command-and-control safety regulation.

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

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INTRODUCTION

Weakly-capitalized financial institutions, like AIG, Bear Stearns, and Lehman Brothers, failed during the 2008 financial crisis; others, like Citibank, tottered and would have failed 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.[1]

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.[2] 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.[3] 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.[4]

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.[5] Several of the

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* 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* 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.

[2] 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 (guest article); 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 quantity and quality of capital held by banks has been a central element of post-financial crisis reform.").

Substantial empirical evidence corroborates: better capitalized banks performed better during the crisis. *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).

[3] 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.

[4] The rules on capital levels come from several sources. Bank regulators determine the levels for deposit-taking commercial banks, and often due so guided by international accords—the Basel agreements, referred to regularly in these footnotes. The rules on capital levels for investment banks come from the Securities and Exchange Commission.

[5] 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 crisis[6] 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 resist regulation that reduces their profitability, lobby against it, and innovate to work around the rules in place. This regulatory avoidance then requires new regulation to maintain safety. These two counter-efforts create spiraling complexity, which induces both regulators and banks to spend more economic resources, with spending from each side often neutralizing the effect on profitability and safety.[7] And, still the regulatory effort, according to some astute regulators who see the excess complexity as undermining effectiveness,[8] is incomplete. 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.

The time is therefore ripe for regulators to consider a different or additional strategy. Regulators should consider how they can act directly on bank incentives in order to diminish their propensity to take unsafe risks rather than increasingly micro-managing banks' business decisions by barring banks from the risks that the bankers find profitable. We focus here on a core of the real incentives for banks, namely, the tax system. Regulators and policymakers should think of the tax system as a variable with the potential to support capital adequacy rules and even to substitute for further command and control regulation, by acting on banker incentives more efficaciously.

Surprisingly, although it is well known that the tax system generally subsidizes debt, analysis of how this feature can give rise to a regulatory strategy is limited, particularly when compared to the deluge of command-and-control proposals. By implicitly subsidizing debt, the tax system is, in our

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

[6] *Id.* 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).

[7] *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. In Europe, Deutsche Bank is doubling its compliance spending and adding at least 500 additional resources (Bloomberg, 9 July 2014). In 2013, HSBC announced plans to add approximately 3,000 compliance staff. This would bring its total compliance staff to more than 5,000, almost 2 percent of its global workforce, which has shrunk by over 40,000 in the past two years." *Id.*

[8] 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, has emphasized how complexity in financial regulation can undermine its effectiveness. Haldane & Madouros, *supra* note 6, at 1–3.

view, a source of financial instability rather than a tool to bolster safety. The effects can and should be reversed.

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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, both financial and nonfinancial firms use more debt and less equity than they otherwise would. But this pro-debt bias is particularly pernicious for banks. For industrial firms, the higher leverage induced by the tax bias does not directly pose systemic problems; the debt bias for banks does. It raises banks' incentives to undermine capital adequacy safety regulation, either transactionally or by inducing repeal and regulatory reversal. For industrial firms, more debt is a private cost; for banks, the bias can raise the risk of systemic economic degradation, a public cost. Moreover, for industrial firms, the tax bias in favor of debt has an important *beneficial* corporate governance undertow in counteracting weaknesses in managerial motivation; but for banks, the tax bias for debt increases managerial and other corporate governance debilities instead of decreasing them. 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 banks, and corporations generally, are taxed are on the table in American presidential politics and around the world:[11] Jeb Bush, Hillary Clinton, and Marco Rubio 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.

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 proven an elusive policy goal in the United States and elsewhere. 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

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[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.

[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.

incremental, targeted tax reform for increased bank 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.

Debiasing the tax system can be understood as a complement to existing regulation. It would reduce a major incentive bankers have to resist capital level regulation: bankers do not want higher equity if it reduces profits but the regulators want higher capital to induce greater safety. Debiasing the taxation of interest reduces this conflict by making equity less expensive to banks and debt-financing more expensive. Evidence from other countries indicates that, depending on the tax reform's configuration, banks would voluntarily increase equity levels by as much or more than the raised capital requirements of recent years.

Fixing the tax distortions is also a regulatory initiative on its own that could substitute for the increasingly complex post-crisis regulatory efforts. Making common equity more attractive could reduce the regulators' need for complex regulation to confine banker risk-taking because, with less debt and more equity, the bankers' incentives to take on that extra risk diminish. For example, regulators, often at the behest of bankers, have approved and encouraged a complex variety of non-equity regulatory capital—debt that will accept losses in a crisis. Perhaps these substitutes will work as well as equity in a crisis, but they may not. Far better for financial safety would be for bankers to take on higher levels of straightforward common equity, which is simpler and safer in a financial crisis. We show how a targeted tax can encourage this very result.

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. The magnitude of its benefit 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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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, such as increasing capital, restricting risky activities, and building resolution institutions to allow a big financial institution to fail without dramatically negative economic consequences to the overall economy. 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. The distortions are much higher for the latter. For industrial firms, the tax-induced preference for leverage can offset some managerial debilities in the large firm. 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—an end to the corporate tax—is politically unattainable and questionable policy unless difficult changes are made to the taxation of individual shareholders. The next simplest measure is to eliminate the deductibility of interest for financial firms and substitute a tax on the firms' gross income, which would by itself greatly increase their 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 have to be much reduced, or a tax on targeted bank liabilities would be added. The rate for either of these two 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 reduce their allowed interest deduction, to maintain revenue neutrality). This effort is viable mechanically and politically, modest in its incremental scope, and potentially greatly beneficial for financial safety. It would make many difficult-to-implement safety regulations more viable and come of them unnecessary.

Banks often oppose financial safety regulation because the rules will reduce their flexibility and profitability. Revenue-neutral tax reform will not have this effect to the same degree. Banks, being accustomed to the current tax system will, we suspect, still disfavor the revenue-neutral tax reform but without the intensity with which they oppose new safety regulation.

In Part V, we evaluate the relevant tax proposals in 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 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

[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

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

Regulators seek to make the financial system safer with rules that require more capital and less risk. But this regulation is, of necessity, incomplete for two major reasons: the inadequacy of regulatory information and the interests and incentives of the regulated. Regulators sitting in government offices lack the full contextual knowledge for understanding what regulation is efficacious and what is onerous. They must predict inherently uncertain future economic conditions and their impact on banks. And the regulators must trade off safety for efficiency, which is often difficult. While the regulated have better contextual knowledge, they have incentives to avoid the safest result, because enhanced risk-taking is too often privately profitable. The regulated therefore have an interest in using their superior contextual knowledge to persuade regulators that a regulation's efficiency costs exceed its safety benefits. 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

Banks' capital ratios had been falling nearly continuously since the mid-nineteenth century until the crisis.[13] Although average capital ratios at U.S. commercial banks still stood at around 10% in 2007, debt was much higher and less safe at the large and systemically important banks and financial institutions.[14] Lehman Brothers, the large investment bank whose failure during the crisis was iconic, had equity of little more than 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 assets' value rendered Lehman insolvent.

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 seem to prefer a bank levy or a financial transactions tax, and not overhauling the corporate tax and interest deduction that we analyze here and that first caught the IMF's attention in 2009. 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] Greenspan, *supra* note 2.

[14] *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.

Smaller reverses would still have made it unwieldy, vulnerable to a run, unlikely to survive, and thus shunned as a trading partner.

Banks' low equity level was not the only reason for the financial crisis, but it deeply 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.[15] 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.[16] A similar initiative is under way at the international level.[17] The tax reform we push forward and analyze here would push banks more willingly toward such constructive results.

B. Further Efforts to Increase Banks' Loss Absorption Capacity

Despite the substantial post-crisis increase, equity levels are not high enough to fully absorb losses of the level observed during a crisis, according to common analysis.[18] 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, implying that even a 7% equity requirement would have stabilized no more than one-quarter of the largest banks.[19] Observers such as Alan Greenspan have consequently argued for equity levels in the 20 to 30% range.[20]

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[15] *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).

[16] 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.

[17] Basel Committee on Banking Supervision Reforms—Basel III, *supra* note 15.

[18] "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.

[19] The Financial Stability Board, analyzing thirteen large international banks that failed or received support during the crisis, found that losses and recapitalization needs reached up to 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/.

[20] Greenspan, *supra* note 2 ("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.").

But banks perceive significantly higher equity levels to be incompatible with their business models, because they see equity as a more expensive source of funding than debt.[21] 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 preferred stock[22] and more debt that is designed to take losses if the institution weakens and fails. For large global bank holding companies, the regulators require that the total loss-absorbing capacity be at least 16% of risk weighted assets, of which only a fraction would be in the most resilient form, common equity.[23]

C. Other Major Post-Crisis Bank Regulation

Regulators have two other major measures to reduce systemic risk. The first is to reduce the operating risk of banks. They do so by disallowing banks from activities that the regulators see as too risky or they reduce the scope and level of these risky activities. Second, they have built mechanisms to reduce the impact of bank failures on the economy. If big banks can fail without dragging the economy down, then safety would be enhanced.

1. Reducing risky operations. The financial crisis was widely thought to have been made more severe because too many big financial institutions were deeply involved in derivatives trading, making them subject to risks of changes in interest rate, commodities prices, and foreign exchange fluctuations.[24] 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 funds.[25] Other risky activities have been further

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[21] Bank consultants and industry associations argue that higher 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.

[22] 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.

[23] *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, Bd. of Governors for the Fed. Res. Sys., Federal Reserve Board Proposes New Rule to Strengthen the Ability of Largest Domestic and Foreign Banks Operating in the U.S. to be Resolved Without Extraordinary Gov't Support or Taxpayer Assistance (Oct. 30, 2015), www.federalreserve.gov/newsevents/press/bcreg/20151030a.htm; 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/.

[24] *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

[25] 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.

regulated[26] and regulatory requirements for bank liquidity—that make the banks keep good levels of easily saleable assets—reduce risk and, regulators hope, make banks less likely to fail.[27] Similar efforts are underway in the United Kingdom and the European Union.[28]

2. Make bank failure less costly. 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 investors taking the loss. The bank may be too big, but if the policy succeeded, it would not be too big to fail.

American regulators are building a so-called "single point of entry" plan to resolve systemically important financial firms, partly because it is the failure plan that the regulated financial firms can most tolerate.[29] Under this SPOE plan, the holding company owner of the bank would lend money to the bank. If the bank ran into financial trouble, it could call on the parent company owner to forgive the debt that the bank owes to the owning holding company. The recapitalized banking subsidiary would be stronger because it would no longer owe that debt; the holding company would be weaker—it and its own creditors would absorb the losses. But because it had no major operations itself, the owning holding company could fail and its own creditors—those who were made part of the "total loss absorbing capacity" mentioned in the prior section—would bear the loss. The holding company could go bankrupt without damaging the economy or, in theory, the banking subsidiary.

In addition, regulators are requiring so-called "living will" rules of large complex financial institutions, by which the institutions develop detailed plans for winding down their operations in case they run into financial distress.[30] The regulatory hope is that banks demonstrate how they can handle a crisis without using taxpayer money. If the losses generated by the failure of a financial institution are quickly allocated across different creditors and contractual stakeholders, regulators hope that markets will adjust smoothly enough to the failure and will continue to function well.

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[26] Basel Committee on Banking Supervision, Basel III Document, Revisions to the Securitisation Framework (Dec. 11, 2014), www.bis.org/bcbs/publ/d303.pdf.

[27] 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.

[28] *See* UK Vickers Report, *supra* note 19 (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.

[29] 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/2013/2013-12-10_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.

[30] Resolution plans are filed at www.federalreserve.gov/bankinforeg/resolution-plans.

D. Limits to Bank Regulation and Limits of the Regulator

While this regulatory effort has surely made the financial system safer than it otherwise would have been, there is good reason to conclude that it has reached limits and that in the future these efforts will diminish and be less successful. 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 mistakes on the regulators. If the regulators judge a risk improperly, they may ban a profitable activity that poses minimal risks to the bank. Similarly, they may misunderstand how, say, credit derivatives can put a financial organization at substantial risk.[31] 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:[32] 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.[33]

One should not see these mistakes as isolated and unlikely to recur. The fundamental structural problem is that 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.[34] In addition, once regulation is in place, banks have an incentive to find transactions that are not penalized by the regulation in place; 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.[35]

2. Limits of the new resolution system. The new resolution systems require that bank affiliates' investors absorb losses, not taxpayers. But these systems have yet to be well tested and may not work as intended in a crisis. The investors, for example, will not want to bear the losses and will seek to avoid them when the time comes. Similar prior efforts to designate loss-absorbing capital layers did not function as originally expected: banks

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

[32] 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.

[33] 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.

[34] Friedrich Hayek, *The Use of Knowledge in Society*, 4 AM. ECON. REV. 519 (1945). For banking, more decentralized decisionmaking would have more decisions made by those lacking incentives to use their better information well. The tax proposals here aim to reduce those misaligned incentives.

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

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.[36]

Not surprisingly, careful analysts of the regulations have not uniformly endorsed them as likely to work well in crisis.[37] Stalling litigation is plausible, incomplete regulatory authority is likely,[38] 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.[39]

Thus it is plausible that in a future crisis, the regulators may decide not to test the new resolution structures that they have been building.[40] Rather than rely on untested procedures with unforeseeable consequences, regulators may prefer to delay invoking them, hoping that a crisis will subside. Then, the situation deteriorates further and regulators could conclude that it is better to use taxpayer money to organize bailouts. Or the structures might not work as planned at all, or not quickly enough.[41]

3. Regulatory weakness and regulatory reversals. As the 2008–2009 crisis fades from memory, regulators 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.[42]

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[36] 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"].

[37] *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.

[38] *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 statue arose); Note, *D.C. Circuit Limits Prospects for Challenging Dodd-Frank's Orderly Liquidation Authority*, 129 HARV. L. REV. 835 (2016).

[39] Emilios 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) ("[I]n spite of the[ir] benefit[s], 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.").

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

[41] 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).

[42] 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 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.*

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The post-crisis regulatory effort may have crested. Yet because of the slowing, dilution, and reversal, analysts[43] and some major regulators[44] 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 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 regulatory tax strategy is that it requires both that the regulator correctly identify the risky activity and that the tax not be readily end-runned 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. Later, 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 34% tax on its net profits. In calculating its net profits, the corporation deducts its interest expense on debt, but not its costs for common equity, such as the dividends and capital gains that stockholders expect.[45] While both interest and dividends compensate investors, debt creates the potential for financial stress—bankruptcy for operating firms, failure for financial firms.

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

[44] 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.

[45] 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.

Together these two effects are the basis of the "tradeoff theory" for finance,[46] 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.[47]

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 33⅓% tax rate, the unlevered firm, XYZ, has $66,667 to return to its capital-providers.[48]

XYZ:	
Earnings from operations:	100,000
Corporate income tax:	(33,333)
After-tax income to SH of XYZ:	66,667
Income to creditors of XYZ:	0
Total income to XYZ's investors:	66,667

TUV:	
Earnings from operations:	100,000
Deductible interest:	(25,000)
Net income before corp. taxes:	75,000
Corporate income tax:	(25,000)
Income to SH of TUV:	50,000
Income to creditors of TUV:	25,000
Total income to TUV's investors:	75,000

The second firm, TUV, borrows and pays $25,000 in interest. It can return $75,000 to its capital-providers ($50,000 to stockholders and $25,000 to creditors). Overall, the second firm returns about $8,000 more to its capital providers. Hence, unless fully offset by the potential for bankruptcy or by operational degradation, the total value of the second, indebted firm's capital should be higher than that of the first firm. The income statements above show the calculations.[49]

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 red. The second figure is the debt-using corporation; the government's tax bite, also in red, is smaller. Although the shareholders' part of the cash flows has been reduced, overall there is more cash available for the tax-using corporation to return to its capital owners. As shareholders are the company's residual claimants, they will capture most of the additional value created by these debt tax shields.

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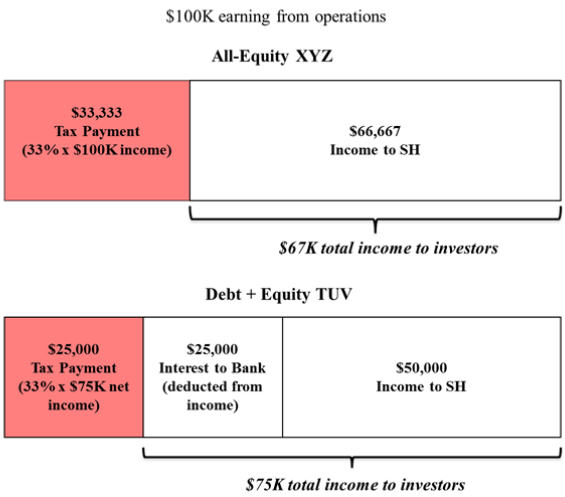
[46] Alan Kraus & Robert H. Litzenberger, *A state-preference model of optimal financial leverage*, 28 J. FIN. 911 (1973); James H. Scott, Jr., *A Theory of Optimal Capital Structure*, 7 BELL J. ECON. 33 (1976).

[47] 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).

[48] The marginal American rate is 34%, but using one-third or 33⅓% is more intuitive.

[49] The example draws from MARK J. ROE & FREDERICK TUNG, BANKRUPTCY AND CORPORATE REORGANIZATION 552–55 (4th ed. 2016).

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



Tax aficionados know that while the basic asymmetry of deductible interest and non-deductible dividends is core to the debt bias in the tax system, it's not the whole story. In particular, while equity is more costly to the firm's tax bill, the individuals who own debt and equity are often taxed more favorably on equity than on debt, via favorable taxation rates on dividends, as compared to the tax rate on interest income, and via lower effective capital gains rates for the gains on equity when common equity is sold for a profit. This tax advantage of equity at the level of the investor 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.

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.[50]

B. Fixing the Basic Pro-Debt Bias

The tax system's 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. 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

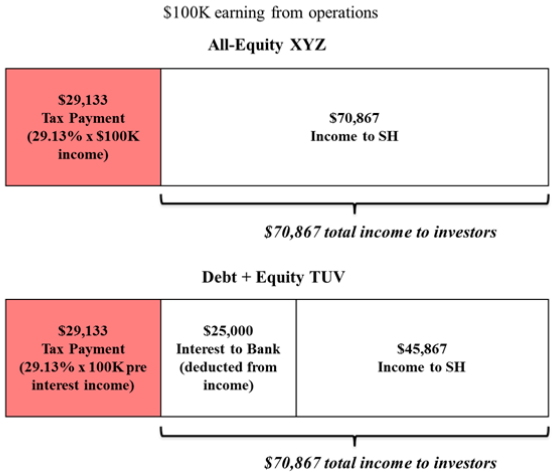
[50] John R. Graham, *How Big Are the Tax Benefits of Debt?*, 55 J. FIN. 1901 (2000); Brealey, Myers & Allen, *supra* note 47, at 441–43.

with the general American policy perspective that the tax base should be expanded, deductions reduced, and rates lowered.

To illustrate, consider revoking interest deductibility for the company in the above example. This broadens the tax base for the levered company, TUV, and, if all else stayed the same, the tax paid would rise, as the same rate would apply to a larger base. To keep total tax revenue unchanged, the tax rate would be lowered. In our example, 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%, 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. Overall under a no-interest-deduction system, the levered firm would produce the same tax revenue as the company with $25,000 (or any other level) in deductible interest today. Increasing leverage would not change the 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

What would the regulatory advantage be to such a tax change? First off, the change would make existing regulation more effective.

Regulators implement financial prudence via command and control rules, instructing banks on what they can and cannot do, and what level of capital the banks must hold. Regulators do so because banks lack the incentives to take into account the risks to the economy emanating from their business; they do not want to fail, but they are not as cautious as the public authorities want them to be. They are not as cautious because, with bank debt guaranteed, formally for deposits and informally for debt at too-big-to-fail firms, and with much of the cost of bank failure hitting the economy overall and not just those

inside the bank, bankers and their organizations take on excessive risk, including becoming over-indebted.[51] 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.[52]

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 dedicate 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 on the advantage of tax as a regulatory strategy: 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.

Properly taxing banks 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, for example, would be better capitalized and better able to withstand a reversal. Or, because the bank is not deducting interest, it has more capital and, because it has more capital, it bears much of the cost of the downside of the unregulated but risky activity. 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. As a result, financial stability would depend less on regulatory measures that, as seen above, intrinsically have the uncertain effects, power, and efficacy.

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

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[51] 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).

[52] 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).

For each of these key aspects of the current regulatory effort, taxing banks properly will make the regulation more efficacious, less likely to be opposed, and less likely to be end-runned.

D. Taxing Banks Properly as Regulatory Substitute

And taxing banks properly will relieve some of the pressure on regulators to watch out for systemic risks. Since proper taxation will shift organizational and managerial incentives inside the bank toward preferring more equity than currently, regulators can back off from some command-and-control regulation, evaluate whether capital and safety levels rise in response to the altered incentives, and stop pushing as hard.

We analyzed in the prior section how taxing banks properly can make existing and future regulation more successful. Here we analyze how taxing banks properly can reduce the need for important but untested elements of the increasingly complex regulatory system, particularly questionable safety initiatives that are likely to be mostly motivated by the current tax code.

1. Non-equity loss absorption as contorted design due to the existing tax structure. A major regulatory foray has required financial firms to have a high-level of loss absorbing non-equity securities. Labels and specifics have changed over time: once the goal was for preferred stock and subordinated long term bonds.[53] More recently, regulators have called for more contingent convertible debt (or "coco's" for short), which would convert to equity when the firm suffered a specified financial reverse.[54] These hybrid efforts—to get the "best" of debt and equity—have been repeated, despite the fact that each failed to accomplish its mission.[55] Now bail-in debt, a type of debt that the creditor must write off or convert to equity before government authorities bail out the firm, is all the rage. And the latest fashion is for the debt to be structurally subordinated by being lodged at the owning holding company, which re-lends the borrowed money to the bank and the other operating subsidiaries, but forgives the debt when the bank or favored operation gets itself into trouble. This regulatory problem maps onto a long-standing tax issue: "Current law's attempt to distinguish debt from equity is a quagmire."[56]

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.[57] But from where does that lower cost

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[53] 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.

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

[55] 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.").

[56] Calvin H. Johnson, *Corporate Meltdowns and the Deduction of Credit-Risk Interest*, 131 TAX NOTES 513, 513 (2011).

[57] 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.

come? Our suspicion is that 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,[58] these hybrids are ways to increase the banks' functional capital, while preserving the tax deduction for debt.[59]

These hybrid securities lead to complex capital structures.[60] Worse for financial safety purposes, the loss-absorbing quality of the hybrids will likely be challenged when needed;[61] that is, those holding the hybrid will not want to see their debt converted to equity, because the converted equity will be worth less. They will prefer for the conversion not to happen and will challenge the regulators.[62] Financial safety can in the future thus depend on these instruments being successfully and rapidly converted. But one should not be confident that this will easily succeed, because one should expect that litigious vulture investors would pounce on ambiguities, as occurs in industrial firm bankruptcies,[63] and delay the resolution process. Regulators facing delay may respond with a full-scale bailout.

Eliminating the tax advantage of hybrid securities compared to equity would reduce the tax-based attractiveness of these complex securities, whose promotion is cumbersome and which may not work as well in a crisis as straight common equity.[64]

2. The shadow banking system as a tax avoidance strategy. Proper taxation should also reduce the scope of the shadow banking system and the sense that it needs to be further regulated. Non-bank intermediaries such as 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. For example, banks place loans in separate trusts that are not taxed like banks, because the loans are outside the taxable corporation.[65] While some shadow banking

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[58] 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.

[59] 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. The reigning resolution effort in the U.S. is the "single-point-of-entry," discussed above, which see as subject to the tax-oriented criticism. It is an effort to create debt that will absorb stress losses, with its major de facto justification for it being debt instead of equity that debt has an advantageous tax status.

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

[61] Emilios Avgouleas & Charles Goodhart, *Critical Reflections on Bank Bail-ins*, 1 J. FIN. REG. 1 (2015).

[62] 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).

[63] *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.

[64] See Basel Banking Supervision, Loss Absorbency, *supra* note 36.

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

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; the banks are 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 tax status 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. 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.[66] Similar effects can be seen 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 is expected to raise its tax rate and the banks thereafter decrease their equity.[67] Another study found similarly that "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."[68] The state-level corporate tax changes art small, but the direction of the change suggests that full-scale tax changes along the lines we argue for will improve financial safety.

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.[69] The graphic illustrates.[70]

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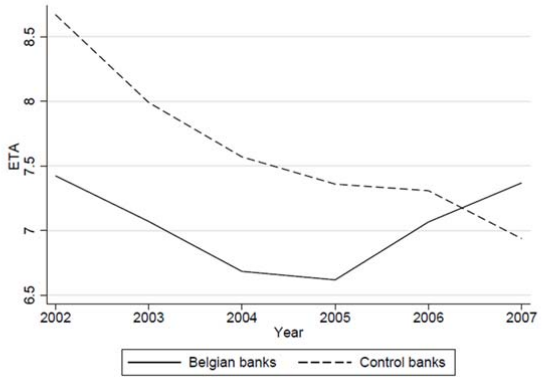
[66] Michael Keen & Ruud de Mooij, *Debt, Taxes, and Banks* 16 (Int'l Monetary Fund Working Paper No. 12-48, 2012), *available at* www.imf.org/external/pubs/ft/wp/2012/wp1248.pdf ("[T]he tax effect on the leverage ratios is in all specifications positive and highly significant. . . . [A] 10 percentage 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").

[67] 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.

[68] 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).

[69] 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

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



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.

There is also complementary empirical evidence on the effect of introducing a tax penalty for debt.[71] 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 . . . ."[72]

Overall the evidence shows that despite the relatively small size of tax differences available thus far for analysis, the beneficial effect is not small. If a fuller-scale regulatory tax effort were implemented, much larger effects could be anticipated. A linear extrapolation of the observed basic results[73] would predict that firms would voluntarily increase their equity by 9% if the current corporate tax rate of 34% was abandoned. For banks, such a change would double bank equity and reach a level beyond that which is thought viable via command-and-control regulation. Equity would rise to a level much higher

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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.").

[70] The graphic is from Figure 1 in Schepens, *supra* note 69. The effect of the Belgium tax reform could well have been stronger if there had not been persistent doubts about its durability. It was passed by a Parliament by a very small majority and has been regularly challenged. It survived but concessions were made to opponents, reducing the benefit to equity.

[71] 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.

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

[73] *See* Thomas Hemmelgarn & Daniel Teichmann, *Tax Reform and Capital Structure of Banks* (European Comm'n Taxation Papers, Working Paper No. 37, 2013).

than regulation requires.[74] And, less ambitiously than full-scale change, the estimated long-run tax effect on leverage based on current evidence is that "a 10 percentage point increase in the marginal tax rate will lead to a 4 percentage point increase in leverage."[75]

Some studies, however, conclude that that the size of the beneficial effect is more uncertain. Several small tax changes analyzed in the studies cited above affect the leverage of banks that are already comparatively well-capitalized banks.[76] Banks with very high leverage do not fine-tune their capital structure to capture tax benefits, and thus far stay highly indebted. While we suspect that stronger tax incentives along the lines of the tax reform advocated in this paper can more strongly affect their behavior, the supporting on-the-ground evidence is not yet there. Regardless, we do not advocate that tax reform should fully substitute for traditional safety regulation, but that it can make that regulation more efficacious in a wide range of circumstances for a wide range of banks.

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 move in the other direction—for banks. Second and related, taxing banks properly can make banks run better and more efficiently.

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

The large public firm has two fundamental 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 than the second. Industrial firm debt typically is the range between 35% and 50% of overall firm value, while for banks debt typically is around 90% of total assets.[77] Debtor-creditor conflict is potentially more serious as the level of debt increases.

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[74] The Basel III international regulatory agreement requires differing capital levels that depend on the size of the bank and the economic cycle. By 2019, basic equity must be 6% of risk weighted assets. Basel Committee of Banking Supervision Basel III phase-in arrangements (2013), *available at* http://www.bis.org/bcbs/basel3/basel3_phase_in_arrangements.pdf.

[75] 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. The American rules will require more capital, particularly for the larger, systemically important banks.

[76] 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).

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

The first conflict is that between shareholders and executives, arising when 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, theory and reality run, an industrial firm that is heavily capitalized with debt affords managers 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 in ways that they do not necessarily scramble to satisfy stockholders.[78] And, with the equity layer smaller, stockholders can be more focused and incentivized, owning a large fraction of the equity themselves and working with private equity firms that own much of the rest of the equity, 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 for many industrial firms, because the extra debt often reduces managerial agency costs, reducing 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, that mitigating benefit is absent. 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);[79] the question is only whether the bank's debt will so high as to be systemically dangerous. Second, in banks the second major conflict is severe, namely that between debt and equity. 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.[80] Much bank 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, as seen above in Section A, play a positive role in industrial firm corporate governance. But the reality is that the underlying too-big-to-fail guarantee—even if only a probability—weakens bank creditors' basic incentives and efficaciousness in imposing positive corporate governance as compared to industrial firm creditors. Depositors are typically the largest

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[78] 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"].

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

[80] Brealey, Myers & Allen, *supra* note 47, at 459.

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, hence, the de facto corporate governance creditor of the bank; and government regulation is, de facto, the creditor-based corporate governance channel for the insured bank.

Moreover, non-deposit financial creditors of banks adjust to the fact that the regulator is the bank's biggest de facto creditor, which weakens the incentives and capacities of creditors 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. Hence, fixing the taxation of debt first in banks—where it presents the most severe corporate governance problems—makes sense. Stated otherwise, 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. 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.[81] We next examine that problem further.

C. Baseline Corporate Governance Debilities in Banks

The high debt levels in banks, particularly when coupled with too-big-to-fail distortions, degrade equity-based corporate governance in banks in ways that are less important for industrial firms. Changing the tax incentives away from debt and toward equity should reduce these debilities.

The basic problem emanates from core debt-equity corporate governance difficulties: 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. Because banks are naturally going to be heavily indebted, this problem is more severe for banks than for industrial firms.

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[81] *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).

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.) The evidence that thinly capitalized banks take on more risk and did worse during the financial crisis is substantial.[82]

In general, a low level of equity in banks, combined with the government's frequent de facto too-big-to-fail support, degrades corporate governance inside the banks. In contrast, 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.[83]

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.

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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., revoke the deductibility of debt, or treat both equity and debt the way debt is treated today, i.e., make the cost of equity tax deductible.

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[82] *See* Beltratti & Stulz, *supra* note 2; 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 Kôhler, *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.

[83] *See* Roe, *Structural Corporate Degradation Due to Too-Big-to-Fail Finance*, *supra* note 12, at 1428–31.

Repealing the corporate tax (and taxing owners of equity and debt similarly) can achieve that equalization, as stated above. 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, it would reduce the industrial sector's demand for debt from the financial sector. If industry could not deduct interest from its tax bill, then it would shift its capital base further from rigid debt and toward flexible equity. That would decrease the demand for debt from banks and the financial sector.

This last point deserves emphasizing, because as far as we know it has not figured in the 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* the financial institutions raises the *outside* demand for financial institutions to grow, lend, and finance themselves via debt. That is because *inside* the nonfinancial operating firm, the same tax-induced debt bias induces the operating firm to raise capital with more debt than it would otherwise. 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.) A full fix to the corporate debt bias would shrink an unnaturally large financial intermediation sector.

While we would support proposals for a 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.[84] But debt-equity tax reform for the banks is both more urgent and simpler to implement. Second, such a full-scale reform involves multiple 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

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[84] 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).

Still, corporate tax reform is perennially on the agenda and is on it now. See, e.g., Stephen K. Cooper & Kaustuv Basu, *Finance Committee May Soon Unveil Corporate Integration Draft*, 150 TAX NOTES 300 (Jan. 18, 2016). The most-likely-to-succeed current proposal would allow corporations to deduct dividends paid, just as they can now deduct interest. 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.
Such a reform would work well for industrial firms, which as tend to retain cash beyond which is efficient and which a dividend deduction would discourage. *See supra* Part III. For financial firms, the proposal is mixed. A dividend deduction would be a safety "plus" in inducing more equity, but a safety "minus" in inducing banks to pay out more cash. One cannot know in advance which effect will dominate. There has been a tendency to exempt financial firms from proposed corporate tax reforms.

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 would expect to have the most efficacious results with the least disruption of the ongoing tax system. For revenue neutrality, a liabilities tax or a reduced interest deduction would offset the new equity deduction and further facilitate financial safety.

A. Ending the Deductibility of Interest for Banks

The most direct path is to end the tax deductibility of interest. Neither the cost of equity nor the cost of debt could be deducted from a company's taxable 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 33⅓%, 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 33⅓% 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
(28B)	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 has major advantages: it is simple, yields a low tax rate, and encourages the bank to use more equity financing and less debt. It should make banks safer. It also comports with the general trend in preferences for

American taxation, namely, to widen the tax base and lower the tax rate.[85] The tax also has enough flexibility to further promote safety and cordon off banks' core business. For example, policymakers may wish that the tax not be levied on bank insured deposits and the structure is flexible enough to do so. In our example above, if $20 billion of the $28 billion deposit interest went to insured deposits, then the tax would be levied on a $30 billion base, instead of a $50 billion base; if this were the average expected banking structure, the tax rate would be 11%, not 6.6 %.

However, this simple fix 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 simple 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; two, is to devise a cutoff so that a net-loss bank is not taxed.

Second, the bank's tax would vary with the overall level of interest rates. Consider for example a situation where inflation increases the nominal but not the real rate of return on investments. When inflation is high, banks' interest income balloons, but so does the bank's interest cost. Both the income and deduction rise, offsetting one another to yield a plausible net number for taxation. 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 using an inflation adjustment for the tax.

We add here, for completeness, that the general concrete plans in academic and policy work thus far typically are not designed for financial institutions. To handle this inflation problem for operating companies, analysts first make the cost of finance not deductible and then make the income from financial investment non-taxable. This fix works for industrial firms, for which financial investment is a minor part. This 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.[86] But the finance "fix" for operating firms—no deduction for interest costs but no taxation of interest income—is not well-suited for banks, because it would largely exempt banks

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[85] 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). For the general preference to broaden the base and cut the tax 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, broaden[s] the base, and cut[s] spending."); 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).

[86] 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.

from taxation, since most of its income is financial income. For this reason, reform proponents exempt financial institutions from such proposals and tax thinking unfortunately stopped there. By exempting banks, the prevailing proposals would mistakenly allow the corporate tax's pro-debt bias to persist in the financial sector; yet it causes much more economic harm there than in the industrial sector. Hence, the appropriate reform is *not* to exempt financial firms from the tax, but to adapt the proposal to work for banks.

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 much or all of the cost of equity. The idea is that the firm is "renting" debt for its operations and it is *also* "renting" 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 is not tax deductible, making it more costly for the firm to raise capital with equity than with debt.[87]

The ACE tax system was developed to reduce investment and financing distortions in nonfinancial corporations and was not intended for financial institutions.[88] However, ACE can be adapted for taxation of financial institutions and, if done properly, can reverse the tax subsidy to debt and hybrid capital. Hence, it can reduce or eliminate the tax system's depressing impact on safe equity. The basic concept is to make much or all of that 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. Conceptually, once again, debt and equity would be taxed similarly even if not quite identically, this time by benefiting equity as compared to the status quo.

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

[87] 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).

[88] 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.

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 basic cost of its $100 billion equity, which it can deduct from its gross operating income along with 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 size of the deduction can be a fixed amount, can be formulaic, or can be that of long-term government debt.

This tax reform would make equity less expensive and the bank would have less reason to prefer debt over equity. The system has other safety inducing advantages. First, by reducing debt and increasing equity, banks will replace interest deductibility with the equity allowance. But because long-term interest rates are typically higher than short-term interest rates, the bank would have an incentive to add more of the increasingly deductible equity and decrease its debt with a lower tax benefit, which is usually the risky and less stable but lower interest shorter-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 makes it costly for a bank to hold low risk liquid securities like U.S. Treasuries and therefore discourages this kind safety. Consider a financial institution that the regulators require to hold low-risk government securities. For concreteness, assume that regulators require Citibank to 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 (or, obviously, a combination). The bonds will yield $3 billion of income. 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, but the bank owes more. But if the bank is required to finance the bonds by increasing its equity, then the bank would pay about $1 billion in additional tax, from 34% of $3 billion. Equity markets will understand that they will obtain only $2 billion of that $3 billion, with the rest going to the IRS. Equity investors in the bank 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 equal to the cost of government securities, then the bank would no longer have a tax reason to run from equity financing of the regulatory requirement that the bank

hold more safe U.S. Treasury securities. 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 thereby avoid pitfalls.[89] And Germany and the United Kingdom have both had major studies done to implement ACE, although they have not yet acted.[90] Hence, initial 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 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. The explanation that the tax deduction promotes safety and is offset by a tax on liabilities may be lost or, worse, may be subject to strong lobbying by the regulated. (I.e., "Thank you for the deduction for equity; but this liabilities tax needs to be rethought and, even if implemented, needs a much lower rate.")[91]

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. Aside from political viability, taxing bank equity less would have two offsetting effects: it would bring forth more equity (which is safety-enhancing) and it would attract more assets into finance (which may well not be safety-enhancing).

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:

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[89] 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).

[90] For Britain, see the IFS Study, *supra* note 87. 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.

[91] 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.

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. The most obvious tax would be on bank assets or liabilities. It would then have hybrid features with the "simple" tax discussed in the prior section.[92]

This leads to our central proposal. The allowance could be applied not to the entire equity base, but to the bank's equity that is above regulatory required equity.

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

Bank income statement with incremental ACE

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

That would yield the bank a deduction of $1.2 billion, which would decrease the tax bite by $400 million instead of $2 billion. Revenue neutrality could be more easily achieved with smaller ancillary adjustments for this incremental allowance than for the full-scale adjustment. A bank levy is a plausible adjustment. That is, the missing $0.4 million can be made up via a

[92] 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 less desirable for banks. Deducting dividends paid helps to create debt-equity tax neutrality, but for it to do so, the bank must declare the dividend, which drains cash from the bank, thereby weakening it and undermining the regulatory, safety-enhancing purpose for the tax reform. The dividend deduction is more suitable for industrial firms, which have a corporate governance history of excessively retaining cash inside the firm. *See supra* Part III.A.

.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.[93]

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.[94] The safety addition here could be substantial:[95] 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 and 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.

By favorably taxing the slice of equity above the level that regulation requires the authorities would not simply be favoring 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.

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. 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.[96] Safer capital structures would be relatively less expensive and risky structures with risky debt would become more expensive. Astute measures could maintain revenue neutrality while making the financial system much safer.

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

While banks would be made more stable by the tax fix, one should not naively expect that firms will refrain from gaming the system. For example, if

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[93] 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 ACE rollback advantaging the *extra* equity on top of what regulators already require. Moreover, a rollback on extra equity instead of regulatory equity is more easily made revenue neutral, which is core to our full proposal unlike that in Allen, *supra*. We would require an offset to the ACE because not to do so might degrade systemic safety: regulatory capital would become cheaper—a safety benefit—but the after-tax profitability of finance would *rise*, drawing more assets into finance, thereby making the economy even more dependent on the financial system than before.

[94] Boadway & Bruce, *supra* note 87; 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).

[95] *Cf.* Johnson, *supra* note 56 (recommending that there be no deduction for the risk component of the interest paid).

[96] 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).

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.

As a preliminary matter we note that the tax arbitrage problem, while real, can be exaggerated. Life insurance companies, mutual funds, and savings banks are already taxed differently than other corporations.[97] Moreover, we point to 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 to have de facto equity-like instruments make them appear 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.

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 seek to move some transactions from the real sector to the financial sector. That tax arbitrage will be limited because banks face activity restrictions, but tax differentials can give them more reasons to challenge and elude these restrictions. This result could undermine financial safety.

A major end-run around an allowance for corporate equity would be to 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 the equity. This tax gambit requires a countermeasure: the offsetting equity needs to be zeroed out when calculating the allowance.[98]

A tax reform targeted at a specific group such as banks opens up the possibility of arbitraging between different corporate forms. As we argued above, this is already the case with a serious part of shadow banking being migration out from the taxed and regulated banks and into the tax-free shadow

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[97] 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.

[98] The general problem and the Belgian and Italian resolution are analyzed in OECD, OECD TAX POLICY STUDIES: TAX POLICY REFORM AND ECONOMIC GROWTH (2010), *available at* https://books.google.com/books?id=cr7Hn10rgIwC&pg=PA97&lpg=PA97&dq=allowance+for+corporate+equity+belgium&source=bl&ots=pDS7YrotTS&sig=xvnLLiPXmrHl0osJ394yW60asHI&hl=en&sa=X&ved=0ahUKEwiXnZ3O8rbJAhWLKx4KHTdNC9M4ChDoAQgvMAQ#v=onepage&q=allowance%20for%20corporate%20equity%20belgium&f=false; Shafik Hebous & Martin Ruf, *Evaluating the Effects of ACE Systems on Multinational Debt Financing and Investment* (Univ. of Frankfurt Working Paper, 2015), 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.

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. If we see financial risk in the financial system as more dangerous than risk in non-financial corporations, this migration is not detrimental and will, on balance, lead to a more robust economy.

Where to draw the initial line for the equity allowance among financial firms is also relevant. That initial line-drawing is a consideration, 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 insurance firms, private equity firms, hedge funds, and other financial firms, with adjustments as needed for specific financial characteristics of the firm type. 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 react quickly to shift income to less-taxed jurisdictions and they can change their core tax domicile.[99]

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 unambiguously beneficial for the country initiating this reform: Banks with low leverage should seek to 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.

However, multinational banks with operations in many countries will try to minimize their tax bills by a smart allocation of debt and equity in their subsidiaries located in different countries. For example, 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.[100] 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.[101] They could be viable for the proposal here as well.

Overall, this tax arbitrage should create stability benefits for the initiating nation: If debt migrates to other countries where it has a tax advantage, governments might be less inclined to bail out creditors that lie

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[99] 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").

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

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

abroad. The impact could well be a self-sustaining coordination as most nations converge on the same debt-debiased tax system for banks.

3. Reaction and further reform. Tax reform is a learning process. The authorities will need to react and adapt to the tax avoidance strategies developed by companies. Gradual expansion of the new tax regime at regular intervals might be a good strategy: first, to bank affiliates, then to shadow banks,[102] then to other financial institutions, then to institutions that are part of any tax dodge, and then perhaps ultimately to all corporations. Our fourth 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, and the expansion would likely be beneficial. If tax law can be unified across non-financial as well as financial institutions, including shadow banks, tax arbitrage will less of a consideration than it is today. Banks are the best and most urgent place to start tax reform but we are not forced to stop there.

Furthermore, expanding the tax fix from finance to industry should further stabilize the financial system, as we have seen. We have thus far focused on the tax deductibility of interest on bank debt as incentivizing banks to use debt excessively. But in addition, the tax deductibility of interest incentivizes industry to use more debt than is appropriate. This incentivized demand for debt then puts more debt in the financial system, further destabilizing finance.

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 and inefficient form of finance for banks; debt is cheaper.[103] 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 giving 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.

That is, 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 we seek is to even up the score, not to raise the cost of capital.

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

[103] 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 57, at 23; Admati & Hellwig, *supra* note 15, at 100–14.

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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. We see this impact as an advantage of the proposal. Industry-wide, the tax take would remain unchanged, leaving the total industry-wide cost of capital unchanged. But safer banks would be favored.

Oddly though, the cost of finance for banks could rise if the banking sector is made safer. Analysts often conclude that the biggest banks get a too-big-to-fail funding boost because creditors expect that in a crisis the banking authorities will bail out the creditors but not the stockholders. This makes bank debt cheaper relative to bank stock. If the tax proposals made the entire banking system safer, then those banks that would lose the too-big-to-fail boost would indeed find themselves with a higher cost of capital. But this is a legitimate increase, not an illegitimate one. (And it might lead smaller, well-capitalized banks to get behind the tax reform proposals, as their capital costs would not increase in this dimension. This is not a small advantage in making the tax change politically viable.)

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

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

A. Pigovian Taxation

First we address a conceptually attractive tax analytic, which while conceptually correct in our view 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 adjusting its pollution levels downward, investing in anti-pollution machinery, or taking other corrective actions. A simple Pigovian tax would thereby correct the pollution problem.[104]

The Pigovian tax in the financial sector is analogous. As several banking analysts have astutely stated,[105] systemic risk is like pollution emanating from banks and, hence, is a candidate for a Pigovian tax. Bank

[104] 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.

[105] 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).

"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.[106]

We have considerable sympathy for the theory. Our reservations are in how the theory has been implemented thus far (as we discuss in the next section) and in whether it can be implemented effectively as an alternative to command-and-control regulation. One 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; presumably then it would have to apply this measure on a bank-by-bank basis. Academics have showed theoretically how to do this, but the results are approximate and disputed.[107]

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.[108]

We have three reservations about these alternatives that make the incremental taxing-banks-properly proposals much superior. First, the extant Pigovian efforts to shape bank risk particulars do not make sense if the overall tax framework is heavily subsidizing debt. The big problem is too much debt; the Pigovian taxes being discussed do not get to the core problem of too much debt and too little equity. 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 regulateds' 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, not the taxation of specific transactions and liabilities. The proper place for a Pigovian reconstruction of the bank tax is to

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[106] See sources in note 105.

[107] 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. Practical and theoretical difficulties with thus measuring systemic risk 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.

[108] Perotti & Suarez, *supra* note 105. *Cf.* Brunnermeier et al., *supra* note 52, at 11.

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.[109] Influential American policymakers have proposed a bank levy—President Obama in 2010[110] and again in 2015,[111] the Republican Chair of the House Ways and Means committee in 2014,[112] and presidential candidate Hillary Clinton in 2015[113]—and several European nations have put one in place.

These levies have had two major justifications. One was payback, the other to bolster Pigovian incentives for safety. President Obama originally justified his proposal with the view that "the largest and most highly levered Wall Street firms . . . 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."[114] It was not primarily justified as a safety-based proposal, but to make the banks pay for the bailout. Similarly, 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.[115]

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[109] *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.

[110] 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).

[111] *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.

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

[113] 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"].

[114] 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.

[115] *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/.

President Obama justified later proposals in safety terms.[116] The 2016 budget included a fee of 7/100 of a percent on the liabilities of large financial institution.[117] 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.[118] 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.[119] Germany justified its bank levy ("Bankenabgabe") in future-oriented terms, as a reserve fund to ensure that taxpayers' money could not be used for bailouts.[120] Still another motivation was to downsize the largest banks, as the levies typically increase in percentage terms with the size of the bank.[121]

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 level that the current deductibility of interest advantages debt.

For those who want 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 34%, 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 34%. That $1

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[116] 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 (stating that tax reform reducing the disparity between the burden on equity financed firms and debt financed firms could cushion firms during market downturns). The concrete proposals do not carry through, because they are too modest to affect financial safety in a major way.

[117] 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.ezp-prod1.hul.harvard.edu/~hsshin/www/NonCoreLiabilitiesTax.pdf.

[118] 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.

[119] 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.

[120] 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 with modest impact). Formally it is not a tax, but a fund for failed banks, similar to the Federal Deposit Insurance Corporation's fees.

[121] 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).

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. While most proposals are insufficiently detailed to facilitate a full analysis, their broad outlines suggest that a few will foster safety, but 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.[122] 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, such an effort points in the right direction, but weakly. Since it retains the basic corporate tax system, the levy rate cannot be high and, hence, it cannot do much good. Targeting short-term debt as a major source of bank weakness makes sense, but there are other sources of risk now and other sources that 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 as it will not always be today's risky short-term debt. But if they can keep identifying and taxing banks on their targeted risks, they can also do that when regulating banks: a justification for overhauling bank taxation to reduce risk-taking incentives is that regulatory perspicacity is limited, making it sensible to work on incentives inside the bank instead of primarily on command-and-control regulation.

Jeb Bush[123] and Marco Rubio[124] propose to lower the corporate tax rate and eliminate the interest deduction. So far, so good. But Marco Rubio's tax plan would fully exempt financial institutions, i.e., no elimination of the interest deduction for banks. Because it would apply a lower business tax rate to financial institutions, it would enhance safety somewhat by making 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

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[122] *See* Clinton: Wall Street Should Work for Main Street, *supra* note 113. *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/.

[123] Jeb Bush: Reform & Growth Plan, JEB! 2016 (Sept. 9, 2015), https://jeb2016.com/backgrounder-jeb-bushs-tax-reform-plan/.

[124] 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.

ends the interest deduction for financial institutions nor puts a levy on bank debt,[125] it could be greatly improved.

D. Taxing Banks Around the World: Improper Surcharges, Proper Equity Deductions

1. Taxing banks improperly around the world. Even more popular is a financial transactions tax, often called a Tobin-tax for James Tobin,[126] the Nobel winner who promoted the idea.[127] The concept is that excessive financial trading is destabilizing, 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,[128] and if it reduces volatility it can be safety-enhancing, it has sharp limits in promoting overall bank safety. First and most importantly, banks can take on large risk without trading much. 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.[129] If Washington taxes a Wall Street transaction, the transaction can go forward through the traders' London desks; several European nations introduced Tobin taxes that gathered little revenue, because the trading went abroad.[130] Better enforcement could make a transaction tax effective, but so far it has not.[131] Third, evidence indicates that the tax makes finance more, not less, volatile (because trading is thinner), so it would need to be targeted properly.[132] Fourth, to the extent 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 become 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 perspectives enhances safety, but is not a tax that leads to more soundly constructed financial institutions.

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[125] *Id.*

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

[127] EU Conmm'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).

[128] *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. LAB. L. & POL'Y J. 449, 472 (2014) ("support across much of Europe [for a] financial transaction tax . . ."); John Carney, *What if Bernie Sanders Gets Wall Street Tax?*, WALL ST. J., Feb. 16, 2016, at C1; 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).

[129] *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.").

[130] *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 a*t www.ssrn.com/abstract=2378347.

[131] *Cf.* Bernadette Ségol, *Europe's Tobin Tax is Designed to Work*, FIN. TIMES, Apr. 17, 2013.

[132] 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/abstract=1980185.

The tax direction in some nations is worse, with tax policy actively weakening financial firms. The popular impulse to punish banks by taxing them more can have the perverse result of rendering the financial system weaker and less safe. 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,[133] which will incentive British banks to reduce their equity levels. This proposal is exceedingly unwise.

2. *Taxing banks better*. Brazil and Poland have also respectively implemented and proposed similarly misguided bank tax policies. In September 2015, Brazil increased the income tax on banks from 15% to 20%, which effectively raises the tax on bank equity.[134] This change is a misguided move away from Brazil's ACE-like corporate tax.[135] In Poland, the winning party in the October 2015 election announced that it would impose a tax on bank assets at 0.39%.[136] The tax would not make debt more expensive and equity less expensive.

In contrast, Portugal and Ireland have proposed ACE-like plans to tax corporate debt and equity equally. Portugal reduced the tax deductibility of interest in 2013, and continued reducing it in 2014.[137] In 2015, it added ACE-like features.[138] Irish authorities have recommended an ACE-like bank tax.[139]

E. The Propitious Political Economy of Taxing Banks Properly

This Part is a good spot to discuss the political viability of taxing banks properly, although analyzing political viability, as opposed to analyzing safety, is not our primary focus.

A practical and political reason presents itself for why regulators should add properly taxing banks to their regulatory goals. 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.

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[133] 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.

[134] *Brazil's Senate Approves Income Tax Increase for Banks*, REUTERS (Sept. 15, 2015), www.reuters.com/article/2015/09/15/brazil-banks-tax-dUSL1N11L2PO20150915#4cmP3oeCipSsQQWc.97.

[135] *See* Klemm, *supra* note 52, at 6.

[136] *Winner of Poland's Election Eyes Bank Tax on Assets as of 2016*, REUTERS, Oct. 25, 2015, www.reuters.com/article/2015/10/25/poland-election-winner-economy-idUSL8N12P0V620151025#o7wv ID4AHISCjwUe.97.

[137] IMF, *Selected Issues Paper*, Country Report No. 15/127 78 (2015), *available at* https://www.imf.org/external/pubs/ft/scr/2015/cr15127.pdf.

[138] *Id.* at 79.

[139] Pamela Newenham, *Banking Federation Proposes Corporate Equity Allowance*, THE IRISH TIMES, Oct. 30, 2015, *available at* http://www.irishtimes.com/business/financial-services/banking-federation-proposes-corporate-hequity-allowance-1.2411335.

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 on profitability.

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; banks 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 the too-big-to-fail subsidy to banks, which benefits bank equity and, derivatively, bank management. But regulators should expect that bank incentives to oppose 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 the banks might be enticed to go along. As bank executives complain that regulation has unpredictable results and recurring changes make business planning harder, this argument could have some impact.

2. Deposits are politically untouchable. Bank liabilities consist of deposits and other borrowings. While a safety-oriented tax reform would not necessarily distinguish 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 just under half of their funding coming from deposits, equity funding about 10%, and with the remainder coming from non-deposit debt.[140] 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—that is, keeping their control over the pot of money that the firm produces.[141]

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[140] 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.

[141] Arlen &. Weiss, supra note 84. The issue then was integration of corporate and personal taxation.

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.

4. Regulators regulate; the IRS taxes. Some may object to using the tax system to regulate, because the proper domain for taxation is raising revenue with horizontal and vertical equity, with limited distortion to the economy. Under the proposal we advance here, tax structure would be used to accomplish better regulation. Doing so, some may object, is not a legitimate use of the tax system. We may not be able to persuade such purists of the value of the proposal in this paper. All we can say is that if the policy works, it's worth implementing and the tax system has often been used to advance non-tax policies.[142]

A more practical impediment to the proposal is related. Different congressional committees handle bank legislation from those that handle tax legislation—e.g., the House Committee on Financial Services for the former, Ways and Means for the latter.[143] 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 toward safety in finance.

The channels for that increased safety are direct and indirect. Indirectly, the changes will facilitate ongoing safety regulation by reducing banking opposition, both in lobbying and in finding transactional counters, because using more equity will no longer be expensive in tax terms. Directly, even without any beneficial regulatory effort, the tax change will incentivize banks to use more equity and less debt.

We have 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 of safe equity).

The next general tax reform would only reform bank taxation. By eliminating the deduction for interest, the tax base would widen and rates could

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[142] A related objection is that having a different tax structure for regulatory and nonregulatory equity would give bank regulators authority over bank taxation. This could be eliminated by having the initial tax rule apply to nonrequired equity capital as it exists on the time of enactment; tax status would tie into that regulatory structure even if regulation later changed, unless Congress itself updated the tax rules.

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

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 begins with an incremental allowance for corporate equity above the regulatory minimum. It would build on the current tax structure by allowing banks to deduct the cost of that portion of equity that is above the regulatory minimum. That deduction would make additional equity about as tax-attractive as debt. Financial firms that used more safe equity, instead of more destabilizing debt, would be allowed a tax deduction for the cost of this extra equity. While this reform would lack the broader safety-enhancing measures of the other reforms, its safety-enhancing power would still be great and it would not require a major tax overhaul, with its concomitant implementation difficulties. It 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 revenue flowing in from financial firms (because it would allow the banks a new deduction). To keep the result tax neutral, offsets would be needed. One offset would be that levy on bank debt. An alternative offset would be to disallow the deduction of interest above the risk-free rate, as represented by the rate on government securities with a similar duration. The combined impact would doubly incentivize banks to add equity and reduce debt.

The result would better align the incentives of bank shareholders, bank managers, and regulators. Wider proposals to restructure corporate taxation failed in part because widespread business support was lacking. But there are political economy possibilities here, particularly for the incremental equity allowance with an incremental interest deduction denial: regulators can often work their will and here big banks could be neutral, as the tax would 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.

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%