An Evaluation of the Denominator of the Reserve Ratio

FDIC Staff Study[*]

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Executive Summary

In 2006, the president signed the Federal Deposit Insurance Reform Act of 2005 (the Reform Act) and the Federal Deposit Insurance Reform Conforming Amendments Act of 2005 (the Conforming Amendments Act) into law. Section 6(c) of the Conforming Amendments Act requires the FDIC to "conduct a study of the feasibility of using alternatives to estimated insured deposits in calculating the reserve ratio of the Deposit Insurance Fund (DIF) and designating a reserve ratio for such Fund." Further, the Conforming Amendments Act requires the FDIC to "submit a report to the Congress . . . containing the findings and conclusions of the Corporation with respect to the study . . . with such recommendations for legislative or administrative action as the Board of Directors of the Corporation may determine to be appropriate." This report responds to these requirements. It compares insured deposits with two alternative denominators of the reserve ratio: total domestic deposits and total liabilities minus subordinated debt.

The reserve ratio is the ratio of the balance in the deposit insurance fund to estimated insured deposits in the banking system. Thus, it is an indicator of the deposit insurance fund's adequacy, and it guides the FDIC in determining an appropriate fund balance and assessment policy. The first question this study addresses is a method to target the size of the insurance fund by means of a solvency standard based on the insurance fund's loss distribution. The FDIC recommends against adopting this method now because determining the fund's loss distribution—either in the short term or in the long term—is difficult and complex. Although the FDIC has made progress in its efforts to determine this loss distribution, more work needs to be done.

The next question concerns the choice of a denominator for the reserve ratio. Ideally, the denominator of the reserve ratio would reflect some measure of the FDIC's potential loss exposure over some appropriate time horizon.

Estimated insured deposits seem like the natural choice as the denominator of the reserve ratio because it represents the amount that the FDIC guarantees. This simple and straightforward approach has been in use since 1980. However, there are at least two concerns that accompany the use of insured deposits as the denominator. First, insured deposits are only estimated. They are not known with certainty unless and until an institution fails. Other potential denominators—domestic deposits or total liabilities minus subordinated debt—are likely to involve less measurement error and are more easily validated. Second, an institution's liability structure tends to change as it approaches failure: uninsured deposits and unsecured creditors tend to demand payment or security as an institution approaches failure, and in order to obtain replacement funding, an institution often will increase its reliance on insured deposits. Thus, using insured deposits as a measure of fund adequacy may understate the FDIC's potential loss exposure. Some analyses, studies, and evidence suggest that domestic deposits or total liabilities minus subordinated debt might be more closely related to the FDIC's loss exposure.

Nevertheless, for several reasons, the FDIC has concluded that it does not recommend a change in the denominator of the reserve ratio or DRR at present.

First, in the Reform Act and Conforming Amendments Act, Congress made the most sweeping changes to the deposit insurance assessment system in years. If the definition of the reserve ratio or DRR is to be changed, the change should wait until the reforms in this legislation have been fully implemented and their effects evaluated.

Second, there is no strong evidence that the industry's aggregate estimates of insured deposits are inaccurate. Furthermore, because the Reform Act gives the FDIC flexibility in managing the reserve ratio within a range of 1.15 percent to 1.35 percent, a precise measure of the reserve ratio denominator has become less important.

Last, at this point neither of the two alternative denominators considered—domestic deposits or total liabilities minus subordinated debt—seems notably better than estimated insured deposits. The analyses, studies, and evidence that support the use of domestic deposits or total liabilities minus subordinated debt as the reserve ratio denominator are primarily based on the failures of smaller institutions. It is not clear whether the conclusions drawn from these analyses, studies, and evidence would apply to the future failure of very large institutions, which hold most of the industry's deposits and therefore pose the greatest possible loss to the FDIC. These very large institutions tend to obtain a much larger share of their funding from sources other than insured deposits. On the basis of the available information, a review of the implicit assumptions that underlie each alternative denominator raises some doubt about the choice of total liabilities minus subordinated debt, but it does not set either domestic deposits or insured deposits apart as the best choice.

The FDIC considers it an open question whether at some future time another denominator might be found preferable to estimated insured deposits. No analysis or evidence has ruled out domestic deposits or total liabilities minus subordinated debt as possible future reserve ratio denominators.

In addition, the FDIC should not place excessive reliance on a single measure when gauging the capital adequacy of the insurance fund. Instead, the FDIC may wish to consider a more nuanced approach to measuring capital adequacy, an approach that involves multiple ratios and perhaps also a loss distribution model for the insurance fund.

The Reserve Ratio

Traditionally a simple, useful, and easily understood indicator of the deposit insurance fund's capital adequacy has been a reserve ratio that is calculated using estimated insured deposits as the denominator. The FDIC began reporting such a reserve ratio in 1945, and the reserve ratio has been so defined by statute since 1980.[1] Most recently, the Federal Deposit Insurance Reform Act of 2005 specifically defines the "reserve ratio" as the ratio of the net worth of the Deposit Insurance Fund (DIF) to aggregate estimated insured deposits.[2]

Whatever its denominator, the reserve ratio plays an important role in how the FDIC manages the size of the DIF. It plays this role because the statute that defined the reserve ratio in 1980 also defined a designated reserve ratio (DRR) that was intended as a fund capital target.

Over time, how rigidly the fund must adhere to this capital target and how assessments are set in relation to the target have changed. For example, the Reform Act of 2005 requires that the FDIC set a DRR annually that is between 1.15 percent and 1.50 percent of estimated insured deposits.[3] In contrast to prior law, however, the Reform Act does not require that the FDIC actually maintain the DIF reserve ratio at the DRR or that the FDIC set assessments solely on the basis of the DRR. But the Reform Act does require that if the reserve ratio falls below 1.15 percent, the FDIC shall establish a restoration plan that will return the ratio to at least 1.15 percent within five years.[4] And if the reserve ratio exceeds 1.35 percent at the end of any year, the FDIC generally must pay dividends equal to one-half of the funds in excess of the amount necessary to maintain the reserve ratio at 1.35 percent. If the reserve ratio exceeds 1.50 percent

[1] The appendix contains further background information.
[2] Reform Act § 2107(b).
[3] Ibid. § 2105.
[4] Ibid. § 2108.

at the end of any year, the FDIC generally must pay dividends equal to the entire amount in excess of the amount necessary to maintain the reserve ratio at 1.50 percent.

Credit-Risk Modeling as a Possible Alternative to the Reserve Ratio

Ideally, the approach used in targeting the fund balance would reflect some measure of the FDIC's potential loss exposure over some appropriate time horizon. A more advanced risk analysis approach, rather than adhering to a reserve ratio, might better achieve this goal. One such method would be to determine a solvency standard based on the insurance fund's loss distribution.

Modern risk analysis can, at least theoretically, provide a much more sophisticated measure of fund adequacy than a simple reserve ratio can. Unlike a reserve ratio, this kind of analysis takes into account the distribution of the FDIC's anticipated loss exposure—that is, the likelihood over time that an institution will fail and the probable size of the FDIC's loss if a failure occurs. In practice, however, this kind of analysis is hard to do and does not produce results that are as simple and easy to understand as a reserve ratio.

One approach that relies on the distribution of future loss exposure to define the capital adequacy of the DIF borrows from the credit-risk modeling literature.[5] Increasingly over recent years, financial institutions have come to adopt advanced credit-risk modeling approaches (sometimes called the value-at-risk [VaR] approach) to determine the adequacy of their economic capital.[6] Using the credit-risk modeling approach, banks develop models of the risks

[5] Jones and Mingo (1998), Nuxoll (1999), and Burns (2004) provide general information about the use of these models. Bennett (2002), Pennacchi (2000), Jarrow et al. (2003), and Kuritzkes, Schuermann, and Weiner (2005) model the FDIC's loss distribution.

[6] In addition, banking regulators are encouraging large banks to use these models for calculating regulatory capital requirements. See Basel Committee on Banking Supervision (1999, 2004) for more information.

of loans in a portfolio. Statistics are used to estimate the probabilities of various possible dollar loss amounts that each loan can experience and the correlations across the loan losses in the portfolio, creating a portfolio cumulative loss distribution. In a study commissioned by the FDIC, Oliver, Wyman & Company concluded in 2000 that this approach could be used to determine the capital adequacy of the deposit insurance funds.[7]

Modeling the Loss Distribution

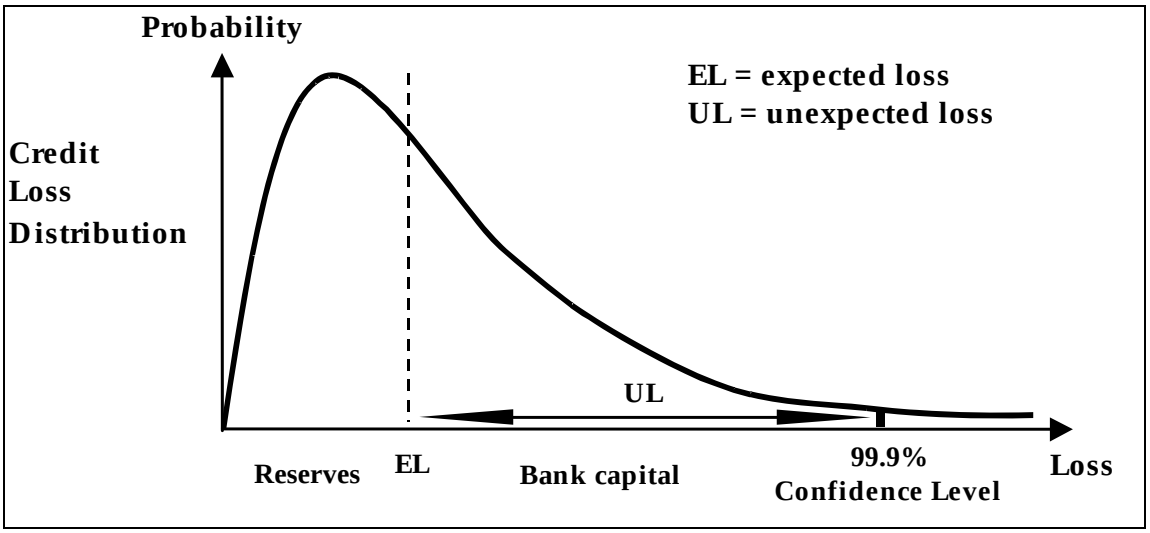
The first step in analyzing the FDIC's risk profile in a credit-risk modeling framework is to recognize that the deposit insurance fund is a portfolio of credit risks. This portfolio consists of individual insured banks and savings associations, each of which has a small but nonzero chance of causing loss to the fund. Such a portfolio is similar to a bank's loan portfolio, although the nature of the underlying risks in the FDIC insurance fund raises unique issues.

Figure 1 shows the typical credit loss distribution for the loan portfolio at an insured bank. The distribution takes into account the size or concentration of individual exposures and the correlation among loan exposures in the portfolio. The expected loss (EL) can then be estimated from the distribution. Any losses above that amount are defined as unexpected losses (UL). Unlike a normal distribution, the bank credit distribution is heavily skewed: it has a long right tail, meaning that most often losses are relatively small but that there are cases in which large losses may arise. In order to protect against these losses, a bank is required by regulators (and by rating agencies, uninsured depositors, and other creditors) to hold sufficient capital to cover the potential for unexpected losses at a high degree of confidence. In this example, the

[7] Oliver, Wyman & Co. (2000), 7–11. The discussion in the following section, *Modeling the Loss Distribution*, borrows heavily from Oliver, Wyman & Co. (2000).

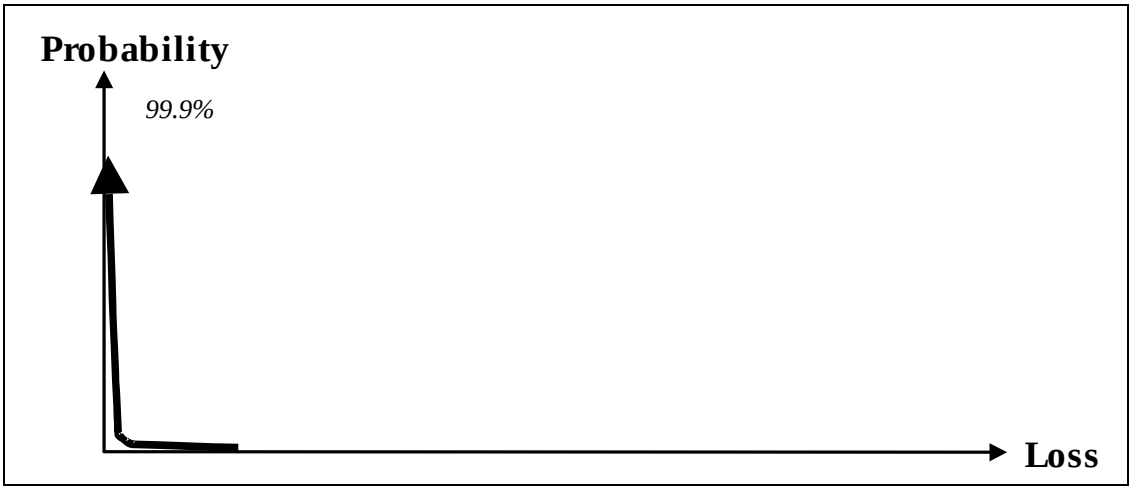
bank holds a reserve for contingent losses for the amount of expected losses and holds capital that would be sufficient to cover unexpected losses at a the 99.9 percent confidence level.

Figure 1: Hypothetical Bank Risk Profile



If the losses exceed the 99.9 percent point, the bank will become insolvent. At failure, the FDIC will bear the losses associated with the residual "tail" risk that would otherwise have been borne by insured deposits. For the individual bank considered above, the FDIC's risk profile is shown in Figure 2. There is a high probability of no loss to the fund, and the residual tail probability of some loss.

Figure 2: FDIC Risk Profile for a Single Hypothetical Bank



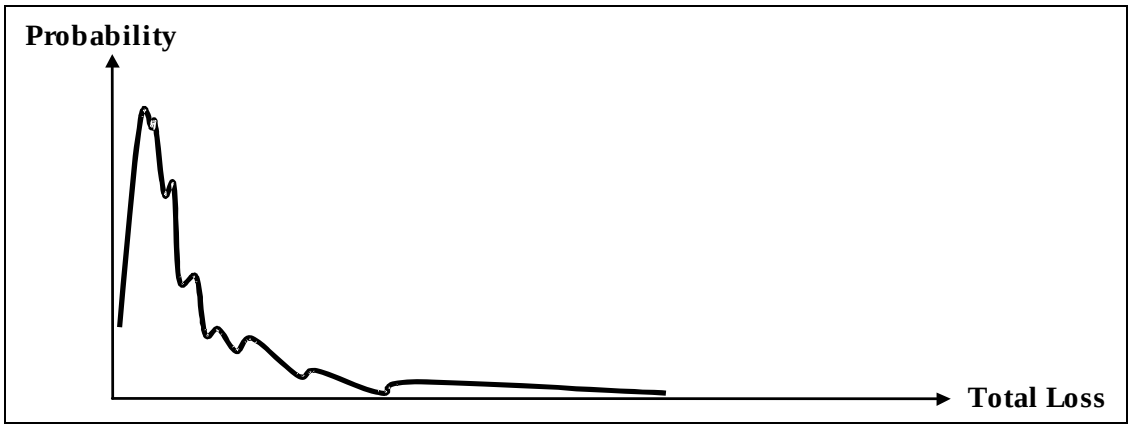
The FDIC's exposures to individual banks can be combined to create a cumulative loss distribution.[8] Just as with a bank's credit loss distribution, the FDIC's cumulative loss distribution will reflect the expected losses of the individual insured banks, the size of the individual exposures, and the correlation of losses across the insured banks. Figure 3 shows conceptually what the cumulative loss distribution for the deposit insurance fund probably looks like. The distribution will be heavily skewed, with a high probability of very small losses to the fund, but also some probability of large losses. The potential for large losses will result, in part, from the presence of large banks in the portfolio.[9] The "lumpiness" in the distribution reflects the contribution of individual large banks, each of which imposes a discrete, nonzero probability

[8] The loss distributions are not simply added, because losses are not independent events. Instead they are combined in a more complex way that addresses correlations across banks.

[9] It also reflects the likelihood that a large number of small banks (or a combination of large and small banks) fail at the same time.

of a sizable loss to the fund.[10] This distribution is generally consistent with the available evidence.[11]

Figure 3: FDIC Cumulative Loss Distribution



As with an individual bank, a loss distribution for the insurance fund allows the FDIC to determine the amount of capital needed to cover potential losses to the fund for a given degree of confidence. The desired level of confidence is equivalent to a solvency standard for the fund. For example, the FDIC could target the fund balance so that it maintains a solvency standard based on a specific confidence interval, as with the hypothetical bank in Figure 1. In practice, the fund sets aside a contingency reserve for the amount needed to cover expected losses for one year, and the fund balance is available to cover unexpected losses.

In 2003, the FDIC hired McKinsey and Company to assess its financial risk management function and make recommendations. McKinsey found that the VaR approach was appropriate

[10] Oliver, Wyman & Co. (2000), 7-8.
[11] For example, see Oshinsky (1999); Oliver, Wyman & Co. (2000); Bennett (2002); Pennacchi (2000); Jarrow et al. (2003); and Kuritzkes, Schuermann, and Weiner (2005).

for the FDIC and recommended that the FDIC use a VaR model as part of its financial risk management process.[12]

Applying Credit-Risk Modeling to a Long-Term Horizon

Most VaR models use a one-year time horizon and thus center on short-term loss exposure. The concept, however, can be applied to a long-term horizon while retaining all the basic features. Pennacchi recommends that the FDIC take a long-term view when considering fund adequacy because periods of industry distress (and associated heavy insurance fund losses) tend to last longer than one year, and assessments imposed during such periods do not always bring the fund level back to the target level in a single year.[13] An approach that uses a long-term loss distribution will reduce the variability of insurance assessments inherent in a short-term distribution.[14] The FDIC's short-term loss distribution can change rapidly in response to industry conditions. Historical changes in the FDIC's contingent loss reserve (that is, funds set aside to cover short-term expected losses) to the FDIC's insurance fund demonstrates just how quickly the short term loss distribution can change: from 1986 to 1987, the contingent loss reserve increased from $6.3 million to $1.2 billion. If the FDIC were to target its fund balance on the basis of its short-term loss exposure, the result would be strongly pro-cyclical assessments—that is, high assessments during banking downturns (when institutions can least afford to contribute to the fund) and lower assessments when banks are healthy.

[12] McKinsey and Company (2003). The FDIC has begun using a VaR model as part of its short-term risk management process.
[13] Pennacchi (2000). See also McKinsey and Company (2003).
[14] Of course, for many reasons the FDIC must also know its short-term loss distribution. The FDIC must have enough funds to meet anticipated short-term losses; its financial statements include a contingent loss reserve that sets aside funds for probable and reasonably estimable losses over one year.

Facing Difficulties in Estimating the Insurance Fund's Loss Distribution

Estimating the fund's distribution of potential future losses—either in the short term or the long term—is difficult and complex. Although the FDIC has made progress in its efforts to determine this loss distribution, the distribution is still not well known.

It is particularly challenging to measure the unexpected losses reliably, especially the risks in the tail of the distribution (because they occur infrequently). History has shown, and research has found, that insurance fund losses during tail events are dominated by large-bank losses. Historically, the FDIC suffered its largest losses in years when large banks failed. Kuritzkes, Schuermann, and Weiner found that the FDIC's loss distribution is "driven heavily by large, lumpy exposures" and that the most costly tail events involve multiple large-bank failures.[15] Oshinsky found that industry consolidation has increased the likelihood that any large losses suffered by the FDIC insurance funds will be driven by the very largest insured banks and savings associations.[16] Using current methods, a highly reliable estimate of the tail of the FDIC's exposure would require a relatively large amount of data that are representative of today's banking environment—data that are not available.

Therefore, despite the significant theoretical advantages of this approach, at this time it should not be viewed as a substitute for the reserve ratio approach for managing the insurance fund.[17] Nevertheless, determining such a loss distribution and setting a solvency standard with regard to it is a worthwhile possible future addition, or possibly even alternative, to a reserve ratio and DRR.

[15] Kuritzkes, Schuermann, and Weiner (2005), 232, 236.
[16] Oshinsky (1999).

The Reserve Ratio Approach: Analysis of Alternative Denominators

As mentioned above, the current denominator of the reserve ratio is the amount of estimated insured deposits. Two alternative denominators have been mentioned by economists: domestic deposits and total liabilities minus subordinated debt. Domestic deposits consist of both insured and uninsured deposits but exclude deposits in foreign offices. Total liabilities minus subordinated debt consist of all deposits (domestic and foreign office), nondeposit secured liabilities (henceforth "secured liabilities"), and nondeposit unsecured liabilities (henceforth "unsecured liabilities").[18] For many years banks and savings associations have routinely and accurately reported domestic deposits, total liabilities, and subordinated debt on the quarterly Call Report (banks) or Thrift Financial Report (savings associations).[19]

Because insured deposits are, on the surface, the natural choice for a denominator for the FDIC and because the current statutory and regulatory environment uses insured deposits for the denominator, a change would be worthwhile only if it would produce notably better results than insured deposits. In fact, there are two concerns about insured deposits that raise the possibility that an alternative denominator might more closely reflect the FDIC's potential loss exposure over some appropriate time horizon. One is the accuracy of estimated insured deposits, and the other is that changes in liability structure that occur as banks approach failure may expose the FDIC to losses that would otherwise be incurred by other creditors.

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[17] The FDIC currently uses a short-term credit risk model to complement other methods used to estimate its expected losses in the short term. And the FDIC continues to support the Basel 2 capital regime combined with a leverage ratio requirement for capital.

[18] Secured liabilities include loans from the Federal Reserve Bank window, Federal Home Loan Bank (FHLB) advances, repurchase agreements, and public deposits. Generally, government securities or other high-quality assets back these liabilities. At failure, secured liabilities are paid up to the market value of the pledged assets. Unsecured liabilities include interbank federal funds borrowings, which are typically overnight loans. Subordinated debt has always been a very small portion of total liabilities. It made up less than 1 percent of total liabilities until 1992, and it now makes up 1.5 percent of total liabilities.

[19] Banks file quarterly Reports of Condition and Income (or Call Reports). Savings associations file quarterly Thrift Financial Reports.

Accuracy of Estimated Insured Deposits

One potential problem with insured deposits is that the amount must be estimated and is therefore subject to measurement error. The FDIC estimates total insured deposits by aggregating data from each institution's quarterly Call Report.[20] Since 1982, the Call Reports have contained data used by the FDIC to compute a simple estimate of uninsured deposits. This simple estimate assumes that all deposit balances that exceed the insurance limit per account are uninsured and that all other deposit balances are insured. But these assumptions are not always correct and can result in inaccurate estimates, given the following complexities of the deposit insurance coverage rules:

1. If one person (or entity) owns multiple accounts in the same right and capacity, the estimate will understate uninsured deposits. For example, if an individual has two single-ownership accounts each worth $75,000, then $100,000 would be insured and $50,000 would be uninsured ($75,000 plus $75,000 less $100,000). However, the simple estimate would show $150,000 in insured deposits and no uninsured deposits, since neither account exceeds $100,000.
2. If more than one person owns an account (through joint ownership or pass-through coverage given to brokers, escrow accounts, pension accounts, or other agent relationships), the estimate will overstate uninsured deposits. For example, a $150,000 account held by two owners who each hold $75,000 would be fully insured. However, the simple estimate would show $100,000 in insured deposits and $50,000 in uninsured deposits ($150,000 less $100,000).[21]

[20] This discussion of the potential mismeasurement of insured deposits borrows from Carns (2002).
[21] The examples of both the multiple accounts and the brokered deposits assume that the depositors do not hold more in deposits in the same ownership capacity at the institution beyond what is described in the example.

3. If additional coverage is afforded for qualifying beneficiaries of trust accounts, the estimate will overstate uninsured deposits.

Beginning with the March 2002 Call Report, banks were required to provide their best estimate of uninsured deposits.[22] However, the Call Report instructions anticipate that the capabilities of institutions to provide better estimates will vary and that the best estimates should be derived from readily available data.

This requirement, however, did not remove the potential for error in the estimate of insured deposits, and the rules governing deposit insurance coverage remain complex. Moreover, although insured institutions have business reasons to know their domestic deposits, total liabilities, and subordinated debt, they have no business reason to accurately calculate insured deposits.[23] In fact, when the FDIC published an advance notice of proposed rulemaking in 2005 that would have required a small number of very large institutions to accurately determine whether their deposits were insured, the ensuing comments argued that even the largest banks were not well positioned to do so.[24] In addition, because of the complexity of the insurance rules, the FDIC cannot verify bank estimates of insured deposits.[25] The other two

[22] The Federal Deposit Insurance Corporation Improvement Act of 1991 required that "the Corporation shall take such actions as may be necessary to insure that (A) each insured depository institution maintains; and (B) the Corporation receives on a regular basis from such institution, information on the total amount of all insured deposits, preferred deposits, and uninsured deposits at the institution." 12 U.S.C. §1817(a)(9)(A). As a result, beginning in 1993, the Call Report asked that an institution report a better estimate of uninsured deposits if it had a procedure for calculating a better estimate. Reporting was voluntary and participation was minimal. For example, only 155 of the more than 8,500 banks that filed December 31, 2001 Call Reports provided their own estimate of uninsured deposits. Starting in 1993, all savings associations were required to provide a "better" estimate.

[23] The FDIC could take further action to improve the estimates. For example, it could mandate a certain amount of reliability and then audit banks to ensure compliance. However, actions like these would impose heavy regulatory burdens.

[24] FDIC (2005) describes the proposal.

[25] The extent to which the estimates of insured deposits have been improved by the requirement that an institution report a best estimate of uninsured deposits, if available, is unknown. Conceivably a bank could develop an improved, but more biased, estimate by eliminating errors that either understate or overstate uninsured deposits while making no adjustment for errors that do the opposite. For example, a bank might aggregate all accounts held by a single owner, but not segregate accounts by insurance category or separate owners or qualifying beneficiaries. This estimate would be biased and could potentially be less accurate than the simple estimate.

options—domestic deposits and total liabilities minus subordinated debt—are much easier to verify.

There is evidence that insured deposits are understated on the final Call Report submitted by failed banks.[26] An examination of 143 failed banks at which insurance status was determined at failure showed that, on average, the final estimate of insured deposits on the final Call Report was 10 percent lower than actual insured deposits at failure.[27] An examination of 16 failed institutions found that the simple estimate tended to overstate uninsured deposits (and understate insured deposits) on the failure date: on average, estimated uninsured deposits were two and one-half times higher than actual. However, no reliable comparisons for healthy institutions are available, and because uninsured depositors tend to flee banks as the institutions approach failure, there is good reason to expect different results for healthy banks. The overall effect of the three potential sources of error on the estimate of insured deposits remains unknown. In fact, it is possible that, on balance, the estimate of insured deposits is relatively accurate. Furthermore, because the Reform Act gives the FDIC flexibility in managing the reserve ratio within a range of 1.15 percent to 1.35 percent, a precise measure of the reserve ratio denominator has become less important.

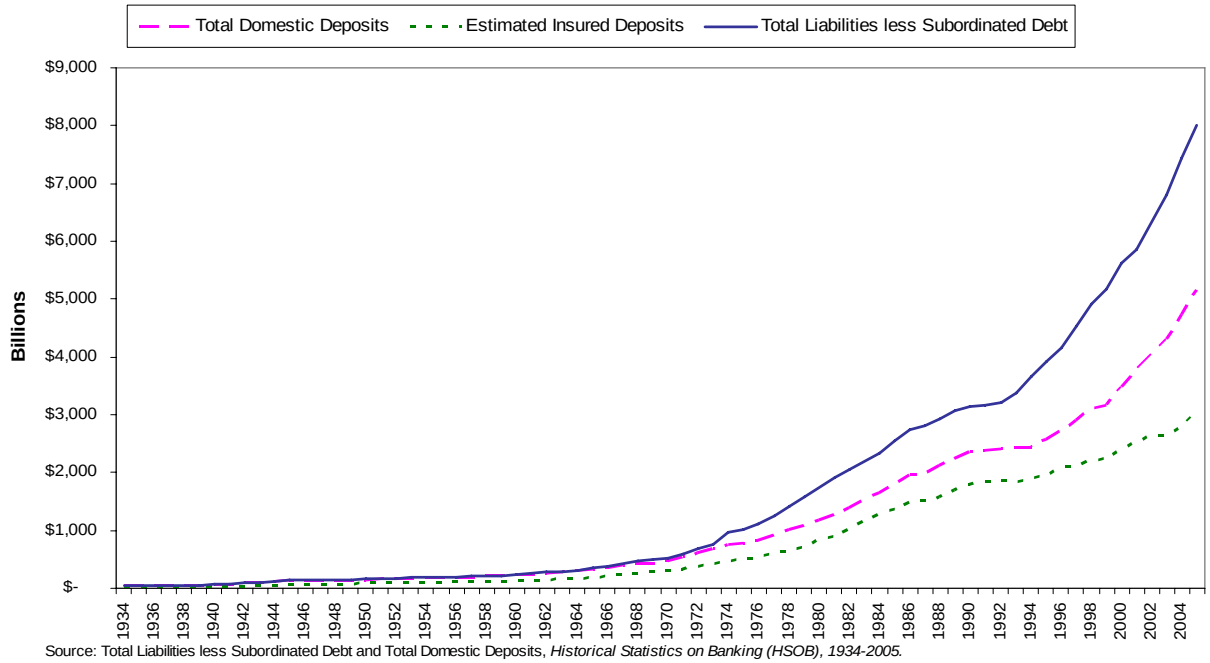
Changes in Liability Structure before Failure

If banks experience changes in their liability structure as they approach failure, an alternative denominator might do a better job than insured deposits of tracking the FDIC's

[26] The source for all the figures in this paragraph is internal FDIC calculations.
[27] On the other hand, the figure for total deposits, on average, was a very good estimate of insured deposits at failure.

potential loss exposure.[28] The importance of the question about the relationship between bank liability structure and the approach to failure has recently increased because the growth rates of the three alternative denominators have diverged since the mid-1990s: uninsured deposits and nondeposit liabilities have grown more quickly than insured deposits. Figure 4 reports estimated insured deposits, domestic deposits, and total liabilities minus subordinated debt held by commercial banks from 1934 to 2005.

Figure 4: Total Domestic Deposits, Estimated Insured Deposits & Total Liabilities less Subordinated Debt, Commercial Banks, 1934 - 2005



Source: Total Liabilities less Subordinated Debt and Total Domestic Deposits, *Historical Statistics on Banking (HSOB), 1934-2005.*

Note: Subordinated debt was unavailable prior to 1944. Given it was minimal relative to total liabilities, only total liabilities are reported prior to 1944. Also, estimated insured deposits are imputed as a share of total domestic deposits in commercial banks as reported in the HSOB. The share is the share of estimated insured deposits to total domestic deposits for all insured institutions as reported in the *2005 FDIC Annual Report*.

From 1995 to 2005, estimated insured deposits of FDIC-insured institutions grew by 45 percent, domestic deposits by 91 percent, and total liabilities minus subordinated debt by 99

[28] To better understand this relationship**,** consider a sample bank failure where the assets are worth nothing and, during the year before failure, total assets remain constant and either (a) the liability composition stays constant, or (b) all unprotected creditors flee the bank and are replaced by insured deposits. In the first case, the FDIC's loss equals insured deposits as of one year before failure. In the second case, the FDIC's loss equals total liabilities as of one year before failure.

percent.[29] As a result, the share of industry assets funded by insured deposits has declined. From 1983 to 1994 insured deposits made up over half of total liabilities; as of year-end 2005, they made up 37 percent. As the volume of uninsured liabilities has increased, so has the potential for creditors to shift risk onto the FDIC as banks approach failure.

Banks tend to approach failure by going through three stages, with the entire process generally occurring over three or more years.[30] In the first stage, loans grow rapidly, but profitability is good. In the second stage, loan quality and profitability suffer. In the last stage, losses from deteriorating loan quality grow more serious, and the bank generally takes strong action to correct the problems. During the last stage before bank failure, banks normally shrink. Numerous studies have examined the market response to deteriorating bank condition and have found significant changes in liability structure as bank health declines, particularly when banks approach failure.[31] These changes influence the FDIC's losses.

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[29] From 1980 to 1994, insured deposits of commercial banks made up 70 to 78 percent of total domestic deposits; they now make up 59 percent, the lowest percentage since deposit insurance limits increased to $15,000 in 1966. From 1934 to 1979, insured deposits made up 36 to 58 percent of total liabilities. Domestic deposits made up over 90 percent of total liabilities from 1934 until 1972 but only 76 percent of total liabilities by 1974. Since then, domestic deposits have ranged from 60 to 76 percent of total liabilities; as of year-end 2005, domestic deposits made up 63 percent of total liabilities.

[30] FDIC (1998), especially 487–88.

[31] In large part, creditors react to the probability of receiving payment. Claims are paid from the assets of the failed bank's estate in a set priority. Secured claims are always paid up to the value of the security. National depositor preference laws adopted in 1993 require that other creditors be paid upon failure in the following order (12 U.S.C. §§ 1816(e)(2)(C); 1821(d)(11)):

1. Administrative expenses of the receivership
2. Domestic deposits
3. General creditor claims, to include foreign deposits and unsecured borrowing
4. Subordinated claims
5. Cross-guarantee claims
6. Stockholders.

For further information on national depositor preference, see Marino and Bennett (1999).

Jordan suggests that banks choose to shrink as a way to improve compliance with capital adequacy requirements.[32] In addition, creditors often demand higher interest rates or collateral, thus providing additional incentives for banks to shrink. The shrinkage can sometimes improve capital ratios and reduce ongoing operating expenses, but it generally cannot take away the underlying losses in the asset portfolio, since assets are sold at market value.

A failing bank's creditors also respond to the change by demanding payment or security. Protected creditors (those with secured liabilities or insured deposits) have modest incentives to demand payment before failure; for example, Cook and Spellman spelled out several motivations for insured depositors to flee a declining institution.[33] Unprotected creditors (those with uninsured deposits or unsecured liabilities) have a far stronger incentive to demand payment or obtain security. Empirical evidence indicates that uninsured depositors are largely successful in obtaining payment before failure. Several researchers have documented substantial withdrawals of uninsured deposits during the period leading up to failure.[34] Bradley and Shibut found that between 1990 and 2002, uninsured deposits represented only 1.5 percent of total deposits at failure among failed banks, though on average nearly 23 percent of total deposits were uninsured during that period.[35]

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[32] Jordan (2000).

[33] Cook and Spellman (1994). They derive a model where insured depositors require a premium that compensates for restitution-related transaction costs. These costs incurred upon failure include costs of recovering the insured funds, the lost interest the depositors bear until the restitution is complete, and illiquidity costs.

[34] Goldberg and Hudgins (1996, 2002) conclude that uninsured deposits as a percentage of total deposits declined for U.S. savings associations as failure approached. Maechler and McDill (2003) find that uninsured depositors penalize banks for poor performance. In an earlier study, McDill and Maechler (2003) find uninsured depositors of U.S. banks to be more responsive to bank conditions at banks with relatively low equity. Davenport and McDill (2005), in their study of the recently failed Hamilton Bank, conclude that while total deposits declined by 27 percent in the last ten months of Hamilton's existence, uninsured deposits declined by 50 percent. Certain uninsured depositors have a weaker incentive to exit the bank because they have offsetting loans that effectively provide collateral. The decline for uninsured deposits that lacked offsetting loans was considerably higher than the decline for total uninsured deposits. See also Jordan (2000); Silverberg (1993); and Marino and Bennett (1999).

[35] Bradley and Shibut (2006).

Many studies have found that unsecured creditors limit their losses before a bank fails. For example, Hirshorn and Zervos found that the collateralization rate of nondeposit liabilities among the average insolvent savings association far exceeded that among well-capitalized savings associations.[36] They also estimated that, under the national depositor preference laws, thrifts with negative net worth would have collateralized 99 percent of nondepositor claims. Conversely, only 54 percent of nondepositor claims would have been collateralized among thrifts with capital between 0 percent and 3 percent. Focusing on the behavior of bank creditors of six large banks that failed between 1984 and 1992, Marino and Bennett observed that uninsured and unsecured liabilities fell relative to insured deposits as bank health deteriorated.[37]

Unlike uninsured depositors or unsecured creditors, the FDIC cannot limit its loss exposure by demanding payment or security.[38] In fact, the FDIC continues to insure any new deposits made at the bank up to the date of failure. Therefore, the FDIC's share of the total loss exposure typically increases as failure approaches.[39] Silverberg concludes that nondeposit creditors generally enable banks to fund high-risk assets (during the early stage of a bank failure), but they do not share in the resulting losses because they normally obtain payment or collateral beforehand.[40]

The empirical evidence consistently shows that the FDIC normally shoulders a very high percentage of the creditor losses at failure, regardless of how the failed banks initially funded

[36] Hirshorn and Zervos (1990).
[37] Marino and Bennett (1999). Also see Ashley, Brewer, and Vincent (1998); Osterberg and Thompson (2003); Stojanvic, Vaughan, and Yeager (2001); and Bennett, Vaughan, and Yeager (2005). Shibut (2002) summarizes the literature.
[38] Technically the FDIC could withdraw its insurance coverage before failure. However, the bank would almost certainly fail before such a time-consuming process could be completed.
[39] To stem this increase in exposure, the FDI Act imposes limits on the ability of banks in deteriorating financial condition to raise interest rates and accept brokered deposits. See 12 U.S.C. § 1831o(f)(2)(C)(i) (interest rates); 12 C.F.R. § 337.6 (brokered deposits).
[40] Silverberg (1993).

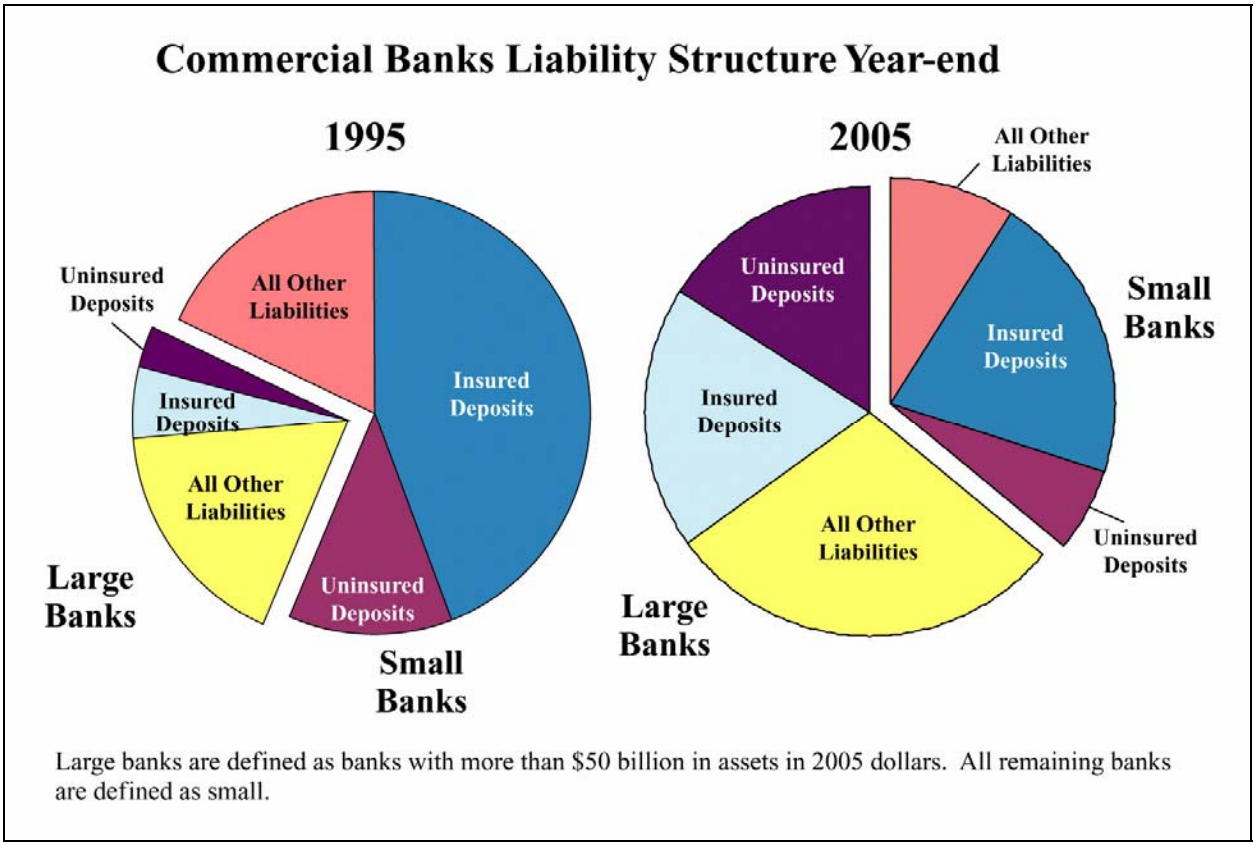
their operations. If this phenomenon were to persist across the entire industry going forward, it appears likely that the denominator that would be most closely related to the FDIC's potential loss exposure would be total liabilities minus subordinated debt and that domestic deposits would also track the FDIC's potential loss exposure more closely than insured deposits.

Other Aspects of the Changing Liabilities Question

However, this view is incomplete. Virtually all of the available evidence pertains to small banks because only a few larger banks have failed, and none of them failed under the current regulatory environment, including requirements for prompt corrective action, depositor preference, and the least-cost test. Furthermore, no U.S. bank with assets over $50 billion (in nominal dollars) has ever failed,[41] yet since the mid-1990s the share of industry assets held by institutions of this size has mushroomed. As of year-end 1995, 11 commercial banks had over $50 billion in assets (in 2005 dollars), and those 11 banks held 26 percent of the liabilities held by commercial banks. From 1995 to 2005, the number of banks with over $50 billion in assets (in 2005 dollars) increased from 11 to 27, and their share of the industry's liabilities increased from 26 percent to 65 percent.

In addition, as Figure 5 shows, on average the liability structure of the largest banks (defined as those with over $50 billion in assets in 2005 dollars) differs substantially from that of the rest of the industry. At year-end 2005, for the smaller banks, estimated insured deposits made up 59 percent of total liabilities, whereas for the largest banks they made up only 30 percent. Nondeposit liabilities made up 25 percent of the smaller banks' liabilities, but 46 percent of the largest banks' liabilities.

Figure 5



Because there is no historical failure experience associated with banks with assets over $50 billion, it is virtually impossible to predict the failure rate or the FDIC's loss rate at failure for these banks. There are good reasons to expect that a potential failure of a very large bank will not mimic the historical patterns of small banks. Some authors have suggested that the failure rate and the FDIC's loss rate might be lower than those of smaller institutions. For example, Oshinsky in one working paper and Shibut in another found that large banking companies experience lower failure rates and loss rates at failure than smaller banking

[41] The largest bank failure in the FDIC's history was Continental Illinois in 1984; at its peak it held $40 billion ($64 billion in 2005 dollars).

companies do.[42] This finding is consistent with the theory that diversification reduces risk. The liability structure of these banks might also reduce the FDIC's loss exposure: Marino and Bennett found that banks that are funded with a large volume of unprotected credits are more likely to experience a liquidity failure; at liquidity failures, unprotected creditors have less of an opportunity to protect their interests and the level of capital is generally higher, compared with other failures; therefore, the FDIC's loss rate is generally lower for liquidity failures.[43] The Group of Ten analyzed the effects of industry consolidation and suggested that the speed of failure for large banks has increased. On the other hand, these institutions have highly complex corporate structures and some of them have large volumes of foreign assets that may not be available to mitigate FDIC losses. Factors such as these might serve to increase the FDIC's loss rate at failure. In summary, there are reasons to expect that the probability of failure, and the FDIC's loss rate at failure, could be lower—perhaps even substantially lower—for these banks than for the rest of the industry. However, the only certain conclusion about the FDIC's potential loss exposure to these banks is that it could be very large.

Figure 5 also shows that the liability structure of smaller banks did not change a great deal from 1995 to 2005.[44] Instead, much of the recent change in the industry's overall liability structure appears to be related to the shift in industry assets from smaller banks to banks over $50 billion. Given the combination of this trend and the high degree of uncertainty about the FDIC's loss exposure associated with very large banks, it is unclear which of the various

[42] The studies referred to in this paragraph are Oshinsky (1999), Shibut (2002), Marino and Bennett (1999), and Group of Ten (2001).
[43] This phenomenon may be offset by the possibility that a failure of a large institution might be considered as posing a systemic risk. If a systemic-risk determination is made and the resolution strategy involves extra payments to unprotected creditors, then the reduction in FDIC losses due to the liquidity failure may not be realized. For details, see Shibut (2002). Note that systemic-risk determinations are expected to be extremely rare.
[44] For commercial banks under $50 billion in 2005 dollars, insured deposits made up 60 percent of total liabilities in 1995 and 59 percent in 2005.

alternative denominators would best reflect the FDIC's potential loss exposure over some appropriate time horizon. One can, however, look at the implicit assumptions about the FDIC's exposure to these banks that underlie each choice.

Implicit Assumptions about the FDIC's Exposure with Each Denominator

This section examines the relationship between the FDIC's risk exposure and the alternative denominators separately for different segments of the industry's liabilities: first, by type of liability (for example insured deposits or uninsured liabilities) and second, by bank size (total liabilities of small and large institutions). Ideally, the best denominator will be closely related to the FDIC's loss exposure for all the industry segments. Such an analysis is necessarily speculative, but even so it sheds some light on the question. Throughout this section, it is assumed that any switch to an alternative denominator would occur without changing the target fund size. Therefore, if a change were made to the denominator, the three alternatives would bring about different target fund balances only to the extent that the denominators grew at different rates in the future.

Total Liabilities Minus Subordinated Debt

If the FDIC were to use total liabilities minus subordinated debt as the denominator of the reserve ratio, and it maintained the same target fund size as of year end 2005, the designated reserve ratio would be changed to 50 basis points.[45] The 50 basis points would be applied to both insured deposits and uninsured liabilities. Therefore, an implicit assumption is that the FDIC's potential loss exposure from uninsured liabilities is the same as its potential loss

exposure from insured deposits. Based on the market discipline literature, this assumption appears reasonable for small institutions because uninsured creditors have by and large avoided losses (and thus pushed their loss exposure to the FDIC) before failure at small banks. However, it may overstate the FDIC's exposure to uninsured liabilities held by large institutions because uninsured creditors may be less able to avoid losses at large bank failures. Since over 75 percent of the industry's uninsured liabilities were held by large banks as of year end 2005, this assumption appears a bit weak. Another implicit assumption behind this option is that the FDIC's potential loss exposure per dollar of liabilities is roughly the same for large and small banks. While sketchy, the available evidence (on liquidity failures and failure cost by bank size) does not support the second assumption very well either. This analysis suggests that total liabilities minus subordinated debt would not be the best choice for the FDIC.

Total Domestic Deposits

If the FDIC were to use total domestic deposits as the denominator of the reserve ratio, and it maintained the same target fund size as of year end 2005, the designated reserve ratio would be changed to 81 basis points. One implicit assumption of this option is that the FDIC's potential loss exposure from assets funded by uninsured deposits is about the same as its potential loss exposure from insured deposits, but there is very little FDIC loss exposure from assets funded by nondeposit liabilities. Another way to examine the relationship between this denominator and the FDIC's loss exposure would be to look at its implications for two different segments of bank liabilities: insured deposits and uninsured liabilities (uninsured deposits and other uninsured liabilities). Under this option the FDIC would hold 81 basis points in the fund

[45] This figure, as well as the other figures used in the following discussion, is derived from Figure 5. Because

per dollar of insured deposits. The amount held per dollar of uninsured liabilities can be estimated by: a) calculating the segment of the targeted fund balance that is associated with uninsured deposits (that is, 81 basis points of uninsured deposits), and b) dividing it by uninsured liabilities. This estimate implies that the FDIC would hold 29 basis points per dollar of uninsured liabilities.[46] The implicit assumption is that the FDIC's potential loss exposure per dollar of uninsured liabilities (29 basis points) is lower than its exposure per dollar of insured deposits (81 basis points), but still significant. In other words, it implies that the FDIC's potential loss exposure per dollar of uninsured liabilities held by FDIC-insured institutions is roughly one third of the FDIC's potential loss exposure per dollar of insured deposits. In light of the available evidence on market discipline, the proportion of uninsured liabilities held by large banks, and the evidence (albeit skimpy) on the FDIC's loss exposure at large and small banks, this appears to be reasonable.

Because large banks hold such a high percentage of the industry's non-deposit liabilities, yet another implicit assumption relates to bank size. It implies that the use of total domestic deposits as the denominator assumes that that the FDIC's exposure per dollar of liabilities is somewhat lower for large banks than for small banks. The extent of the implied difference can be estimated by: a) calculating the target level of reserves separately for large and small banks on the basis of domestic deposits, and then b) calculating the ratio of the target fund balance to total liabilities separately for each group of banks. Based on year-end 2005 data, this would imply

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Figure 5 includes only commercial banks, the actual figures for the entire insurance fund would be a little different.

[46] More specifically, the ratios were calculated on the basis of Figure 5 as of year-end 2005 using a four-step process. First, the target fund balance of 125 basis points of insured deposits was calculated. Second, the target fund balance was divided by total domestic deposits; this yielded an equivalent DRR of 81 basis points of total domestic deposits. Then the targeted fund balance was broken into two segments, one for insured deposits (81 basis points of insured deposits), and another for uninsured deposits (81 basis points of uninsured deposits). The segment of the fund balance that was attributable to uninsured deposits (81 basis points of uninsured deposits) was $13.5 billion. The $13.5 billion was then divided by total uninsured liabilities; this was 29 basis points.

that the FDIC should target a fund balance that holds 61 basis points of total liabilities for small banks and 44 basis points of total liabilities for large banks.[47] This in turn implies that the FDIC's loss exposure per dollar of large bank liabilities would be roughly 72 percent of its loss exposure per dollar of small bank liabilities.[48] While highly uncertain, this assumption appears to be credible in light of the available evidence.

Insured Deposits

For the alternative of insured deposits, one implicit assumption is that the FDIC's potential loss exposure from assets funded by uninsured liabilities is very small. Because large banks hold such a high percentage of the industry's uninsured liabilities, another implicit assumption would be that the use of insured deposits as the denominator implies that the FDIC's exposure per dollar of liabilities is substantially lower for large banks than for small banks, but certainly not trivial. As with domestic deposits, one could estimate the extent of the implied difference by: a) calculating the target level of reserves separately for large and small banks on the basis of insured deposits, and then b) calculating the ratio of the target fund balance to total liabilities separately for each group of banks. Based on year-end 2005 data, this would imply that the FDIC should target a fund balance that holds 74 basis points of total liabilities for small banks and 37 basis points of total liabilities for large banks.[49] This in turn implies that the

[47] Specifically, based on Figure 5, calculate 81 basis points of total domestic deposits for large banks, and 81 basis points of total domestic deposits for small banks. This essentially creates two hypothetical target fund balances: one for large banks and one for small banks. The 61 basis points was calculated as the hypothetical small bank target fund balance divided by total liabilities of small banks. Likewise, the 44 basis points was calculated as the hypothetical large bank target fund balance divided by total liabilities of large banks.

[48] The 72 percent is calculated as the 61 basis points of liabilities for small banks divided by the 44 basis points of liabilities for large banks.

[49] Specifically, based on Figure 5, calculate 125 basis points of total insured deposits for large banks, and 125 basis points of total insured deposits for small banks. This essentially creates two hypothetical target fund balances: one for large banks and one for small banks. The 74 basis points was calculated as the hypothetical small bank target

FDIC's loss exposure per dollar of large bank liabilities is roughly 50 percent of its loss exposure per dollar of small bank liabilities.[50] While highly uncertain, this assumption also appears to be credible in light of the available evidence.

Summary of Liability and Accuracy Issues

In summary, a review of the implicit assumptions that underlie each alternative denominator raises some doubt about the choice of total liabilities minus subordinated debt because this choice implies that, per dollar of liabilities, the FDIC should anticipate roughly equivalent amounts of potential loss exposure from small and large banks. Historically, however, the exposures from small and large banks have not been roughly equivalent. This analysis does not set either domestic deposits or insured deposits apart as the best choice. Both of these options imply that the FDIC's potential loss exposure is, per dollar of liabilities, lower at large banks than at small banks; the use of insured deposits as the denominator implies a somewhat larger differential than the use of domestic deposits. There is simply not enough evidence at this time to determine which implicit assumption is more valid. Neither the analysis of measurement error nor the analysis of liability changes (and the associated implicit assumptions) indicates which alternative would be a better choice. Therefore, the FDIC finds that there is no compelling reason to change the denominator from insured deposits to one of the alternatives.

However, this uncertainty indicates that a reserve ratio based on insured deposits may provide an incomplete view of the fund's capital adequacy. It is still possible that one or both of

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fund balance divided by total liabilities of small banks. Likewise, the 37 basis points was calculated as the hypothetical large bank target fund balance divided by total liabilities of large banks.

the other denominators might be more closely related to the FDIC's potential loss exposure. Therefore, the FDIC should consider examining its capital adequacy (and setting assessments) in a way that does not depend entirely on the reserve ratio but, instead, relies on a broader view of its risk exposure. The Reform Act gave the FDIC more discretion to set assessments on the basis of a variety of factors (particularly when the designated reserve ratio falls between 115 and 135 basis points), and this analysis suggests that the FDIC should expect to use that discretion.

As time passes, additional information may become available that could provide stronger support for a change in the reserve ratio or for another type of improvement in the FDIC's management of its insurance fund balance. Therefore, the FDIC considers it an open question whether at some future time another denominator—or even another method for targeting the insurance fund balance—might be preferable to the current denominator of estimated insured deposits.

[50] The 50 percent is calculated as the 74 basis points of liabilities for small banks divided by the 37 basis points of liabilities for large banks.

Appendix

Background and Historical Overview

The adequacy of the FDIC's insurance fund was of obvious concern from the time the FDIC was created. The FDIC's initial capital consisted of $289 million contributed by the Treasury and Federal Reserve Banks; and the plan for a temporary insurance fund that was part of the Banking Act of 1933 called for this to be supplemented by assessments on insured banks.[51] The original permanent plan, which was never enacted, would have allowed the FDIC simply to assess banks when necessary to pay for the costs of losses at failed institutions. The Banking Act of 1935 adopted a flat annual assessment rate of 1/12th of 1 percent of a bank's total deposits. This assessment level was based on the FDIC's study of failure costs from 1864 to 1934, and the use of total deposits rather than estimated insured deposits was designed to reduce the relative burden on small banks.[52]

Although the level of insured deposits was not explicitly expressed as the denominator of a ratio, the FDIC was always concerned with that level, and during the 1930s and 1940s the Corporation called for special reports on deposits from all insured banks to help it estimate its contingent liability.[53] In its 1945 *Annual Report* the FDIC did use a ratio, with total deposits as the denominator: noting that troubled banks were often resolved through the use of transactions that protected all deposits, the agency suggested that total deposits might be a better measure of the fund's potential liabilities. The report stated that the ratio of the fund to total deposits had been declining and stood at 59 basis points, the lowest in the Corporation's history. Moreover, the report traced the ratio back through 1934.[54]

During the 1940s failures became rare, deposit growth continued unabated, and so the deposit insurance fund continued to grow. Given the small number of failures, after the fund reached $1 billion many observers, irrespective of any measure of fund adequacy, believed the insurance fund sufficient to handle any eventuality. This led to the repayment of the initial capital contributions by the Treasury and Federal Reserve banks in 1947–1948 and the institution of a system of assessment credits in 1950 (the system of assessment credits thus lowered the effective assessment rate).[55] Also in 1950, the FDIC's *Annual Report* altered its reporting to include—for the first time—the ratio of the deposit insurance fund to both total deposits and estimated insured deposits, and it traced both ratios back to the FDIC's inception.[56] Thereafter both ratios were generally reported.

It was not until 1980 and passage of the Depository Institutions Deregulation and Monetary Control Act that a statutory reserve ratio was established. The act's inclusion of a

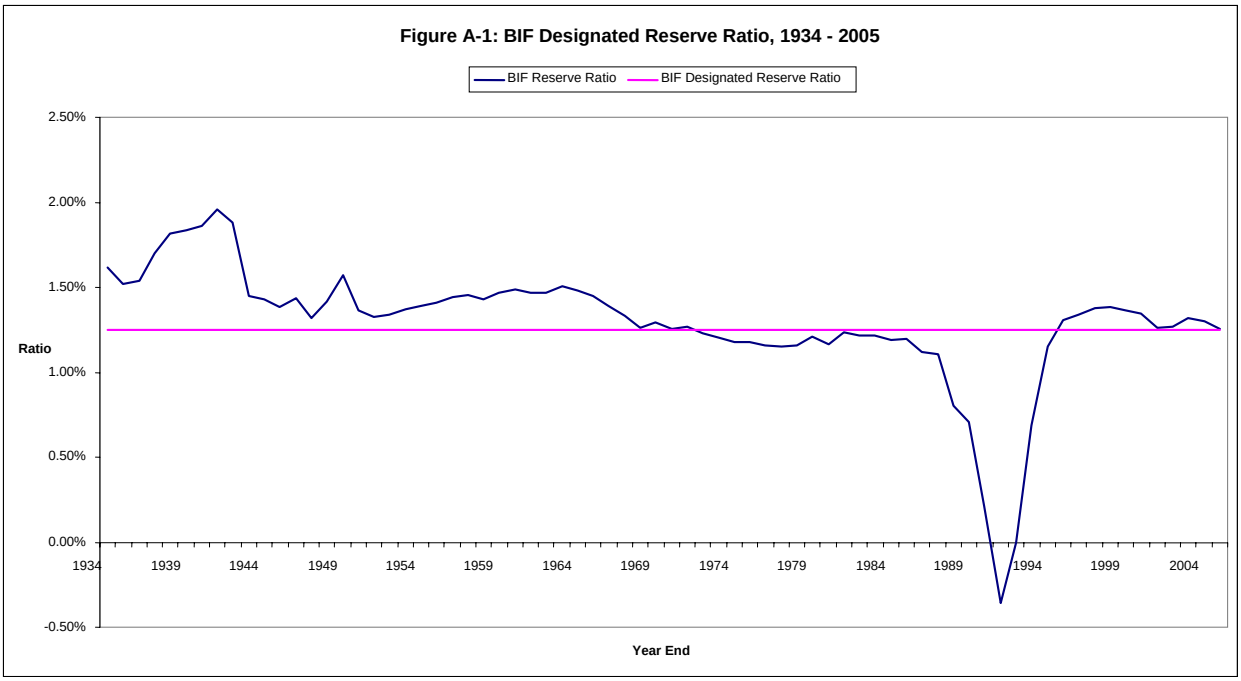
[51] The plan called for each bank to pay an assessment of 1/2 of 1 percent of its insured deposits, with half of the assessment payable immediately and the remainder at the FDIC's call.
[52] The FDIC found that during the preceding 70 years, excluding periodic crises, losses to depositors with deposits under $5,000 (the insurance coverage level) amounted to 9 cents per $100. See U.S. House (1935), 8.
[53] The special reports during these decades were prepared in 1936, 1938, 1941, 1945, and 1949. See FDIC (1945), 63, and FDIC (1949), 57.
[54] FDIC (1945), 3, 32.
[55] FDIC (1984), 58.
[56] FDIC (1950), 29.

statutory reserve ratio, at the FDIC's behest, was likely prompted by an increase in the number of failures in the 1970s and the increasing numbers of problem banks in the middle to late 1970s. The reserve ratio created a mechanism that would require a reduction in assessment credits to insured institutions if the fund's capital were drained. The statute also provided for increases in credits if the fund's level rose. The range for the reserve ratio was set from 1.10 to 1.40 percent of estimated insured deposits. The law required that whenever the ratio fell below 1.10 percent, the FDIC Board of Directors would have to increase the percentage of net assessment income transferred into the fund. Conversely, when the reserve ratio exceeded 1.40 percent, the percentage of net assessment income transferred into the fund was to be reduced. In addition, the statute stated that if the reserve ratio exceeded 1.25 percent, the Board could reduce the percentage of net assessment income transferred into the fund as long as it did not reduce the reserve ratio to below 1.25 percent.[57]

As the banking crisis of the 1980s progressed, some form of reserve ratio remained in force but various statutory changes affected both the ratio and the assessment schemes designed to maintain the adequacy of the insurance funds. For example, the Financial Institutions Reform, Recovery and Enforcement Act of 1989 included the creation of a "hard-target" DRR of 1.25 percent of insured deposits, but allowed the FDIC to set the DRR as high as 1.5 percent. The FDIC Assessment Rate Act of 1990 removed the 1.5 percent ceiling. The Federal Deposit Insurance Corporation Improvement Act of 1991 maintained the 1.25 percent target, mandated the implementation of risk-based deposit insurance premiums, and removed the assessment credit system. The Deposit Insurance Funds Act of 1996 reestablished the FDIC's authority to grant assessment rebates and prohibited the FDIC from charging premiums to well-capitalized, well-managed institutions when the reserve ratio exceeded 1.25 percent. The Federal Deposit Insurance Reform Act of 2005 removed the hard-target DRR in favor of a range and allowed the FDIC to charge risk-based premiums regardless of the level of the reserve ratio. Despite all the recent statutory and regulatory changes, however, the denominator of the reserve ratio and DRR has continued to be set by statute as total estimated insured deposits.

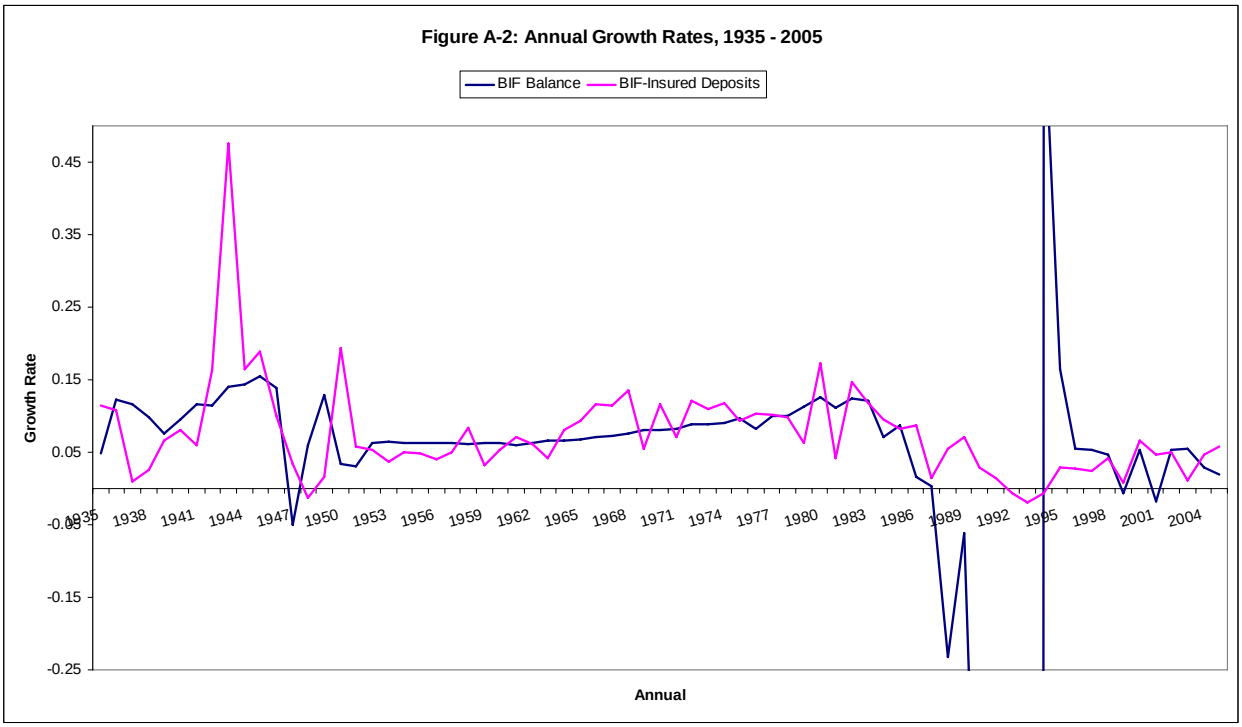
Figure A.1 shows the Bank Insurance Fund (BIF) reserve ratio between 1934 and 2005 and the DRR for the same period. The vertical axis represents the value of the reserve ratio, with the current DRR target value of 1.25 percent highlighted. The horizontal axis represents the time period 1934 to 2005. The BIF reserve ratio exceeded the 1.25 percent target for the life of the fund until 1972, when it fell below the threshold; it did not regain the threshold again until 1995. Recently the BIF reserve ratio again approached the 1.25 percent threshold, falling to it by December 2005.

[57] 12 USC 1817, 1976 edition, Supplement 4 (1980).



Historically, increases in insurance coverage have contributed to declines in the reserve ratio, particularly the increase from $10,000 to $15,000 in 1966 and then those to $20,000 in 1969 and $40,000 in 1974. The sharp decline in the 1980s began with the increase in insurance coverage to $100,000 in 1980 but fell precipitously as a result of the banking crisis of 1980 to 1994.

Recently the BIF reserve ratio has declined because the industry's insured deposits have grown more quickly than the insurance fund. Figure A.2 shows the annual growth rate of insured deposits and the fund balance between 1935 and 2005. The vertical axis represents the annual growth rate, while the horizontal axis represents the period 1935 to 2005. The growth rate of aggregate insured deposits measurably exceeded that of the BIF balance in 2004 and 2005.



Before the two funds were merged, the recent decline in the BIF reserve ratio called attention to the importance of the appropriate reserve ratio denominator. For several reasons, however, the Reform Act arguably served to dampen the immediate concerns about capital adequacy that were associated with the growth of insured deposits in the denominator of the reserve ratio. First, the Reform Act merged the BIF and the Savings Association Insurance Fund (SAIF) to create the DIF and replaced the BIF and SAIF reserve ratios with a comparable DIF reserve ratio. Second, the Reform Act replaced the 1.25 threshold with a range over which the DIF reserve ratio can fluctuate without triggering mandatory action on the part of the FDIC. In particular, the DIF reserve ratio can now fall to 1.15 percent before the FDIC is compelled to charge enough in assessments to restore the DIF reserve ratio to at least 1.15 percent generally within five years.

As of September 2006, the DIF reserve ratio had fallen to 1.22 percent. In November 2006, the FDIC established the DRR for the DIF at 1.25 percent. Even though the statutory implications of the DRR were relaxed under the Reform Act, the DIF DRR will still serve to signal the reserve ratio that the FDIC's Board of Directors aims to attain and will signal the effect that the Board wants assessments to have on the reserve ratio.

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