

Working Paper Series on the Value of Large Banks

Working Paper No. 3: Assessing Funding Costs and the Net Impact of Government Policy on Large Banks

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I. Introduction

Improving the safety and soundness of large banks has been at the heart of a historic series of financial regulatory reforms adopted during the last several years. The Clearing House Association L.L.C. (“The Clearing House”) has supported these reforms, which have produced comprehensive improvements in the financial condition, operations, and supervision of large banks. However, some critics of large banks argue that a “too-big-to-fail” (“TBTF”) problem persists and that government policies confer an unfair competitive advantage on large banks relative to smaller banks and perhaps an unfair economic advantage relative to competitors generally. A renewed debate regarding these contentions is underway, and new empirical research has been conducted on the role, activities, and function of large banks in our financial system.¹

The Clearing House has developed this *Working Paper Series on the Value of Large Banks* to address the key issues that should be considered in assessing whether large banks are perceived to be TBTF and enjoy any funding advantage on that basis and to correct any related misconceptions about large banks. The first working paper provided the necessary context for the policy debate by framing the appropriate question that policymakers should be considering: *Do large banks today enjoy unfair economic benefits as a result of express, implied, or perceived government policies?*² The second working paper examined whether deposit insurance and access to the discount window provide an unfair economic advantage to large banks. It concluded that large banks have not enjoyed—and in the future are not likely to enjoy—any disproportionate economic benefit from these two pillars of our banking system’s stability.³

This working paper, entitled *Assessing Funding Costs and the Net Impact of Government Policy on Large Banks*, presents a framework for evaluating existing evidence on bank funding costs, as well as ongoing regulatory reform efforts and the net effect of regulation on funding. Several

recent policy proposals focused on large U.S. banks either state or imply that large banks enjoy lower funding costs as a result of implicit government support—sometimes citing academic literature to back up these claims, but often assuming that the TBTF premise is an established fact.⁴ This is cause for concern: The conclusions to be drawn from and government policies to be shaped by the TBTF debate are far too important to be decided on the basis of limited evidence that primarily focuses on *correlations* between bank size and funding costs. Instead, empirical work should focus on attempting to estimate the *causal effect* of bank size on potential funding cost differentials. Furthermore, the assessment of the efficiency of various regulatory policies should take into account the impact of these policies for the largest banks and the potential implications for real economic activity. ■

1 The Government Accountability Office (GAO) is conducting a study, expected to be completed this year, to measure “the economic benefits that [large banks] receive as a result of actual or perceived government support,” in response to a request from Senators Sherrod Brown (D-OH) and David Vitter (R-LA).

2 See The Clearing House, *Working Paper No. 1: Identifying the Right Question*, Working Paper Series on the Value of Large Banks (Nov. 2013), available at <https://www.theclearinghouse.org/~media/Files/Association%20Documents/20131107%20TCH%20Working%20Paper%20Series%20on%20Value%20of%20Large%20Banks.pdf>.

3 See The Clearing House, *Working Paper No. 2: Access to Deposit Insurance and Lender-of-Last-Resort Liquidity*, Working Paper Series on the Value of Large Banks (Jan. 2014), available at <https://www.theclearinghouse.org/~media/Files/Association%20Documents/TCH%20Working%20Paper%20No%202%20Value%20of%20Large%20Banks.pdf>.

4 See, e.g., William M. Isaac and Cornelius Hurley, “Too Safe to Fail,” *Washington Times* (March 3, 2011), (advocating that each TBTF firm be required “to establish a separate reserve account on its balance sheet funded by the annual taxpayer subsidy it enjoys as a result of its privileged status and lower funding costs”); Subsidy Reserve Act of 2013, H.R. 2266, 113th Cong. § 2 (2013) (proposing that “[e]ach nonbank financial company supervised by the Board of Governors and each bank holding company with total consolidated assets equal to or greater than \$500,000,000,000 shall establish and maintain a capital account called the ‘Subsidy Reserve’”); Tax Reform Act of 2014 Discussion Draft Section-by-Section Summary (2014), available at http://waysandmeans.house.gov/uploadedfiles/statutory_text_tax_reform_act_of_2014_discussion_draft_022614.pdf (proposing an excise tax on large financial institutions to “recapture a portion of that implicit subsidy”).

Executive Summary

II. Executive Summary

- Empirical work analyzing bank funding cost differentials is inconclusive at best: there is no persuasive evidence that large banks enjoy an unfair funding difference today as a result of market perceptions of implicit U.S. government support.
 - Recent work that includes post-reform data shows no significant evidence of TBTF effects today on large bank funding costs.
 - Much of the research often cited as “evidence” of a TBTF funding differential has various shortcomings, including:
 - › Not accounting for legitimate reasons why large banks may enjoy lower funding costs for certain liabilities; and
 - › Drawing overly broad conclusions about aggregate funding costs from a limited set of liabilities.
- Recent developments—including the ‘single-point-of-entry’ (“SPOE”) resolution strategy for large institutions and other post-crisis reforms designed to prevent the failure of large institutions—are changing market perceptions of the likelihood that the government will bail out creditors of large institutions in the future.
 - Titles I and II of the Dodd-Frank Act—along with parallel and closely coordinated developments toward establishing resolution procedures in other countries—provide an effective framework for ending TBTF by eliminating the need for government bailouts in a future financial crisis.
 - Market participants—as well as the leading credit rating agencies—are revising their expectations of government support of large U.S. banks.
- Any analysis of the overall competitive effects of government policies on large banks must consider not only the potential advantages resulting from expressed or implied government policies, *but also the disadvantages resulting from government policies.* For large banks, the disadvantages are considerable, as they bear significant costs as a result of policies and regulations specifically directed at them alone – a form of regulatory taxation – which may offset any potential competitive advantage they might enjoy as a result of other government policies. ■

Existing Research Does Not Demonstrate that Large Banks Today Enjoy Significant Funding Differences Due to Market Perceptions of Implicit U.S. Government Support

III. Existing Research Does Not Demonstrate that Large Banks Today Enjoy Significant Funding Differences Due to Market Perceptions of Implicit U.S. Government Support

Contrary to the assertions of many critics of large banks, the existing body of research on funding cost differentials does not provide persuasive evidence today of any significant funding advantage for large banks related to market perceptions of implicit government support. Interestingly, newer research that looks at post-reform data finds no significant evidence today of any TBTF-based funding advantage.

A. NEW RESEARCH THAT ANALYZES POST-REFORM DATA FINDS NO SIGNIFICANT EVIDENCE OF ANY BENEFICIAL TBTF EFFECTS ON FUNDING COSTS TODAY FOR THE LARGEST U.S. BANKS.

In March and April 2014, Oliver Wyman published two independent research reports, commissioned by The Clearing House, that examine deposit rate differences and bond pricing spreads among banks of different sizes.⁵ These studies, which adjust for many of the research design challenges discussed below, show that funding differences observed in some pre-crisis studies have significantly diminished since the introduction and implementation of relevant financial regulatory reforms. The studies also find no significant evidence that any funding cost differentials today are attributable to TBTF factors alone. Finally, the findings of Oliver Wyman are supported by the recent findings of other researchers, who similarly find dramatic declines in funding differences after the crisis and since the imposition of new regulatory reforms.

i. Significant Funding Cost Differences Do Not Exist for Deposit Rates

In the first study, Oliver Wyman examined deposit rate differences among banks of different sizes, using a similar approach and data source as were applied in a widely-

cited prior study by Stefan Jacewitz and Jonathan Pogach.⁶ Jacewitz and Pogach analyzed U.S. branch-level deposit rate data for money market deposit accounts (MMDAs) from 2005 to 2010. They concluded that the largest banks had a funding cost advantage from 2006 to 2010 consistent with implicit or perceived government support of TBTF institutions. However, since the period studied by Jacewitz and Pogach, there have been significant changes in deposit insurance provided by the FDIC and major policy reforms affecting TBTF perceptions.

The Oliver Wyman study explored to what extent these changes have impacted perceptions of government support, most significantly by extending the data period of the study through 2012. By extending the data period, Oliver Wyman found that any cost of funding differential for deposits had shrunk dramatically by the end of 2012, and that at the end of 2012 the largest banks paid four basis points, or 0.04%, less than smaller banks for deposits.⁷

Further, the Oliver Wyman study concluded that this small funding cost difference is likely attributable to factors unrelated to TBTF and perceptions of implied government support, such as the offering of more extensive banking services and the lower demand for deposits among large banks, which are generally less reliant than smaller competitors on deposits as a source of funding.⁸ The findings indicate the presence of non-TBTF sources of funding cost advantages that are not explained by other factors, including influences on deposit rates that would be associated with size, but not with TBTF perceptions. First, Oliver Wyman found that large banks have cost advantages on MMDAs that are explicitly insured by the government, which should not be impacted by any TBTF perceptions because of the government guarantee.⁹ Second, the study found that MMDA cost differences exist not only between the largest banks and their

⁵ See Aditi Kumar and John Lester, Oliver Wyman, *Do Deposit Rates Show Evidence of Too Big to Fail Effects?* (March 2014), available at https://www.theclearinghouse.org/~media/Files/Association%20Documents/20140318%20Oliver%20Wyman_Deposit%20Rates%20Study.pdf, and John Lester and Aditi Kumar, Oliver Wyman, *Do Bonds Spreads Show Evidence of Too Big to Fail Effects?* (April 2014), available at <https://www.theclearinghouse.org/~media/Files/Association%20Documents/Oliver%20Wyman%20study%20-%20Do%20bond%20spreads%20show%20evidence%20of%20too%20big%20to%20fail.pdf>.

⁶ Stefan Jacewitz and Jonathan Pogach, *Deposit Rate Advantages at the Largest Banks* (2013).

⁷ Kumar and Lester, *Do Deposit Rates Show Evidence of Too Big to Fail Effects?* at 24.

⁸ *Id.* at 22-26.

⁹ *Id.* at 22-23.

smaller competitors, but also between smaller subsets of banks and their respectively smaller peers, suggesting the existence of more general size benefits unrelated to perceptions of government support.¹⁰ These findings show the difficulty of adequately distinguishing between TBTF drivers of funding differences and other factors that influence deposit rates.

ii. Significant Funding Cost Differences Do Not Exist for Bond Spreads

The second Oliver Wyman study examined bond spreads and also found no significant evidence of TBTF effects in large bank funding costs. Many experts view bond spreads as offering the most robust empirical view of potential TBTF effects, making them a natural point of analysis. Oliver Wyman again extended and updated a widely-cited prior study, building on the work of Viral Acharya, Deniz Anginer, and A. Joseph Warburton.¹¹ In their 2013 working paper, Acharya, Anginer, and Warburton examined the spreads on U.S.-issued bonds of U.S. financial institutions—including banks, insurers, broker-dealers, asset managers, trading exchanges, and insurance brokers—from 1990 to 2011.¹² They argued that the largest institutions are supported by an implicit government guarantee based on evidence that larger institutions have lower credit spreads relative to smaller institutions (implying lower credit risk) but that there is no observable relationship between size and credit risk for institutions in the sample, and ultimately concluded that the largest institutions had an average funding cost advantage of 24 basis points from 1990-2011.¹³

Oliver Wyman used an analytical model very similar to that used by Acharya, Anginer, and Warburton but incorporated several adjustments to more accurately isolate and identify any funding cost differences and the source of any such differences. Most notably, Oliver Wyman included bond spreads from 2012 to 2013, allowing their study to capture the market impact of the substantial efforts of U.S. policymakers to address TBTF perceptions.¹⁴ Oliver Wyman also restricted their sample of issuers to bank holding companies, excluding insurers and asset managers with very different risk and funding profiles than other financial institutions.¹⁵ The study found that the bond spread differential for the largest banks became insignificant (*i.e.*, not distinguishable from zero)

by 2013 in the wake of financial reforms.¹⁶ Oliver Wyman also found evidence that funding spread differences incorporate effects other than TBTF perceptions, such as the general bond spread benefit associated with increasing firm size.¹⁷ Thus, the study concluded that there are no statistically significant bond spread advantages today among the largest institutions in the wake of policy changes addressing TBTF concerns, and that, in the years when a funding cost differential might have been observed, the advantage was not necessarily attributable to perceptions of government support.¹⁸

iii. Other Research Finds Similar Declines in Funding Cost Differences

The two Oliver Wyman studies make an important contribution to the TBTF policy debate because they focus on funding cost differences between the largest U.S. banks and other U.S. banks and examine data for periods during which the dramatic regulatory reforms of the past several years have begun to take effect. Their findings—that funding cost differences have declined considerably for the largest U.S. banks since the crisis—should not be surprising. This research simply reflects the fact that financial markets have begun to recognize that new standards make large banks less likely to fail in the first place, and that the statutory prohibition of taxpayer bailouts, supported by new tools to resolve large banks, is highly credible.

Consistent results have also been found by other researchers recently examining this important issue. New York University economist Viral Acharya and his coauthors similarly examined bond spreads through 2011, and also found a significant decline during just the first two years after the crisis.¹⁹ FDIC economists Jonathan Pogach and Stefan Jacewitz found significant declines in funding differences for deposits by just the third quarter of 2010.²⁰ And more recently, IMF economists Frederic Lambert and Kenichi Ueda found that funding cost differences had fallen from about 80 bps during the crisis to just 15 bps in 2012.²¹

10 *Id.* at 23-24.

11 Viral Acharya et al., *The End of Market Discipline? Investor Expectations of Implicit State Guarantees* (Dec. 2013).

12 Lester and Kumar, *Do Bonds Spreads Show Evidence of Too Big to Fail Effects?* at 2.

13 *Id.*

14 *Id.*

15 *Id.* at 5.

16 *Id.* at 16.

17 *Id.* at 13-14.

18 *Id.* at 16.

19 Acharya et al., *The End of Market Discipline? Investor Expectations of Implicit State Guarantees* at 45.

20 Pogach and Jacewitz, *Deposit Rate Advantages at the Largest Banks* 25 (Feb. 21, 2014).

21 Frederic and Ueda, *How Big is the Implicit Subsidy for Banks Considered Too Important to Fail?* 112, 115 (April 2014).

B. MUCH OF THE OLDER RESEARCH ON FUNDING COST DIFFERENTIALS IS MARKED BY DESIGN AND METHODOLOGICAL SHORTCOMINGS, AND DOES NOT DEMONSTRATE THE EXISTENCE OF ANY UNFAIR FUNDING DIFFERENCES.

These studies that purport to show a significant funding cost differential – mostly older research – suffer from critical design and methodological shortcomings. Evaluating the relative funding costs of banks of varying size and complexity, and identifying the causes of the differences, if any, among them is a daunting task. For this reason, few studies have undertaken the effort. Unlike the research by Oliver Wyman and others cited above, much of the older research has failed to isolate and address the sources of funding cost differences in a meaningful way and does not provide a credible basis for serious policy proposals.

For one, most research looks at a specific class of liabilities and compares the cost of the specific liabilities with all liabilities across institutions. Focusing on a particular liability (e.g., deposits or bonds) does not offer a holistic picture of bank funding costs. There is considerable diversity in the ways in which differently-sized banks with different business models fund themselves. The largest U.S. banks typically use a broad mix of insured and uninsured deposits, senior and subordinated debt, and other funding sources; for their part, smaller or less complex banks typically rely more heavily on insured deposits.²² This difference in funding models makes it misleading to compare funding costs as if large banks were simply scaled-up versions of smaller banks. In fact, while large banks may have advantages when issuing certain types of liabilities, recent research indicates that the average aggregate funding costs of the largest U.S. banks typically exceed those of banks that rely more heavily on deposit funding.²³

While looking at only particular liabilities may provide an incomplete picture, certain research methodologies in particular are especially dubious. One common approach for assessing potential funding cost differences between banks is through credit ratings. Some researchers measure the “uplift” associated with rating agency perceptions of the likelihood and extent of government support for an institution. The “uplift” is the difference between an institution’s “standalone” rating and its “with support” rating, the latter of which includes perceptions of

government support.²⁴ Researchers have attempted to translate the number of notches of support into a number of basis points savings on bond yields by estimating how much more a bank would pay on its debt if it did not enjoy the higher “with support” rating rather than the “standalone” rating.²⁵ A major shortcoming of the credit rating support approach is the assumption that rating agency “with support” ratings reflect actual savings in debt costs in the market.²⁶ The judgments on which the uplift are based involve subjective assessments about the likelihood and extent of government interventions that are difficult to model. Additionally, credit ratings take a while to adequately reflect today’s market perceptions. The available evidence indicates that there is no widespread or reliable “uplift.” Market-based bond spreads and CDS spreads track the “standalone” ratings more closely than the “with support ratings,” suggesting that the “uplift” does not translate into an actual funding advantage.²⁷

Although many studies focus on measuring the funding advantages of a specific class of liabilities, some studies incorrectly take findings specific to one type of liability, for example bonds, and apply the finding across all liabilities to generate a dollar figure for a purported funding differential. This is seen in a number of studies, where the authors multiply the differential found by the total liability stack. It is critical that studies take into account the full range of funding sources when attempting to calculate the total dollar value of benefits of any purported funding differences.²⁸

Other challenges are faced by empirical studies trying to measure perceptions of government support.²⁹ Most of the research to date fails to distinguish between perceptions of implicit government support and advantages of size and scale that larger institutions in all industries share.³⁰ Funding cost differentials appear to exist between large and small firms in most industries. This is in part because larger firms tend to have greater product and geographic diversification, broader access to funding during periods of economic difficulty, more historical loss data, and wider investment research coverage, all of which

22 Randall S. Kroszner, *A Review of Banking Funding and Cost Differentials* 13 (Nov. 16, 2013).

23 *Id.* at 30 and Figure 5. See also Michel Araten and Chris Turner, “Understanding the Funding Cost Differences Between Global Systemically Important Banks (G-SIBS) and non-G-SIBs in the USA” Figure 1, *Journal of Risk Management in Financial Institutions*, vol. 6, 4 (387-410) at Figure 1 (2013).

24 Randall S. Kroszner, *A Review of Banking Funding and Cost Differentials* 15 (Nov. 16, 2013).

25 *Id.* at 16.

26 *Id.*

27 See Michel Araten, *Credit Ratings as Indicators of Implicit Government Support for Global Systemically Important Banks* (2013); see also Michel Araten and Chris Turner, “Understanding the Funding Cost Differences Between Globally Systemically Important Banks (G-SIBs) and Non-G-SIBs in the USA” Figure 1, *Journal of Risk Management in Financial Institutions*, Vol. 6 (387-410) at Figure 1 (2013).

28 Kroszner at 27.

29 *Id.* at 2

30 *Id.*

have been shown to result in lower funding costs.³¹ In the case of bonds, there are substantial liquidity differences between the bonds of large and small banks (and large and small institutions in other industries). More liquidity should mean lower funding costs, a cost of funding effect that studies should take into account.³² These general funding differences between large and small institutions must be considered when interpreting bank funding cost research, especially in light of recent research finding scale economies in banking, including at the largest banks.³³ Other sources of false funding cost differentials may arise when the advantage is associated with size, diversity, greater access to capital markets in times of stress, or more frequent issuance, in addition to greater liquidity of debt issuances.

The composition of the data set on which a study relies must also be considered when interpreting the study's results. Much of the existing research evaluates larger groups of financial institutions that include banks, non-bank financial companies, and non-U.S. institutions. Non-bank financial companies generally have a different structure than banks and often operate under different regulatory structures. Other studies fail to distinguish between U.S. and non-U.S. institutions. This can also give misleading results, as non-U.S. institutions operate under different regulatory regimes and may be subject to different expectations of government support. Failing to distinguish between bank and non-bank institutions, and between U.S. and non-U.S. institutions, creates an overly broad data set that obscures, rather than illuminates, the relative funding costs of large U.S. banks.³⁴

Finally, some of the existing research provides an unreliable picture of the market today because it only evaluates funding costs before the enactment of historic regulatory reforms. Policy proposals purportedly based on funding cost research should rely only on studies that provide an accurate and up-to-date picture. Many recent reforms, including the Dodd-Frank Act Title II resolution framework, are expressly aimed at putting an

end to TBTF perceptions,³⁵ and pre-reform data cannot possibly account for the effect of those reforms on market perceptions. Indeed, as is discussed further below, there is strong evidence that these regulatory reforms are operating as intended and are significantly altering market expectations.³⁶

Research addressing funding costs must take into account these critical design and methodological issues. More importantly, policy proposals based on flawed studies will unnecessarily increase the costs paid by U.S. households and businesses for critical financial services, all without improving the competitiveness or safety-and-soundness of the financial system. ■

31 *Id.*

32 *Id.* at 26.

33 See Joseph Hughes and Loretta Mester, *Who Said Large Banks Don't Experience Scale Economies? Evidence from a Risk-Return-Driven Cost Function*, Federal Reserve Bank of Philadelphia Working Paper No. 13-13, at 25 (Apr. 2013); David Wheelock and Paul Wilson, *Do Large Banks have Lower Costs? New Estimates of Returns to Scale for U.S. Banks*, *Journal of Money, Credit, and Banking*, Vol. 44 No. 1 (Feb. 2012).

34 Kroszner at 12-13. Much of this research also fails to take into account differences in the risk characteristics of various types of liabilities, including differences in investors' rights, the laws of various jurisdictions, and maturities, all of which affect the relative cost of those liabilities. *Id.* at 27.

35 See Remarks of Mary John Miller, Under Secretary of the Treasury, at the Hyman P. Minsky Conference, 1-2 (Apr. 18, 2013) (“[I]t is also important to ask why the market would continue to [provide any funding advantage] in light of the law’s clarity that taxpayer support will not be forthcoming and thus whether any funding advantage might be attributable to other reasons... To the extent the largest financial companies have been benefiting from a funding advantage based on their ratings, that uplift has been declining and appears to be continuing to go away as implementation of the Dodd-Frank Act progresses.”).

36 See, e.g., Moody’s Investor Services, *Rating Action: Moody’s Concludes Review of Eight Large US Banks*, *Global Credit Research*, 1 (Nov. 14, 2013) (finding significant progress in developing the Orderly Liquidation Authority and removing the credit-rating uplift for certain bank holding companies).

Recent Reforms Are Dispelling Market Perceptions that Large Banks Enjoy Implicit U.S. Government Support

IV. Recent Reforms Are Dispelling Market Perceptions that Large Banks Enjoy Implicit U.S. Government Support

The fact that these more recent studies have found no significant evidence of TBTF effects today in bank funding costs should not come as any surprise, as they focus on the recent period following sweeping regulatory reforms and the beginning of efforts to implement a new resolution framework specifically intended to ensure that no bank is TBTF. Policymakers in the United States and their foreign counterparts are working hard to manage and limit systemic risk and to develop and refine national and cross-border resolution procedures, and the markets have revised their expectations of U.S. and other governmental support of large banks accordingly. Of particular note, market participants are recognizing that a workable cross-border framework is being developed to resolve the largest and most complex institutions without adverse systemic consequences.³⁷

A. FINANCIAL REGULATORY REFORMS ARE SUBSTANTIALLY ENHANCING THE RESILIENCY OF BOTH INDIVIDUAL BANKS AND THE BANKING SYSTEM ON THE WHOLE AND ARE IMPACTING MARKET EXPECTATIONS REGARDING THE POSSIBILITY OF DEFAULT.

Implementation of the Dodd-Frank Act and the comprehensive capital and liquidity reforms within the Basel III framework are substantially enhancing the resiliency of both individual banks and the banking system on the whole, making it less likely that an individual firm will become insolvent, while also making firms more resolvable and the financial system less prone to systemic threats. *Working Paper #2* provided an extensive discussion of post-crisis regulatory reforms that will help ensure the continued safety and soundness of large banks, including enhanced capital requirements, capital surcharges, stress testing, liquidity reforms, short-term funding reforms, counterparty exposure limits, other enhanced prudential standards, and systemic risk monitoring.³⁸

B. THE DODD-FRANK ACT RESOLUTION FRAMEWORK PROVIDES AN EFFECTIVE AND WORKABLE STRATEGY FOR RESOLVING LARGE BANKS.

In the aftermath of the financial crisis, there was broad consensus among the financial industry, policymakers, and the public that taxpayer exposure to the losses of financial institutions should be eliminated. In the United States, the first two Titles of the Dodd-Frank Act address these goals. Under Title I, all large bank holding companies and other systemically important financial institutions (“SIFIs”) are required to create a so-called “living will” for their resolution under the Bankruptcy Code.³⁹ Title II creates a separate resolution mechanism under a Federal Deposit Insurance Corporation (“FDIC”) receivership that serves as a last resort if resolution under the Bankruptcy Code would have a disruptive effect on U.S. financial stability.⁴⁰

i. Title I Resolution – Bankruptcy Code

Title I of the Dodd-Frank Act lays the groundwork for effective resolution. Large banks and other SIFIs are required to develop detailed plans for their “rapid and orderly resolution in the event of financial stress or failure.”⁴¹ Among other things, the living will must describe how any insured bank or thrift that is affiliated with the parent company is protected from risks arising from the activities of its nonbank subsidiaries; the organization’s ownership structure, assets, liabilities, and contractual obligations, including cross-guarantees; and a process for identifying the organization’s pledged collateral.⁴²

The institution must also describe how any adverse effects on the financial stability of the United States caused by the institution’s failure would be mitigated.⁴³ In doing so, it must adopt several key assumptions. It must assume that it will not receive any extraordinary form of government assistance.⁴⁴ It also must assume the failure of any nonbank

37 See Paul Tucker, *Solving Too Big to Fail: Where do Things Stand on Resolution?*, Speech at the Institution of International Finance 2013 Annual Membership Meeting, Washington, D.C. (Oct. 12, 2013) (“[T]he US authorities have the technology – via Title II of Dodd Frank; and, just as important, most US bank and dealer groups are, through an accident of history, organized in a way that lends them to top-down resolution on a group-wide basis. I don’t mean it would be completely smooth right now; it would be smoother in a year or so as more progress is made. But in extremis, it could be done now. That surely is a massive signal to bankers and markets.”)

38 See *Working Paper #2: Access to Deposit Insurance and Lender-of-Last-Resort Liquidity* at 15-18.

39 See Dodd-Frank Act § 165(d).

40 See *id.* § 201-217.

41 Dodd-Frank Act § 165(d)(1), (4).

42 *Id.* § 165(d)(1)(A)-(D).

43 See FDIC, *Resolution Plans Required*, 76 Fed. Reg. 67323 (Nov. 1, 2011), codified at 12 C.F.R. 381.4(c)(4)(v).

44 12 C.F.R. 381.4(a)(4)(ii).

subsidiary that conducts a core line of business or critical operations.⁴⁵

All resolution plans are periodically reviewed by the FDIC and the Federal Reserve Board (“FRB”), which have the authority to determine that the plans are not “credible.”⁴⁶ If the FDIC and the FRB determine that a resolution plan is deficient, the institution must resubmit the plan.⁴⁷ If an institution fails to provide a credible plan, the FRB and FDIC may jointly impose more stringent capital, leverage, or liquidity requirements on the firm or restrict its growth, activities, or operations.⁴⁸ If the failure persists for two years or longer, the FDIC, the FRB, and the Financial Stability Oversight Council may order the firm to divest certain assets or operations.⁴⁹ As of July 23, 2014, more than 150 firms, accounting for the bulk of the total consolidated assets held by banking organizations operating in the United States, have submitted living wills.⁵⁰

ii. Title II Resolution – Orderly Liquidation Authority

Title II of the Dodd-Frank Act establishes a regime for troubled institutions whose resolution under the Bankruptcy Code or other ordinary methods might be disruptive to U.S. financial stability. The Orderly Liquidation Authority (“OLA”) under Title II would only be invoked in the rarest of circumstances,⁵¹ particularly as the Title I planning requirements are intended to increase the feasibility of resolution under the Bankruptcy Code. Title II may be best viewed as an important “safety valve” option that can be used if and when it becomes likely that a failure under generally applicable bankruptcy and bank resolution procedures will have serious systemic consequences.

A key tenet of Title II is that all losses are to be borne by the shareholders and creditors of a firm.⁵² Indeed, Title II flatly prohibits taxpayer payment for such losses.⁵³ The FDIC has issued important regulations to implement these provisions.⁵⁴ In December 2013, the FDIC issued for comment a notice describing its SPOE

recapitalization strategy for resolving SIFIs under OLA.⁵⁵ The SPOE approach recognizes that large, diversified U.S. financial institutions are usually structured with a holding company that owns various operating subsidiaries, such as a bank, broker-dealer, or insurance company, and that the problems that can topple such an organization almost always begin with severe losses at one or more of its operating subsidiaries. The SPOE approach calls for the holding company to absorb all of the organization’s losses and to restore its distressed operating subsidiaries to sound financial condition.⁵⁶ The operating subsidiaries would then be transferred to a new bridge holding company (“BridgeCo”). This allows the subsidiaries to stay open and to continue to serve their customers and support the economy, but under new ownership and management.⁵⁷

To facilitate the SPOE approach, the FRB is expected to promulgate a so-called “long-term debt requirement,” which would ensure that large firms have sufficient loss-absorbing capacity at the holding company level to facilitate a SPOE resolution.⁵⁸ In addition, Title II permits the FDIC to provide temporary, secured liquidity to the new BridgeCo through the Orderly Liquidation Fund (“OLF”) to support the liquidity needs of subsidiaries should private market financing not be available during a crisis.

The Title II SPOE approach ends taxpayer bailouts because it imposes losses on shareholders and creditors of the holding company—and not the taxpayers. Shareholders and creditors will have the maximum incentive to restrain excessive risk-taking by the operating subsidiaries because they will be first in line to absorb any losses incurred by those subsidiaries. In addition, by recapitalizing the operating subsidiaries and avoiding the sudden and disruptive shutdown of core lines of business and critical operations, the SPOE approach will preserve a firm’s going concern and franchise value and be likely to lead to lower losses than would be incurred if the operating subsidiaries were liquidated. The FDIC also will retain the authority to restructure or downsize the recapitalized company as necessary to mitigate future systemic risk.⁵⁹

Additionally, any funding through the OLF would be extended to a fully recapitalized BridgeCo on a strictly

45 See 76 Fed. Reg. at 67328.

46 Dodd-Frank Act § 165(d)(4).

47 *Id.* § 165(d)(4).

48 *Id.* § 165(d)(5)(A).

49 *Id.* § 165(d)(5)(B).

50 See Resolution Plans, available at <http://www.federalreserve.gov/bankinfo/reg/resolution-plans.htm>.

51 Dodd-Frank Act § 203(a)(2), (b).

52 See Dodd-Frank Act §§ 204(a)(1), 206(2)-(3), 12 U.S.C. §§ 5384(a)(1), 5386(2)-(3).

53 See Dodd-Frank Act § 214(c), 12 U.S.C. § 5394(c).

54 See generally 12 C.F.R. Part 380.

55 Federal Deposit Insurance Corporation, *Resolution of Systemically Important Financial Institutions: The Single Point of Entry Strategy*, 78 Fed. Reg. 76614 (Dec. 18, 2013) (hereinafter “FDIC SPOE Statement”).

56 *Id.* at 7-8.

57 *Id.* at 8-9

58 See Remarks by Daniel K. Tarullo, Member, Board of Governors of the Federal Reserve System at the Yale Law School Conference on Challenges in Global Financial Services (Sept. 20, 2013), available at <http://www.federalreserve.gov/newsevents/speech/tarullo20130920a.pdf>.

59 Federal Deposit Insurance Corporation and Bank of England, *Resolving Globally Active, Systemically Important, Financial Institutions* (Dec. 10, 2013), available at <http://www.fdic.gov/about/srac/2012/gsifi.pdf>.

temporary and fully secured basis and would not involve a taxpayer bailout. Any OLF borrowings “would be fully secured through the pledge of assets of the bridge financial company and its subsidiaries”⁶⁰ and priced at above market rates.⁶¹ In the unlikely event that the collateral or the BridgeCo’s unencumbered resources would be insufficient to repay the borrowings, the FDIC has the authority to obtain repayment from other large U.S. financial institutions.⁶²

To complement this work, the FDIC has promoted cross-border cooperation with foreign banking regulators in order to enhance regulators’ ability to resolve large, complex institutions. The FDIC and the Bank of England have released a joint paper on resolution, conducted a staff-level cross-border resolution tabletop exercise, and plan to organize a similar exercise in 2014 involving “principals” like FDIC Chairman Martin Gruenberg and Bank of England Governor Mark Carney.⁶³ The FDIC has also held meetings to coordinate resolution planning with Swiss, German, Japanese, Chinese, and European Commission officials.⁶⁴ The Clearing House believes that the FDIC and foreign banking regulators have made important progress in creating a framework for effective cross-border resolutions, and that further work is eliminating the remaining obstacles to the effective resolution of globally active institutions.⁶⁵

Other countries are adopting resolution strategies

60 FDIC SPOE Statement at 76622.

61 *Id.* at 76617. This would ensure that the FDIC’s use of the OLF is consistent with the classic principles for sound central bank lender-of-last-resort facilities – that the central bank lend freely, but only during a financial panic, to solvent firms, fully secured by good collateral, and at penalty rates. Walter Bagehot, *LOMBARD STREET: A DESCRIPTION OF THE MONEY MARKET* (1873).

62 FDIC SPOE Statement at 76622.

63 See Martin J. Gruenberg, Chairman of the FDIC, Remarks at the Volcker Alliance Program, at 10, Washington, D.C. (Oct. 13, 2013).

64 *Id.* at 10-11.

65 The remaining pieces are falling into place to allow a globally active banking organization to be successfully resolved, including the Federal Reserve Board’s long-term debt requirement in the United States and the Financial Stability Board’s global standard for gone concern loss absorbing capacity, which will help ensure that G-SIBs maintain sufficient loss absorbing capacity on an ongoing basis. Additionally, significant progress is being made to ensure that cross-default overrides will in fact be recognized by the relevant parties when, if ever, the necessary time comes. See, e.g., Article 60a in Council of the European Union, Proposal for a Directive of the European Parliament and of the Council Establishing a Framework for the Recovery and Resolution of Credit Institutions and Investment Firms (final compromise text), document 17958/13 (Dec. 18, 2013) (finalizing the text of the European Bank Recovery and Resolution Directive providing European resolution authorities important new regulatory powers to cooperate with the FDIC and to support a resolution of a U.S. G-SIB under a SPOE strategy, including the power to override the cross-default rights of counterparties to European contracts triggered by a U.S. Title II proceeding).

modeled in part on the U.S. approach. Last year, the U.K. government introduced the Financial Services (Banking Reform) Act 2013, which contains a “bail-in” option⁶⁶ and makes other amendments to the bridge bank tool provided in the U.K. Banking Act 2009.⁶⁷ Germany and Switzerland have indicated that the SPOE approach is their preferred strategy for resolving German and Swiss global systemically important banks (“G-SIBs”),⁶⁸ and the recently finalized European Bank Recovery and Resolution Directive⁶⁹ contains a bail-in tool and a bridge institution tool that empowers regulators in the member states of the European Union and a proposed future EU resolution authority to develop the framework for both an SPOE approach and a multiple-point-of-entry approach to resolving top-tier European parent banks or holding companies.⁷⁰ Other leading financial centers are adopting compatible resolution structures following the model of the Financial Stability Board’s *Key Attributes for Effective Resolution Regimes of Financial Institutions*.⁷¹

C. MARKET PARTICIPANTS ARE RECOGNIZING THE EFFECTIVENESS OF THE NEW RESOLUTION FRAMEWORK AND ARE REVISING THEIR EXPECTATIONS OF GOVERNMENT SUPPORT ACCORDINGLY.

Both the Title I living will requirement and the Title II SPOE approach enjoy significant support from U.S. policymakers, their foreign counterparts, and market participants as effective solutions to the TBTF dilemma. For example, FRB Governor Daniel K. Tarullo has praised the SPOE approach for its “potential to mitigate run risks and credibly impose losses on parent holding company creditors, and thereby, to enhance market discipline.”⁷² FRB Chair Janet Yellen has expressed a similar sentiment:

66 U.K. Banking Reform Bill, Schedule 2, at 121-123.

67 29 U.K. Banking Act 2009, Article 12.

68 FINMA Position Paper, “Resolution of Globally Systemically Important Banks” (Aug. 7, 2013) available at <http://www.finma.ch/e/finma/publikationen/Documents/pos-sanierung-abwicklung-20130807-e.pdf>. Martin J. Gruenberg, Chairman of the FDIC, Remarks at the Volcker Alliance Program, at 9-10, Washington, D.C. (Oct. 13, 2013).

69 Council of the European Union, Proposal for a Directive of the European Parliament and of the Council Establishing a Framework for the Recovery and Resolution of Credit Institutions and Investment Firms (final compromise text), document 17958/13 (Dec. 18, 2013).

70 Freshfields Bruckhaus Deringer, European Bank Recovery and Resolution Directive, 7-10 (Jan. 2014).

71 Financial Stability Board, *Key Attributes of Effective Resolution Regimes for Financial Institutions* (Nov. 4, 2011).

72 Daniel K. Tarullo, Member of the Board of Governors of the Federal Reserve System, *Toward Building a More Effective Resolution Regime: Progress and Challenges*, at 8, Remarks at the Federal Reserve Board and Federal Reserve Bank of Richmond Conference, “Planning for the Orderly Resolution of a Globally Systemically Important Bank,” Washington, D.C. (Oct. 18, 2013).

“Right now, the FDIC has the capacity and the legal authority to resolve, possibly using Orderly Liquidation Authority, a systemically important firm that finds itself in trouble. And they’ve designed an architecture that I think is very promising in terms of being able to accomplish that.”⁷³

Perhaps most importantly, market participants are recognizing the potential effectiveness of the new resolution framework. In November 2013, Moody’s revised its ratings for bank holding company debt by removing the ratings grade “uplift” it had previously provided based on implicit U.S. government support.⁷⁴ As Moody’s explained, this revision was a direct result of its review of the SPOE approach, under which, it concluded, “the holding company creditors are unlikely to receive government support, signaling a higher risk of default.”⁷⁵ Moody’s Managing Director Robert Young further observed:

“We believe that US bank regulators have made substantive progress in establishing a credible framework to resolve a large, failing bank. . . . Rather than relying on public funds to bail-out one of these institutions, we expect that bank holding company creditors will be bailed-in and thereby shoulder much of the burden to help recapitalize a failing bank.”⁷⁶

In addition, Standard & Poor’s is reconsidering its inclusion of government support in its ratings of the largest U.S. banks. In revising their rating outlook of certain large U.S. bank holding companies in June 2013 from stable to negative, lead S&P analysts stated: “[w]e believe it is becoming increasingly clear that holding company creditors may not receive extraordinary government support in a crisis.”⁷⁷

The fact that rating agencies are taking the new resolution framework into account—insofar as the framework credibly reduces or eliminates the prospect of future governmental support of large U.S. banks—corroborates the recent research concluding that large U.S. banks enjoy no cost of funding differences as a result of implicit governmental support. ■

73 Testimony of Janet Yellen, Federal Reserve Board Chair, Hearing on the Nomination of Janet L. Yellen, of California, to be Chairman of the Board of Governors of the Federal Reserve System, before the Senate Committee on Banking, Housing & Urban Affairs, 113th Congress (Nov. 14, 2013).

74 See *supra* Moody’s Investor Services.

75 *Id.*

76 *Id.*

77 Standard & Poor’s Ratings Services, Various Outlook Actions Taken on Highly Systemically Important U.S. Banks; Ratings Affirmed, (June 11, 2013).

Policymakers Should Consider the Net Competitive Impact of Government Policy, as Many Regulatory Requirements Tax the Largest Banks Alone

V. Policymakers Should Consider the *Net* Competitive Impact of Government Policy, as Many Regulatory Requirements Tax the Largest Banks Alone

For any study of funding costs to be meaningful and provide a full and accurate analysis of competitive advantages among banks of different sizes, it must evaluate both the positive and negative effects experienced by banks of different sizes due to government regulation and other mandates. Large banks are increasingly subject to significantly higher regulatory costs. Many of these regulatory costs uniquely impact the largest banks, a type of regulatory taxation. Policymakers, regulators, academics, and others have observed that certain regulatory taxes come with substantial costs and “offset” any competitive advantage that may be attributed to government support.⁷⁸

Key regulators have made clear that should the largest banks enjoy a competitive advantage as a result of market perceptions of possible government support, any such competitive advantage might be offset by regulatory costs. As explained by Federal Reserve Board Chair Janet Yellen:

“[T]he efforts of the Federal Reserve and the global regulatory community have focused principally on (1) producing stronger regulations to reduce the probability of default of such firms to levels that are meaningfully below those for less systemically important financial firms, and (2) creating a resolution regime to reduce the losses to the broader financial system and economy upon the failure of a SIFI. The goal has been to compel SIFIs to internalize the costs their failure would impose on

society and to offset any implicit subsidy that such firms may enjoy due to market perceptions that they are too-big-to-fail.”⁷⁹

Federal Reserve Board Governor Daniel K. Tarullo has also commented on the role of certain regulations imposed solely on the largest banks in offsetting any potential unfair funding difference, explaining that “additional capital requirements can also help offset any funding advantage derived from the perceived status of [the largest banks] as too-big-to-fail.”⁸⁰ U.S. regulators have invoked the role of regulation in offsetting unfair funding differences when adopting new requirements applicable only to the largest banks. For example, in their final rule imposing an enhanced supplementary leverage ratio requirement on G-SIBs, the Office of the Comptroller of the Currency, the FRB, and the FDIC noted that “[b]y enhancing the capital strength of covered organizations, the enhanced supplementary leverage ratio standards could counterbalance possible funding cost advantages that these organizations may enjoy as a result of being perceived as “too big to fail.”⁸¹

Indeed, regulators have pointed out that the concept of an offset is fundamental to the arguments of those who advocate for more stringent regulation of the largest banks as a form of a “tax” to negate the alleged government “subsidy” they claim large banks enjoy.⁸² The Clearing House agrees that policymakers should consider the net effect of government policies on large banks before prescribing further government action to address possible TBTF effects or perceptions. While the existing research does not provide substantial evidence of any TBTF funding difference among banks today, if any funding difference were to exist, it would be more accurate and lead to the adoption of better calibrated regulatory responses to consider the difference not in a vacuum but

78 See, e.g., Staff, International Monetary Fund, *A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20*, at 26-27 (Jun. 2010) (“Regulatory and tax policies towards the financial sector have been formed largely independently of each other. A more holistic approach is needed to ensure that they are properly aligned in both the incentives and the overall burden they imply for the sector.”); Standard & Poor’s, *Two Years On, Reassessing the Cost of Dodd-Frank for the Largest U.S. Banks* (Aug. 9, 2012) (estimating that “the DFA could reduce pretax earnings for the eight large, complex banks by a total of \$22 billion to \$34 billion annually”); Kenneth Jones & Barry Kolatch, *The Federal Safety Net, Banking Subsidies, and Implications for Financial Modernization*, FDIC Banking Review, Vol. 12 No. 1 (May 1999) (examining whether deposit insurance and discount window access confer a competitive advantage, concluding that the “relevant question is not whether a gross subsidy exists, but whether a net marginal subsidy remains after full account is taken of all offsetting costs of government regulation, costs both explicit and implicit”).

79 Janet Yellen, Vice Chair, Board of Governors of the Federal Reserve System, Remarks at the International Monetary Conference, Shanghai, China (June 3, 2013).

80 Daniel K. Tarullo, Board of Governors of the Federal Reserve System, Remarks at the Yale Law School Conference on Challenges in Global Financial Services (Sept. 20, 2013).

81 79 Fed. Reg. 24,523 (May 1, 2014).

82 See Jeremy Stein, Board of Governors of the Federal Reserve System, Remarks at the Rethinking Macro Policy II Conference sponsored by the International Monetary Fund, Washington, D.C. (Apr. 17, 2013).

rather alongside any offsetting regulatory policies and costs experienced uniquely by the institutions that might benefit from the funding difference.

Towards this goal, The Clearing House is currently conducting a study estimating the costs of various requirements applicable to large financial institutions. Specifically, the study examines the annual cost of compliance associated with a subset of proposed regulatory policies, taking into consideration the distance to compliance, cost of equity, and various portfolio adjustments. This study will begin the discussion around the benefits and trade-offs between heightened prudential standards, financial stability, and economic growth. A forthcoming paper will incorporate the findings of this critical research into the key issue for this *Working Paper Series*: “Do large banks today enjoy unfair economic benefits as a result of express, implied, or perceived government policies?” ■

Conclusion

VI. Conclusion

Remarkable progress has been made in the United States and other countries since the financial crisis to further enhance the safety and soundness of large banks and to establish coordinated resolution procedures to prevent any future bailouts by taxpayers. The most recent contributions to the body of research on bank funding costs indicate that large banks today enjoy no significant unfair funding difference at all. These updated studies corroborate statements made by regulators, rating agencies, and other market participants confirming that the Dodd-Frank Act resolution framework credibly precludes any future U.S. government support for insolvent financial institutions.

Nevertheless, some older studies contend a TBTF problem persists that has resulted in large banks enjoying unfair funding cost differences due to market perceptions of implicit U.S. government support. Many of these earlier studies suffer from flawed methodologies, insufficient data periods, and other weaknesses highlighted in this working paper.

The lack of evidence of any funding difference due to market perceptions of TBTF, however, is only part of the story. To assess accurately the overall impact of U.S. government policies on the funding costs of large banks, policymakers must examine the *net* effect of those policies. That of course means not ignoring the substantial—though often appropriate—costs of additional regulations and responsibilities imposed on large banks. All told, these offsetting costs more than offset any purported funding difference stemming from prior perceptions of implicit U.S. government support. ■

ABOUT THE CLEARING HOUSE

Established in 1853, The Clearing House is the oldest banking association and payments company in the United States. It is owned by the world's largest commercial banks, which hold more than half of all U.S. deposits. The Clearing House Association L.L.C. is a nonpartisan advocacy organization representing – through regulatory comment letters, amicus briefs and white papers – the interests of its owner banks on a variety of important banking issues. Its affiliate, The Clearing House Payments Company L.L.C., provides payment, clearing and settlement services to its member banks and other financial institutions, clearing almost \$2 trillion daily which represents nearly half of the automated clearing-house, funds transfer, and check-image payments made in the United States. See The Clearing House's web page at www.theclearinghouse.org.

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