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Let's Talk About Tax: Fixing Bank Incentives to Sabotage Stability

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Cover Page Footnote

Assistant Professor, Loyola University New Orleans College of Law. Many thanks to Chris Brummer, Vic Fleischer, Bob Hockett and James Kwak for their helpful comments on earlier drafts. Thanks also go to participants in the Brooklyn Law School Workshop on Financial Regulation for their input.



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LET'S TALK ABOUT TAX: FIXING BANK INCENTIVES TO
SABOTAGE STABILITY

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Hilary J. Allen *

Regulatory capital requirements are in place to improve bank (and systemic) stability by forcing banks to fund themselves with more loss-absorbent equity. But banks have strong incentives to prefer debt funding to equity funding, and thus to arbitrage regulatory capital requirements. In particular, banks have (often successfully) petitioned regulators to allow them to satisfy regulatory capital requirements with hybrid debt-equity instruments that can be treated as debt for tax purposes. Unfortunately, the financial crisis showed that the first generation of these hybrid instruments, including trust preferred securities, did not live up to their promise of promoting bank stability. The next generation of hybrids, the contingent convertible bonds or “cocos,” have the potential to be downright harmful to stability.

We therefore need to address bank incentives to create hybrid instruments, and otherwise arbitrage regulatory capital requirements. While regulatory capital requirements are almost always discussed in isolation from tax policy, this Article recognizes that banks' reluctance to fund themselves with larger cushions of common equity is, in large part, a tax problem. Financial regulators, rather than accepting such tax preferences as a given, should engage with their tax colleagues and revisit the wisdom of tax policies that incentivize reliance on debt funding, and the instability such reliance creates. To that end, this Article takes the first step in fusing together regulatory capital scholarship with the tax literature on reducing debt bias, and proposes that common equity held by banks as regulatory capital should be made tax deductible.

* Assistant Professor, Loyola University New Orleans College of Law. Many thanks to Chris Brummer, Vic Fleischer, Bob Hockett and James Kwak for their helpful comments on earlier drafts. Thanks also go to participants in the Brooklyn Law School Workshop on Financial Regulation for their input.

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INTRODUCTION

For many non-tax lawyers, the complexity of tax law makes it a subject approached with trepidation and awe: tax is shrouded in a mystique that makes non-experts wary of intruding.¹ But understanding tax law is fundamentally important to the regulation of banks, because tax law creates strong incentives for banks to fund themselves with debt

1. Commenting on the complexity of tax law, LoPucki noted that “the tradeoff for that complexity is that the expert community is fully absorbed with it and has less time to devote to understanding how the law they have mastered relates to the rest of the world. Additionally, legal expertise that goes beyond a certain level of complexity is of little use, because it cannot be communicated to others, which ordinarily is a prerequisite to application.” Lynn M. LoPucki, *Legal Culture, Legal Strategy, and the Law in Lawyers’ Heads*, 90 NW. U. L. REV. 1498, 1542 (1996).

rather than equity,² and banks with insufficient equity funding are inherently unstable due to their limited ability to absorb losses.³ It is therefore vital that financial regulatory scholars and policymakers engage with tax law to address these tax-driven incentives for instability. Unfortunately, perhaps because of the perception of tax law as a segregated and impenetrable discipline,⁴ this has rarely happened.⁵ The key contribution of this Article, then, is to recognize the interdependent nature of regulatory capital and taxation policies, and spur a conversation between the disciplines.⁶

In particular, this Article seeks to push the Basel Committee on Banking Supervision (the preeminent international standard setter for bank regulation)⁷ to consider tax issues. To date, the BCBS has not directly confronted the tax-driven bias towards debt financing.⁸ Instead,

2. Ilan Benshalom, *How to Live With A Tax Code With Which You Disagree: Doctrine, Optimal Tax, Common Sense, and the Debt-Equity Distinction*, 88 N.C. L. REV. 1217, 1221 (2010).

3. See *infra* Part I.B.

4. Gilson and Schizer comment that “tax ‘practice’ [is] the plumbing of tax law that is familiar to practitioners but, predictably, is opaque to those, including financial economists, outside the day-to-day tax practice.” Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 877 (2003).

5. Viral Acharya and his colleagues have commented that “[t]he fact that neither the Dodd-Frank Act nor Basel III tries to investigate the question of why equity financing is more costly than debt financing is rather disappointing.” Viral V. Acharya, Nirupama Kulkarni & Matthew Richardson, *Capital, Contingent Capital, and Liquidity Requirements*, in REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE 143, 157 (Viral V. Acharya et al. eds., 2011).

6. Although accounting issues are not covered in any detail in this Article, accountants also have an important role to play in this conversation.

7. The Basel Committee on Banking Supervision or “BCBS” is an international standard-setting body comprised of representatives from twenty-seven different countries. See *Basel Committee on Banking Supervision*, BANK FOR INT’L SETTLEMENTS, <http://www.bis.org/bcbs/index.htm> (last visited June 15, 2013). Because the IMF and the World Bank often require countries to comply with the BCBS’s standards as a condition of receiving assistance (and still more countries have chosen to comply with the BCBS’s standards as best practices, or to provide comfort to foreign investors), standards promulgated by the BCBS apply to many more countries than its twenty-seven members. See KERN ALEXANDER, RAHUL DHUMALE, & JOHN EATWELL, GLOBAL GOVERNANCE OF FINANCIAL SYSTEMS: THE INTERNATIONAL REGULATION OF SYSTEMIC RISK 39 (2006). This raises legitimacy issues, which are discussed in more detail in notes 356–58, *infra*, and accompanying text.

8. The underlying tax incentives for higher bank leverage are not even mentioned in Basel I, II or III. Basel I goes so far as to say that “tax considerations are not

it seems content to view this bias as inevitable and has created a “work-around” by implementing rules that require a minimum percentage of bank funding to be comprised of equity and equity-like instruments rather than debt⁹—these rules are known as regulatory capital requirements.¹⁰ We are thus left with something of a policy paradox: financial regulation forces banks to fund themselves with more equity, while tax rules simultaneously punish equity funding.¹¹

addressed in this paper.” BASEL COMM. ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS 3 (1988), available at <http://www.bis.org/publ/bcbsc111.pdf> [hereinafter BASEL I].

9. Shackelford et al. have noted that, traditionally, “academics and policymakers have given far less attention to the possible role of tax instruments in the financial . . . realm, reflecting direct regulation’s predominant role in addressing financial sector issues.” Douglas A. Shackelford, Daniel N. Shaviro, & Joel Slemrod, *Taxation and the Financial Sector*, 63 NAT’L TAX J. 781, 782 (2010).

10. The BCBS has promulgated three major standards that are colloquially known as Basel I, Basel II, and Basel III. Formally speaking, Basel I is a document titled “International Convergence of Capital Measurement and Capital Standards,” that was published by the BCBS in July of 1988. Basel I (like the subsequent Basel II and III standards) was not binding on individual nations, but each of the then G-10 nations committed to implement Basel I into national law by the end of 1992. See BASEL I, *supra* note 8, at 14. As Basel I became outmoded, the BCBS issued new standards. See BASEL COMM. ON BANKING SUPERVISION, BASEL II: INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK (2004), available at <http://www.bis.org/publ/bcbs107.pdf> [hereinafter BASEL II]. This is colloquially known as Basel II, and it was intended to be phased in from 2006 through 2009. However, even before the implementation was complete, the Financial Crisis showed the regulatory capital requirements of Basel I and II to be inadequate. The BCBS responded with a compilation of documents that have come to be known as Basel III. The key document setting out regulatory capital requirements under Basel III was released on December 16, 2010 and is entitled “Basel III: A global regulatory framework for more resilient banks and banking systems.” BASEL COMM. ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (2011), available at <http://www.bis.org/publ/bcbs189.pdf> [hereinafter BASEL III].

11. The paradoxical nature of policy with respect to regulatory capital was highlighted in a comment letter written to the Financial Times by twenty prominent economists. They noted that “[i]t is paradoxical to subsidize debt that generates systemic risk and then regulate to try to limit debt.” Anat Admati et al., *Healthy Banking System Is the Goal, Not Profitable Banks*, FIN. TIMES, Nov. 9, 2010, <http://www.gsb.stanford.edu/news/packages/pdf/admatiFTletter11.09.10.pdf>. The International Monetary Fund (IMF) has also noted that “[b]anks face both an explicit tax advantage of debt and, through regulatory requirements, an implicit penalty— with evident risk of policy incoherence.” INT’L MONETARY FUND, DEBT BIAS AND OTHER

In what appears to be a subconscious attempt to reconcile these inconsistent tax and financial regulatory positions, the BCBS has expended considerable effort to allow banks to satisfy at least some of their regulatory capital requirements with hybrid debt-equity instruments.¹² These hybrids have some of the loss-absorbing characteristics of equity, but also possess a sufficient number of debt-like attributes to justify their being treated as debt instruments for the purposes of tax-deductibility.¹³ However, by allowing hybrids to count as regulatory capital, the BCBS is promoting the creation of new and complex financial instruments that can compromise bank and financial system stability.¹⁴ Furthermore, the allocation of resources to devising these hybrid instruments can be viewed as socially wasteful, because the instruments have little use other than to arbitrage regulatory capital requirements.¹⁵

A simpler solution is preferable:¹⁶ this Article takes the position that tax penalties for equity funding are not immutable, and that by addressing these tax penalties directly, we can obviate much of the desire of banks to satisfy their regulatory capital requirements with inferior and complicated hybrid instruments. To provide some background for this discussion, Part I of this Article will briefly summarize the regulatory capital standards (known colloquially as Basel I, Basel II and Basel III)¹⁷ that the BCBS has promulgated over the years

DISTORTIONS: CRISIS-RELATED ISSUES IN TAX POLICY 11 (2009), available at <http://www.imf.org/external/np/pp/eng/2009/061209.pdf>.

12. See *infra* Part I.A.

13. See Acharya et al., *supra* note 5, at 168.

14. See *Tax Reform and the Tax Treatment of Debt and Equity: Joint Hearing Before the H. Comm. on Ways and Means & the S. Comm. on Fin.*, 112th Cong. 9 (2011) (statement of Victor Fleischer, Professor, University of Colorado Law School) [hereinafter Fleischer], available at <http://www.finance.senate.gov/imo/media/doc/Fleischer%20Testimony.pdf>; Hilary J. Allen, A New Philosophy for Financial Stability Regulation 37–39 (Feb. 20, 2013) (unpublished manuscript), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2085336.

15. See Benschalom, *supra* note 2, at 1233–34; see also Fleischer, *supra* note 14, at 20.

16. “In complex environments, decision rules based on one, or a few, good reasons can trump sophisticated alternatives. Less may be more.” Andrew G. Haldane, Executive Director, Financial Stability, Bank of England, & Vasileios Madouros, Economist, Bank of England, Speech at the Federal Reserve Bank of Kansas City Symposium: The Changing Policy Landscape, The Dog and the Frisbee 5 (Aug. 31, 2012), available at <http://www.bis.org/review/r120905a.pdf?frames=0>.

17. See *supra* notes 8, 10.

in an attempt to require banks to fund themselves with more equity. Part I goes on to consider in detail the reasons why banks seek to arbitrage these regulatory capital requirements, concluding that minimal equity funding becomes privately optimal for individual banks (although it is suboptimal for society at large) because of tax and other government subsidies that favor debt.¹⁸

Using debt-equity hybrid instruments to satisfy regulatory capital requirements is one way in which banks can maximize their debt funding. Basel I and II sanctioned this practice,¹⁹ but the experience of the financial crisis²⁰ showed that many of these hybrid instruments did not absorb losses as well as expected,²¹ and were thus inferior substitutes for regulatory capital in the form of common shares and retained earnings—the best form of capital, which the BCBS calls “Common Equity Tier 1.”²² To illustrate the problems associated with earlier versions of hybrid instruments, Part II.A will consider the case study of trust-preferred securities (“TruPSs”), which were very popular in the United States until the financial crisis revealed their inadequacies as regulatory capital. While instruments like TruPSs no longer qualify as regulatory capital under the most recent Basel III standards,²³ Basel III does allow banks to use a “next-generation” of hybrid instruments to satisfy some of their regulatory capital requirements, so long as these hybrids satisfy certain loss-absorbency criteria.²⁴ Part II.B considers the most prominent of these next-generation hybrids: the contingent convertible capital instrument, or “coco.”

Although there have been few issuances of cocos to date, these hybrid instruments have been feted for their purported recapitalization and governance benefits. However, a detailed examination of these

18. Anat R. Admati et al., *Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Expensive* 4, 39 (Rock Ctr. for Corp. Governance at Stanford Univ., Paper No. 86, 2011), available at <https://gsbapps.stanford.edu/researchpapers/library/RP2065R1&86.pdf>.

19. See *infra* Part I.A.

20. The global financial crisis of 2007-2008 will be referred to in this Article as the “Financial Crisis.”

21. Press Release, Bank for Int’l Settlements, Basel Committee Issues Final Elements of the Reforms to Raise the Quality of Regulatory Capital (Jan. 13, 2011), available at <http://www.bis.org/press/p110113.pdf>.

22. BASEL III, *supra* note 10, at 13.

23. This is because TruPSs cannot be written off or converted into common equity, as required. See Press Release, Bank for Int’l Settlements, *supra* note 21.

24. *Id.*

cocos indicates that such benefits are limited at best, and are far outweighed by the systemic risks involved.²⁵ It therefore comes as somewhat of a relief that regulators in the United States have recently declined to endorse the use of these instruments as regulatory capital.²⁶ However, cocos have received a lot of support from authorities in Europe,²⁷ and there was strong international demand for a recent issuance of cocos by the British bank Barclays.²⁸ Given the global nature of the financial system, if cocos were to destabilize banks in Europe, the impact would certainly be felt around the world.²⁹ To avoid this outcome, this Article argues that the BCBS should refine its international regulatory capital standards to reject cocos and mandate that regulatory capital requirements be satisfied entirely with vanilla, uncomplicated, Common Equity Tier 1 funding.

25. See *infra* Part II.B.

26. A recent study by the Financial Stability Oversight Council recommended “that contingent capital instruments remain an area for continued private sector innovation, and encourag[ed] the Federal Reserve and other financial regulators to continue to study the advantages and disadvantages of including contingent capital and bail-in instruments in their regulatory capital frameworks,” but did not recommend incorporating cocos into the United States regulatory system at present. FIN. STABILITY OVERSIGHT COUNCIL, REPORT TO CONGRESS ON STUDY OF A CONTINGENT CAPITAL REQUIREMENT FOR CERTAIN NON-BANK FINANCIAL COMPANIES AND BANK HOLDING COMPANIES 3 (2012), available at [http://www.treasury.gov/initiatives/fsoc/Documents/Co%20co%20study\[2\].pdf](http://www.treasury.gov/initiatives/fsoc/Documents/Co%20co%20study[2].pdf). For a discussion of how regulatory endorsement can lead to explosive growth in the market for hybrid instruments, see notes 137–38 and accompanying text.

27. The Swiss, British and German authorities, as well as the European Union, all broadly support the use of cocos. Wulf A. Kaal & Christoph K. Henkel, *Contingent Capital with Sequential Triggers*, 49 SAN DIEGO L. REV. 221, 243, 245–46 (2012).

28. The strongest demand for Barclays’ cocos was from Asian investors, but U.S. investors were also interested. Helene Durand, *Barclays’ Contingent Capital Bond Finds Strong Support*, REUTERS, Nov. 14, 2012, <http://www.reuters.com/article/2012/11/14/barclays-cocos-idUSL5E8ME2YP20121114>. The cocos offered by Barclays pose more risk to investors than the cocos discussed in this Article, because they are written off upon the occurrence of the trigger event, rather than converting to equity. The prospect of having their investment completely wiped out upon the occurrence of the trigger event could make investors even more prone to panic, exacerbating the concerns raised in Part II.B. of this Article.

29. Financial crises can be transmitted around the world by way of the “interconnectedness of systemic institutions through an array of complex transactions,” as well as “a severe contraction in global liquidity, cross-border credit availability and demand for exports.” BASEL III, *supra* note 10, at 1, 2.

Banks will resist this, however, because they prefer hybrids as a cheaper alternative to Common Equity Tier 1 funding.³⁰ As established in Part I, much of the relative price advantage of debt derives from skewed governmental policies and incentives, particularly from structural biases in national tax codes that favor debt over equity.³¹ Part III will examine the broad tax literature on reducing corporate bias towards debt generally, and consider how this literature can be narrowly applied so as to minimize bank antipathy towards holding Common Equity Tier 1 regulatory capital. From this preliminary survey of the tax literature, there seems to be a relatively simple and fairly promising way of incentivizing banks to fund themselves with more of this type of capital: the implementation of an “allowance for Common Equity Tier 1” or “ACET1,” which would allow banks to fully deduct the cost of Common Equity Tier 1 used to satisfy regulatory capital requirements.³²

This Article’s recommendation is therefore two-fold: first, the BCBS should require that all regulatory capital requirements be satisfied with Common Equity Tier 1 (i.e., the BCBS should no longer recognize hybrids as regulatory capital). Second, individual countries should be encouraged to adopt an ACET1 that is based on an optional model promulgated by the BCBS. Part IV therefore gives some thought as to how such an ACET1 might be implemented in practice: further input from economists and tax scholars will certainly be necessary in developing an ACET1, but it is important to note from the outset that because this ACET1 would be viewed as a benefit by banks, its implementation could avoid some of the political barriers and international coordination problems that hamper most financial regulatory reforms.³³

I. REGULATORY CAPITAL

A. CAPITAL REQUIREMENTS

Most developed countries have implemented *ex ante* minimum regulatory capital requirements, which are reasonably consistent

30. Samuel G. Hanson, Anil K. Kashyap & Jeremy C. Stein, *A Macprudential Approach to Financial Regulation*, 25 J. ECON. PERSP. 3, 11 (2011).

31. See *infra* notes 263–65 and accompanying text.

32. See *infra* note 299 and accompanying text.

33. See *infra* Part IV.

throughout the world because they are based on international standards promulgated by the BCBS.³⁴ These standards require banks to maintain a minimum ratio of “regulatory capital” (the numerator of the equation) to “risk-weighted assets” (the denominator of the equation). Under the first iteration of the BCBS’ standards, colloquially known as “Basel I,” banks were required to fund themselves with instruments that qualified as “regulatory capital” in an amount equal to at least 8.0%³⁵ of their “risk-weighted assets.”³⁶ At least 50% of the required regulatory capital had to be comprised of instruments that satisfied the criteria for “core” capital—these instruments included common equity shares, as well as non-cumulative perpetual preferred stock (and even some innovative hybrid capital instruments with step-up clauses).³⁷ The remaining 50% of the required regulatory capital could then be comprised of other types of instruments (including hybrid instruments)³⁸ known as “supplementary capital.”³⁹

The requirements relating to the numerator of the capital ratio remained largely unchanged under the second iteration of the BCBS’ standards, known as “Basel II,”⁴⁰ but Basel II did make significant changes to how assets were risk-weighted (the denominator of the ratio).⁴¹ Under Basel I, the risk-weighting of a bank asset was determined based on which of four “buckets” that type of asset was assigned to: for example, all U.S. municipal bonds were accorded a 20% risk-weight and all unsecured loans were accorded a 100% risk-weight.⁴² But these “buckets” were critiqued as arbitrary and not reflecting the true risk posed by an asset (in particular, these “buckets” did not reflect

34. See *Basel Committee on Banking Supervision*, *supra* note 7.

35. BASEL I, *supra* note 8, at 13.

36. “Determining a bank’s risk-weighted assets is a complicated calculation that reflects the perceived riskiness of assets held by the bank and the perceived likelihood that a bank’s contingent obligations will crystallize into actual obligations.” Hilary J. Allen, *Cocos Can Drive Markets Cuckoo*, 16 LEWIS & CLARK L. REV. 125, 131 n.23 (2012).

37. BASEL I, *supra* note 8, at 3, 6, 13.

38. For a discussion of the hybrid instruments that qualified as regulatory capital under Basel I, see note 124 and accompanying text.

39. See BASEL I, *supra* note 8, at 4–6.

40. See BASEL II, *supra* note 10, at 12.

41. DAVID ANDREW SINGER, REGULATING CAPITAL: SETTING STANDARDS FOR THE INTERNATIONAL FINANCIAL SYSTEM 64 (Eric Helleiner & Jonathan Kirshner eds., 2007).

42. Patricia A. McCoy, *Musings on the Seeming Inevitability of Global Convergence in Banking Law*, 7 CONN. INS. L.J. 433, 452 (2001).

the credit risk of the obligor, such that, for example, all unsecured borrowers were treated as equally risky).⁴³ Basel II therefore allowed asset risk-weightings to be determined “either by external ratings provided by external credit rating agencies (CRAs) or by internal ratings calculated by banks, based on their own internal models.”⁴⁴

The financial crisis highlighted many flaws in the capital standards set out in Basel I and II. In particular, there was recognition that “[t]he global banking system entered the crisis with an insufficient level of high quality capital”⁴⁵; that is, there were problems with the numerator of the regulatory capital ratio. Many of the instruments that were being used as regulatory capital (including many hybrid instruments) were not able to absorb losses as well as common shares and retained earnings.⁴⁶ Thus, the most recent standards developed by the BCBS (known as “Basel III”) have a renewed focus on common equity funding.⁴⁷ Basel III requires banks to fund at least 4.5% of their risk-weighted assets with Common Equity Tier 1.⁴⁸ In practice, however, banks must fund at least 7.0% of their risk-weighted assets with Common Equity Tier 1, or else face restrictions on their ability to pay dividends and bonuses.⁴⁹ In addition, the BCBS has promulgated additional capital requirements for global systemically important banks,⁵⁰ and these requirements will also need to be met with Common Equity Tier 1.⁵¹ However, even though the BCBS acknowledges that other types of regulatory capital are inferior to Common Equity Tier 1,⁵² it does not mandate that *all* regulatory capital requirements must be satisfied with Common Equity

43. *Id.* at 453.

44. Vanessa Le Leslé & Sofiya Yurievna Avramova, *Revisiting Risk-Weighted Assets* 37 (Int’l Monetary Fund, Working Paper No. 12/90, 2012).

45. BASEL III, *supra* note 10, at 12.

46. *See id.* at 2.

47. *Id.* at 12. The phased implementation of Basel III commenced on January 1, 2013. *Id.* at 27.

48. *Id.* at 12.

49. This requirement for 2.5% extra Tier 1 common equity is referred to as the “Capital Conservation Buffer.” *Id.* at 55.

50. This extra capital requirement will range between 1% and 2.5% of the risk-weighted assets of the bank, depending on its systemic importance. BASEL COMM. ON BANKING SUPERVISION, GLOBAL SYSTEMICALLY IMPORTANT BANKS: ASSESSMENT METHODOLOGY AND THE ADDITIONAL LOSS ABSORBENCY REQUIREMENT 20 (2011), available at <http://www.bis.org/publ/bcbs207.htm>.

51. *Id.*

52. BASEL III, *supra* note 10, at 12.

Tier 1. Instead, while Basel III requires banks to maintain total regulatory capital in an amount no less than 8% of a bank's risk-weighted assets,⁵³ it provides that 1.5% of a bank's risk-weighted assets can be held as "Additional Tier 1" instruments (such as perpetual non-cumulative preference shares) and 2.0% can be held as "Tier 2" instruments (including some types of subordinated debt).⁵⁴ While it is open to banks to satisfy *all* of their Tier 1 and Tier 2 capital requirements with Common Equity Tier 1,⁵⁵ banks are unlikely to do so because of the expense they associate with such funding.⁵⁶

Although Basel III focused most closely on the numerator of the regulatory capital ratio, there was also an acknowledgment of some of the failings of the denominator (i.e., the measurement of risk-weighted assets), and so Basel III introduced a new, non-risk-based leverage ratio to "introduce additional safeguards against model risk and measurement error by supplementing the risk-based measure with a simple, transparent, independent measure of risk."⁵⁷ While the BCBS has yet to finalize the parameters of the leverage ratio, broadly speaking, it will require banks to hold regulatory capital (either Common Equity Tier 1 common equity or Additional Tier 1 instruments) in an amount equal to at least 3% of *all* assets, including off-balance sheet items.⁵⁸ But this new leverage ratio acts as a backstop to, rather than replacing, the risk-weighted capital ratio.⁵⁹ This is a conscious policy choice by the BCBS: while the purpose of regulatory capital requirements is to reduce leverage by forcing banks to fund more of their activities with equity and equity substitutes,⁶⁰ the BCBS recognizes that not all assets are equally risky⁶¹ and believes that risk-weighting assets incentivizes stronger risk-management practices by banks;⁶² these incentives would be absent if the BCBS relied primarily on the more simplistic

53. *Id.* This 8% does not include the capital conservation buffer or capital surcharges for global systemically important banks. Factoring in these amounts, regulatory capital requirements could be as high as 13% of risk-weighted assets for the largest international banks.

54. *See id.*

55. It is also open to banks to satisfy their Tier 2 capital requirements with Additional Tier 1 capital.

56. *See* notes 91–105 and accompanying text.

57. BASEL III, *supra* note 10, at 4.

58. *Id.* at 61–63.

59. *Id.* at 61.

60. *See* Admati et al., *supra* note 18, at 8–9.

61. Le Leslé & Avramova, *supra* note 44, at 28.

62. BASEL II, *supra* note 10, at 2.

unweighted leverage ratio. The ratio of regulatory capital to risk-weighted assets thus remains the cornerstone of prudential banking regulation, but there are a number of ways that a bank can understate its risk-weighted assets to game the ratio and thus fund itself with less regulatory capital and more debt.⁶³ A bank can use internal models that underestimate the risk of the bank's assets,⁶⁴ or it can use accounting gimmicks like the "Repo 105" maneuver that was used by Lehman Brothers to transfer assets off balance sheet whenever it was required to report on its financial condition.⁶⁵ Because the reforms of Basel III made little change to how assets are risk-weighted, the BCBS's standards still afford many opportunities for arbitraging the denominator of the regulatory capital ratio.

The foregoing discussion makes it clear that, even after the reforms of Basel III, regulatory capital requirements are still flawed.⁶⁶ Nonetheless, regulatory capital requirements remain the centerpiece of international efforts to improve financial stability.⁶⁷ This Article therefore considers how to maximize the efficacy of such requirements by undercutting incentives to arbitrage both the numerator and the denominator of the regulatory capital equation (focusing in particular on bank incentives to arbitrage the numerator by creating unnecessarily

63. See Charles W. Calomiris & Richard J. Herring, *Why and How to Design a Contingent Convertible Debt Requirement* 4–5 (Working Paper No. 11-41, 2012), available at <http://fic.wharton.upenn.edu/fic/papers/11/11-41.pdf>.

64. Le Leslé & Avramova, *supra* note 44, at 7.

65. The report issued by Anton Valukas (the Examiner in the Lehman Brothers Holdings bankruptcy) concluded that:

Lehman employed off balance sheet devices, known within Lehman as 'Repo 105' and 'Repo 108' transactions, to temporarily remove securities inventory from its balance sheet, usually for a period of seven to ten days, and to create a materially misleading picture of the firm's financial condition in late 2007 and 2008. . . .

Lehman regularly increased its use of Repo 105 transactions in the days prior to reporting periods to reduce its publicly reported net leverage and balance sheet.

Report of Anton R. Valukas, Examiner at 732–33, *In re Lehman Bros. Holdings Inc.*, 445 B.R. 143 (Bankr. S.D.N.Y. 2011) (No. 08-13555 (JMP)), available at <http://jenner.com/lehman/VOLUME%203.pdf>.

66. A number of other criticisms have also been leveled at Basel III, including that it encourages correlation of bank assets to the detriment of systemic stability. See *infra* Part IV.A.

67. FINANCIAL STABILITY BOARD, OVERVIEW OF PROGRESS IN THE IMPLEMENTATION OF THE G20 RECOMMENDATIONS FOR STRENGTHENING FINANCIAL STABILITY 1 (2012), available at http://www.financialstabilityboard.org/publications/r_120619a.pdf; see also Le Leslé & Avramova, *supra* note 44, at 4.

complex and problematic hybrid debt-equity instruments). Part I.B will delve more deeply into these incentives of arbitrage regulatory capital requirements.

B. INCENTIVES TO ARBITRAGE REGULATORY CAPITAL REQUIREMENTS

At their heart, regulatory capital requirements are an attempt to require banks to fund themselves with less debt. To deliberately oversimplify (thus ignoring hybrid instruments for the moment), banks have a choice between two types of funding sources: debt or equity.⁶⁸ The proportion of equity funding (as opposed to debt funding) used by banks to make loans and acquire other assets is referred to as leverage—the less equity funding used, the higher the debt funding and thus the leverage.⁶⁹ Other things being equal, banks prefer to rely on debt funding (and thus to increase leverage) to enable them to acquire more assets and multiply their profits in good times.⁷⁰ However, in bad times, the amount of debt incurred by the bank to finance its assets will remain constant even as the value of those assets decreases.⁷¹ Instead, a fall in asset values will reduce (or even wipe out) the value of the equity funding such assets; because leverage is the ratio of equity funding to the total value of the asset, leverage will increase as equity is reduced.⁷² It is easiest to demonstrate this by way of a few simplified mathematical examples.

Scenario 1:

Assume that an asset, A, is purchased by a bank for \$100. The bank used \$20 of its own equity and \$80 of borrowed money, to fund

68. Debt can take the form of a loan or a debt security (such as a bond), and represents a reasonably fixed liability of the debtor. Equity (such as a common share) is an ownership interest in the issuer of the equity, and the holder of that equity is not entitled to any fixed return. See RICHARD S. CARNELL ET AL., *THE LAW OF BANKING AND FINANCIAL INSTITUTIONS* 130 (4th ed. 2008).

69. Andrew W. Lo & Thomas J. Brennan, *Do Labyrinthine Legal Limits on Leverage Lessen the Likelihood of Losses? An Analytical Framework*, 90 *TEX L. REV.* 1775, 1780 (2012). For a simplified calculation of leverage, divide the total asset value by the amount of equity funding for that asset. TOBIAS ADRIAN & HYUN SONG SHIN, *FEDERAL RESERVE BANK OF NEW YORK STAFF REPORTS, LIQUIDITY AND LEVERAGE 4–5* (2010), available at http://www.newyorkfed.org/research/staff_reports/sr328.pdf.

70. Lo & Brennan, *supra* note 69, at 1777.

71. See Markus K. Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007-2008*, 23 *J. ECON. PERSP.* 77, 92 (2009).

72. See ADRIAN & SHIN, *supra* note 69, at 9.

the purchase. Leverage is 5% (i.e., 100/20). Assume, then, that the value of asset A falls to \$95. The bank's \$80 debt remains constant, meaning that the value of the bank's equity in asset A falls to \$15, and leverage will be 6 1/3% (i.e., 95/15).

Scenario 2:

Assume that an asset, A, is purchased by a bank for \$100. The bank used \$10 of its own equity and \$90 of borrowed money to fund the purchase. Leverage is 10% (i.e., 100/10). Assume, then, that the value of asset A falls to \$95. The bank's \$90 debt remains constant, meaning that the value of the bank's equity in asset A falls to \$5 and leverage will be 19% (i.e., 95/5).

We can see from these hypotheticals that equity is more loss-absorbent than debt, because the equity funding used to finance an asset will simply become eroded as the asset's value declines, whereas debt obligations remain constant.⁷³ We can also see that the more highly-leveraged a bank is to begin with, the more its leverage will be affected by a reduction in asset values.⁷⁴

Once asset values start declining and leverage starts rising, banks may face regulatory and/or market pressure to readjust their leverage.⁷⁵ At this point, a bank has two options: it can either start selling its assets, or raise new equity capital by issuing or selling shares. If the bank is suffering from any type of distress, it will find it difficult to raise new common equity capital because of what is known as the "debt overhang" problem: new investment is discouraged because investors fear that any

73. A report on banking by the United Kingdom's Independent Commission on Banking (known as the "Vickers Report") discusses in detail why equity is more loss-absorbent:

Because the value of a bank's equity equals the value of its assets less the value of its (non-equity) liabilities if asset values fall, equity absorbs losses smoothly. Equity holders know that it is risky. Further, equity is perpetual. A bank does not have to re-finance its equity funding periodically, as it does its debt funding (although it may need to add to it from time to time). So equity cannot 'run' in the way that other liabilities – in particular, deposits and short-term funding – can.

INDEPENDENT COMM'N ON BANKING, FINAL REPORT: RECOMMENDATIONS 86 (2011).

74. It is worth noting that "investment banks . . . were operating at leverage ratios of 25:1 to 35:1 in terms of debt to equity before many of them collapsed [in the financial crisis]. With such leverage, even a small quantity of abrupt and adverse negative news about assets will be sufficient to wipe out equity capital . . ." Acharya et al., *supra* note 5, at 167.

75. ADRIAN & SHIN, *supra* note 69, at 28.

new capital they contribute will be immediately applied to the bank's existing obligations to senior debtholders, wiping out their new investment.⁷⁶ Recapitalization can also be impeded by Akerlof's famous "lemons" problem:⁷⁷ in a volatile market, potential buyers of bank shares are likely to assume that capital raising must be necessary due to problems at the bank. Because of the imperfect information available to them, these potential buyers will discount the amount that they are willing to pay for the shares, thus reducing the amount of new equity funding that a bank can raise by way of issuing or selling shares.⁷⁸

Given the impediments to recapitalization posed by the "debt overhang" and "lemons" problems, banks may be left with only one way to reduce leverage—selling assets. Unfortunately, in circumstances where there is low liquidity in the market (such as during a crisis when numerous parties are trying to reduce leverage by way of asset sales), it will be difficult to find a purchaser for the assets, and sales will be made at a discount.⁷⁹ This will drive down the price of equivalent assets,⁸⁰ and if a large number of banks (and other financial institutions) are trying to sell the same assets at the same time, these discounts can be quite large.⁸¹ Falling asset prices will increase the leverage of other banks, and those other banks will then face pressure to deleverage by selling assets, creating a vicious cycle.⁸²

Therefore, when highly-leveraged banks deleverage, they often generate negative externalities for other market participants by depressing asset prices market-wide.⁸³ Conversely, because equity absorbs losses more smoothly than debt, banks with larger Common Equity Tier 1 holdings (and thus lower leverage) are less likely to need

76. Hanson et al., *supra* note 30, at 6.

77. George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 *QUEENS J. ECON.* 488, 489–90 (1970).

78. Charles K. Whitehead, *Destructive Coordination*, 96 *CORNELL L. REV.* 323, 349 (2011).

79. Brunnermeier, *supra* note 71, at 92.

80. *Id.*

81. *Id.*

82. Brunnermeier refers to this as the "fire sale externality." *Id.* at 94.

83. Whitehead describes the effects of these externalities as follows: "As different managers experience similar effects, they are likely to react in the same way by each selling assets, causing greater price volatility and prompting further sales. The result is a cascading decline in value, with greater coordination impairing each firm's ability to manage its own risk exposure." Whitehead, *supra* note 78, at 326–27.

to sell assets or raise new capital in the first place.⁸⁴ If deleveraging does become necessary for these banks, they may be able to do so by way of raising new equity capital, avoiding asset sales and the negative externalities associated with such sales. This is because larger holdings of Common Equity Tier 1 make the “debt overhang” problem less of an issue: holders of this type of equity are the most junior claimants in any bankruptcy and their claim is only residual (i.e., they have no hard claim to any assets of the bank), so they will not take priority over any new investment.⁸⁵ To the extent that a bank is funded with more Common Equity Tier 1 vis-à-vis debt, new investors have less reason to fear that their capital investment will be wiped out by more senior debt-holders. Furthermore, where a bank is already funded with a substantial amount of Common Equity Tier 1, the financial situation of the bank is more simple and transparent,⁸⁶ and this may work to reduce the information asymmetries that cause the “lemons” problem, increasing the amount potential buyers are willing to pay for bank shares.⁸⁷

A bank that funds itself with larger cushions of Common Equity Tier 1 will therefore be both better able to recapitalize and better able to absorb any losses that it suffers. This is likely to inspire market confidence.⁸⁸ With market confidence, such banks are less likely to suffer from the types of liquidity runs that brought down institutions like

84. Admati and her colleagues note that “[t]he destabilizing effects of simultaneous deleveraging by asset sales would be greatly reduced if banks were much better capitalized, because the required level of sales is much reduced when the initial leverage is much lower.” Anat Admati et al., *Debt Overhang and Capital Regulation* 31 (Rock Ctr. for Corp. Governance at Stanford Univ., Working Paper No. 114, 2012), available at <http://ssrn.com/abstract=2031204>.

85. See Admati et al., *supra* note 18, at 10.

86. In contrast, it is more difficult for banks to reveal the true value of their more risky assets. Calomiris & Herring, *supra* note 63, at 9.

87. With better information about the issuer available to potential investors, investors have less reason to fear a hidden problem at the bank, and so they will charge less for their investment (issuers will also need to expend less on disclosure to bridge any informational asymmetry). Furthermore, a less leveraged bank is less susceptible to changes in asset values, and as such, there will be fewer instances where drastic recapitalization is required. The expense of new equity issuances can be avoided; instead, equity cushions can be slowly replenished with retained earnings. See Admati et al., *supra* note 18, at 37.

88. Admati et al. note that “[w]ith greater capital cushions, there would be less risk of such systemic breakdowns from mutual distrust.” *Id.* at 8.

Bear Stearns and Lehman Brothers,⁸⁹ and society as a whole is less likely to suffer from the negative externalities associated with the failure of financial institutions.⁹⁰ Society thus has a vested interest in banks funding themselves with more Common Equity Tier 1, hence the implementation of regulatory capital requirements. Banks, however, are more focused on their internal cost of capital and view Common Equity Tier 1 as a more expensive form of funding than debt; there is thus a tendency for banks to prefer highly-leveraged funding profiles,⁹¹ and thus to arbitrage regulatory capital requirements. The higher cost of Common Equity Tier 1 is usually explained by reference to the higher required return on, and informational sensitivity of, equity, but as the discussion below will show, tax policies and other government subsidies for debt are the real drivers of banks' preference for leverage.

i. Required Return on Equity

One reason generally cited for the higher cost of Common Equity Tier 1 vis-à-vis debt is that bank shareholders require a higher return on their shares than bank creditors do on their debt, in order to compensate the shareholders for the risk they take as residual claimants.⁹² But while it is true that shares do require a higher rate of return than debt, Admati and her colleagues have persuasively disputed that an increase in the

89. Prior to its failure, Lehman Brothers had substantial amounts of hybrid instruments on its books. Fleischer, *supra* note 14, at 9. One of the concerns regarding Lehman Brothers immediately prior to its bankruptcy was that the valuations of its assets were unclear, such that counterparties and regulators could not tell whether it had sufficient capital, or was insolvent. As such, the market lacked confidence in Lehman as a counterparty, which compromised its access to short-term funding and thus its liquidity. FIN. CRISIS INQUIRY COMM'N, THE FINANCIAL CRISIS INQUIRY REPORT 324–25 (2011). For further discussion of the demise of Bear Stearns and Lehman Brothers, see notes 241–47 and accompanying text.

90. The instability of financial institutions affects the availability of credit, and in turn, economic growth. Allen, *supra* note 14, at 9–10. Because of this reduction in credit and economic growth, financial crises can result in increased unemployment, poverty and crime. Stephen L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 207 (2008).

91. Hanson et al., *supra* note 30, at 20.

92.

The expected return on equity is usually different than on debt because the investors' returns are contingent on many unforeseeable factors related to the success of the firm's business strategy. This contingency is typically perceived to make the equity investments riskier than investments in bonds (which are debt instruments), and, as a result, equity investors typically demand a higher return for their investments. Benshalom, *supra* note 2, at 1229.

percentage of Common Equity Tier 1 funding will, in and of itself, raise *total* funding costs for banks.⁹³ Admati et al.'s conclusion is based on the work of Modigliani and Miller, which has been summarized as follows:

[T]he Modigliani and Miller paradigm exposes the flaw in the following reasoning: "Equity is more expensive than debt because it is riskier. Thus, if a bank is forced to rely more on equity, its overall cost of finance will go up, and it will have to charge more for its loans." The fallacy here is that the risk of equity, and hence its required return, is not a constant, but rather declines as leverage falls. Indeed, when all the Modigliani and Miller conditions hold, this effect is just enough to offset the increased weight of the more-expensive equity in the capital structure so that the overall cost of capital stays fixed as bank leverage varies.⁹⁴

It is therefore not axiomatic that it is more expensive for banks to fund themselves with more Common Equity Tier 1. Although the required return on equity for a highly-leveraged bank will be higher than the interest rate on debt, as the risk profile of that bank is made more conservative with more Common Equity Tier 1 funding, both shareholders and debtholders will be subject to less risk and should demand less of a return, and thus the total cost of funding should not increase.⁹⁵

ii. Informational Sensitivity

The higher cost of Common Equity Tier 1 has also been attributed to the increased informational sensitivity of equity,⁹⁶ but just as with required return on equity, this higher cost is not a constant. Generally speaking, debt is more informationally insensitive than shares because

93. Admati et al., *supra* note 18, at 16–17. "‘Economizing’ on equity itself has an effect on the riskiness and, therefore, on the required expected return of equity. This effect must be taken into account when assessing the implications of increased equity capital requirements for banks’ cost of capital." *Id.* at 17.

94. Hanson et al., *supra* note 30, at 17.

95. Admati et al. demonstrate this with the following numerical example: "[G]iven 10% equity capital the required return was 15% for equity and 5% for debt, for an average cost of $10\% \times 15\% + 90\% \times 5\% = 6\%$. With 20% equity capital the required return for equity falls to 10% (with a 5% cost of debt), leading to the same average cost of $20\% \times 10\% + 80\% \times 5\% = 6\%$." Admati et al., *supra* note 18, at 17 n.25.

96. Calomiris & Herring, *supra* note 63, at 8.

returns on debt are fixed, whereas returns on shares are much more volatile.⁹⁷ So long as default by the debt issuer is unlikely, a debtholder only needs to know the terms of the debt instrument to determine the value of the debt, whereas a shareholder needs to know detailed information about the operations of the issuer of the shares in order to price those shares. This informational insensitivity of debt ensures that it is more marketable than shares—much less diligence is required on the part of the purchasing investor—which increases the liquidity of debt and results in a discount in price when compared with shares.⁹⁸ However, as a bank’s risk profile becomes more leveraged (and thus the bank becomes more likely to default on its debt), the certainty that the bank will be able to meet its commitment to repay debt becomes compromised. Potential debtholders must then devote more time to investigating the solvency of the bank, making debt more informationally sensitive, less liquid, and more expensive.⁹⁹ Thus, if we focus on the *total* cost of a bank’s funding, while shares may be more informationally sensitive (and thus expensive) than debt, a larger cushion of Common Equity Tier 1 also preserves the informational insensitivity (and thus cheaper cost) of debt. So, at least theoretically, the total cost of funding should not increase (and bank profits should not decrease) as leverage is decreased.¹⁰⁰

iii. Tax Policies and Other Subsidies for Debt

In practice, however, lower leverage *is* more expensive for banks. This is largely a result of distortive tax policies and implicit government subsidies that favor debt.¹⁰¹ First, debt is rendered cheaper for banks because they have access to deposit insurance (which subsidizes the cost of “borrowing” from depositors), as well as access to emergency

97. Admati et al., *supra* note 18, at 26.

98. *Id.*

99. *Id.*

100. There is, of course, an entire field of behavioral finance that repudiates (or at least discounts) the rationality of investors, suggesting that investors’ demand for return is motivated less by risk and informational asymmetries, and more by irrational sentiments and popular narratives. *See, e.g.*, GEORGE A. AKERLOF & ROBERT J. SHILLER, *ANIMAL SPIRITS: HOW HUMAN PSYCHOLOGY DRIVES THE MARKET AND WHY IT MATTERS FOR GLOBAL CAPITALISM* (2009). This literature is compelling, but it is not considered in detail in this Article. Because behavioral finance does not provide any unified explanation that suggests that equity is more expensive than debt, this Article does not need to rebut it.

101. Admati et al., *supra* note 18, at 3.

funding from central banks acting in their capacity as “lender of last resort” (which reduces the risk that banks will default on their non-insured debt, making that debt cheaper for banks to issue).¹⁰² By the same logic, an implicit subsidy is conferred by governments—and therefore indirectly, by taxpayers—upon the debt of banks that are perceived to be “too big to fail”.¹⁰³ Although financial reform efforts in the wake of the financial crisis have targeted this issue (for example, the United States’ Dodd-Frank Act describes itself as legislation that will “end ‘too big to fail’”), there is a general consensus that these subsidies persist notwithstanding the reforms that have been in place to date.¹⁰⁴ In addition to these subsidies, most countries have tax rules in

102. *Id.* at 23–24. For further discussion of deposit insurance and central banks as lenders of last resort, see *infra* Part IV.A.

103. Acharaya and his colleagues have noted that government guarantees of too-big-to-fail institutions make debt cheaper than equity. Because of these guarantees, large, complex financial institutions “will have an incentive to lever up by borrowing at government-subsidized rates and investing in spread (or carry) trades.” Acharya et al., *supra* note 5, at 157. Given this persistent implicit government backing, it makes little sense for these types of institutions to hold increased amounts of equity: with more equity, the bank’s shareholders would bear losses in a crisis, while an absence of equity would mean that those losses could be distributed to taxpayers in a bailout. KENNETH R. FRENCH ET AL., THE SQUAM LAKE REPORT: FIXING THE FINANCIAL SYSTEM 55 (2010).

104. For a detailed discussion of the provisions of Dodd-Frank that purport to prevent future bailouts of financial institutions, see Arthur E. Wilmarth, Jr., *Narrow Banking: An Overdue Reform that Could Solve the Too-Big-to-Fail Problem and Align U.S. and U.K. Regulation of Financial Conglomerates (Part 1)*, BANKING & FIN. SERVICES POL’Y REP., Mar. 2012, at 8–12. Notwithstanding implementation of financial reform around the world, there is a general skepticism of the claim that the political powers that be will actually let such failures occur. This is because there is no real credible alternative to a bail-out or an unwieldy bankruptcy of large financial institutions with international operations: “For a resolution process to have any chance of succeeding, it must be cross-border in scope; yet there are strong political reasons to believe that such an international agreement will be difficult or impossible to achieve” SIMON JOHNSON & JAMES KWAK, 13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN 207 (2010). In the United States, for example, the orderly resolution authority conferred on the FDIC by Title II of Dodd-Frank does not cater to the complexity and transnational nature of large banks. Furthermore, even post-Dodd-Frank, there is scope for federal assistance for financial institutions. See generally Wilmarth, Jr., *supra* at 8–12; Simon Johnson, *The Myth of The Resolution Authority*, N.Y. TIMES (Mar. 31, 2011, 5:00 AM), <http://economix.blogs.nytimes.com/2011/03/31/the-myth-of-resolution-authority/>; Stephen J. Lubben, *Resolution, Orderly and Otherwise: B of A in OLA*, 81 U. CIN. L. REV. 485 (2013). As such, “despite all the . . . ‘no more taxpayer-funded bailout’ clamor included in recent financial reform

place that cause banks to favor debt over equity.¹⁰⁵ As long as such tax rules and government subsidies remain in force, banks will have strong incentives to arbitrage regulatory capital requirements so as to enable them to increase their leverage.

Since the financial crisis, a deep literature has emerged on how to end subsidies for institutions deemed “too big to fail”: many argue that this can only be achieved by drastic structural reform (proposals include breaking up the mega-banks¹⁰⁶ and ring-fencing their banking activities).¹⁰⁷ These proposals are worthy of consideration, but this Article does not seek to contribute to the literature on “too big to fail.” In addition, it does not seek to challenge the subsidies associated with deposit insurance, or access to central banks as lenders of last resort: the Article accepts that these subsidies are a worthwhile price to pay for policies that genuinely enhance financial stability.¹⁰⁸ Instead, this paper focuses on the more neglected issue of how tax incentives affect banks, and leaves issues regarding government subsidies to other scholars.

It would therefore be helpful to know from the outset just how much of banks’ preference towards debt is tax-driven, and how much is driven by government subsidies. Unfortunately, as far as I am aware, there are no studies that directly address this issue. There are some data available, though, on the value of the implicit “too big to fail” government subsidy: since the financial crisis, a number of studies have sought to quantify the impact of this subsidy on the funding cost for large banks. The research of Baker and McArthur suggests that the value of the subsidy for large banks averaged 29 basis points over the period starting in 2000 and ending with the fall of Bear Stearns, and averaged 78 basis points in the period starting with the fall of Lehman

legislation, bailouts in the future are likely if circumstances become sufficiently severe.” Cheryl D. Block, *Measuring the True Cost of Government Bailout*, 88 WASH. U. L. REV. 149, 224 (2010). The continuing lower cost of funding for systemically important institutions reflects market support for this view. See Viral V. Acharya et al., *The End of Market Discipline? Investor Expectations of Implicit State Guarantees* 20–21 (Mar. 2013) (unpublished manuscript), available at <http://ssrn.com/abstract=1961656>.

105. Tim Edgar, *Financial Instability, Tax Policy, and the Tax Expenditure Concept*, 63 SMU L. REV. 969, 998, 1000 (2010). These will be examined in detail in Section 4.A.

106. JOHNSON & KWAK, *supra* note 104, at 214–17.

107. See generally INDEPENDENT COMM’N ON BANKING, *supra* note 73; see also Wilmarth, *supra* note 104, at 1.

108. Admati et al., *supra* note 18, at 23–24.

Brothers and ending in the middle of 2009.¹⁰⁹ Acharya, Anginer and Warburton found that the average value of the subsidy per year during the period from 1990 through 2010 was 28 basis points, peaking at an average of 120 basis points in 2009.¹¹⁰ The latter two studies considered only U.S. banks—Ueda and Weder di Mauro estimate that internationally, large banks had a funding cost advantage of roughly 60 basis points at the end of 2007 and 80 basis points at the end of 2009.¹¹¹ Though the results of these studies vary, the consensus seems to be that the impact of being “too big to fail” on bank funding cost is usually well under 100 basis points (1.00%), although it becomes more valuable in the depths of a crisis.¹¹²

“Too big to fail” institutions are not the only banks that receive government subsidies. Around the world, most banks (no matter what their size) are beneficiaries of deposit insurance and have access to central banks as lenders of last resort.¹¹³ As far as I am aware, however, there are no studies that seek to quantify the “value” for banks of access to lenders of last resort. The data are also sparse with respect to deposit insurance: most of the empirical studies consider how much it costs deposit insurers to provide insurance,¹¹⁴ rather than the value of that deposit insurance to banks. One study, however, does consider the impact of the introduction of deposit insurance on deposit interest rates (i.e., the cost of deposit funding) for banks around the world.¹¹⁵ Somewhat counter-intuitively, this study finds that when deposit

109. DEAN BAKER & TRAVIS MCARTHUR, CTR. FOR ECON. & POLICY RESEARCH, THE VALUE OF THE “TOO BIG TO FAIL” BIG BANK SUBSIDY 2 (2009).

110. Acharya, et. al., *supra* note 104, at 4. The study also found that subsidies persist notwithstanding the passage of Dodd-Frank. *Id.* at 19–20.

111. Kenichi Ueda & Beatrice Weder di Mauro, *Quantifying Structural Subsidy Values for Systemically Important Financial Institutions* 4 (Int’l Monetary Fund, Working Paper No. 12/128, 2012), available at <http://www.imf.org/external/pubs/ft/wp/2012/wp12128.pdf>.

112. Although we have no data on the value to banks of access to central banks as lenders of last resort, presumably this would also be higher during a crisis.

113. See *infra* notes 332–35 and accompanying text.

114. For a survey of this literature, see Thomas L. Hogan & William J. Luther, *Explicit and Implicit Costs of Government-Provided Deposit Insurance* 30 (2012), available at <http://ssrn.com/abstract=2083662>.

115. Francesca Carapella & Giorgio Di Giorgio, *Deposit Insurance, Institutions and Bank Interest Rates* 1 (Columbia Univ. Dept. of Econ. Discussion Paper Series, Paper No. 0304-06, 2003), available at <http://academiccommons.columbia.edu/catalog/ac:116049>.

insurance is introduced in a country, it has very little impact on the interest rates that banks in that country pay on deposits,¹¹⁶ suggesting that the deposit insurance subsidy isn't overly valuable to banks.

Turning now to tax, there is a sizable empirical literature that investigates the impact of tax policies on the cost of debt and equity for corporations generally. Most of the studies on corporate debt bias relate to individual countries, however, and because of differences among countries' corporate tax rates, tax treatment of investor income, and accounting policies, it is difficult to generalize about how much of the cost of equity can be traced back to tax policies. That said, the empirical work that has been done on individual G7 countries indicates that "[t]hese distortions create advantages to the use of debt measurable in hundreds of basis points."¹¹⁷ Although this literature does not look specifically at banks,¹¹⁸ banks face the same tax incentives as other corporations¹¹⁹ and so the findings regarding corporations can act as a rough guide to the impact of tax policies on the cost of bank funding.¹²⁰

And so we have data which suggest that the availability of deposit insurance has little impact on banks' cost of deposit funding, the "too big to fail" subsidy is usually worth much less than a hundred basis points, and that tax distortions affect funding decisions in the order of hundreds of basis points. Furthermore, the value of the "too big to fail" subsidy seems to be cyclical (it is more valuable in bad times), whereas tax distortions are constant. This analysis of the relative impact of tax policies and other subsidies on the cost of bank debt and equity is very ad hoc, and would benefit from further research by economists. Nonetheless, it suggests that addressing tax incentives that favor debt is the reform that will have the single biggest impact on bank incentives to arbitrage regulatory capital requirements. Indeed, there is already a

116. *Id.* at 19. The authors note that though deposit insurance does not significantly impact deposit interest rates, it does encourage banks to make riskier loans with higher interest rates.

117. Michael Keen, Alexander Klemm & Victoria Perry, *Tax and the Crisis*, 31 *FISCAL STUD.* 43, 49 (2010), available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1475-5890.2010.00107.x/pdf>.

118. *Id.* at 52.

119. *Id.*

120. "[T]he size of the effects of corporate taxation on the financial structure of banks is close to the ones for non-financial firms." Serena Fatica, Thomas Hemmelgarn & Gaetan Nicodeme, *The Debt-Equity Tax Bias: Consequences and Solutions* 9 (European Comm'n Taxation Papers, Paper No. 33, 2012), available at http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/tax_papers/taxation_paper_33_en.pdf.

broad consensus that banks will not issue hybrid instruments if those hybrids do not receive preferential tax treatment,¹²¹ which suggests that only the significant tax savings associated with debt-equity hybrids justify the costs associated with developing and marketing those instruments (i.e., that government subsidies alone do not make hybrids sufficiently attractive to banks).¹²² If we can address tax incentives so that Common Equity Tier 1, hybrids, and debt are all treated the same from a tax perspective, we can therefore quash bank incentives to develop new and complicated debt-equity hybrids.

II. THE PROBLEMS WITH HYBRID INSTRUMENTS

Given banks' general preference for debt over equity as a funding source, it is not surprising that banks have sought to develop instruments that have enough equity-like features to be counted as regulatory capital, but also have debt-like features that make the instruments cheaper than Common Equity Tier 1.¹²³ Basel I and II were amenable to counting these "hybrid debt capital instruments" as part of banks' regulatory capital, so long as:

- they [were] unsecured, subordinated and fully paid-up;

121. Acharya et al., *supra* note 5, at 168. Given that the United States Internal Revenue Service is unlikely to treat cocos as debt, U.S. banks may not end up issuing cocos. Viva Hammer, Sam Chen & Paul Carman, *Tax Treatment of Contingent Convertible Bonds*, DERIVATIVES & FIN. INSTRUMENTS 97 (2011). It has also been suggested that (tax issues aside) for cocos to really take-off, cocos need to be classified as debt in order to appeal to the large fixed income market. LOUISE PITT ET AL., CONTINGENT CAPITAL: POSSIBILITIES, PROBLEMS AND OPPORTUNITIES 4–5 (2011), available at <http://www.goldmansachs.com/our-thinking/public-policy/regulatory-reform/contingent-capital.pdf>

122. Stephen Fiamma, tax partner at Allen & Overy, pithily summed up this attitude: "Banks and lawyers are working hard to come up with the holy grail of an instrument that meets both Basel requirements and the IRS requirements for tax deductibility. Until that happens, why would any bank bother with CoCos?" Liam Vaughn, *Basel Regulators Force Banks to Cut Plans for Contingent Convertible Bonds*, BLOOMBERG, July 19, 2011, <http://www.bloomberg.com/news/2011-07-19/basel-regulators-force-banks-to-cut-contingent-convertible-plans.html>.

123. "[Hybrids'] appeal to issuers is that they look like relatively cheap equity." Anousha Sakoui et al., *Regulatory Thaw Helps Hybrid Return*, FIN. TIMES, Aug. 3, 2010, <http://www.ft.com/intl/cms/s/0/fe74723a-9f48-11df-8732-00144feabdc0.html#axzz24PujkslK>; see also Candemir Baltali & Joseph Tanega, *Basel III: Dehybridization of Capital*, 8 N.Y.U. J. L. & BUS. 1, 24–26 (2011).

- they [were] not redeemable at the initiative of the holder or without the prior consent of the supervisory authority;
- they [were] available to participate in losses without the bank being obliged to cease trading (unlike conventional subordinated debt);
- although the capital instrument may carry an obligation to pay interest that cannot permanently be reduced or waived (unlike dividends on ordinary shareholders' equity), it should allow service obligations to be deferred (as with cumulative preference shares) where the profitability of the bank would not support payment.¹²⁴

Although these requirements ensured that hybrid instruments had some equity-like characteristics, hybrids remained inferior substitutes for Common Equity Tier 1 because they were not sufficiently loss-absorbent.¹²⁵ This is largely due to one debt-like characteristic of hybrid instruments (which was common to most hybrid instruments issued prior to the financial crisis): the amounts due thereunder remained constant even in the face of declining values of the very assets they financed.¹²⁶ Therefore, just as with more traditional debt instruments, reductions in asset values had the potential to trigger destructive deleveraging behavior.¹²⁷ Furthermore, the debt overhang problem applied to these hybrid instruments in the same way it applied to debt,¹²⁸ albeit to a lesser degree, because holders of hybrid instruments had more senior claims on the assets of the bank than holders of Common Equity Tier 1.¹²⁹ Although investors in hybrids were typically subordinated to other debt creditors,¹³⁰ this fact provided little comfort to new investors in shares: new investors feared that any new capital they invested would be wiped out in satisfying the more senior claims of the hybrid

124. BASEL I, *supra* note 8, at 16.

125. Baltali & Tanega, *supra* note 123, at 24.

126. Admati et al., *supra* note 18, at 10–11. The BCBS has sought to address this issue in Basel III by requiring that hybrid instruments include provisions that allow them to be written-down, or converted into common equity. These new requirements are discussed *infra*, Part II.B.

127. *See supra* notes 79–82 and accompanying text.

128. *See supra* note 76 and accompanying text.

129. Baltali & Tanega, *supra* note 123, at 27–28.

130. *See id.*; Admati et al., *supra* note 18, at 10.

instrument holders.¹³¹ Accordingly, hybrid instruments impeded recapitalization in a way that Common Equity Tier 1 does not.

In addition, Common Equity Tier 1 is relatively transparent and simple to understand, at least when compared with more complex hybrid sources of funding.¹³² Other things being equal, market participants are more likely to have confidence in the solvency of a bank with a funding cushion made up of Common Equity Tier 1, as opposed to a funding cushion comprised of less predictable hybrid instruments.¹³³ This type of market confidence reduces the risk of runs on such bank's short-term funding, and thus reduces liquidity risk for the bank and makes it more stable.¹³⁴ In contrast, relying on complex and unpredictable hybrid instruments leaves more scope for uncertainty and panic—and this is not just a problem at the individual bank level. Hybrids also increase the amount of risk in the financial system as a whole: complex instruments may “creat[e] complications that increase the likelihood that [defaults] will occur and diminish the ability of investors and other market participants to anticipate and avoid these [defaults].”¹³⁵ In contrast, Common Equity Tier 1 is relatively simple and well-understood, and therefore is less likely to exacerbate systemic risk.¹³⁶

To make this hypothetical discussion of the inferiority of hybrid instruments more concrete, Part II.A looks in detail at the performance during the financial crisis of one particular hybrid instrument, the trust preferred security or “TruPS.”

131. See Hanson et al., *supra* note 30, at 9.

132. The IMF notes that the use of hybrids results in “increased complexity and opacity of financial arrangements.” INT’L MONETARY FUND, *supra* note 11, at 11.

133. Baltali & Tanega, *supra* note 123, at 20–21.

134. See *supra* notes 87–90 and accompanying text.

135. Steven L. Schwarcz, *Regulating Complexity In Financial Markets*, 87 WASH. U. L. REV. 211, 214 (2009). For a general discussion of the problems associated with introducing complex new financial products into an already complex financial system, see generally Allen, *supra* note 14.

136. “The purported purpose of whittling down the hybrid capital instruments and phasing out innovative hybrid instruments is to reduce the specter of future idiosyncratic and systemic crises in the international banking sector.” Baltali & Tanega, *supra* note 123, at 17; see also INT’L MONETARY FUND, *supra* note 11, at 11.

A. TRUST PREFERRED SHARES – A CAUTIONARY TALE

The TruPS is a type of hybrid security that became extremely popular in the United States in the years prior to the financial crisis.¹³⁷ TruPSs are created when a bank (or bank holding company (“BHC”))¹³⁸ issues subordinated debt to a trust company, and then that trust company issues preferred shares to investors.¹³⁹ Investors are paid dividends on the preferred shares, and those dividend payments are funded by the interest payments on the subordinated debt made by the bank or BHC to the trust.¹⁴⁰ Because TruPSs are structured so that the bank or BHC makes interest payments on the subordinated debt rather than paying dividends on the preferred shares, the return on these instruments is tax-deductible at the bank/BHC level, and so they are cheaper to issue than shares.¹⁴¹ Usually, TruPSs mature after 30 years, and allow for the suspension of dividend payments for up to five years during that 30-year period¹⁴²; while dividend payments to TruPSs holders are suspended, dividends continue to accumulate, and no dividend can be paid to any common shareholder of the bank or BHC while dividends are owed to TruPSs holders.¹⁴³ Because TruPSs allow for dividend accumulation, pursuant to the criteria set forth in Basel I and II, TruPSs could not be used to satisfy “core” capital requirements for banks.¹⁴⁴ Banks could use TruPSs as “supplementary” capital, however.¹⁴⁵ Furthermore, the United States Federal Reserve developed a special rule for BHCs in 1996, allowing BHCs (but *not* banks)¹⁴⁶ to satisfy up to 25% of their

137. Acharya et al., *supra* note 5, at 176; UNITED STATES GOV'T ACCOUNTABILITY OFFICE, REPORT TO CONGRESSIONAL COMMITTEES, DODD-FRANK ACT: HYBRID CAPITAL INSTRUMENTS AND SMALL INSTITUTION ACCESS TO CAPITAL 11–12 (2012), available at <http://www.gao.gov/assets/590/587759.pdf>.

138. A “bank holding company” is a company that owns or controls a bank in the United States. 12 U.S.C. § 1841(b) (2006).

139. UNITED STATES GOV'T ACCOUNTABILITY OFFICE, *supra* note 137, at 2 n.2.

140. *Id.* “The bank holding company has 100 percent ownership of the trust and usually guarantees the interest and principal payments of the TruPs.” Acharya et al., *supra* note 5, at 161.

141. Acharya et al., *supra* note 5, at 175.

142. UNITED STATES GOV'T ACCOUNTABILITY OFFICE, *supra* note 137, at 11–12.

143. *Id.* at 24.

144. Basel I provides that “cumulative preferred stock” does not qualify as “Tier 1” or “core” capital under the Basel I standards. BASEL I, *supra* note 8, at 3.

145. See *supra* note 39 and accompanying text.

146. UNITED STATES GOV'T ACCOUNTABILITY OFFICE, *supra* note 137, at 2.

“core” capital requirement with TruPSs,¹⁴⁷ so long as they “provide[d] for a minimum five-year consecutive deferral period on distributions to preferred shareholders . . . [and were] subordinated to all subordinated debt and have the longest feasible maturity.”¹⁴⁸

Even though TruPSs can be quite expensive to implement,¹⁴⁹ they were cheaper than issuing common shares,¹⁵⁰ and the combination of regulatory endorsement and cheaper cost led to rapid growth in the United States TruPSs market from 1996 onwards, particularly amongst BHCs. By December of 2010, BHCs had outstanding over \$128 billion of TruPSs, representing 10% of all BHC Tier 1 capital.¹⁵¹ In hindsight, however, the inferiority of TruPSs to Common Equity Tier 1 is clear, and the popularity TruPSs enjoyed as regulatory capital was problematic. TruPSs entail a contractual obligation to repay the full principal amount after a fixed term (usually 30 years), and also include a contractual entitlement to dividends. While payment of dividends can be suspended for up to five years, they will accumulate in the interim.¹⁵² Holders of TruPSs therefore have a fixed claim on the assets of the issuing bank, so TruPSs do not absorb losses as smoothly as Common Equity Tier 1 (holders of common equity have no fixed claim to any repayment).¹⁵³ Because holders of TruPSs have claims on the issuing bank that are senior to those of the bank’s common shareholders (and because suspension of dividend payments on TruPSs also required suspension of dividend payments on common shares), TruPSs also

147. Acharya et al., *supra* note 5, at 175. The concept of “bank holding company” regulation is a uniquely American construct. Saule T. Omarova & Margaret E. Tahyar, *That Which We Call a Bank: Revisiting the History of Bank Holding Company Regulation in the United States*, 31 REV. BANKING & FIN. L. 113, 114 (2011). As such, the BCBS does not expressly address bank holding companies in its standards, but the United States opted to implement the majority of the Basel I, II and III standards for bank holding companies as well as banks: one notable deviation from these standards was to allow BHCs to count TruPSs towards their core regulatory capital requirements. UNITED STATES GOV’T ACCOUNTABILITY OFFICE, *supra* note 137, at 7.

148. Press Release, Federal Reserve, Board Approval of the Use of Certain Cumulative Preferred Stock Instruments in Tier 1 Capital for Bank Holding Companies (Oct. 21, 1996), available at <http://www.federalreserve.gov/boarddocs/press/bcreg/1996/19961021/default.htm>.

149. Acharya et al., *supra* note 5, at 175.

150. *Id.* at 176.

151. UNITED STATES GOV’T ACCOUNTABILITY OFFICE, *supra* note 137, at 13.

152. *Id.* at 21–22.

153. See *supra* notes 68–73 and accompanying text.

perpetuate the debt overhang problem and make recapitalization more difficult.¹⁵⁴

In addition to being inferior from a loss-absorbency and recapitalization perspective, TruPSs provide a good illustration of the unnecessary complexity and uncertainty that can be created when hybrid debt-equity instruments are developed to arbitrage regulatory capital requirements. For example, the dividend suspension feature was included in TruPSs solely to ensure that they could be counted as regulatory capital.¹⁵⁵ This suspension feature would make the instruments more “equity-like,” because it would mean that TruPS holders had no right to fixed payment from the issuer during the suspension period (instruments are more loss-absorbent when they don’t entitle the holder to a fixed payment).¹⁵⁶ However, contractual mechanisms in hybrid instruments do not always work as envisaged. During the financial crisis, many TruPS issuers did not exercise their contractual right to suspend dividend payments, because of the fear that the suspension would be viewed as a “red flag” by the market, and induce short-selling that would reduce the price of the issuer’s common stock and otherwise make funding in the capital markets more difficult.¹⁵⁷ Where dividends were not suspended, the loss-absorbency promise of TruPSs was not realized. Many other TruPS issuers *did* suspend dividend payments, however,¹⁵⁸ which meant that the instruments operated inconsistently in the market, generating uncertainty amongst current and potential investors.

Finally, because TruPSs were considered cheaper than common shares, and because the BCBS (and particularly in the case of BHCs, the Federal Reserve) had given these instruments their imprimatur,¹⁵⁹ many smaller banks and BHCs sought a way to enter the TruPS market. However, the implementation costs seemed prohibitive for many smaller

154. UNITED STATES GOV’T ACCOUNTABILITY OFFICE, *supra* note 137, at 24. See *supra* note 84 and accompanying text for further discussion of the debt overhang problem.

155. Press Release, Federal Reserve, *supra* note 148.

156. INDEPENDENT COMM’N ON BANKING, *supra* note 73, at 86.

157. UNITED STATES GOV’T ACCOUNTABILITY OFFICE, *supra* note 137, at 23.

158. “As of February 2010, nearly 270 U.S. small banks had deferred interest payments on their trust preferred securities.” Acharya et al., *supra* note 5, at 177.

159. “[L]egal and regulatory regimes did not discourage, limit or prohibit excessive hybridization but rather provided an imprimatur for the issuance and trade of hybrid capital structures to the detriment of the entire global banking system.” Baltali & Tanega, *supra* note 123, at 4.

institutions.¹⁶⁰ The solution to this problem was to add another layer of complexity to the financial system by pooling and securitizing the TruPSs of smaller institutions, creating collateralized debt obligations (“CDOs”).¹⁶¹ This worked well for a time, but as the market for CDOs dried up during the financial crisis, smaller BHCs could no longer sell their TruPSs and were deprived of a source of capital on which they had come to rely. Without this source of capital, many institutions found themselves in financial difficulty, and would have benefitted from the ability to renegotiate the terms of the TruPSs with investors, or to offer an exchange of TruPSs for common shares.¹⁶² Unfortunately, because so many TruPSs were pooled and securitized, it was difficult for individual TruPS issuers to “identify and gain approval for recapitalization transactions from the ultimate . . . investors.”¹⁶³ The final result was that a sizable number of smaller BHCs defaulted on their TruPSs payment obligations¹⁶⁴ (and many others still have these instruments on their books, impeding recapitalization).¹⁶⁵

The inadequacy of TruPSs as loss-absorbent capital affected all institutions. The funding difficulties experienced by institutions that had pooled their TruPSs primarily affected smaller BHCs. Fortunately, because systemically important financial institutions were not greatly affected, the consequences of TruPSs’ complexities did not really reverberate around the financial system. Nonetheless, the experience with TruPSs illustrates that untested hybrid instruments often do not react as expected during crisis situations. Because of the problems associated with TruPSs, they are now being phased out of the regulatory capital regime in the United States, but this transition will be complicated and time consuming.¹⁶⁶ TruPSs should therefore serve as a

160. Acharya et al., *supra* note 5, at 176.

161. *Id.*

162. UNITED STATES GOV’T ACCOUNTABILITY OFFICE, *supra* note 137, at 25.

163. *Id.*

164. “According to a leading credit rating agency, of the 605 banking institutions in pooled trust preferred securities that have deferred dividends since January 1, 2007, some . . . 29 percent have defaulted . . .” *Id.* at 23.

165. Acharya et al., *supra* note 5, at 177.

166. Acharya et al. describe the transitional arrangements as follows: “[Dodd-Frank] gives banks with more than \$100 billion in capital up to five years to phase out these securities and up to 10 years for institutions with capital between \$15 billion and \$100 billion. As a compromise, the amendment exempts small banks with capital less than \$15 billion and allows them to continue to treat existing TruPSs on the balance sheet as Tier 1 capital. . . . Moody’s Investors Service estimates that in total nearly \$118 billion

cautionary tale, and regulators should be wary of endorsing complicated and untested instruments by allowing them to count towards a bank's (or a BHC's) regulatory capital requirements.

B. COCOS: THE NEXT GENERATION OF HYBRIDS

Because of the poor performance of TruPSs and other hybrid instruments during the financial crisis, such instruments came under scrutiny by the BCBS as it developed Basel III.¹⁶⁷ The result is that Basel III requires banks to satisfy much more of their regulatory capital requirements with Common Equity Tier 1, and phases out the use of some hybrid instruments.¹⁶⁸ However, Basel III still allows some hybrid instruments to be counted towards regulatory capital¹⁶⁹ so long as they can be written-down or converted into common shares¹⁷⁰ (the BCBS has determined that such features will make the hybrid instruments more loss-absorbent).¹⁷¹ As such, Basel III does not reject hybrid instruments

of TruPSs will be disqualified from Tier 1 treatment across all bank holding companies." Acharya et al., *supra* note 5, at 161–62. "[M]any of [the five-year dividend suspension periods] will expire around the same time as banks are supposed to be phasing out trust-preferred securities under Basel III. The timing leaves those banks a little more than a year to earn enough to start winding down their reliance on the securities. Some banks that issued trust-preferred securities may have to sell or file for bankruptcy protection if they are unable to find another solution." Rachel Witkowski, *Pressure Mounts for Banks to Unload Trust-Preferred Securities*, AM. BANKER, Aug. 22, 2012, available at http://www.americanbanker.com/issues/177_163/pressure-mounts-for-banks-to-unload-trups-1052053-1.html.

167. Hybrids also came under scrutiny at the national level in the United States, with section 171 of Dodd-Frank effectively prohibiting bank holding companies from satisfying their Tier 1 regulatory capital requirements with TruPSs. Furthermore, section 174 of Dodd-Frank required the GAO to carry out a study of the use of hybrid instruments to satisfy regulatory capital requirements for bank holding companies. The results of this study were set out in UNITED STATES GOV'T ACCOUNTABILITY OFFICE, *supra* note 137.

168. "Innovative hybrid capital instruments with an incentive to redeem through features such as step-up clauses, currently limited to 15% of the Tier 1 capital base, will be phased out." BASEL III, *supra* note 10, at 2.

169. Under Basel III, banks can use hybrids to satisfy regulatory capital requirements in an amount equal to 3.5% of risk-weighted assets. *See supra* notes 48–51 and accompanying text for further discussion of quantitative capital requirements under Basel III.

170. Press Release, Bank for Int'l Settlements, *supra* note 21.

171. *Id.*

entirely; instead, it seeks to limit the quantity and improve the quality of hybrid regulatory capital.¹⁷²

In response to Basel III's new qualitative requirements for hybrid instruments, banks and national regulators have taken a keen interest in a new type of instrument known as a "contingent convertible bond" or "coco."¹⁷³ While there is no official definition of what constitutes a "coco,"¹⁷⁴ as generally conceived, a coco is a hybrid debt-equity instrument that starts its life as a debt instrument (like a bond) but will convert to common shares upon the occurrence of a "trigger event," thus providing the issuing bank with a fresh infusion of common shares.¹⁷⁵ This trigger event is the novel and distinguishing feature of a coco, and is intended to address the loss-absorbency problem posed by previous generations of hybrids: once the trigger event occurs, the instrument will automatically and irrevocably convert from debt into loss-absorbent common shares.¹⁷⁶ However, there is not yet a consensus about what should constitute a trigger event. Some prefer market-based triggers, such that sufficiently large decreases in the share price or increases in the CDS spread of the issuing bank would trigger conversion.¹⁷⁷ Others

172. *Id.*

173. The Swiss have been at the forefront of implementing national infrastructure for coco issuances. For further discussion of the Swiss treatment of cocos, see Allen, *supra* note 36, at 138–39; Kaal & Henkel, *supra* note 27, at 244–45. British and German authorities have also given serious thought to implementing national regimes for cocos. See Kaal & Henkel, *supra* note 27, at 243, 245–46. The U.S. has to date been more cautious about cocos, concluding that they should remain a matter for private sector experimentation for now. FINANCIAL STABILITY OVERSIGHT COUNCIL, *supra* note 26, at 3. To date, only Lloyds, Credit Suisse, Rabobank and Barclays have engaged in coco issuances, but other banks have shown interest in the instrument. See Allen, *supra* note 36, at 139–40. For example, Bank of America Merrill Lynch has also commented on investor demand for cocos. Matthew Attwood, *Basel Pops CoCo Market Hope*, REUTERS, June 27, 2011, <http://www.reuters.com/article/2011/06/27/us-coco-credit-ifr-idUSTRE75Q2BX20110627>. Regarding previous issuances, see Allen, *supra* note 36, at 139–40, and Kaal & Henkel, *supra* note 27, at 246.

174. Calomiris & Herring, *supra* note 63, at 34–37, have summarized in tabular form some of the varied design features proposed for cocos.

175. CEYLA PAZARBASIOGLU ET AL., INT'L MONETARY FUND, CONTINGENT CAPITAL: ECONOMIC RATIONALE AND DESIGN FEATURES 4 (2011), available at <http://www.imf.org/external/pubs/ft/sdn/2011/sdn1101.pdf>.

176. BASEL COMM. ON BANKING SUPERVISION, *supra* note 50, at 18.

177. See, e.g., Calomiris & Herring, *supra* note 63, at 17; PITT ET AL., *supra* note 121. Coffee and Kaal & Henkel support the use of market-based triggers. John C. Coffee, Jr., *Systemic Risk After Dodd-Frank: Contingent Capital and the Need For*

view these market-based triggers as inviting market manipulation.¹⁷⁸ Some prefer a trigger that is based on the issuing bank's regulatory capital ratio;¹⁷⁹ however, this is potentially subject to accounting manipulation by the issuing bank, and in any event can prove a lagging indicator of the bank's health.¹⁸⁰ Finally, some have expressed a preference for giving financial regulators discretion in determining whether a trigger event has occurred,¹⁸¹ but this type of trigger breeds uncertainty in the market and the risk of this type of conversion could prove impossible to price.¹⁸² Furthermore, some have expressed concerns regarding the reluctance of regulators to actually call a trigger event, for fear of sending a negative signal about the issuing bank to the market.¹⁸³

Much of the current academic discussion of cocos focuses on these trigger design issues.¹⁸⁴ However, as I have argued elsewhere, cocos are problematic notwithstanding the design of the trigger event, because they incentivize behavior that is likely to detrimentally impact confidence in, and thus the liquidity of, the issuing bank, potentially bringing about the failure of the very institution that the cocos were intended to recapitalize.¹⁸⁵ The thesis of my argument is that, at the time of purchase, buyers of cocos will tend to underestimate the risk of

Regulatory Strategies Beyond Oversight, 111 COLUM. L. REV. 795, 830–31 (2011); see also Kaal & Henkel, *supra* note 27, at 232.

178. “Price manipulation (via short-selling) and the self-fulfilling threat of equity dilution could inflict a confidence-induced downward spiral that eventually triggers conversion.” PAZARBASIOGLU ET AL., *supra* note 175, at 24.

179. The cocos issued by Lloyds in 2009 had a capital based trigger: they included a provision that the notes would convert into a fixed number of common equity shares if the ratio of Lloyd's core Tier 1 capital to risk-weighted assets were to fall below 5%. ASS'N FOR FIN. MKTS. IN EUROPE, PREVENTION AND CURE: SECURING FINANCIAL STABILITY AFTER THE CRISIS (2010).

180. Acharya et al., *supra* note 5, at 169; Calomiris & Herring, *supra* note 63, at 16.

181. Press Release, Bank for Int'l Settlements, *supra* note 21.

182. ASS'N FOR FIN. MKTS. IN EUROPE, *supra* note 179, at 48–49; PITT ET AL., *supra* note 121, at 13.

183. “[R]egulators and supervisors have shown time and again that they are hesitant to opine negatively about SIFIs in a way that will become public. Such forbearance leads to protracted delays in recognizing problems.” Calomiris & Herring, *supra* note 63, at 16.

184. Wulf A. Kaal, *Initial Reflections on the Possible Application of Contingent Capital in Corporate Governance*, 26 NOTRE DAME J.L. ETHICS & PUB. POL'Y 281, 287, 299–302 (2012).

185. Allen, *supra* note 36, at 128.

conversion into common shares¹⁸⁶ (both because of cognitive biases¹⁸⁷ and computer-based risk models that tend to underestimate the occurrence of low-probability events¹⁸⁸), and so the risk of conversion will not be properly reflected in the coco price. At a later date, if the trigger event and the accompanying automatic and irrevocable conversion into common shares suddenly do seem likely, this will spur a flurry of panic selling (both of the cocos themselves and of stock of the issuing bank), short selling of the issuing bank's stock, and purchases of credit default swaps that reference the issuing bank.¹⁸⁹ All of this activity (and its impact on stock prices and CDS spreads) is likely to damage confidence in the issuing bank,¹⁹⁰ and this damaged confidence is likely to manifest itself in runs on short-term funding – the issuing bank is thus liable to experience a liquidity crisis from which recapitalization from coco conversion may be unable to save it.¹⁹¹ While there is surprisingly little discussion in the literature as to how much recapitalization would be needed (and therefore, how much contingent capital would need to be issued and convert) to return a distressed bank to health, the IMF has cast some doubt on the view that a bank could *ever* hold enough convertible capital to forestall a liquidity crisis.¹⁹² As Joseph Sommer of the Federal Reserve Bank of New York

186. *Id.* at 157.

187. “Individuals tend to ignore low probability catastrophic events.” Henry T.C. Hu, *Misunderstood Derivatives: The Causes of Informational Failure and the Promise of Regulatory Incrementalism*, 102 YALE L.J. 1457, 1488 (1993).

188. For example, most financial institutions use some form of VaR, or value-at-risk, model to calculate how much they stand to lose on investments on any given day. However, the VaR model relies on historical data to calculate future risk – “VaR estimates future losses based on the assumption that the market will perform in the future as it performed in the past.” Kristin N. Johnson, *Addressing Gaps in the Dodd-Frank Act: Directors’ Risk Management Oversight Obligations*, 45 U. MICH. J.L. REFORM 55, 71 (2011). As such, VaR discounts low probability losses that are not reflected in historical data (what constitutes “low probability” varies from model to model, depending on the historical data inputted and the institution’s confidence level). For further discussion, see Peter Conti-Brown, *A Proposed Fat-Tail Risk Metric: Disclosures, Derivatives, and the Measurement of Financial Risk*, 87 WASH. U. L. REV. 1461, 1462–65 (2010).

189. Allen, *supra* note 36, at 158–60.

190. *Id.*

191. *Id.* at 162.

192. “[F]orestalling a liquidity crisis with convertible debt would require large amounts of such debt and may require extending the coverage of debt-equity

noted, “[b]alance-sheet capital isn’t too relevant if you’re suffering a massive run.”¹⁹³ The only option left open to the bank at this point would be to seek liquidity assistance from the central bank in its capacity as the “lender of last resort,”¹⁹⁴ invoking the very government intervention that cocos were designed to avoid.¹⁹⁵

The potential for cocos to trigger runs thus militates against any regulatory endorsement of these instruments: the harm that cocos can cause derives from their status as an indicator of the issuing bank’s health, so it is not enough to just reduce the percentage of regulatory capital that can be comprised of cocos—even a small number of cocos issued to raise regulatory capital can be problematic. And cocos don’t just pose risks to individual banks: there is a systemic risk dimension to these instruments as well.¹⁹⁶ The conversion of one bank’s cocos and their attendant loss in value may require any other banks that have invested in those cocos to start selling assets in order to deleverage.¹⁹⁷ Furthermore, to the extent that investor banks keep the converted shares of the coco issuer, they will find themselves residual claimants in the coco issuer (whereas before they were higher ranking debt-holders), increasing inter-bank exposure and interconnectedness.¹⁹⁸ Conversion of one bank’s cocos is also likely to make the markets skittish about cocos in general (even cocos that are issued by banks that seem to be stable), potentially encouraging panicked sell-offs of cocos that would

conversion to unsecured senior debt under the bail-in schemes.” PAZARBASIOGLU ET AL., *supra* note 175, at 16.

193. Email from Joseph Sommer, Counsel, Federal Reserve Bank of New York, to Patrick M. Parkinson, Deputy Research Director, Board of Governors of the Federal Reserve System et al. (July 13, 2008), Re: another option we should present re triparty?; FINANCIAL CRISIS INQUIRY COMM’N, *supra* note 89, at 324.

194. Central banks perform the role of lender of last resort by making loans to distressed banks which are secured by the bank’s assets, effectively creating a market for the bank’s assets when there is no public market for them. Thomas M. Humphrey, *Lender of Last Resort: What It Is, Whence It Came, and Why The Fed Isn’t It*, 30 CATO J. 333, 355 (2010).

195. Calomiris & Herring, *supra* note 63, at 26.

196. Systemic risk has been defined as “the risk that (i) an economic shock such as market or institutional failure triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility.” Schwarcz, *supra* note 90, at 204.

197. Charles A.E. Goodhart, *Are CoCos from Cloud Cuckoo-Land?*, VOX (June 10, 2010), <http://voxeu.org/index.php?q=node/5159>.

198. *See id.*

destroy their value.¹⁹⁹ Again, to the extent that other banks have invested in cocos and are seeing their value fall, this may necessitate destructive deleveraging by those other banks.²⁰⁰

Cocos thus seem inherently problematic from a systemic stability perspective. From the perspective of issuing banks, cocos' one redeeming feature seems to be the lower cost associated with cocos because of debt-like tax treatment.²⁰¹ Nonetheless, cocos continue to receive support from many academics and policymakers.²⁰² One strand of literature that has recently developed in support of cocos stresses the benefits they provide as a tool for governance, by incentivizing both existing shareholders and coco holders to improve discipline of coco issuers.²⁰³ The discussion below will demonstrate, however, that many of these governance benefits are overstated,²⁰⁴ and they do not justify the systemic risks posed by the instruments.

199. *Id.*

200. *See supra* notes 82–83 and accompanying text.

201. Acharya et al. comment that “bankers like it only if it is capital for regulatory purposes and debt for tax purposes” Acharya et al., *supra* note 5, at 168. It should be noted, though, that at this stage it is not certain whether all nations will treat cocos as debt for tax purposes. Switzerland has indicated that it will, which has likely been crucial to the development of cocos in that country. Elena Logutenkova & Klaus Wille, *UBS, Credit Suisse May Need to Boost Capital to 19%*, BLOOMBERG, Oct. 4, 2010, <http://www.bloomberg.com/news/2010-10-04/ubs-credit-suisse-must-boost-capital-to-meet-swiss-regulator-requirements.html>. The FSOC has indicated that, in the United States, cocos would not be tax-deductible: “There would be substantial challenges to characterizing [contingent capital] as debt for U.S. income tax purposes.” FINANCIAL STABILITY OVERSIGHT COUNCIL, *supra* note 26, at 17. In that case, U.S. banks would likely have little incentive to issue contingent capital. Acharya et al., *supra* note 5, at 168.

202. *See supra* notes 173–74 and accompanying text.

203. The BCBS briefly refers to the potential governance benefits of cocos and suggests that they might result in, for example, “the bank maintaining a cushion of common equity above the trigger level, a pre-emptive issuance of new equity to avoid conversion, or more prudent management of ‘tail-risks.’” BASEL COMM. ON BANKING SUPERVISION, *supra* note 50, at 18. For a more in-depth discussion of the governance benefits of cocos, see Coffee, *supra* note 177, at 795, Kaal & Henkel, *supra* note 27; and Calomiris & Herring, *supra* note 63.

204. Admati et al. share this skepticism of the governance benefits provided by cocos – they note: “We have seen no compelling argument that contingent capital that has a debt-like structure prior to conversion has a positive impact on governance problems sufficient to justify including it in capital regulation.” Admati et al., *supra* note 18, at 55.

i. Shareholder Discipline

Professor Coffee makes a persuasive argument that, prior to the financial crisis, “shareholder pressure led managers to take on higher leverage and accept greater risk in the boom years—with catastrophic consequences [. . .].”²⁰⁵ Proponents of the governance benefits of cocos (including Coffee) argue that the incentives of existing bank shareholders can be reoriented so that they resist highly-leveraged risk profiles,²⁰⁶ if those shareholders fear the dilution that will follow coco conversion.²⁰⁷ This begs a question: if shareholders were willing to push management for increased leverage and short-term profits prior to the financial crisis, even in the face of the potential failure of the firm (which would wipe out shareholder interests entirely), then why would the mere fear of dilution by coco conversion be enough to incentivize shareholders not to push for leverage in the future?

At least in the context of banks that are perceived as “too big to fail,” there is a plausible answer to this conundrum: shareholders in these banks do not truly expect to be wiped out, because they expect that such banks will be bailed out by the government.²⁰⁸ There is arguably less scope for government intervention in coco conversion (especially if the cocos are triggered by a more objective capital- or market-based mechanism),²⁰⁹ and therefore shareholders of “too big to fail” banks might fear conversion/dilution more than they do bank failure. However, it is wrong to say that cocos preclude government intervention entirely. Especially if the cocos are structured so that they are triggered at the discretion of the regulator, it is quite plausible that markets will expect forbearance from the government with respect to

205. Coffee, *supra* note 177, at 810–11.

206. *Id.* at 807, 828; Calomiris & Herring, *supra* note 63, at 13. The BCBS argues, in a similar vein, that shareholder governance benefits will accrue if “a sufficiently *high* number of new shares are created upon conversion to make the common shareholders suffer a loss from dilution.” BASEL COMM. ON BANKING SUPERVISION, *supra* note 50, at 18.

207. Kaal & Henkel propose a model that allows for a change of control following coco conversion, and argue that fear of loss of control will create similar salutary incentives for bank shareholders. Kaal & Henkel, *supra* note 27, at 264.

208. Calomiris & Herring, *supra* note 63, at 3. This expectation was generally honored (other than for shareholders in Lehman Brothers) during the Financial Crisis, and likely persists notwithstanding the innovations made by Dodd-Frank and other financial reforms around the world. *See* notes 103–07 and accompanying text for further discussion of this issue.

209. Calomiris & Herring, *supra* note 63, at 4.

conversion/dilution in the same way that they currently expect a bailout.²¹⁰ Furthermore, it is not outside the realm of possibility that even with capital- or market-based triggers, national governments could become so nervous about the systemic effects of the conversion of a particular bank's cocos²¹¹ that they would intervene to avoid conversion (or at least markets might calculate that governments might take such an approach).²¹² In any of these circumstances, shareholders would have no more incentive than they do now to agitate for more prudent leverage.

Assuming, however, that existing bank shareholders do fear dilution by way of coco conversion more than they fear the failure of the bank itself, the corporate governance literature suggests other reasons to be skeptical about the discipline that such shareholders might exert.²¹³ Most fundamentally, an expectation of this type of discipline is premised on the willingness and ability of shareholders to work together in pressuring management to generate stable profits over the longer-term. Shareholders would, with reasonable consistency, have to be content to forego short-term profits—which can be magnified by leverage—in favor of longer-term stability. This would only work if the bulk of shareholders were committed to holding the bank stock for reasonably long periods of time.²¹⁴ The data show, however, a trend in

210. If regulators believe that coco conversion will have a negative signaling effect about the issuing bank (which is quite likely), then they may drag their feet in ordering a conversion. See PAZARBASIOGLU ET AL., *supra* note 175, at 25. Coffee, *supra* note 177, at 806, notes that there is always a concern that “regulators, because of political or legal controversies, will fail to intervene.”

211. See *supra* notes 209–13 and accompanying text.

212. Such a “too big to convert” subsidy would therefore make cocos less costly than they should otherwise be, and thus more popular for banks to issue. This could potentially create an asset bubble. For further discussion of moral hazard issues relating to coco conversion, see Coffee, *supra* note 177, at 840–41.

213. A significant body of empirical literature calls into question the desirability of shareholder governance. For a survey of this literature, see Lynn A. Stout, *The Mythical Benefits of Shareholder Control*, 93 VA. L. REV. 789, 798–803 (2007). However, this Article will not address this literature: it proceeds on the assumption that shareholder governance can be beneficial, and focuses on questioning the *efficacy* of bank shareholder governance.

214. Shareholder short-termism persists, notwithstanding that many measures have been proposed to try and curb it. See, e.g., THE ASPEN INSTITUTE, *OVERCOMING SHORT-TERMISM: A CALL FOR A MORE RESPONSIBLE APPROACH TO INVESTMENT AND BUSINESS MANAGEMENT* (2009), available at http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/overcome_short_state0909_0.pdf.

the opposite direction: institutional shareholders in particular are holding shares for shorter periods of time.²¹⁵ More transient shareholders have greater incentives to agitate for short-term profits, even if the strategies employed to achieve such profits have the potential to destabilize the firm, and thus risk conversion/dilution, in the long run.²¹⁶

One might expect longer-term shareholders to have greater incentives to avoid conversion/dilution, but shareholder apathy has been well documented.²¹⁷ Bank shareholders often have a highly diversified pool of investments, and as such they may not be willing to invest their time in policing the management of one individual bank.²¹⁸ While it is true that apathetic long-term shareholders are less likely than transient shareholders to actively push for increased leverage, bank managers also have incentives to increase leverage,²¹⁹ and apathetic bank shareholders do little to check management behavior. Even where shareholder will is present, many shareholders lack the ability to assess notoriously complex and opaque bank balance sheets: it may be unreasonable to expect these shareholders to understand enough of the bank's risk profile to influence and discipline management.²²⁰ This is *a fortiori* the

215. Lynne L. Dallas, *Short-Termism, the Financial Crisis, and Corporate Governance*, 37 J. CORP. L. 265, 296–97 (2012).

216. *Id.* at 302–04.

217. See, e.g., Stout, *supra* note 213, at 792. Kaal also notes that cocos could create a false sense of security, thus dissuading monitoring efforts: “If the market in contingent capital securities should evolve with CCS designs that provide sufficient protections and guard against systemic risks and contagion, it seems theoretically possible that decision makers could rely on the design of CCS and neglect their role as monitors.” Kaal, *supra* note 184, at 310.

218. Fleischer, *supra* note 14, at 9. An additional argument has been made that there are few incentives for existing bank shareholders to agitate for the bank to be less leveraged, because by making the remaining debt safer, a reduction in leverage results in a transfer of value from the shareholders to the debt holders. Admati et al., *supra* note 84, at 41.

219. “If the corporation were financed mostly with equity, such executives would share in the upside if things go well, but they would also share in the downside if things go badly. If the corporation is financed mostly with debt, on the other hand, the managers’ upside potential is amplified, and their downside risk remains limited.” Fleischer, *supra* note 14, at 8. See generally Lucian A. Bebchuk & Holger Spamann, *Regulating Bankers’ Pay*, 98 GEO. L.J. 247 (2010).

220. “Evaluation of the creditworthiness of any bank requires analyses of its balance sheet, operations, management, competitors, and so on. Information on each of these elements is at best only partly disclosed to bank investors, and even in the absence of moral hazard problems, creditworthiness can vary over time from changes in ordinary business operations.” Gary Gorton & Andrew Metrick, *Regulating the Shadow Banking*

case when the risks that need to be disciplined are “tail” risks that will only really come to light in financial crises, and which, by definition, are hard to predict.²²¹

Expecting bank shareholders to impose discipline on bank management in ordinary times thus seems aspirational at best, even if the shareholders are distantly threatened by dilution of their shareholdings upon a coco conversion. However, as a crisis brews and coco conversion suddenly seems likely, shareholder apathy is likely to evaporate, and shareholders are likely to become much more motivated to sell their shares in the bank.²²² The difficulties inherent in accurately assessing the bank’s risk profile persist, though, and may even deepen in a crisis.²²³ As such, this type of selling is not really informed market discipline: instead, it is more of a panic, a reflection of herd behavior and rumors about the distress of the issuing bank,²²⁴ as well as a desire to get an “early-mover advantage” by selling stock before other shareholders do so.²²⁵ Widespread panicked sales by shareholders will depress the issuer’s stock price, potentially below any price that is a rational reflection of the risk profile of the issuer. Facing this kind of downward pressure on its stock price, the issuing bank may be incentivized to attempt to improve its risk profile by sharply restricting lending and selling its assets in a fire sale.²²⁶ indirectly, then, cocos have

System, BROOKINGS PAPERS ON ECON. ACTIVITY 261, 275 (2010). A recent survey by Barclays found that a majority of bank investors either do not understand or trust the risk-weights assigned to such bank’s assets. Haldane & Madouros, *supra* note 16, at 21.

221. See *supra* notes 187–88 and accompanying text. Acharya et al. are skeptical of the ability of cocos to address tail risks:

[B]anks can – as they have in the past – take bets on the tail risk of the economy

A property of taking on such tail risk is that the only outcomes possible are boom or bust, and the intermediate region of risk outcomes over which contingent capital might have some bite is essentially rendered rather unlikely or inconsequential. Such tail-risk seeking would likely have to be addressed through means other than pure reliance on a contingent capital requirement.

Acharya et al., *supra* note 5, at 166.

222. Allen, *supra* note 36, at 159.

223. Market discipline is likely to be particularly confused in a time of crisis. M. Todd Henderson & Frederick Tung, *Paying Bank Examiners for Performance*, 35 REG. 32, 36 (2012).

224. AKERLOF & SHILLER, *supra* note 100, at 55–56.

225. Brunnermeier, *supra* note 71, at 96.

226. BASEL COMM. ON BANKING SUPERVISION, *supra* note 50, at 20. At this stage, equity markets are likely to be inaccessible for the bank, so a fresh recapitalization will not be an option. Calomiris & Herring, *supra* note 63, at 15.

incentivized socially harmful deleveraging behaviors that are the very externalities that regulatory capital requirements were created to avoid.²²⁷

In sum, shareholder discipline of coco issuers is likely to be largely ineffective during normal times, but potentially destructive during crises. As such, the threat of dilution posed by cocos is unlikely to prompt any meaningful, socially beneficial improvement in shareholder governance of banks. The next Part will consider whether the creation of a new class of interests, cocoholders, will inspire any better governance.

ii. Cocoholder Discipline

At least prior to conversion, cocos are more debt-like than equity-like. The generally accepted view is that debtholders are superior to shareholders in terms of the discipline they exert on bank management.²²⁸ Extrapolating from this, prior to conversion, cocoholders should theoretically be more effective than shareholders in exerting discipline over bank management. However, many of the factors that impede shareholder governance of banks are also at work with respect to debtholders: the opacity of banks' operations, risk and balance sheet deters governance,²²⁹ as does the apathy inherent in any investor that holds a large group of diversified investments.²³⁰ Furthermore, there is an increasing trend towards the decoupling of debtholders' contractual rights from exposure to the debt issuer (for example, by purchasing a CDS that will make them whole in the event the debt issuer fails), which "weakens their incentives to assess and monitor debtors' repayment ability."²³¹ The experience of the financial crisis supports skepticism about debtholder governance living up to its theoretical promise; at least for banks, there seems to have been little by way of discipline from debtholders in the boom years leading up to the financial crisis.²³²

227. See *supra* notes 82–83 and accompanying text.

228. FRENCH ET AL., *supra* note 103, at 44.

229. Admati et al., *supra* note 18, at 28.

230. See *supra* note 217 and accompanying text.

231. Henry T.C. Hu & Bernard Black, *Debt, Equity, and Hybrid Decoupling: Governance and Systemic Risk Implications*, 14 EUR. FIN. MGMT. 663, 665 (2008).

232. Admati et al., *supra* note 18, at 34–35.

While the fear of conversion may render cocoholders somewhat more motivated than ordinary debtholders to discipline management,²³³ cocoholders are likely to underestimate the risk of conversion (which will only occur in low-probability, high-consequence tail events),²³⁴ and thus it is unlikely that cocoholders will exert pressure upon management until a tail event seems imminent.²³⁵ At this late stage, it is likely that pressure from the cocoholders will take the form of panicked sales of cocos and shorting of the coco issuer, rather than measured and informed discipline.²³⁶ If the cocos have a market-based trigger and market activity causes the issuing bank's share price to fall low enough (or conversely, CDS spread to rise high enough), then this will trigger conversion.²³⁷ Even if changes in stock prices or CDS spreads do not immediately reach the levels necessary for conversion (or if the cocos have regulator- or capital-based triggers instead of market-based triggers), these changes will be interpreted by other financial institutions as red flags, damaging confidence in the issuing bank. If market participants lack confidence in the issuing bank, they may withdraw or restrict such bank's access to short-term funding (such as that provided through the repurchase agreement market),²³⁸ and without such funding, a bank's decline is likely to be precipitous.²³⁹ Even if a bank could survive the beginning of such a liquidity run, that run would inspire further drops in the bank's stock prices, and corresponding increases in its CDS spreads.²⁴⁰ This could set off market-based triggers, or the loss

233. The BCBS notes that, depending on how conversion is structured, “[c]ontingent capital holders may have an extra incentive to monitor the risks taken by the issuing bank due to the potential loss of principal associated with the conversion.” BASEL COMM. ON BANKING SUPERVISION, *supra* note 50, at 18.

234. Allen, *supra* note 36, at 135–36, 157.

235. *Id.* at 157–58.

236. *Id.* at 158. It is also important to note that sales and shorting by cocoholders will not occur in a vacuum – shareholders in the bank and speculators will also engage in sales and shorting activity. *Id.* at 159–60.

237. This scenario has been referred to as a “death spiral”, whereby “the dilution of the existing stockholders’ claims that would occur in a conversion lowers the stock price, which leads to more dilution, which lowers the price even further.” FRENCH ET AL., *supra* note 103, at 56.

238. Allen, *supra* note 36, at 155–56.

239. If a financial institution does not have a sufficiently large and liquid capital cushion, a run on its short-term funding sources can render it insolvent and illiquid almost overnight. FINANCIAL CRISIS INQUIRY COMM’N, *supra* note 89, at 326.

240. Allen, *supra* note 36, at 162.

of liquidity could force the regulator to exercise any power it has to declare a trigger event, thereby bringing about conversion.²⁴¹

If conversion of the cocos does occur, one can argue that the cocos have implicitly failed to achieve their governance objectives: the specter of conversion should have encouraged sufficiently prudent management such that the cocos would never have converted.²⁴² Nonetheless, Coffee and Kaal and Henkel have proposed models for cocos that are structured to give governance a second chance, by creating new voting blocs post-conversion. Kaal and Henkel propose that cocos should be structured with two sequential triggers.²⁴³ assuming that both triggers are tripped, Kaal and Henkel's proposal would create a post-conversion voting bloc of shareholders with supermajority voting powers.²⁴⁴ Coffee's proposal would create a new voting bloc of preferred shareholders with interests aligned with debt holders, rather than common shareholders.²⁴⁵ Both of these newly-created voting blocs would be very motivated to press for more prudent management.²⁴⁶ However, motivation counts for little if the newly-created voting constituencies don't have enough time to pressure the management of the issuing bank to recapitalize, and management doesn't have enough time to respond.²⁴⁷ because coco conversion will only occur following a tail-event (and most likely

241. Because capital ratios are a lagging indicator of a bank's health, cocos with a capital-based trigger would probably not convert before the liquidity crisis brings down the issuing bank. Calomiris & Herring, *supra* note 63, at 5. For example, on March 16, 2008, news broke that Bear Stearns would be acquired by JPMorgan (supported by substantial government assistance) notwithstanding that "[a]t all times during the week of March 10 to 17, up to and including the time of its agreement to be acquired by JP Morgan, Bear Stearns had a capital cushion well above what is required." FINANCIAL CRISIS INQUIRY COMM'N, *supra* note 89, at 288.

242. Calomiris & Herring, *supra* note 63, at 12–13.

243. The first trigger would convert the coco into equity. The second trigger would only occur if the financial situation of the issuing bank did not improve after the capital infusion rendered by the occurrence of the first trigger. This second trigger would increase the voting rights of the former cocoholders (now equity holders). Kaal & Henkel, *supra* note 27, at 230–31.

244. Kaal & Henkel, *supra* note 27, at 231.

245. Coffee, *supra* note 177, at 806.

246. Calomiris & Herring, *supra* note 63, at 27.

247. "If the new preferred shareholders are to be given voting rights in the hope that this will alter corporate governance at the issuer and/or affect managerial preferences, such an issuance cannot come at the twelfth hour if it is to work." Coffee, *supra* note 177, at 831.

amidst a liquidity crisis), bank failure—or the need for government intervention—is likely to follow hard upon conversion.²⁴⁸

In a bid to address timing constraints, Coffee makes a novel proposal for incremental conversion of cocos, which would allow for earlier triggering and thus more time for discipline.²⁴⁹ Instead of waiting for a tail event to occur, Coffee’s proposal would allow for partial conversion of cocos even if there has been only a moderate stock price decline. While Coffee concedes that it would be extreme for *all* cocos to convert because of “a moderate stock price decline (which might occur for extrinsic reasons and later be reversed),”²⁵⁰ Coffee suggests that perhaps 25% of the cocos could convert upon a 25% drop in stock price (as measured from the stock price at the date of issuance).²⁵¹ Thereafter, a further 25% of cocos would convert upon a further 25% drop in stock price, and so on.²⁵² However, the marketability of cocos structured in such a way is questionable: if even a partial conversion were to occur after only a moderate drop in stock price, investors would likely require a prohibitive spread on cocos *ex ante* to compensate them for the risk of premature conversion (what the IMF terms “false positives”).²⁵³

Assuming, however, that cocos structured as per Coffee’s proposal would be marketable, it is worth putting the potential efficacy of these cocos to an (admittedly unscientific) test, by superimposing this hypothetical incremental conversion structure on the actual decline of Bear Stearns. If we hypothesize that Bear Stearns had issued cocos at its actual record high stock price of \$171.51 (hit on January 12, 2007),²⁵⁴ we see that no conversion would have occurred until the stock price fell below \$128.63 (being 75% of \$171.51), which occurred on July 26, 2007.²⁵⁵ On March 16, 2008, Bear Stearns had to be rescued by JPMorgan (with the backing of the United States government);²⁵⁶

248. Allen, *supra* note 36, at 128.

249. Coffee, *supra* note 177, at 807, 834–35.

250. *Id.* at 830.

251. *Id.*

252. *Id.*

253. PAZARBASIOGLU ET AL., *supra* note 175, at 24.

254. Daniel Burns, *12 Key Dates in the Demise of Bear Stearns*, REUTERS, Mar. 17, 2008, <http://blogs.reuters.com/from-reuterscom/2008/03/17/12-key-dates-in-the-demise-of-bear-stearns/>.

255. Company Report of Bear Stearns Cos., BLOOMBERG LAW (on file with author).

256. FINANCIAL CRISIS INQUIRY COMM’N, *supra* note 89, at 290.

Coffee's proposal would therefore have allowed seven-and-a-half months for a new post-conversion voting block to pressure Bear Stearns' management to recapitalize, and for management to respond. This seven-and-a-half month timeframe is a "best case scenario," given that it discounts the very real likelihood that conversion of Bear Stearns' hypothetical cocos would have inspired a liquidity crisis that increased the pace of Bear Stearns' decline,²⁵⁷ but even this best case scenario might not have provided enough time for recapitalization. For example, Lehman Brothers' first real financing problems surfaced in March of 2008,²⁵⁸ and from that time onwards Lehman faced significant pressure from regulators and markets to raise capital and otherwise deleverage. It did manage to make significant strides in improving its capital and liquidity positions,²⁵⁹ but unfortunately it was unable to improve enough to earn the confidence of the financial markets, and Lehman was forced to file for bankruptcy on September 15, 2008.²⁶⁰ Six months therefore proved to be an insufficient period of time to restructure Lehman's risk profile, so seven and a half months may similarly have been insufficient time for Bear Stearns to undergo its own risk profile restructuring (and if Bear Stearns had issued cocos when its stock was trading lower than its record high price of \$171.51, conversion would have come later and left even less time for recapitalization).

Looking at the examples of Bear Stearns and Lehman Brothers, it seems questionable whether even a staggered, early trigger system for coco conversion would allow time for converted cocoholders to have a meaningful impact on the governance of banks (it is also questionable whether there would be any market for cocos with this type of staggered trigger). It therefore seems that *any* voting bloc created post-conversion is likely to be ineffectual in saving an ailing bank, and if the governance benefits of cocos are illusory, cocos have little by way of redeeming features other than their cheaper cost for banks.²⁶¹ The BCBS and national governments should reject cocos, and other hybrid instruments, and require all regulatory capital to be comprised of Common Equity

257. See *supra* notes 185–91 and accompanying text.

258. Lehman's share price was relatively solid towards the end of 2007, but started to fall quite dramatically after the Bear Stearns acquisition was announced in March of 2008. After a brief improvement in April, it continued its downward slide through the summer of 2008. FINANCIAL CRISIS INQUIRY COMM'N, *supra* note 89, at 325–26.

259. *Id.*

260. *Id.* at 339.

261. Admati et al., *supra* note 18, at 53.

Tier 1.²⁶² To subdue bank resistance to this approach, the next Part considers ways of neutralizing banks' incentives to fund themselves with hybrid instruments and to arbitrage regulatory capital requirements more broadly.

III. FIXING TAX INCENTIVES

A. TAX BIASES AGAINST EQUITY

Tax codes subsidize corporate debt when they make interest payments on debt tax-deductible for a corporation, while equity returns (e.g., dividends paid on common shares) are not.²⁶³ Because most tax codes make interest expense tax-deductible at the corporate level, the only tax paid on interest is the tax paid by the holder of the debt (e.g., the bondholder). Dividends, being the equivalent return on equity, however, are taxed at the level of both the corporation and the equity holder (e.g., the shareholder).²⁶⁴ While tax codes are by no means uniform as between different countries, a tax structure that favors debt over equity to at least some degree is standard in most countries.²⁶⁵ This tax preference in favor of debt is not an inevitability, however, but rather a policy choice resting on an arbitrary foundation.²⁶⁶

262. Although some might fear that an increase in common equity holdings will circumscribe the ability of banks to extend credit, this fear is unfounded: as long as banks' total level of funding remains constant, they can continue to make the same amount of credit available (i.e., as far as banks' ability to lend goes, the debt-equity composition of this funding pool is irrelevant – they can issue more equity to allow them to lend more). Admati et al., *supra* note 18, at 43. Hanson et al. did not find sufficient empirical evidence to support any correlation between equity ratios and loan rates. Hanson et al., *supra* note 30, at 18.

263. Edgar, *supra* note 105, at 998–99; *see also* INT'L MONETARY FUND, *supra* note 11, at 5. The reasons for the different tax treatment of debt and equity are largely historical: they were “originally developed to address the problem of controlling shareholders financing their privately held corporations through debt to avoid higher taxes on dividends.” Benschalom, *supra* note 2, at 1246.

264. Daniel Shaviro, *The 2008 Financial Crisis: Implications for Tax Reform* 4–5 (NYU Center for Law, Econ. and Org., Working Paper No. 09-35, 2009), available at <http://ssrn.com/abstract=1442089>.

265. Edgar, *supra* note 105, at 998–1000. The IMF also refers to the “almost ubiquitous practice of allowing interest payments, but not the cost of equity finance, as a deduction against CIT.” INT'L MONETARY FUND, *supra* note 11, at 5.

266. The reasons for the different tax treatment of debt and equity are largely historical: they were “originally developed to address the problem of controlling

When a corporation can deduct interest payments on its debt, the managers of that corporation are incentivized to continue to fund the corporation with debt, rather than equity, up to the point where the internalized costs of corporate instability resulting from leverage outweigh the benefits associated with the cheaper funding (or the point where debt funding ceases to be a cheaper option, because the corporation is charged a higher interest rate due to its perceived riskiness).²⁶⁷ In the context of banks, this equilibrium is likely to be reached only after significant amounts of leverage have been incurred, as many of the costs of instability can be externalized to society at large.²⁶⁸ In particular, where the bank in question is perceived as “too big to fail” and therefore implicitly supported by a government safety net, debt costs will not increase in a way that truly reflects the risk associated with increased reliance on debt funding, so there is little incentive to restrain leverage.²⁶⁹ Accordingly, regulatory capital requirements have been put in place with respect to banks, forcing them to fund themselves with more Common Equity Tier 1 and thus limit their leverage.²⁷⁰ But there remains an underlying tension between regulatory capital requirements, which require banks to rely on equity funding, and tax incentives, which discourage banks from funding themselves with equity. If we can neutralize the tax incentives that encourage banks to favor debt, then that should be sufficient to stop banks from seeking to arbitrage the numerator of the regulatory capital equation by developing new and complicated debt-equity hybrids.²⁷¹ Addressing tax incentives for debt, if done carefully, can also significantly lessen incentives to arbitrage the assessment of a bank’s “risk-weighted assets” (the denominator of the regulatory capital

shareholders financing their privately held corporations through debt to avoid higher taxes on dividends.” Benshalom, *supra* note 2, at 1246. *See also* Fatica et al., *supra* note 120, at 6.

267. Edgar, *supra* note 105, at 1001.

268.

[W]hen firms borrow, they are likely to internalize the expected bankruptcy costs they themselves incur but not the impact of their own failure and default on others (effects that are not present in the use of equity finance). These externalities are likely to be especially large for financial institutions, given their systemic importance.

INT’L MONETARY FUND, *supra* note 11, at 12. *See also* Edgar, *supra* note 105, at 1001.

269. Admati et al., *supra* note 84, at i.

270. *See supra* Part I.A.

271. *See supra* notes 137–38 and accompanying text.

equation) by way of accounting manipulation and favorable risk modeling.²⁷²

B. POTENTIAL SOLUTIONS

This Part considers proposals that have been made in tax literature to address corporate debt bias generally, and it narrows the application of those proposals to banks and their regulatory capital.²⁷³ First, however, some caveats: one might argue that, at least with respect to banks that are the beneficiaries of “too big to fail” implicit subsidies, it is insufficient to neutralize tax incentives for debt, and tax incentives should go so far as to favor equity over debt.²⁷⁴ In addition, a number of Pigouvian tax-based solutions have been proposed to address the externalities imposed on society by the activities of large, interconnected financial institutions, including taxes on the activities, transactions, and profits of such institutions, as well as the bonuses they pay.²⁷⁵ This Article does not consider any of these proposals in any depth. In addition, this Article does not attempt to fix corporate debt bias generally, nor does it advocate for an overhaul of the broader tax system: the fiscal costs of making *all* corporate equity tax-deductible would be far in excess of what is proposed by this Article. Instead, this Article has the limited goal of minimizing bank incentives to arbitrage

272. It should be noted that this type of arbitrage does not entail the same sunk costs as developing and marketing new hybrid products, and so persistent government subsidies for debt will always encourage banks to understate their risk-weighted assets to some degree, even if the tax incentives are addressed.

273. Fleischer also advocates reform of debt bias that is targeted only at financial institutions. He argues that this is justified on the grounds that financial institutions “are the source of most of the externalized social costs of excessive leverage.” Fleischer, *supra* note 14, at 11.

274. See, e.g., Edgar, *supra* note 105, at 998. There is by no means universal support for this type of policy – it has been rejected outright by the IMF: “Some would argue, for example, that non-tax factors create an inherent tendency toward excessive leverage and that the tax system ought therefore to actively disfavor debt. But there is no consensus on the precise nature and magnitude of such inefficiencies, or on the relative merits of tax and regulatory responses in addressing them. Neutrality of tax arrangements remains a core benchmark for policy evaluation and design in this as in other areas of tax design, and provides useful organizing framework for the discussion.” INT’L MONETARY FUND, *supra* note 11, at 4.

275. Shackelford et al., *supra* note 9, at 796.

regulatory capital requirements.²⁷⁶ Finally, this Article does not consider how to design a transition from the current regime:²⁷⁷ this remains a project for future research. Having now established the scope of the endeavor, we turn to the tax literature on corporate debt bias.

Although national tax codes differ around the world, they share some similarities. One such similarity is that, generally, the return on equity is taxed twice, at the corporate and the investor level, whereas interest on debt is only taxed at the investor level.²⁷⁸ This creates a pervading tax bias towards debt. Broadly speaking, there are two ways to help neutralize this bias. One is to make debt less attractive; the alternative is to make equity more attractive.²⁷⁹ Most obviously, debt could be made less attractive by abolishing corporate deductions for interest (i.e., taxing debt at both the corporate and the investor level),²⁸⁰ but the tax literature also suggests several more nuanced methods of neutralizing bias toward debt. One such method is the implementation of a comprehensive business income tax (“CBIT”) that eliminates the deductibility of debt at the corporate level, but provides for no taxation of either debt or equity at the investor level.²⁸¹ Another such proposal is for the introduction of “thin capitalization” rules, whereby progressive limits are put on the amount of interest that can be deducted by corporations in certain circumstances.²⁸² In the banking context, several authors have suggested reducing the availability of interest deductibility

276. Fundamental change in tax structures may provoke instability and financial distress. INT’L MONETARY FUND, *supra* note 11, at 16. However, the hope is that the introduction of the more limited reform proposed in this Article would not prove destabilizing.

277. “Gaps between announcement and implementation (or even the expectation of tax changes) can distort financial decisions.” *Id.* at 32. For example, if a nation agreed to implement an ACET1, the banks there might be reluctant to raise capital in the interim period between the announcement and the implementation of the policy. A transitional plan should be formulated to minimize undercapitalization during such interim period.

278. Shaviro, *supra* note 264, at 7. In the United States, the relevant provisions are 26 I.R.C. §§ 163, 311(a) (2006).

279. INT’L MONETARY FUND, *supra* note 11, at 13–14; RUUD A. DE MOOIJ, INT’L MONETARY FUND, TAX BIASES TO DEBT FINANCE: ASSESSING THE PROBLEM, FINDING SOLUTIONS 14 (2011), available at <http://www.imf.org/external/pubs/ft/sdn/2011/sdn1111.pdf>.

280. Edgar, *supra* note 105, at 1003.

281. See, e.g., Shaviro, *supra* note 264, at 8; INT’L MONETARY FUND, *supra* note 11, at 13; DE MOOIJ, *supra* note 279, at 15.

282. Shaviro, *supra* note 264, at 11; INT’L MONETARY FUND, *supra* note 11, at 13; DE MOOIJ, *supra* note 279, at 14.

as a bank's leverage increases:²⁸³ for example, Fleischer has suggested the "elimin[ation of] the deduction of interest by financial institutions to the extent the debt/equity ratio of the institution exceeds 2 to 1."²⁸⁴

The alternative to penalizing debt is to seek to neutralize debt bias by incentivizing equity: proposals of this type can be targeted at either the corporate or the shareholder level. For example, a dividend exemption scheme exempts shareholders from paying tax on dividends while the corporation continues to be liable for taxes on its equity.²⁸⁵ However, this does not respond completely to existing debt bias (which exempts debt at the corporate level, rather than at the investor level), so a dividend imputation scheme might be more appropriate—this would give shareholders a credit for tax paid on equity at the corporate level so that equity is effectively taxed at the shareholder level, matching debt taxation.²⁸⁶ Alternatively, an Allowance for Corporate Equity ("ACE") allows for a deduction on equity at the corporate level that approximates corporate deductibility of interest.²⁸⁷

The following (highly stylized) examples illustrate the differences between these proposals.²⁸⁸ Assume that in Country X, corporate income (including income that is distributed to shareholders by means of dividends) is taxable at a rate of 20%, but interest payments made to service corporate debt are tax deductible. Individual investors' income is taxed at a rate of 30%, notwithstanding the source of that income. The following scenarios show how tax reform would impact Company C and Investor I, who are resident in Country X.

Scenario 1: Abolishing Corporate Deductions for Interest

Company C's income would be taxable at a rate of 20%: it is irrelevant whether that income is contributed to shareholders as

283. See, e.g., Shaviro, *supra* note 264, at 11; Fleischer, *supra* note 14, at 4.

284. Fleischer, *supra* note 14, at 4. Fleischer further notes, "[t]he goal of such a tax is not to punish banks, but rather to remove the tax incentive to increase leverage beyond the ratio that would arise in a world without taxes." *Id.* at 4.

285. See, e.g., Shaviro, *supra* note 264, at 7.

286. See, e.g., *id.* at 7–8.

287. See, e.g., *id.* at 9; INT'L MONETARY FUND, *supra* note 11, at 14; DE MOOIJ, *supra* note 279, at 16–19.

288. These examples are highly simplified, ignoring that many countries have progressive tax rates and treat investor income differently depending on its source. The examples also ignore that if reform were implemented, rates would most likely be adjusted as part of the reform to neutralize the revenue impact of the change.

dividends or used to service debt obligations. Investor I would pay 30% on all income: it is irrelevant whether that income derives from an investment in equity or debt.

Scenario 2: Introduction of CBIT

Company C's income would be taxable at a rate of 20%: it is irrelevant whether that income is contributed to shareholders as dividends or used to service debt obligations. Investor I would not pay any tax on income from its investments in equity or debt.

Scenario 3: Introduction of Thin Capitalization Rules

Company C's income would be taxable at a rate of 20%. To the extent that Company C maintained a ratio of debt to equity below a certain level, income used to service debt obligations would be tax deductible. Once the ratio of Company C's debt to equity exceeded the stipulated level, this tax deductibility would be progressively eliminated. Investor I would pay 30% on all income: it is irrelevant whether that income derives from an investment in equity or debt.

Scenario 4: Introduction of Dividend Exemption Scheme

Company C's income would be taxable at a rate of 20%, but income used to service debt obligations would be tax deductible. Investor I would not pay any tax on income from its investments in equity, but would pay 30% on income from their investments in debt.

Scenario 5: Introduction of Dividend Imputation Scheme

Company C's income would be taxable at a rate of 20%, but income used to service debt obligations would be tax deductible. Investor I would receive a credit for the tax already paid by Company C, and so would pay only 10% on income from its investments in equity. Investor I would continue to pay 30% on income from their investments in debt.

Scenario 6: Introduction of ACE

Company C's income would be tax deductible if it is either used to service debt obligations or contributed to shareholders as dividends. Investor I would pay 30% on income from its investments in both equity and debt.

The remainder of this Part will consider the desirability and feasibility of narrowly applying the foregoing proposals for the targeted

purpose of addressing banks' incentives to arbitrage regulatory capital requirements.

The simplest way to discourage banks from using hybrid instruments to satisfy regulatory capital requirements would be to end tax-deductibility for such hybrids, effectively saying that all regulatory capital must be taxed at the same rate as Common Equity Tier 1. However, even assuming that the political difficulties inherent in effecting such a change could be overcome,²⁸⁹ this would raise the cost of regulatory capital for banks and thus intensify the already strong incentives that banks have to understate their risk-weighted assets (the denominator of the regulatory capital ratio) in order to hold less capital.²⁹⁰ The same concerns arise in the context of thin capitalization rules: assume, for example, that a rule was introduced that provided that the tax-deductibility of a bank's hybrid instruments would be progressively eliminated as the ratio of the bank's hybrid instruments to Common Equity Tier 1 increased. This would succeed in making hybrids less attractive to banks, but it would also make regulatory capital more expensive. This type of thin capitalization rule would thus exacerbate incentives to arbitrage the calculation of risk-weighted assets, and the more complicated nature of progressive thin capitalization rules (as opposed to a more clear-cut abolition of tax-deductibility for hybrids) would allow greater scope for exploitation.²⁹¹

The remaining proposals for neutralizing debt bias are less likely to encourage banks to underreport their risk-weighted assets. However, three of these (the CBIT, dividend imputation, and dividend exemption schemes) are non-starters because of the size and importance of tax-exempt and foreign investors as a market for bank capital.²⁹² Looking

289. Eisenger colorfully describes the resistance that would accompany any attempt to abolish corporate debt deductibility generally, noting that “[r]educing the deductibility would be elegant but generate screams of bloody murder from corporate America.” Jesse Eisinger, *Distortion in Tax Code Makes Debt More Attractive to Banks*, N.Y. TIMES, Sept. 19, 2012, <http://dealbook.nytimes.com/2012/09/19/distortion-in-tax-code-makes-debt-more-attractive-to-banks/?ref=business>.

290. Calomiris & Herring, *supra* note 63, at 2.

291. Complicated tax rules allow greater scope for arbitrage activity. See Fleischer, *supra* note 14, at 5.

292. The IMF has estimated that tax-exempt investors hold 40%, and non-residents hold 30% of all equity issued in the United Kingdom. For the United States, the IMF suggests that approximately 50% of equities are held by tax-exempt investors. INT'L MONETARY FUND, *supra* note 11, at 8.

first at the CBIT, we could tailor this for regulatory capital purposes by charging banks a tax on any hybrid instrument used to satisfy regulatory capital requirements: the rate of taxation would be equal to the amount the bank is charged on its Common Equity Tier 1. Then, because CBIT requires no tax payment at the investor level,²⁹³ tax credits would need to be given at the investor level for the compensatory tax paid by the bank on its hybrid instruments, as well as the tax paid by the bank on its Common Equity Tier 1. However, tax-exempt and foreign investors would not be able to take advantage of these investor-level tax credits, and so a CBIT scheme would give them no greater incentive to invest in Common Equity Tier 1. Furthermore, these investors would start to charge more for hybrid capital; while they would continue to pay no tax themselves, they would be forced to absorb corporate-level tax on hybrids for the first time.²⁹⁴ Thus, as far as tax-exempt and foreign investors are concerned, there would be no difference between a CBIT scheme like this, and a scheme that merely ended tax-deductibility of hybrid instruments.

If we were to design a dividend imputation scheme for Common Equity Tier 1, then both the bank and its shareholders would still pay taxes on the capital, but shareholders would be given a credit for the tax already paid by the bank.²⁹⁵ If all bank shareholders were in a position to take advantage of these tax credits, then the scheme would ensure that equity would only be taxed at the rate that applies to investors, just as with hybrid instruments.²⁹⁶ However, tax-exempt and foreign investors cannot use these tax credits, and so they would still absorb corporate-level tax on Common Equity Tier 1 while not being required to bear any corporate-level tax on hybrids: the tax bias would persist for these investors.²⁹⁷

293. Shaviro, *supra* note 264, at 8; INT'L MONETARY FUND, *supra* note 11, at 13; DE MOOIJ, *supra* note 279, at 15.

294. Edgar, *supra* note 105, at 1003.

295. The purpose of structuring the dividend imputation scheme in this way is to ensure the total tax collected on equity approximates what would have been collected if only the shareholder had been taxed. Shaviro gives a helpful example that illustrates how a dividend imputation scheme works: “[S]uppose the corporate rate was 25 percent, the shareholder rate was 35 percent, and that a given shareholder received a € 75 dividend (€ 100 with the gross-up). For tax purposes, the shareholder would have € 100 of income and a € 25 tax credit, and therefore would owe a further € 10 of tax.” Shaviro, *supra* note 264, at 7.

296. Edgar, *supra* note 105, at 1004.

297. *Id.* at 1005, 1010–11.

Finally, a dividend exemption scheme would render return on Common Equity Tier 1 taxable at the bank level but not at the investor level, whereas the return on hybrids would be the opposite: taxable at the investor level but not at the bank level. While exempting dividends from tax would be attractive for local investors, tax-exempt and foreign investors never paid any tax on dividends in the first place. A dividend exemption scheme would therefore not mark any change from the status quo for these investors: just as before, no corporate-level tax would be factored into the interest payments that these investors receive, but corporate-level tax would be factored into dividend payments.²⁹⁸ Therefore, all other things being equal, tax-exempt and foreign investors would still charge less for hybrids than for Common Equity Tier 1.

In sum, to the extent that banks are raising capital from the large and important tax-exempt and foreign investor bloc, no CBIT, dividend imputation, or dividend exemption scheme would reorient existing bank incentives to satisfy regulatory capital requirements with hybrid instruments. The efficacy of an Allowance for Common Equity Tier 1, or “ACET1,” however, is not undermined by the prominence of tax-exempt or foreign investors in the capital markets. An ACET1 would allow for a bank-level deduction on Common Equity Tier 1 expense,²⁹⁹ which would lower the bank’s cost of equity; this lower cost would then be passed on to *all* investors (including tax-exempt and foreign investors), rendering Common Equity Tier 1 a much more attractive funding source for banks. Furthermore, because the ACET1 ensures that Common Equity Tier 1 and debt funding are taxed in the same way, it reduces incentives for banks to understate their risk-weighted assets and deliberately hold insufficient capital.

As such, the ACET1 is a relatively simple and elegant alternative to accommodating hybrids within the regulatory capital framework. However, the introduction of this ACET1 does not obviate the need for regulatory capital requirements: the persistence of government subsidies for debt still provides some incentive for banks to be overly-

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Tax-exempt investors—pension funds, charitable foundations and, in many cases, sovereign wealth funds—clearly prefer debt finance: for them indeed there is a clear arbitrage gain in lending to tax-paying corporations and taking the interest untaxed. In addition, for non-resident investors, not liable to domestic personal taxes, the deductibility of debt finance is critical.

INT’L MONETARY FUND, *supra* note 11, at 8.

299. Shaviro, *supra* note 264, at 9; INT’L MONETARY FUND, *supra* note 11, at 14.

leveraged,³⁰⁰ and these incentives still need to be addressed by regulation. Furthermore, even with the best incentives in place, banks suffering from distress may not *be able* to maintain sufficient Common Equity Tier 1. In this context, regulatory capital requirements serve as a supervisory tool; a bank's inability to comply with capital regulations sends a warning signal to regulators about the bank's health.³⁰¹ The following Part therefore explores in more detail how the ACET1 can be accommodated *within* the regulatory capital framework.

IV. AN ALLOWANCE FOR COMMON EQUITY REGULATORY CAPITAL

An ACE has already been implemented more broadly (i.e., for *all* corporate equity) in several countries, including Belgium.³⁰² The Belgian ACE model serves as a useful starting point for formulating the more limited ACET1 (which would only be available to banks). Belgium allows for a deduction to the value of equity, and this allowance “applies to the book value of net equity and is corrected for the net value of equity participations.”³⁰³ Because an ACET1 structured in this way would allow for a deduction for retained earnings (as well as dividends paid), it would match tax provisions that allow deductions for debt payments as they accrue, even if they are not paid at that time. It would therefore avoid any unintended consequence of encouraging banks to distribute their profits to shareholders, rather than build up cushions of retained earnings. Furthermore, because the ACET1 would only be available on net equity less equity participations, banks would not be able to use the allowance twice on the same funds.³⁰⁴

The Belgian model, like most proposals for an ACE,³⁰⁵ only provides an allowance for the *notional* return on equity (as calculated by reference to some benchmark rate—Belgium uses “a notional deduction

300. See *supra* notes 109–12 and accompanying text.

301. This is the rationale for the United States' “prompt corrective action” regime, codified in 12 U.S.C. § 1831o (2006).

302. “Croatia implemented an ACE from 1994 to 2001, and it has recently been adopted in Belgium and Latvia. A variant is applied in Brazil, and partial ACEs were applied in Austria and Italy.” INT'L MONETARY FUND, *supra* note 11, at 14.

303. DE MOOIJ, *supra* note 279, at 17.

304. “If the parent would be granted an ACE on all equity, including that used to finance participations in related entities, it would receive an allowance for returns that are untaxed.” DE MOOIJ, *supra* note 279, at 17 n.18.

305. *Id.* at 16–17.

to the value of equity at the rate on 10-year government bonds”).³⁰⁶ In contrast, tax-deductibility is available with respect to *all* interest expenses (even when the rates of interest exceed market rates).³⁰⁷ Therefore, if an ACET1 were implemented, and it only allowed for the deduction of notional rates of return on that equity, debt bias would persist to the extent that a bank delivered a return on equity in excess of the notional return.³⁰⁸ In such situations, leverage would still be a more attractive way of funding bank investments, and increased leverage would likely drive up return on Common Equity Tier 1 (at least during good times),³⁰⁹ which would make an even higher portion of return on such equity *not* tax-deductible, making leverage seem even more attractive. This vicious cycle would encourage banks to become highly-leveraged, defeating the intention of an ACET1.

It is conceivable, though, that an ACET1 could be applied to the full return on Common Equity Tier 1, thus fully neutralizing the tax bias for debt and against equity.³¹⁰ The chief objection to designing an ACET1 in this way (and indeed, the main reservation associated with implementing ACEs in general, even when based on notional returns) is that doing so will result in a loss of revenue for the taxing authority.³¹¹ Currently, taxing authorities receive taxation income levied on the full return on equity; if an ACET1 were applied to a notional return on

306. *Id.* at 17.

307. *Id.*

308. This is the likely, rather than a purely theoretical, outcome. For example, as of June 30, 2012, the yield on 10-year U.S. treasury bonds (the most obvious candidate for the “notional return” on equity for United States banks) was 1.67%. *Resource Center: Daily Treasury Yield Curve Rates*, U.S. DEP’T OF TREASURY, <http://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/TextView.aspx?data=yieldYear&year=2012> (last visited June 16, 2013). On June 30, 2012, the return on equity was 9.99% for JPMorgan, 5.89% for Citigroup, and 12.98% for Wells Fargo. *See JPMorgan Chase Return on Equity*, YCHARTS, http://ycharts.com/companies/JPM/return_on_equity (last visited Aug. 5, 2013); *Citigroup Return on Equity*, YCHARTS, http://ycharts.com/companies/C/return_on_equity (last visited Aug. 5, 2013); *Wells Fargo Return on Equity*, YCHARTS, http://ycharts.com/companies/WFC/return_on_equity (last visited Aug. 5, 2013).

309. Admati et al., *supra* note 18, at 16.

310. Allowing banks to deduct the *full* return on *all* common equity held as regulatory capital goes beyond the IMF’s proposal, which is to “giv[e banks] a tax deduction for a *notional* return on *Tier 1* capital.” INT’L MONETARY FUND, *supra* note 11, at 14 (emphasis added).

311. DE MOOIJ, *supra* note 279, at 3.

banks' Common Equity Tier 1, then taxing authorities would lose revenue in an amount equal to taxes that are currently levied on that notional return.³¹² To fully neutralize debt bias by allowing banks complete deductibility of return on Common Equity Tier 1 would result in even greater losses in taxation revenue (although the revenue impact could potentially be offset by the introduction of some type of financial institution or transaction tax).³¹³ While it might be expected that some of this revenue could be recouped at the investor level (i.e., investors receive dividends tax-free from banks, but must then pay tax on the dividends they receive), to the extent that shareholders are tax-exempt or are located in another jurisdiction, there will be no recoupment from investors of the foregone bank-level tax revenue.³¹⁴

In order to determine the feasibility of an ACET1 that allows complete deductibility of return on common equity regulatory capital, models would need to be run to determine what the actual impact of such a move would be on the GDP of each country.³¹⁵ This is a project for future research, though one design issue to be tackled is whether the ACET1 should be available to banks only with respect to the *minimum* required holdings of Common Equity Tier 1, or whether it should be available for larger holdings as well. The former option would certainly limit the revenue implications of implementing an ACET1 for banks, because it would ensure that only a limited slice of bank funding was exempt from taxation. However, given that we want to encourage banks to fund themselves with more Common Equity Tier 1 than the minimum requirements dictate, it would be prudent (if economically feasible) to extend the ACET1 to a "buffer" of Common Equity Tier 1 beyond the minimum amount required.³¹⁶ Thinking more broadly, calculations of

312. The IMF has developed models to allow it to estimate the impact on GDP of the introduction of an ACE for the notional return on all common and preferred stock (the 10-year government bond yield in each country) for *all* corporations (i.e., not just banks). *Id.* at 20. The IMF estimates that this would likely result in a reduction in revenue of 0.43% of GDP in the United States, and 0.56% of GDP in the United Kingdom. *Id.* Complete deductibility of return on equity for all corporations would obviously have a larger impact on GDP. However, the effect on GDP of an ACET1 is unknown at present.

313. See *supra* note 275 and accompanying text.

314. See Edgar, *supra* note 105, at 1002–03.

315. If the proposed ACET1 is not economically feasible, it might still be worth investigating the benefits of allowing deductibility of a *notional* return on bank equity.

316. There are likely to be few detrimental consequences to society from banks funding themselves with more equity than originally intended. Admati et al., *supra* note 84, at 33.

revenue impact should be based on the amount of Common Equity Tier 1 currently required by Basel III, but it would also be worthwhile to run numbers to determine the impact of an ACET1 if banks were required to fund themselves with more Common Equity Tier 1 than Basel III currently requires. While this Article does not purport to make any comment about the quantitative aspects of Basel III, there are many economists who believe that in order to shore up the banking system, there needs to be a significant increase in the amount of Common Equity Tier 1 used by banks, above and beyond what is currently required by Basel III.³¹⁷ If it *is* decided that regulatory capital requirements for banks should be increased, that increase could be introduced in conjunction with an ACET1 (again, if economically feasible), thus softening the impact of such increase on banks.

The foregoing discussion is very high level and neglects many of the detailed design features that will need to be worked out before an ACET1 can be implemented, or even properly evaluated. Economists and tax scholars will surely have much to contribute to this endeavor. From a regulatory scholarship perspective, we need to consider whether there is a sound policy basis for according special favorable tax treatment to banks, and whether consistent international implementation of such an ACET1 is feasible.

A. POLICY ARGUMENTS FOR IMPLEMENTING AN ALLOWANCE FOR COMMON EQUITY REGULATORY CAPITAL

The proposed ACET1 is a type of tax credit that will operate as a subsidy *only* for banks. Such a subsidy is likely to meet with some popular resistance, given the current level of anti-bank sentiment around the world.³¹⁸ However, because of collective action problems, it can be difficult for broad community disapproval to have any impact on the

317. For example, Admati and nineteen other prominent economists have argued that banks should be required to fund themselves with common equity in an amount equal to at least 15% of their total assets. *See* Admati et al., *supra* note 11.

318. This sentiment is perhaps best epitomized by the Occupy Wall Street movement, which describes itself as “fighting back against the corrosive power of major banks and multinational corporations over the democratic process, and the role of Wall Street in creating an economic collapse that has caused the greatest recession in generations.” *About*, OCCUPY WALL STREET, <http://occupywallst.org/about/> (last visited June 16, 2013). Despite the ubiquity and high visibility of the Occupy Wall Street movement, however, it has achieved little in terms of tangible results.

formulation of financial regulation, especially on an issue as complex as capital regulation.³¹⁹ Instead, in the United States at least, it is the financial industry itself that has more input in the development of financial regulation.³²⁰ This means that financial regulation is an uphill battle,³²¹ and some of the more drastic reforms that have been proposed to improve financial stability, such as breaking up the big banks, financial transaction taxes, and taxes on leverage, will likely face insurmountable industry opposition.³²² The ACET1 proposed in this Article is unique among such reforms in that it seeks to improve financial stability by *benefitting* banks, and, as such, is a policy that is likely to be encouraged by the financial industry.³²³

The proposed ACET1 is thus a politically expedient way to remove a key incentive for unhealthy levels of bank leverage. An ACET1 is a defensible policy as well as politically expedient; it can be justified by the “specialness” of banks. Banks are special because they are a key source of credit and thus fuel broader economic growth.³²⁴ In order to provide that credit, banks must often perform a maturity transformation role: the credit that banks usually provide is longer-term credit, whereas the funding they rely on to make the longer-term credit available is comprised of deposits and other short-term funding (like repurchase agreements) which can be withdrawn from the bank very quickly.³²⁵ The inherent fragility, but social necessity, of this banking business

319. For a discussion of the collective action problems associated with influencing financial regulatory policy, see Allen, *supra* note 14, at 26–29.

320. As Senator Dick Durbin put it, “the banks . . . are still the most powerful lobby on Capitol Hill. And they frankly own the place.” Ryan Grimm, *Dick Durbin: Banks “Frankly Own the Place”*, HUFFINGTON POST (May 30, 2009, 6:12 AM), http://www.huffingtonpost.com/2009/04/29/dick-durbin-banks-frankly_n_193010.html.

321. In terms of capital regulation, Singer notes that “[h]istorically, financial institutions have generally resisted the imposition of capital regulation” SINGER, *supra* note 41, at 19.

322. For a discussion of resistance to the implementation of international financial taxes in the wake of the Financial Crisis, see Richard T. Page, *Foolish Revenge or Shrewd Regulation: Financial-Industry Tax Law Reforms Proposed in the Wake of the Financial Crisis*, 85 TUL. L. REV. 191, 207 (2010).

323. In a similar vein, Jesse Eisenger notes that “[m]aking dividend payments tax deductible, which would start to level the playing field, might be easier and more popular.” Eisenger, *supra* note 289.

324. See generally FEDERAL RESERVE BANK OF MINNEAPOLIS, ARE BANKS SPECIAL? (1982), available at <http://www.minneapolisfed.org/pubs/ar/ar1982a.cfm>.

325. See *id.*

model can be invoked to support a special tax subsidy for Common Equity Tier 1 that will stabilize banks.³²⁶

Special treatment for banks is nothing new, in any event. Banks in the United States have had recourse to the Federal Reserve as “lender of last resort” since 1913,³²⁷ and since 1933, banks have had their deposit liabilities insured by the FDIC.³²⁸ Outside of the United States, some central banks have been performing “lender of last resort” roles for centuries,³²⁹ and deposit insurance is now available to depositors in banks in over 100 countries.³³⁰ More recently, banks around the world perceived as “too big to fail” have received implicit subsidies from their home governments.³³¹ Each of these types of special treatment, however, has a negative side effect in that it creates moral hazard: it encourages banks to engage in *riskier* behavior so as to multiply their profits in good times, knowing that there is a government safety net that will absorb the losses in bad times.³³² Conversely, the ACET1 proposed in

326. Because all banks perform this maturity transformation role, this ACET1 can justifiably be given to all banks, even those smaller banks that do not profit from implicit “too big to fail” government subsidies. The ACET1 therefore might soothe some of the concerns of mid-tier and community banks, which are currently experiencing higher funding costs than those being charged to their “too big to fail” brethren, and feel disproportionately burdened by the provisions in Dodd-Frank, many of which were designed to address systemic stability issues that such banks feel they do not contribute to. *See* The Effect of Dodd-Frank on Small Financial Institutions and Small Businesses: Hearing Before the Subcomm. on Fin. Inst. and Consumer Credit of the Comm. on Fin. Servs., 112th Cong. 116 (2011) (prepared statement of James D. MacPhee, Chairman, Independent Community Bankers of America).

327. The Federal Reserve System was established by the Federal Reserve Act of 1913, Pub. L. No. 63-43, 38 Stat. 251 (1913). Section 13 of that Act authorizes the Board of Governors of the Federal Reserve System to act as a lender of last resort.

328. The Federal Deposit Insurance Corporation was formed in 1933 with the enactment of the Banking Act of 1933, Pub. L. No. 73-66, 48 Stat. 162 (1933).

329. *See, e.g.,* Humphrey, *supra* note 194, at 334–35 (noting that the Bank of England has been identified as the “lender of last resort” since the early 1800s).

330. *Deposit Insurance Systems Worldwide*, INTERNATIONAL ASSOCIATION OF DEPOSIT INSURERS, <http://www.iadi.org/di.aspx?id=67> (last visited June 16, 2013).

331. *See supra* notes 103, 109–12 and accompanying text.

332. Moral hazard is the “tendency of an insured to relax his efforts to prevent the occurrence of the risk that he has insured against because he has shifted the risk to an insurance company.” RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 121 (5th ed. 1998). Lovett expressed the application of moral hazard in the banking context as follows: “If governments and modern nations do not allow most banks to [fail], how can the leaders and managements of banking institutions be disciplined and avoid unduly risky, negligent, or adventurous lending policies (or simply poor asset-liability

this Article promotes *less risky* behavior by neutralizing in large part the existing incentives for banks to minimize their equity funding.

The ACET1 would, of course, be an expense for taxing authorities because it would reduce the revenue they would otherwise receive from taxing bank equity. Such an expense must be considered, however, in the context of the cost of financial instability. History has shown that tax revenues are likely to drop sharply in a recession (or depression) following a financial crisis, leading to an explosion of government debt.³³³ For example, the Congressional Budget Office has estimated that the United States incurred an additional \$7 trillion in government debt as a direct result of the recession following the financial crisis.³³⁴ Given the magnitude of the cost of instability, foregoing tax revenue from bank equity may well be an acceptable “premium” for improved stability (and if a future financial crisis were to occur nonetheless, the government would already have a reduced expectation of revenues from financial sector taxation, so the impact of such crisis on government debt would be somewhat dampened). As an added benefit, to the extent that the ACET1 causes governments to be less dependent on tax revenues from banks in the first place, the political clout of banks may be somewhat weakened. On the margins, there would also be some administrative savings associated with dispensing with hybrid instruments as regulatory capital: neither regulatory nor tax authorities would need to devote resources to evaluating new types of hybrid instruments to determine whether they should qualify as regulatory capital, or be entitled to debt tax treatment, respectively.³³⁵ Furthermore, to the extent that the ACET1 reduces incentives for banks to manipulate their accounting for risk-weighted assets, regulators will have an easier

management)?” William A. Lovett, *Moral Hazard, Bank Supervision and Risk-Based Capital Requirements*, 49 OHIO ST. L.J. 1365, 1365 (1989).

333. CARMEN M. REINHART & KENNETH S. ROGOFF, *THIS TIME IS DIFFERENT: EIGHT CENTURIES OF FINANCIAL FOLLY* 142 (2009).

334. Simon Johnson, *Where is the Volcker Rule?*, N.Y. TIMES, Dec. 15, 2011, <http://economix.blogs.nytimes.com/2011/12/15/where-is-the-volcker-rule/>

?ref=business. The economic contractions that follow a financial crisis often impose high costs on society in the form of reduced tax revenues. These costs are likely to dwarf the costs of any bailout in a financial crisis. REINHART & ROGOFF, *supra* note 333, at 142, 224.

335. In addition, the social waste associated with private sector development of hybrid instruments to arbitrage regulatory capital requirements would be avoided: “Tens of millions of dollars a year in billable hours and investment banking fees are devoted to analyzing whether particular financial products will or should be treated as debt or equity for tax purposes.” Fleischer, *supra* note 14, at 10.

job monitoring banks' compliance with regulatory capital requirements.³³⁶

It should also be noted that several commentators have identified a significant flaw in the Basel architecture: namely, that regulatory capital requirements can be destabilizing to the extent that they encourage banks to invest heavily in asset classes that have been assigned low risk-weightings.³³⁷ This practice simultaneously increases the number of such assets in the system and correlates bank exposure to them, and there is a very real concern that such growth/correlation will make the assets themselves more risky and the banking system as a whole more susceptible to bubbles and panics.³³⁸ However, the implementation of the proposed ACET1 will mitigate incentives for such destabilizing herding by banks: to the extent that the ACET1 lessens bank incentives to arbitrage regulatory capital requirements, banks will be less likely to concentrate their investments in low risk-weighted asset classes.

Finally, it is important to recognize that traditional banks are not the only institutions that provide long-term credit funded by short-term liabilities. The term "shadow banking" is often used to describe institutions (for example, money market mutual funds) that carry out similar functions as banks but are not subject to banking regulation.³³⁹ While many have argued that the shadow banking sector poses great risk to financial stability,³⁴⁰ Basel III (and its predecessors Basel I and II) have never been applied to this shadow banking sector. Indeed, the growth of the shadow banking industry was in many ways a response to

336. The ACET1 addresses some of the concerns about regulatory capacity raised by Calomiris & Herring, *supra* note 63, at 5.

337. This was the case with mortgage-backed securities issued prior to the Financial Crisis. See Roberta Romano, *For Diversity in the International Regulation of Financial Institutions: Critiquing and Recalibrating the Basel Architecture* 20–22 (Yale Law & Econ., Research Paper No. 452, 2013), available at <http://ssrn.com/abstract=2127749>; see also Viral V. Acharya, *The Dodd-Frank Act and Basel III: Intentions, Unintended Consequences, and Lessons for Emerging Markets* 13 (ADBI Working Paper Series, Paper No. 392, 2012), available at <http://www.adbi.org/working-paper/2012/10/29/5292.dodd.frank.act.basel.iii.emerging.markets/>.

338. Acharya, *supra* note 337, at 13.

339. Gorton & Metrick, *supra* note 220, at 261–62.

340. See generally *id.*; Eric F. Gerding, *The Shadow Banking System and Its Legal Origins* (2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1990816.

capital requirements for traditional banks.³⁴¹ many investors migrated to institutions that were not subject to capital requirements, and therefore were perceived as able to offer investors more of a return.³⁴² Because bank regulatory capital requirements do not apply to this shadow banking sector, the ACET1 proposed in this Article would not be available to shadow banks either. This might have a salutary side-effect: the institution of the ACET1 would give traditional banks an edge over their less-regulated competitors, which might start to reverse the migration of funds to the shadow banking sector.

B. INTERNATIONAL COORDINATION

The BCBS promulgated Basel I, its first international standards for regulating bank capital, in 1988.³⁴³ These standards were the response to a growing consensus that regulatory capital requirements were desirable but expensive, and that unilateral action by a country in setting minimum regulatory capital requirements would increase stability, but lead to a loss of competitiveness in attracting banking business.³⁴⁴ Individual countries were therefore reluctant to implement minimum capital standards for their banks unless they could be sure that other banks would be required to play by the same rules: international harmonization was a prerequisite to the implementation of stringent regulatory capital requirements.³⁴⁵ In contrast, because the proposed ACET1 would benefit banks rather than hinder them, national governments could move unilaterally in implementing such an ACET1.

341. In 1981, the United States implemented regulatory capital requirements for banks for the first time, which incentivized some investors to exit the traditional banking industry. *See id.* at 274. The rapid rise of the shadow banking industry began in the early 1980s, and shadow banking actually overtook the traditional banking sector in terms of market share mid-way through 2007. TOBIAS ADRIAN & HYUN SONG SHIN, FEDERAL RESERVE BANK OF NEW YORK STAFF REPORTS, THE SHADOW BANKING SYSTEM: IMPLICATIONS FOR FINANCIAL REGULATION 1–2 (2009), available at http://www.newyorkfed.org/research/staff_reports/sr382.pdf.

342. “Where competition from unregulated entities is permitted, whether explicitly or de facto, capital and other requirements imposed on regulated firms may shrink margins enough to make them unattractive to investors. The result, as in the past, will be some combination of regulatory arbitrage, assumption of higher risk in permitted activities, and exit from the industry.” Gorton & Metrick, *supra* note 220, at 305.

343. BASEL I, *supra* note 8.

344. For a detailed discussion of incentives for harmonization of capital regulation, see SINGER, *supra* note 41, at 20–35.

345. *Id.* at 49.

Indeed, it would make the country more attractive as a jurisdiction for banking business. Thus, if even one country with a major banking sector were to implement such an ACET1, it is quite possible that other countries with substantial financial industries would quickly follow suit, in order to avoid migration of their financial services businesses to the nation that provides the ACET1.³⁴⁶ International implementation of an ACET1 might therefore be brought about even without agreement on international standards for an ACET1. Such standards are still desirable, however, to ensure a level of consistency in the models used to implement the ACET1 around the world.³⁴⁷

In the absence of any international tax law organization or standard setter,³⁴⁸ there is little by way of an international tax forum to agree on a model ACET1. International tax law is largely comprised of bilateral treaties,³⁴⁹ whereas international financial law is populated by multilateral technocratic rules and standards,³⁵⁰ and the BCBS in particular has a successful history of developing international standards that have been widely implemented at the national level.³⁵¹ While the BCBS has traditionally eschewed any responsibility towards addressing tax issues (in Basel I, it noted that “[c]onvergence in tax regimes, though

346. The imperative of regulatory competitiveness is often used to justify countries adopting more lax financial regulation – this is often referred to as a “race to the bottom.” Chris Brummer, *How International Financial Law Works (and How it Doesn't)*, 99 GEO. L.J. 257, 268 (2011). Here, however, the desire for competitiveness would encourage larger holdings of common equity, inspiring a “race to the top.”

347. “The internationalization of financial markets creates the need for greater coordination and cooperation among financial regulators.” Eric C. Chaffee, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: A Failed Vision for Increasing Consumer Protection and Heightening Corporate Responsibility in International Financial Transactions*, 60 AM. U. L. REV. 1431, 1449 (2011).

348. Some academics have proposed that an international tax law authority should be created, but none exists at this time. See, e.g., Yariv Brauner, *International Trade and Tax Agreements May Be Coordinated, But Not Reconciled*, 25 VA. TAX REV. 251, 254 (2005).

349. Reuven S. Avi-Yonah, *International Tax as International Law*, 57 TAX L. REV. 483, 497 (2004).

350. Brummer, *supra* note 346, at 260.

351. “[I]nternational coordination has been easier to achieve on the regulatory side (as with the widespread adoption of Basel standards) than in relation to taxation.” Michael Keen, *The Taxation and Regulation of Banks 6* (Int'l Monetary Fund, Working Paper No. 11/206, 2011), available at <http://www.imf.org/external/pubs/ft/wp/2011/wp11206.pdf>.

desirable, lies outside the competence of the Committee”),³⁵² the BCBS is not beholden to any formal organizational documents that prohibit it from incorporating tax elements into its standards.³⁵³ It is therefore open to the BCBS to incorporate a regulatory capital-focused model ACET1 into its standards on capital adequacy.

Of course, while the lack of formal boundaries on the BCBS’s authority gives it flexibility, it also undermines the BCBS’s legitimacy as a standard-setting body.³⁵⁴ The legitimacy of the BCBS has also been questioned because it is an unelected and unrepresentative body,³⁵⁵ and because its standards are often implemented by national-level administrative law agencies without being subject to real oversight by democratically elected institutions.³⁵⁶ To date, these critiques of the BCBS’ legitimacy have been largely theoretical, but if the BCBS were to promulgate an international standard which *required* an ACET1 (and thus deprived nation states of revenue in terms of the tax that would otherwise be charged on Common Equity Tier 1), challenges to the BCBS’ authority would likely be more than just academic. In the United States, Congress jealously guards its oversight over taxation authority, using legislation to override international tax treaties much more frequently than it attempts to override other types of treaties.³⁵⁷ In this context, it is unlikely that democratically elected legislatures would acquiesce in technocratic agencies effecting the ACET1 by way of administrative rule-makings. The ACET1 would have to be implemented by way of legislation.

For that reason, it would be best for the BCBS to develop a model for an ACET1, but make that model optional. In that way, the BCBS

352. BASEL I, *supra* note 8, at 3.

353. “The Committee does not possess any formal supranational supervisory authority. Its conclusions do not have, and were never intended to have, legal force.” BASEL COMM. ON BANKING SUPERVISION, HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP (2009), *available at* <http://www.bis.org/bcbs/history.pdf>.

354. Brummer notes that “some international financial organizations, like the Bank for International Settlements [of which the BCBS is part], have no clear responsibilities to any public. The attenuated proximity to core democratic processes is problematic for some observers.” CHRIS BRUMMER, *SOFT LAW AND THE GLOBAL FINANCIAL SYSTEM: RULE MAKING IN THE 21ST CENTURY* 188 (2012).

355. *Id.* at 188–89, 208. Only twenty-seven countries are represented in the BCBS. *Basel Committee on Banking Supervision*, *supra* note 7, at 1.

356. Many less contentious international financial standards can avoid the political process entirely, being implemented at the administrative level without any need for formal ratification. BRUMMER, *supra* note 354, at 188.

357. Avi-Yonah, *supra* note 349, at 493–99.

could strive to achieve consistency without compulsion. As discussed above, the threat of international competition could provide the necessary compulsion for broad implementation of the ACET1: if one country adopts a BCBS-model ACET1, others are likely to follow suit so as not to lose their competitiveness as a forum for financial services business.³⁵⁸ In countries where the banking sector makes up a larger proportion of GDP,³⁵⁹ one could reasonably expect that the revenue implications of the proposed ACET1 would be felt more keenly than in a country with a less dominant financial sector, and that this may lead to some resistance to the implementation of such an ACET1. But these countries also have a greater need for financial sector competitiveness than do countries with more diversified economies, and more to lose in the event of a financial crisis. As such, they should have more incentive to adopt reforms that encourage better-capitalized banks and thus promote financial stability.

CONCLUSION

Hybrid debt-equity instruments increase the complexity and compromise the stability of the financial system: they are “complex, confusing to many investors, and would not exist in a world without a debt/equity tax distortion.”³⁶⁰ As such, hybrids are a clumsy reconciliation of conflicting tax policies that favor debt and regulatory policies that discourage debt. In contrast, an ACET1 that allows banks to deduct the cost of their Common Equity Tier 1 seems to be a much more elegant and appealing way of resolving the tax/regulatory conundrum. Not only would such an ACET1 neutralize incentives for

358. See *supra* notes 346–47 and accompanying text.

359. The UK is an example of a country whose financial sector makes up a relatively large percentage of its GDP. See Stephen Burgess, *Measuring Financial Sector Output and Its Contribution to UK GDP*, BANK OF ENGLAND Q. BULL. 234 (2011), available at <http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb110304.pdf>. In a recent report, the UK’s Independent Commission on Banking concluded that the UK had to implement financial reform over and above that being required by international bodies like the BCBS, because of “the position of the UK as an open economy with very large banks extensively engaged in global wholesale and investment banking alongside UK retail banking. Indeed part of the challenge for reform is to reconcile the UK’s position as an international financial center with stable banking in the UK.” INDEPENDENT COMM. ON BANKING, *supra* note 73, at 7.

360. Fleischer, *supra* note 15, at 31.

banks to develop hybrid debt-equity instruments, it would also significantly reduce incentives for banks to manipulate reporting of their risk-weighted assets, with the ancillary benefits of reducing regulators' costs, reducing correlation risk, and reversing the migration of funds to the shadow banking system. Furthermore, the ACET1 is appealing from a realpolitik perspective, because while banks ordinarily resist financial regulatory reform, they would likely embrace the implementation of an ACET1.

Without the implementation of this ACET1, the BCBS and national authorities will perennially find themselves in the unfortunate position of having to evaluate new generations of hybrid instruments that have been designed to game regulatory capital requirements and tax laws. Despite the best efforts of regulators to predict how these hybrids will operate, many of the problems inherent in these instruments will not come to light until they backfire in the next financial crisis.