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THE SWAPS PUSHOUT RULE: MUCH ADO ABOUT THE WRONG THING?

John Crawford and Tim Karpoff***

A notably bitter battle over financial reform in the wake of the crisis of 2008 has centered on a mandate that federally insured depository institutions—i.e., banks—refrain from entering into certain derivatives contracts.¹ The mandate was included as a provision of the Dodd-Frank Act and prohibited banks from entering into particular types of “swaps,” or contracts in which parties promise to pay each other based on defined events such as a bond default.² The prohibition was popularly known as the Swaps Pushout Rule (the “Rule”). Bank holding companies (BHCs) could continue to transact in these instruments, but had to do so out of different legal entities, such as broker-dealers.³ Several of the largest financial institutions in the United States recently led a successful lobbying effort to roll back the Rule—which had not yet taken effect—so that banks can continue to enter into the vast majority of these swaps.⁴ The Rule’s rollback has inspired intense criticism, but the critiques have not accurately reflected what is really at stake for the

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¹ See Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111-203, § 716, 124 Stat. 1376 (2010) [hereinafter Dodd-Frank Act] (codified at 15 U.S.C. § 8305) (amended 2014).

² *Id.*

³ Section 3(a)(4) of the Securities Act of 1934 defines a broker as a person or entity “engaged in the business of effecting transactions in securities for the accounts of others,” and Section 3(a)(5) defines a dealer as a person or entity “engaged in the business of buying and selling securities for his own account.” Securities Act § 3(a). Most major firms engaged in brokering and dealing do *both*, and are routinely referred to as “broker-dealers.” Securities Exchange Act of 1934, 15 U.S.C. § 78 (1934) (amended 2012).

⁴ See Text of House Amendment to Senate Amendment to H.R. 83 at 615–18 (2014), <http://docs.house.gov/bills/thisweek/20141208/CPRT-113-HPRT-RU00-HR83sa.pdf>. A comparison of the amended provision to the original Rule can be found at http://www.davispolk.com/sites/default/files/DFA_Section_716.pdf.

banks or the public. The Rule was sold as an anti-bailout measure;⁵ however, this Article argues that the Rule would have been ineffective as a means to prevent bailouts of the largest, most complex BHCs—those that deal in these swaps. The Rule *does*, however, matter for prudential regulatory purposes—just not for the reasons put forward by critics.⁶ What matters is not whether swaps are booked at a BHC subsidiary that enjoys formal access to the federal safety net,⁷ but rather the size of the loss-absorbing capital “buffer” the BHC must use to fund its swap positions. It turns out that the size of the required buffer for the swap may vary depending on the legal entity in which it is booked.⁸ This has important implications for what the appropriate response to the rollback should be.

This Article explains the practical impact of the Rule and its rollback—an essential step to informing further regulatory efforts. Part I provides a detailed description of the Rule, and Part II explains why the notion that it would have prevented bailouts is misguided. Part III explores possible reasons the systemically important BHCs (SIBs) that dominate the market in the relevant swaps lobbied for the rollback.⁹ We argue that the principal reason SIBs care about the Rule is that the relevant swaps are subject to different capital charges based on whether they are booked in the SIBs’ bank or non-bank subsidiaries.¹⁰ Put simply, it costs more to fund these swaps if they are booked at a broker-dealer rather than at a bank.

⁵ Senator Elizabeth Warren, for example, declared that the rollback would put “taxpayers right back on the hook for bailing out big banks.” See, e.g., *‘Enough is enough’: Elizabeth Warren launches fiery attack after Congress weakens Wall Street regs*, WONKBLOG, Dec. 12, 2014, <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/12/12/enough-is-enough-elizabeth-warrens-fiery-attack-comes-after-congress-weakens-wall-street-regulations/>.

⁶ It is important to note that the rollback was criticized based on process as well as substance: some saw it as evidence of unhealthy influence by big banks. See *id.* Our focus, however, is exclusively on the substance of the Rule.

⁷ This “safety net” consists of deposit insurance and access to emergency lending from the Federal Reserve.

⁸ See *infra* Part III.

⁹ Five SIBs account for 95% of the market in swaps dealing: JPMorgan Chase & Co., Citigroup Inc., Goldman Sachs Group Inc., Bank of America Corporation, and Morgan Stanley. See John Carney, *Ratings Game Behind Big Banks’ Derivatives Play*, WALL ST. J., (Dec. 12, 2014), <http://www.wsj.com/articles/ratings-game-behind-big-banks-derivatives-play-heard-on-the-street-1418417119?cb=logged0.08315180937852862>. We restrict our analysis in this Article to SIBs because they dominate the market, were most active in pushing for the rollback, and have been the focus of criticism and “bailout” fears. If smaller banks’ market share of swaps dealing grew, it might affect one’s view of the appropriate regulatory response. See *infra* note 77 and accompanying text.

¹⁰ See *infra* Part III.

I. The Rule

The Dodd-Frank Act was drafted in an environment of widespread public anger about the bailouts that occurred during the financial crisis; the Act promised, *inter alia*, to “end ‘too big to fail’ [and] to protect the American taxpayer by ending bailouts.”¹¹ The Rule was written as a provision of the Dodd-Frank Act and purported to serve this end. As drafted, the Rule would have prohibited insured depository institutions from entering only *certain* swap contracts: uncleared credit default swaps (CDS);¹² most types of equity swaps;¹³ and swaps referencing most physical commodities.¹⁴ These swaps were forbidden only to the degree that they did not aim to mitigate risks assumed in other (permissible) parts of the bank’s portfolio.¹⁵ Interest rate swaps¹⁶ and foreign exchange swaps¹⁷—which in aggregate represent the vast majority of SIBs’ swap portfolios in terms of market value¹⁸—would not have been subject to the Rule.

It is important to emphasize that while the Rule would have pushed the swaps out of the SIB’s bank subsidiary, it would *not* have pushed the swaps out of the SIB entirely; the swaps would have remained permissible if they were simply migrated to an affiliate entity in the *same* SIB’s holding company.¹⁹ Figure 1 illustrates a typical SIB structure, consisting of a parent holding company atop an array of operational subsidiaries, includ-

¹¹ Dodd-Frank Act pmb1.

¹² For a description of CDS, *see infra* Part III. Uncleared swaps exclude swaps “cleared by a derivatives clearing organization . . . or a clearing agency . . . that is registered, or exempt from registration, as a derivatives clearing organization under the Commodity Exchange Act or as a clearing agency under the Securities Exchange Act, respectively.” Dodd-Frank § 716(d)(3).

¹³ An example of an equity swap is one in which party A makes fixed payments to party B in exchange for payments that mimic the return on a particular corporation’s stock.

¹⁴ Dodd-Frank Act, Pub. L. No. 111-203, § 716, 124 Stat. 1376 (2010) (codified at 15 U.S.C. § 8305). Note that swaps based on precious metals have always been exempt from the Rule.

¹⁵ *Id.*

¹⁶ In an interest rate swap, parties exchange different interest payments on a notional principal amount. One party will usually pay a fixed rate and the other party a floating rate. *See, e.g., The valuation of US Dollar interest rate swaps*, BANK FOR INT’L SETTLEMENTS (Jan. 1993), <http://www.bis.org/publ/econ35.htm>.

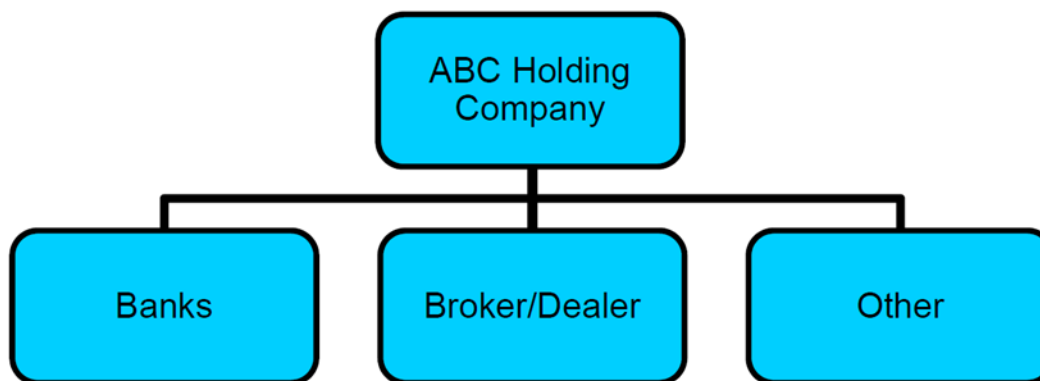
¹⁷ A foreign exchange swap involves the exchange of principal and interest in one currency for principal and interest in another currency; it is typically used by firms trying to “lock in” the value in currency A’s terms of future payments due to them in currency B. *See, e.g., The basic mechanics of FX swaps and cross-currency basis swaps*, BANK FOR INT’L SETTLEMENTS (Sept. 2008), http://www.bis.org/publ/qtrpdf/r_qt0803z.htm.

¹⁸ *See BIS Quarterly Review*, Bank for International Settlements, 141 (June 2015), http://www.bis.org/publ/qtrpdf/r_qt1506.pdf.

¹⁹ As noted above, the Rule is different in this respect from the Volcker Rule, which forbids proprietary trading throughout the entire SIB.

ing banks and broker-dealers.²⁰ What was at stake with the Rule, therefore, was not whether JPMorgan Chase & Co. (a holding company) could enter swap agreements, but rather which of its subsidiaries would house the swaps: JPMorgan Chase Bank, N.A. (an insured depository, or bank) or J.P. Morgan Securities LLC (a broker-dealer).

Figure 1: Illustrative SIB Holding Company²¹



As noted, the Rule was part of a legislative effort to end bailouts; the central plank of this effort was the creation of a mechanism to resolve failing financial institutions without the commitment of taxpayer funds.²² The legislation left in place, however, an explicit promise by the federal government to “bail out” bank depositors (subject to an account-based cap) in the event of bank failure.²³ While deposit bailouts remain a central feature of our financial system, certain reform efforts have focused on lessening the likelihood of such bailouts by imposing heightened risk constraints on banks, including higher capital and stricter liquidity requirements.²⁴ The Rule represented an additional effort at risk constraint, inspired perhaps by one of the most salient and troubling crisis events:

²⁰ “Banks” in this Article refers to deposit-taking institutions. “Broker-dealers” include the classic Wall Street firms (often called—perhaps confusingly—“investment banks”) involved in activities such as underwriting securities offerings, buying and selling securities on their own or clients’ accounts, and advising corporate clients on mergers and acquisitions. SIBs engage in both types of activity, but out of different subsidiaries.

²¹ See Title II Resolution Strategy Overview 14, Aug. 2012, <https://www.fdic.gov/resauthority/sifiresolution.pdf>.

²² See Dodd-Frank Act, Pub. L. No. 111-203, § 214, 124 Stat. 1376 (2010) (codified at 12 U.S.C. 5394).

²³ This is, of course, deposit insurance. See *Deposit Insurance at a Glance*, FED. DEPOSIT INS. COMMISSION, https://www.fdic.gov/deposit/deposits/brochures/deposit_insurance_at_a_glance-english.html.

²⁴ See, e.g., Regulatory Capital Rules, 78 Fed. Reg. 62018 (codified at 12 C.F.R. parts 208, 217, and 225); Liquidity Coverage Ratio, 79 Fed. Reg. 61440 (codified at 12 C.F.R. parts 50, 249, and 329).

the bailout of the insurer AIG in September 2008.²⁵

II. The Rule's Ineffectiveness as an Anti-Bailout Measure

Critics suggest that the Rule protected taxpayers from paying for bank risk-taking.²⁶ Whether taxpayers are on the hook for a bailout, however, is unlikely to turn on whether a SIB books its swaps in its bank subsidiary or its broker-dealer subsidiary. The key conceptual assumption driving this Article is that for the largest financial institutions—those that dominate the relevant swaps markets²⁷—the relevant unit of analysis for thinking about potential taxpayer bailouts is the SIB as a *whole*, not its subsidiaries.

If a SIB subsidiary is insolvent but the SIB as a whole is not, the SIB parent company will almost certainly recapitalize the subsidiary; it does not matter whether it is the commercial bank or the broker-dealer.²⁸ If, on the other hand, the SIB as a whole is insolvent, the default option is to put it into bankruptcy. For the largest financial firms—those that dominate the relevant swap markets and that lobbied for the rollback of the Rule—however, it is highly likely that regulators would instead resort to the Single Point Of Entry (“SPOE”) strategy authorized by Title II of Dodd-Frank. The reason is straightfor-

²⁵ AIG sold CDS on bonds backed by mortgages. These CDS were a bit like insurance: buyers promised to make periodic premium payments to AIG, and AIG promised to pay out on the CDS in the event the bond being “insured” suffered a defined “credit event,” such as a default. The CDS were unlike insurance, however, in that the “protection buyers” were largely taking speculative short positions rather than insuring against losses—they did not necessarily have an “insurable interest.” In addition, AIG was careful to structure the CDS so that they would not technically qualify as insurance contracts, which would have required AIG to set aside capital reserves against potential losses. In large part because of its failure to provide adequately for losses on its CDS portfolio, AIG required a massive bailout from the federal government. The Rule was intended to protect taxpayers from covering AIG-like losses at institutions whose creditors—i.e., depositors—continue to enjoy explicit federal insurance against losses. For an account of AIG’s bailout, see FIN. CRISIS INQUIRY COMM’N, THE FINANCIAL CRISIS INQUIRY REPORT, 19 (2011), available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf> [hereinafter FCIC REPORT].

²⁶ See, e.g., *supra* note 5 and accompanying text.

²⁷ See *supra* note 9.

²⁸ The holding company is legally required to support the bank subsidiary. Dodd-Frank Act § 616(d), (codified at 12 U.S.C. 1831o-1). The holding company is not legally required to recapitalize the broker-dealer subsidiary, but failing to do so is likely to cause immense reputational damage to the SIB, and could constitute institutional suicide. See, e.g., Julie Creswell & Vikram Bajaj, *\$3.2 Billion Move by Bear Stearns to Rescue Fund*, N.Y. TIMES (June 23, 2007), <http://www.nytimes.com/2007/06/23/business/23bond.html?pagewanted=all&r=0>. It is important to note, of course, that there are strict limits on the holding company’s ability to shift resources from banks to other subsidiaries. See Federal Reserve Act § 23A (codified at 12 USC 371c). If a SIB that was solvent on a consolidated basis—due to a well-capitalized bank—were unable to support a non-bank subsidiary, it would likely trigger the SPOE resolution discussed in this section.

ward: SPOE resolution is much less likely to spark a panic than a bankruptcy proceeding.²⁹

The SPOE approach takes advantage of the organizational structure of U.S. SIBs: as noted above, they tend to have a parent holding company that issues equity shares and long-term debt in public capital markets and an array of subsidiaries that carry out the SIBs' actual operations.³⁰ The Federal Deposit Insurance Corporation's strategy under SPOE is to resolve *only* the holding company.³¹ If the approach works, the subsidiaries will be transferred *en masse* and without any hiccup to a "bridge" holding company.³² All SIB losses will be borne at the parent holding company level, by long-term debtors and shareholders; to ensure that there is *enough* loss-absorbing capacity at the parent holding company level, the Federal Reserve is preparing a rule that will require SIBs to issue a minimum amount of long-term holding-company debt as part of its "total loss-absorbing capital."³³

If this strategy works, *it should not matter which subsidiary has booked the SIB's derivatives*. To be concrete, the debate over the Rule concerns whether certain swaps will be booked at a SIB's commercial bank subsidiary, or its broker-dealer subsidiary. In either event, the subsidiaries will continue operating, and their third-party creditors and counterparties will suffer no losses or delays.³⁴ Taxpayers will not be on the hook: all

²⁹ The failure of a SIB could trigger runs on sister SIBs if short-term creditors feel they are at risk of suffering delay and/or a haircut in recovering their principal. Preempting this dynamic requires meeting "no delay" and "no haircut" conditions for short-term creditors of a failed SIB. A SPOE resolution can plausibly meet these conditions, bankruptcy cannot. For a fuller discussion, see John Crawford, "*Single Point of Entry*": *The Promise and Limits of the Latest Cure for Bailouts*, 109 NW L. REV. ONLINE 103 (2014).

³⁰ See Dodd-Frank Act Title II; see also Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy, 78 Fed. Reg. 76614, 76615 (proposed Dec. 18, 2013) [hereinafter Proposed SPOE Rule].

³¹ *Id.* at 76615–17.

³² *Id.* The new "bridge" holding company would be structurally just like the old holding company, but with fewer obligations and different claimants. The old shareholders would likely be wiped out; the old long-term creditors would likely have their debt claims on the original holding company converted into equity claims on the new bridge holding company—almost certainly representing a significant diminution in value. The term "bridge" reflects the provisional status of the claims on the new holding company during the resolution process; the new holding company serves as a "bridge" between the pre-resolution SIB and the post-resolution SIB.

³³ See FIN. STABILITY BD., ADEQUACY OF LOSS-ABSORBING CAPACITY OF GLOBAL SYSTEMICALLY IMPORTANT BANKS IN RESOLUTION (2014), <http://www.financialstabilityboard.org/wp-content/uploads/TLAC-Condoc-6-Nov-2014-FINAL.pdf>.

³⁴ Traditional cross-default provisions in swaps could disrupt this strategy, but major swap dealers have adopted a protocol to opt into resolution regimes that override these cross-default provisions. See

losses will be borne by the long-term creditors and equity claimants of the SIB holding company.

But what if there is insufficient capacity at the holding company level to absorb *all* the SIB's losses in a resolution? The formal requirement in this case is to resolve the subsidiaries that remain insolvent even after being recapitalized in the SPOE resolution process.³⁵ If regulators actually followed this approach, then in theory it could matter to taxpayers which subsidiary was insolvent.³⁶ However, we believe this scenario is unlikely. Required total loss-absorbing capacity at the holding company level is expected to be somewhere near 20% of risk-weighted assets. Should losses outstrip that amount, banking regulators will likely be more concerned about containing broader risks to the financial system than about imposing losses on subsidiary creditors. Resolving a SIB subsidiary and giving its creditors haircuts can generate the precise crisis-like dynamics—panic and its pernicious consequences—that Title II is meant to help avoid.³⁷ Regulators who invoke Title II will have strong incentives to prevent this outcome by effectively bailing out the SIB subsidiaries.

Despite the *formal* prohibition on bailouts, Title II provides some latitude for regulators to prevent contagion by engaging in a *de facto* bailout. If a newly capitalized SIB under a bridge holding company is facing a liquidity crunch, the Treasury is authorized to lend to the SIB.³⁸ The SIB has to be solvent in order to receive such loans.³⁹ The distinction between insolvency and illiquidity in a crisis can, however, be impossible to draw with confidence; it necessarily depends on a large number of assumptions, and a few optimistic (yet plausible) assumptions will often be enough to ground a solvency determination. If Treasury fails to recover its loans, it must impose an *ex post* levy on other SIBs, thus ensuring that taxpayers do not suffer losses.⁴⁰ Again, in this scenario—which we

Resolution Stay Protocol – Background, ISDA (2014)
<https://www2.isda.org/attachment/NzA0Mw==/RESOLUTION%20STAY%20PROTOCOL%20Background%20FINAL.pdf>.

³⁵ See Proposed SPOE Rule, *supra* note 32, at 76623.

³⁶ It is possible that the government would be legally obligated to cover (some) losses at the bank if (i) the bank's losses outstripped all the bank's uninsured liabilities—otherwise, the uninsured depositors and bond holders could absorb all losses—and (ii) losses on insured deposits outstripped the funds available from the Federal Deposit Insurance Fund, which is capitalized by industry fees rather than taxpayer dollars. The government would be under no legal obligation to cover losses at the broker-dealer.

³⁷ Panic is a phenomenon that affects short-term funding; short-term funding is used by SIB subsidiaries but generally not the SIB holding company.

³⁸ *Id.* at 76616.

³⁹ *Id.*

⁴⁰ *Id.* at 76617. The “*ex post* levy” means that the government will collect any money it loses on the

consider the likeliest in the event a SIB fails and its losses do, in fact, outstrip the loss absorbing capacity of the parent holding company—it should not matter *ex post* whether the swaps were booked at the bank or the broker-dealer.

III. What Is at Stake for SIBs?

If the controversy surrounding the Rule’s rollback focused erroneously on the likelihood of bailouts of SIB subsidiaries, then the question remains why the big banks cared about the issue. What factors made it important enough for SIBs to lobby against the Rule? Below, we look at several possibilities, considering transition costs and collateral before zeroing in on capital as what is likely of greatest concern to the SIBs.

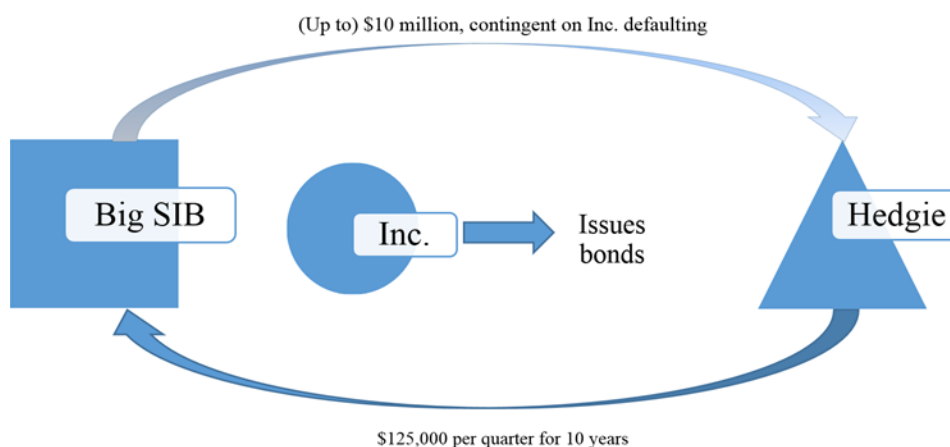
A. Transition costs

One possibility is that there may be transition costs related to things such as re-writing contracts. These one-time costs may be substantial in the short-term, but in the long-term would likely be relatively small and should not be a major concern from a public policy perspective.

B. Collateral

Another potential motivation relates to collateral requirements. Collateral is security against the future performance under a contract. In a CDS transaction, the contract is executory: both parties have yet to fully perform. Here it will help to provide a stylized example of a CDS for illustrative purposes.

Figure 2: 10-year CDS on Inc. Bonds



loans it makes to the bridge holding company through a fee or tax on remaining SIBs.

Figure 2 illustrates the structure of a typical CDS: a SIB (“Big SIB”) sells \$10 million worth of protection to a hedge fund (“Hedgie”) against default by a corporate bond issuer (“Inc.”).⁴¹ The CDS has a duration of 10 years, and to purchase the protection, Hedgie agrees to pay \$125,000 per quarter to Big SIB.⁴²

By construction, the CDS will be valued at zero at inception. This means that the expected present value of Hedgie’s premium payments to Big SIB perfectly offsets the expected present value of Big SIB’s contingent payment to Hedgie in the event of Inc.’s default.⁴³ As Inc.’s creditworthiness and other market conditions change over the life of the CDS, however, the value of the contract is unlikely to remain at zero. If, for example, the cost of buying \$10 million worth of protection against Inc.’s default rises to \$250,000 per quarter, then a default by Big SIB would impose a significant “replacement” cost on Hedgie: Hedgie would have to pay twice as much for the same level of protection with another dealer. If, on the other hand, the cost of buying \$10 million worth of protection fell to \$62,500 per quarter, then Hedgie’s default on its premium payments would be costly to Big SIB: Big SIB would have to take on twice the risk, guaranteeing \$20 million worth of Inc.’s bonds, in order to replace the revenue stream it lost from Hedgie. Each party’s cost of replacing the position in the event of counterparty default is referred to as “current exposure,” and parties may post collateral as security for these replacement costs.⁴⁴

Parties may also post collateral for “potential future exposure,” which reflects fac-

⁴¹ It is important to note that the \$10 million is notional: it does not actually change hands upfront.

⁴² This represents a cost of protection of 500 basis points, or 5% per annum: four annual payments of \$125,000 equals \$500,000 per year, or 5% of \$10 million.

⁴³ This assumption is stylized for ease of analysis; the reality is usually a bit more complicated. *See, e.g.,* David Mingle, *The Value of a New Swap*, ISDA RES. NOTES (2010), <http://www.isda.org/researchnotes/pdf/NewSwapRN.pdf> (“The pricing of derivatives transactions is based on the theoretical concept of pricing at mid-market, that is, zero net present value at inception. In practice, the mid-market price is generally not the actual price transacted with a counterparty, but is instead a benchmark against which the actual price is set.”). In general, the divergence from zero is likely to be small. *Id.* at 2, note 1 (“The small initial divergence from par is the dealer’s profit on making the market.”). A notable counter-example of a large divergence involved a derivative transaction in 2006 between the government of Greece and Goldman Sachs. The deal was struck “off-market” such that Greece’s day one position on the transaction was significantly negative. In return, Goldman Sachs made a substantial upfront payment to Greece, which had the effect of making the Greek government’s fiscal position look healthier than it was. This transaction was, however, unusual.

⁴⁴ Collateral posted to cover current exposure, or the cost of replacing the position, is referred to as “variation margin.” *See* Capital, Margin, and Segregation Requirements for Security-Based Swap Dealers and Major Security-Based Swap Participants and Capital Requirements for Broker-Dealers, 77 Fed. Reg. 70214, 70257 n.475 (proposed Nov. 23, 2012) [hereinafter Proposed Capital Rule] (“In the Dodd-Frank Act, collateral collected to cover current exposure is referred to as *variation margin*.”).

tors such as the volatility of Inc.'s bond spreads and counterparty creditworthiness.⁴⁵ The parties will generally use credit ratings as a proxy for creditworthiness.⁴⁶ Because of the interplay between credit ratings and collateral requirements, the entity in which a CDS transaction is booked can have a substantial impact on a broker-dealer's profit margin. If there is a difference in the credit ratings assigned to a SIB's broker-dealer subsidiary and its bank subsidiary, then the SIB will, all else equal, have an incentive to book derivatives at the higher-rated subsidiary. Higher credit ratings will generally translate into lower collateral requirements, which effectively lower the cost of the transaction. Some news reports cited this as a motivating factor behind SIBs' lobbying for the Rule's rollback.⁴⁷

However, if our analysis of the likely fallout from SIB failure is correct, then the credit ratings of the bank and broker-dealer subsidiaries—which relate to uninsured debt such as long-term bonds—should generally be the same.⁴⁸ And indeed, there is no difference between the credit rating on long-term debt at the broker-dealer and commercial bank subsidiaries for four of the five SIBs that, in aggregate, account for 95% of total no-

⁴⁵ See *id.* at 70241 (“[P]otential future exposure” covers “the risk, among other things, . . . that the current exposure may increase in the future and the counterparty will default on the obligation to provide additional collateral to cover the increase . . .”). In practice, of course, the parties will generally net out both their current and potential future exposure in posting collateral. See, e.g., *id.* at 70243 (“For internal risk management purposes, the ANC broker-dealer monitors and controls its exposure to the counterparty on a net basis.”). Parties will typically net out their obligations across *all* derivatives contracts they have entered with each other. It is worth noting that prior to the financial crisis, parties were generally not required to collateralize these counterparty credit risks. However, even in that period, as market conditions and the creditworthiness of the counterparties changed, the parties would often exchange collateral to account for these shifts. Following passage of the Dodd-Frank Act, and corresponding enactment of similar measures in Europe and Asia-Pacific, most transactions require financial parties to collateralize their transactions.

⁴⁶ Collateral terms between two counterparties for swaps are set forth by the International Swaps and Derivatives Association (ISDA) in a document known as the Credit Support Annex. The specific terms can be customized, but the form is standard across the industry. Credit ratings are a typical factor in determining the amount of collateral that counterparties must post under different scenarios, given that current exposure and potential future exposure are essentially other forms of the extension of credit. As such, a party to a CDS will generally have to post more collateral the lower its credit rating. Assets posted as collateral translate to less funding for other productive and profitable purposes.

⁴⁷ See Carney, *supra* note 9. The SIB's counterparty will often be a smaller bank, and Carney astutely observes that the smaller bank *may* itself be required to take a higher capital charge the lower the SIB's credit rating due to heightened counterparty risk, and that this will affect pricing adversely for the SIB. *Id.* Of course, if the position is fully collateralized, it will not require a higher capital charge for the small bank, but either way, the small bank will demand more generous terms from the SIB, cutting into the SIB's profit margin.

⁴⁸ This is because there is little practical difference in the likelihood of default by different SIB subsidiaries, given the realities of Title II.

tional derivatives in the United States.⁴⁹ The broker-dealers and commercial banks of, respectively, JPMorgan Chase & Co., Goldman Sachs Group Inc., Bank of America Corporation, and Morgan Stanley, have received the same ratings from every credit ratings agency that has rated both.⁵⁰ Again, this is consistent with the discussion above suggesting that the probability of default on uninsured debt is likely *not* higher in a SIB's non-bank subsidiaries than in its bank. There is one outlier: for Citigroup Inc., Moody's rating for the broker-dealer is three notches below that of the bank; and S&P's and Fitch's respective ratings for the broker-dealer are one notch below their ratings for the bank.⁵¹ We find this somewhat puzzling, given the realities of Title II. In any event, it was reported that Citigroup was particularly active in seeking the rollback of the Rule, and the impact of credit ratings on its collateral requirements may help (partly) explain Citigroup's motivation, though it does not explain the motivations of other SIBs.⁵²

C. Capital

While transition costs and collateral concerns may have played some role in SIB lobbying for the rollback, we believe the central motivation was much simpler: a desire for more favorable capital treatment. What counts as “capital” for regulatory purposes can be extraordinarily complicated in operational terms but is simple at a conceptual level: it is a measure of the difference between a bank's assets and its liabilities, between what it owns and what it owes. A larger capital buffer makes default—that is, failing to pay what is owed—less likely, holding all else equal.

Why, then, might SIB decision-makers want to minimize capital? The key reason

⁴⁹ See Carney, *supra* note 9. JPMorgan Chase & Co. alone accounts for 44% of credit default swaps.

⁵⁰ The relevant credit rating for derivatives purposes is the rating on long-term debt. See JPMorgan Chase & Co., Fixed Income Information: Credit Ratings, <http://investor.shareholder.com/JPMorganChase/fixedIncome.cfm> (comparing JPMorgan Chase Bank, N.A. to J.P. Morgan Securities LLC); Goldman Sachs Credit Ratings, <http://www.goldmansachs.com/investor-relations/creditor-information/gs-entity-rating.pdf> (comparing Goldman Sachs & Co. to Goldman Sachs Bank USA); Bank of America, Fixed Income Overview: Credit Ratings Summary, <http://investor.bankofamerica.com/phoenix.zhtml?c=71595&p=debtoverview#fbid=nfXFTZgx57A> (comparing Bank of America, N.A. to Merrill Lynch, Pierce, Fenner & Smith Incorporated); Morgan Stanley Investor Relations, Creditor Information: Current Credit Ratings, <https://www.morganstanley.com/about-us-ir/creditor-presentations.html> (comparing Morgan Stanley Bank, N.A., to Morgan Stanley & Co. LLC).

⁵¹ Citigroup Credit Ratings, <http://www.citigroup.com/citi/investor/rate.htm> (comparing Citibank, N.A., to Citigroup Global Markets Holdings Inc.).

⁵² See Carney, *supra* note 9 (noting that the provision rolling back the Rule “was reportedly authored by lobbyists for Citigroup,” but “J.P. Morgan Chase chief Jamie Dimon [also] called to lobby lawmakers”).

is that if one holds equity constant, then taking on more debt—which translates to a thinner capital buffer in relative terms—can amplify the returns on equity (i.e., shareholder profits). This holds true as long as the return on assets—e.g., the interest on the loans the SIB makes to others—exceeds the interest the SIB pays to its lenders. In contrast, having to fund a business with more capital depresses a SIB’s return on equity. As a result, SIB decision-makers tend to view capital as an “expensive” way to fund the SIB’s activities, and thus have an incentive to minimize it.⁵³

The bank capital regime is very different in its details from the “net capital” rules that apply to broker-dealers.⁵⁴ In many cases, but not all, the same position (such as contractual rights and obligations under a swap contract) will draw a larger capital requirement at a bank than at a broker-dealer. One might think that the SIB would want to book as many of these positions as possible at the broker-dealer instead of the bank. However, SIBs must apply bank capital rules on a *consolidated* basis throughout the entire holding company family, so that for most practical purposes the SIB cannot escape bank capital rules by parking assets at its non-bank subsidiaries. In contrast to positions where the bank capital charge exceeds the net capital charge, uncleared derivatives represent one limited subset of interests where the capital requirement at the broker-dealer, all else equal, may exceed the capital requirement for the same position at the bank.⁵⁵ This is especially the case under a new rule proposed, but not yet finalized, by the Securities and Exchange Commission.⁵⁶ It is our view that this was the most significant factor driving efforts to roll back the Rule.

To illustrate this, we will draw on the hypothetical CDS between Big SIB and Hedge outlined above in Figure 2.⁵⁷ Assume the following two stylized facts: (1) the

⁵³ There are strong critics of banks’ claim that “capital is expensive.” See generally Anat R. Admati et al., *Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity is Not Socially Expensive* (Stanford Graduate Sch. of Bus. Research Paper No. 13-7, 2013). These critics argue that capital is expensive relative to debt only because of social subsidies such as implicit government guarantees of the largest financial institutions and the deductibility of interest payments (but not dividends). *Id.* They do *not*, however, question that capital can be at least privately expensive for SIBs, thus creating the incentive to minimize it.

⁵⁴ We will assume that the relevant choice of subsidiaries for the SIB is either a bank or a broker-dealer, but it is worth noting that *any* non-bank entity dealing in swaps will face capital requirements that are largely identical to those applying to broker-dealers. See Proposed Capital Rule, *supra* note 46.

⁵⁵ Unlike bank capital requirements that apply on a consolidated basis to the entire SIB, the net capital requirements apply *only* to the broker-dealer.

⁵⁶ Proposed Capital Rule, *supra* note 46.

⁵⁷ To be clear, for the purposes of this Article we use a highly simplified example and ignore a number of factors related to how precise capital requirements for a broker-dealer or bank would be calculated. These simplifying steps are adopted as a matter of convenience and do not affect our ultimate

contract is struck with a value of zero at inception; and (2) Big SIB is precisely at its regulatory thresholds with respect to its bank capital, consolidated bank capital, and net capital requirements.

The CDS will require Big SIB to raise extra capital no matter where it is booked, but the swap will require Big SIB to raise *more* new capital under the SEC's proposed net capital rule than under bank capital rules.⁵⁸ Both capital regimes—net capital and bank capital—require two calculations: (i) *required* capital and (ii) *actual* capital. Compliance demands that *actual* capital be greater than or equal to *required* capital (assumption (2) in the paragraph above means that the two are equal at Big SIB). If required capital goes up, or if actual capital goes down, Big SIB will have to raise new capital.

Consider first bank capital. As noted, at a high level, capital measures the difference between assets and liabilities. Because the contract is valued at zero, the swap leaves *actual* capital unchanged. The swap adds to the bank's *required* capital levels, however: it must treat its exposure to the underlying reference asset—Inc.'s bonds—as if it had loaned cash to Inc. directly.⁵⁹ The \$10 million exposure would receive a 100% risk weight,⁶⁰ and under rules being implemented now, a total capital charge of up to 15%

conclusion—that capital requirements for a given credit derivatives transaction booked at a broker-dealer would be higher than they would be if the positions were booked at a depository institution.

⁵⁸ It is important to emphasize that different assumptions will yield different results. In some cases, the net capital charge may be *even greater* than the bank capital charge; in others, bank capital will exceed net capital requirements. Our goal here is not to map out the relative capital charges under a wide range of scenarios, but simply to illustrate how the net capital charge *can*, under plausible assumptions, prove more onerous.

⁵⁹ 12 C.F.R. 3.34(c)(2) (“A national bank or Federal savings association that is the protection provider under an OTC credit derivative must treat the OTC credit derivative as an exposure to the underlying reference asset.”). Counterparty credit risk need not affect capital requirements for the bank as protection seller, and we assume for ease of exposition that it does not here. *See id.* (“The national bank or Federal savings association is not required to compute a counterparty credit risk capital requirement for the OTC credit derivative under § 3.32, provided that this treatment is applied consistently for all such OTC credit derivatives.”). Collateral also does not generally affect capital for the bank as posted collateral remains on the balance sheet of the bank and received collateral is segregated so it does not appear on the bank's balance sheet. The treatment of collateral for broker-dealers is different. *See infra* note 77.

⁶⁰ *See* 12 C.F.R. 3.32(f) (“A national bank . . . must assign a 100% risk weight to all its corporate exposures.”). Risk weights are a way of adjusting required capital to the perceived riskiness of a bank's assets. In this example, where the capital requirement is 15%, *infra* note 61, a 100% risk weight means that the bank has to apply the 15% capital requirement to the full face value of the position. A 50% risk weight would mean that the bank would apply the 15% capital charge to 50% of the face value of the position, effectively halving the required capital. And if the risk weight were zero—as with Treasury bonds, the traditional paragon of a “safe” investment—it would mean that there would not be a capital charge at all for the position.

would apply.⁶¹ If the swap is booked in the bank, then, Big SIB will have to add as much as \$1.5 million in capital to cover the position.

What about broker-dealers' net capital? For broker-dealers that carry customer accounts which include all the largest broker-dealers, required net capital is computed as a percentage of customer debits.⁶² Let us assume Hedgie is not a customer; the swap would then not add to Big SIB's *required* net capital.⁶³

The swap would, however, have an impact on Big SIB's *actual* net capital: it would *reduce* actual net capital, meaning Big SIB would have to raise *new* capital to cover the shortfall. Actual net capital is calculated by computing a broker-dealer's net worth and then making a number of adjustments, including deductions for various assets based on perceived risk.⁶⁴ The swap, valued at zero, would not add to the broker-dealer's net worth, but *would* require new deductions. Under the rules that apply to Big SIB's broker-dealer subsidiary,⁶⁵ the swap will require (1) a "market risk" deduction to account for the possibility that Big SIB will lose on the position due to Inc.'s performance or other market factors; and (2) a "credit risk" deduction to account for counterparty risk vis-à-vis Hedgie.⁶⁶ We consider the effect of each type of deduction in turn.

1. *Market Risk*

The largest broker-dealers, including the broker-dealer subsidiaries of the SIBs affected most by the Rule and its rollback, use "alternative net capital" (ANC) rules that permit them to use their own internal financial models rather than mandatory haircuts to compute the necessary market risk deductions.⁶⁷ These models are visible to regulators

⁶¹ Under rules that will come fully into effect at the beginning of 2019, all banks are subject to capital requirements—consisting of a "minimum total capital ratio" plus a "capital conservation buffer," and expressed as a percentage of risk-weighted assets—of 10.5%. *See* Regulatory Capital Rules, 78 Fed. Reg. 62018, 62075 at tables 5 & 6 (Oct. 11, 2013). In addition, the largest SIBs will be subject to an additional SIB capital "surcharge" of up to 4.5 percentage points. *See* Board of Governors for the Federal Reserve System, Press Release, July 20, 2015, <http://www.federalreserve.gov/newsevents/press/bcreg/20150720a.htm> ("[E]stimated surcharges . . . range from 1.0 to 4.5% of each firm's total risk-weighted assets.").

⁶² 17 C.F.R. 240.15c3-1(a)(1)(ii).

⁶³ If Hedgie *is* a customer, then Big SIB's broker-dealer could face even *higher* capital requirements, as required net capital would rise as a result of any collateral that Hedgie posted with the broker-dealer (since such collateral would constitute customer debits).

⁶⁴ 17 C.F.R. § 240.15c3-1(c)(2) (2015).

⁶⁵ *See infra* note 67 and accompanying text.

⁶⁶ 17 C.F.R. § 240.15c3-1e(b) & (c) (2015).

⁶⁷ 17 C.F.R. § 240.15c3-1e (2015). *See also* Removal of Certain References to Credit Ratings Under the Securities Exchange Act of 1934, 79 Fed. Reg. 1522, 1532 n.162 (Jan. 8, 2014) ("Currently, there are

but not to the general public. When the SEC proposed the rule permitting the use of internal models in 2004, however, it estimated the ANC rules would reduce deductions for broker-dealers by an average of 40%.⁶⁸ We may, then, be able to get a very rough estimate of the market risk deduction that would apply to Big SIB's net capital if it booked the swap at its broker-dealer by calculating the mandatory deduction under the new rule and applying a 40% discount. Under the new rule, the mandatory deduction for the swap will be 25% of the notional value of the position,⁶⁹ or \$2.5 million.⁷⁰ Applying a 40% discount as a rough proxy for the effect of Big SIB's ability to use internal models, this would translate to a \$1.5 million market risk deduction—as a practical matter, \$1.5 million of additional capital that the broker-dealer will have to raise. As described below, however, several factors beyond the market risk deduction could have the effect of increasing the net capital charge for the position—potentially to much more than \$1.5 million.

2. *Credit risk and collateral*

Assume first that the position is fully collateralized on a net basis.⁷¹ If Big SIB ends up having to post collateral with Hedgeie, this collateral will count as an unsecured receivable which receives a 100% capital deduction under proposed rules.⁷² This would, of course, create a significant capital charge if the market moved against Big SIB's position. For example, if Inc.'s creditworthiness deteriorated one year after our illustrative CDS was struck, so that the cost of attaining the same level of insurance rose to \$175,000 per quarter, then Hedgeie's current exposure to Big SIB—reflecting the replacement cost of the contract if Big SIB defaulted—would be very large: assuming a 5% annual discount rate, it would rise to approximately \$1.44 million.⁷³ If Big SIB's broker-dealer

six ANC broker-dealers: Barclays Capital Inc.; Citigroup Global Markets, Inc.; Goldman Sachs & Co.; J.P. Morgan Chase Securities LLC; Merrill Lynch Pierce Fenner & Smith Incorporated; and Morgan Stanley & Co. Incorporated.”).

⁶⁸ See Alternative Net Capital Requirements for Broker-Dealers that are Part of Consolidated Supervised Entities, 69 Fed. Reg. 34428, 34455 (“In the Proposing Release, we estimated that broker-dealers taking advantage of the alternative capital computation would realize an average reduction in capital deductions of approximately 40%.”).

⁶⁹ See Proposed Capital Rule, *supra* note 46, at 70335. The market deduction for the protection seller in a CDS is determined by length to maturity and the basis point spread (that is, the premium paid by the protection buyer). The rule requires a deduction of 25% of the notional amount of protection for 10-year contracts with a 500 basis point spread (as in our example with Big SIB and Hedgeie).

⁷⁰ The notional value is \$10 million; \$10 million x 25% = \$2.5 million.

⁷¹ This means that, after netting, the party with current or potential future exposure to the other party receives collateral to cover the entire (net) exposure.

⁷² See Proposed Capital Rule, *supra* note 46, at 70241.

⁷³ Again, this is an estimate for purposes of the stylized example; the replacement cost—i.e., the

posted this as collateral, it would almost double the capital charge from \$1.5 million to \$2.94 million.⁷⁴

It is also worth noting that the proposed rules for broker-dealers do *not* require that their own (net) exposure to swap counterparties be fully collateralized; if, however, the counterparty is a financial entity such as Hedgie, the broker-dealer's unsecured exposure *also* receives a 100% deduction.⁷⁵ Thus, if Inc.'s creditworthiness improves instead of deteriorates, but Hedgie does not post collateral, the credit risk deduction could make Big SIB's net capital charge just as onerous.

In any event, booking this swap in the broker-dealer will often require Big SIB to raise more—perhaps considerably more—*new* capital than it would have to raise if the swap were booked in the commercial bank. It is worth emphasizing again that changing the assumptions could radically change this outcome. The point of the example is to show that the net capital charge *can* be significantly greater than the bank capital charge, and SIBs have an incentive to maintain flexibility in where they book a swap in order to minimize the capital charge that applies to it. The Rule would have forced SIBs to book swaps where they would often require a larger capital charge; *this* is the principal reason SIBs pushed for the Rule's rollback.

IV. Conclusion

Despite critics' claims in the wake of the rollback,⁷⁶ the Rule was oversold as an

current exposure that needs to be collateralized—should be calculable based on the present value of the difference between the stream of the premium payments Hedgie is currently making and the stream of premium payments it would have to make if it struck a new contract for the same degree of protection. This would presumably be discounted by some estimate of the likelihood that the premium payments will stop due to Inc.'s default, but we ignore this to keep the example (relatively) simple. Under these assumptions, current exposure can be determined by the equation $CE = D * \frac{1-(1+i)^{-n}}{i}$, where CE = current exposure; D = the difference between the periodic (quarterly) payment, i.e., \$175,000 minus \$125,000, or \$50,000; i = the discount rate, i.e., 1.25% per quarter (equivalent to 5% per annum); and n = the number of quarterly payments, i.e., 36, as one year has elapsed and there are nine years left on the original CDS.

⁷⁴ Big SIB's bank would have to post the same collateral, but it would not have to take a capital deduction for it.

⁷⁵ See Proposed Capital Rule, *supra* note 46, at 70241.

⁷⁶ See, e.g., *supra* note 5; see also Emily Stephenson & Sarah N. Lynch, *Sen. Feinstein working to reinstate U.S. swaps 'push-out' rule*, REUTERS, Feb. 6, 2015, <http://www.reuters.com/article/2015/02/06/usa-congress-swaps-idUSL1N0VG26G20150206> (Senator Diane Feinstein stated she was "appalled that we are again opening the door to the trading of risky derivatives backed by a taxpayer guarantee."); Heidi Moore, *Congressional budget welcomes big bank bailouts once more despite White House opposition*, THE GUARDIAN, Dec. 10, 2014, <http://www.theguardian.com/business/2014/dec/10/congressional-budget-big-bank-bailouts> (Dennis

anti-bailout measure. If swaps give rise to negative externalities by increasing the risk of taxpayer bailouts, there are at least two ways to mitigate the cost: prohibition and forcing dealers to internalize more of the risk through higher capital requirements. The Rule was unsatisfying on either measure. For those in favor of prohibition, our analysis suggests that the Rule would have been ineffective as a way to protect taxpayers from risks arising from swaps dealing. An effective rule from this point of view would push the swaps out of the entire SIB holding company family, as the Volcker Rule does for proprietary trading.⁷⁷

Higher capital requirements, on the other hand, are a standard prudential regulatory tool for mitigating risk. Requirements vary, depending on the type of legal entity in which a particular transaction is booked. Such variances drive much behavior for SIBs and it may be appropriate to harmonize these requirements across the various types of legal entities. In any event, those who believe swaps pose substantial risks, but who hesitate from calling for a SIB-wide prohibition, should focus on capital. The Rule may, as a practical matter, have achieved higher capital as a side effect, but it would have done so in an inefficient and opaque manner. If legislators or regulators believe capital requirements should be higher, they should raise them directly.

Kelleher, president of Wall Street watchdog Better Markets, claimed the Rule “was saying US taxpayers should not be paying for risky trading activities.”).

⁷⁷ This may be the appropriate approach if, contrary to the current market configuration, swaps dealing becomes a large and widespread problem among non-SIB banks. On the other hand, such a move might prove counterproductive if it pushed systemically risky activities into unregulated corners of the market. See, e.g., Cheyenne Hopkins & Silla Bush, *Dodd-Frank Swaps Pushout Would Be Eased by Bipartisan Bills*, BLOOMBERG BUSINESS, (Mar. 6, 2013), <http://www.bloomberg.com/news/articles/2013-03-06/dodd-frank-swap-pushout-would-be-limited-under-bipartisan-bills> (“Fed Chairman Ben S. Bernanke and Sheila Bair, the former Federal Deposit Insurance Corp. chairman, opposed the provision and argued that it would drive derivatives trading to less-regulated entities.”).