THE IMPOSSIBILITY OF TLAC

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After the 2008 financial crisis, governments worldwide made a concerted effort to allow banks to fail. This effort is central to the mantra of "no more bailouts." In the United States TLAC – total loss absorbing capacity – is central to this new effort. TLAC debt is debt issued by a financial institution's holding company, that is designed to either be written off or converted into equity if the financial institution fails. The goal is to restore the financial institution to solvency in rapid fashion.

But debt is not normally designed from inception to suffer losses. Rather, debt is often referred to as a "fixed claim," because the borrower has a contractual obligation to repay. But, unlike equity, the TLAC bonds, being bonds, have a fixed upside, and thus should only be marketable in a manner similar to high-yield (junk) bonds, with a large interest coupon or at a substantial discount to par and with strong disclosure of the bonds' inherent risks.

The only way to maintain even the illusion of the traditional debt-equity distinction will be to sell TLAC debt to unknowing retail buyers. And that appears to be what is happening. In this paper I show that TLAC debt is sold to retail investors without any indication that it might be something other than "normal" debt. Investors may be slow to appreciate the risks that TLAC debt presents, but once they do, what price will large financial institutions pay to support their present capital structure? A sudden run by panicked investors out of TLAC debt or the equity of large banks would present obvious problems for stability of the American financial system.

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I.
An Introduction to TLAC

In April 2010, Canada's then Superintendent of Financial Institutions authored a Financial Times opinion piece pressing for more "market discipline" of large banks to replace "a deeply embedded presumption" of bailouts.[1] Noting that some regulators had considered capital surcharges[2] for large banks, the author argued that

> There is a better way, which goes by the name of embedded contingent capital. This is a security that converts to common equity when a bank is in serious trouble, instantly increasing the core capital of the bank without the use of taxpayer dollars. The principle is similar to "CoCos", the convertible bonds already issued by some banks. But it would apply to all subordinated securities and would be at least equivalent in value to the common equity. This would create a notional systemic risk fund within the bank itself—a form of self-insurance pre-funded by private investors to protect the solvency of the bank.

While global bank regulators did not give up on capital surcharges,[3] they also accepted the concept of "embedded contingent capital," albeit with a new name: Total loss-absorbing capacity (TLAC, or "tea-lack").[4]

TLAC sits as the very center of the post-Lehman financial system.[5] Key financial institutions are still quite large, but the financial

1. Julie Dickson, Opinion, *Protecting Banks is Best Done by Market Discipline*, Fin. Times (London), Apr. 9, 2010, at 9.

2. As explained in further detail herein, capital in the bank insolvency context is essentially common equity. A capital surcharge, then, is a requirement that a large bank have a further percentage of equity beyond what is already legally required of banks generally.

3. Edward F. Greene & Joshua L. Boehm, *The Limits of "Name-and-Shame" in International Financial Regulation*, 97 Cornell L. Rev. 1083, 1113 (2012); *see also* Ryan Corn, *The Impact of the Federal Reserve's New Risk-Based Capital Surcharges*, 35 Rev. Banking & Fin. L. 2, 2 (2015).

4. My focus is on TLAC as applied to the largest American banks. Large European banks are also subject to TLAC, and other resolution and related capital systems. Nonetheless, I occasionally draw on European examples where they provide useful insights. The differences between the two systems are discussed in further detail in Part II. *See infra* Part II.

5. Morgan Ricks, *Organizational Law as Commitment Device*, 70 Vand. L. Rev. 1303, 1315 n.35 (2017).

community aims to make bankruptcy[6] somewhat tidier, and thus more likely to actually happen, than it was before 2010.[7] "Resolution" is the preferred term here for failure, even though most normal Americans would call it "bankruptcy."[8] TLAC provides the foundation for all of the post-Lehman resolution plans.[9]

TLAC consists of Tier 1 capital, essentially equity,[10] and eligible long-term debt.[11] Equity is the "best" protection against failure, because equity, and in particular common equity, is incapable of triggering a default.[12] Common shareholders have no promise of repayment, rather they live for the thrill of their potential "upside."[13]

Equity is the difference between the amount that the business owns and the amount that it owes. The value of a company's equity is fluid and expands and contracts to meet changes in the value of the assets owned by the company and its debts. When the company owes

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6. Bankruptcy, under a pre-existing legal framework, being seen as preferable to *ad hoc* bailouts, which may incentivize risky bank behavior. *See* Anna Gelpern & Erik F. Gerding, *Inside Safe Assets*, 33 YALE J. ON REG. 363, 400–02 (2016).

7. *See* Aaron M. Levine & Joshua C. Macey, *Dodd-Frank Is a Pigouvian Regulation*, 127 YALE L.J. 1336, 1358 (2018) (providing an overview of the post-2008 "resolution" system).

8. *See* Adam J. Levitin, *Bankruptcy's Lorelei: The Dangerous Allure of Financial Institution Bankruptcy*, 97 N.C. L. REV. 243, 246–47 (2019) (comparing a large financial institution resolution to the GM bankruptcy in 2000).

9. *See generally* Stephen J. Lubben & Arthur E. Wilmarth, Jr., *Too Big and Unable to Fail*, 69 FLA. L. REV. 1205, 1206 (2017).

10. Christina Parajon Skinner, *Misconduct Risk*, 84 FORDHAM L. REV. 1559, 1590 n.166 (2016). More specifically, Tier 1 capital includes common equity plus other instruments that are subordinated to subordinated debt, have no fixed maturity and no embedded incentive for redemption, and for which a bank can cancel dividends or coupons at any time.

11. These requirements are being implemented in the EU in the form of a "minimum requirement for own funds and eligible liabilities" ("MREL"). Gregory J. Lyons, Aatif Ahmad & Chen Xu, *Prudential Regulation in an Age of Protectionism*, 36 BANKING & FIN. SERVICES POL'Y REP., no. 1, Jan. 2017, at 8, 10. The acronyms abound. *See infra* Part II.

12. Anat R. Admati, Peter Conti-Brown & Paul Pfleiderer, *Liability Holding Companies*, 59 UCLA L. REV. 852, 899 (2012).

13. MORGAN RICKS, THE MONEY PROBLEM: RETHINKING FINANCIAL REGULATION 16 (2016) ("As residual claimants, member bank shareholders benefit from good portfolio performance, but they also absorb "first loss" in the event of portfolio losses."); *see also* Saule T. Omarova, *Bank Governance and Systemic Stability: The "Golden Share" Approach*, 68 ALA. L. REV. 1029, 1036 (2017) ("Banks issue very little equity, their core assets are highly opaque, and their liabilities are extremely short-term—a fragility-producing combination. In order to protect banks from failure and to ensure their ability to continue providing publicly important services, modern governments typically subsidize banks by providing them with credit and liquidity support.").

more than it owns, its equity has gone to zero, and it is said to be insolvent.[14]

Under Dodd-Frank, Basel III,[15] and perhaps a small outbreak of general common sense, American financial institutions have massively increased their equity capital. Massive increases should not be mistaken for massive amounts of capital, however.[16] The new order moves from microscopic capital levels to capital levels that, while perceptible, are still quite miniscule. Nonetheless, everyone generally gives themselves a pat on the back for this marked improvement over the old ways.

Consider that in its 2017 10-K, JPMorgan Chase & Co.[17] reported equity of $256 billion as against liabilities of $2,278 billion. That is, equity is about 10% of the capital structure.

In comparison, Exxon Mobil Corporation[18] reported equity of $195 billion stacked against $154 billion in debts. That is, equity exceeds debt on the balance sheet, and indeed represents 56% of the right-hand side of the balance sheet. While Chase is much improved—in 2007[19] it had equity of 8%, so equity has risen by nearly 30%—it still would not be mistaken for a normal corporation. It would be far easier for JPMorgan to become insolvent than Exxon.

Banks are highly leveraged institutions – indeed, among the most leveraged of all firms in the economy.[20] The unstable balance sheet of

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14. Keeping in mind that default in a financial institution is as much about liquidity as it is about balance sheets. Stephen J. Lubben, *A Functional Analysis of SIFI Insolvency*, 96 TEX. L. REV. 1377, 1378 (2018).

15. Basel III is an international set of standards issued by the Basel Committee on Banking Supervision in 2010 in response to the financial crisis. In 2013, these standards were adopted in the United States by a final rule that also implemented "capital adequacy reforms mandated by Congress in the Dodd-Frank Wall Street Reform and Consumer Protection Act." KEITH R. FISHER, BANKING LAW MANUAL § 6.03 (Keith R. Fisher, 3d ed. 2020); Basel Committee on Banking Supervision, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* [Basel III] (Dec. 1, 2010), https://www.bis.org/publ/bcbs189.pdf; Dodd-Frank Wall Street Reform and Consumer Protection Act, 12 U.S.C. § 5401 (2010).

16. *See* Mark J. Roe & Michael Tröge, *Containing Systemic Risk by Taxing Banks Properly*, 35 YALE J. ON REG. 181, 189 (2018).

17. JPMorgan Chase & Co., Annual Report (Form 10-K) (Feb. 27, 2018).

18. Exxon Mobil Corp. Annual Report (Form 10-K) (Feb. 28, 2018).

19. JPMorgan Chase & Co., Annual Report (Form 10-K) (Feb. 29, 2008).

20. Kathryn Judge, *Three Discount Windows*, 99 CORNELL L. REV. 795, 801 (2014). *See also* Rizwaan Jameel Mokal, *Liquidity, Systemic Risk, and the Bankruptcy Treatment of Financial Contracts*, 10 BROOK. J. CORP. FIN. & COM. L. 15, 26 (2015).

banks is not a quirk.[21] Rather, it is inherent to a key economic function of banks, which is providing liquidity.[22] As financial intermediaries, banks accept liquid deposits from the public and reinvest those funds in long-term, illiquid loans and other similar securities (often comprised of pools of loans). They promise to repay those deposits – that is, provide liquidity to the banks' creditors – on a moment's notice. Twenty-four hours a day, seven days a week, creditor-depositors expect to be able to walk up to an ATM and "call" their debt by withdrawing cash. If everyone goes to an ATM at once, the bank faces a problem, as it will never be able to turn its assets into cash fast enough to meet everyone's demands.

Financial institutions like to live life on the edge – to do otherwise would leave them with a return on equity (ROE) far below that of "normal" companies.[23] Thus, by their very design, the large banks live life as pyramids balanced on their tip, hoping that nothing comes along to topple them over.[24] Moreover, executives and other key insiders of megabanks typically receive bonuses that are linked closely to ROE and earnings per share. As a result, those insiders have strong incentives to keep the denominator of ROE and EPS calculations as small as possible.[25]

In short, equity is quite small in banks, but TLAC requires some equity in place to help in resolution. But the more curious part of TLAC is the long-term debt requirement, which necessitates the creation of a squad of bondholders who stand ready to endure substantial pain upon financial distress.[26] These requirements work hand-in-hand with requirements that the bank's holding company have a "clean"

21. Nor is it a recent development, *see* HYMAN P. MINSKY, STABILIZING AN UNSTABLE ECONOMY 259 (McGraw-Hill 2008) (1986)("[I]n 1983, the ratio of book value to assets was about 3 percent for some of the very largest banks").

22. *Id*. at 262.

23. ROE equals a company's return on assets, multiplied by its debt or leverage. When return on assets is insufficient, one way to increase ROE is by increasing leverage, where leverage is the ratio of total assets to equity (*i.e.,* the third part of the balance sheet after assets and equity). Andrew G. Haldane, Executive Director, Financial Stability, Bank of England, Small Lessons from a Big Crisis, Remarks at the Federal Reserve Bank of Chicago 45th Annual Conference (May 8, 2009), https://www.bis.org/review/r090710e.pdf.

24. *See generally* Anat R. Admati, *The Compelling Case for Stronger and More Effective Leverage Regulation in Banking*, 43 J. L. STUD. S35 (2014).

25. ANAT R. ADMATI & MARTIN HELLWIG, THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT (2014).

26. Arthur E. Wilmarth, Jr., *The Financial Industry's Plan for Resolving Failed Megabanks Will Ensure Future Bailouts for Wall Street*, 50 GA. L. REV. 43 (2015).

balance sheet,[27] such that these TLAC bondholders and the shareholders are all alone on the right-hand side, waiting to incur losses—or, more elusively, "haircuts"[28]—in times of stress.[29]

Imagine a scenario where Chase's assets lose 15% of their value. As we have already seen, Chase's shareholders can only take losses of 10% before they give up the ghost – the shares are worthless beyond that point. The TLAC bondholders are the ones who must pick up the slack and take the remaining 5% in losses, and any further losses, to prevent the bank from becoming insolvent.

Most often, "picking up the slack" will mean that bondholders will be involuntarily converted into the new bank shareholders—either in a Chapter 11 bankruptcy proceeding or a similar "OLA" proceeding under the Dodd-Frank Act.[30] And those shares will be worth the bondholders' old face value, less the losses the bank has suffered and will suffer during the course of its "resolution." In short, repayment in shares of lesser value than the full $1,000 bondholders were originally promised.[31]

Bondholders will not be paid in full and will lose their status as creditors. The public stockholders of the holding company would bear the first losses, likely exiting the scene quite swiftly, and the bank's long-term debt obligations would be converted into equity that would be used to capitalize the successor entity, while the dregs are left behind in the old bank or bank holding company, to be liquidated over time. That is, if all goes according to plan.[32]

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27. The "clean" balance sheet or holding company requirements are discussed in more detail in Section IIA, *infra*, but in essence mean that the holding company's balance sheet must not be too complex, with too many layers of creditors of varying priorities.

28. In financial markets, a haircut refers to a reduction applied to the value of an asset. In this context, it means forcing losses on the bondholders to rebalance the bank's balance sheet.

29. Monica M. Burks, *Living Wills: How Legal Entity Rationalization Addresses the "Too Big to Fail" Problem*, 21 N.C. BANKING INST. 357, 373 (2017). While termed the "clean" holding company rule, holding companies are in fact allowed to have non-TLAC debt, as discussed *infra*. As noted *supra* note 4 and *infra* Part II, this paper's discussion of the TLAC system, and the use of holding companies, is largely US-specific.

30. Lubben, *supra* note 14, at 1378.

31. In North America, corporate bonds are normally issued in $1,000 increments. *See* STEPHEN J. LUBBEN, CORPORATE FINANCE 76 (3d. ed. 2021).

32. Jay Lawrence Westbrook, *SIFIs and States*, 49 TEX. INT'L L.J. 329, 342 (2014).

> In the midst of a section explaining how recapitalization of the distressed institution will make it solvent and permit market funding, [the FDIC and the Bank of England] . . . "describe a process that is wonderfully orderly and without timelines. The description is in dramatic contrast to the expe-

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In short, TLAC imagines a banking system where both shareholders and bondholders stand ready to take losses when the bank experiences financial distress. For example, Citibank proclaims on its webpage that it has

> developed a resolution plan so that Citigroup's shareholders and unsecured creditors—including its unsecured debt holders—bear any losses resulting from Citigroup's bankruptcy.[33]

But by so designing the banking system, a basic distinction between debt and equity breaks down.

Bondholders rarely purchase debt claims with the express idea of taking losses to benefit the corporation's stability. Rather, debt is the classic fixed claim, and in the case of bonds this usually means that the payment of interest and repayment of principal are mandatory.[34] Indeed, the key regulatory statute for bonds—the Trust Indenture Act of 1939—is based on this premise.[35]

Defaults happen, and the bondholder seeks a promised interest rate that accounts for that risk, but rarely is default part of the central design of the capital structure, at least outside of the specialized realm of distressed debt investing.[36] In normal situations, the problem of uneven cashflows is for shareholders to worry about.[37]

> rience in the Crisis or even the experience of the FDIC in resolving several large U.S. financial institutions before the full Crisis arrived."

33. *Citi Fixed Income Investors: TLAC-Eligible Debt*, CITIGROUP (Sept. 8, 2020), https://www.citigroup.com/citi/fixedincome/cds_tlac.htm [https://perma.cc/LDF2-PRMM].

34. There are, of course, historical exceptions (income bonds) and more recent rediscoveries (PIK toggles). Income bonds provide for coupon payments only upon the debtor-firm reaching certain financial thresholds, while PIK toggles allow the firm to make coupon payments in the form of additional debt. Notably, even here the return of principal is mandatory.

35. William W. Bratton & Adam J. Levitin, *The New Bond Workouts*, 166 U. PA. L. REV. 1597, 1600 (2018). It is, of course, arguable that the TIA represents an old-fashioned view of finance. And indeed, older instruments like convertible bonds, and newer instruments like total return swaps, do not fit neatly within the traditional debt-equity dichotomy. Douglas G. Baird and M. Todd Henderson, *Other People's Money*, 60 STAN. L. REV. 1309, 1311–12 (2008).

36. Michelle M. Harner, *The Corporate Governance and Public Policy Implications of Activist Distressed Debt Investing*, 77 FORDHAM L. REV. 703, 714 (2008). *See also* Adam J. Levitin, *Finding Nemo: Rediscovering the Virtues of Negotiability in the Wake of Enron*, 2007 COLUM. BUS. L. REV. 83, 157 (2007).

37. As PIMCO explains in its primer on bonds: "Unlike equities, bonds should repay principal at a specified date, or maturity. This makes bonds appealing to investors who do not want to risk losing capital and to those who must meet a liability at a particular time in the future." *Everything You Need to Know About Bonds*, PIMCO,

This essay argues that the two basic principles of TLAC are in conflict with one another: promoting the central place of equity on the balance sheet is inconsistent with injecting equity-like features into debt. Debt is really the new equity in the post-Lehman financial institution, and equity is little more than a speculative bet on the continuation of a highly leveraged cashflow.[38]

In such circumstances, equity in financial institutions should no longer be bought and sold by traditional equity investors. And we may wonder if financial institution equity holders should have the same corporate law powers as other shareholders, given that the true "residual" claim[39] in such institutions is actually more likely held by the (contingently) convertible TLAC bonds.[40]

The TLAC bonds themselves should begin to take on the behavior of equity – since, as key loss absorbers, the TLAC debt already has the fundamental characteristics of equity. But, unlike equity, the TLAC bonds, being bonds, have a fixed upside, and thus should only be marketable in a manner similar to high-yield (junk) bonds, with a large interest coupon or at a substantial discount to par and with strong disclosure of the bonds' inherent risks.

The only way to maintain even the illusion of the traditional debt-equity distinction will be to sell TLAC debt to unknowing retail buyers.[41] And that appears to be what is happening.

The largest S&P 500 funds continue to hold shares of Chase in near equal amounts to shares of Exxon.[42] And a dozen pages into Chase's most recent debt issuance, the potential investor is told

> The notes constitute "loss-absorbing capacity" within the meaning of the final rules (the "TLAC rules") issued by the Board of Gover-

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https://www.pimco.com/en-us/resources/education/everything-you-need-to-know-about-bonds (last visited Sept. 5, 2020).

38. *Cf.* Lissa Lamkin Broome, *Redistributing Bank Insolvency Risks: Challenges to Limited Liability in the Bank Holding Company Structures*, 26 U.C. DAVIS L. REV. 935, 947 (1993).

39. Residual claims on assets are typically associated with equity and are the right of a party to remaining assets only after all fixed claims (i.e., debt claims) have been satisfied.

40. Again, the strength of this proposition might depend on whether we are considering a Coco-style resolution, or a more formal resolution under a TLAC/MREL regime, as discussed in Part II *infra*. Thus far, the United States has tended to follow the latter.

41. *Cf.* Yesha Yadav, *We Need to Know Who Invests in Bank Equity*, 70 VAND. L. REV. EN BANC 283, 284 (2017) ("[S]cholars and policymakers have not yet considered the question of who, in fact, invests in the risk-bearing securities critical to bank regulation and resolution—and what this means for regulatory policy.").

42. For example, as of March 5, 2019, the SPDR® S&P 500 ETF (SPY) was made up of 1.48% Chase and 1.45% Exxon.

> nors of the Federal Reserve System (the "Federal Reserve") on December 15, 2016 regarding, among other things, the minimum levels of unsecured external long-term debt and other loss-absorbing capacity that certain U.S. bank holding companies, including JPMorgan Chase & Co., will be required to maintain, commencing January 1, 2019. Such debt must satisfy certain eligibility criteria under the TLAC rules. If JPMorgan Chase & Co. were to enter into resolution either in a proceeding under Chapter 11 of the U.S. Bankruptcy Code or into a receivership administered by the Federal Deposit Insurance Corporation (the "FDIC") under Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act"), holders of the notes and other debt and equity securities of JPMorgan Chase & Co. will absorb the losses of JPMorgan Chase & Co. and its affiliates.[43]

Disclosure, but in name only.[44] Saying that certain types of investments will "absorb the losses" that result from a bankruptcy case is not quite the same thing as saying "your investment is comparable to 'junk bonds'—high-risk debt—and will lose value, perhaps all value, if the bank fails." The basic impossibility of the TLAC system is avoided by opacity. Unless holders of Chase debt securities are experts in the intricacies of the TLAC rules, they have no reasonable way of determining how risky those securities truly are.

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Part II of this paper outlines the TLAC system of debt and equity for American financial holding companies. In Part III, I report the results of a simple empirical study. In early March 2019, I attempted to obtain quotes[45] for every domestic bond or note on Citigroup's list of TLAC debt. For those issues with available information—even if no currently active quote was available—I recorded the disclosures provided to investors. Not one mentioned the TLAC rules, or the role that TLAC debt would play in the resolution of Citigroup.

Part IV then develops the central thesis of this paper: namely, that the TLAC strategy largely depends on the ability to disguise equity as debt, and further to pretend that financial institution equity is

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43. *Prospectus Supplement (to Prospectus dated April 15, 2016)*, JPMORGAN CHASE & CO. (Jan. 22, 2019), [https://perma.cc/84UH-9BYX].

44. The most recent 10-K explains somewhat more directly: "If the Parent Company were to enter into a resolution, holders of eligible LTD [long-term debt] and other debt and equity securities of the Parent Company will absorb the losses of the Parent Company and its subsidiaries." But this discussion is not tied to any particular security. JPMorgan Chase & Co., Annual Report (Form 10-K) (Feb. 27, 2018).

45. A bond quote is the last price at which a bond was traded.

just like other "blue chip" corporate equity. This obfuscation facilitates the adoption of a new resolution model in the short term, but presents long-term dangers to investors in large banks and the financial system.

In particular, investors may be slow to appreciate the risks that TLAC debt presents, but once they do, what price will large financial institutions pay to support their present capital structure? A sudden run by panicked investors out of TLAC debt or the equity of large banks would present obvious problems.[46]

Italy provides a key example of how this might play out:

> In December 2015, the Italian government rescued four regional banks and imposed almost $400 million of losses on holders of their subordinated debt. Many of the debtholders were consumers who had been persuaded by their banks to convert their deposits into subordinated bonds. The debtholders' losses provoked a strong political backlash against then Prime Minister Matteo Renzi and caused many investors to dump their holdings of subordinated debt in Italian banks.[47]

As a result, in 2017 Italian authorities recapitalized two regional Italian banks without imposing losses on bondholders, as required under European law.[48]

A gradual increase in yield (and cost) might be less problematic, and indeed might ultimately encourage a kind of "soft" breakup of the larger banks, as the financial markets begin to price in the true costs of a megabank failure and thus make their massive size less attractive. But it seems strange and even reckless to leave such an important policy aim to chance. The paper thus concludes by observing that current efforts to reduce the systemic risks of the existing banking system—whose basic structure remains largely unchanged from 2007—by installing a "new and improved" resolution structure will

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46. We saw some indications of what this might look like in 2016, when investors dumped Deutsche Bank CoCos because of growing concerns about Deutsche's viability. Joseph Cotterill, *The Coco That Popped*, FT ALPHAVILLE (Feb. 9, 2016), https://ftalphaville.ft.com/2016/02/09/2152719/the-coco-that-popped/. As described at the end of the next section of the paper, CoCos have some similarities to TLAC debt.

47. Lubben & Wilmarth, *supra* note 9, at 1235–36.

48. ARTHUR E. WILMARTH, JR., TAMING THE MEGABANKS: WHY WE NEED A NEW GLASS-STEAGALL ACT 314 (2020). *See* Marco Lamandini, Giuseppe Lusignani & David Ramos Muñoz, *Does Europe Have What It Takes to Finish the Banking Union?*, 24 COLUM. J. EUR. L. 233, 267–68 (2018) ("The [2017] law then tried to accomplish an acrobatic exercise to balance the demands of [EU] State aid rules on burden-sharing, with the aim of limiting bondholders' losses (especially retail ones) by also regulating the conversion of subordinated debt into shares at a given exchange ratio.").

only "succeed" if we close our eyes (and those of investors) to the long-term dangers that strategy entails.

II.
TLAC: Debt and Equity

Historically, the United States had an insolvency system that divided financial institutions into three clearly-defined categories: depository banks, insurance companies, and everyone else.[49] Failures of depository banks were "resolved" by the FDIC, insolvent insurance companies were handled in state-court receiverships, and "everything else" went into Chapter 11 of the Bankruptcy Code.[50] Thus, when Drexel Burnham Lambert, the investment bank that "invented" junk bonds, collapsed in 1990, it was resolved through a Chapter 11 filing by its parent company, being neither an insured bank nor an insurance company.[51] The demise of Drexel was quite different from the approach that the FDIC uses for resolving the failures of large depository banks:

> The FDIC normally tries to sell a distressed bank to another. Thus, in 2008, Chase acquired Washington Mutual, pushing the New York bank into previously unoccupied Western territory. The transfer is typically done through a "purchase and assumption" agreement.[52]

During the recent financial crisis, it seemed that another method of resolution for large nonbank financial institutions was developed when the Federal Reserve orchestrated the rescue of Bear Stearns by Chase in March 2008.[53] However, as quickly as the Fed got into the resolution business, it got out when Lehman faced an almost identical crisis six months later. Despite being a top investment bank, with more than twice as many assets as Bear Stearns and with key connections to financial institutions throughout the world, Lehman was left to

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49. Beginning in the 1970s, this got slightly more confused, when broker-dealers were redirected to new bankruptcy-like liquidation procedures under SIPA, although SIPA only narrowly applies to the specific legal entity that is regulated as a broker-dealer, and not the corporate group as a whole. Thomas W. Joo, *Who Watches the Watchers? The Securities Investor Protection Act, Investor Confidence, and the Subsidization of Failure*, 72 S. Cal. L. Rev. 1071, 1104 (1999).

50. Stephen J. Lubben, The Law of Failure: A Tour Through the Wilds of American Insolvency Law 103–04, 107, 132–33 (2018).

51. Kurt Eichenwald, *Drexel, Symbol of Wall St. Era, Is Dismantling; Bankruptcy Filed*, N.Y. Times, Feb. 14, 1990, at A1.

52. Lubben, *supra* note 50, at 104.

53. Steven A. Ramirez, *Subprime Bailouts and the Predator State*, 35 U. Dayton L. Rev. 81, 85 (2009).

the "normal" bankruptcy process.[54] Indeed, Lehman's bankruptcy process was something less than normal, since it was not afforded the preparation time that even an airline might have been allowed before entering Chapter 11.[55] The results, while perhaps better than some bankers might have expected, were still far short of an ideal outcome.[56]

The Fed quickly returned to something like the Bear Sterns-approach with AIG,[57] and the U.S. Treasury provided more surreptitious aid to tottering financial institutions like Citibank and Bank of America.[58] In 2010, the Dodd-Frank Act tried to address the "bankruptcy or bailout" dilemma created by the failures of Lehman and AIG by creating the new Orderly Liquidation Authority (OLA) in Title II, which, combined with SPOE (described below), may allow for the resolution of an insolvent bank holding company while its operating subsidiaries remain intact; thus making the resolution process significantly simpler and more efficient, and theoretically minimizing the risk of runs on the subsidiaries.[59] OLA represents an attempt to extend the FDIC receivership model to large financial institutions of all kinds, but notably it supplements the existing insolvency systems, rather than replacing them.[60] As I have summarized elsewhere,

> The law . . . extends the FDIC's reach to include the holding company and unregulated subsidiaries, which previously would have failed under the normal Bankruptcy Code provisions. And the FDIC can also grab the assets of a failed broker-dealer.
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> One proposed use of OLA turns on the so-called single-point-of-entry (SPOE) strategy.

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54. Caitlin Bozman, *Holding the Line or Changing Tides? The Future of "Too Big to Fail" Regulation*, 107 GEO. L.J. 1105, 1112 (2019).

55. Stephanie Ben-Ishai & Stephen J. Lubben, *A Comparative Study of Bankruptcy as Bailout*, 6 BROOK. J. CORP. FIN. & COM. L. 79, 90 (2011).

> Unfortunately, it seems that neither banking regulators nor Lehman management appreciated that filing a large corporate bankruptcy case involves a good deal of advanced planning. Instead, both parties treated the matter more like a homeowner seeking to use bankruptcy on the day of the foreclosure sale: Lehman's bankruptcy counsel was only alerted on the day of the proposed filing.

56. Stephen J. Lubben, *The Divide Between Banking and Bankruptcy*, N.Y. TIMES: DEALBOOK (Feb. 22, 2012, 12:13 PM), https://dealbook.nytimes.com/2012/02/22/the-divide-between-banking-and-bankruptcy/.

57. Colleen M. Baker, *Incomplete Clearinghouse Mandates*, 56 AM. BUS. L.J. 507, 519 (2019).

58. Lissa Lamkin Broome, *The Dodd-Frank Act: Tarp Bailout Backlash and Too Big to Fail*, 15 N.C. BANKING INST. 69, 69 (2011).

59. Lubben & Wilmarth, *supra* note 9, at 1217.

60. LUBBEN, *supra* note 50, at 105–06.

> The SPOE strategy envisions that a resolution under Title II would occur only at the top-tier holding company, avoiding to the greatest extent possible the need for the initiation of insolvency proceedings at the level of the operating subsidiaries. If it works as planned, this approach minimizes the complexities and conflicts that would invariably arise if multiple resolution proceedings in the United States and foreign jurisdictions had to be commenced at the level of the operating subsidiaries.

It is also designed to reduce the risk of runs on the operating subsidiaries by their depositors and other short-term creditors, like swaps and other derivatives counterparties. The SPOE approach instead envisions that these creditors would be spared and all losses incurred at the level of the operating subsidiaries would be absorbed by holders of the top-tier holding company's long-term debt. Whether SPOE will work as designed, particularly in a 2008-style scenario of widespread financial panic, is the subject of a good deal of debate.[61]

Specifically, whether SPOE will work depends, in large part, on whether the TLAC debt system, which I turn to next, will itself work as designed.

A. You Can Never Have Too Many Acronyms: TLAC in Support of SPOE

In November 2015, the Financial Stability Board (FSB)—a key global coordinating body for regulators[62]—published its guidelines for making global systemically important banks (G-SIBs) more amenable to resolution.[63] Under this proposal, G-SIBs are required to meet a minimum TLAC requirement of 16% of their group's risk-weighted assets (RWAs), rising to 18% in 2022.[64]

In short, at least sixteen percent of the financial institution's assets—adjusted for the assets' perceived riskiness ("risk weighting")—must be financed with debt or equity that will aid in resolution of the entity, namely common equity and TLAC qualified debt, and in a few years a bit more of such financing will be required.

While the FSB's proposal is not directly enforceable in the United States, the Federal Reserve Board of Governors adopted a final

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61. *Id*. at 106.

62. *See generally* G.A. Walker, *International Financial Instability and the Financial Stability Board*, 47 INT'L LAW. 1 (2013).

63. *Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution: Total Loss-absorbing Capacity (TLAC) Term Sheet*, FINANCIAL STABILITY BOARD (Nov. 9, 2015), http://www.fsb.org/wp-content/uploads/TLAC-Principles-and-Term-Sheet-for-publication-final.pdf.

64. *Id.* at 10.

rule in December 2016 that requires U.S. based G-SIBs[65] and the U.S. affiliates of certain foreign G-SIBs to adhere to U.S.-specific TLAC requirements.[66] Under the domestic rules, TLAC consists of (1) Tier 1 capital, which is largely comprised of common equity and preferred stock,[67] and (2) the unpaid principal of TLAC-eligible debt securities, subject to reductions for debt due in the near term.[68]

Under the Fed's rules, a financial institution must hold TLAC that exceeds the larger of

- 18% of the G-SIB's RWA plus the then-applicable RWA-based TLAC buffer. The RWA-based TLAC buffer equals the 2.5% capital conservation buffer,[69] plus any applicable countercyclical capital buffer (currently 0%[70]), plus the specific G-SIB's capital surcharge[71] (between 1 and 4.5%, in theory, although no US G-SIB has gone beyond 3.5% to date—and presently only Chase faces a surcharge of even that level)[72], or
- 7.5% of the G-SIB's total leverage exposure—under an alternative form of risk weighted assets under Basel III—plus a leveraged-based TLAC buffer of 2% (i.e., 9.5%).[73]

Essentially this means there is a TLAC floor of 9.5% of risk-weighted assets for G-SIBs, but in many cases it will be much higher. For example, Citigroup, the subject of Part III of this paper, reports that it "estimates its total current minimum TLAC requirement is 22.5% of RWA for 2019."[74] That total is reflective of the first option above, and is comprised of 18% plus the 2.5% capital conservation buffer and Citigroup's 2.0% G-SIB capital surcharge.

Within the broader TLAC requirement, the long-term-debt requirement (LTD) means that the bank must have eligible outstanding TLAC debt that exceeds the greater of

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65. Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, State Street, and Wells Fargo.

66. *See* 12 C.F.R. §§ 252.60–252.65.

67. 12 C.F.R. § 217.20; *see also* Skinner, *supra* note 10 (describing Tier 1 capital as "the safest and most liquid" forms of capital).

68. 12 C.F.R. § 252.63(b).

69. As part of the Basel III changes made in the aftermath of the 2008 financial crisis, all banks were required to maintain a fixed capital conservation buffer equal to 2.5% of risk-weighted assets, in addition to several other capital and leverage requirements. Starting in October 2020, these capital requirements will be replaced with a new "dynamic" capital requirement.

70. 12 C.F.R. § 217.11(b).

71. 12 C.F.R. § 217.2.

72. G-SIB Scores Interactive Chart, OFFICE OF FINANCIAL RESEARCH (Jan. 31, 2020), https://www.financialresearch.gov/gsib-scores-chart/.

73. 12 C.F.R. § 252.63.

74. Citigroup Inc., Annual Report, (Form 10-K) (Feb. 22, 2019).

- 6% of the G-SIB's RWA plus its G-SIB capital surcharge, determined in a different way than under the general TLAC requirement, and
- 4.5% of the G-SIB's total leverage exposure.[75]

Thus, each G-SIB must have long-term debt equal to at least 4.5% of risk weighted assets, but in most cases much more. In the case of Citigroup, this results in an LTD requirement of 9% of RWA—a result of a 3.0% G-SIB capital surcharge applicable to this calculation. Using numbers from its 2018 10-K, this results in a requirement that Citigroup have over $100 billion in outstanding eligible debt.[76]

Debt that is due within two years only satisfies the LTD requirements at 50% of par value,[77] while debt due within one year is subject to a 100% haircut (i.e., it does not count at all).[78] US banks have begun to issue senior debt with call options one year before maturity,[79] with plans to redeem the debt before it stops counting towards their TLAC requirement, allowing them to quickly retire debt that has no regulatory benefit.[80]

The external LTD requirements are linked to the capital requirements—including the capital conservation buffer and applicable G-SIB surcharges—so that the amount of debt a G-SIB is required to hold will be nearly the same as the required amount of common equity. Debt instruments are only eligible to meet the LTD requirement if they are governed by domestic law and not subject to acceleration or early payoff as a result of a decline in the issuer-G-SIB's credit qual-

75. 12 C.F.R. § 252.62.

76. Based on reported risk-weighted assets of $1,174,448 million (standardized approach) or $1,131,933 million (advanced approach). Citigroup Inc., *supra* note 70, at 35. Overall, as of the end of 2018, US banks have issued more than $650 billion in TLAC related debt. Claire Boston, *Banks Presence Shrinks in the U.S. Corporate Bond Market*, BLOOMBERG (Jan. 25, 2019, 9:07 AM), https://www.bloomberg.com/news/articles/2019-01-25/banks-are-a-shrinking-presence-in-the-u-s-corporate-bond market.

77. Par value is the amount or money a bond issuer promises to repay at the bond's maturity date. Thus, a bond for which the creditor is owed $1,000 within two years will only satisfy $500 worth of TLAC requirements.

78. Of course, the latter instruments can still be bailed-in in a crisis and represent an additional buffer within the bank.

79. A call option on a bond means that the issuer may elect to pay off the debt early. It is the corporate debt equivalent of the right homeowners enjoy to refinance their mortgage.

80. Will Caiger-Smith & Alice Gledhill, *TLAC Callables All the Rage as Goldman Breaks Europe*, REUTERS (Oct. 21, 2016, 1:25 PM), https://www.reuters.com/article/uscorpbonds-banks-bonds-idUSL1N1CR0RK.

ity.[81] If exercising a call right would cause the G-SIB to fall below its LTD or broader TLAC requirement, the issuer must seek Federal Reserve approval before calling the debt.

This debt must be issued by a "clean" holding company.[82] While termed the "clean" holding company rule, holding companies are in fact allowed to have non-TLAC debt. Such debt is limited to 5% of the holding company's total TLAC (equity and debt), unless the TLAC debt is expressly subordinated.[83] That is, creation of senior debt is unlimited, but pari pasu[84] or subordinated debt is limited to 5% of TLAC debt. Notably, former TLAC debt that is within one year of maturity, and thus subject to a 100% haircut for TLAC purposes, is not included in the 5% limit. There is an assumption here—perhaps unwarranted—that senior debt will remain untouched during the resolution process, so the focus is on keeping the junior (subordinated) debt stock "clean" to facilitate easy restructuring or resolution.

While the overall TLAC rules will require G-SIBs to have somewhere between 21% and 23% of their overall capital structure in equity and qualifying long-term debt, the remainder of their capital structure is to be comprised of obligations issued by the operating subsidiaries.[85] This is designed to permit the "bailout" of short-term creditors—including not only depositors, but also wholesale funders (such as lenders under repurchase agreements) and derivative counterparties—while imposing losses on the long-term bondholders.[86]

As noted in the introduction of this section, the TLAC requirements are designed to work in conjunction with a resolution strategy known as single point-of-entry or SPOE,[87] wherein only the G-SIB's holding company would enter into a bankruptcy or OLA proceeding.[88]

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81. *See* Stephen Healy, *Federal Reserve Adopts New Bailout Rule*, 36 REV. BANKING & FIN. L. 531, 538 (2017).

82. *See* 12 C.F.R. § 252.64.

83. *Id.*

84. Equal ranked. For clarity bankruptcy attorneys use the language of a long dead civil law empire.

85. Arthur E. Wilmarth, Jr., *SPOE + TLAC = More Bailouts for Wall Street*, BANKING & FIN. SERVICES POL'Y REP., Mar. 2016, at 1, 4.

86. Jeffrey N. Gordon & Wolf-Georg Ringe, *Bank Resolution in the European Banking Union: A Transatlantic Perspective on What It Would Take*, 115 COLUM. L. REV. 1297, 1364 (2015).

87. *See generally* Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy, 78 Fed. Reg. 76,614 (Dec. 18, 2013) (describing SPOE).

88. Wolf-Georg Ringe, *Bank Bail-in between Liquidity and Solvency*, 92 AM. BANKR. L.J. 299, 307 (2018). Under Title II of Dodd-Frank, OLA establishes a system whereby the FDIC can oversee a resolution process that looks like a traditional

Losses, which most likely would originate at the operating company level, would be "pushed up" to the holding company, the holding company would be detached from the group and liquidated, and the subsidiaries would operate under a "bridge financial holding company" that would act as a temporary holding company for the group.[89]

The movement of losses from operating subsidiaries to the holding company is achieved by an "internal TLAC" or "internal LAC"[90] structure, in which the parent company agrees to recapitalize its subsidiaries should they get into trouble.[91] This obligation to recapitalize—often taking the form of a "secured support agreement"—is designed to be immune from attack as a fraudulent transfer or otherwise subject to avoidance by grumpy creditors or cheerful bankruptcy trustees.[92] Basically, subsidiary losses are imposed on the holding company, and the holding company in turn imposes those losses on its shareholders and bondholders.

As the rating agency Fitch recently noted:

> A pivotal question will be whose investors should absorb potential losses in the event of a bail-in approach. Internal LAC triggered for a foreign-based material sub-group will result in losses being transferred to the home authority region via the parent bank and thereby onto parent bank investors. Although the home authority is generally expected to respect and consent to the triggering of internal LAC (assuming agreed-upon processes have been followed, eg [sic], via crisis management groups, and in the absence of alternative credible options), difficulties could arise where the home authority objects to the write-down or conversion into equity of

FDIC bank receivership, but which is applied to a large part of the financial institution. In a SPOE-style OLA case, that proceeding would only involve the bank holding company (or, more likely, the "financial holding company," as defined in the Gramm–Leach–Bliley Act). *Id.* at 307–08; *see also* Mark R. Maciuch, *Backstop, Not Bailout: The Case for Preserving the Orderly Liquidation Authority under Dodd-Frank*, 13 BROOK, J. CORP. FIN. & COM. L. 263, 266–68 (2018) (providing an overview of OLA).

89. Richard A. Roth, *Treasury Report Calls for Restricting, Not Abolishing, Orderly Liquidation Authority*, BANKING & FIN. L. DAILY (Feb. 21, 2018), https://lrus.wolterskluwer.com/news/banking-finance/treasury-report-calls-for-restricting-not-abolishing-orderly-liquidation-authority/46709/ [https://perma.cc/3QDS-5JDZ]; *see also* Steven L. Schwarcz, *Beyond Bankruptcy: Resolution as a Macroprudential Regulatory Tool*, 94 NOTRE DAME L. REV. 709, 725 (2018) (discussing the "bridge financial holding company" concept).

90. Loss absorbing capacity.

91. *See* Wilmarth, *supra* note 85, at 4–5.

92. Roth, *supra* note 89.

> internal LAC, or does not provide consent within the ex-ante agreed timeframe.[93]

As noted earlier, if SPOE "works as planned, [it] minimizes the complexities and conflicts that would invariably arise if multiple resolution proceedings in the United States and foreign jurisdictions had to be commenced at the level of the operating subsidiaries."[94] But as the foregoing Fitch report makes clear, getting SPOE to work still requires sufficient cooperation with home regulators, especially on the question of internal TLAC. Home country regulators could be understandably hesitant to let assets leave the jurisdiction for the sake of saving a financial institution's creditors in other locations, but the very point of the OLA-TLAC-SPOE combination is to allow a single resolution proceeding involving only the holding company.

B. The Importance of Being Subordinated

The overall TLAC-SPOE strategy relies deeply on the concept of subordination: holding company creditors, who in theory are all long-term debtholders with no practical ability to run,[95] will absorb the G-SIB's losses, while short-term creditors, who have a greater ability to run, will hopefully decide not to do so because their claims will be 100% protected within an operating subsidiary that remains "open for business."[96] As a matter of grand theory, and assuming such creditors act like the superbly rational drones often seen in economic models, the short-term creditors will not run.[97]

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93. *Major Bank Jurisdiction Resolution Regimes - Update*, FITCH RATINGS, Sept. 11, 2019, at 1.

94. LUBBEN, *supra* note 50, at 106; *see also* text accompanying note 60.

95. While the concept of a bank run is familiar to anyone who has taken a U.S. history class that covered the Great Depression, any short-term creditors – not just depositors – can "run," by demanding repayment of their debts that might otherwise be "rolled over." For example, a bank might use a security to borrow money through a repurchase agreement (or repo). The counterparty gives the bank cash in exchange for the security, with an agreement that in 48 hours the bank will buy back the security at an agreed price. In normal times, the parties might extend this agreement repeatedly. But if the counterparty wants to "run," it can terminate the deal at any 48-hour period. Just like a run by depositors, the refusal to "roll over" the transaction has the effect of draining cash from the bank. Long-term bondholders, however, have no contractual right to repayment until maturity. Thus regulators view long-term bond debt as less "runnable."

96. *See, e.g.*, John Crawford, *Credible Losers: A Regulatory Design for Prudential Market Discipline*, 54 AM. BUS. L.J. 107, 144 (2017) (describing that, in a SPOE resolution, "the liabilities of the parent holding company are generally 'structurally subordinated'" to those of the operating subsidiaries); David A. Skeel, Jr., *When Should Bankruptcy Be an Option (for People, Places, or Things)?*, 55 WM. & MARY L. REV. 2217, 2240 (2014).

97. *But cf.* Lubben, *supra* note 14, at 1389.

In truth, of course, there is a good deal of wishful thinking, and a bit of a "pay no attention to the man behind the curtain" tone to the suggestion that subsidiary creditors will completely disregard what has just happened to the G-SIB's holding company.[98] Indeed, history is hardly supportive of this aspect of the SPOE-TLAC structure, for example

> [W]hen Drexel Burnham declared bankruptcy in February 1990, following the collapse of the junk bond market, its problems quickly spread to two of its subsidiaries, which were securities broker-dealers regulated by the SEC. The regulated subsidiaries were solvent at the time of Drexel Burnham's failure, but the SEC was soon obliged to liquidate them after they could not obtain even short-term credit from counterparties or banks. The contagion resulting from the failure[ ] of . . . Drexel Burnham indicates that investors, depositors and other creditors do not believe that a regulated financial institution can be effectively shielded from serious problems occurring at its parent company.[99]

But the focus of this paper is on the shareholders and creditors of the parent company, who will undoubtedly take the hit when a large G-SIB fails.

Who might these investors be? Regulators have expressed an intention to discourage large financial institutions from holding TLAC debt by imposing significant capital penalties.[100] Assuming this

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> And the notion that all the operating subsidiaries throughout the world will continue business as usual in the days after the parent company has failed assumes a high degree of rationality in the midst of financial collapse. It is almost as if the proponents of SPOE have already forgotten what happened in 2008.

98. *See* Jay Lawrence Westbrook, *SIFIs and States*, 49 TEX. INT'L L.J. 329, 341–42 (2014) (suggesting that, during market turmoil, investors will not be able to know whether a bank is solvent). Foreign regulators with control over subsidiaries must also "keep calm," despite the failure of the holding company. Patrick Bolton & Martin Oehmke, *Bank Resolution and the Structure of Global Banks*, 32 REV. FIN. STUD. 2384, 2410 (2018):

> [O]ne of the key challenges in G-SIB resolution under SPOE is ensuring that national regulators are willing to cooperate. Such cooperation cannot be taken for granted. National regulators may prefer to ring-fence domestic assets rather than cooperate in a cross-border SPOE resolution that involves transfers to recapitalize operations in another jurisdiction.

99. Arthur E. Wilmarth, Jr., *Wal-Mart and the Separation of Banking and Commerce*, 39 CONN. L. REV. 1539, 1607 (2007).

100. *See* Steven Harras, *Regulators to Limit Megabank Connections by Amending 'Too Big to Fail' Rule*, CQ ROLL CALL, Apr. 2, 2019, 2019 WL 1450293 ("The new plan, if approved, would require megabanks to hold additional capital against "substantial holdings" of TLAC debt. The proposal is designed to discourage global systemically important banks, or GSIBs, from purchasing large amounts of TLAC debt from other big banks.").

comes to pass, and given that many of these financial institutions already face strong limitations on holding equity and other high-risk investments, it seems likely that individuals, either directly or indirectly (through asset managers, insurance companies, and pension funds), are the most likely investors in the TLAC "resolution stack."[101] This means that those saving for their retirement, or dependent on insurance, are the investors who are most likely to suffer losses when banks fail.

On the equity side, the inclusion of the US G-SIBs in several broad market indexes means that individual investors will own the TLAC equity as part of their index funds.[102] Given the growth of passive investing, ownership by index funds may well be sufficient to maintain G-SIB share prices, at least in the near term.[103]

C. The European Approach

The system outlined above is specific to the United States, and because I rely on some European examples in this paper, it makes sense to briefly outline the European approach to post-crisis bank resolution.[104]

In addition to the TLAC system, which applies to all G-SIBs throughout the world,[105] EU banks are subject to a minimum requirement for own funds and eligible liabilities (MREL), first introduced for EU banks by means of the Bank Recovery and Resolution Directive (BRRD) in 2016.[106] MREL affects all European banks, even those that are not G-SIBs. Under recent amendments to the MREL regulations, non-G-SIB European banks are divided between banks generally, and "top tier" banks.[107] The latter are essentially the "middle tier," despite their name, since they are the biggest European banks

101. See *infra* part IV.

102. *See* Yesha Yadav, *Too-Big-to-Fail Shareholders*, 103 MINN. L. REV. 587, 593–94 (2018).

103. *See* Dorothy S. Lund, *The Case Against Passive Shareholder Voting,* 43 J. CORP. L. 493, 507 (2018) (describing the growth in passive investing).

104. For further discussion, see generally Marco Ventoruzzo & Giulio Sandrelli, *O Tell Me the Truth about Bail-In: Theory and Practice*, 13 J. BUS. ENTREPRENEURSHIP & L. 187 (2019).

105. *See* FINANCIAL STABILITY BOARD, *supra* note 63, and accompanying text.

106. Stuart Willey, Paul Alexander & Angelo Messore, *Banks Face Steep Climb in MREL Issuance*, WHITE & CASE: FINANCIAL REGULATORY OBSERVER (Mar. 20, 2019), https://www.whitecase.com/publications/insight/banks-face-steep-climb-mrel-issuance.

107. KPMG, RESOLUTION: PRESSURES BUILD ON EUROPEAN BANKS, (2019), https://assets.kpmg/content/dam/kpmg/ie/pdf/2019/05/ie-resolution-pressures-build-on-european-banks-may-2019.pdf.

after the European G-SIBs. These banks have assets of more than €100 billion, although banks with lesser assets can also be designated as "top tier" institutions by regulators. The top tier banks are subject to requirements that mirror those of TLAC, although they demand somewhat lesser degrees of "resolvable" debt.[108]

Resolution in the European context is complicated by the fact that, save for in the UK and Switzerland, bank holding companies are relatively rare. Thus, a complex set of regulatory moves have been taken to effectively subordinate MREL-eligible debt to claims held by protected creditors (depositors and derivative counterparties), who would otherwise be considered of equal rank with the bondholders.

In addition to these formal resolution structures, some European banks have issued "CoCos"[109] as additional capital instruments, beyond their common equity.[110] As noted in the Introduction, CoCos have been around longer than TLAC/MREL instruments, and are essentially bonds that are converted into common equity or written down if contractually specified trigger events occur.[111] A key distinction between the CoCos and the TLAC/MREL debt instruments is that the CoCos are designed to be triggered while the bank is still a going concern, with the hope that the triggering will avoid the need for resolution. TLAC/MREL, on the other hand, is triggered when a banking organization enters formal insolvency proceedings.[112]

CoCos that are written down raise confusing issues of priority skipping – the shareholders retain their investment while the bond-

108. *See* Marcello Minenna, *How Italian Banks Are Disadvantaged by New MREL Rules*, FIN. TIMES: ALPHAVILLE (July 17, 2017), https://ftalphaville.ft.com/2017/07/21/2191734/guest-post-how-italian-banks-are-disadvantaged-by-new-mrel-rules/ (noting similarities between European requirements for top tier banks and TLAC); David Ramos & Javier Solana, *Bank Resolution and Creditor Distribution: The Tension Shaping Global Banking - Part I: "External and Intra-Group Funding" and "Ex Ante Planning v. Ex Post Execution" Dimensions*, 28 U. MIAMI BUS. L. REV. 1, 56 (2019) (describing how MREL requirements vary more than TLAC requirements).

109. Contingent convertible bonds (CoCo), also known as an enhanced capital notes (ECNs).

110. *See* Hilary J. Allen, *Cocos Can Drive Markets Cuckoo*, 16 LEWIS & CLARK L. REV. 125, 138–39 (2012) (describing Lloyd's and Credit Suisse's issuance of CoCo instruments).

111. *E.g.* Hilary J. Allen, *Let's Talk About Tax: Fixing Bank Incentives to Sabotage Stability*, 18 FORDHAM J. CORP. & FIN. L. 821, 852–53 (2013); *see also* Deutsch Bundesbank, *Contingent Convertible Bonds: Design, Regulation, Usefulness*, 70 MONTHLY REP., no. 3, Mar. 2018, at 53, 54 ("According to the financial data services Bloomberg and Dealogic, by the end of 2017, 398 CoCo bonds had been issued in Europe alone (of which EU: 285) with a total volume of €230 billion (of which EU: €193 billion)).")

112. For more on CoCos, *see* Cheng-Yun Tsang, *The Seven Deadly Sins of the Contemporary Financial System*, 37 REV. BANKING & FIN. L. 359, 406–07 (2017).

holders lose theirs. A recent report from Deutsche Bundesbank suggests that many European CoCos are ill suited to their alleged purpose, in large part because the terms of such instruments are largely dictated by shareholders and shareholder-beholden management.[113] In such an environment, shareholders have greater incentives to assume excessive risks if the first loss position is held by non-voting CoCo bondholders.

CoCos that convert to equity are somewhat similar to TLAC debt, in that the end result in both cases is that claims of debtholders are effectively converted into equity claims. However, CoCos more directly disclose this outcome and are subject to greater sales restrictions than American TLAC debt instruments. For example, the sale of CoCos to retail investors is prohibited in the UK.[114]

* * *

In the next part of this Article, I examine how easy it is for individual investors in the United States to purchase TLAC debt securities without any information about the unique role those securities might play in the "resolution" of the issuer-bank. Indeed, the very term—"resolution"—seems likely to distract investors from understanding the core issues of default, bankruptcy, and loss of investment.

As will then be developed in Part IV, the ease with which individual investors could unwittingly buy TLAC debt, combined with the incentives asset managers will have to purchase that debt as they "reach for yield," means that true costs of a G-SIB's failure will be likely to fall on individual investors. In some sense, many taxpayers (in their status as investors) will effectively remain on the hook when a megabank fails, albeit with the chance to spread some of the pain to taxpayers in other jurisdictions as well.[115]

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113. Deutsch Bundesbank, *supra* note 111, at 60. https://www.bundesbank.de/resource/blob/723800/7dae3af896e09b2f3d0f3f5cc2ad12fd/mL/2018-03-cocos-data.pdf (describing equity-holders' outsized decision-making power in the context of CoCos' loss-absorption mechanisms).

114. Restrictions in Relation to the Retail Distribution of Contingent Convertible Instruments, FIN. CONDUCT AUTH. (last updated Sept. 12, 2016), https://www.fca.org.uk/publications/temporary-product-interventions/restrictions-relation-retail-distribution-contingent.

115. Assuming foreign investors are willing to buy debt that by regulation must be issued under American (likely New York) law.

III.
Disguising Equity as Debt, or Debt as Equity: An Empirical Study

In this section, I describe the results of a simple empirical study, designed to illuminate what "typical" retail investors might learn if they are interested in purchasing financial institution bonds, that turn out to be TLAC debt. In Part A I describe the study, in Part B I review the results, and in Part C I conclude with some observations. In short, individual investors would have to make a real effort—arguably an unrealistic effort—to discover that the bonds they are buying are essentially "equity disguised as debt."

To be sure, the Federal Reserve's TLAC rules do contain some disclosure obligations.[116] Thus, G-SIBs are required to include a description of the TLAC-SPOE process in the offering documents for their TLAC-eligible debt instruments. G-SIBs are also required to include similar disclosures either on their web pages, or in their SEC reports.[117]

The first requirement, of course, does not apply to TLAC-eligible debt that is already outstanding. In any event, as discussed below, the offering documents are not apt to be the primary source of information for an individual investor. Moreover, as discussed in the introduction to this paper, there is no present requirement that disclosures under the Federal Reserve's TLAC rules must be capable of being easily understood by somebody who is not either a corporate bankruptcy or bank regulation and resolution expert.[118] Saying that certain types of investments will "absorb the losses" that result from a bankruptcy case is not quite the same thing as saying "your investment is comparable to 'junk bonds'—high-risk debt—and will lose value, perhaps all value, if the bank fails."

A. Examining Citigroup's TLAC Debt

Appendix A to this Article contains Citigroup's list of TLAC eligible debt instruments,[119] as of March 2019. Overall, there are 111

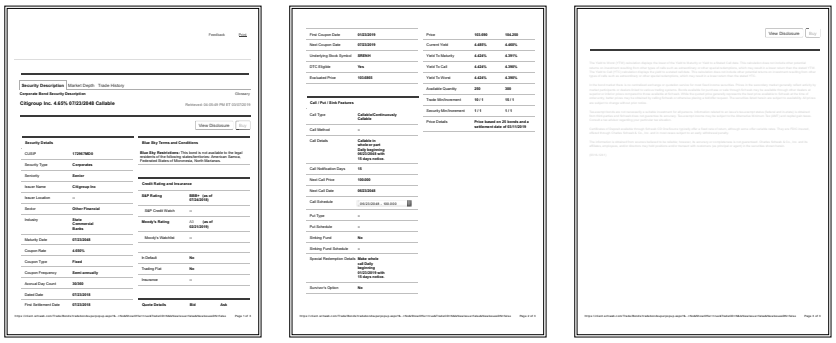
116. *See* Lubben & Wilmarth, *supra* note 9, at 1244. (arguing that "the Fed's disclosure requirements for TLAC debt are far too vague and too mild.").
117. 12 C.F.R. § 252.65.
118. This problem is endemic to American corporate disclosure documents. *See* Rett Wallace, *Uber's Enormous, Vague IPO Prospectus Is an Outrage*, Fin. Times (Apr. 30, 2019), https://www.ft.com/content/60ab80e2-6a8b-11e9-9ff9-8c855179f1c4 [https://perma.cc/482D-E8GK] (describing a decline in the quality of information contained in public companies' disclosure documents).
119. For ease, hereinafter I refer to each as a "bond," regardless of whether they are a bond or note.

distinct bonds, representing nearly $115 billion in (par value) debt on the list.[120] This is the basic material of my study.

On Wednesday, March 6, and Thursday, March 7, 2019, during regular market hours, I entered each CUSIP[121] on the Appendix into the relevant search box on Schwab.com. Forty-four of the bonds were available for purchase. Information was available for an additional 23 bonds, even though there was no currently available quote, creating a total of 67 bonds that I was able to examine.

Of the 111 debt instruments on the Appendix, 27 were issued abroad, and thus did not have CUSIP numbers.[122] This study therefore looks at 67 of the possible 84 domestic bonds, or just over 75% of the universe of Citigroup TLAC bonds.

For each of these 67 bonds, I saved a basic information ("Security Description") screen, an example of which is shown below:



I also visited, and saved, the page of information that Schwab provides to customers who click on the "View Disclosure" button at the bottom of the aforementioned information page. An example of the disclosure page, retrieved at the same time as the above information page, is shown below:

120. $4.5 billion of the debt was apparently ineligible at the time of my study, given that it had a maturity date within the next year. I have nonetheless included these debt instruments, indicated with gray shading on the Appendix, in the overall study.

121. A CUSIP number is a unique identification number assigned to all stocks and registered bonds in the United States and Canada. CUSIP GLOBAL SERVICES, https://www.cusip.com [https://perma.cc/Z367-NQE9] (last visited Sept. 7, 2020).

122. The foreign instruments were instead issued with International Securities Identification Number (ISIN), which can be distinguished from CUSIPs by the letters at the start of the number.

Disclosure Note for CUSIP - 172967MD0

Date	Type	Note
07/23/2018	New Issues on IDN information	USD 2.5 BLN. MWC T+30 BPS.Par call from 06/23/2048. BKS: Citi
07/23/2018	Asset	Until 01/23/2019, Make-Whole Call at US Treasury plus 30 basis points.
07/23/2018	Secured Text	The notes offered by this prospectus supplement are a series of senior debt securities issued under Citigroups senior debt indenture. The notes will be limited initially to an aggregate principal amount of $2,500,000,000.
07/23/2018	Events Of Default Text	Events of Default and Defaults Events of default under the senior debt indenture are: failure to pay principal or required interest for 30 days after it is due; and certain events of insolvency or bankruptcy, whether voluntary or not (Senior Debt Indenture, Section 6.01). Defaults under the senior debt indenture include: failure to perform any other covenant of Citigroup in the senior debt indenture; and all events of default (Senior Debt Indenture, Section 6.07). Unless otherwise specified in connection with a particular offering of senior debt, only the events of default provide for a right of acceleration of the senior debt securities. No other event, including a default that is not also an event of default, will result in acceleration (Senior Debt Indenture, Sections 6.01, 6.02 and 6.07). Unless otherwise specified in connection with a particular offering of subordinated debt, the only events of default specified in the subordinated debt indenture are events of insolvency or bankruptcy, whether voluntary or not, with respect to Citigroup. Only these events of default provide for a right of acceleration of the subordinated debt securities. No other event, including a default in the payment of principal of, premium, if any, or interest on, subordinated debt securities, the performance of any other covenant of Citigroup in the subordinated indenture or any other default that is not also an event of default, will result in acceleration (Subordinated Debt Indenture, Sections 6.01, 6.02 and 6.07). If an event of default regarding debt securities of any series issued under the indentures should occur and be continuing, either the trustee or the holders of 25% in the principal amount of outstanding debt securities of such series may declare each debt security of that series due and payable (Section 6.02). Citigroup is required to file annually with the trustee a statement of an officer as to the fulfillment by Citigroup of its obligations under the indentures during the preceding year (Senior Debt Indenture, Section 5.06; Subordinated Debt Indenture, Section 5.04). No event of default regarding one series of senior debt securities issued under the senior debt indenture is necessarily an event of default regarding any other series of senior debt securities (Senior Debt Indenture, Section 6.01). For purposes of this section, series refers to debt securities having identical terms, except as to issue date, principal amount and, if applicable, the date from which interest begins to accrue.

Date	Type	Note
07/23/2018	Redemption	Redemption at Issuer Option: We may redeem the notes, at our option, in whole at any time or in part from time to time, on or after January 23, 2019 and prior to June 23, 2048, at a redemption price equal to the sum of (i) 100% of the principal amount of the notes being redeemed plus accrued and unpaid interest thereon to, but excluding, the date of redemption; and (ii) the Make-Whole Amount (as defined in the Issuers Prospectus dated May 14, 2018 (the Prospectus)), if any, with respect to such notes. The Reinvestment Rate (as defined in the Prospectus) will equal the Treasury Yield defined therein calculated to June 23, 2048, plus 0.30%. We may redeem the notes, at our option, in whole, but not in part, on or after June 23, 2048 at a redemption price equal to 100% of the principal amount of the notes plus accrued and unpaid interest thereon to, but excluding, the date of redemption. Redemption for Tax Purposes: We may redeem the notes, at our option, in whole at any time, but not in part, at a redemption price equal to 100% of the principal amount of the notes plus accrued and unpaid interest thereon to, but excluding, the date of redemption, if, as a result of changes in U.S. tax law, withholding tax or information reporting requirements are imposed on payments on the notes to non-U.S. persons.

The information above is obtained from Reuters, a third party provider of fixed income data, and is believed to be reliable; however, its accuracy or completeness is not guaranteed.

As we can see at the end of the text box immediately above, Reuters provides this latter information for Schwab. The right-hand column of the text box reproduces specific portions of the underlying bond indenture.[123] Citigroup has traditionally issued debt securities under a master indenture, which provides general terms applicable to numerous bond offerings within a particular time period, and a supplemental indenture, which applies to a specific bond.

The relevant indentures are not available to Schwab customers on the broker's web page. Credit ratings are available, and there is a link to a Moody's report on the issuer. In March 2019, page four of that Moody's report stated that:

> Citigroup is a systemically important bank, which may be subject to Title II resolution in the US . . . As such, for Citi, we assume residual tangible common equity of 3% and losses post-failure of 8% of tangible banking assets. These are in line with our standard assumptions for US Title II banks. Under SPE [SPOE] receivership within the United States the FDIC has authority to bail-in holding company debt and provide liquidity to systemically important foreign and nonbank subsidiaries. We perform a consolidated LGF [loss given default] analysis of Citigroup, including its foreign

123. When an investor buys a "bond," she actually buys two related documents: "the first, a note that contains a simple promise to repay with interest and a reference to the second document, the indenture, which contains most of the substantive terms of the lending arrangement." LUBBEN, CORPORATE FINANCE, *supra* note 31, at ch. 14.

> wholesale operations but excluding major international deposit-taking subsidiaries including Banamex Citibank Korea and Citibank Pty in Australia, which we assume would be resolved within their local jurisdictions. As of year-end 2018, Citigroup reported a surplus above the TLAC requirement. We believe this situation will be sustained, given our forward-looking view of Citigroup's loss given failure.[124]

Indeed. Yet, as discussed below, that statement by Moody's is the closest a Schwab customer will come to a description of the impact of the TLAC-SPOE regime in the United States, unless they conduct additional research beyond the Schwab web page.

B. Study Results: TLAC Disclosure to Individual Investors

Of the 67 Citigroup bonds reviewed as part of this study, none of the Schwab information statements contained any mention of TLAC, SPOE, or the role that potential write-downs or write-offs of these particular debt instruments would play in a future Citi collapse. Instead, as can be seen in the example provided above, the focus is on standard information like interest rate yield, events of default, and call provisions. Based on this information alone, the investor would never know that G-SIB debt was not the same as traditional corporate debt.

Even if the investor clicks through to the Moody's report, the previously quoted discussion of TLAC and SPOE is followed by the observation that "we believe that Citi's bank deposits and bank senior debt are likely to face extremely low loss given failure." Of course, none of the TLAC instruments are bank-level debt, and thus this comment is apt to mislead the investor. Later in the report, Moody's observes that:

> We assess a 'Moderate' likelihood of external support to the deposits, senior debt and counterparty obligations of Citibank, N.A. and to the counterparty obligations of other systemically important subsidiaries, which results in one notch of uplift for those rating classes. We believe should SPE fail, and the resources of the holding company not be sufficient in a bail-in, there is a moderate likelihood the government would provide support to the depositors and senior creditors of Citibank N.A.[125]

But again, this is unhelpful at best to potential TLAC debt investors—especially if they do not appreciate the vital distinction between

124. Moody's Investor Service, *Senior Unsecured Rating as of 02/21/2019 for Citigroup Inc.* (on file with author), at 4.
125. *Id.* at 5.

Citibank N.A., the insured bank subsidiary, and Citigroup, Inc., the TLAC-issuing holding company.

An investor who "Googles" something like "Citigroup 172967MD0"—using the CUSIP from above—finds a host of unfamiliar looking web pages, the sixth of which is the list of TLAC debt securities that provides the basis for this study.[126] A somewhat more diligent investor might make their way to the Citigroup web page, and perhaps even the sub-page dedicated to fixed income investors.[127] There they might find a diagram that illustrates how Citigroup—the holding company—issues most of the public debt, the proceeds of which are then routed to the operating entities.[128] But the diagram contains no mention of TLAC, SPOE, or OLA.

Citigroup's debt securities web page includes a suggestion that the reader might wish to consult the "Funding and Liquidity Risk" section of the most recent 10-Q and 10-K.[129] Strangely, there does not appear to be any such section in the 2018 10-K.[130] But if the investor is somewhat flexible in what they are looking for, they will find a section entitled "Liquidity Risks" (in the plural) on page 53 of that document, and another section entitled "Liquidity Risk" (in the singular) beginning on page 82. Neither section effectively discloses what might happen to a TLAC bondholder's investment if Citigroup becomes insolvent.

If we search Citigroup's 10-K report for the term "TLAC," we find a general discussion of the TLAC rules on page 44, and a discussion of how much debt Citigroup will have to issue under those rules on page 87. On that same page, under the heading "Resolution Plan," we are told:

> Under Citi's resolution plan, only Citigroup, the parent holding company, would enter into bankruptcy, while Citigroup's material legal entities (as defined in the public section of its 2017 resolution plan, which can be found on the FRB's and FDIC's websites) would remain operational and outside of any resolution or insolvency proceedings. Citigroup believes its resolution plan has been designed to minimize the risk of systemic impact to the U.S. and

126. Reproduced as Exhibit A, *infra*.

127. *Fixed Income Investors*, CITIGROUP, https://www.citigroup.com/citi/fixedincome/ [https://perma.cc/D7BS-SDAZ] (last visited Sept. 7, 2020).

128. *Citigroup Funding Flows*, CITIGROUP, https://www.citigroup.com/citi/fixedincome/data/fund_over.pdf (last visited Sept. 6, 2020).

129. *Funding & Liquidity Overview*, CITIGROUP, https://www.citigroup.com/citi/fixedincome/cds_overview.htm [https://perma.cc/3GJN-2LD4] (last visited Sept. 6, 2020).

130. Citigroup Inc., *supra* note 70.

> global financial systems, while maximizing the value of the bankruptcy estate for the benefit of Citigroup's creditors, including its unsecured long-term debt holders. In addition, in line with the Federal Reserve's final total loss-absorbing capacity (TLAC) rule, Citigroup believes it has developed the resolution plan so that Citigroup's shareholders and unsecured creditors—including its unsecured long-term debt holders—bear any losses resulting from Citigroup's bankruptcy. Accordingly, any value realized by holders of its unsecured long-term debt may not be sufficient to repay the amounts owed to such debt holders in the event of a bankruptcy or other resolution proceeding of Citigroup.

Thus, one subtle, heavily qualified sentence, at the end of a dense paragraph on page 87 of Citigroup's 10-K report, is the closest we come to any explanation of what happens to TLAC bondholders upon default. "[A]ny value realized . . . may not be sufficient" to repay the investment. Hardly a clear statement that the investor's TLAC bonds will be converted into equity, and that such equity will likely be worth substantially less than the face value of the bond. Introducing unexplained concepts like "maximizing the value of the bankruptcy estate for the benefit of Citigroup's creditors," hardly helps investors really understand the nature of the investment.

The phrase "Citigroup believes it has developed a resolution plan so that Citigroup's shareholders and unsecured creditors—including its unsecured debt holders—bear any losses resulting from Citigroup's bankruptcy" provides the first bit of caution to potential TLAC debt investors. But what is the exact connection between this statement and any particular Citigroup debt instrument those investors might purchase?

Returning to the fixed-income-investor web page, potential TLAC bondholders might notice the link to something entitled "TLAC-Eligible Debt."[131] There we find the following text:

> Citi considers the Notes listed in the link below to be TLAC-eligible debt. The Notes are listed by category, CUSIP / ISIN, maturity date, and unpaid principal balance as of December 31, 2018. As previously disclosed, in line with the Federal Reserve Board's final total loss-absorbing capacity rule, Citigroup believes it has developed a resolution plan so that Citigroup's shareholders and unsecured creditors—including its unsecured debt holders—bear any losses resulting from Citigroup's bankruptcy. For additional information about the TLAC rule and its consequences for eligible debt securities, please refer to the section "Managing Global Risk – Li-

131. *TLAC-Eligible Debt*, CITIGROUP, https://www.citigroup.com/citi/fixedincome/cds_tlac.htm [https://perma.cc/83B4-9KC7] (last visited Sept. 6, 2020).

> quidity Risk – Long-Term Debt – Total Loss Absorbing Capacity (TLAC)" in Citi's most recent Annual Report on Form 10-K. This information does not constitute an offer to sell or the solicitation of an offer to buy the Notes or any Citi securities.

The link provides the current version of the list of bond instruments set forth on Exhibit A to this paper. But the suggestion that the 10-K will provide useful information about the "consequences for eligible debt securities" is quite doubtful, as we have already seen. Indeed, this text on the web page largely repeats the cloudy disclosure found in the 10-K.

What if an investor is truly persistent and decides to look at the underlying debt documentation, rather than rely on the key terms summarized on Schwab? Here it will largely depend on which debt instrument the investor is considering. And sometimes disclosure will even vary within debt instruments.

For example, if our investor is examining Citigroup's 4.450% Subordinated Notes due in 2027, the prospectus supplement dated September 23, 2015 contains no mention of TLAC; understandable, given that the American rules for TLAC were not finalized until more than a year later.[132] There is a vague and somewhat strange suggestion of a possible governmental bailout or recapitalization of Citi in the supplement, noting that:

> the subordinated notes may be fully subordinated to interests held by the U.S. government in the event of a receivership, insolvency or similar proceeding, including a proceeding under the "orderly liquidation authority" provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.[133]

Presumably this is a reference to potential FDIC funding under OLA, and the "orderly liquidation fund" contained therein.[134]

Under a prospectus supplement dated October 23, 2015, Citigroup offered an additional $1.5 billion of these subordinated

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132. CITIGROUP, PROSPECTUS SUPPLEMENT: 4.450% SUBORDINATED NOTES DUE 2027 (Sept. 23, 2015), https://www.citigroup.com/citi/fixedincome/data/US2B4-450-SubNotesdue2027.pdf.

133. *Id.* at S-6.

134. Hollace T. Cohen, *Orderly Liquidation Authority: A New Insolvency Regime to Address Systemic Risk*, 45 U. RICH. L. REV. 1143, 1216–17 (2011):

> Section 5390(n)(1) provides for the establishment in the Treasury of an Orderly Liquidation Fund which is to be available for the FDIC to borrow funds to carry out its rights and duties under Title II, "including the orderly liquidation of [the] covered financial compan[y], payment of administrative expenses, [and] the payment of principal and interest" on obligations issued by the FDIC as receiver to the Secretary.

notes.[135] Unsurprising, since this offering occurred only one month after the original offering, the discussion of a potential Citi insolvency remained the same.

By May 2018, when Citigroup again offered some $343 million of the notes, the Fed had issued its TLAC rules and the prospectus supplement, and indeed the underlying master prospectus, were substantially revised.[136] Nonetheless, the notes issued in 2018 purport to be legally indistinct from those issued on the two prior occasions.[137]

The 2018 master prospectus discusses the TLAC rules in three distinct places.[138] Each time there is the inevitable cross reference to the 10-K, which, as noted, is not very helpful. Indeed, the language in the prospectus largely parallels that in the 10-K, with one subtle addition in each case.

In two instances, the prospectus explains that:

> Unless otherwise specified in connection with a particular offering of debt securities, the debt securities are intended to qualify as eligible long-term debt for purposes of the Federal Reserve's total loss-absorbing capacity ("TLAC") rule. As a result, in the event of a Citigroup bankruptcy or other resolution proceeding, Citigroup's losses and any losses incurred by its subsidiaries would be imposed first on Citigroup's shareholders and then on its unsecured creditors, including the holders of the debt securities.[139]

And in the other instance, the final clause is moved within the sentence—and set off in dashes—but otherwise the substance is the same.[140] It should be noted that the first clause of the first sentence of the above quoted paragraph in the prospectus (beginning with "Unless otherwise specified") does not appear in Citigroup's 10-K and could lead an investor to infer that her debt securities are not subject to treatment (and potential loss) as TLAC debt securities. The investor

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135. CITIGROUP, PROSPECTUS SUPPLEMENT: 4.450% SUBORDINATED NOTES DUE 2027 (Oct. 23, 2015), https://www.citigroup.com/citi/fixedincome/data/28750ACL.PDF.

136. CITIGROUP, PROSPECTUS SUPPLEMENT: 4.450% SUBORDINATED NOTES DUE 2027 (May 15, 2018), https://www.citigroup.com/citi/fixedincome/data/589705ACL.PDF.

137. *Id.* at S-4 ("The subordinated notes will have the same ISIN, Common Code and CUSIP number as, and upon closing will be fully fungible and will trade interchangeably with, the other outstanding subordinated notes in the series.").

138. *Id.* at 3, 10, 18.

139. *Id.* at 3; *see also id.* at 18.

140. *Id.* at 10 ("In addition, in line with the Federal Reserve's final TLAC rule, Citigroup believes it has developed the resolution plan so that Citigroup's shareholders and its unsecured creditors—including the holders of the securities being offered by this prospectus—bear any losses resulting from Citigroup's bankruptcy.").

would have to read the entire prospectus carefully to negate such an inference!

The language from Citigroup's 10-K and the prospectus quoted above provide the only direct indication of what might happen to bondholders upon resolution of Citigroup. As shown above, the would-be investor has to look beyond the description provided by her broker (Schwab) and review both the 10-K and the prospectus. Moreover, reading the prospectus for the specific bond the investor is considering may not be sufficient: instead, the investor must read a prospectus prepared after 2015, even if for an unrelated bond. The earliest discussions of TLAC in Citigroup's materials seem to come in late 2016.[141] A bond issued before then would contain no information of what might happen upon financial distress.

C. Study Conclusions: Hidden Disclosure?

In a recent paper, Professor Crawford argues that:

> the problem with imposing losses on long-term debt is not structural, but rather one of fair advertising. This is an entirely tractable problem: if long-term debt is marketed properly, one should feel just as comfortable imposing losses on such debt as one does on bank equity.[142]

In Part IV of this Article I question whether better disclosure will solve the full extent of TLAC's problems. However, let us accept the disclosure framework for present purposes. Does Citigroup fairly advertise its TLAC debt?

Or, more aptly, we might ask if the securities industry as a whole fairly advertises Citigroup debt to individual investors. As seen in the modest study conducted above, a potential Citigroup debt investor could learn something about TLAC, and its consequences, from the publicly available materials. But whether such an investor actually would discover the relevant material and understand its implications would depend in part on luck or a very high (probably unrealistic) level of diligence.[143] The material is there, but it is not easy to find or to comprehend for the average investor.

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141. CITIGROUP, PROSPECTUS SUPPLEMENT: 3.3200% NOTES DUE 2026 9 (Oct. 17 2016) at 9.

142. John Crawford, *Resolution Triggers for Systemically Important Financial Institutions*, 97 NEB. L. REV. 65, 118 (2018) (footnotes omitted).

143. *Cf.* Morey W. McDaniel, *Bondholders and Corporate Governance*, 41 BUS. L. 413, 418 (1986) ("A small investor need not make his own assessment of the default risk because in an efficient bond market the anticipated default risk is impounded in the price. Therefore, all bondholders are compensated ex ante for any anticipated risk of default ex post.").

Contrast the treatment of TLAC debt with Schwab's treatment of high-yield or junk bond debt.[144] First, if an investor even attempts to search for a high-yield bond, a warning in red type appears on the screen:

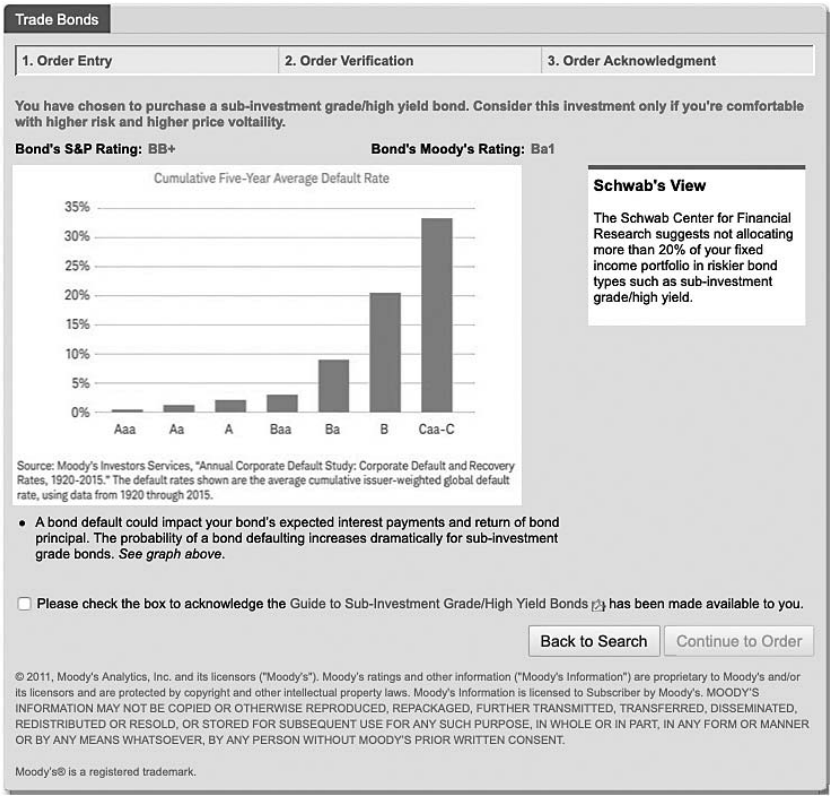
> Warning: Sub-investment grade/high yield bonds are riskier than investment grade bonds.

If the investor continues the search to find specific high-yield bonds, the same warning appears, again in red, at the top of the page of search results. If the investor then attempts to purchase a specific bond, a new warning screen pops up, that the investor must acknowledge before proceeding. Below is an example related to an attempt to purchase relatively tame bonds that would mature in less than a year, issued by the Xerox Capital Trust (rated BB+ by Standard & Poors).[145] Again we see the textual warning (again in red type), now combined with a graph and the warning that:

> A bond default could impact your bond's expected interest payments and return of bond principal. The probability of a bond defaulting increases dramatically for sub-investment grade bonds.

As shown below, Schwab's webpage clearly discloses the risks and consequences of default for high-yield bonds and requires the investor (by clicking the indicated box) to acknowledge her receipt of that disclosure.

144. The steps described in this paragraph are from Schwab.com as of late 2019.
145. CUSIP 984121CH4. Xerox Capital Trust II 2.800% Senior Notes due 2020.



This stands in stark contrast to the buried and vague disclosures of TLAC debt, which, as we have seen, represents "disclosure" in the same sense that AIG "disclosed" its credit default swap operations: in short, disclosure in name only.[146] Neither Schwab nor Citigroup is presently making a concerted effort to ensure the would-be investor learns about TLAC, SPOE, the risk of losses under the TLAC rules, and post-Lehman bank insolvency in general.

In the next section of the Article, I examine why this state of affairs might be highly advantageous to both regulators and G-SIBs.

IV.
WHY TLAC (AND LTD) ARE IMPOSSIBLE

TLAC works only so long as investors are willing to hold large amounts of G-SIBs' debt and equity. As a matter of basic corporate

146. Kristin N. Johnson, *Clearinghouse Governance: Moving Beyond Cosmetic Reform*, 77 BROOK. L. REV. 681, 688–89 (2012).

finance, the attractiveness of both instruments will be a function of their risk-adjusted return.[147]

HSBC, which describes itself as "one of the largest banking and financial services institutions in the world,"[148] argued in a submission to the FSB that:

> There is a serious risk that the requirements for TLAC will need to materially increase pricing in order to attract finance to overcome:
> (i) a natural aversion to instruments which are much more likely to be subject to capital losses from institutions which were typically holders of senior debt from banks;
> (ii) real limitations on institutional appetite to increase their overall exposure to the banking system, as compared to other sectors of the economy; and
> (iii) in some jurisdictions, particularly [emerging markets], a shallow pool of investible funds for which banks will need to compete.[149]

With respect to equity, TLAC adds little risk that is not already present for any such investment in a larger bank. First, shareholders in all enterprises face the risk of losing their investment. As a simple matter of priority, a shareholder in a larger corporate enterprise faces some probability of losing their entire investment.[150] Bank equity investors face a higher risk of such a loss, as a result of the extremely leveraged nature of modern banks.[151] A small loss has a bigger chance of eliminating equity in a bank, as compared with a "normal" corporate firm.[152]

TLAC does not change these basic risks. Indeed TLAC—along with the Basel III capital requirements, as it would be hard to separate the two—might slightly reduce the risk to the extent that large banks

147. Patrick Halligan, *Cramdown Interest, Contract Damages, and Classical Economic Theory*, 11 AM. BANKR. L. REV. 131, 173–74 (2003).

148. *Who We Are*, HSBC, https://www.hsbc.com/who-we-are (last visited Sept. 6, 2020).

149. HSBC, RESPONSE TO FSB CONSULTATION ON TOTAL LOSS ABSORBING CAPACITY (Feb. 2, 2015), http://www.fsb.org/wp-content/uploads/HSBC-on-TLAC.pdf, at 20.

150. And shareholders have long been the first to lose their investment upon reorganization. Adrian H. Joline, *Railway Reorganizations*, 8 AM. L. 507, 508 (1900) (referring to shareholders in railroad foreclosure cases of the prior century).

151. Prasad Krishnamurthy, *Regulating Capital*, 4 HARV. BUS. L. REV. 1, 19 (2014). *See also* David Min, *Corporate Political Activity and Non-Shareholder Agency Costs*, 33 YALE J. ON REG. 423, 457 (2016) ("Because banks are so highly leveraged, and because their profitability is so directly tied to the amount of risk and leverage they take on, the conflict between shareholders and creditors is particularly extreme in banking.").

152. Helen A. Garten, *What Price Bank Failure?*, 50 OHIO ST. L.J. 1159, 1165 (1989).

have more equity than they did before 2008. Somewhat larger equity cushions mean somewhat more equity to absorb a loss, reducing the probability of a complete wipeout for shareholders.

As discussed in the Introduction, bank debtholders inherently face higher risks, compared with bondholders of real economy firms, again as a result of the high degree of leverage on the typical bank balance sheet. By definition, leveraged firms are more fragile, and banks are heavily leveraged.

However, the market does not actually treat G-SIBs as if they were highly leveraged. Let's return to bonds issued by Chase and Exxon, whose capital structures we compared in the introduction:

S&P Rating	**Moody's Rating**	**Description**	**Coupon**	**Maturity**	**Callable**	**Price**	**YTM**	**YTW**
AA+	Aaa	Exxon Mobil Corp 2.222% 03/01/2021 Callable, 30231GAV4, Make Whole Call Continuously-Callable on 02/01/2021 @ 100.00000	2.222	3/1/21	Yes	100.856	1.598	1.56
A-	A2	JPMorgan Chase & Co. 2.55% 03/01/2021 Callable, 46625HQJ2, Continuously-Callable on 02/01/2021 @ 100.00000	2.55	3/1/21	Yes	100.98199	1.833	1.79
Information as of Oct. 7, 2019 (schwab.com)								

The table shows bonds of identical maturities, issued by each company. Recall that while Exxon maintains equity capital of more than 50%, Chase has equity of only about 10%. Not surprisingly, Standard & Poor's and Moody's provide significantly higher ratings for Exxon's bonds. Nonetheless, the difference in yield between the two bonds hardly seems to reflect the massive difference in leverage, and the attendant risks of Chase's much higher leverage.

Thus, an investment in TLAC debt issued by a G-SIB is not remotely comparable to an investment in bonds issued by highly-capitalized nonfinancial corporations like Exxon. One might also reasonably question whether G-SIB debt is really comparable even to a "normal" investment in a highly leveraged debtor?

In normal corporations, debt is issued to finance projects. Those projects might be socially meaningful (build a new plant) or frivolous (pay stock dividends to cash out firm value to benefit shareholders), but at least newly-issued debt finances something. In contrast, the TLAC rule and the LTD requirement mandate debt for debt's sake.

That is, Citigroup is required to borrow $100 billion, whether it needs that money or not. Presumably in most cases this TLAC debt replaces financing that would otherwise occur in other parts of the firm, and thus has positive effects to the extent it forces the use of long-term debt in place of shorter-term wholesale (i.e., non-deposit based) funding.[153] The latter might be "cheaper" from the bank's individualistic perspective, but 2008-2009 showed that short-term wholesale funding is deeply susceptible to systemic runs.[154] Moreover, insofar as TLAC increases the costs of debt and lowers a G-SIB's profit margin, one possible second-order effect is to force the G-SIB to reduce its assets and decrease the total stock of (debt) capital to reflect the resulting reduction in the size of the bank's balance sheet.

This funding shift, however, is a secondary effect of the LTD requirement. The primary goal is to structurally subordinate[155] a sizable portion of the bank's funding, to allow that funding to take losses, while protecting another aspect of funding from incurring any losses whatsoever.[156] That is, the TLAC rules aim to design an instrument that looks like debt in normal times, but functions like equity in times of stress.

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153. Kwon-Yong Jin, *How to Eat an Elephant: Corporate Group Structure of Systemically Important Financial Institutions, Orderly Liquidation Authority, and Single Point of Entry Resolution*, 124 YALE L. J. 1746, 1751–52 (2015). *See also* David Min, *Understanding the Failures of Market Discipline*, 92 WASH. U. L. REV. 1421, 1495 (2015); Jennifer Taub, *Regulating in the Light: Harnessing Political Entrepreneurs' Energy with Post-Crisis Sunlight Hearings*, 11 U. ST. THOMAS L. J. 438, 439 (2014).

154. Dan Awrey, *Brother, Can You Spare A Dollar? Designing an Effective Framework for Foreign Currency Liquidity Assistance*, 2017 COLUM. BUS. L. REV. 934, 960 (2017); Daniel K. Tarullo, *Macroprudential Regulation*, 31 YALE J. ON REG. 505, 518 (2014).

155. J. Maxwell Tucker, *Substantive Consolidation: The Cacophony Continues*, 18 AM. BANKR. INST. L. REV. 89, 90 (2010) ("Under the . . . principle of 'structural subordination,' creditors of the parent company may recover from the assets of the subsidiary company only after the subsidiary has paid all of its obligations. The principle of structural subordination is the flip-side of the better-known principle of limited liability.").

156. DEP'T OF THE TREASURY, ORDERLY LIQUIDATION AUTHORITY AND BANKRUPTCY REFORM 10–11 (2018), https://home.treasury.gov/sites/default/files/2018-02/OLA_REPORT.pdf

Presumably this feature should have a cost; all else equal, the investor should receive a greater return for agreeing to this subordinated treatment up front. The magnitude of the cost is open to debate, but its existence seems clear. And if that cost is too high, the entire TLAC-SPOE effort will fail, because it is heavily dependent on the TLAC debt functioning as an integral part of the financial institution's overall funding package.

This issue was recognized from the beginning of the bail-in concept. In 2010, Canadian Banking Commissioner Dickson argued that:

> The conversion trigger would be activated relatively late in the deterioration of a bank's health, when the value of common equity is minimal. This (together with an appropriate conversion method) should result in the contingent instrument being priced as debt. Being priced as debt is critical as it makes it far more affordable for banks, and therefore has the benefit of minimising the effect on the cost of consumer and business loans.[157]

But is there any reason to price TLAC debt as debt, or rather should it be considered (at best) senior equity? And if the debt is really just glorified preferred equity, where does that leave the holding company's common shares?

How we answer these key questions largely turns on who we believe will be the prototypical investors in TLAC securities. And closely linked to that issue is the question of what purpose TLAC instruments serve, and how that purpose relates to the cost of TLAC debt.

The last question is complicated by the intentional blurring of the boundary between debt issued for funding and debt issued for the regulatory purposes that lies at the heart of the TLAC regime. The equity-like characteristics of TLAC instruments mean that issuer costs will exceed those for pure debt, but as noted this debt will replace some other sources of funding.[158]

A 2015 research paper by the Bank for International Settlements estimates that the interest rate on TLAC eligible debt will be, on average, 0.4% higher than other forms of debt.[159] Most of that higher charge would come even without consideration of the inherent "equityness" of the TLAC debt. Swapping operating company debt for holding company debt will involve more cost simply because of the creditor's different place – and effective subordination – in the corpo-

157. *Supra* note 1.

158. If it did not, it would represent a pure tax on the financial institution.

159. BANK FOR INT'L SETTLEMENTS, ASSESSING THE ECONOMIC COSTS AND BENEFITS OF TLAC IMPLEMENTATION (2015), at 9, https://www.bis.org/publ/othp24.pdf.

rate (and thus capital) structure.[160] Changes in the creditor's place on the yield curve[161]—replacing short-term commercial paper with long-term TLAC debt, for example—also has an obvious cost.[162]

In addition, the U.S. TLAC requirements prohibit many covenants that might trigger early repayment of the debt. Differences between the lower level of investor protection provided by the limited covenants in G-SIBs' TLAC bonds, compared with the greater protection provided by broader covenants contained in ordinary bonds issued by smaller (non-systemic) banks, should also result in extra cost for TLAC debt.

In short, there are a variety of costs associated with the move to TLAC. But what additional costs can we directly attribute to the equity-like characteristics of TLAC instruments?

Presumably the instances in which TLAC debt will experience losses will be rare, but when they occur, it is easy to imagine that the losses might be both sudden and severe. Essentially the TLAC debt will perform like traditional debt for long periods of time, but then might experience something similar to the "jump to default" scenario that has been observed with credit default swaps.[163] Namely, once the issuing G-SIB is perceived to be in distress, value will fall off the table.

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160. Richard Squire, *Clearinghouses as Liquidity Partitioning*, 99 CORNELL L. REV. 857, 913 (2014).

161. Changes in the creditor's place on the yield curve refers to the difference in the amount owed to the creditor based on the length of time the creditor must wait for a return of their principal.

162. *Cf.* Michael Simkovic & Benjamin S. Kaminetzky, *Leveraged Buyout Bankruptcies, the Problem of Hindsight Bias, and the Credit Default Swap Solution*, 2011 COLUM. BUS. L. REV. 118, 190 n. 220 (2011) ("In general, long-term debt carries a higher yield than short-term debt from the same issuer").

163. Colleen M. Baker, *When Regulators Collide: Financial Market Stability, Systemic Risk, Clearinghouses, and CDS*, 10 VA. L. & BUS. REV. 343, 355 (2016) ("payouts on CDS contracts can be triggered suddenly or in a non-linear fashion. Other OTC derivatives—for example, interest rate swaps—generally experience more gradual price movements."). *See also* Dan Awrey, *Regulating Financial Innovation: A More Principles-Based Proposal*, 5 BROOK J. CORP. FIN. & COM. L. 273, 306–07 n.181 (2011):

> To say that a credit default swap exhibits non-linear price characteristics is essentially to say that any change in the underlying market conditions or asset prices may be disproportional to the resulting impact on the value of the swap. Jump-to-default risk, meanwhile, is the risk that the reference credit will go from non-default to default so rapidly that the market will not have an opportunity to incorporate the increased default risk associated with its movement towards default into the swap's current credit spread.

Consider a simple bank holding company balance sheet, based on JP Morgan Chase's numbers, as reported in its 2018 annual report:

Assets:		***Liabilities:***	
Shares in subsidiary	$198	Long-term debt	$211
Payables from subsidiary	$198		
		Equity:	
		Common equity	$185

-Billions of dollars

The right-hand side numbers are taken directly from the Chase annual report, and I then plug in hypothetical numbers for the left side, based on the numbers we know.[164] For simplicity, I have split the total number evenly between equity and debt investments in the subsidiaries.

The asset value for the holding company is relatively small, as compared with the consolidated asset value,[165] because the subsidiary is highly leveraged.[166] That is, the holding company's asset value is the value of the equity (shares) of the subsidiary, which has value only after the subsidiary's large debts are paid. For example, Chase has more than $2.5 trillion in assets, but those assets are largely financed with liabilities—including more than $1 trillion in deposits—issued by the subsidiaries themselves.[167]

For our purposes, and to make the analysis easier, we can imagine that our financial institution has a single operating subsidiary of similar size to all of Chase's consolidated subsidiaries. That is, the operating subsidiary has $2.5 trillion in assets, and those assets are financed by $198 billion of equity and an equal amount of intercompany debt,[168] while the remainder (about $2.1 trillion) is financed by third-party debt, much of which will be more "runnable" wholesale liabilities and deposits.[169]

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164. JPMorgan Chase & Co., *supra* note 17, at 27.

165. Consolidated asset value meaning the aggregate value of all assets of the holding company and the subsidiaries.

166. *See* David A. Skeel, Jr., *The Law and Finance of Bank and Insurance Insolvency Regulation*, 76 TEX. L. REV. 723, 750 (1998).

167. JPMorgan Chase & Co., *supra* note 156, at II.

168. Intercompany debt in this context meaning debt owed to the holding company by the operating subsidiaries, and vice versa.

169. *See* Dan Awrey, *Law and Finance in the Chinese Shadow Banking System*, 48 CORNELL INT'L L.J. 1, 34 (2015); Andrew W. Hartlage, *The Basel III Liquidity Coverage Ratio and Financial Stability*, 111 MICH. L. REV. 453, 473 (2012).

Then recall that all the debt issued at the operating subsidiary level is to be protected by the TLAC-SPOE structure.[170] In particular, under SPOE operating subsidiary debt will be paid "in the ordinary course," as if the insolvency of the parent holding company never occurred.[171] As a result, there will be a strong tendency to reverse the normal priority structure—by forgiving the subsidiary's debt owed to the holding company before writing down the holding company's equity in the sub—to maintain the subsidiary as a "well-capitalized," or at least not insolvent, going concern.[172]

Assume that the operating company's assets lose 8% of their value.[173] While it is common to immediately jump from this assumption to an analysis of how those losses will be allocated under SPOE, we can make the hypothetical more realistic by assuming that these first-stage losses are followed by a second round of losses. Some of the runnable creditors of the operating company will run, regardless of what may be "rational," and the operating company will then have to sell assets, almost certainly at a loss, to cover the lost financing.[174] That is, losses will tend to accelerate, even in the absence of an uncontrolled "run."

As a result, it seems more realistic to suppose the operating company incurs a total loss of 12% of assets—8% in the first round, and an additional 4% when the first round of losses becomes known to the market.[175] Those losses will then be "pushed up" to the holding company by cancelling the intercompany debt and by partially reducing the value of the operating company's equity.

The holding company's assets have shrunk by $292 billion. The holding company can absorb $396 billion in losses altogether, and the TLAC bondholders will begin absorbing those losses once the operating company losses reach 7.5% of the operating company's assets and the equity of the holding company's shareholders is eliminated.[176]

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170. Jonathan C. Lipson, *Against Regulatory Displacement: An Institutional Analysis of Financial Crises*, 17. U. PA. J. BUS. L. 673, 717 (2015).

171. *See* Stephen J. Lubben, *Resolution, Orderly and Otherwise: B of A in OLA*, 81 U. CIN. L. REV. 485, 513 n.96 (2012).

172. Lubben & Wilmarth, *supra* note 9, at 1221; *see also* LUBBEN, *supra* note 50, and accompanying text.

173. $200 billion.

174. *See* Lubben, *supra* note 14, at 1389 (discussing why the assumption that creditors would act "rationally" under these circumstances is questionable).

175. In the first round, assets go to $2.3 trillion, and in the second round they drop another $92 billion, to $2.2 trillion.

176. There remains a broader question of whether these levels are truly sufficient. *See* John Crawford, *"Single Point of Entry": The Promise and Limits of the Latest Cure for Bailouts*, 109 NW. U. L. REV. ONLINE 103, 111 (2014).

Under the foregoing assumptions, the bondholders will incur $107 billion in losses, representing about 50% of the par value of the TLAC debt.

Put another way, the bondholder who lent our bank $1,000, with a promise that the bank would repay that amount with interest, will now receive common shares with a purported value of $500. Presumably those shares will pay no dividends in the near term, and given the lack of dividends and the bank's recent troubles, the market price of those shares is likely to be substantially less than their nominal value.

A loss of the size assumed above is larger than typically modeled in regulatory stress tests, but seems entirely possible.[177] Indeed, the TLAC-SPOE system is designed for such catastrophic events. One plausible scenario is that the system will be invoked after an entire asset class—like mortgage backed securities in 2008, or perhaps collateralized loan obligations in coming years[178]—suddenly losses its marketability.[179] That is, there is a low probability of such a drop in firm value, but when it comes that drop will be sudden and substantial.

In such a scenario, it is easy to imagine losses blowing through the equity of the holding company's shareholders, perhaps even before formal "resolution" commences, thereby imposing large losses on holders of TLAC debt in the first round. Further losses will be imposed on those same bondholders in subsequent rounds, until the panic subsides. As we saw in the hypothetical, a 12% loss of value at the operating subsidiary level quickly translated into bondholders losing 50% of their original investment.

> The Financial Stability Board (FSB) recently proposed a requirement for SIFIs to maintain total loss-absorbing capacity—in equity and long-term debt—of between 16 and 20 percent of risk-weighted assets. Would a ratio in this general range be adequate? It is worth observing that a few months prior to its demise, Lehman Brothers reported a ratio of total capital-to-risk-weighted assets of 16.1 percent.

177. For example, in the 2020 stress tests the Fed assumed Chase would incur $64.4 billion in loan losses. BD. OF GOVERNORS OF THE FED. RESERVE SYS., DODD-FRANK ACT STRESS TEST 2020: SUPERVISORY STRESS TEST RESULTS 61 (2020). For more on the stress tests generally, see Garrett J. Moore, *Pass or Fail? Grading the Effectiveness of Stress Tests A Decade After the Financial Crisis*, 23 N.C. BANKING INST. 333, 336–37 (2019).

178. Frank Partnoy, *The Worst Worst Case*, ATLANTIC, July–Aug. 2020, at 41, 42.

179. Markus K. Brunnermeier, Simon C. Rother & Isabel Schnabel, *Asset Price Bubbles and Systemic Risk* 1 (Nat'l Bureau of Econ. Research, Working Paper No. 25775, 2019). There are a wide range of possible shocks to the banking system, as opposed to any individual bank, that might prompt the use of TLAC-SPOE. *E.g.*, David F. Cavers, *Legal Planning Against the Risk of Atomic War,* 55 COLUM. L REV. 127, 141–42 (1955) (describing the financial impact of an atomic attack on the United States).

That potential for a sudden drop in value should be priced by investors in TLAC debt.[180] The question is whether the various ways in which TLAC debt differs from normal debt – even normal holding company debt – make it too complicated for all but the most sophisticated investors to price. That, in turn, brings us back to the fundamental question of who might hold such debt.

There should be deep-rooted skepticism about unsophisticated investors funding the operations of G-SIB banks through putative debt securities, especially when those debt securities will have equity-like loss characteristics. But who else might hold the debt?

Regulators have already moved to discourage (and hopefully prevent) cross-holding of TLAC instruments among the G-SIB banks.[181] That makes plenty of sense, as we do not want to have our G-SIBs linked together when we experience a systemic financial crisis. Indeed, it is hardly defensible for any sizable financial institution to own an asset that will have to be sold in times of financial stress to satisfy the holder's own regulatory regime. Such sales into a downward moving market will simply make a bad situation worse.[182]

The TLAC rule as originally proposed also expressed the regulators' intention to "strongly discourage smaller banking organizations from investing in covered debt instruments."[183] Depository banks, in short, seem to be largely out of the picture as potential buyers of TLAC debt.

Insurance companies face similar limitations, as indicated by the following statement issued by the National Association of Insurance Commissioners (NAIC):

> Because investment is a large part of the insurance business, regulators pay close attention to investment risk, encouraging less risky investment when appropriate. In the 1990s, insolvencies caused by high-risk investment strategies led U.S. regulators to consider their oversight and possible restriction of insurer investments by imposing either a defined limits or a defined standards approach. Using a

180. *Cf.* Thomas S. Green, *An Analysis of the Advantages of Non-Market Based Approaches for Determining Chapter 11 Cramdown Rates: A Legal and Financial Perspective*, 46 SETON HALL L. REV. 1151, 1187–88 (2016) (discussing the Efficient Capital Markets Hypothesis with regard to the bond market).

181. Regulatory Capital Treatment for Investments in Certain Unsecured Debt Instruments of Globally Systemically Important U.S. Bank Holding Companies, 84 Fed. Reg. 13,814, 13,814–15 (proposed Apr. 8, 2019) (to be codified at 12 C.F.R. pts. 3, 217, 324) [hereinafter Regulatory Capital Treatment].

182. *Cf.* Mark J. Roe, *Clearinghouse Overconfidence*, 101 CAL. L. REV. 1641, 1701 (2013) (describing the downward asset price spiral that occurred during the 2008-2009 financial crisis).

183. Regulatory Capital Treatment, *supra* note 181, at 13,818.

> defined limits approach, regulators place certain limits on amounts or relative proportions of different assets that insurers can hold to ensure adequate diversification and limit risk. Using a defined standards approach, regulators restrict investments based on a "prudent person" approach, allowing for discretion in investment allocation if the insurer can demonstrate their adherence to a sound investment plan. Also, the NAIC Capital Markets & Investment Analysis Office reviews insurers' assets for credit risk, potentially driving insurers toward less-risky investment.[184]

In short, because TLAC instruments are problematic under the state-law capital and regulatory regimes administered by NAIC's members, the ability of insurance companies to invest in TLAC debt is likely to be very limited.

That largely leaves asset managers and retail investors. Among the former, it is helpful to distinguish between public-facing managers and more targeted, private asset managers.[185]

Public-facing managers include regulated investment companies (e.g., mutual funds) and pension funds.[186] In some sense, these sorts of managers are the first derivative of retail investors: the managers represent individual investors investing through employer or union pensions, 401k plans, IRAs, and retail accounts.[187] The manager provides a layer of protection for the ultimate investors, since the manager presumably has more specialized knowledge about investing as compared with the archetypical account owner.

On the other hand, interposing an asset manager simply moves the question of disclosure to a new level. Should mutual funds, for example, be required to alert potential investors to their investments in

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184. Kris DeFrain, *U.S. Insurance Financial Regulatory Oversight and the Role of Capital Requirements*, CIPR NEWSLETTER (Nat'l Ass'n of Ins. Comm'rs & The Ctr. for Ins. Pol'y and Res., Wash., D.C.), Jan. 2012, at 5.

185. *See* Wulf A. Kaal, *The Post Dodd-Frank Act Evolution of the Private Fund Industry: Comparative Evidence from 2012 and 2015*, 71 BUS. LAW. 1151, 1153 (2016); Michael C. Macchiarola & Daniel Prezioso, *Expanding Alternatives: From Structured Notes to Structured Funds*, 19 U. PA. J. BUS. LAW. 405, 410–17 (2017).

186. *See* WILMARTH, *supra* note 48, at 313 ("To avoid [systemic] problems, regulators have encouraged megabanks to sell most of their TLAC debt securities to mutual funds and pension funds.").

187. *See* Felix Salmon, *Stop Selling Bonds to Retail Investors*, 35 GEO. J. INT'L L. 837, 842 (2004):

> It is worth noting that selling bonds to retail investors does not diversify the investor base in the sense of reducing systemic risk and moral hazard. Institutional funds are ultimately owned by individuals: nearly all of us own a tiny bit of Brazilian debt in our retirement plans or the fixed-income part of our mutual fund portfolios.

TLAC debt?[188] At present, such disclosure is very weak. For example, the combined prospectus for PIMCO's Credit Bond Funds[189]—which includes, among others, the PIMCO Preferred and Capital Securities Fund[190]—contains no mention of TLAC or SPOE whatsoever.

More fundamentally, some public-facing asset managers may recreate moral hazard problems by presenting a politically compelling case for a bailout.

For example, will Congress be able to adhere to their previous "no more bailouts" pledge if it will result in a substantial loss to state government pension funds? Does the potential for such a bailout encourage those pension funds to purchase higher-yielding TLAC debt? Or might it increase investor perceptions that the financial institutions themselves will benefit from a bailout?[191] While prudential regulators have little direct power over pension funds, the potential that the TLAC-SPOE might not function as designed during a crisis should be a cause for concern.

Many state pensions have historically exhibited an overreliance on hedge fund and private equity investments, meaning that investments by private asset managers are not entirely free of concern either.[192] But hedge funds—the most likely investors in TLAC debt—are falling out of favor with pension funds, and other hedge fund investors do not present the same degree of worry, so perhaps these are the best buyers of TLAC debt.[193] However, hedge funds alone are not nearly large enough to absorb the anticipated size of the U.S. TLAC market.

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188. Francine McKenna, *U.S. Mutual Funds Exposed to High-Yield, High-Risk Euro Bank CoCo Bonds*, MARKETWATCH (Dec. 29, 2017, 9:00 AM), https://www.marketwatch.com/story/us-mutual-funds-exposed-to-high-yield-high-risk-euro-bank-coco-bonds-2017-12-28.

189. PIMCO, Credit Bond Funds Prospectus (Form 497) 448 (July 30, 2018 (as supplemented Apr. 1, 2019)).

190. Preferred and Capital Securities Fund, PIMCO (Sept. 4, 2020), https://www.pimco.com/en-us/investments/mutual-funds/preferred-and-capital-securities-fund/inst [https://perma.cc/J5YM-RV9Q].

191. *Cf.* Daniel Schwarcz & David Zaring, *Regulation by Threat: Dodd-Frank and the Nonbank Problem*, 84 U. CHI. L. REV. 1813, 1833 (2017) ("By becoming systemically risky—or being perceived to be systemically risky by financial markets—a firm can now, in the post-crisis era, increase the perceived chances that it will be bailed out if it comes close to failure during a broader period of financial instability.").

192. Cary Martin, *Private Investment Companies in the Wake of the Financial Crisis: Rethinking the Effectiveness of the Sophisticated Investor Exemption*, 37 DEL. J. CORP. L. 49, 77–78 (2012).

193. Frank Partnoy, *Webber's Best Weapon: Working-Class Shareholders as David to Corporate Management's Goliath*, 99 B.U. L. REV. 291, 296–97 (2019).

U.S. banks also benefit from one of the largest retail investor bases, and retail investors do have a history of buying bank and broker-dealer paper. Relying on retail investors to pick up some of the slack in the market for TLAC debt will only work if these investors are treated fairly. The present disclosure system—which discloses only to the extremely diligent, well-informed investors who understand what it means to "absorb losses"—does not meet that test. Imposing losses on unwitting investors in TLAC debt will be no more politically attractive or viable than imposing such losses on pension funds.

In large part this problem stems from the fragmentation of American financial regulation: the market regulator (the SEC) is not involved in the TLAC-SPOE process, which is overseen by the Federal Reserve and the FDIC.[194] SEC involvement will be key to ensuring that brokers provide investors with access to information in an easily understood form.

But will banks – and potentially even their prudential regulators – resist a more robust disclosure regime? This takes us back to the question of cost: TLAC-SPOE only works if G-SIBs can sell TLAC equity and debt at a cost that "works" with the banks' business structure and profit constraints. If TLAC debt, for example, can only be sold with a relatively high coupon, it may undermine G-SIBs' financial viability, which will worry not only the banks, but also regulators.

Unfortunately, one way to reduce the cost of the TLAC system is to understate the risks that investors face.[195] In short, it may be that it is ultimately impossible to sell debt disguised as equity—which TLAC debt arguably is—under a regime of full disclosure at a sustainable cost. That will increase the temptation to instead promote partial disclosure, and hope for the best.

V.
CONCLUSION

Whether TLAC will impose substantial additional costs on large American financial institutions is unclear. If the TLAC debt simply involves the substitution of existing debt for TLAC eligible instru-

194. *See* Kristin Johnson, Steven A. Ramirez & Cary Martin Shelby, *Diversifying to Mitigate Risk: Can Dodd-Frank Section 342 Help Stabilize the Financial Sector*, 73 WASH. & LEE L. REV. 1795, 1852, 1860–61 (2016).

195. James J. Park, *Bondholders and Securities Class Actions*, MINN. L. REV. 585, 603 (2014) ("If a company's risk of default is 50% and its public disclosures wrongly convey that the risk is 0%, a bondholder who buys bonds assuming that the risk is 0% will charge a lower price than if he knew that the risk was 50%.").

ments at an additional cost, it could be argued that this is likely to be a marginal cost. But this may not be the case if the change from senior debt to subordinated TLAC debt materially alters the investor base through the exclusion of banks and insurance companies, as well as other investors unwilling to accept the higher risks of "bail-in."

At present we do not really know how the new regulatory system affects pricing, because TLAC debt is being sold without a clear description of the actual risks to investors under TLAC and SPOE. There also needs to be improved disclosures of the assets and risk exposures of G-SIBs so that investors can make an informed decision on overall risks, not just their ranking in resolution and insolvency.[196]

All equity and TLAC debt investors in the holding companies of G-SIBs need to be told that they will participate in recapitalization measures during resolution. Overreliance on industry jargon—"structural subordination" was never said by anyone who is not either a bankruptcy or banking law expert[197]—does little to make it transparent and clear what happens in resolution and the distribution of losses across the debt hierarchy.

Without such clarity, TLAC debt will be sold on an unstable and unfair basis and there is no guarantee that bail-in debt will work as planned in the event of the next global financial crisis. As a result, governments may decide that bailing out banks—especially banks of national or global systemic importance—is a better option than using an untested and faulty system that seeks to impose massive losses on unsophisticated, poorly informed investors.[198]

196. Frank Partnoy & Jesse Eisinger, *What's Inside America's Banks?*, ATLANTIC, Jan.–Feb. 2013, at 60, 64.

197. *See* Lubben & Wilmarth, *supra* note 9, at 1244–46.

198. Mark J. Roe & Stephen D. Adams, *Restructuring Failed Financial Firms in Bankruptcy: Selling Lehman's Derivatives Portfolio*, 32 YALE J. ON REG. 363, 393 (2015).

CUSIP / ISIN	Maturity Date	Notional in USD Equivalent
172967LE9	1/10/2020	1,000,000,000
172967LF6	1/10/2020	1,500,000,000
XS1179295156	2/12/2020	30,600,000
XS1179296980	2/12/2020	55,123,200
172967JJ1	2/18/2020	2,000,000,000
172967FF3	8/9/2020	991,800,000
JP584119D598	9/16/2020	410,153,580
172967KB6	10/26/2020	2,700,000,000
172967KC4	10/26/2020	300,000,000
172967KH3	2/18/2021	742,833,706
172967KK6	3/30/2021	2,500,000,000
172967KL4	3/30/2021	1,000,000,000
172967KQ3	5/4/2021	105,600,000
172967KP5	5/4/2021	422,400,000
XS1417876759	5/24/2021	1,143,150,000
172967KV2	8/2/2021	1,750,000,000
172967KW0	8/2/2021	750,000,000
CH0026791225	9/27/2021	304,321,363
XS1128148845	10/27/2021	1,714,725,000
172967JB8	11/18/2021	512,520,135
172967LC3	12/8/2021	2,550,000,000
172967LB5	12/8/2021	750,000,000
172967FT3	1/14/2022	2,420,000,000
172967LG4	4/25/2022	2,250,000,000
172967LH2	4/25/2022	1,250,000,000
172967GK1	7/30/2022	894,000,000
172967LQ2	10/27/2022	1,750,000,000
172967LR0	10/27/2022	400,000,000
JP584119E2C6	12/9/2022	79,296,359
172967LV1	1/24/2023	2,000,000,000
172967GL9	3/1/2023	366,226,000
XS1795253134	3/21/2023	1,428,937,500
172967GT2	5/15/2023	1,250,000,000
JP584119E364	6/2/2023	91,145,240
172967LN9	7/24/2023	750,000,000
172967LM1	7/24/2023	2,500,000,000
172967KX8	9/1/2023	2,000,000,000
172967HD6	10/25/2023	974,351,000
XS1457608013	10/26/2023	2,000,512,500
XS1508910194	10/27/2023	211,200,000
XS1508910277	10/27/2023	176,000,000
172967LL3	5/17/2024	1,500,000,000
XS1068874970	5/22/2024	1,143,150,000

CUSIP / ISIN	Maturity Date	Notional in USD Equivalent
172967LZ2	6/1/2024	1,250,000,000
172967MA6	6/1/2024	1,000,000,000
172967HT1	6/16/2024	623,184,000
XS0195612592	7/1/2024	215,885,389
172967HV6	8/5/2024	750,000,000
172967HW4	8/19/2024	115,484,776
CH0365501474	11/22/2024	278,961,250
172967JF9	1/28/2025	1,428,937,500
172967JL6	3/26/2025	1,000,000,000
172967JP7	4/27/2025	1,500,000,000
172967AL5	5/15/2025	200,000,000
172967AM3	6/1/2025	114,502,000
172967JT9	6/10/2025	2,500,000,000
172967JS1	6/9/2025	439,302,973
172967HB0	9/13/2025	1,420,000,000
JP584119E596	9/16/2025	182,290,480
172967DD0	10/31/2025	683,589,300
172967AQ4	12/1/2025	100,000,000
172967KG5	1/12/2026	2,000,000,000
172967KJ9	3/9/2026	1,500,000,000
172967KN0	5/1/2026	2,000,000,000
XS0168658853	5/21/2026	764,160,000
172967MB4	7/1/2026	650,000,000
XS1859010685	7/24/2026	2,000,512,500
XS1107727007	9/10/2026	1,026,518,978
172967KY6	10/21/2026	3,000,000,000
172967JC6	11/20/2026	1,000,000,000
172967EB3	5/24/2027	41,574,169
172967ED9	6/25/2027	455,726,200
XS0381986453	6/28/2027	51,441,750
172967KA8	9/29/2027	3,850,000,000
172967LD1	1/10/2028	2,750,000,000
172967AR2	1/15/2028	300,000,000
172967JG7	1/28/2028	171,472,500
XS1795252672	3/21/2028	857,362,500
172967LP4	7/24/2028	2,500,000,000
172967KU4	7/25/2028	2,100,000,000
XS1457608286	10/26/2028	1,143,150,000
172967LS8	10/27/2028	2,250,000,000
172967LW9	4/23/2029	2,000,000,000
XS0213026197	2/25/2030	516,628,352
1729679B9	8/16/2030	100,536,710
XS0245936496	3/3/2031	270,571,226
172967BL4	6/15/2032	1,000,000,000
172967BU4	2/22/2033	481,363,000
172967CC3	10/31/2033	653,694,000

CUSIP / ISIN	**Maturity Date**	**Notional in USD Equivalent**
172967CT6	12/11/2034	152,374,000
JP584119F593	9/14/2035	91,145,240
172967DJ7	3/6/2036	93,810,221
172967DS7	8/25/2036	525,000,000
172967DR9	8/25/2036	601,788,000
172967EC1	5/29/2037	115,221,000
172967EE7	6/26/2037	501,298,820
172967EP2	3/5/2038	275,797,000
XS0372391945	6/25/2038	542,595,629
172967LU3	1/24/2039	1,000,000,000
172967EW7	7/15/2039	1,935,999,000
XS0449155455	9/1/2039	636,800,000
172967FX4	1/30/2042	960,000,000
172967HA2	9/13/2043	1,000,000,000
172967HE4	11/7/2043	60,712,000
172967HS3	5/6/2044	879,998,000
172967JU6	7/30/2045	1,000,000,000
172967KR1	5/18/2046	2,000,000,000
172967EF4	6/26/2047	228,774,552
172967LJ8	4/24/2048	1,000,000,000
172967MD0	7/23/2048	2,500,000,000
172967AS0	2/15/2098	250,000,000
	Total:	**114,256,208,598**