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Degradation of the Financial System Due to the Structure of Corporate Taxation

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Thanks go to Hilary Allen, John Coffee, Merritt Fox, Jeffrey Gordon, Kate Judge, Sam Peltzman, Alex Razkolnikov, Hal Scott, Stephen Shay, David Schizer, Alvin Warren, and participants in a Columbia Law School workshop for comment

Abstract

Regulators have sought since the 2008 financial crisis to further strengthen the financial system. Yet a core source of weakness and a powerful additional instrument for strengthening the financial system, namely the relentless impact of the corporate tax on the choice between risky debt and safer equity, is fundamentally absent from the regulatory agenda. The tax penalty for equity undermines the capital adequacy efforts that have been central to the post-crisis reform agenda. Yet this result is not inevitable; alternative tax structures can be neutral on the debt-equity choice or can even favor safer equity in the financial system.

By repurposing tax tools used elsewhere in the world, we show how the safety-undermining impact of the current corporate tax can be ended. The best trade-off of goals and practical potential is, first, to reduce the corporate income tax burden on bank equity levels above the required minimum, by according an imputed deduction for the cost of equity capital above the regulatory-required amount. This tax benefit can then, second, be made revenue-neutral to banks by offsetting it, such as by decreasing the tax deductibility of the riskiest classes of financial system liabilities. That offsetting tax rate can, we show, be quite low, because the financial system's debt base is wide while its equity base is narrow.

Standard bank regulation is command-and-control style. Regulators order what banks can and cannot do; banks resist, lobby to reverse and undermine the commands, find transactional alternatives, and distort their behavior when approaching regulatory constraints. Regulators cannot in many areas know as much as the regulated; with a tax instrument, they do not need to know as much.

Existing cross-country and cross-state data show the tremendous potential from this reform to incentivize more safely capitalized banks. The magnitude of the safety benefit that could come from this reform to lower the after-tax cost of additional equity should rival the size of all the post-crisis regulation to date. Thus the main thesis we bring forward is not a small or technical claim but a call for a major shift in regulatory style.

It is time to change how we tax banks.

Keywords: financial crisis, too-big-to-fail, corporate governance, bank regulation, bank capital, international finance, allowance for corporate equity, corporate tax, interest deductibility

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July 3, 2016

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Regulators have sought since the 2008 financial crisis to further strengthen the financial system. Yet a core source of weakness and a powerful additional instrument for strengthening the financial system persists unchanged and absent from the regulatory agenda—namely the relentless impact of the corporate tax on the choice between risky debt and safer equity. The tax penalty for equity and the concomitant boost for debt undermines the capital adequacy efforts that have been central to the post-crisis reform agenda. Yet this result is not inevitable.

By repurposing tax tools used elsewhere in the world, we show how the safety-undermining impact of the current corporate tax can be ended or even reversed. The best trade-off of goals and practical potential is, first, to reduce the corporate income tax burden on bank equity levels above the required minimum, by according an imputed deduction for the cost of equity capital above the regulatory-required amount. This tax benefit can then, second, be made revenue-neutral to the finances by offsetting it, such as by decreasing the tax deductibility of the riskiest classes of financial system liabilities. That offsetting tax rate can, we show, be quite low, because the financial system's debt base is wide while its equity base is narrow.

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DEGRADATION OF THE FINANCIAL SYSTEM DUE TO THE STRUCTURE OF CORPORATE TAXATION

Mark J. Roe and Michael Tröge

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Degradation of the Financial System Due to the Structure of Corporate Taxation

Mark J. Roe and Michael Tröge*

INTRODUCTION

Highly-capitalized financial firms generally handled the 2008 financial crisis well,[1] while weakly-capitalized financial firms failed or tottered. Lehman Brothers and Bear Stearns — two of the iconic failures — had less than 4% of their value in equity, so relatively small losses could, and did, cripple those firms.[2] Those that failed, those that the government bailed out, and those that struggled were unable to smoothly absorb losses stemming from turmoil in the American housing market and, as a consequence, cut back their lending. Economic growth slowed, first in the United States and then around the world, with the world's lost economic output exceeding $10 trillion.[3]

Regulators and analysts concluded that better-capitalized financial institutions could have better performed their essential economic functions during the crisis.[4] Accordingly, a major regulatory initiative has been to raise capital levels at the world's major financial institutions.

But critics see the mandated increases in capital and new restrictions in activities as insufficient for safety, too readily reversible, and prone to end-runs by the regulated.[5] Several of the nation's primary regulators are skeptical that the regulatory reaction arrests the chance of another financial crisis.[6] New systemic risks will eventually emerge and, when the system is off its high-alert of the past

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* Professors, Harvard Law School and ESCP-Europe, respectively. Thanks go to Hilary Allen, John Coffee, Merritt Fox, Jeffrey Gordon, Kate Judge, Sam Peltzman, Alex Razkolnikov, Hal Scott, Stephen Shay, David Schizer, Alvin Warren, and participants in a Columbia Law School workshop for comments.

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

[2] 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).

[3] *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.

[4] Daniel K. Tarullo, Governor, Federal Reserve System, Capital Regulation Across Financial Intermediaries (Sept. 28, 2015), *available at* http://www.federalreserve.gov/newsevents/speech/tarullo20150928a.htm ("Strengthening the . . . capital held by banks has been a central element of post-financial crisis reform.").

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

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

few years, the authorities are less likely to react fast enough and perspicaciously enough.

More could be done, but more of the same kind of command-and-control regulation will have diminishing safety returns. Banks and other financial firms resist regulation that reduces their profitability, lobby against it, and innovate to work around it. This regulatory avoidance then requires new regulation to maintain safety. The regulatory and the counter-efforts together create spiraling complexity and absorb much in economic resources, top management attention, and the energy and thinking of the nation's top regulators, with each side's spending often neutralizing the other's effect on profitability and safety.[7] Too much private value for banks can be created by avoiding regulatory impact than by improving financial channels for lenders and borrowers.

An added strategy is available. Regulators can act directly on financial firms' incentives to reduce risk. Core to the real incentives for any American business is the corporate tax system, which penalizes equity and favors debt.

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The pro-debt bias in the tax system arises because the cost of debt is deductible while the cost of equity is not.[8] As a consequence, both financial and industrial firms reduce their overall tax-adjusted cost of finance by using more debt and less equity than they otherwise would. But this pro-debt bias is particularly pernicious for financial firms because the principal "raw material" for their business is not steel or electricity, but funding.

The pro-debt bias in financial firms harms the economy. Failure is of course a tragedy for any firm, its employees, its executives and its financiers, but unlike the failure of a major financial firm, the failure of a non-financial corporation has no major spillover costs to the other firms and the overall economy. Hence, for industrial firms, the tax-induced high leverage is a problem but not a systemic one; the debt bias for financial firms is more pernicious.

The tax bias toward debt may have not attracted the attention it deserves because of how the financial crisis of 2008–2009 played out.[9] No immediate pre-

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[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)." *See also* Charles I. Plosser, Simplicity, Transparency, and Market Discipline in Regulatory Reform, Speech at Federal Reserve Bank of Philadelphia Conference, Enhancing Prudential Standards in Financial Regulations (Apr. 8, 2014), http://www.philadelphiafed.org/publications/speeches/plosser/2014/04-08-14-frbp.cfm. Andrew Haldane, a British financial regulator, emphasizes how complexity in financial regulation undermines effectiveness. Haldane & Madouros, *supra*, at 1–3.

[8] 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.

[9] *See* Int'l Monetary Fund, Debt Bias and Other Distortions: Crisis-Related Issues in Tax Policy (Fiscal Affairs Dep't, June 12, 2009), *available at* www.imf.org/external/np/pp/eng/2009/061209.pdf. The IMF abandoned that fine first foray for minor bank levies and a financial transactions tax on trading turnover. IMF, *A Fair and Substantial Contribution by the Financial Sector*, Final Report for the G-20 (June 2010), *available at*

crisis change in taxation occurred that weakened the financial system. Policymakers and academic analysts accordingly focused on the proximate causes—a housing bubble and weakly capitalized financial institutions. But the preexisting levels of debt were too high for safety due in large measure to the tax-based debt bias. To analogize: if one observes a fall off a cliff after an unexpected gust of wind, one might blame the weather and the wind; we here blame the decision to walk near the cliff's edge.

Comprehensive business tax reform to reduce or eliminate the debt-bias for all corporations could best reduce the debt bias. But comprehensive reform has thus far been elusive and, hence, we analyze here tax reform that only targets financial institutions. If banking regulators pushed for a revenue-neutral reform that targeted financial firms, Congress may listen and act. In the spirit of seeking the doable, we show how an incremental, targeted tax reform that ends the tax penalty for banks and other financial firms that build up their equity above the regulatory minimum, coupled with a reduced interest deduction on the riskiest debt in the financial system, can achieve a high portion of the safety-inducing goals of the comprehensive tax reform. Moreover, the most-likely-to-succeed reforms for industry could not work well for finance; differing reforms will be needed anyway.

Command-and-control capital rules will work better if complemented by incentive-based structures. The plan we propose should encourage banks to hold equity noticeably in excess of today's regulatory minimum. This extra equity is economically very useful: during and after the crisis banks desperately avoided violating capital adequacy constraints by cutting back lending and shrinking their balance sheets. This led to a credit crunch that severely damaged the real economy.[10] If banks were incentivized to have tax-motivated equity well in excess of regulatory minimum, then the chances and severity of lending cutbacks like those we suffered during the financial crisis would diminish.

Moreover, there is now enough international experience with taxes similar to the structure we bring forward to show that financial firms subject to directionally correct tax incentives will voluntarily lower debt and increase equity, rather than resisting further capital strengthening. The magnitude of this improvement should rival the size of all the post-crisis mandates to increase capital. This is thus not a small, technical claim we bring forward, but a major one.

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A roadmap for this Article: In Part I, we recount how weak capital in financial institutions makes them and the economy vulnerable to economic

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www.imf.org/external/np/g20/pdf/062710b.pdf. Policymakers worldwide prefer a bank levy or a financial transactions tax, and not overhauling the corporate tax and the interest deduction. For strong academic analysis of an overhaul, see Hilary J. Allen, *Let's Talk About Tax: Fixing Bank Incentives to Sabotage Stability*, 18 FORDHAM J. CORP. & FIN. L. 821 (2013); Ruud A. De Mooij, *Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions*, 33 FISCAL STUD. 489 (2012). *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).

[10] Viral Acharya & Matthew Richardson, *Introduction*, RESTORING FINANCIAL STABILITY: HOW TO REPAIR A FAILED SYSTEM 11–12 (Viral Acharya & Matthew Richardson, eds. 2009).

reverses. We review the major post-crisis regulatory efforts to improve financial safety and the reasons why critics see them as incomplete.

In Part II, we show first how taxing equity and debt unequally generates the pro-debt bias of taxation and, second, how treating debt and equity symmetrically can eliminate this problem. We analyze the international evidence to see that the safety benefits of these tax incentives are high, rivaling the strength of all post-crisis regulation.

In Part III, we compare the corporate governance distortions from the tax system in industrial corporations and in banks. For large industrial firms, the tax-induced preference for leverage mitigates managerial debilities. But for financial firms leverage lacks meaningful corporate governance benefits, but it does not lack for costs. 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 with precision how the core tax reform should work, progressing through several reforms, starting with the most comprehensive and then narrowing scope until we reach our preferred, targeted, new, but in our view largely efficacious restructuring of financial taxation: allow financial firms to deduct an imputed cost of their equity on that portion of their equity that exceeds what regulators require. This effort is viable operationally and politically possible, would be offset with revenue-equivalent reduction in the deductibility of interest, is modest in its incremental scope, but would greatly beneficial for financial safety. It would make difficult-to-implement safety regulations more viable and some of them unnecessary.

In Part V, we evaluate the relevant tax proposals in policy circles, both international and domestic, and in Congress. Some are better than others, but all fall short of what can and should be done. The most prominent congressional corporate tax reform will work well for real economy firms but would be disastrous for systemic financial safety if applied to financial firms, in that it would *encourage* a pernicious decapitalization of financial firms.

* * *

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

I. REGULATION THUS FAR AND WHY IT IS NECESSARILY INCOMPLETE

Regulators intensified their efforts to make the financial system safer after the financial crisis, using traditional command-and-control regulation. But this regulation can only partially correct the distorted incentives for low levels of equity that arise not only from the current corporate tax, but also from deposit insurance and from implicit too-big-to-fail support for banks and other financial firms. Government officials lack the full contextual knowledge for understanding which regulatory commands are efficacious and which are onerous. They must predict inherently uncertain future economic conditions and their impact on banks. Regulation of this sort must necessarily be incomplete, over-shooting and under-shooting the mark in promoting safety.

A. Bank Capital Levels

Increasing bank equity to levels sufficient to fully absorb losses at the level observed during the financial crisis has proven difficult. Despite a major post-crisis effort to increase capital,[11] the best evidence indicates that capital levels are still not high enough.[12] The Financial Stability Board, a major post-crisis international regulatory consortium, estimates that a 7% equity requirement, roughly the current rule, would have stabilized no more than one-quarter of the largest banks.[13] Observers such as Alan Greenspan, the former Federal Reserve chair, have consequently argued for equity levels of up to 20 to 30%.[14]

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

But banks abhor sharply higher equity levels, because they view equity as more expensive than debt.[15] Regulators, facing resistance, seek other means to stabilize banks and increase banks' loss absorption capacity, via subordinated debt, which can be unwieldy, but which preserves the tax deduction for the banks.[16] The regulators also reduce the banks' riskiest activities, increase their cash-raising liquidity,[17] and seek to make the failure of a major financial institution less damaging than it has been.[18]

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[11] *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, at 10–11 (2014), *available at* http://ssrn.com/abstract=2178475. The most prominent academic critical evaluation of the international capital requirements is ANAT ADMATI & MARTIN HELLWIG, THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT 179–91 (2013).

[12] "Merrill Lynch . . . lost 19% [of its value]. It would have needed a core-capital ratio of 23% to avoid falling through the 4% floor. . . ." *Reforming banking: Base camp Basel, Regulators are trying to make banks better equipped against catastrophe*, ECONOMIST, Jan. 21, 2010, at 68. An IMF study points to 17% equity as the level needed to withstand a financial crisis such as the one we had. Jihad Dagher et al., Benefits and Costs of Bank Capital (IMF Staff Discussion Note SDN/16/04, Mar. 2016).

[13] 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/.

[14] Alan Greenspan, *More capital is a less painful way to fix the banks*, FIN. TIMES, Aug. 17, 2015.

[15] Bankers say more equity will raise banks' cost of funding, induce them to raise their lending rates, and then reduce overall economic growth. See Int'l Inst. of Finance, *The Cumulative Impact on the Global Economy of Changes in the Financial Regulatory Framework*, 12 tbl. I.2. (Sept. 2011), www.iif.com/file/7080/.

[16] *See* Total Loss-Absorbing Capacity, Long-Term Debt, and Clean Holding Company Requirements for 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).

[17] Dodd-Frank Wall Street Reform and Consumer Protection Act § 619, 12 U.S.C. §1851 (2010); 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; UK Vickers Report, *supra* note 13 (recommending "ring-fencing" the bank's 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.

[18] 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, A REPORT OF THE FAILURE RESOLUTION

C. Limits to Bank Regulation and Limits of the Regulator

While this regulatory effort has made the system safer, the effort is reaching its limits and may well be affecting bank efficiency.

1. Limits to regulatory perspicacity. Command-and-control regulation puts much of the economic onus for error on the regulators. They may mistakenly ban a profitable activity that poses minimal risks to the bank. Conversely, they may misunderstand how, say, credit derivatives can put a financial firm at risk of failing.[19] Such misjudgments are neither isolated nor unlikely to recur but are common, contributed to the 2008–2009 financial crisis,[20] and are embedded in the regulators' limited knowledge base. Regulators have limited information and that which they have is often distorted, because it is mismeasured and because its source is often the regulated players. Moreover, once regulation is in place, banks find transactions that the rules do not penalize but accomplish the same end; they have little reason to inform regulators that the transactions are close to, but not identical to, those running through the regulated channel.[21]

The classic statement of the generalized limits of centralized information and the value of decentralized decisionmaking comes from Friedrich Hayek.[22] Although the concept is not alien to tax theory,[23] it surprisingly is not part of the analytics of bank safety regulation.

2. Limits of the new resolution system. Major efforts now seek to resolve failed banks well, tied to rapidly putting the losses on long-term debt. But these mechanisms have yet to be tested and may not work well in a crisis.[24] Stalling litigation is plausible, incomplete regulatory authority is likely,[25] and, given the global nature of the largest financial institutions and markets, may be unworkable

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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.

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

[20] Viral V. Acharya, Philipp Schnabl & Gustavo Suarez, *Securitization Without Risk Transfer*, 107 J. FIN. ECON. 515 (2013).

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

[22] Friedrich Hayek, *The Use of Knowledge in Society*, 4 AM. ECON. REV. 519 (1945). Decentralized decisionmaking in banks with a thin equity layer has better-informed actors deciding but lacking good incentives for systemic safety. The proposals here aim to better align incentives.

[23] *Cf.* Louis Kaplow & Steven Shavell, *On the Superiority of Corrective Taxes to Quantity Regulation*, 4 AM. L. & ECON. REV. 1, 4, 7 (2002).

[24] 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.

[25] *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).

because the capacity for international regulatory coordination is still low.[26] Regulators may, fearful of failure, refuse to test the new resolution structures,[27] waiting until it is too late, when they again feel compelled to bailout the banks.[28]

II. TAXING BANKS PROPERLY TO MAKE THEM SAFER

Using the tax system to incentivize policy is hardly a new idea. And, for the financial sector, several types of bank levies, taxes on transactions, and tax surcharges have been proposed to shape banks' decisions. We discuss and evaluate the extant proposals in Part V, finding them all inadequate, ineffective, and weak, with the most prominent systemically dangerous.

In this Part, we show the basic tax bias toward debt embedded in today's tax code and then outline a simple, revenue-neutral way to reverse the bias. In Part IV we analyze more precise and potentially more effective measures.

A. The Basic Pro-Debt Bias Stated

The basic tax bias toward debt arises from the American corporation paying a 35% tax on its net profits. The corporation deducts its interest expense on debt from its gross profits, but cannot deduct its costs for common equity, such as the dividends and capital gains that stockholders expect.[29]

Consider two operationally identical firms, 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, pays $33,333 in taxes and has $66,667 to return to its capital-providers.[30]

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[26] 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) ("bail-in suffers from complex coordination problems").

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

[28] For the generality of bailouts as inevitable, see CHARLES P. KINDLEBERGER & ROBERT Z. ALIBER, MANIAS, PANICS AND CRASHES: A HISTORY OF FINANCIAL CRISES (2011).

[29] 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.

[30] The marginal American rate is 35%, but using one-third or 33⅓% for calculation is more intuitive.

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

The second firm, TUV, borrows and pays $25,000 in interest, whose deductibility lowers its tax bill. Since it pays only $25,000 in taxes, it returns $75,000 to its investors ($50,000 to stockholders and $25,000 to creditors), yielding about $8,000 more to its capital providers. Hence, unless fully offset by the potential for bankruptcy or operational degradation, the total value to investors of the second, indebted firm will be higher than that of the first firm.

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

Tax aficionados know that this is not the whole story. While equity is more costly to the firm's tax bill, individuals are often taxed more favorably on equity than on debt, via low taxation rates on dividends and capital gains taxes. This tax advantage of equity for investors partially offsets its tax disadvantage at the firm level.[31] Balancing out these pluses and minuses yields a mixed analytic, but the consensus is that when all factors are added up, the tax system is overall biased toward debt.[32]

B. Fixing the Basic Pro-Debt Bias

The pro-debt bias originates in the corporate tax. Quite simply, if the corporation paid no tax on its income, or if both debt and equity returns to investors 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.

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[31] The same principle reduces the investor-level tax disadvantage of debt. While interest income is generally taxed to investors, debt held by untaxed entities is not. When tax exempts hold debt, the earnings on the debt instruments are never taxed, but are still deducted from the issuer's tax bill. The issuer of equity, however, enjoys no tax deduction.

[32] John R. Graham, *How Big Are the Tax Benefits of Debt?*, 55 J. FIN. 1901 (2000); Brealey, Myers & Allen, *supra* note 34, at 441–43.

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

Consider revoking interest deductibility in the above example. This broadens the tax base for the levered company, TUV, and its tax paid would rise, if the same rate applied to the larger base. To keep total tax revenue unchanged, the authorities would lower the tax rate. Before reform, the government raises $33,333 + $25,000 = $58,333. After the revenue-neutral reform, both companies should contribute $58,333/2=$29,166. A tax rate of 29.16% on the expanded base achieves that. Without interest deductibility the tax base is now $100,000 in both the levered and unlevered company and the authorities raise $29,160 from each firm.

The reform would increase the levered firm's tax bill, while the unlevered firm's tax would decrease. Financing the firm with more debt would no longer increase the post-tax income available for creditors and shareholders.

C. The Evidence: Tax Incentives Can Change Banks' Capital Structure

Debt creates the potential for financial stress—bankruptcy for operating firms, failure for financial firms. The "tradeoff theory" of capital structure[33] explains the choice of debt and equity levels as executives and their financiers balancing the costs of high leverage (principally from potential financial stress and bankruptcy) against the tax benefits from interest's deductibility.[34] For financial firms, the analytics are more complex but not different in kind: Some of the business of banking is managing liabilities and matching them to their loans in ways that are profitable, such as by aggregating some shorter term debt and lending longer-term. Hence, banks will have high levels of debt regardless of the tax structure. But banks need some level of equity and the safety issue has been: how much? Thus, although the tax-versus-bankruptcy "tradeoff" theory cannot apply to *all* of the typical bank's debt, it can affect whether the bank will choose the pre-crisis 4%, the current 8%, or a safer 15% level for its equity.

* * *

Good empirical evidence confirms that banks' capital structure choices do include a tradeoff as traditional theory has it. Capital structure varies from country to country, and over time, and rate differences correlate with structural tradeoff differences. Even among countries that have deductible interest, tax rates differ,

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[33] 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).

[34] Modigliani & Miller, *supra* note 8; 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).

making the pro-debt bias stronger where the tax rate is higher, such as the United States. Several studies have exploited these variations to show that, indeed, in countries where the relative tax advantage of debt is small (or when rates change in the same jurisdiction), banks have a higher equity level.

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.[35] A linear extrapolation has an end of the corporate tax bias increasing bank capital by 10%, approximately doubling it.[36] Comparable effects arise from differences in state-by-state corporate taxation in the United States. Banks typically increase their debt (thereby raising their interest deduction) in the year before a state's tax rate rise goes into effect and they thereafter decrease their equity.[37] The effects on bank risk are straightforward: A recent study "confirm[s] that higher corporate income tax rates increase both the credit and insolvency risk of banks"[38]

Additional and important evidence comes from Belgium, which before the financial crisis changed its corporate tax system 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, while they continued to *fall* in comparable European banks.[39] The graphic illustrates.[40]

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[35] Michael Keen & Ruud de Mooij, *Debt, Taxes, and Banks*, 48 J. MONEY, CREDIT & BANKING 5, 21 (2016) ("[A] 10 percentage point increase in the corporate tax rate [seems to] increase[] the leverage ratio by 1.7 percentage points. . . . [T]he tax effect on the leverage ratio is positive and . . . quite large."); *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").

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

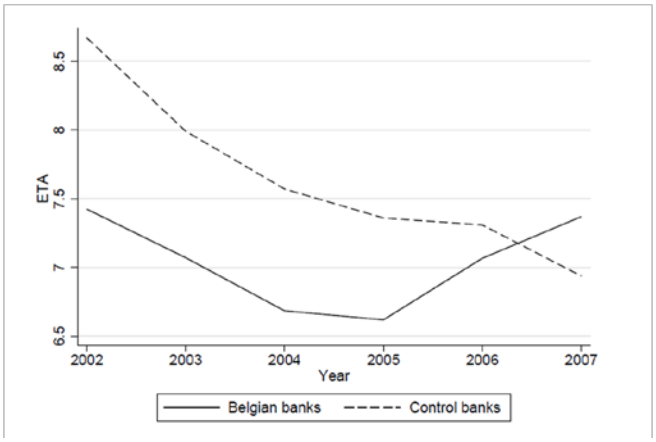
[36] The linear extrapolation is that the rate would be lower not by 10%, but by three and one-half times that (because the highest rate is 35%, not 10%), resulting in a capital increase of 3½ times 2.7%, or about 9.5%, which would approximately double current bank capital.

[37] Alexander Schandlbauer, *How Do Financial Institutions React to a Tax Increase?* 39–40, tbls. 5–6 (Vienna Graduate Sch. of Fin. Working Paper, 2014), *available at*, http://ssrn.com/abstract=2397030. The impact on non-bank firms' leverage is similar. 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).

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

[39] Glenn Schepens, *Taxes and Bank Capital Structure*, 120 J. FIN. ECON. 585 (2016) (the research "compares the evolution of the capital buffers of Belgian banks that were subject to the change in tax legislation with a group of matched banks in other European countries that did not experience such a change. . . . [R]educing

Figure 1: 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.

Complementary empirical evidence exists for other tax incentives on banks. Several European nations added small levies on bank borrowing, and these taxes induced European banks to borrow less.[41]

Moreover, the American bank tax history shows the important and beneficial impact of tax incentives to build up excess equity-based risk absorption. Between 1947 and the mid-70s U.S. banks could build reserves for loan and lease losses that far exceeded the banks' actual average loss rates. These reserves reduced bank taxable income and effectively became part of the bank's equity, until the bank reversed the reserve. Banks then accumulated large reserves which counted as bank primary capital, adding on average additional capital corresponding to about 2% of loans. This pro-equity tax structure lasted until 1988, when regulatory policy changed.[42] The tax reform we propose here is likely to have similarly strong, positive effect.

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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.").

[40] The graphic is from Figure 1 in Schepens, *supra* note 39. Doubts about the reform's durability weakened its impact. 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.

[41] 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.

[42] See John R. Walter, *Loan Loss Reserves*, 77 FED. RES. BANK RICHMOND ECON. REV. 20, 24-25(1991).

Some studies, however, see the tax-incentive impact as strongest for already-better capitalized banks,[43] with already highly-leveraged banks or unable or unwilling to increase their equity when tax incentives to so arose.

Thus, despite the small size of the real world tax differences available for analysis, the beneficial effect as measured in most studies seems likely to be large. If a full-scale regulatory tax effort were implemented, larger effects than those now seen could be anticipated. A linear extrapolation of the observed basic results predicts banks would double their current level of bank equity[44] and thereby reach a level beyond that which is thought viable via command-and-control regulation.

III. TAXING BANKS PROPERLY AS CORPORATE GOVERNANCE STRATEGY

In this Part we interpret the capital structure problem through the analytic lens of corporate governance and organizational efficiency. We make critical points that we do not believe have yet been highlighted for bank tax reform: The pro-debt tax bias has important mitigating *positive* benefits for *industrial* firms, but these benefits are missing for banks. Moreover, different tax strategies have sharply different impacts on the corporate governance of industrial firms and he safety of banks; the core corporate tax "fix" will be quite detrimental to bank safety; since different tax fixes are needed for industry and for financial, it makes sense to begin by specifically targeting tax reform at financial firms. Taxing banks properly can make banks run more efficiently.

A. Agency Cost Benefits for Industry

The large public firm has two core corporate governance conflicts, one between senior executives and stockholders, and the other between debt and equity. More debt can reduce the first conflict but will exacerbate the second. Because industrial firms typically have much less debt than banks, the first conflict should be more pernicious for them while the second will be more important for banks.

The conflict between executives and stockholders in industrial firms arises because executives have slack, since stockholders in the public firm are insufficiently cohesive, attentive, and powerful to hold managers tightly accountable for failing to produce corporate value. However, an industrial firm that heavily uses debt tightens that slack, because the managers must produce enough cash to pay interest when due and re-pay the debt at maturity. If they fail to pay,

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[43] Grace Weishi Gu, Ruud de Mooij & Tigran Poghosyan, *Taxation and Leverage in International Banking*, 22 INT'L TAX & PUB. FIN. 177, 184 (2015); Keen & De Mooij, *supra* note 35, at 21.

[44] *See supra* note 36 & accompanying text. *See generally* Gu et al., *supra* note 43, at 184; Keen & de Mooij, *supra* note 35, at 21.

unforgiving creditors have remedies that stockholders lack. Hence, managers scramble to meet debt payments more earnestly than to satisfy stockholders.[45]

These reduced managerial costs cannot justify debt's deductibility. The point is that there is a mitigating benefit of high debt for nonfinancial firms and it therefore lowers the total cost of tax's distortion of capital structure choices for nonfinancial, industrial firms.

B. Debt-Equity Agency Cost Degradation for Banks

For banks, there is no such mitigating agency cost benefit. Industrial firm debt is about 35% of overall firm value and rarely more than 50% in the public firm, while bank debt is typically more than 90% of total assets now, with the most aggressive reformers aiming to put that closer to 80%.

Banks will have high levels of debt regardless;[46] the question is only whether the bank's debt will be so high as to be systemically dangerous. Banks' business, after all, is maturity and size transformation—borrowing, often short-term and in small portions, and then lending the accumulated funds long-term. The question remains, though, how much debt the safe bank will have.

The principal agency cost, corporate governance conflict in banks is the second conflict, that between debt and equity. As the bank's equity level declines, stockholders have reason to increase the riskiness of their 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.[47] Thinly capitalized banks took on more risk and did worse during the financial crisis.[48]

Active creditors can play a positive role in industrial firm corporate governance but are unlikely to play this positive role in banks well. Banks' non-deposit financial creditors know that the regulator is the bank's biggest de facto creditor, which weakens private creditors' incentives and capacities as corporate governance players. They 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

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[45] 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"].

[46] Harry DeAngelo & René Stulz, *Why High Leverage is Optimal for Banks*, 116 J. FIN. ECON. 21 (2015); JOHN ARMOUR ET AL. PRINCIPLES OF FINANCIAL REGULATION chs. 14 & 15 (2016, forthcoming).

[47] Brealey, Myers & Allen, *supra* note 34, at 459.

[48] *See* Beltratti & Stulz, *supra* note 4; Daniel Ferreira, David Kershaw, Tom Kirchmaier & Edmund Schuster, *Shareholder Empowerment and Bank Bailouts* (London Sch. Econ. Working Paper, 2012), www.ssrn.com/abstract=2170392. *Cf.* John Armour & Jeffrey N. Gordon, *Systemic Harms and Shareholder Value*, 6 J. LEGAL ANALYSIS 35 (2014).

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 modern financial firms' debt.

C. Baseline Corporate Governance Debilities in Banks

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.

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.

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.[49]

Lastly, we have effective means to restructure failed industrial firms, namely, chapter 11 of the Bankruptcy Code. We generally have not yet 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.

* * *

With corporate governance in mind, we can better evaluate mechanisms to even up the tax impact of debt and equity: A deduction for dividends paid—corporate tax reformers' favorite—would bolster industrial firm corporate governance by incentivizing payouts, which industrial firm executives are thought to keep low. But it would cause havoc in financial firm safety, by further pushing firms to reduce equity. Financial reformers should want a corporate tax that does the opposite for the financial sector, incentivizing financial firms to *retain* earnings to bolster equity levels. We will need a different system for evening up debt and equity taxation in industry and in finance. The next Part examines this and related issues more deeply.

[49] *See* Roe, *supra* note 9, at 1428–31.

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

A corporate tax reform that focused only on industry will nevertheless have salutary effects for financial safety by reducing the general demand for debt, facilitating some deleveraging and downsizing of financial institutions.

This point deserves emphasizing. An economy-wide fix to the corporate tax debt bias would lower the system-wide use of debt, making real economy firms more stable as is well-known *but also* make financial firms and the financial system more stable. Thus far we focused here on the tax incentives *inside* the financial institution to favor debt over equity. But the debt bias *outside* in the real economy raises *outside* demand for financial institutions to grow, lend, and finance themselves via debt. This artificially increased demand for debt induces an artificially large debt-based financial sector. (The deductibility of interest on personal debt, such as on household mortgages, has the same systemically-detrimental effect.) Fully fixing the corporate debt bias would shrink an unnaturally large financial intermediation sector.

While we favor comprehensive reform, we do not pursue our analysis in that direction. First and foremost, no such full-scale reform has yet proven politically viable.[50] Second, comprehensive reform implicates issues beyond financial system safety, such as capital accumulation and industrial investment. By targeting financial firms separately, reformers can use the tax system to best build safer systemic financial structures. The best tax reform for finance is not the same as the best for industry. And debt-equity tax reform for banks is both urgent and simpler to implement.

We bring forward three alternatives to analyze in detail in this part. The first, analyzed in Section A, is the simplest and most disruptive: to end the tax deductibility of bank-paid interest. The second, in Section B, is to allow banks to deduct a calculated cost of equity. In Section C, we offer our most targeted solution, one which we have not seen brought forward elsewhere: Allow banks to deduct a calculated cost of equity for equity exceeding regulatory requirements (and then disallow full deductibility of the financial sector's riskiest debt to offset the lost revenue). By focusing on the marginal cost of equity, we expect to have the most efficacious results with the least disruption of the ongoing tax system.

A. Ending the Deductibility of Interest for Banks

The most direct path to capital structure neutrality is to treat debt the way we treat equity, that is, to end the deductibility of interest. (This was the example illustrated above in Part II.B.) That would greatly expand the taxable base for banks; hence, to avoid a big tax increase, the tax rate for the pre-interest income base would have to decrease substantially.

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[50] 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).

Consider a simple trillion-dollar bank with the following capital structure and $50 billion in gross profit before interest:

Traditional bank balance sheet

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

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

Bank net profit of $10 billion is taxed at a rate of 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. When it raises capital via debt, it shields operating income from tax, because the return to that capital is deductible from its gross income.

The Internal Revenue Service 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 only 6.6%.

This tax shift is simple, yields a low tax rate, and encourages the bank to use more safe equity and less debt. It also comports with basic preferences for American taxation, namely, to widen the tax base and lower the tax rate.[51] If policymakers do not wish to levy the tax on insured deposits, they need not. In our example, if $20 billion of the $28 billion deposit interest went to insured deposits, then the tax would be levied on a $30 billion base, not a $50 billion base; the tax rate would be 11% of $30 billion, not 6.6% of $50 billion.

[51] Stephen E. Shay, *U.S. Experience with Interest Deductibility Restrictions*, *in* EC-IMF CONFERENCE: CORPORATE DEBT BIAS 32 (Feb. 23–24, 2015), *available at* http://ec.europa.eu/ taxation_customs/taxation/ gen_info/tax_conferences/corporate_debt_bias/index_en.htm (applying concept to interest deduction and ACE). On broadening the base and cutting the rate, see THE PRESIDENT'S FRAMEWORK FOR BUSINESS TAX REFORM—A JOINT REPORT BY THE WHITE HOUSE AND THE DEPARTMENT OF THE TREASURY 1–2 (Feb. 2012), *available at* https://www.treasury.gov/resource-center/tax-policy/Documents/The-Presidents-Framework-for-Business-Tax-Reform-02-22-2012.pdf; 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).

However, ending the deduction for interest has major drawbacks. First, it will tax banks even if their net profit is zero or if they run a loss. This drawback could be ignored, because banks running losses are systemically wounded, are risky to the economy, and should shrink further; alternatively, one could not tax a net-loss bank.

The second drawback is that the bank's tax would vary with the level of interest rates. When interest rates increase, banks' interest income rises, but so does is interest cost. For a corporate traditional tax, both interest income and the interest deduction rise, offsetting one another. But when the bank tax is levied only on the "top-line" inflated gross income with no offsetting deduction for the inflated interest expense, the tax balloons.

Third, ending the deduction may push the newly disfavored debt from the sector whose tax is reconfigured to elsewhere in the economy. If that elsewhere is safer, this shift is a benefit; if riskier, it is not. Hence, the specific sorts of debt that would be targeted would need to be thought out.

B. A Deduction for the Cost of Bank Equity

A less intuitive, but quite promising, bank tax reform is to tax equity similarly to debt, by according the bank an interest-like deduction for the cost of equity. The idea is that the firm "rents" debt for its operations and *also* "rents" equity. Financial-oriented readers may think of firms paying up for their "cost of capital" and that intuition accords well with this tax idea, an allowance for corporate equity (or ACE): Equity capital, like debt, has a cost. Under traditional corporate taxation, that cost of equity is not tax deductible; under an ACE system, it is.[52] This system does not give banks a deduction for dividend paid—a distinction that is a quite important strength of ACE for banks over current corporate tax reform favorites, and it is a distinction to which we shall return.

The ACE tax system was developed to reduce investment and financing distortions in nonfinancial corporations and was not intended for financial institutions.[53] However, ACE can be repurposed for taxation of financial institutions and, if done properly, can reverse the tax subsidy to debt.

Mechanically, in most renditions, the deduction for equity is calculated by multiplying the book value of equity by a formulaic rate of interest tied to market rates. The following financial statements illustrate a straightforward 6% allowance for corporate equity for the running example of our trillion-dollar bank. The allowance for the cost of the bank's equity gives the banks a $6 billion deduction

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[52] 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), developed in INST. FISCAL STUDIES CAPITAL TAXES GROUP, EQUITY FOR COMPANIES: A CORPORATION TAX FOR THE 1990S (1991), *available at* http://www.ifs.org.uk/comms/comm26.pdf, and most recently analyzed in the Mirrlees Review. DIMENSIONS OF TAX DESIGN (Stuart Adam et al., eds., 2010). For further analysis, 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).

[53] 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.

for the cost of the bank's $100 billion of equity, which it deducts from its gross operating income alongside its interest expense. By allowing that $6 billion deduction for the cost of equity, the bank then has $4 billion of taxable profits, instead of the original $10 billion.

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

In our running example, the level of debt and equity remains unchanged, but the tax bill diminishes. We shall discuss (and offset) this decrease below. But for now, observe that in a dynamic setting, a healthy part of the tax impact can and often will be safety-enhancing *and* tax neutral: because the tax change will make the tax cost of debt and equity approximately neutral, banks will have an incentive to substitute some of their old debt for new equity. This substitution would be approximately tax neutral, because deductible debt would diminish.

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

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

The allowance for equity mechanism has another 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—such as Austria, Belgium, and Italy—to allow American policymakers to study the details of their experience and avoid pitfalls. And Germany and the United Kingdom have both carefully studied implementing ACE, although neither has yet acted.[54] Hence, easy-to-make initial mistakes requiring later correction would be less likely and smaller in scope.

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The allowance mechanism has disadvantages, and the basic one is not small: the allowance in isolation would reduce bank taxes greatly. The political headline of a bank-specific allowance for corporate equity might be that the banks, unlike everyone else, are being favored with a deduction for profits that should really be taxed. Or lobbying by banks may yield no offset to the allowance and lowered tax bill. (I.e., "Thank you for the deduction for equity; but let's just stop there."[55])

In our running example, if the bank continued to be taxed at traditional rates, it would pay only $1.3 billion in tax, instead of the $3.3 billion from a traditional tax. Revenue neutrality would require that the $2 billion in tax relief be raised elsewhere from the banks. The most obvious tax would be on bank liabilities, as discussed in the prior section.[56] But before we finish achieving revenue neutrality, we first show that most of the safety advantage can be achieved without according banks the full allowance for the cost of equity, but rather to target it for equity above the regulatory-required level. This will not only be easier to implement overall but will greatly reduce the make-up needed for revenue neutrality.

We thus now come to our central proposal.

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

Allowing the banks to deduct their cost of corporate equity for only that portion of equity *exceeding* the regulatory minimum will avoid major implementation and transition problems without severely compromising the safety benefit. By favorably taxing only that portion of equity that exceeded what the regulators require, the authorities would not give banks a windfall tax benefit for

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[54] For Britain, see the IFS Study, *supra* note 52.

[55] Critics would argue, however, that: "The tax system 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.

[56] Other thorough-going corporate tax reforms have been brought forward. One major one would allow a deduction to the corporation for dividends paid, which would punish equity less than the current tax system does. For general corporate purposes, Reuven Avi-Yonah and Amir Chenchinski show that the dividend deduction does much that is needed. Reuven S. Avi-Yonah & Amir C. Chenchinski, *The Case for Dividend Deduction*, 65 TAX LAW. 3, 3–4 (2011). While the reform is attractive for industry, it is not for banks. *See infra* note 73 & accompanying text.

equity that they need to hold in any case. The tax authorities would not need to search as far and wide for offsetting limits that would maintain tax neutrality.

Suppose that the required regulatory minimum equity is 8% of assets. The $1 trillion bank in the running illustration has $100 billion of equity, meaning that it has $20 billion of capital in excess of the regulatory minimum. The minimally disruptive allowance is to allow the same percentage cost of equity, 6%, but only for the $20 billion excess.

That would yield the bank a deduction of $1.2 billion, which would decrease its tax by $400 million instead of the $2 billion from an allowance for all equity.

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

The lost $400 million of tax revenue can be made up via a low .04% levy on the bank's full $1 trillion of assets, a .4% levy on $100 billion of its short-term debt, or a .2% levy on its $200 billion of non-deposit debt.[57] Or the make-up could target the riskiest forms of short-term debt spread through-out the financial system.

Revenue-neutrality could be achieved in multiple ways. One way would also use an incremental concept: 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.[58] Low-risk banks would presumably pay interest approximating that on U.S. Treasuries; they could deduct most of their interest

[57] Our core proposal thus parts company with Allen's, *supra* note 9, at 875–83, 886–87, who seeks an ACE-like deduction for regulatory capital and perhaps more. In our view, leaving disadvantaged the slice that regulators already require is not particularly systemically damaging and focusing on the incremental slice yields wider offset options.

[58] Boadway & Bruce, *supra* note 52; 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). *Cf.* Calvin H. Johnson, *Corporate Meltdowns and the Deduction of Credit-Risk Interest*, 131 TAX NOTES 513, 513 (2011). (recommending that there be no deduction for the risk component of the interest paid).

paid. But as a bank took on more debt and more risk, its borrowing rate would rise but the tax allowance for its interest paid would not. Such a well-designed tax system would thereby penalize the riskier bank and reward the safer one.

We emphasize here that by favorably taxing the slice of equity above the level that regulation requires, the authorities would not simply favor a random slice of equity with no more than a weak impact on safety-increasing equity. The authorities would be favoring the "marginal," extra equity above that which is already required. The favored slice would be the slice that the better taxation is most likely to push to grow and that is most important for financial safety.

* * *

This allowance for incremental equity above that which is required by regulation can be grafted onto the current tax structure for financial firms without reconstructing the taxation of all of corporate America. It rewards banks for building up more safe equity on top of what regulators already require. Its core operation reduces tax revenue less than other reforms, thereby allowing for more astute and less intrusive offsets.

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

While financial firms will game the allowance, tax arbitrage (to use the tax vocabulary here) can be exaggerated. Life insurance companies, mutual funds, and savings banks are already taxed differently than other corporations.[59] Moreover, the changes will *reduce* adjacent gaming and boundary problems that now occur. Whether the net gaming impact is less or more is hard to know beforehand.

Potential tax arbitrage on the equity allowance is not a show-stopper for pushing forward on an allowance for equity because the consequences of arbitraging safety rules today is not as pernicious as the consequences of the arbitraging the allowance. That is, financial firms engage in wide arbitrage of bank safety rules; but banks' manipulating safety is typically *more dangerous* to the economy than manipulating of tax impact.

For example, one of the major arbitrage opportunities that led to the financial crisis was banks' ability to reduce required capital if they obtained a guarantee (via a credit default swap) from a high-quality financial firm on a risky loan. Many banks got such guarantees from AIG, the huge and originally AAA-rated insurer. In the crisis, AIG defaulted on these guarantees, exacerbating the crisis. The tax structure we propose will not introduce pernicious arbitrage to a pristine system that lacks regulatory arbitrage; it would instead shift the locus to a less systemically dangerous locale.

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[59] 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.

We next illustrate several ongoing and potential tax arbitrage possibilities, and their limits. Even if we focus only on tax arbitrage, one would have to weigh the *net arbitrage* potential for systemic-strengthening tax improvement here.

1. Tax arbitrage today 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. A leverage-neutral tax system that we aim for will render these arbitrage strategies pointless.

2. Tax arbitrage today between different corporate forms. Tax arbitrage boosts the so-called "shadow banking" sector, which moves currently taxed bank operations into tax-favored entities. Firms and savers with cash can "deposit" that cash in non-taxed money market funds instead of in banks; those money market funds in turn lend to industrial firms by buying the firm's debts. They thereby provide a banking function that is taxed differently than, and less than, the traditional banking channel.

And banks can arrange a long-term loan to an industrial firm; left on the banks' books, the loan income would be taxed. But the bank can pool such loans into a separate trust or partnership that pays no tax directly; the bank can then sell off ownership in the pool to investors.

Overall, to compete with these loan pools and money market funds directly, the bank is incentivized to "zero out" its tax bill by offsetting its taxable interest income on loans with an interest deduction on the bank's own borrowing to finance the loans. Bank equity undermines the banks' zeroing out capacity and renders the banks less able to compete with the differently taxed "shadow banking" sector. The allowance for corporate equity that we propose will narrow the difference between the shadow banking sector and the traditional banking sector. This narrowing will reduce tax arbitrage, not increase it.

3. The inevitability of arbitrage. Nevertheless, if banks are taxed differently from industrial firms, then players will move some transactions from the real sector to the financial sector, and vice versa. Regulatory activity restrictions on banks will reduce but not eliminate such shifts. For example, fee-based financial businesses do not use debt as integral to their business in the same way as a bank transforms short-term debt into long-term loans. A bank that had untaxed equity above the regulatory minimum would be tempted to acquire and expand fee-based financial businesses, because they would effectively be untaxed. The authorities would need to keep those fee-based businesses in traditionally-taxed affiliates.

Wise design can reduce arbitrage. First, the allowance for equity should be set for a wide array of financial firms, applying not just to commercial banks and investment banks, but also other financial firms that are organized and taxed as corporations and subject to capital adequacy regulation, such as insurance firms and other financial firms. (Private equity firms, hedge funds, and mutual funds are generally not taxed as corporations.) The place to begin is with the banks, but not the place to end.

Second, some or all of the offsetting limit to interest deductibility should target a sector-wide financial instrument that is resistant to shifting because it's the instrument that is taxed not the institution. For example, if the offsetting tax was

on short-term repurchase agreements wherever held (as opposed to just those held by banks), the incentive to move these instruments from banks to the less-regulated shadow banking sector would diminish.

Overall, a tax reform favoring equity in financial institutions and debt in non-financial corporations should lead equity to migrate from non-financial companies to the financial system, with debt migrating in the opposite direction. Because risk in the financial system as more dangerous than the debt-based risk in non-financial corporations, this migration will, on balance, lead to a more robust economy. Hence, the first-order net arbitrage is beneficial.

4. International arbitrage. International tax competition comes with almost all tax reform. Multinational firms can quickly shift income to less-taxed jurisdictions and they can change their core tax domicile.[60] Multinational banks operating globally can minimize their tax bill by allocating their debt and equity to the jurisdiction where each is taxed least.

This type of arbitrage should on balance be a plus for countries that introduce the incremental allowance for equity because a tax reform favoring low leverage benefits the *initiating* country: Banks with low leverage should move to this country while banks with high leverage should seek to be taxed in countries where their debt generates the highest possible deduction. This pressure should reduce financial risk for the country initiating the reform. Multinational banks will be incentivized to lodge debt in an affiliate taxed by a nation where interest is fully deductible[61] and move debt away from the country initiating the equity-favoring reform.

Overall, this tax arbitrage should yield major stability benefits for the initiating nation. Coordinated international tax reform might ensue. The impact could well be a self-sustaining coordination as most nations converge on the same debt-debiased tax system for banks.

4. Artificial increases in non-regulatory equity. The affected firms would have reason to argue that their regulatory-required equity was low, so that their tax benefit would be higher. Administrability might thus demand that the regulatory level above which equity benefits be stabilized at the regulatory amount at the time the allowance was implemented at, say, equity of 8% of total assets. But this is a secondary implementation issue.

Another tax reduction strategy might be to create fictitious equity. A bank invests in the equity of a subsidiary and then the subsidiary invests this money back in equity of the bank. The net cash balance of the offsetting equity investments is zero, but the circular transaction allows the bank to present what appears to be deductible equity at the parent level to the tax authorities. This tax gambit requires a countermeasure: the offsetting equity needs to be zeroed out

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[60] 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.

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

when calculating the allowance.[62] This countermeasure succeeded in Italy, which had a short-lived general allowance for corporate equity. An American ACE for banks can benefit from these experiences and put countermeasures in place right from the start.

* * *

Tax rules induce tax arbitrage. Changing tax rules will reduce some arbitrage channels and create others. We emphasize that today there are many arbitrage strategies arising from the different tax treatment of debt and equity. Today firms and banks create "debt-like" instruments that get the interest deduction to create risk-bearing securities that are tax deductible. They move debt into untaxed entities. A leverage-neutral tax system will create new possibilities for arbitrage but render several existing arbitrage strategies pointless.

Tax reform is a learning process. The authorities will need to counter tax avoidance strategies that arise. Gradually expanding the new tax regime would reduce arbitrage.

E. The Cost of Finance When Taxing Banks Properly

When regulators seek to raise the capital required of banks, bankers argue that equity is expensive; debt is cheaper.[63] Hence, regulation that forces banks to use more costly equity will, they say, shackle them with higher financing costs, which they would have to pass on to their clients by charging borrowers more and paying depositors less.

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

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

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

[63] 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 sharp criticism, see 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 at 23 (Rock Ctr. for Corp. Gov. at Stanford Univ., Working Paper No. 161), *available at* http://ssrn.com/abstract=2349739; Admati & Hellwig, *supra* note 11, at 100–14.

The reforms would redistribute tax benefits within the industry. Banks with high leverage would be taxed more; banks with low leverage would be taxed less. Thus some banks already with low leverage would be favored; this is an advantage of the proposal: the tax reform would favor safer banks.

The cost of finance for banks could rise if the banking sector is made safer, because the biggest banks would lose whatever too-big-to-fail funding boost they now obtain. (With more capital, they would be less likely to fail.) That is, in a crisis, the authorities are now more likely to bail out bank debt than bank equity. This makes bank debt cheaper relative to bank equity. But if the tax reform here made banking safer, then banks that lost the too-big-to-fail boost would have a higher cost of capital. This is a legitimate cost increase, not an illegitimate one.

V. TAXING BANKS IMPROPERLY IN CONGRESSIONAL REFORM AND AROUND THE WORLD

Around the world, different means to tax banks—levies on debt, taxes on financial transactions, surcharges on profits—are proposed and some are implemented. Most of these tax proposals are misguided or weak; some are systemically dangerous.

A. Bank Levies

Bank levies tax the bank's overall size, or its aggregate debt.[64] President Obama first proposed such a bank levy in 2010[65] and again in 2015,[66] as did the Republican Chair of the House Ways and Means committee in 2014[67] and presidential candidate Hillary Clinton in 2015[68]—and several European nations have enacted them.

These levies have had two major justifications. One was payback,[69] the other to bolster safety.[70] President Obama's 2016 budget included a small fee of 7/100 of a percent on the liabilities of large financial institution.[71]

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[64] *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.

[65] 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).

[66] *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.

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

[68] *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"].

[69] 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.

[70] 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.

In our view, these levies could be no more than minor offsets, satisfying a political impulse, and cannot be serious regulatory tools because the tax rates for the levies, both proposed and enacted, are all too low to seriously improve financial safety. While they disadvantage debt, they disadvantage it at only about one-tenth of the level that the current deductibility of interest advantages debt, as can be quickly calculated: The bank levies aim to tax the principal amount of bank debt by between five-hundredths and three-tenths of a percentage point for each dollar of targeted debt the bank has on its books. So a levy on a $100 million, 3% interest loan to a bank would range from $50,000 to $300,000 annually. But with corporate tax rates in the United States at 35%, the basic corporate tax deduction for interest reduces the cost of the 3% loan to the bank by about $1,000,000 annually, because the $3,000,000 in interest reduces the firm's gross taxable income, which is taxed at 35%. That $1 million tax saving is between three and twenty times larger than the tax cost from the levies that have been enacted or are being actively discussed.

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

B. Taxing Banks Improperly: Weak Proposals in Current Political Discourse

We here briefly note bank taxation proposals in current political discourse. Only a few will foster safety, and not by much; a few will make no significant change to the current state of affairs; and some will degrade financial safety, perhaps in a major way.

Democratic front-runner Hillary Clinton proposes a fee tied to bank risk and the level of short-term debt, focusing on the largest banks.[72] The effort points in the right direction, but its impact must be weak because it retains the basic corporate tax system, which means the levy rate must be low.

Corporate tax reform has been on the congressional policy agenda in recent years. The most-likely-to-succeed current proposal would allow corporations to deduct dividends paid, just as they can now deduct interest.[73] As we have analyzed above in Part III, such a reform would work well for *industrial*

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[71] 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.

[72] *See* Clinton: Wall Street Should Work for Main Street, *supra* note 68. *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/.

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

firms, which tend to retain cash beyond which is efficient. But for financial firms, enactment would degrade financial safety, possibly severely. A dividend deduction would be a safety "plus" in inducing more equity, but a major safety "minus" because to even up the taxation of equity with debt, the bank must declare and pay out a dividend, which drains cash from bank, thereby weakening it.

C. Pigouvian Taxes

Targeted bank taxes have been conceptualized as "Pigouvian," named for Arthur Pigou, who showed how activities causing externalities, like pollution, could be taxed at a rate reflecting their social cost. Bank activities that risk damaging the economy are like pollution and can be taxed to reduce their incidence to proper levels.[74]

But targeted Pigouvian taxes run into the same information problems as direct command-and-control type regulation. Authorities must target the correct risky features, which is a daunting task. Worse yet conceptually, Pigouvian add-ons make little sense when the overall tax framework heavily subsidizes debt: the tax system pushes financial firms to produce the "pollution" that Pigovian reformers then seek to abate by taxing that pollution.

Pigouvian thinking underlies the most popular financial tax reform around the world: The financial transactions tax, often called a Tobin-tax for James Tobin,[75] the Nobel winner who promoted the idea.[76]

D. Taxing Banks Around the World: Tobin Taxes

The concept behind the Tobin-tax on financial transactions is that excessive financial trading is destabilizing and believed to increase financial volatility with excessive market swings, so taxing transactions would reduce trading; the tax addresses the volatility of financial markets. Although prominent and politically popular,[77] it has sharp limits in promoting overall bank safety.

First, banks can take on large risk without trading. A risky loan portfolio, which need not trade at all, is all it takes. Second, the tax is easy to avoid, by moving the locus of the trade to another jurisdiction without the tax. Several European nations enacted Tobin taxes that gathered little revenue, because trading

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[74] Enrico Perotti & Javier Suarez, *A Pigovian Approach to Liquidity Regulation*,7 INT'L J. CENT. BANKING 3 (2011).

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

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

[77] See Editorial, *The Need for a Financial Trading Tax*, N.Y. TIMES, Jan. 28, 2016, at A24; 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 . . .").

went abroad.[78] Third, evidence indicates that the tax makes finance more volatile (because it discourages trading, leading to price leaps).[79]

E. Taxing Banks Around the World: Systemically Destructive Surcharges

Worse yet, the tax direction today in some nations actively weakens financial firms. The British government last autumn degraded their bank tax system. Britain had previously enacted a small bank levy, but then reversed course by phasing out the debt levy and replacing it with an 8% surcharge on bank profits.[80] A bigger tax on profits is a bigger tax on equity, which will incentive British banks to reduce their equity levels. (It is an idea that has arisen in American policymaking circles as well.) This British reform is exceedingly unwise, moving in precisely the wrong direction.

F. The Propitious Political Economy of Taxing Banks Properly

Is tax reform here politically viable?

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 activity regulation.

True, banks will not powerfully promote the reform; they and their executives are accustomed to current bank taxation. Properly taxing banks will also reduce any too-big-to-fail subsidy to banks, which benefits bank equity and, derivatively, bank management. But if regulators persuaded banks that the regulators could forgo the next level of command-and-control regulation, then banks might be enticed to go along.

2. Deposits are politically untouchable. Bank liabilities include retail deposits. While a safety-oriented tax reform need not distinguish insured deposits from other borrowings, there are reasons to do so. On safety, insured deposits do not run as quickly in a crisis as other bank debts. On practical politics, regulators will not want to tax retail deposit liabilities unfavorably.

Reform that increased the taxation of bank debt need not affect insured deposits. U.S. banks have half of their funding coming from deposits, with equity funding nearly 10% and the remaining 40% coming from non-deposit debt.[81] At

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[78] *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.

[79] 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.

[80] 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.

[81] 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

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 probably means no tax reform. 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.[82] And the tax-equalizing reform for industry must differ from that for finance anyway.

A 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.[83] Our proposal is addressed to the financial regulators, but they, even if convinced, may be less able to influence congressional tax committees than banking committees.

CONCLUSION

The next regulatory frontier for making finance safer is to restructure the corporate taxation of financial firms. Simply put, interest should no longer be taxed favorably while equity is taxed unfavorably. Evening up the two will create better incentives for safety in finance. Banks and other financial firms would find that using more equity will no longer be expensive in tax terms. The tax change will incentivize banks to use more equity and less debt.

We analyzed four tax reforms that would greatly increase financial safety, in a sequence moving from the most general (and most effective) to the most targeted and most politically and technically viable. The first would be comprehensive corporate tax reform for financial as well as nonfinancial firms. The added rationale we offer for a system-wide fix 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.

The next most general tax reform would reform bank taxation broadly, by eliminating the deduction for interest. The change would widen the tax base for financial firms and rates could drop precipitously. That base-widening and rate-lowering comports with prevailing American tax norms, but has major drawbacks.

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.

[82] Arlen & Weiss, supra note 50. The issue then was integration of corporate and personal taxation.

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

The third general reform would focus on equity, allowing the bank to deduct an allowance for their cost of equity. Its basic structure would narrow the tax base sharply and reduce revenue from bank taxation. But multiple offsets can make the reform revenue neutral. An obvious offset would be a levy on bank liabilities. Another would be to reduce the deductibility of nondeposit interest payments, particularly on the systemically riskiest debt.

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

If implemented alone, the allowance for equity above the regulatory minimum would lower the tax take from financial firms, by giving banks a new tax deduction. To be revenue-neutral, offsets similar to those for the previous proposal would be needed. But because our preferred reform would only apply to incremental, above-the-regulatory-required equity, the needed offset would be much smaller.

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

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

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