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# Beyond Dodd-Frank: Pinning Down the Octozilla of Too-Big-to-Fail with Multiple Market Instruments

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## Abstract:

A principal purpose of Dodd-Frank is to end "too-big-to-fail." It makes improvements, but leaves in place two market failures that continue too-big-to-fail. Large banks receive an implicit subsidy, because of the continuing perception that they are too-big-to-fail. They also face incentives to make riskier investment choices because while they fully capture the returns for successful investments, the losses from catastrophic failures will be shared by taxpayers. Moreover, the costs of complying with Dodd-Frank's regulations may make smaller banks "too-small-to-succeed." Consequently, we need to go beyond the command-and-control approach of the Dodd-Frank Act, and adopt economic instruments to correct these market failures.

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In 2010, Congress enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act<sup>1</sup> (Dodd-Frank). According to its preamble, Dodd-Frank was supposed “to end ‘too big to fail.’”<sup>2</sup> “Too big to fail” (TBTF) had played a devastating role in the 2008 Financial Crisis in the United States.<sup>3</sup> In order to address the problem of TBTF, Dodd-Frank employs a number of approaches.<sup>4</sup> However, the challenges presented by TBTF are more like a sea-monster from a late-night horror movie (let’s call it “Octozilla”): when the sailors try to attack Octozilla head-on, the creature’s other tentacles reach around and knock the sailors out of the way. Similarly, because Dodd-Frank’s approaches do not directly address market incentives, the problem of the “Octozilla” of TBTF remains.

Meanwhile, certain provisions of Dodd-Frank actually exacerbate the problem of TBTF. One of the by-products of Dodd-Frank’s Volcker Rule<sup>5</sup> is that certain smaller banks may become “too-small-to-succeed” (TSSS). This article suggests that the use of a portfolio of market instruments will be necessary to address TBTF without making other banks TSSS.

TBTF reared its head initially in the 1980s, and in the years prior to the 2008 financial crisis, the challenges presented by TBTF multiplied. Economies of scale took hold in the financial industry, and at the same time, the 1994 Riegle-Neal Interstate Banking and Branching Efficiency Act<sup>6</sup> repealed the prohibition against interstate banking.<sup>7</sup> As a result, certain banks and other financial entities became interconnected with a large number of other financial groups. As a result, failure and bankruptcy of one such entity could cause massive disruptions throughout the US economy. Consequently, a perception arose that when one such large bank might appear to be heading for bankruptcy, it was expected that the federal government would step in to prevent the failure and the resulting damage to the entire economy. These perceptions created perverse incentives for large banks and other financial entities to take on excessive leverage and risks that exacerbated the 2008 crisis.

Dodd-Frank addresses TBTF via a number of instruments. One is the creation of the Financial Services Oversight Council (FSOC). One of the FSOC’s most important tasks is to determine which non-banks should be designated as “systemically important financial institutions” (SIFIs). These designated

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<sup>1</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376, 12 U.S.C. §§ 5301-5641 (2010) [hereinafter Dodd-Frank].

<sup>2</sup> Dodd-Frank, pmb1.

<sup>3</sup> For reviews of the causes of the 2008 financial crisis, see for example, VIRAL A. ACHARYA ET AL., REGULATING WALL STREET: THE DODD-FRANK ACT AND THE NEW ARCHITECTURE OF GLOBAL FINANCE (2010); FINANCIAL CRISIS INQUIRY COMMISSION, THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES (2011), available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>; and ANDREW ROSS SORKIN, TOO BIG TO FAIL: THE INSIDE STORY OF HOW WALL STREET AND WASHINGTON FOUGHT TO SAVE THE FINANCIAL SYSTEM - AND THEMSELVES (2009).

<sup>4</sup> See \_\_\_\_\_

<sup>5</sup> Dodd-Frank §619, codified at 12 U.S.C. § 1851.

<sup>6</sup> H.R. 3841--103rd Congress: Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. (1994). Retrieved December 26, 2013, from <http://www.govtrack.us/congress/bills/103/hr3841>.

<sup>7</sup> Interstate banking had been mostly prohibited under the Douglas Amendment to the Bank Holding Company Act of 1956, 12 U.S.C. § 1842(d).

SIFIs along with bank holding companies having more than \$50 billion in assets<sup>8</sup> are subjected to more intrusive capital and behavioral regulations to prevent excessive risks. Dodd-Frank also establishes an “Orderly Liquidation Authority” (OLA) to more carefully deal with closing down a SIFI without provoking a run. And Dodd-Frank specifically forbids emergency lending by the Federal Deposit Insurance Corporation (FDIC) or Federal Reserve to SIFIs (until they are under the OLA), in order to suggest that the too-big-to-fail policy is over.

Another part of Dodd-Frank is the Volcker Rule, which prohibits certain types of proprietary trading activities by commercial banks. The Volcker Rule is supposed to reduce the need for a TBTF policy by making it less likely that a large commercial bank would need external support as a result of large trading losses, such as those incurred by J.P. Morgan Chase in the “London Whale”<sup>9</sup> debacle that occurred in 2012. Preventing the possibility of these enormous losses should reduce the probability that these large commercial banks would need to be bailed out.

Despite all of these regulations, TBTF remains a problem. There is evidence that the market continues to give SIFIs benefits because of an expectation that they are indeed TBTF. Consequently, many scholars have suggested that Dodd-Frank does not go far enough to end too-big-to-fail.<sup>10</sup> These scholars suggest a variety of approaches to better address TBTF. A number have suggested that a direct structural solution is needed: a breakup of the largest banks. Others have suggested changes in corporate governance or in corporate finance. Still others have suggested that because too-big-to-fail entities receive implicit subsidies, the best remedy is through a tax that counteracts these subsidies.

This article argues that Dodd-Frank had it wrong: there is no way to completely end TBTF. Economies of scale and the increasingly interconnected network of finance mean that TBTF is here to stay. Instead, what we need to do is counteract each of the effects of TBTF with an appropriate instrument. This article notes that there are multiple market inefficiencies that result from TBTF. Some of these are market distortions that lead to inefficient incentives. Others relate to liquidity traps that can lead to pressure to bail out a failing bank. This article argues that the best approach is to use a portfolio of market instruments, including a combination of two separate taxes, to address the multiple inefficiencies of TBTF.

The rest of this article is as follows. Section I provides a brief history of TBTF in the United States, while Section II uses this history to highlight the fundamental factors that underlie and result from a TBTF policy. Section III describes how Dodd-Frank addresses TBTF, and Section IV summarizes the

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<sup>8</sup> Dodd-Frank, 12 U.S.C. § 5326(a).

<sup>9</sup> See JP Morgan Chase Whale Trades: A Case History of Derivatives Risks and Abuses: Hearing before the Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs, United States Senate, One Hundred Thirteenth Congress, First Session, March 15, 2013, *available at* <http://www.gpo.gov/fdsys/pkg/CHRG-113shrg85162/html/CHRG-113shrg85162.htm>.

<sup>10</sup> See § III, *infra*, for a more complete examination of these critiques. See also Dale B. Thompson, *The Dodd-Frank Act and Too-Big-to-Fail: What’s Missing? A Survey of the Current Literature*, 6 UNIV. ST. THOMAS J. L. PUB. POL. (forthcoming 2014) [hereinafter, *Dodd-Frank & TBTF: What’s Missing?*].

academic literature's critique of Dodd-Frank's approach to TBTF. Finally, Section V offers the argument for using two different taxes to address the two distortions resulting from too-big-to-fail.

#### I. A Short History of Too-Big-to-Fail in the United States Financial Industry

The history of TBTF goes back to an action by the Federal Deposit Insurance Corporation (FDIC) in the 1980s. In May of 1984, an "electronic bank run" on Continental Illinois National Bank and Trust Company took place.<sup>11</sup> At the time, Continental Illinois was the seventh-largest U.S. bank, and had connections to a large number of other correspondent banks.<sup>12</sup> As a result, "bank regulators were faced with a potential crisis that might envelop the entire banking system."<sup>13</sup> With this situation, it was thought that the "run had to be stopped,"<sup>14</sup> and so the FDIC took extraordinary steps to end the crisis.<sup>15</sup> As a result of these actions, people started to realize that the systemic risk consequences of the liquidation of certain banks would lead "bank regulators [to] look for alternatives to closing the bank and paying off the insured depositors."<sup>16</sup> This meant that we had a *de facto* policy of too-big-to-fail.

TBTF played a major role in the 2008 Financial Crisis, and our experiences demonstrate the multiple problems associated with TBTF. Although the Federal Reserve had helped broker the sale of Bear Stearns to JP Morgan Chase in early 2008,<sup>17</sup> no such support was offered to Lehman Brothers. Similar to Continental Illinois, Lehman Brothers underwent a liquidity crisis when JP Morgan Chase and Citigroup demanded additional collateral.<sup>18</sup> The bankruptcy examiner concluded that this liquidity crisis was behind the end of Lehman Brothers: "Lehman's available liquidity is central to the question of why Lehman failed."<sup>19</sup> Lehman's failure caused a panic in the financial markets, and faced with financial calamity, the federal government intervened significantly to support other SIFIs, including Citigroup, Wells Fargo, JP Morgan Chase, Bank of America, Merrill Lynch, Goldman Sachs, and others.<sup>20</sup> Much of this support came through the Troubled Asset Relief Program, established by the Emergency Economic Stabilization Act of 2008.<sup>21</sup>

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<sup>11</sup> FED. DEPOSIT INS. CORP., HISTORY OF THE 80S: VOL. I, AN EXAMINATION OF THE BANKING CRISES OF THE 1980S AND EARLY 1990s (1997), ch. 7: *Continental Illinois and "Too Big to Fail,"* at 243, available at [http://www.fdic.gov/bank/historical/history/235\\_258.pdf](http://www.fdic.gov/bank/historical/history/235_258.pdf).

<sup>12</sup> *Id.* at 250 (stating that "Continental had an extensive network of correspondent banks, almost 2,300 of which had funds invested in Continental").

<sup>13</sup> *Id.* at 244.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at 244-45.

<sup>16</sup> *Id.* at 249.

<sup>17</sup> *Dodd-Frank & TBTF: What's Missing?*

<sup>18</sup> See Anton R. Valukas, Report Of Anton R. Valukas, Examiner, *In Re Lehman Brothers Holdings Inc.* (2010), available at <http://jenner.com/lehman/>, at 24.

<sup>19</sup> *Id.*

<sup>20</sup> Robert J. Rhee, Case Study of the Bank of America and Merrill Lynch Merger (2010), available at [http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1939&context=fac\\_pubs](http://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?article=1939&context=fac_pubs), at 4.

<sup>21</sup> Emergency Economic Stabilization Act of 2008, Pub. L. 110-343, div. A, Oct. 3, 2008, 122 Stat. 3765, 12 U.S.C. §§ 5211-5241 (2010).

These large financial institutions – both banks and non-banks – were behind the dramatic expansion of credit during the first part of the 2000s.<sup>22</sup> These institutions originated a number of risky loans, and also then securitized bundles of these loans through complex financial instruments.<sup>23</sup> When the crisis struck, these large institutions were affected most significantly. As Arthur Wilmarth has noted, the “‘big eighteen’ [large, complex, financial institutions]<sup>24</sup> accounted for three-fifths of the \$1.5 trillion of total worldwide losses recorded by banks, securities firms, and insurers between the outbreak of the financial crisis in mid-2007 and the spring of 2010.”<sup>25</sup>

Faced with the possible ramifications of these losses, the United States and a number of European governments “provided extensive assistance to ensure the survival”<sup>26</sup> of the “big eighteen.” This assistance included both “\$290 billion of capital infusions from the federal government, and ... \$235 billion of debt that was guaranteed (and thereby subsidized) by the Federal Deposit Insurance Corporation.”<sup>27</sup> Thomas Hoenig, the president of the Federal Reserve Bank of Kansas City, noted, “It is no longer conjecture that the largest institutions in the United States have been determined to be too big to fail. They have been bailed out.”<sup>28</sup>

These experiences demonstrate the interconnections between the existence of a TBTF policy, the effects on financial market actors due to this policy, and the key factors that precipitate the need to bail-out a SIFI. As seen in both the Continental Illinois and Lehman Brothers experiences, liquidity problems are frequently the precipitating factor behind the collapse of a SIFI. Beyond liquidity, the fundamental reasons for the 2008 crisis were improper incentives – directly caused by the TBTF policy - that led SIFIs to take too many, excessively risky investments. During the 2008 Crisis, easier access to increasing amounts of external financing led these SIFIs to develop overly complex and risky financial instruments. And when these risks revealed themselves, the perceived toxicity of these assets destroyed their marketability, thereby depriving them of the liquidity the SIFIs needed to continue. And that is when the federal government, faced with the possibility of the devastating impact on the economy, was forced to step in and bail out these TBTF SIFIs.<sup>29</sup>

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<sup>22</sup> Arthur E. Wilmarth, Jr., *The Dodd-Frank Act: A Flawed and Inadequate Response to the Too-Big-to-Fail Problem*, 89 OR. L. REV. 951, 963 (2011).

<sup>23</sup> *Id.* at 963-7.

<sup>24</sup> The “big eighteen” include the largest U.S. and foreign banks, along with non-banks such as the largest U.S. securities firms and AIG. See *Hearing on “Examining Enhanced Supervision for Regulating Large, Complex Financial Institutions,” before the Subcommittee on Financial Institutions and Consumer Protection of the Committee on Banking, Housing, And Urban Affairs, United States Senate*, 112<sup>th</sup> Cong. (DECEMBER 7, 2011) (Prepared Statement of Arthur E. Wilmarth, Jr.) at 61, n. 25, available at <http://www.gpo.gov/fdsys/pkg/CHRG-112shrg74834>.

<sup>25</sup> Wilmarth, *supra* note 22, at 978.

<sup>26</sup> *Id.* at 979.

<sup>27</sup> *Id.*

<sup>28</sup> Thomas M. Hoenig, President, Fed. Reserve Bank of Kansas City, *Leverage and Debt: The Impact of Today’s Choices on Tomorrow*, Speech at the 2009 Annual Meeting of the Kansas Bankers Ass’n (Aug. 6, 2009), at 4, available at <http://www.kansascityfed.org/SpeechBio/HoenigPDF/hoenigKBA.08.06.09.pdf>, cited by Wilmarth, *supra* note 22, at 979-80, n. 111.

<sup>29</sup> Recall that this bailout was accomplished via TARP.

## II. Dodd-Frank's Mechanisms to Address Too-Big-to-Fail

Recognizing these problems, Congress enacted Dodd-Frank in 2010 to prevent future financial crises. Its preamble specifically states that one of its purposes was “to end ‘too big to fail.’”<sup>30</sup> Additionally, when President Obama signed the legislation, he explained, “Because of this law, the American people will never again be asked to foot the bill for Wall Street's mistakes. ... And there will be new rules to make clear that no firm is somehow protected because it is “too big to fail.””<sup>31</sup>

There are four principal parts of Dodd-Frank designed to end TBTF: the creation of the Financial Stability Oversight Council (FSOC);<sup>32</sup> the creation of the Orderly Liquidation Authority (OLA); a prohibition against the Federal Reserve or the FDIC lending to “financially failing firm[s];”<sup>33</sup> and the Volcker Rule. The purpose of the FSOC is to better regulate those financial institutions that pose systemic risks. Large banks are regulated currently by the Federal Reserve and the FDIC, but Dodd-Frank allows the FSOC to impose additional regulations on systemically important banks. In particular, the FSOC can “impose[...] heightened leverage and risk-based capital standards”<sup>34</sup> on these banks. More significantly, the FSOC can determine whether a non-bank is systemically important, and if so, then it can designate the non-bank as a SIFI.<sup>35</sup> These non-bank SIFIs are currently regulated much less than large banks, and so this designation by the FSOC would impose significant new controls on them, as they would also have to comply with similar “leverage and risk-based capital standards”<sup>36</sup> as large-bank SIFIs.

The purpose of the Orderly Liquidation Authority is to provide “a credible tool to wind down large, highly leveraged, and substantially interconnected financial firms.”<sup>37</sup> In the 2008 Financial Crisis, we saw effects on failing financial institutions similar to bank runs.<sup>38</sup> A “liquidity trap” emerges where failing firms need to raise capital quickly, while at the same time, their creditors are attempting to

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<sup>30</sup> Dodd-Frank, pmb1.

<sup>31</sup> Stacy Kaper, *Obama Signs Historic Regulatory Reform Bill into Law*, AM. BANKER (July 21, 2010), available at <http://www.americanbanker.com/news/obama-1022698-1.html> (quoting statement made by President Obama upon signing the Dodd-Frank Wall Street Reform and Consumer Protection Act).

<sup>32</sup> The FSOC is composed of the Secretary of the Treasury, the Comptroller of the Currency, and the Chairs of the Federal Reserve Board, the Federal Deposit Insurance Corporation, the Securities and Exchange the Commodities Futures Trading Commission, and other members.

<sup>33</sup> Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1406 n. 229 (2011). See also Steven L. Schwarcz, *Regulating Shadows: Financial Regulation and Responsibility Failure*, 19 WASH & LEE L. REV. 1781, 1818-19 (2013).

<sup>34</sup> Rob Tammero, Note, *Reigning in Systemically Important Financial Institutions*, 30 REV. BANKING & FIN. L. 595, 599 (2011), available at <http://www.bu.edu/rbfl/files/2013/09/ReigningInFinancialInstitutions.pdf>.

<sup>35</sup> Douglas J. Elliott, *Regulating Systemically Important Financial Institutions That Are Not Banks* (2013), at 1, available at <http://www.brookings.edu/~media/research/files/papers/2013/05/09-regulating-financial-institutions-elliott/09-regulating-financial-institutions-elliott.pdf>.

<sup>36</sup> Tammero, *supra* note 34, at 599.

<sup>37</sup> Michael S. Barr, *The Financial Crisis and the Path of Reform*, 29 YALE J. ON REG. 91, 100 (2012).

<sup>38</sup> See Dale B. Thompson, *Why we Need a Superfund for Hedge Funds*, 79 MISS. L. J. 995 (2010) [hereinafter *Superfund for Hedge Funds*].

extract capital from them. To combat this, Dodd-Frank creates the OLA, which is “modeled on the FDIC process that successfully took deposit-taking banks [during the 2008 Crisis] ... into receivership and restructured them without significant disruption to the broader financial system.”<sup>39</sup>

These two new regulatory bodies along with the prohibition on lending to failing SIFIs are key steps towards ending TBTF. In addition to the heightened requirements for bank SIFIs, bringing non-bank SIFIs under the regulatory umbrella should reduce the likelihood that any SIFI would fail. Also, as this author has noted before, “creating a better liquidation process would mean that failure of any one SIFI could be handled without having the failure spread to other parts of the financial system.”<sup>40</sup> Meanwhile, the prohibition on emergency lending should reduce the perception that government would bail out a failing SIFI.

Another part of Dodd-Frank was the Volcker Rule. During the Great Depression, Congress enacted the Glass-Steagall Act<sup>41</sup> imposed barriers between commercial and investment banks, generally prohibiting commercial banks from engaging in the selling of most securities.<sup>42</sup> However, in 1999, the Gramm–Leach–Bliley Act<sup>43</sup> repealed part of the Glass-Steagall Act, thereby allowing commercial banks to conduct securities operations. The Volcker Rule is designed to reinstitute some of these barriers. Specifically, it functions by “prohibiting banks from engaging in proprietary trading, eliminating portfolio hedging, and preventing banks from having an ownership interest in covered funds,”<sup>44</sup> although it does allow banks exemptions for certain underwriting, and market making, and risk-mitigating hedging activities.<sup>45</sup> These prohibitions are supposed to lessen the risks that commercial banks are exposed to, thereby making them less likely to fail.

### III. Critiques and Alternatives to Dodd-Frank

However, a number of scholars have criticized Dodd-Frank as being “inadequate”<sup>46</sup> to address too big to fail. One of the criticisms voiced by many is the continued existence of the implied subsidy to TBTF institutions.<sup>47</sup> Indeed, one study by the International Monetary Fund estimates that the subsidy to

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<sup>39</sup> Steven J. Markovich, *The Dodd-Frank Act* (2013), available at <http://www.cfr.org/united-states/dodd-frank-act/p28735>.

<sup>40</sup> *The Dodd-Frank Act and Too-Big-to-Fail: Literature Survey*.

<sup>41</sup> Banking Act of 1933 §§ 16, 20, 21, and 32, Pub.L. 73–66, 48 Stat. 162 (1933).

<sup>42</sup> See Simon Kwan, Cracking the Glass-Steagall Barriers, FRBSF ECONOMIC LETTER (March 21, 1997), available at <http://www.frbsf.org/economic-research/publications/economic-letter/1997/march/cracking-the-glass-steagall-barriers/>.

<sup>43</sup> Pub.L. 106–102, 113 Stat. 1338, enacted November 12, 1999.

<sup>44</sup> Joshua Bohl, Analyzing the Volcker Rule’s Impact on Commercial Banks (2014), at 1, on file with author.

<sup>45</sup> See Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Private Equity Funds: Final Rule, 79 FR 5536 (2014).

<sup>46</sup> Wilmarth, *supra* note 22.

<sup>47</sup> See Steven A. Ramirez, *Dodd-Frank as Maginot Line*, 15 CHAP. L. REV. 109, 110 (2011) (noting that Dodd-Frank “may render such a crisis [as 2008] more likely by transforming implicit guarantees for megabanks into explicit guarantees”); Dean Baker & Travis McArthur, The Value of the “Too Big to Fail” Big Bank Subsidy, Ctr. for Econ. & Policy Research (Sept. 2009), available at <http://www.cepr.net/documents/publications/too-big-to-fail-2009-09.pdf>); Charles W. Murdock, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: What Caused the Financial Crisis and Will Dodd-Frank Prevent Future Crises?*, 64 SMU L. REV. 1243 (2011); John C. Coffee, Jr.,



TBTF institutions has “increased” after the crisis.<sup>48</sup> Also, Arthur Wilmarth notes that ratings agencies upgraded the ratings “for deposits and senior debt issued by the six largest U.S. banks, based on [the agencies’] expectation of ‘a very high probability of systemic support’ for such banks from the U.S. government.”<sup>49</sup>

Another criticism is that Dodd-Frank over-relies on prudential standards.<sup>50</sup> Wilmarth again notes that Dodd-Frank’s principal direct instrument of higher capital requirements is troublesome because “capital-based regulation has repeatedly failed in the past [due to] ... ‘regulatory capital arbitrage.’”<sup>51</sup> This is a concern that was raised previously by this author in *Why we Need a Superfund for Hedge Funds*. That article noted that higher “reserve and margin requirements, ... [while helpful, would not on their own] directly address liquidity risk,”<sup>52</sup> again partly because the “rapidly changing strategies”<sup>53</sup> of the financial sector would enable regulatory capital arbitrage.

Consequently, financial law and policy scholars have proposed a number of alternatives to better address too big to fail. A number of these alternatives are designed to change the internal decision-making of SIFIs, while others are proposed to directly reduce the need for any government bailout. Some have proposed changes to corporate governance, including “greater representation of public interests at the board and executive levels of big banks,”<sup>54</sup> and the adoption of “behavioral economics-based guidelines regarding risk committees’ composition, obligation requirements, and working procedure.”<sup>55</sup> Another has proposed creating “a bailout exception to their bank’s limited-shareholder-liability status, thus requiring shareholders - not taxpayers - to cover the ultimate costs of the bank’s failure.”<sup>56</sup>

Another way to alter decision-making by SIFIs is to give them financial incentives. One such financial incentive is by taxing risky behavior by the SIFI. These taxes are imposed to correct “overly risky

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*Systemic Risk After Dodd-Frank: Contingent Capital and the Need for Regulatory Strategies Beyond Oversight*, 111 COLUM. L. REV. 795, 800 (2011); and Wilmarth, *supra* note 22, at 983 (finding that “Dodd-Frank’s provisions fall far short of the changes that would be needed ... to remove other public subsidies for TBTF institutions”).

<sup>48</sup> Kenichi Ueda and Beatrice Weder di Mauro, *Quantifying Structural Subsidy Values for Systemically Important Financial Institutions* (2012), at 1, available at <http://www.imf.org/external/pubs/ft/wp/2012/wp12128.pdf>.

<sup>49</sup> Wilmarth, *supra* note 22, at 983-4 (quoting FIN. CRISIS INQUIRY COMM’N, PRELIMINARY STAFF REPORT, GOVERNMENTAL RESCUES OF “TOO-BIG-TO-FAIL” FINANCIAL INSTITUTIONS 12 (2010)).

<sup>50</sup> See Wilmarth, *supra* note 22, at 1009-10 (noting that “Dodd-Frank relies heavily on the concept of stronger capital requirements, [and] ... capital-based regulation has repeatedly failed in the past;” and that SIFIs “have repeatedly demonstrated their ability to engage in ‘regulatory capital arbitrage’ in order to weaken the effectiveness of capital requirements”).

<sup>51</sup> *Superfund for Hedge Funds*, at 1009-10.

<sup>52</sup> *Id.* at 1023.

<sup>53</sup> *Id.* at 1024.

<sup>54</sup> Lawrence G. Baxter, *Betting Big: Value, Caution and Accountability in an Era of Large Banks and Complex Finance*, 31 REV. BANKING & FIN. L. 765, 765.

<sup>55</sup> Nizan Geslevich Packin, *It’s (Not) All About the Money: Using Behavioral Economics to Improve Regulation of Risk Management in Financial Institutions*, 15 U. PA. J. BUS. L. 419, 481 (2013).

<sup>56</sup> Peter Conti-Brown, *Elective Shareholder Liability*, 64 STAN. L. REV. 409, 409 (2012)

behavior by financial institutions [that] can generate negative externalities,<sup>57</sup> because the costs of their possible failure may spread to others.”<sup>58</sup> A Pigouvian tax<sup>59</sup> on their risky behavior will force SIFIs to internalize these externalities. Such a tax on systemic risks has been proposed by Iman Anabtawi and Steven Schwarcz,<sup>60</sup> while others have suggested implementing a systemic risk tax and then using tax revenues from it to help fund the Orderly Liquidation Fund.<sup>61</sup> This approach is the same one offered previously by this author in *Why we Need a Superfund for Hedge Funds*.

Meanwhile, other proposals deal with too big to fail more directly. A number of scholars including former Federal Reserve Chairman Alan Greenspan,<sup>62</sup> Nobel Laureate Joseph Stiglitz,<sup>63</sup> and Simon Johnson and James Kwak<sup>64</sup> have all suggested that what we need to do is break up the large financial institutions, so that none would now be too-big-to-fail. Another recommendation would be the more widespread use of “contingent capital,”<sup>65</sup> which is “a debt instrument that becomes instead an equity instrument when certain contingencies – such as a financial crisis – occur.”<sup>66</sup>

Thus, a number of different alternatives have been proposed to address the insufficiencies of Dodd-Frank’s approaches to ending TBTF. Corporate governance changes should be conducted, but their power to address liquidity and systemic risks may depend on shareholder’s continuing limited ability to properly their agents who operate SIFIs. Breaking up the largest SIFIs could bring many benefits, but this

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<sup>57</sup> A negative externality occurs when a firm’s behavior generates a cost that is not imposed on itself but is instead imposed on others.

<sup>58</sup> *The Dodd-Frank Act and Too-Big-to-Fail: Literature Survey*.

<sup>59</sup> See ARTHUR C. PIGOU, *THE ECONOMICS OF WELFARE* (1920).

<sup>60</sup> Anabtawi & Schwarcz, *supra* note 33, at 1402.

<sup>61</sup> See Int’l Monetary Fund, *A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20* (2010), at 5, available at <http://www.imf.org/external/np/g20/pdf/062710b.pdf>. (arguing for a “Financial Stability Contribution” whose “main component ... would be a levy to pay for the fiscal cost of any future government support to the sector”); Jeffrey N. Gordon & Christopher Muller, *Confronting Financial Crisis: Dodd-Frank’s Dangers and the Case for a Systemic Emergency Insurance Fund*, 28 *YALE J. ON REG.* 151, 151(2011) (“propos[ing] the creation of a Systemic Emergency Insurance Fund ... [which] should be funded ... by risk-adjusted assessments on all large financial firms”); and Wilmarth, *supra* note 22, at 1020 (arguing for the use of “risk-based insurance premiums” on SIFIs to fund the OLF). For a related recommendation, see Saule T. Omarova, *Wall Street as Community of Fate: Toward Financial Industry Self-Regulation*, 159 *U. PA. L. REV.* 411, 474 (2011) (calling for a “mandatory system of mutual self-insurance”).

<sup>62</sup> See Michael McKee and Scott Lanman, *Greenspan Says U.S. Should Consider Breaking Up Large Banks* (October 15, 2009), available at [http://www.bloomberg.com/apps/news?pid=email\\_en&sid=aJ8HPmNUfchg](http://www.bloomberg.com/apps/news?pid=email_en&sid=aJ8HPmNUfchg) (quoting Greenspan saying, “If they’re too big to fail, they’re too big”).

<sup>63</sup> See JOSEPH E. STIGLITZ, *FREEFALL: AMERICA, FREE MARKETS, AND THE SINKING OF THE WORLD ECONOMY*, 164–65 (2010) (suggesting that “there is an obvious solution to the too big to fail banks: break them up”).

<sup>64</sup> See SIMON JOHNSON & JAMES KWAK, *13 BANKERS: THE WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN*, 214-15 (2010) (proposing a cap of four percent of Gross Domestic Product for banks and two percent for securities firms).

<sup>65</sup> See Coffee, *supra* note 47, at 806 (arguing that “contingent capital ... not only can [] prevent the fall of the first interconnected domino ..., but it also protects against the danger that systemically significant financial institutions may face highly correlated risks”); Arthur E. Wilmarth, Jr., *Reforming Financial Regulation to Address the Too Big to Fail Problem*, 35 *BROOK. J. INT’L L.* 707, 760-61 (2010); and Wulf A. Kaal, *Initial Reflections on the Possible Application of Contingent Capital in Corporate Governance*, 26 *N.D. J. L. ETHICS & PUB. POL’Y* 281, 297 (2012).

<sup>66</sup> *The Dodd-Frank Act and Too-Big-to-Fail: Literature Survey*.

policy may also limit the achievement of significant economies of scale. It is also not clear that size would be the only factor that could lead to a government bailout, and if so, the two market distortions would remain. There also can be many benefits from the more widespread adoption of contingent capital, though this author remains unconvinced that its use will fully eliminate liquidity and systemic risks. Nonetheless, its use could clearly reduce the impact of any individual SIFI failure, and so it could be an important component of a more complete package to address too-big-to-fail.

What else should be part of this package? Just as in *Why we Need a Superfund for Hedge Funds*, this author sees significant benefits from the approach that combines Pigouvian taxes with a “Superfund to Fund Purchases of Illiquid Securities.”<sup>67</sup> The next section will explain why the liquidity tax recommendation needs to be extended to incorporate two distinct taxes.

In the end, TBTF is a self-perpetuating cycle, for which we can at best hope to minimize its amplitude. In order to do this, in the next section, we will examine more closely these factors underlying TBTF.

TBTF causes two significant market distortions, one with respect to the creditors of TBTF banks<sup>68</sup> and the other with respect to portfolio choices made by the TBTF banks themselves. Additionally,

We will now more closely examine the market distortions caused by TBTF. When a creditor makes a loan to a non-TBTF bank, prudence requires that the creditor investigate the riskiness of the bank, because federal insurance limitations mean that failure of the bank could result in nonpayment of the loan. On the other hand, with a TBTF bank, the creditor may believe that this bank’s status as TBTF means that, even if the bank runs into trouble, the creditor will still have their loan principal returned. As a result, creditors will not need to charge an additional risk premium to the TBTF bank for its loan. These differences can be illustrated by the following two equations:

$$(\text{Interest Rate})_{\text{REGULAR BANK } i} = (\text{Interest Rate})_{\text{RISK-FREE RETURN}} + (\text{Risk Premium})_{\text{REGULAR BANK } i} \quad (1)$$

$$(\text{Interest Rate})_{\text{TBTF BANK } j} = (\text{Interest Rate})_{\text{RISK-FREE RETURN}} + (\text{Risk Premium})_{\text{TBTF BANK } j} - (\text{Implied TBTF Subsidy})_j \quad (2)$$

What these two equations demonstrate is that the TBTF bank will be able to raise its capital while paying a lower interest rate than regular banks. This creates a competitive advantage for TBTF banks, which also means that they can expand further, thereby further entrenching their status as too-big-to-fail.

Another inefficiency arises in a TBTF bank’s use of capital. It is a classic “moral hazard” situation where the incentives set up by a TBTF policy lead the bank’s managers to select overly risky investments to add to the bank’s portfolio. The “moral hazard” problem is this: a TBTF bank manager will consider a wide range of possible investments for the bank. In constructing a portfolio, managers normally will try to balance risk and return. While riskier investments can bring a larger return, they also can lead to

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<sup>67</sup> *Superfund for Hedge Funds*, at 1029.

<sup>68</sup> This discussion is uses a TBTF bank as a clarifying example, although a similar logic could apply to a non-bank systemically important financial institution (SIFI).

losses. However, for a TBTF bank, investments with significant losses do not necessarily result in an overall loss to the bank, because governmental regulators may step in “bail out” the TBTF bank. Consequently, to the TBTF bank manager, extremely risky investments may bring with them significant profits if things turn out well, while if things turn poorly, the TBTF quasi-guarantee will place a limit on the total amount of losses imposed on the bank. This means that TBTF bank managers will have a strong incentive to select more risky investments than optimal. This effect makes it more likely that a TBTF bank will need a bail out if one or more of its “protected” investments fail.

These concerns came to fruition in the Financial Crisis of 2008.

Thus, the 2008 Financial Crisis gave us examples of both the moral hazard distortion and the cost-of-capital-subsidy distortion.

#### IV. What is Needed? Two Separate Taxes on SIFIs

We have seen that, even after Dodd-Frank, we still have two market distortions caused by a *de facto* too-big-to-fail policy. To many, these market distortions seem connected, and so it might seem as though we could use a single tax to address both. On the other hand, as this author has stated previously, “In general, it is better to use at least as many instruments as the number of goals to be achieved.”<sup>69</sup> In this case, when we look at how the taxes would be calculated, we will see that they will be based on quite different sets of information, and so one tax alone will not address both market distortions.

In general, having too few instruments means that at least one goal will not be properly addressed. If we have only a tax to counteract the TBTF subsidy in raising capital, then individual managers at the TBTF bank will still face the moral hazard of having strong incentives to choose more risky investments, possibly leading to another financial crisis. Meanwhile, if we only have a tax on liquidity and systemic risks,<sup>70</sup> creditors will still be willing to lend capital to TBTF banks at a discounted interest rate. As noted above, this distortion can lead to greater industry concentration, which again can possibly lead to another financial crisis.

One might suggest that a single tax might be sufficient in this particular case, because both taxes would be related to the risks posed by the TBTF banks. For example, Wilmarth points to the problem of the continuing subsidy for TBTF firms and proposes that “Congress should amend Dodd-Frank to require SIFIs to pay risk-based insurance premiums to prefund the OLF [Orderly Liquidation Fund].”<sup>71</sup> One

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<sup>69</sup> *Superfund for Hedge Funds*, at 1026.

<sup>70</sup> Liquidity risks are a specific type of systemic risks. See Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 248 (2008). This author has noted previously the significant role that liquidity risks played in the 2008 financial crisis, but also noted that “other forms of systemic risk such as counterparty risk could also be addressed by this tax system with the level of tax calibrated also with the level of other associated risks.” *Superfund for Hedge Funds*, at 1027, n. 134.

<sup>71</sup> Wilmarth, *supra* note 22, at 1020.

reason offered by Wilmarth for doing this is because “the payment of risk-based assessments to pre-fund the OLF would reduce TBTF subsidies for SIFIs by forcing them to internalize more of the “negative externality” (i.e., the potential public bailout cost) of their activities. To accomplish the goal of internalizing risk, the marginal rates for OLF assessments should become progressively higher for SIFIs that create a greater potential for systemic risk. ... A pre-funded OLF with appropriately calibrated risk-based assessments would reduce moral hazard among SIFIs.”<sup>72</sup> Thus, Wilmarth seems to state that a single risk-based assessment will reduce both “TBTF subsidies” and “moral hazard.”

Similarly, John Coffee’s comments directly connect the two market distortions. He writes:

Many economists believe that the market's perception that some financial institutions were "too big to fail" (and would therefore be bailed out with public funds) resulted in an unintended subsidy for these institutions because their creditors charged them less for capital than their true risk level justified. As a result, because capital was cheap to them, these firms (and their shareholders) were incentivized to take on excessive leverage.<sup>73</sup>

Here, Coffee directly connects one distortion with the other: he too makes the connection that the TBTF subsidy to their capital costs would “incentivize” TBTF banks into the moral hazard of excessive leverage. As such, it would seem that a tax that would address one would also address the other. However, as we look at how the two taxes should be assessed, we will better understand that they are not the same, and should be implemented separately.

Let’s first consider the tax to correct the creditor subsidy to TBTF banks (hereinafter the “Creditor Subsidy Tax” or CST). The problem to be addressed is to counteract the discounted interest rates that creditors are offering TBTF banks. Creditors’ assessments of these banks are based on publicly available information about them, and so that is the information that should be used in assessing the Creditor Subsidy Tax. To calculate this tax, recall equations (1) and (2) above, showing the interest rate demanded by creditors before they are willing to loan to a particular bank. We can use these equations to specify a regression equation that would enable us to calculate the Creditor Subsidy Tax:

$$IR_k = \beta_0 + \beta_1 * X_k - TBTF_k (\beta_2 + \beta_3 * Size_k) + \varepsilon \quad (3)$$

In this equation,  $IR_k$  is the interest rate demanded of bank  $k$ ,  $X_k$  is a vector of publicly available variables used to assess the *ex ante* riskiness of bank  $k$  ( $\beta_1 * X_k$  itself represents the Risk Premium associated with bank  $k$ ), and  $TBTF$  is a dummy variable that is equal to one if bank  $k$  is too-big-to-fail (and is otherwise equal to zero). After estimating this equation, focusing on the effects of the *ex ante* publicly available variables, the ideal tax on TBTF bank  $k$ ’s capital acquisition that would completely counter the implied TBTF creditor subsidy would be equal to  $(\beta_2 + \beta_3 * Size_k)$ . It should be noted that this tax would be

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<sup>72</sup> *Id.*, at 1021-22. It should be noted that Wilmarth also proposes additional regulations (limiting second-tier banks’ operation to “Narrow Banks”) to further address systemic risks. *Id.*, at 1034.

<sup>73</sup> Coffee, *supra* note 47, at 800. It should be noted that, in this article, Coffee is arguing for contingent capital rather than a tax.

essentially equivalent to Wilmarth's proposal to collect risk-based insurance premia from SIFIs for prefunding the OLF.

In contrast, the tax to address the moral hazard problem leading to excessive liquidity and systemic risks (hereinafter the "Moral Hazard Tax" or MHT) will be designed to force banks to internalize the externality costs of the liquidity and systemic risks embedded in the portfolio choices made by the banks. As described in *Why we Need a Superfund for Hedge Funds*, hedge funds, banks, and other financial entities will be reluctant to share the specific portfolio information needed to properly assess its level of liquidity and systemic risk.<sup>74</sup> To get around this, a private review of the portfolio must be done with a lag.<sup>75</sup> This lagged review examines private information about the specific composition of the portfolio, and is conducted *ex post*. By analyzing the portfolio itself, along with all other systemically important portfolios, the regulator can properly assess its liquidity and systemic risks.<sup>76</sup> The Moral Hazard Tax can then be properly calibrated to adjust to the level of these risks.

In order for this *ex post* analysis to create proper incentives, it needs to be combined with the use of rulemaking procedures, which can be conducted by the FSOC. As stated in the "Superfund for Hedge Funds" article, "incorporat[ing] public rulemaking procedures ... to assess the liquidity risks of [portfolios] would also then improve the transparency of the tax, so that [the regulated entities] would better predict the level of the ... tax for a given [portfolio]."<sup>77</sup> This process would provide a direct incentive for TBTF banks to form risk committees, as suggested by Packin, as they learn to better manage both the risks and taxes associated with different portfolio choices. Thus, the implementation of the Moral Hazard Tax will involve not just the private assessment of the tax itself, but also the use of public rulemaking procedures along with the participation of bank risk committees.

Thus, we see that the Creditor Subsidy Tax and the Moral Hazard Tax are constructed in different ways. One is a tax on capital raised by the TBTF bank, and the other is a tax on the liquidity and systemic risks contained in the bank's portfolio. Designed to counteract the effects of different decision makers (creditors in one case and the bank's managers in another), they must rely on different sets of information. Calculation of the CST is based on publicly available information about the entire bank itself, while the MHT is based on a private examination of the specific components of the bank's portfolio. Because they are designed for different purposes and are based on different sets of information, one tax cannot easily substitute for the other, and so both taxes must be used.

There are some disadvantages to this approach. Calibration of the MHT may be difficult: how do you assess the level correctly to properly deter overly risky decisions? However, behavioral economics

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<sup>74</sup> *Superfund for Hedge Funds*, at 1033.

<sup>75</sup> *Id.*

<sup>76</sup> This evaluation of overall liquidity and systemic risk is very complex and requires an enormous amount of information. See *Superfund for Hedge Funds*, at 1027-29. See also Anabtawi & Schwarcz, *supra* note 33, at 1403 (explaining that "Precise specification of the systemic risk function would require an understanding of the entire topology of the financial system. Determining the systemic importance of even a single asset held by a firm, for example, involves knowing the quantities of the asset held by each firm, the pattern of those holdings, and the elasticity of the asset's demand curve.").

<sup>77</sup> *Id.* at 1034-35.

suggests that precise fine-tuning may not be necessary to address our objective. By simply making an analysis of liquidity and systemic risks part of the decision process, and embedding it inside the banks through risk committees, we may achieve our ultimate objective of reducing these risks.

The foremost obstacle will be political. One of these taxes (the CST) was essentially initially part of the original Dodd-Frank legislation, but was forced to be removed. As Wilmarth notes, “early versions of the [Dodd-Frank] legislation ... would have authorized the FDIC to pre-fund the OLF by collecting up to \$150 billion in risk-based assessments from nonbank SIFIs and large BHCs. ... However, Senate Republicans repeatedly blocked consideration of the bill on the Senate floor until Senate Democrats agreed to remove the pre-funding provision.”<sup>78</sup> More recently, implementation of other parts of Dodd-Frank has been delayed significantly by financial industry opposition and lobbying.<sup>79</sup> In December 2013, after regulatory agencies finally agreed on a final version of the “Volcker Rule,” industry groups have again been objecting to its implementation and have filed lawsuits opposing it.<sup>80</sup>

Despite these obstacles, there are many advantages to the use of both the Creditor Subsidy Tax and the Moral Hazard Tax. As opposed to a command-and-control regulatory approach, these two taxes can be flexible and quickly adapt to changes in the financial industry: “because they are not tied to any particular strategies or financial securities, the tax [system can] ... adapt to [financial] innovations in order to provide incentives to reduce the externalities of liquidity risks.”<sup>81</sup> By using an *ex post* approach to the MHT, financial firms will know that innovations in financial products cannot be designed in order to “exploit a loophole,” such as could be done with fixed command-and-control regulations. The innovative financial product will be evaluated simply on the level of liquidity and systemic risks it entails.

More importantly, because this is a market-based approach, financial firms will have more flexibility in designing new financial product innovations. They also will have more freedom to pursue and utilize firm and market structures whose advantages are based on social efficiencies rather than the market distortions of too-big-to-fail. These advantages might even propel the financial industry to support the implementation of both the Creditor Subsidy Tax and the Moral Hazard Tax. Only then would we be finally able to address properly the inefficiencies caused by too-big-to-fail.

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<sup>78</sup> Wilmarth, *supra* note 22, at 1015-16.

<sup>79</sup> See Arthur E. Wilmarth, Jr., *Turning a Blind Eye: Why Washington Keeps Giving in to Wall Street*, 81 U. CIN. L. REV. 1283 (2013).

<sup>80</sup> Matthew Goldstein & Peter Eavis, *Banks' Suit Tests Limits of Resisting Volcker Rule*, NEW YORK TIMES, B1 (12-25-2013).

<sup>81</sup> *Superfund for Hedge Funds*, at 1039.