

## Toward a Long-Term Strategy for Deposit Insurance Fund Management

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### Introduction

In response to the recent financial crisis and passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), the Federal Deposit Insurance Corporation (FDIC) has developed a comprehensive, long-range management plan for the Deposit Insurance Fund (DIF).<sup>1</sup> The plan is designed to reduce pro-cyclicality; keep assessment rates moderate, steady, and predictable throughout economic and credit cycles; and maintain a positive fund balance even during a period of large fund losses. It achieves these goals by setting an appropriate target fund size and a strategy for assessment rates and dividends. The plan covers the near term, governed by the statutory requirement that the fund reserve ratio reach 1.35 percent by 2020; the medium term, when the reserve ratio has recovered to precrisis levels; and the long term, when the reserve ratio is large enough that the fund would be able to withstand a period of fund losses similar in magnitude to that of the late 1980s and early 1990s or the current crisis.<sup>2</sup>

This article presents the FDIC analysis that informed the medium- and long-term elements of the plan. The first section describes historical changes in DIF balances, reserve ratios, and assessment rates. The second section uses historical fund loss and simulated income data from 1950 to the present to determine how high the reserve ratio would have had to have been before this period's two banking crises to have maintained both a positive fund balance and stable assessment rates throughout. The analysis demonstrates that a moderate, long-term average industry assessment rate, combined with an appropriate dividend or assessment rate reduction policy, would have prevented the fund

from becoming negative during the crises. However, the fund's reserve ratio would have had to have exceeded 2 percent before the crises began.

### A Brief History of the Deposit Insurance Fund

An examination of historical trends in the deposit insurance fund since 1935 helps illustrate the reasons for the FDIC's development of a new long-term policy for managing the fund. Twice since 1991, the fund's resources have been insufficient to handle the costs associated with large numbers of bank failures without a dramatic increase in assessment rates.<sup>3</sup> During both crises, and indeed ever since 1950, assessment rates have been pro-cyclical; that is, insured institutions have paid lower premiums during prosperous times and high premiums during times of industry distress, when they were least able to afford them. Assessment rates since the late 1980s have been volatile, rather than steady and predictable. As context for the analysis that follows, this section will review changes in the fund balance, the reserve ratio, the effective assessment rate, and the ratio of industry earnings to total assessments from 1935 to 2010.<sup>4</sup>

The banking industry remained highly regulated and few banks failed during the FDIC's first four decades, allowing the fund balance to increase steadily from 1935 through the mid-1980s (see Chart 1).<sup>5</sup> By 1946 the fund had reached \$1 billion, and by the early 1970s it had climbed to about \$5 billion. Although losses from

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<sup>1</sup> See Notice of Proposed Rulemaking on Assessment Dividends, Assessment Rates and Designated Reserve Ratio, *Federal Register* 75 (October 27, 2010), 66272, <http://www.fdic.gov/regulations/laws/federal/2010/10proposeoct27.pdf>; and FDIC Restoration Plan, *Federal Register* 75 (October 27, 2010), 66293, <http://www.fdic.gov/regulations/laws/federal/2010/10noticeoct27.pdf>.

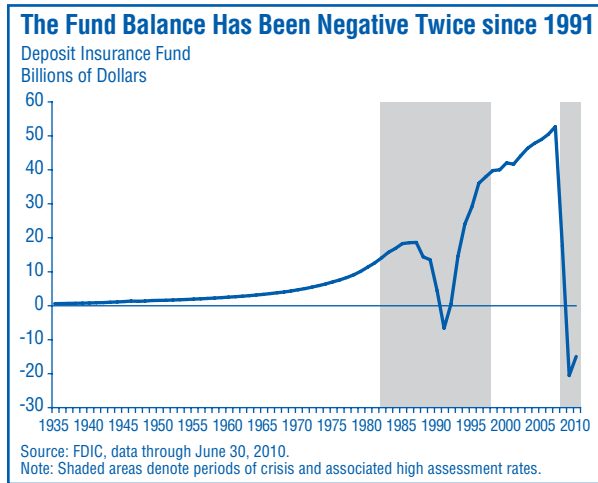
<sup>2</sup> *Ibid.* The FDIC proposes to set the designated reserve ratio (DRR) at 2 percent; maintain current assessment rates until the reserve ratio reaches 1.15 percent; and, in lieu of dividends, adopt progressively lower assessment rates when the reserve ratio reaches 1.15 percent, 2 percent, and 2.5 percent.

<sup>3</sup> For 1935 to 1988, the term "fund" refers to the FDIC's deposit insurance fund; from 1989 to 2005, the term combines the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF); from 2006 onward, the term refers to the DIF. (From 1989 to 2005, the FDIC managed two deposit insurance funds—the FDIC's deposit insurance fund, which was renamed the BIF, and the SAIF, which was created to insure thrift institutions following the savings and loan crisis. The BIF and the SAIF were merged in 2006 to form the DIF.)

<sup>4</sup> Although the FDIC began operations in 1934, it did so under a temporary insurance plan that used insured deposits (rather than adjusted total domestic deposits) as an assessment base until the passage of the Banking Act of 1935. For consistency, all historical data presented begin with year-end 1935.

<sup>5</sup> About 400 mostly small banks failed during the late 1930s and early 1940s, but very few failed until the 1980s.

Chart 1



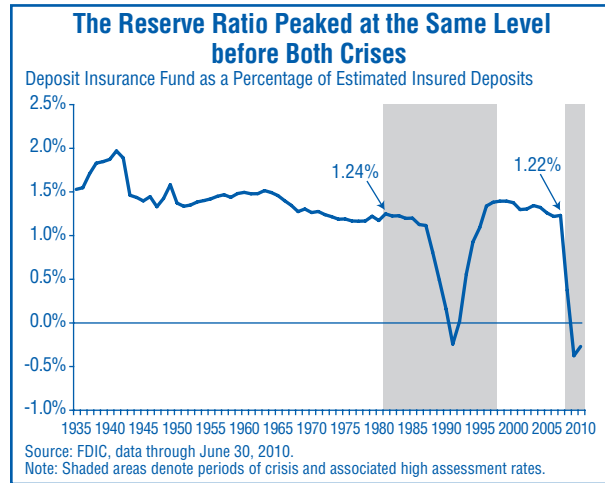
failures increased somewhat in the 1970s, the fund had grown to almost \$10 billion just before the banking crisis of the 1980s and early 1990s. The fund balance actually rose during the first half of the crisis, peaking at slightly more than \$18 billion in 1987. Increasing losses from hundreds of bank failures finally caused the fund balance to decline rapidly, to negative \$6.9 billion in 1991.<sup>6</sup> The fund rebounded swiftly, however, and the combination of dwindling failures and high assessment rates pushed it to a new high of almost \$24 billion in 1994. A one-time special assessment in 1996 further bolstered the fund's resources.<sup>7</sup> Extremely low losses for the next decade allowed the fund to grow unimpeded, despite relatively low average assessment rates, and at year-end 2007—on the eve of the current crisis—it had risen to more than \$52 billion. The current crisis, however, and the resulting large losses from 2008 onward, pushed the fund balance to a record low of negative \$20.9 billion at year-end 2009. As of June 30, 2010, the fund had recovered somewhat but was still a negative \$15.3 billion.

The reserve ratio, which compares the fund to estimated insured deposits, is both a measure of the FDIC's exposure and of fund adequacy (see Chart 2). The ratio stood at just under 2 percent as the nation entered World War II. An increase in insured deposits because of record savings rates during the war pushed down the

<sup>6</sup> More than 1,600 FDIC-insured institutions failed between 1980 and 1994.

<sup>7</sup> In 1996, to capitalize the SAIF, a special assessment mandated by the Deposit Insurance Funds Act of 1996 (DIFA) was levied on SAIF-insured deposits. See FDIC, *History of the Eighties: Lessons for the Future: An Examination of the Banking Crises of the 1980s and Early 1990s* (1997), 132–35.

Chart 2



ratio, as did the increase in the FDIC's insurance coverage level from \$5,000 to \$10,000 in 1950. From 1950 to 1980, the average ratio was 1.33 percent. Growth in insured deposits, particularly after 1966 (resulting partly from a series of increases in the coverage level from \$10,000 to \$100,000), contributed to a gradual decrease in the ratio, which by 1980 had dropped to 1.16 percent.<sup>8</sup> As losses from failures mounted, the reserve ratio dipped below zero, reaching negative 0.25 percent in 1991. Starting in 1989 and continuing through 2005, the governing statute mandated a hard-target designated reserve ratio (DRR) of 1.25 percent as a measure of fund adequacy.<sup>9</sup> The reserve ratio reached this level by 1996 following rapid recovery in the fund balance during the 1990s. During the next decade, the reserve ratio declined gradually because fund income was limited by the assessment rate policy mandated by the Deposit Insurance Funds Act of 1996 (DIFA) (see discussion below). The reserve ratio fell to 1.22 percent in 2007. The heavy losses associated with the current crisis pushed the ratio to an all-time low of negative 0.39 percent in 2009. These historical shifts in the fund's condition reflect changes in FDIC income and expenses. Two of the most important policies affecting

<sup>8</sup> Congress increased the deposit insurance coverage level five times from 1950 to 1980: to \$10,000 in 1950, to \$15,000 in 1966, to \$20,000 in 1969, to \$40,000 in 1974, and to \$100,000 in 1980.

<sup>9</sup> The hard target was statutorily imposed by the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA). See FDIC, *History of the Eighties*, 101. Under FIRREA the FDIC could, if circumstances warranted, set the DRR as high as 1.5 percent, but this provision was removed by the FDIC Assessment Rate Act of 1990. In 2006, after the passage of the Deposit Insurance Reform Act of 2005 (DIRA), the fund no longer had a hard-target DRR, but instead the DRR was allowed to range from 1.15 percent to 1.50 percent. The recent passage of Dodd-Frank established a minimum DRR of 1.35 percent.

income were those on assessment rates and those on assessment credits and dividends.

Both the assessment rate charged and whether (and how much) assessment income is refunded or credited to insured institutions have affected the FDIC's fund management significantly. From 1935 until 1950, the FDIC by law charged a flat assessment rate of 8.33 basis points against an assessment base of total adjusted domestic deposits—in other words, insured institutions paid 8.33 cents for every \$100 of deposits they held (see Chart 3).<sup>10</sup>

The banking industry began calling for decreases in this rate almost immediately, and such calls became more frequent as the fund balance increased and failures declined. In 1936, banks reportedly sought assessment rate cuts because the FDIC appeared to be accumulating reserves too quickly. In 1940, a prominent banker proposed lowering the rate to 6.25 basis points, saying that the fund was large enough (at year-end 1940, it stood at \$496 million) to deal with demands “even of crisis proportions.” By 1946, the New Jersey Bankers Association called for assessments to be ended altogether so long as the fund exceeded \$1 billion. The FDIC resisted any decrease, first by citing the uncertainty of the industry's post-Depression condition, then by emphasizing the dangers of converting to a postwar economy, and finally by arguing that such change could be contemplated only after the FDIC succeeded in repaying its initial capital (approximately \$289 million) and achieved a fund balance of \$1 billion.<sup>11</sup>

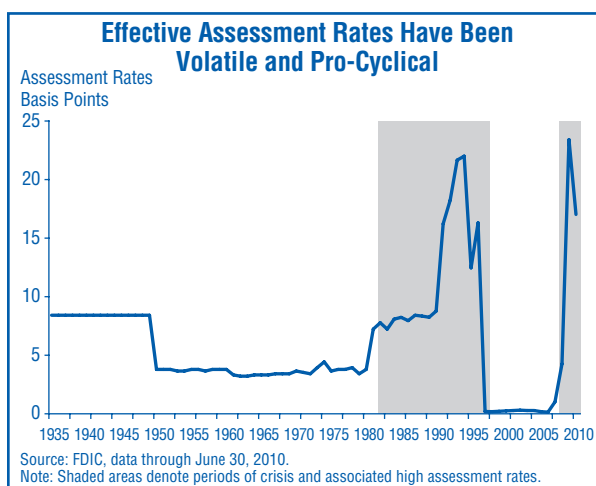
With this last condition met, Congress and the FDIC agreed to an adjustment in rates. However, the FDIC recommended against a permanent change because it had neither faced a serious economic downturn nor determined an exact level of fund adequacy.<sup>12</sup> Therefore, the Federal Deposit Insurance Act of 1950 (FDI Act) instead provided a 60 percent credit to insured institutions after FDIC expenses when assessment

<sup>10</sup> The initial rate was based on the FDIC's analysis of losses in suspended commercial banks from 1865 to 1934. See FDIC, *Annual Report of the Federal Deposit Insurance Corporation for the Year Ending December 31, 1934* (1935), 73–113.

<sup>11</sup> See “Capital Expects Banks to Demand FDIC Rate Cut,” *Wall Street Journal*, August 4, 1936; “Banker Proposes FDIC Cut Its Rate,” *New York Times*, May 23, 1940; and “Bankers Ask End to FDIC Charges,” *New York Times*, May 12, 1946. The fund first reached \$1 billion in 1946, and the FDIC repaid its initial capital by 1948. The FDIC also paid the interest foregone on the initial capital during 1950 and 1951.

<sup>12</sup> FDIC, *Annual Report for the Year Ended December 31, 1950* (1951), 5.

Chart 3



income exceeded expenses.<sup>13</sup> The effective assessment rate was then approximately halved; however, since the nominal rate remained unchanged, the credit could decrease if FDIC expenses rose. This policy was inherently pro-cyclical; it resulted in the FDIC's collecting lower assessments when failure levels were low and higher assessments when failures increased. Congress slightly increased the assessment credit to 66.66 percent in 1960, but lowered it to 60 percent in 1980 when the credit was linked to the reserve ratio.<sup>14</sup> As losses from failures mounted during the early 1980s, credits grew gradually smaller until they ceased altogether in 1985, and the effective assessment rate returned to approximately 8.33 basis points.<sup>15</sup>

<sup>13</sup> Expenses included operating costs, additions to loss reserves, and insurance losses sustained plus losses from preceding years in excess of reserves.

<sup>14</sup> For the change in 1960, see Public Law No. 86–171. Provisions of this statute simplified the assessment process but resulted in many banks paying somewhat higher assessments. The FDIC therefore supported the small increase in the credit. Under the provisions of the Depository Institutions Deregulation and Monetary Control Act of 1980, if the reserve ratio was less than 1.10 percent the FDIC had to decrease the assessment credit to an amount that would restore the reserve ratio to at least 1.10 percent (although in so doing, the FDIC could not retain more than 50 percent of net assessment income). If the reserve ratio exceeded 1.25 percent, the FDIC could increase the assessment credit, but only in such a way that the reserve ratio remained at least 1.25 percent. If the reserve ratio exceeded 1.40 percent, the FDIC had to increase the assessment credit so that the reserve ratio did not exceed 1.40 percent.

<sup>15</sup> Although no institution received credits after 1984, statute provided for the possibility of credits until 1994. Later statutes changed the terminology over time (to “refunds” in 1996 and to “dividends” in 2005), but the purpose of these provisions was always the return, when deemed appropriate, of some portion of assessments paid by insured institutions.

In response to the deepening banking crisis in the late 1980s, assessment rates rose considerably during the early 1990s. Both Congress and the FDIC sought to replenish the Bank Insurance Fund (BIF) and capitalize the Savings Association Insurance Fund (SAIF) through a series of rate increases, and by July 1991, the nominal assessment rate for each fund was 23 basis points.<sup>16</sup> Institutions were charged these high rates at the height of the crisis, when they could least afford them. The swift recovery from the crisis meant that elevated rates lasted only through 1996. It was during this period of high rates that the risk-related premiums mandated by the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) were introduced (in 1993) so that the FDIC could appropriately price for risk-taking.<sup>17</sup>

The Deposit Insurance Funds Act of 1996 (DIFA) included a one-time special assessment on SAIF-assessable deposits to fully capitalize the SAIF and expanded the Financing Company's (FICO) assessment authority

to all FDIC-insured institutions.<sup>18</sup> In addition, DIFA barred the FDIC from charging well-capitalized, highly rated institutions for deposit insurance once the DRR of 1.25 percent was achieved. This provision, backed by segments of the banking industry, led to pro-cyclical consequences that lasted a decade.<sup>19</sup> Because the banking industry recovered much more quickly than anticipated, more than 90 percent of the industry rapidly fell into the well-capitalized, highly rated category and paid no deposit insurance assessments at all from 1996 to 2006. The effective assessment rate therefore approached zero for about ten years.<sup>20</sup> By giving the FDIC authority to require all insured institutions to pay at least a minimum assessment, the Deposit Insurance Reform Act of 2005 (DIRA) corrected the moral hazard inherent to this system. However, the low premium income from 1996 to 2006 limited both the fund's growth and its ability to withstand the current crisis, just as the credit policy in effect from 1950 to 1984 had resulted in the FDIC's having fewer resources during the prior crisis. To meet the costs of the current crisis, effective assessment rates had to increase significantly beginning in 2008.

In general, the FDIC has charged the lowest assessment rates during prosperous periods and the highest rates during and in the wake of crisis periods. These policies affected the degree to which insured institutions were burdened by assessment rates over time (see Chart 4). From 1987 to 1992, assessments were on average 22 percent of industry net income. During 2009, assessments (including the one-time special assessment) were more than 140 percent of industry net income.<sup>21</sup>

<sup>16</sup> In 1989, FIRREA set BIF rates at 12 basis points for 1990 and 15 basis points for 1991 and thereafter. SAIF rates were set at 20.8 basis points for 1990; 23 basis points for 1991 through 1993; 18 basis points for 1994 through 1997; and 15 basis points for 1998 and thereafter. The FDIC was given the authority to impose higher rates if appropriate to restore the fund to the DRR within a reasonable period, but rates could not exceed 32.5 basis points or be raised by more than 7.5 basis points in a year (SAIF rates, however, were fixed through 1994). See FIRREA, §208. The FDIC Assessment Rate Act of 1990 set the BIF rate at 15 basis points (or a higher rate at the FDIC's discretion—FIRREA's rate limits were removed) to enable the fund to reach the DRR within a reasonable period. However, the new law maintained the SAIF rates set by FIRREA through 1997 as minimum rates that could be increased at the FDIC's discretion. See Title 2 of the Omnibus Budget Reconciliation Act of 1990, §2002. SAIF rates were therefore 23 basis points for all of 1991. By statute, BIF rates would have been 15 basis points in 1991, but the FDIC twice used its statutory authority to raise them—first to 19.5 basis points in 1990 (for 1991) and then to 23 basis points at midyear 1991 (effective July 1, 1991). See FDIC, *1990 Annual Report* (1991), 17, and *1991 Annual Report* (1992), 13. In the short term, the FDIC's reasons for raising rates included projected decreases in the reserve ratio and the need to pay interest on an anticipated \$10 billion in borrowing for working capital from the Federal Financing Bank. In the longer term, the increases were seen as necessary for the recapitalization of the BIF. See *Federal Register* 56 (May 7, 1991), 21064.

<sup>17</sup> FDICIA required that the FDIC change the flat-rate assessment system to one based on an institution's risk to the deposit insurance fund, taking into account a variety of risk measurements, the likelihood of loss to the fund, and the fund's revenue needs. FDICIA also required that the design of the required risk-based premium system incorporate average effective assessment rates at least at the level they had been at on July 15, 1991 (if the fund either had outstanding borrowings or was below the DRR). See FDICIA, §302.

<sup>18</sup> The FICO was created by the Competitive Equality Banking Act in 1987 as a vehicle to recapitalize the FSLIC. The expansion of FICO assessments to BIF-insured institutions was contentious during the legislative debate. See *History of the Eighties*, 133–35.

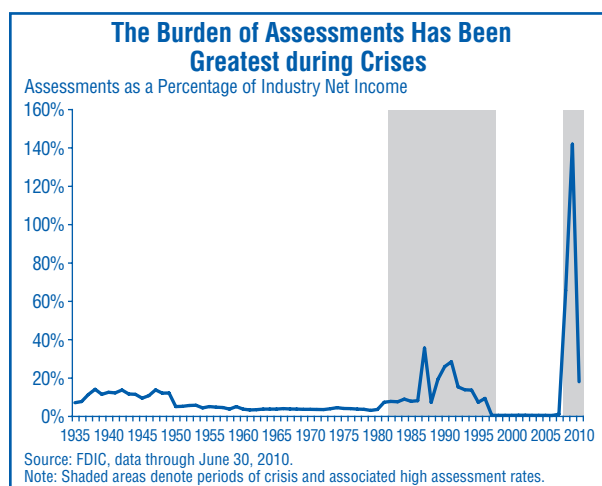
<sup>19</sup> For example, the American Bankers Association notes that it promoted the provision. See [http://www.aba.com/Industry+Issues/FDIC\\_RBP.htm](http://www.aba.com/Industry+Issues/FDIC_RBP.htm) (accessed November 15, 2010). See Public Law 104–208, §2708.

<sup>20</sup> The annual industry-wide effective assessment rate in 1996 was high because of the imposition of the one-time SAIF special assessment mandated by DIFA; without the special assessment, the effective rate was approximately 2.4 basis points. In 2007 and 2008 (particularly in 2007), effective assessment rates were decreased by the effect of a one-time assessment credit provided for in DIRA.

<sup>21</sup> In 2009, the FDIC imposed a 5 basis point special assessment on each insured depository institution's assets minus Tier 1 capital as of June 30, 2009.



Chart 4



### Changes under Dodd-Frank

The additional flexibility provided by Dodd-Frank was integral to the FDIC's comprehensive fund management plan and to the approach taken in the simulated fund analysis presented in this article. It is therefore helpful to briefly summarize the important changes made by the law that affect the FDIC's ability to manage the fund.

Dodd-Frank raised the minimum DRR, which the FDIC must set each year, from 1.15 percent to 1.35 percent and removed the upper limit on the DRR and therefore on the size of the fund.<sup>22</sup> It also required that the fund reserve ratio reach 1.35 percent by September 30, 2020, instead of 1.15 percent by the end of 2016.<sup>23</sup> The statute also significantly changed dividend policy: the FDIC is no longer required to provide dividends from the fund when the reserve ratio is between 1.35 percent and 1.5 percent. Moreover, although the law continues the FDIC's authority to declare dividends when the reserve ratio at the end of a calendar year is at least 1.5 percent, it grants the FDIC sole discretion to suspend or limit the declaration or payment of dividends.<sup>24</sup>

<sup>22</sup> See footnote 9.

<sup>23</sup> Dodd-Frank requires that the FDIC offset the effect on small institutions (those with less than \$10 billion in assets) of the statutory requirement that the fund reserve ratio increase from 1.15 percent to 1.35 percent by September 30, 2020. This will entail imposing additional assessments on large institutions (those with at least \$10 billion in assets). The FDIC plans to determine the mechanism and manner of the offset through rulemaking expected to begin in 2011.

<sup>24</sup> See Public Law No. 111-203, §§332 and 334.

### Analysis of Loss, Income, and Reserve Ratios

The FDIC sought to develop a long-term fund management strategy to reduce pro-cyclicality; keep assessment rates moderate, steady, and predictable throughout economic and credit cycles; and maintain a positive fund balance even during a banking crisis. To explore the potential policy options, the FDIC analyzed the trade-offs between assessment rates and policies that either award dividends or reduce assessment rates by creating a simulated deposit insurance fund covering the years 1950 to 2010.

The simulated fund uses FDIC historical data on the assessment base (total adjusted domestic deposits) and FDIC losses. Fund income is modeled by combining assessment base data with an investment portfolio of Treasury securities based on FDIC historical experience. The simulated fund's portfolio of securities changes in response to the FDIC's provision for losses, reflecting higher and lower anticipated losses over time.<sup>25</sup>

The analysis varied assessment rates and dividends to determine what would have happened to the simulated fund's balance and reserve ratio from 1950 to 2010. Below are the results of four of these options in detail. Each achieves the goal of maintaining a positive fund balance throughout the 60-year period. The first two options are on opposite ends of the policy spectrum. The first assumes that the FDIC grants no dividends, while the second assumes that the FDIC dividends the maximum allowable under the law. The third and fourth options compare limited dividend and assessment rate reduction policies that successfully meet the FDIC's objectives for sound fund management.

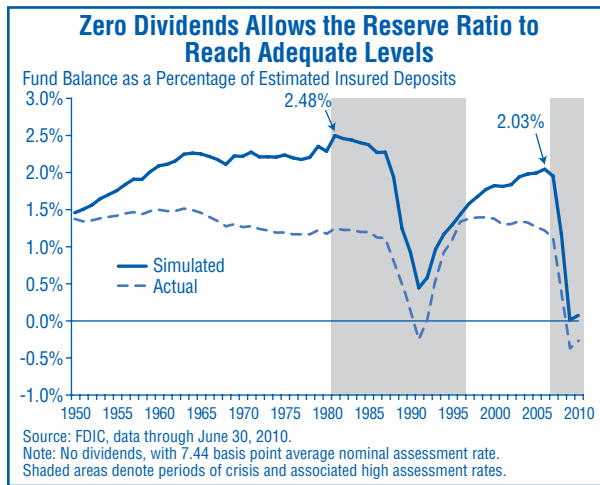
#### Four Policy Options

To determine the appropriate level of dividends and assessment rates, our analysis first tried to answer a straightforward question: What constant average nominal assessment rate during the entire 60-year period would have maintained a positive fund balance during both crisis periods, assuming a policy that provided no dividends?<sup>26</sup> The result is a moderate rate of 7.44 basis points, which would have allowed the fund's reserve ratio to reach 2.48 percent (in 1981) before the crisis of the 1980s and early 1990s, and 2.03 percent (in 2006) before the current crisis (see Charts 5 and 6). Failure to reach these reserve ratios would have resulted in a negative

<sup>25</sup> See the appendix for a detailed discussion of the methodology and assumptions used in the simulations.

<sup>26</sup> All assessment rates represent an industry-wide average.

Chart 5



amount in the fund in excess of the amount required to maintain the reserve ratio at 1.5 percent, but gives the FDIC sole discretion to suspend or limit these dividends. Granting the maximum allowable dividends would have resulted in substantial premium volatility and pro-cyclical average effective assessment rates (see Charts 7 and 8).<sup>27</sup> Indeed, granting full dividends requires a constant average nominal assessment rate of 21.96 basis points to maintain a positive fund balance during both periods of crisis. Such a rate is historically very high and corresponds most closely to the rates charged to recapitalize the fund after a crisis. In some years, the effective assessment rate would have been negative in order to maintain the reserve ratio at 1.5 percent.

Chart 6

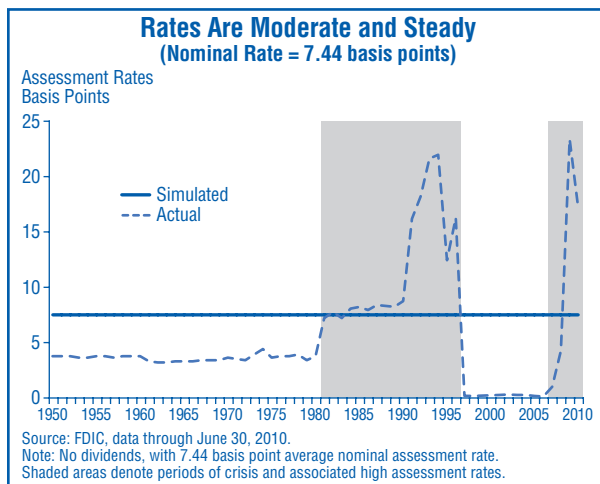
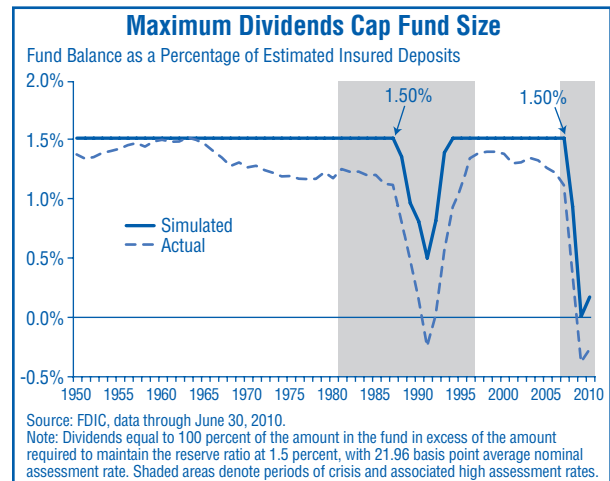
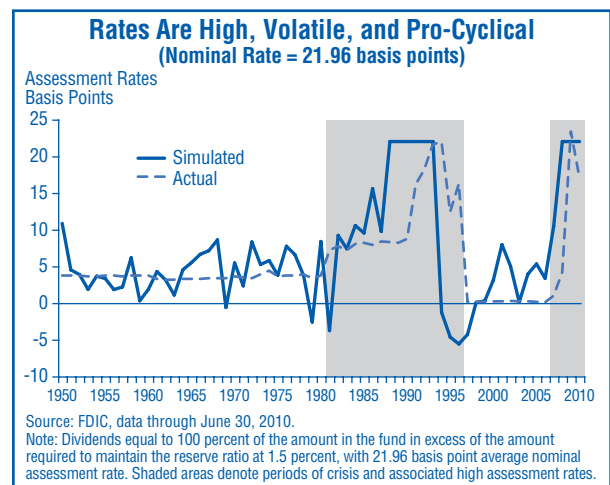


Chart 7



balance. Assessment rate volatility was by design completely eliminated. This policy is in many ways successful, but it eliminates the possibility of dividends or rate reductions and potentially allows the fund to grow without limit. Although the fund must have sufficient resources to handle a period of large fund losses, the fund need not grow larger than necessary to do so.

Chart 8



Moreover, during most years since 1950, federal statutes have provided for either a credit or dividend policy (although since 1985 no recurring credits or dividends have been awarded). Having first examined the consequences of granting no dividends, the analysis sought to evaluate the consequences had the full amount of dividends possible under current law been granted from 1950 to 2010. As amended by Dodd-Frank, the FDI Act provides that the FDIC dividend 100 percent of the

<sup>27</sup> Average effective assessment rates are calculated by subtracting dividends paid from assessments received.

Given the limitations of awarding either no dividends or the maximum allowable dividends, the analysis examined a third and fourth option. Option three limited dividends, while option four reduced assessment rates in lieu of dividends; both were consistent with the broad set of goals for fund management. The analysis showed that these options would achieve the FDIC's goals of maintaining both a positive fund balance and moderate, steady assessment rates throughout economic and credit cycles.

The third option awards dividends as a percentage of the amount in the fund in excess of the amount required to maintain the reserve ratio at a specified level. The analysis has already shown that granting maximum allowable dividends would have required a high constant average nominal assessment rate. However, granting limited dividends when the reserve ratio reaches 2 percent and somewhat greater dividends if the reserve ratio reaches 2.5 percent permits a significantly lower constant average nominal assessment rate from 1950 to 2010 to keep the fund balance positive.<sup>28</sup> Increasing dividends when the reserve ratio exceeds 2.5 percent would prevent the fund from growing larger than necessary to remain positive during periods of high losses.

This option results in a moderate constant nominal assessment rate of 8.45 basis points across the entire 60-year period (see Charts 9 and 10). The reserve ratios necessary to maintain a positive fund balance are 2.24 percent before the crisis of the 1980s and early 1990s, and 1.98 percent before the current crisis. These ratios are, of course, significantly higher than the level of the DRR historically but should be sufficient to withstand a future period of large fund losses similar to those the FDIC has experienced during the past 30 years. Procyclicality is limited, but this option generates moderate premium volatility.

The last option achieves the FDIC's fund management goals of maintaining both a positive fund balance and

<sup>28</sup> Specifically, under this option, dividends would be equal to 25 percent of the amount in the fund in excess of the amount required to maintain the reserve ratio at 2 percent and 50 percent of the amount in the fund in excess of the amount required to maintain the reserve ratio at 2.5 percent. The nearer a dividend comes to 100 percent of an institution's assessment, however, the more it introduces moral hazard and reduces or eliminates the FDIC's ability to control and price for risk-taking. To avoid the possibility that an insured institution could receive a dividend that approaches 100 percent of its assessment, this option limits dividends such that no institution can receive a dividend greater than 50 percent of its annual assessment.

Chart 9

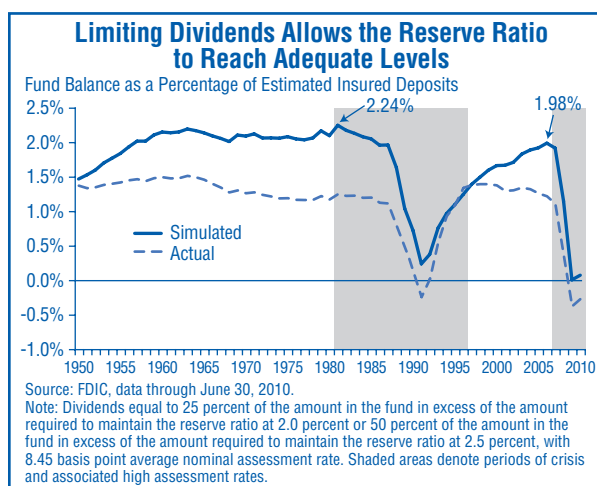
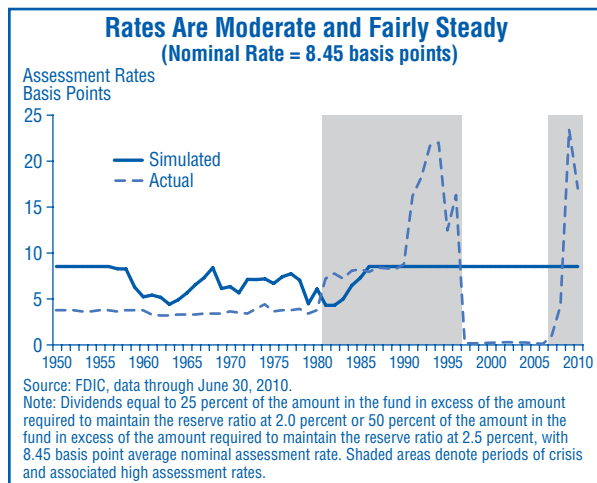


Chart 10



moderate, steady assessment rates throughout economic and credit cycles by reducing the average assessment rates in lieu of dividends.<sup>29</sup> Rates are reduced by 25 percent when the reserve ratio reaches 2 percent and by 50 percent when the reserve ratio reaches 2.5 percent. Again, an increased rate reduction would prevent the fund from growing larger than necessary to remain positive during periods of high losses.

This option results in a moderate constant nominal assessment rate of 8.47 basis points during the entire 60-year period (except when reduced as a result of the

<sup>29</sup> This method is not without precedent. Under FDICIA (§302(e)(3)), the use of assessment credits was eliminated in 1994 and replaced with assessment rate reductions. As the fund reserve ratio was under the DRR, no rate reductions took place before DIFA replaced rate reductions with refunds in 1996.

Chart 11

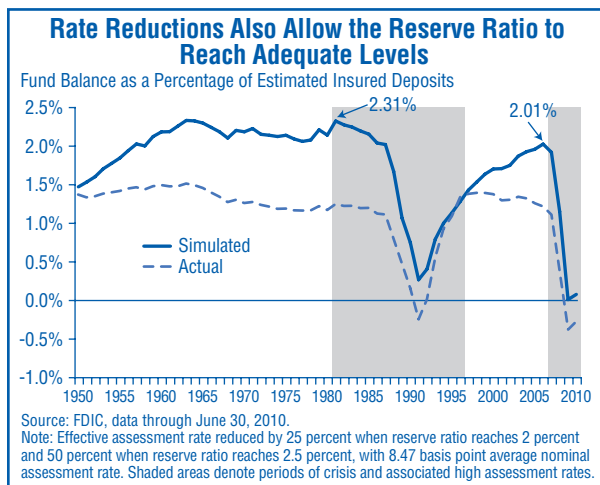
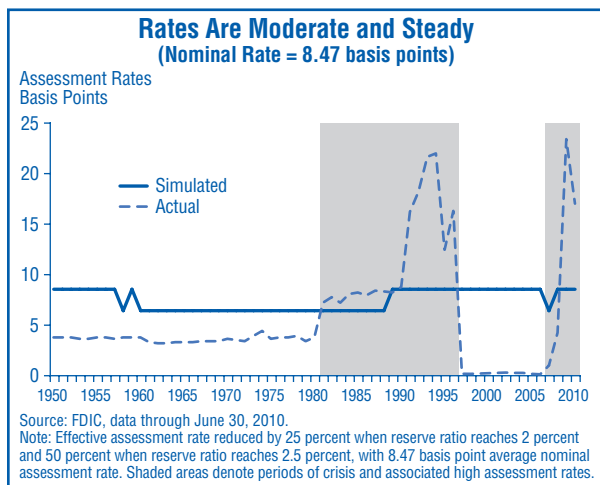


Chart 12



fund exceeding the 2 percent threshold), almost identical to the rate required under the third option, which limited dividends (see Charts 11 and 12). The reserve ratios necessary to maintain a positive fund balance are 2.31 percent before the crisis of the 1980s and early 1990s, and 2.01 percent before the current crisis—similar to the ratios required under the third option. Premium volatility and pro-cyclicality are both successfully minimized, but premium volatility is significantly lower than under the third option.<sup>30</sup> Interestingly, both the third and fourth options generate nominal assess-

<sup>30</sup> Additional comparative examples of simulations using varying levels of assessment rate reduction and reserve ratios at which rates are first reduced are presented in the appendix.

ment rates almost identical to the rate the FDIC supported in 1935.<sup>31</sup>

Since 1935, the assessment base calculation has been derived from total domestic deposits. Dodd-Frank, however, has significantly altered this calculation to one derived from average consolidated total assets minus average tangible equity. For purposes of comparison, the analysis for the fourth option was repeated, but with the assumption that the new assessment base had been in place from 1950 to 2010. This analysis allows for an approximation of the long-term moderate rate required using the new assessment base.<sup>32</sup>

This simulation results in peak reserve ratios similar to those using the current base (see Chart 13). The simulated fund successfully limits both rate volatility and pro-cyclicality. The one significant change—due to the alteration in the composition of the assessment base—is that the constant nominal assessment rate required to maintain a positive fund balance from 1950 to 2010 drops from 8.47 to 5.29 basis points (see Chart 14). The rate is lower because for much of the period the assessment base calculated using the new definition is significantly larger than under the old definition.

A final concern is whether the fund will recover quickly enough after a period of high fund losses. This is of particular importance given the current statutory requirement that once the fund drops below a reserve ratio of 1.35 percent (or is expected to), the FDIC must adopt a restoration plan that provides that the reserve ratio will return to 1.35 percent within eight years (although the period can be extended under extraordinary circumstances). The speed with which the reserve ratio returns to 1.35 percent can be explored by looking at the behavior of the simulated fund using the fourth option during and after the high losses of the 1980s and

<sup>31</sup> In 1935, FDIC officials believed that the 8.33 basis point rate would likely be insufficient to build up the deposit insurance fund but endorsed it (and indeed the 8.33 basis point rate was a legislative compromise—the House bill included a higher rate) because it would allow banks to build up capital. See *Banking Act of 1935: Hearings on H.R. 5357, February 21, Before the House Committee on Banking and Currency, 74th Cong., 48 (1935)* (statement of Leo T. Crowley, Chairman of the Federal Deposit Insurance Corporation).

<sup>32</sup> The Dodd-Frank Act provides that the assessment base be changed to average total consolidated assets minus average tangible equity. See Public Law No. 111–203, §331. For this simulation, from 1990 to 2010, the assessment base equals year-end total industry assets minus Tier 1 capital. For earlier years (before the Tier 1 capital measure existed) it equals year-end total industry assets minus total equity.



Chart 13

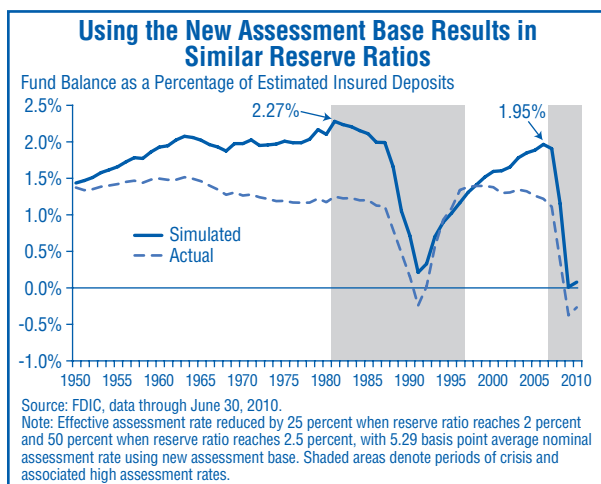
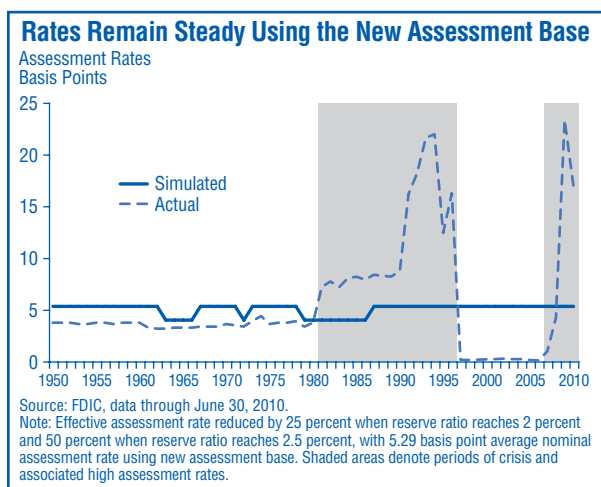


Chart 14



early 1990s. The simulation that charges 8.47 basis points (using an assessment base of adjusted total domestic deposits) first drops below a reserve ratio of 1.35 percent in 1989 and recovers to that level in eight years (in 1997). The simulation that charges 5.29 basis

points (using an estimated assessment base of total assets minus tangible equity) also first drops below 1.35 percent in 1989, but takes one additional year to return to that level (in 1998). Both versions of the simulation demonstrate that the constant nominal rate charged would fit the statutory requirements for the restoration of the fund from a period of losses similar to that during the 1980s and early 1990s.

**Conclusion**

The simulated fund analysis has clear implications. Historically, a reserve ratio of more than 2 percent would have been necessary for the fund to withstand crisis periods while maintaining a positive balance. Limiting the simulated fund’s growth, either by capping the reserve ratio at levels previously thought to be appropriate or by granting dividends or rate reductions at those levels, led to high nominal assessment rates that were both highly pro-cyclical and volatile. However, either suspending dividends until the reserve ratio reaches 2 percent and then awarding only limited dividends or, in lieu of dividends, lowering assessment rates when the reserve ratio reaches 2 percent, allows the fund to reach a level sufficient to withstand crises of the magnitude already experienced with rates that are significantly less pro-cyclical. A policy that lowers rates in lieu of dividends results in rates that are less volatile.

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The authors wish to thank Diane Ellis, Paul Kupiec, Marc Steckel, Jack Reidhill, Munsell St. Clair, Christine Blair, David Lee, and Ahmad Sarsour, all from the FDIC’s Division of Insurance and Research, for their advice and assistance in developing the simulation analysis and for their helpful comments on this article.

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# Appendix

This appendix provides supplementary details on the method used to generate fund simulations in the FDIC's analysis. It also presents additional comparative examples of simulations using a variety of assessment rate policies that combine different constant nominal assessment rates with different levels of assessment rate reduction awarded at different reserve ratio thresholds.

## Methodology and Assumptions

### Data

Except as specifically noted in the text, the simulated fund's assessment base and fund expenses are actual FDIC historical data.<sup>33</sup> For the years 1950 to 1988, data are from the FDIC insurance fund; from 1989 to 2005, data combine the BIF and the SAIF; from 2006 onward, DIF data are used. FDIC historical data are altered in only one respect: because all depositors in failed banks during the current crisis were covered up to \$250,000, the FDIC deposit insurance coverage level for 2007 is assumed to be \$250,000 even though the coverage limit in effect at the time was \$100,000. (The Dodd-Frank Act extended the \$250,000 coverage limit retroactively to depositors in any insured depository institutions for which the FDIC was appointed receiver or conservator on or after January 1, 2008.) Historical interest rate data are from the Board of Governors of the Federal Reserve System.

### Treatment of Historical Assessment Credits, Special Assessments, and FSLIC/RTC Costs

The simulated fund implements neither the assessment credit policies in effect from 1950 to 1984 nor the one-time assessment credit provided under DIRA. In addition, the simulated fund's income includes neither the one-time special assessment to recapitalize the SAIF in 1996 nor the one-time special assessment imposed in 2009. The simulated fund does not include as expenses the costs of the savings and loan crisis, which were borne by the Federal Savings and Loan Corporation (FSLIC) and Resolution Trust Corporation (RTC) for savings and loan failures during the 1980s and early 1990s. The inclusion of these costs would require a much higher reserve ratio to keep the fund balance positive during the late 1980s and early 1990s.

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<sup>33</sup> The assessment base used in this analysis is adjusted total domestic deposits. The Dodd-Frank Act provides that the assessment base be changed to average total consolidated assets minus average tangible equity.

### Investment Strategy

No consistent historical data are available describing the FDIC's investment portfolio over time. Moreover, as a simulated fund diverges from the actual fund, the FDIC's actual investment choices become increasingly irrelevant to the simulated fund's likely choices. After reviewing available FDIC data, the method chosen for the analysis was a modeled investment portfolio with the following investment strategy and set of rules for the simulated fund. The fund assumes a "default" portfolio mix of Treasury securities to be maintained under most conditions: 35 percent in six-month securities; 25 percent in one-year securities; 25 percent in three-year securities; and 15 percent in five-year securities. This portfolio mix remains fixed unless the FDIC's provision for losses increases for two consecutive years. In that event, all income (proceeds from maturing securities, as well as net assessment and interest income) is invested in six-month Treasury securities. The simulated fund therefore has an increasingly shorter-term bias as anticipated losses from failures rise. When the fund's income exceeds expenses for two years, the fund's investments return to the 35-25-25-15 mix.

### Assessment Rate, Dividend, and Reserve Ratio Variables

Constant nominal industry average assessment rates in the analysis range from 7.44 to 25.88 basis points. The analysis examines two sets of options: percentage reductions in assessment rates and dividends as a percentage of the amount in the fund over a specified reserve ratio. Rate reductions and dividend amounts range from zero to 100 percent. Reserve ratios at which assessment reductions or dividends are first awarded range from 1.5 percent to 2.5 percent.

### Additional Comparative Examples

This section provides further detail and examples of the trade-offs the FDIC examined in seeking an appropriate long-term fund management policy that takes into account the goals of maintaining both a positive fund balance and moderate, steady assessment rates throughout economic and credit cycles.<sup>34</sup> The examples below

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<sup>34</sup> Specifically, the analysis sought to implement an assessment rate policy (a constant nominal rate in combination with assessment rate reductions) that would result in the fund falling to zero in 2009 (the fund's trough during the current crisis). Using assessment rates greater than those identified would cause the simulated fund to grow higher during periods of benign economic conditions and give the fund a capital buffer above zero in 2009.

vary assessment rate reductions and the reserve ratio at which reductions are first awarded.

**Maintaining Relatively Low Assessment Rates**

Table A.1 shows the constant nominal assessment rates that need to be applied to keep the fund from becoming negative during both crises using various levels of assessment rate reduction and reserve ratios at which rates are first reduced.

In general, policies with low reserve ratios at which assessment rate reductions are first awarded and high rate reductions require relatively high nominal assessment rates, and so fail to keep assessment rates relatively low and steady. Policy options with high reserve ratios at which assessment rate reductions are awarded and low rate reductions require the lowest nominal assessment rates.

**Reducing Pro-cyclical Assessments**

In its analysis, the FDIC sought policies that reduced pro-cyclical assessments, which are lower during prosperous times but higher when both insured institutions and the fund are stressed by significant losses. Table A.2 compares average effective assessment rates during crisis years with average effective assessment rates during noncrisis years as a measure of how pro-cyclical effective assessment rates are throughout time.<sup>35</sup>

Again, policies that reduce rates at lower reserve ratios and by higher amounts are less desirable and produce greater pro-cyclicality. As a point of reference, the average assessment rates of the actual fund (which has historically had to implement pro-cyclical assessment policies during times of crisis to cover losses and rebuild the fund) more than quadrupled during crisis periods. An appropriate assessment reduction policy should seek relatively small changes in effective assessment rates across both crisis and noncrisis periods.

Table A.1

Nominal Assessment Rates Needed to Maintain Positive Fund Balance					
Percentage Reduction in Rates	Reserve Ratio at Which Rates Are First Reduced				
	1.50	1.75	2.00	2.25	2.50
100	25.88	14.94	9.23	8.03	7.53
75	17.84	14.15	8.90	7.98	7.49
50	12.32	11.70	8.73	7.99	7.46
25	9.22	9.04	8.47	7.75	7.43
10	8.03	7.97	7.78	7.54	7.41

Source: FDIC.

Table A.2

Assessment Rate Multiplier from Noncrisis to Crisis Years					
Percentage Reduction in Rates	Reserve Ratio at Which Rates Are First Reduced				
	1.50	1.75	2.00	2.25	2.50
100	4.9	2.4	1.2	1.0	0.9
75	2.6	2.1	1.1	1.0	1.0
50	1.4	1.3	1.1	1.0	1.0
25	1.1	1.1	1.0	0.9	1.0
10	1.0	1.0	1.0	1.0	1.0

Source: FDIC.

<sup>35</sup> Crisis years are defined as 1981 to 1996 (although in terms of bank failures this crisis ended by 1994, the industry had to pay high premiums for an additional two years in order to recapitalize the fund) and 2008 to 2010, while all other years in the sample are noncrisis years: 1950 to 1980 and 1997 to 2007.