Dodd-Frank's Federal Deposit Insurance Reform

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ABSTRACT

A seldom discussed part of the 2010 Dodd-Frank Act (DFA) is how the deposit insurance assessment alteration impacted different types of banks. We provide details of the reform and investigate the effects on the banking industry. The DFA called for an expansion of the assessment base used to determine deposit insurance fees, along with a simultaneous reduction in assessment rates, so as to not raise additional fees paid. This reform did not affect all banks the same as a result of very different business models. The reform was aimed at benefitting community banks at the expense of non-community banks. We estimate that community banks in the aggregate benefitted by more than $3.7 billion in deposit insurance fee reductions following the reform's implementation in 2011. While non-community banks initially experienced increased fees, offsetting the benefits to community banks, we find evidence that non-community banks in the aggregate adjusted their funding behavior so that all but the largest banks also enjoyed benefits from the reform during our sample period.

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1. Introduction

Explicit insurance of bank deposits is becoming more common around the world. Many countries made significant changes to their insurance schemes in response to the 2008 financial crisis, and as of the end of 2013, 189 countries had some form of deposit insurance and 112 countries had an explicit insurance scheme (Demirguc-Kunt et al., 2015). A little discussed part of the Restoring Financial Stability Act of 2010, commonly called the Dodd-Frank Act (DFA), was the reform outlined by the DFA regarding federal deposit insurance in the United States. The DFA did a number of things with regard to deposit insurance. The first thing it did was to increase the insured deposit limit permanently to $250,000. The Federal Deposit Insurance Corporation (FDIC) had temporarily increased the limit earlier in the financial crisis, but the DFA indicated the change should be made permanent. The second thing the DFA did was to change the way that risk was to be measured by the FDIC, as well as the assessment rate that was applied to the new risk measure. The last meaningful thing it did was to establish a new goal of growing the deposit insurance fund (DIF) to be 1.35% of insured deposits by September 2020, rather than the earlier goal of 1.15%. Most importantly for community banks, the Act mandated that banks with more than $10 billion in total assets pay proportionately more for increasing the ratio to the higher 1.35% level. At the completion of the second quarter 2016, the FDIC announced that the DIF had surpassed the 1.15% threshold and smaller banks would face lower assessment rates going forward.

The focus of this research is on the impact of the change in the assessment base and ancillary changes in assessment rates, which due to its complexity has not been well examined or understood. Prior to the DFA, the assessment base used to determine the fees banks paid for deposit insurance was total domestic deposits. A bipartisan amendment to the DFA suggested the FDIC should update the deposit insurance assessment base to be more inclusive of bank funding sources in a manner that did not increase total revenue to the FDIC. The FDIC formally modified the assessment base in 2011 to include all bank liabilities. At the same time, the FDIC lowered the assessment rates to prevent an increase in revenues because of the expanded assessment base. These changes have the potential to affect individual banks differently because community banks often rely more on deposits for funding while larger, non-community banks rely more on non-deposit sources such as wholesale funds. The purpose of this paper is to provide a detailed analysis of the effects of these changes proposed by the DFA and implemented by the FDIC.

We begin by providing a dollar estimate of the initial benefit to the community banking industry and the added cost to non-community banks resulting from the deposit insurance reform implemented. Actual deposit insurance premiums paid by banks are not public knowledge so we develop an estimate of the premiums. A general lack of transparency regarding individual bank risk requires us to abstract from much of the detail of the overall structure of the determination of FDIC premiums. Specifically, we and the public are not privy to the exact information needed to determine a bank's deposit insurance premiums, such as CAMELS ratings. We make simplifying assumptions, for instance ignoring the risk-based element of deposit fee determination, to provide simulated estimates of the benefits of deposit insurance reform to community banks in the U.S. This comparative static exercise suggests that in the first year of the new assessment mechanism, community banks in the aggregate paid about $744 million less than they would have under the

old, pre-DFA assessment system. In other words, there was a gift to community banks embedded in the DFA that is non-trivial economically, but seems to have been even underappreciated conceptually and quantitatively.

The second part of this research allows for a more dynamic element to the analysis by considering the evolution of respective assessment bases and deposit insurance fees paid by community banks as opposed to all other banks. We start by pointing out that many times regulatory changes result in behavioral modification, which sets in motion a reaction to the regulation, so that benefits and costs of regulatory reform are not static, but evolve over time. Kane (1981), amongst others, emphasized this aspect of regulatory change, noting that sometimes the behavior changes necessitate further regulatory reform in what he calls a "*regulatory dialectic"*. In this vein, we show evidence of a first step of this anticipated evolution in the U.S. banking system. In particular, we provide evidence that the aggregate U.S. banking system evolved away from the heavy reliance on non-deposit funding pre-reform, as the cost of non-deposit funding sources has increased post-DFA. Indeed, our analysis indicates that non-community banks greatly increased their relative reliance on deposits at the expense of non-deposit funding sources over the years following the implementation of the deposit insurance reform. One of the interesting findings from this analysis is that what started out generally envisioned as a zero-sum FDIC fund change, with the gains to community banks coming at the expense of increased costs to non-community banks, held in the aggregate for only a brief period of time. Non-community banks shifted their relative funding sources in a manner that has also substantially lowered their FDIC fees relative to what they would have been under the pre-DFA insurance pricing scheme. We also show that not all non-community banks were able to modify their funding sources as quickly as others. The largest, stress-test banks in the aggregate were much less able to change.

Our research is related to three strands of literature. First, our discussion and quantification of the most recent deposit insurance reform follows decades of recommendations for improvements due to the many potential disadvantages of government sponsored schemes.[1] Many authors called for risk-adjusted premiums during the 1980s (Pyle, 1984; Diamond and Dybvig, 1986; McCulloch, 1986). The outcomes of the Savings and Loan Crisis made it apparent that deposit insurance could lead to moral hazard as described in McCulloch (1986) and Calomiris (1989) because flat-rate insurance allows banks to privatize the gains from holding risky assets while the losses are shared with the deposit insurer and taxpayers.[2] The FDIC Improvement Act of 1991 enacted risk-adjusted premiums to address this problem (Benston and Kaufman, 1998), but the extent of the reduction in moral hazard is debatable, at least partially because of the possibility that other factors produce moral hazard (John et al., 1991; Chen and Mazumdar, 1994; Mishra and Urrutia, 1995).

Although an improvement, risk-rating premiums was also an insufficient reform to resolve other potential negatives of government provided deposit insurance. Deposit insurance is associated with financial reporting opacity and income smoothing (Black and Gallemore, 2016), reduced bank efficiency (Barth et al., 2013), and reduced market discipline on banks (Mondschean and Opiela, 1999; Demirguc-Kunt and Huizinga, 2004; Imai, 2006).[3] When added together, the detrimental effects of deposit insurance can lead to substantial impairments to the banking industry in a systemic fashion. The existence of deposit insurance and the size of the coverage amount

[1] See Calomiris and Jaremski (2016) for a more thorough discussion of the historical and contemporary issues related to deposit insurance.
[2] Empirical support that deposit insurance leads to moral hazard is provided by numerous studies including Grossman (1992) and Wheelock and Kumbhakar (1995). Berlin et al. (1991) provide a survey of this literature.
[3] The association between deposit insurance and reduced market discipline is not, however, universal (Martinez Peria and Schmukler, 2001).

have been linked to bank crises (Demirguc-Kunt and Detragiache, 2002; Barth et al., 2004), reduced financial growth (Cull et al., 2005), and systemic instability (Anginer et al., 2014a; Anginer et al. 2014b) in countries around the world.

The model of Cull et al. (2005) illustrates how banks have the incentive to invest at excessively high levels of risk which induces system-wide instability. Without proper regulation this can lead to a decline in the overall economic activity of a country as the risky loans default. Similarly, the model of Pennacchi (2006) contends that risk-based capital and risk-based deposit insurance premiums incentivize banks to invest in loans and off-balance sheet activities with high systematic risk. Banks can increase their insurance subsidy by investing in loans that have a high probability of default in a contracting economy and a low probability of default in an expanding economy. This leads to widespread losses when the economy declines.

The undesirable consequences of deposit insurance have prompted some authors to argue for 100% reserve banking in which the lending function and deposit accepting functions are split into separate institutions. Deposit accepting institutions would then be required to hold reserves against 100% of deposits, thereby safeguarding the deposits and nullifying the need for deposit insurance (Kareken, 1986; Merton and Bodie, 1993). John et al. (1991) suggest that deposit insurance could also be eliminated with a more dramatic progressive tax scheme. A sufficiently high tax rate would limit banks' desire for higher profits and the associated higher risk and could fix the moral hazard problem without requiring 100% reserve banking.

Many authors counter that these types of dramatic changes to the banking industry could be detrimental because they would eliminate the many advantageous effects of deposit insurance. Clearly deposit insurance can help reduce bank runs (Diamond and Dybvig, 1986), but it also

supports banks' ability to create liquidity (Diamond and Dybvig, 1986) and hedge against liquidity shocks (Pennacchi, 2006), both of which are lost in the 100% reserve banking model. Additionally, deposit insurance can be a tool to protect low-cost funding for a sovereign nation's banking system. Raising the coverage limit within a country may prevent depositors from moving deposits to a bank in another country with a higher coverage limit (Engineer et al., 2013). Likewise, Anginer et al. (2014a) find that although deposit insurance deduces systemic stability during normal economics times, it is associated with increased stability during the 2008 crisis suggesting that deposit insurance works as intended when it is most needed. Merton and Bodie (1993) contend that the most important benefit of deposit insurance is improving the efficiency of the payment system because the other functions of deposit insurance can be attained by other means. Since sellers of goods rely on banks to verify and guarantee payments from the buyers of goods, if deposit insurance did not exist sellers would have to be concerned with default by both the buyer and the bank, substantially burdening the payment system.

Privatizing deposit insurance is a possible solution that would address the negative aspects while maintaining the benefits (McCulloch, 1986; Merton and Bodie, 1993; Kane and Hendershott, 1996). Moral hazard would be reduced because privatization would allow premiums to be fairly priced based on expected losses to the insurance fund, and the industry would not be upended by significant operational changes. Partial privatization may provide benefits as well. Calomiris (1989) describes a two-tiered system in which deposit insurance is provided by the federal government, but insurance premiums are set based on bank failures at the local level. This would force banks to monitor their neighbors to make sure their neighbors are not taking on too much risk while still providing an insurance fund that is backed by tax dollars and not subject to default. A similar notion is to require banks to form coinsurance groups that would encourage monitoring

while simultaneously reducing losses to the government insurance fund (Kane and Hendershott, 1996). Additional monitoring may also be achieved by mandating some level of uninsured deposits that are long-term in nature (Diamond and Dybvig, 1986) or the use of subordinated debt (Kane and Hendershott, 1996).

We present evidence that the most recent deposit insurance reform has had benefits that were potentially unintended. Buser et al. (1981) contend that the FDIC has two roles: sell deposit insurance and regulate banks to make them safer. When the FDIC changed the assessment base it inadvertently caused non-community banks to shift their funding source towards deposits, which are generally considered safer and more desirable by regulators. By changing the pricing of their insurance product the FDIC achieved their second goal of making banks safer. Our evidence also indicates that the unfair insurance pricing in favor of 'too big to fail' (TBTF) banks noted by O'Hara and Shaw (1990) has been at least partially reversed. O'Hara and Shaw (1990) document the benefits that TBTF banks received because they were only charged premiums for their insured deposits even though all depositors had an implied guarantee because of the TBTF status. TBTF banks essentially did not pay for the entire amount of insurance coverage that they received. While TBTF banks still enjoy an implied guarantee on all deposits, we document how the new assessment base has reduced the subsidy provided to them.

Second, we highlight how the DFA deposit insurance reform affects community banks differently than non-community banks and add to the previously documented differences between the two types of banks. Hein et al. (2005) provide an in depth analysis of the uniqueness of community banks. In brief, the authors document that community banks generally do not rely heavily on non-interest income, maintain higher capital levels, are more likely to organize as

Subchapter S corporations, and rely more heavily on relationship lending. Many of these findings are reaffirmed by Lux and Green (2015) who go on to document that community banks disproportionally serve rural areas and focus on agricultural and mortgage lending, have lower default rates on residential mortgages, use less technology, are involved in the securitization market less, and are currently suffering declining market share in many loan categories. These findings are consistent with the predictions of DeYoung et al. (2004) that a shifting regulatory and technological landscape has resulted in increased competition but strategic advantages for community banks. Much of this advantage is derived from the comparative ability to use soft information that is more difficult for larger banks (Berger et al., 2005). Proficiency in relationship lending makes community banks particularly well-suited for small-business lending (Berger and Black, 2011), but it has the drawback of being costly and difficult to scale and is at least partly to blame for the documented inefficiency of community banks.[4] We provide evidence that the community bank model is now also advantageous because of the new deposit insurance pricing scheme.[5]

Finally, we add to the quantification of the costs and benefits of the mandated deposit insurance reform and contribute to the ongoing examination of the implications of the DFA. Kane (2012) argues that the DFA is overall unsuccessful because it does not adequately address the incentive conflicts, risk-taking, and implicit liability of the tax payers that characterized the 2008

[4] For example, Berger and Humphrey (1992); Bauer, Berger, and Humphrey (1993); McAllister and McManus (1993); Berger and Humphrey (1994); Elyasiani and Mehdian (1995).

[5] Hein, Koch and Nounamo (2012), provide evidence that the special assessment of 2009 expanded the assessment base disparate impacts were felt by large versus small federally insured banks. The special assessment imposed more of a burden on large banks, but Hein, et al (2012) document that the increased burden was capped by the FDIC at the time. Interestingly the DFA shift in expense increase on large banks was not capped. Additionally, it is worth mentioning that the special assessment was required because the deposit insurance fund (DIF) had been depleted, indicating insufficient FDIC resources to deal with the financial crisis.

financial crisis. Further, complying with any regulation has direct costs, such as hiring additional employees, which disproportionately affects community banks that have relatively smaller earnings to absorb the new costs (Feldman et al., 2013). The DFA is no exception as survey results indicate a majority of community banks have increased time, personnel, and resources dedicated to compliance which has caused them to reconsider their asset mix to help reduce the regulatory burden and uncertainty (Peirce et al., 2014). Concerns expressed to compliance consultants reiterate the claimed burden of the DFA on community banks (Lux and Green, 2015). Cyree (2016) confirms the asserted detrimental effects of the DFA by documenting lower ROA, lower loan productions, and increased hiring at community banks post-DFA. Fortunately, the DFA has had documented positive effects as well. Bond yield spreads for the largest banks widened after passage, implying the DFA reduced the implied bailout guarantee and increased market discipline on these banks (Balasubramnian and Cyree, 2014). Many consumers are arguably better off after DFA because the Durbin Amendment reduced the fees that large banks are permitted to charge on debit-card transactions (Mauricio, 2013). Our findings suggest the DFA has also been beneficial by reducing deposit insurance premiums for community banks and indirectly causing larger banks to shift away from market-based sources of funding that become more expensive and difficult to obtain during crises.

The remainder of the paper is organized as follows. Section 2 provides a detailed discussion of the deposit insurance reform mandated by the DFA. Section 3 details the data and methodology that we utilize. We present our findings of the relative benefits to community banks in Section 4 and the shift in funding by non-community banks in Section 5. Section 6 offers concluding remarks.

2. The DFA and Deposit Insurance Reform

Many community bankers tend to associate the DFA with the establishment of the Consumer Finance Protection Bureau, and increased compliance costs and regulatory burden. In fact, the U.S. House of Representatives' Financial Services Committee has stated that "community banks are being crushed by the Dodd-Frank Act" and anecdotal stories from the popular press paint a similar picture (Guerrera, 2013). But lost in much of the thinking has been the reform of the deposit insurance system risk assessment measure that was also part of the DFA. An implicit aim of the reform would appear to have been to effectively lower the cost of deposit insurance for community banks and shift more of that burden to other generally larger banks.[6] It would appear that the sentiment in Congress at the time of the DFA's passage was that large banks were accountable for more of the inappropriate behavior leading into the financial crisis, and were therefore more responsible for the problems stemming from the financial crisis. Regardless, the DFA explicitly suggested a significant change how individual depository institutions were to have their risk measured by the FDIC.

In an effort to hold these larger institutions more accountable, the DFA outlined a marked change in the assessment base against which premiums are determined. The pre-DFA assessment base for determining the fees an individual bank paid to the FDIC was simply a bank's total domestic deposits. As large banks were funded with proportionately less domestic deposits and proportionately more non-deposit funds not subject to FDIC premiums, it was felt that these banks were not paying their "fair share" into the deposit insurance fund (O'Hara and Shaw, 1990). As a result of this concern, Senators Tester and Hutchison offered a bipartisan amendment to the DFA

[6] Kreicher, McCauley and McGuire (2013) also examine the change in the assessment base and recognize the benefits to smaller U.S. banks. Unlike the current paper, they focus on international banking implications and examine the incidence of the change in assessment rates on managed liabilities.

that suggested the assessment base be changed to be more inclusive of bank funding sources. The DFA allowed the FDIC to determine how this amendment was to be implemented.

The FDIC formally modified the assessment base in 2011, by moving away from solely using domestic deposits as the base, to a broader system that uses banks' total liabilities, in essence all non-equity funding sources, as its improved risk assessment measure. The new assessment base was to include not only deposits, but also all non-deposit liabilities, most especially short-term wholesale funds. For most community banks, this expansion of funding sources used in the determination of the assessment base did not amount to a significant increase in their own individual assessment base because community banks generally do not rely on non-deposit liabilities to any great extent, in the aggregate, as shown in Figure 1. However, large, non-community banks, again in the aggregate, have significant non-deposit liabilities on their balance sheet. These non-deposit liability funding sources, against which no fees were levied under the old deposit insurance base calculation, were included items in the determination of the new assessment base in the deposit insurance reform. Most non-community banks, and thus the banking system as a whole, saw the assessment base grow substantially in dollar magnitude. We estimate that the assessment base grew for all insured U.S. banks by almost $4 trillion as a result of this reform and the vast majority of this increase occurred in banks other than community banks.

If the only thing that changed with the DFA was an expansion in the size of the assessment base for the banking system, and the old assessment rates remained in place, then the FDIC would have increased their revenue generation tremendously. In other words, if the assessment rates used to determine FDIC fees remained unchanged, then the expanded assessment base would have generated significant additional revenues for the FDIC. However, the DFA stipulated that no

increased revenue generation should result from the expansion in the new assessment base. This necessitated a reduction in assessment rates, coincident with the expansion in the assessment base. As such, the FDIC in 2011 proposed, along with their newly defined assessment base, a new structure of lower assessment rates.

Combining the effects of the changes in the assessment base and the assessment rate suggests that most community banks were expected to see a decrease in the actual dollar amount of such fees because the product of their relatively unchanged assessment base multiplied by a lower assessment rate should result in a reduced fee. Moreover, if community banks are paying lower FDIC fees, and the total revenues are roughly constant, then non-community banks should see their relative dollar payments to the FDIC increase. This appears to be the objective of this reform as the commentary in Congress at the time suggests.

While the objective of deposit insurance reform imbedded in the DFA would appear to be a relative shift in the burden of deposit insurance from community banks to larger banks, there are a number of vagaries in evaluating the ability to achieve this objective. For example, was this relative burden anticipated to be shifted temporarily or was the shift anticipated to be permanent in nature? Moreover, was the increased burden supposed to fall mainly on the "Too Big to Fail" (TBTF) banks or to fall on all non-community banks equally? Our empirical investigation below tries to shed light on these questions.

3. Data and Methodology

3.1. Identifying community banks

The basic data we use in our study comes from the FDIC and includes data on all FDIC insured banks and savings institutions. In particular, we use individual bank call report data that provides the amount of domestic deposits individual banks have over time, as well as the bank's other non-deposit liabilities, which we aggregate for our macro analysis. We have this data for the period beginning in the second quarter of 2011 through the second quarter of 2015. This data allows us to determine the assessment base for each bank under both the old assessment base definition, as well as the new assessment base definition.

Our analysis, by making assumptions about assessment rates applied to the given assessment base measure, aims to compare and contrast community banks with other larger banks with regard to the deposit insurance reform enacted by the FDIC in response to the DFA. At this point, there is no universally accepted means of distinguishing community banks from other banks. While it is generally agreed that community banks have different business models than larger commercial banks, most academic studies simply use some variation of total bank asset size as the differentiating factor in identifying community banks. In such studies banks below a certain asset threshold are classified as community banks and those above that limit are non-community banks. Unfortunately, even here there is no standard threshold for asset size, with some early research using an asset limit as small as $100 million and more recent research using an asset limit as large as $10 billion. The inconsistency makes comparisons and generalizations across community bank studies problematic. Moreover, the underlying assumption in these studies that asset size by itself is sufficient to characterize alternative business models is questionable.

Fortunately, beginning in 2012, the FDIC has markedly improved the identification of community versus non-community banks. We see ourselves starting a tradition of using this process to distinguish community banks from other banks, which will make comparing across studies easier. The FDIC methodology involves a more sophisticated understanding of the aspects of the business models that make community banks unique, over and above simply considering asset size, as they screen banks based on other aspects, going far beyond asset size alone. The resultant classification is published as part of the FDIC Community Bank Study Reference Data. In our subsequent empirical work, we combine our basic data of quarterly call report measures of individual bank funding sources, with the FDIC identifier that identifies community banks and non-community banks.

Our objective is to analyze how the DFA changed the deposit insurance fees paid respectively by community banks and non-community banks in the aggregate for each classification, given the universe of all FDIC-insured banks.[7] We first estimate deposit insurance fees paid by both community banks and non-community banks immediately after the DFA, and compare these fees to our stylized estimate of what the fees would have been without the change in the assessment base and rates.

3.2. Assessment rates structure: old and new

Table 1 provides detail on the assessment rates structure under the old deposit assessment base system, pre-DFA. The table highlights the fact that the exact formula for the determination of the fees paid by a bank was risk-based, with riskier banks being assessed higher deposit insurance fees. The structure was also complex in other ways. Adjustments were made based on

[7] Whalen (2011) provides an estimate of the change in individual assessment bases of the ten largest U.S. commercial banks.

various preferred types of debt versus less preferred types of funding. The system penalized certain funding sources, like secured liabilities and brokered deposits and favored unsecured debt items. In our analysis below we ignore these finer adjustments, and assume that a bank's deposit insurance was solely determined by deposit liabilities and all banks had the same level of risk.

In contrast to the old assessment rates, Table 2 provides the assessment rates structure under the new, broader assessment base system. The table again shows the risk-based determination of assessment rates as well as a new distinct treatment for "large and highly complex financial institutions".[8] In addition to the CAMELS score, adjustments are now made to the assessment rate based on six to twelve financial variables depending on the size and complexity of the bank.[9] For example, the fee determination may include various sources of leverage, liquidity levels, asset quality, potential losses, and trading revenue volatility depending on the size of the bank. We continue to ignore these finer adjustments in our analysis and assume all banks had the same level of risk.

Comparing the two tables, one observes that the assessment rates in Table 2 are generally much smaller than in Table 1. This is consistent with the reasoning provided in Section 2. In particular, if the assessment base is increased by including new funding items, then assessment rates must be decreased to prevent the revenues to the FDIC from increasing. Using the averages for the ranges of assessment rates as a benchmark, one generally observes that the less risky banks were given relatively larger reductions in assessment rates than risky banks.

[8] It is appropriate here to point out that our non-community bank identifier includes all these large and highly complex financial institutions.
[9] See https://www.fdic.gov/deposit/insurance/calculator.html for a more detailed discussion.

3.3. Assessment bases and assessment rates: old and new a stylized comparison

Table 3 provides our estimates of the aggregate bank assessment base. We abstract from the finer distinctions of funding sources in Tables 1 and 2 and measure the old assessment base as simply a bank's total deposits and view the new assessment base as a bank's "total liabilities". Using the FDIC identifier for "community banks", and labeling all other banks as "non-community banks", Table 3 enumerates both the new assessment base, and our counterfactual estimate of the old assessment base on a quarterly basis, as determined by individual balance sheet information on each bank. In addition to respective estimates of aggregate assessment bases for community and non-community banks, we sum these groups together to provide estimates for all FDIC insured banks. In all cases, the new assessment base is larger by construction as it is inclusive of all items in the old assessment base plus other non-deposit liabilities. However, as suggested above, we call attention to the fact that the relative increase in the assessment base size is proportionately larger for non-community banks in moving to the new assessment base. For example, in June 2011 the new assessment base is 55% larger for non-community banks, but only 9% larger for community banks. As a whole, the data presented in Table 3 confirms that community banks had a far greater proportion of funding provided by deposits than non-community banks, and non-community banks used more wholesale funding sources (non-deposit liabilities) that previously escaped deposit insurance charges.

We address the impact of the FDIC assessment base change by constructing stylized measures of assessment premiums, as actual premiums are not publicly available. Our stylized model builds on the broad funding sources of the banks, but totally abstracts from any change in bank risk profile. We start with the recognition that under the old assessment base system, the aggregate premiums paid we determined by aggregate domestic deposits, *DD*, at that time. Our

stylized model assumes that there exists a known effective assessment rate, α, which is used to determine aggregate deposit insurance premiums, such that aggregate premiums under the old deposit insurance are given by $\alpha * DD_t$. Similarly, we assume that under the new reformed assessment base, aggregate total liabilities, *TL*, are used to determine aggregate deposit insurance premiums, with an unknown assessment rate of β. Finally by assuming that the intent of the reform does not generate any change in the amount of deposit insurance premiums in the aggregate, we have:

$$Total\ Deposit\ Insurance\ Premiums_t = \alpha * DD_t = \beta * TL_t$$

Using this right hand equality, we take the effective assessment rate, the aggregate domestic deposits, and the aggregate total liabilities for all FDIC insured banks immediately prior to the reform and estimate a new effective assessment rate as:

$$New\ Assessment\ Rate\ (\beta)_t = \frac{DD_t * \alpha}{TL_t}$$

4. Estimating the Initial Benefit to All Community Banks

As shown in Table 3 in June 2011, there were $8,230 billion in domestic deposits within all insured banks, both community banks and non-community banks. Under our stylized model, this would represent the aggregate assessment base under the old, pre-DFA, measure. We compare this number with the new assessment base using the FDIC's measure of total liabilities, for June 2011, the date of the switch in assessment measures. Aggregate non-equity funding sources are found to be a much larger amount of $12,000 billion. In other words, for all insured banks the new

assessment base was 46.2% larger than the old assessment base, and the ratio of aggregate deposits to total liabilities for the system as a whole was about 68.4%. This latter ratio tells us that the new assessment rate, β, should be roughly 68.4% of the old assessment rate, α, to maintain the same revenue generation for the FDIC.

Based on this reference point, we conclude that banks that had more than 68.4% of their total liabilities funded by deposits would have seen a reduction in their FDIC fees, while those institutions with less than 68.4% would have seen an increase in fees. In other words, banks that had a ratio of deposits to total liabilities in excess of 68.4% benefitted from the DFA deposit insurance change, and those with a lower deposits to total liability ratio were made worse off by the deposit insurance reform. As discussed in Section 3.3, individual community banks that had a deposits to total liabilities ratio greater than 68.4% when the new measure was implemented were benefitted from the reform. Non-community banks, particularly the stress tested banks, which had a deposits to total liabilities ratio less than 68.4% would have been made worse off by the reform by our estimation.

We next take this estimate from our "breakeven" analysis and attempt to quantify the dollar magnitude of community banks savings. In this exercise we remind readers that we abstract from much of the complexity of the current fee determination system. For example, we ignore all adjustments to the initial base determination, including the added elements associated with brokered deposits, unsecured debt, the newly added category of "large and highly complex institutions," and we assume the risk classification of all banks is accurate and stable over time. As such, our approach does not provide a useful approximation of the overall premiums paid to the FDIC, but it is a useful starting point to assess relative winners and losers as a result of the

reform. We assume all banks had a 4.43 quarterly basis point assessment rate, which is calculated from the "effective annual assessment rate" of 17.72 as provided by the FDIC for 2010. Our breakeven estimate assumes that the new quarterly assessment rate would now be approximately 3.03 basis points, or approximately 68.4% of the old assessment rate.

We offer these basis point references to banks as a means of gaining ballpark estimates of how the deposit insurance reform in DFA impacted particular institutions. While all banks know what they paid under the new system beginning in the second quarter of 2011, they do not know exactly what would have paid without reform. The simple arithmetic we suggest for estimating the annual fee paid under the old system is to multiply the 4.43 quarterly basis point assessment rate times the deposits in June 2011. This estimated FDIC fee can then be compared to the annual fee under the new system. With our breakeven analysis, banks would find their comparable current fees by simply multiplying by 0.000303 or 3.03 basis points (0.684*4.43 basis points) assessment rate times their total liabilities in June 2011. The difference in these two estimates then provides a ballpark estimate of savings due to the reform.

To illustrate the simple math and derive our estimate of aggregate community banks' savings from the DFA reform, we use the aggregate banking statistics taken from the FDIC for all insured banks. As shown in Table 4, assuming a 4.43 basis point quarterly premium charge against domestic deposits based on levels in June 2011, non-community banks in aggregate would have paid approximately $2,941 million dollars a quarter for FDIC fees. The same quarter, community banks in aggregate would have paid $704 million. These numbers then represent the pre-DFA fee structure.

We assume all banks pay an assessment rate of 3.03 quarterly basis points on total liabilities for their June 2011 holdings to calculate the post-DFA fee charges. The comparative static analysis suggests that non-community banks would have paid $3,122 million a quarter and community banks would have paid only $522 million a quarter. In other words, we estimate that community banks fees were reduced by approximately $182 million for June 2011. Similarly, and by construction, the non-community banks would have seen their premiums increased by a $182 million in June 2011.[10] To put the community bank reduced fees in a broader context, we annualize the gain for community banks ($728 million) and estimate that the aggregate return on equity (ROE) for community banks would have been almost 50 basis points lower if the pre-DFA assessment scheme has remained in place, 4.40% versus 4.98% for the year following the change in assessment base in 2011.

5. A Longer-Term Look: The Incentive to Change Behavior

Of course, this estimation of the gain for payments associated with June 2011 is a static one. Importantly, this estimate ignores any impact of the reform on subsequent bank behavior. As outlined above the deposit insurance reform markedly changed not only the measurement of bank risk, but also the relative pricing of alternative funding sources. We argue that one can view that prior to the reform, domestic deposits were levied a premium of approximately 4.43 basis points a quarter, while non-deposit, non-equity funding sources had no premiums levied against them. After the reform, our stylized characterization of the reform suggests the quarterly levy on deposit funding sources would have fallen to 3.03 basis points. On the other hand, non-deposit, non-equity funding sources effectively had their levy go from zero to the same 3.03 basis points. We

[10]The dollar differences do not perfectly negate each other due to a rounding error.

hypothesize that this change in relative pricing was likely to influence bank behavior as it relates to alternative funding sources, with banks generally seeking to replace non-deposit funding sources with deposits. Moreover, to the extent that community banks generally use few non-deposit funding sources, we anticipate that such banks will have less room to change behavior relative to non-community banks that had significant amounts of wholesale non-deposit funding prior to the reform.

In order to examine the impact of changed behavior we extrapolate premiums beyond June 2011, using the actual behavior of community and non-community banks' use of domestic deposits and total liabilities respectively. Using the same relative assessment rates as outlined above for the pre- and post-DFA deposit insurance schemes, we estimate the quarterly premiums paid from June 2011 through December 2015. Table 4 provides our estimates of the aggregate fees for community banks, non-community banks, and all FDIC insured banks. Here we use the actual path of deposits and non-deposit, non-equity funding sources for all community banks and for all non-community banks. In other words, we allow banks to change their relative funding sources over time and we extend our comparison of aggregate fees paid for the stylized pre-DFA system to the post-DFA system.

On average, community banks appear to have reduced fees by approximately $190 million a quarter as a result of the redefinition of the assessment base. This would suggest a "savings," measured by the difference between the pre- and post- DFA fees, to be well in excess of $3.7 billion over our sample period. The DFA deposit insurance reform was a gift to community banks that continues giving. The fairly consistent reduction in quarterly fees for community banks in Table 4 illustrates the generally consistent funding pattern for community banks, as they continued

to rely primarily on domestic deposits throughout the whole five year period. Since community banks generally funded most of their assets with such deposits, there was not much room for them to cut back non-deposit funding in an effort to reap further reduced fees. Still, as expected community banks in the aggregate did see some slight increase in their use of deposits, resulting in a slightly increasing gain from the reform over time.

In contrast to the stability of relative funding sources observed for community banks, non-community banks show a markedly different response to the reform. Our estimate of the June 2011 reduced FDIC fees for community banks is, by construction, closely matched by increased FDIC fees for non-community banks. But, as Table 4 shows this increased deposit insurance expense for non-community banks was quickly reduced over time, eventually turning to a decreased expense relative to what it would have been. This reduction occurred as non-community banks shifted their funding profile to avoid the new, relatively expensive non-deposit liabilities. Rather, non-community banks attempted to mimic community banks to some extent by relying relatively more on domestic deposits.

The evidence in Table 4 shows that one year after implementation, non-community banks had shifted their funding from the now more expensive non-deposit sources to the now cheaper domestic deposits, so they were paying total fees approximately equal to what they would have paid under the earlier fee determination scheme. Beginning in the second half of 2012, non-community banks are also estimated to have savings from the reform, just as community banks experienced. We see this evidence as consistent with a potential unintended consequence of the DFA deposit insurance reform. Figure 2 provides a graphic summary of the impact of the DFA reform by looking at the deposit insurance expense of community banks relative to their non-

community bank brethren. Community banks received relative benefits by the change in the assessment base and respective assessment rates. However, the figure does show that they would have been made better off over time even under the old assessment calculation, as non-community banks increased their reliance on deposits as a funding source.

The deposit insurance reform appears to have caused the FDIC to lose fees over time, as both community and non-community banks experience savings in FDIC fees relative to what they would have paid pre- reform. One downside of the reform would appear to be that the Deposit Insurance Fund (DIF) has not been built up as rapidly as it might have been. Indeed, Table 4 suggests that the FDIC would have raised almost $6 billion more from total bank fees if the DFA reform had not been implemented. We caution that our crude estimation in this area likely contain error, especially for non-community banks, since we have not considered the new classification category "large and complex institutions," the various risk categories, and the dynamic nature of the risk categories. Moreover, we are here assuming that the observed pattern of funding sources post the assessment base and rate change would have been exactly the same without the change, which is contrary to thought that the change encouraged behavioral changes by banks.

Still, we find the stylized evidence highly suggestive that community banks were made better off by the reform, and that non-community banks changed their relative funding sources to take advantage of the newly reduced fee levied against domestic deposits, also making them better off. An interesting question for future research would be to determine how much of the changed funding profile for non-community banks is driven by the relative pricing change implemented with the reform and how much of it could be directly associated with the Federal Reserve's quantitative easing program, for example. In addition, more study needs to be devoted to better

understanding the manner in which non-community banks were able to increase the relative use of deposits as a funding source.

6. An Examination of Stress Test Banks

Our examination has not distinguished non-community banks to any extent. However, our review of the deposit insurance and banking literature highlights the importance of Too Big to Fail (TBTF) or systemically important banks, suggesting that not all non-community banks are necessarily homogeneous. In this section, we seek to shed further light on the impact that the deposit insurance reform had on the very largest U.S. banks versus other non-community banks.[11] We employ the distinction initially imposed by U.S. regulators with regard to imposing the original stress tests, as our means of identifying TBTF banks. Regulators chose to subject nineteen different banks, the largest in the U.S., to stress tests in 2009 while allowing all other banks to avoid such considerations. Using these nineteen stress-tested banks as our proxy for TBTF banks, we break our sample of non-community banks into two separate groups, the non-community, stress tested banks and the non-community banks, that were not stress tested.

Table 5 shows the respective assessment bases for our three groups of bank. We list the assessment base under the old system, essentially domestic deposits, as compared to the new assessment base, essentially all non-equity funding sources for the three groups, as well as for all U.S. insured banks. By definition the new assessment base is relatively larger than the old assessment base for all groups. However, the extent of the increased assessment base is seen to be

[11] It should be noted that the 2011 assessment measure change also introduced for the first time the category of large and highly complex institutions, as seen in Table 2. Our crude simulations do not incorporate this change. As such, we do not hold up are estimates of deposit insurance premium assessments as highly realistic. Still, the evidence we provide in this section does illustrate very different changes in funding behavior of non-community banks along the lines of distinguishing the very largest from the rest.

the largest for the stress tested banks (73% larger), next the non-community non-stress tested banks (24% larger), and finally the community banks (9% larger). Figure 3 confirms visually that the non-stress test, non-community banks have funding that more similarly matches that of community banks, as opposed to the stress test TBTF banks.

Table 6 then estimates the respective FDIC premiums for the three aggregate banking groups based on the realized assessment bases in Table 5. Once again, the estimated premiums for the old, pre-DFA scheme assumes a quarterly assessment rate of 4.43 basis points applied to the old assessment base. The estimated premiums for the new, post-DFA scheme assumes a quarterly assessment rate of 3.03 basis points applied to the new assessment base. Interestingly, this comparison shows that not all non-community banks are the same. Most importantly, the table shows that the stress test non-community banks paid more in deposit insurance premiums after the reform up to the very last quarter in our sample period. On the other hand, the non-stress tested banks, like the community banks, saw reduced premiums from the reform from the very beginning. In fact, we estimate that these banks saved more than community banks by the reform for the full sample period, $4.381 billion versus $ 3.672 billion.

7. Conclusion and Discussion

Community banking advocates have focused on the negative consequences of the DFA, while ignoring the benefit provided by the deposit insurance reform. By lowering the assessment rate applied against deposits, the DFA greatly benefitted community banks in the aggregate, as apparently intended by many in Congress. We estimate that community banks benefitted by more than $3.672 billion in deposit insurance fee reductions since 2011. While we do not suggest that the DFA, on net, has been beneficial to community banks, we do think it is wrong to completely

ignore the beneficial aspects of the federal deposit insurance reform. The negative consequences that DFA has imposed on community banks, especially in the form of increased compliance costs, cannot be ignored, but it is equally wrong not to acknowledge the benefits. Specifically, community banks and their advocates need to recognize that indeed Dodd-Frank attempted to do something to allow them to be more profitable, in comparison to large banks.

However, our admittedly crude attempt to quantify the gains and losses from the Dodd-Frank deposit insurance reform suggests that non-community banks were not as big of losers from the reform as it initially might have been assumed. Rather, we find compelling evidence that non-community banks adjusted their behavior to take advantage of the new relative pricing scheme for alternative funding sources. This action lessened the pain associated with expanding the assessment base for such financial institutions. As such, our evidence is suggestive that it is wrong to think that all regulatory reform is a zero-sum game, as the smaller non-community banks were also soon able to experience deposit insurance premium gains from the reform. The very largest banks in the country, as determined by the original nineteen stress-tested banks, generally paid more for deposit insurance than they would have without the reform. Their shifting to the relatively cheaper deposit funding over time did not result in lower premiums until the fourth quarter 2015.

Whether or not the DFA deposit insurance reform moved toward a more optimal structure of deposit insurance pricing would appear to hinge on the risk imposed by the respective funding sources in a future financial crisis and is a matter we leave for future research. To the extent that one believes that deposits represent a safer source of bank funding in contrast to non-deposit liabilities, it would appear that the DFA reform can be viewed in the aggregate as making the U.S. banking system safer.

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Figure 1: Bank Domestic Deposits to Liabilities Ratio

This figures details the ratio of total domestic deposits divided by total liabilities for FDIC insured banks separated into community and non-community banks. The graph is a time series by bank quarters. The solid line represents the ratio for community banks. The dotted line represents the ratio for non-community banks.

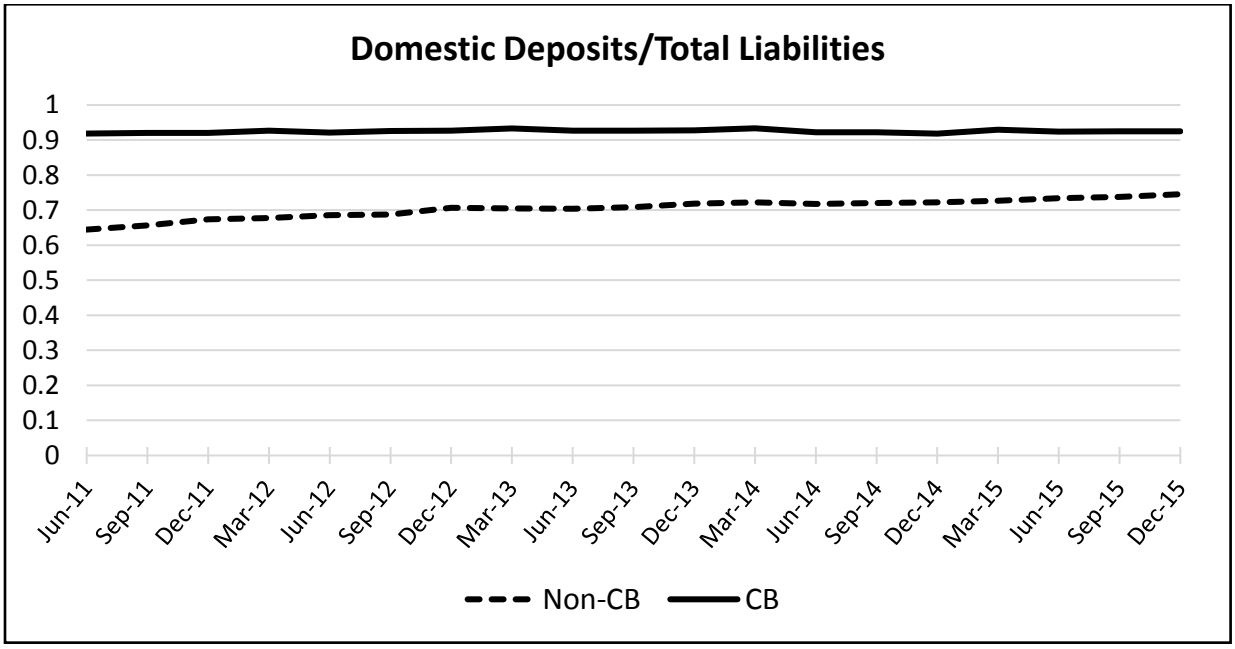

Figure 2: FDIC Premiums for Community versus Non-Community Banks

This figure details the ratio of total estimated FDIC premiums paid by community banks divided by total estimated FDIC premiums paid by non-community banks. The graph is a time series by bank quarters. The solid line represents the ratio under the old, pre-DFA system. The dotted line represents the ratio under the new, post-DFA system in place since 2011.

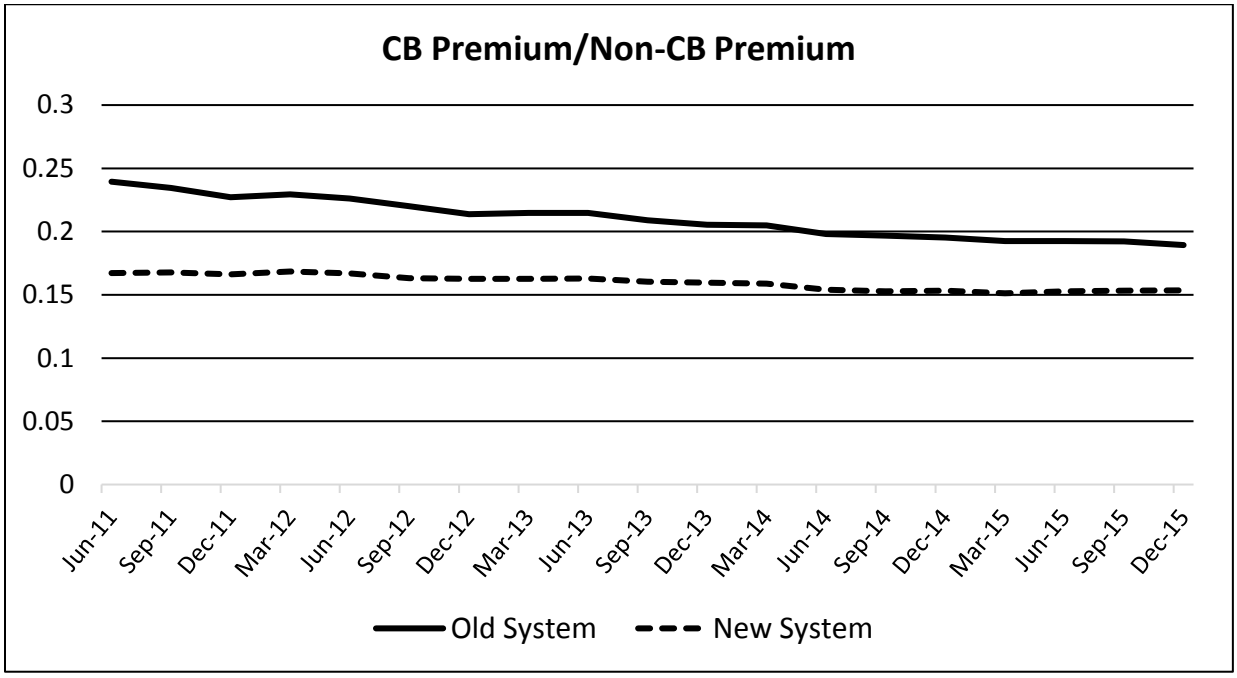

Figure 3: Bank Domestic Deposits to Liabilities Ratio with TBTF Banks

This figures details the ratio of total domestic deposits divided by total liabilities for FDIC insured banks separated into stress tested, non-community, non-stress tested, and community banks. The graph is a time series by bank quarters. The solid line shows the ratio for community banks. The dotted line shows the ratio for non-community, non-stress tested banks. The dashed line shows the ratio for the stress tested banks.

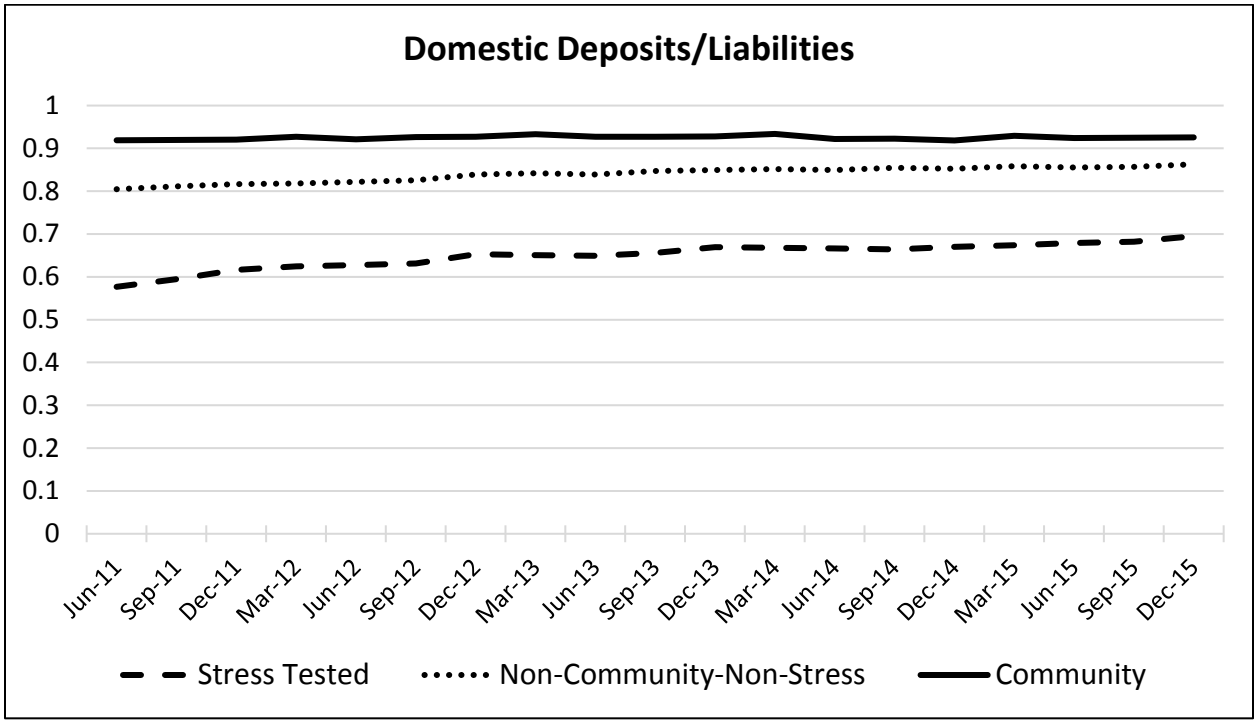

Table 1: Assessment Rates Effective April 2009 to March 2011
Panel A contains the assessment rate schedule effective April 1, 2009 which uses domestic deposits as the assessment base. Rates are obtained from: https://www.fdic.gov/news/news/financial/2009/fil09012.html. Panel B contains the definitions of the risk categories which are available from: https://www.fdic.gov/deposit/insurance/assessments/priorperiod.html.

Panel A: Assessment Rates				
	Risk Category I	Risk Category II	Risk Category III	Risk Category IV
Initial Base Assessment Rate	12 to 16	22	32	45
Unsecured Debt Adjustment	-5 to 0	-5 to 0	-5 to 0	-5 to 0
Secured Liability Adjustment	0 to 8	0 to 11	0 to 16	0 to 22.5
Brokered Deposit Adjustment	N/A	0 to 10	0 to 10	0 to 10
Total Base Assessment Rate	7 to 24.0	17 to 43.0	27 to 58.0	40 to 77.5

Panel B: Risk Category Definitions	
Risk Category I -	Well Capitalized with generally a CAMELS composite of 1 or 2
Risk Category II -	Well Capitalized with generally a CAMELS composite of 3; or Adequately Capitalized with generally a CAMELS composite of 1, 2, or 3
Risk Category III -	Well or Adequately Capitalized with generally a CAMELS composite of 4 or 5; or Under Capitalized with generally a CAMELS composite of 1, 2, or 3
Risk Category IV -	Under Capitalized with generally a CAMELS composite of 4 or 5

Table 2: Assessment Rates Effective April 2011

Below is the assessment rate schedule effective April 2011 which uses total liabilities as the assessment base. Rates are obtained from: https://www.fdic.gov/deposit/insurance/assessments/risk.html. Total base assessment rates do not include the depository institution debt adjustment. The unsecured debt adjustment cannot exceed the lesser of 5 basis points or 50 percent of an insured depository institution's initial base assessment rate; thus for example, an insured depository institution with an initial base assessment rate of 5 basis points will have a maximum unsecured debt adjustment of 2.5 basis points and cannot have a total base assessment rate lower than 2.5 basis points.

	Risk Category I	Risk Category II	Risk Category III	Risk Category IV	Large and Highly Complex Institutions
Initial Base Assessment Rate	5 to 9	14	23	35	5 to 35
Unsecured Debt Adjustment	-4.5 to 0	-5 to 0	-5 to 0	-5 to 0	-5 to 0
Brokered Deposit Adjustment (added)	N/A	0 to 10	0 to 10	0 to 10	0 to 10
Total Base Assessment Rate	2.5to 9	9 to 24	18 to 33	30 to 45	2.5 to 45

Table 3: **Estimated Aggregate Assessment Bases Pre- and Post- DFA Reform**

This table shows the total FDIC assessment base ($ Millions) by quarters for non-community banks, community banks, and all banks. The *Old System* estimates the assessment base using the total domestic deposits for each bank. This provides the counterfactual estimate of what the assessment base would have been if the old domestic deposit measure was used. The *New System* estimates the assessment base using the total liabilities of each bank. This provides our estimate of the assessment base post-DFA. Total liabilities include all deposits (including foreign held deposits), other borrowings, subordinated notes and debentures, limited-life preferred stock and related surplus, trading account liabilities and mortgage indebtedness. Columns (1) & (2) show the assessment based for non-community banks under the old system (1) and the new system (2). Columns (3) and (4) show the assessment base for community banks under the old system (3) and the new system (4). Columns (5) and (6) show the total FDIC assessment base under the old system (5) and the new system (6).

	Non-Community		Community		All Banks	
	Old System	New System	Old System	New System	Old System	New System
	(1)	(2)	(3)	(4)	(5)	(6)
Jun-11	6,640,000	10,300,000	1,590,000	1,730,000	8,230,000	12,000,000
Sep-11	6,890,000	10,500,000	1,620,000	1,760,000	8,510,000	12,200,000
Dec-11	7,140,000	10,600,000	1,620,000	1,760,000	8,760,000	12,300,000
Mar-12	7,180,000	10,600,000	1,650,000	1,780,000	8,830,000	12,300,000
Jun-12	7,270,000	10,600,000	1,640,000	1,780,000	8,910,000	12,400,000
Sep-12	7,430,000	10,800,000	1,630,000	1,760,000	9,060,000	12,600,000
Dec-12	7,780,000	11,000,000	1,660,000	1,790,000	9,450,000	12,800,000
Mar-13	7,760,000	11,000,000	1,670,000	1,790,000	9,430,000	12,800,000
Jun-13	7,740,000	11,000,000	1,660,000	1,790,000	9,400,000	12,800,000
Sep-13	7,940,000	11,200,000	1,660,000	1,790,000	9,600,000	13,000,000
Dec-13	8,120,000	11,300,000	1,670,000	1,800,000	9,790,000	13,100,000
Mar-14	8,240,000	11,400,000	1,690,000	1,810,000	9,920,000	13,200,000
Jun-14	8,400,000	11,700,000	1,660,000	1,800,000	10,100,000	13,500,000
Sep-14	8,500,000	11,800,000	1,670,000	1,810,000	10,200,000	13,600,000
Dec-14	8,670,000	12,000,000	1,690,000	1,840,000	10,400,000	13,800,000
Mar-15	8,870,000	12,200,000	1,710,000	1,840,000	10,600,000	14,000,000
Jun-15	8,880,000	12,100,000	1,710,000	1,850,000	10,600,000	14,000,000
Sep-15	8,930,000	12,100,000	1,720,000	1,860,000	10,600,000	14,000,000
Dec-15	9,170,000	12,300,000	1,740,000	1,880,000	10,900,000	14,200,000

Table 4: **Estimated Aggregate Premiums Pre- and Post- DFA Reform**

This table shows the total FDIC premiums paid ($ Thousands) by quarter for non-community banks, community banks, and all banks. The *Old System* represents the premiums banks would have paid assuming the same system was maintained, at the lowest FDIC insurance assessment a bank could pay, 7 basis points. This *Old System* was replaced on April 1, 2011. After that date the FDIC switched to the *New System.* Columns (1) and (2) show the total FDIC premiums paid for non-community banks under the old system (1) and the new system (2). Columns (3) and (4) show the total FDIC premiums paid for community banks under the old system (3) and the new system (4). Columns (5) and (6) show the total FDIC premiums paid under the old system (5) and the new system (6).

	Non-Community		Community		All Banks	
	Old System	New System	Old System	New System	Old System	New System
	(1)	(2)	(3)	(4)	(5)	(6)
Jun-11	2,940,049	3,122,206	703,921	522,126	3,643,970	3,644,332
Sep-11	3,052,266	3,169,013	715,585	531,622	3,767,851	3,700,635
Dec-11	3,161,900	3,196,146	717,829	531,319	3,879,729	3,727,465
Mar-12	3,180,330	3,194,421	729,446	537,972	3,909,776	3,732,393
Jun-12	3,220,461	3,220,700	728,321	537,435	3,948,783	3,758,135
Sep-12	3,289,677	3,273,188	723,997	533,804	4,013,674	3,806,991
Dec-12	3,448,161	3,336,079	736,854	542,338	4,185,015	3,878,417
Mar-13	3,437,624	3,325,880	738,379	540,722	4,176,003	3,866,602
Jun-13	3,426,629	3,325,937	735,589	541,989	4,162,218	3,867,926
Sep-13	3,518,430	3,380,676	734,754	541,677	4,253,184	3,922,353
Dec-13	3,598,737	3,410,915	738,689	544,751	4,337,426	3,955,666
Mar-14	3,648,447	3,453,353	747,033	548,338	4,395,480	4,001,691
Jun-14	3,719,556	3,527,123	736,456	543,538	4,456,013	4,070,661
Sep-14	3,765,725	3,574,440	740,781	546,207	4,506,506	4,120,648
Dec-14	3,842,829	3,623,182	750,164	555,153	4,592,994	4,178,334
Mar-15	3,929,362	3,680,483	756,739	556,462	4,686,101	4,236,945
Jun-15	3,933,047	3,667,943	756,727	560,287	4,689,775	4,228,230
Sep-15	3,956,923	3,673,367	760,628	562,552	4,717,550	4,235,919
Dec-15	4,061,894	3,715,397	769,006	569,983	4,830,900	4,285,380

Table 5: **Estimated Aggregate Assessment Base Pre- and Post- DFA Reform with TBTF Banks**

This table shows the total FDIC assessment base ($ Millions) by quarter for both stress-tested banks and non-community-non-stress tested banks. The *Old System* estimates the assessment base using the total domestic deposits for each bank. This provides the counterfactual estimate of what the assessment base would have been if the old domestic deposit measure was used. The *New System* estimates the assessment base using the total liabilities of each bank. This provides our estimate of the assessment base post-DFA. Total liabilities include all deposits (including foreign held deposits), other borrowings, subordinated notes and debentures, limited-life preferred stock and related surplus, trading account liabilities and mortgage indebtedness. Columns (1) and (2) show the assessment based for stress-tested banks under the old system (1) and the new system (2). Columns (3) and (4) show the assessment base for non-community-non-stress tested banks under the old system (3) and the new system (4).

	Stress Tested		Non-Community-Non-Stress	
	Old System	New System	Old System	New System
	(1)	(2)	(3)	(4)
Jun-11	4,210,000	7,300,000	2,430,000	3,020,000
Sep-11	4,410,000	7,420,000	2,490,000	3,070,000
Dec-11	4,600,000	7,460,000	2,540,000	3,110,000
Mar-12	4,710,000	7,540,000	2,470,000	3,020,000
Jun-12	4,780,000	7,620,000	2,490,000	3,030,000
Sep-12	4,880,000	7,730,000	2,550,000	3,090,000
Dec-12	5,140,000	7,870,000	2,650,000	3,160,000
Mar-13	5,100,000	7,840,000	2,660,000	3,160,000
Jun-13	5,090,000	7,840,000	2,650,000	3,160,000
Sep-13	5,230,000	7,970,000	2,710,000	3,200,000
Dec-13	5,370,000	8,020,000	2,760,000	3,250,000
Mar-14	5,410,000	8,100,000	2,820,000	3,310,000
Jun-14	5,510,000	8,270,000	2,880,000	3,390,000
Sep-14	5,560,000	8,370,000	2,940,000	3,440,000
Dec-14	5,660,000	8,450,000	3,010,000	3,530,000
Mar-15	5,770,000	8,560,000	3,100,000	3,610,000
Jun-15	5,750,000	8,470,000	3,130,000	3,660,000
Sep-15	5,750,000	8,430,000	3,180,000	3,710,000
Dec-15	5,900,000	8,490,000	3,270,000	3,790,000

Table 6: **Estimated Aggregate Premiums Pre- and Post- DFA Reform with TBTF Banks**

This table shows the total FDIC premiums paid ($ Thousands) by quarter for both stress-tested banks and non-community-non-stress tested banks. The *Old System* represents the premiums banks would have paid assuming the same system was maintained, at the lowest FDIC insurance assessment a bank could pay, 7 basis points. This *Old System* was replaced on April 1, 2011. After that date the FDIC switched to the *New System*. Columns (1) and (2) show the FDIC premiums for stress-tested banks under the old system (1) and the new system (2). Columns (3) and (4) show the premiums for non-community, non-stress tested banks under the old system (3) and the new system (4).

	Stress Tested		Non-Community-Non-Stress	
	Old System	New System	Old System	New System
	(1)	(2)	(3)	(4)
Jun-11	1,864,989	2,208,376	1,075,060	913,830
Sep-11	1,953,813	2,246,056	1,103,187	927,905
Dec-11	2,035,931	2,255,583	1,125,969	940,564
Mar-12	2,086,411	2,279,620	1,093,919	914,801
Jun-12	2,118,296	2,304,692	1,102,165	916,008
Sep-12	2,161,856	2,337,333	1,127,822	935,855
Dec-12	2,275,626	2,381,258	1,172,536	954,821
Mar-13	2,260,727	2,370,401	1,176,896	955,479
Jun-13	2,253,304	2,371,475	1,173,324	954,462
Sep-13	2,318,841	2,412,139	1,199,588	968,537
Dec-13	2,377,102	2,426,935	1,221,635	983,980
Mar-14	2,397,234	2,450,638	1,251,213	1,002,715
Jun-14	2,442,632	2,502,752	1,276,924	1,024,371
Sep-14	2,463,952	2,533,069	1,301,774	1,041,371
Dec-14	2,507,397	2,555,151	1,335,433	1,068,031
Mar-15	2,558,123	2,588,056	1,371,239	1,092,427
Jun-15	2,547,770	2,561,195	1,385,278	1,106,749
Sep-15	2,547,148	2,550,765	1,409,775	1,122,602
Dec-15	2,612,149	2,567,750	1,449,745	1,147,646