

How Large Has the Federal Financial Safety Net Become?

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In 2002, Walter and Weinberg examined the federal financial safety net as it stood at the end of 1999 (Walter and Weinberg 2002). At the time, the authors estimated that approximately 45 percent of all financial firm liabilities were protected by the safety net. As one would expect in this article, the current estimate indicates that the size of the net has grown, as the financial market turmoil that began in 2007 led federal government agencies to expand the range of institutions and the types of liabilities protected by the safety net.

1. THE SAFETY NET: ITS DEFINITION, COSTS, AND BENEFITS

Walter and Weinberg defined the federal financial safety net as consisting of all explicit or implicit government guarantees of private financial liabilities. Private financial liabilities are those owed by one private market participant to another. As used by Walter and Weinberg, the phrase *government guarantee* means a federal government commitment to protect lenders from losses due to a borrower's default (Walter and Weinberg 2002).¹ Following this definition, we include in our estimate of the safety net, insured bank and thrift deposits, certain other banking company liabilities, some government-sponsored enterprise (GSE) liabilities, selected private employer pension liabilities, as well as

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¹ In addition to estimating the proportion of financial firm liabilities backed by the federal government, Walter and Weinberg also estimated the proportion of nonfinancial firm and household liabilities with such backing.

a subset of the liabilities of other financial firms. The details of why we chose to include these liabilities are provided below.

Effect of a Safety Net on Economic Efficiency

Government actions in the form of subsidies, taxes, or regulations change market outcomes, and in competitive markets such changes distort allocations and can reduce economic efficiency. Does the financial safety net cause distortions? As discussed in Walter and Weinberg, in principle, the government could design guarantees that mimic market outcomes. Typically, however, government intervention arises from a desire to alter market outcomes. In the case of guarantees, this means either expanding coverage or underpricing relative to private market guarantees. Underpricing means that the guarantor collects fees that are less than the expected value of its obligations. This underpricing subsidizes risk taking.

Underpriced guarantees tend to shift resources away from activities that are not covered toward those that are. In that way, a government guarantee is similar to a direct subsidy paid to those engaged in a particular activity. A guarantee is different, however, in the way it affects attitudes toward risk. By assigning to the government part of the risk in the activities being financed, the safety net reduces market participants' willingness to control risk. Overprovision of guarantees, while not necessarily drawing resources into an activity, does shift risk preferences in a way similar to underpricing. In short, guarantees lead to expanded risk taking.

Our calculation of the size of the safety net does not represent a measure of the size of the distortions to the allocation of resources and risk taking. Such a measure would require knowledge of the extent of underpricing or overprovision of government guarantees. Those would be difficult to measure, especially the latter, since government provision often preempts private market activity. We nevertheless believe that the extent of distortions is directly related to the size of the safety net. Other things being equal, the greater the share of private liabilities protected by the government safety net, the more likely it is that government guarantees are extending beyond the level of protection that would be provided in a private market.

Why Have a Safety Net?

If the safety net is distortionary, why have one? Proponents of the financial safety net, especially as it applies to banks, often argue that private risk-sharing arrangements tend to disregard the *systemic* consequences of large losses borne by an individual or a small group of institutions. The idea here is that such losses might spill over and generate further losses caused, for example, by a contagious loss of investor confidence. Under such a view, govern-

ment protection for certain investors could prevent widespread financial panic or distress. While the potential systemic consequences of a large financial failure are difficult to assess, when faced with the possibility of widespread failures of financial firms, policymakers are likely to conclude that preventing such failures by protecting creditors of financial firms (providing safety net protection) is prudent.

Similarly, some observers maintain that the safety net protections can lower the costs of, and therefore encourage, certain highly beneficial financial arrangements. For example, Diamond and Dybvig (1983) argue that banks' performance of the *maturity transformation function* is highly beneficial to the economy but is more costly without government-provided deposit insurance. Banks perform maturity transformation by gathering money from numerous short-term depositors (those bank customers whose deposits *mature* soon after deposited—especially checking deposits, which are available, meaning that they mature, immediately after being deposited) to fund long-term loans to businesses and individuals. Without deposit insurance, which only the government has sufficient resources to provide, bank runs are likely to occur. A bank run happens when many depositors attempt to withdraw their funds simultaneously. Since banks make long-term loans, they cannot recover sufficient money from borrowers to meet a run and, therefore, fail. To protect themselves from runs, banks can undertake costly private measures, but Diamond and Dybvig argue that government deposit insurance is likely to be less expensive and therefore preferable to such measures.

2. LEGISLATIVE AND REGULATORY CHANGES THAT EXPANDED THE SAFETY NET

As shown in Table 1, we estimated the proportion of financial firm liabilities protected as of the end of 2009. By the end of 2009, a number of government programs had been established to address turmoil in financial markets. Employing methods similar to those used by Walter and Weinberg when they measured the size of the safety net for the end of 1999, we find that as of the end of 2009 about 59 percent of financial firm liabilities were protected by the federal safety net.

One of the most important reasons for the increase from 1999 to 2009 is the enlarged portion of banking firm liabilities that market participants are likely to consider protected: banking and savings firm liabilities with an implicit backing. In 1999, implicitly guaranteed liabilities of banks and savings institutions amounted to about 13 percent of all of these firms' liabilities (15.9 percent for commercial banks and 4.2 percent for savings institutions), or \$820

Table 1 Estimated Federal Financial Safety Net

Financial Firms	Explicitly Guaranteed Liabilities	Implicitly Guaranteed Liabilities	Explicitly and Implicitly Guaranteed Liabilities	Total Liabilities
Banking and Savings Firms (Includes BHCs)	6,536 40.2%	7,276 44.8%	13,812 85.0%	16,249
Credit Unions	725 88.7%		725 88.7%	817
Government-Sponsored Enterprises				
Fannie Mae		3,345	3,345	3,345
Freddie Mac		2,333	2,333	2,333
Farm Credit System		188	188	188
Federal Home Loan Banks		973	973	973
Total		6,838 100%	6,838 100%	6,838
Private Employer Pension Funds	2,799 85.5%		2,799 85.5%	3,273
Other Financial Firms		748 4.9%	748 4.9%	15,158
Total for Financial Firms	10,059 23.8%	14,862 35.1%	24,921 58.9%	42,335

Notes: Data from December 2009, in billions of dollars. Figures may not sum exactly due to rounding. The figures in the column "Explicitly and Implicitly Guaranteed Liabilities" are the sum of the numbers in the first two columns, "Explicitly Guaranteed Liabilities" and "Implicitly Guaranteed Liabilities." See Appendix for table legend.

billion; in 2009, about 45 percent of banking and savings firm liabilities were implicitly guaranteed, by our estimate, amounting to \$7.3 billion.²

How did Walter and Weinberg determine which institutions to include as having an implicit guarantee and which liabilities issued by these institutions might be covered? As the authors noted, the critical question is whether market participants believe that a given institution will be protected, even though official policy may not state explicitly that all of these liabilities are protected. As of 1999, Walter and Weinberg argued that market participants were likely to assume that certain holders of liabilities in the largest 21 banking companies and the two largest thrift companies would be protected in the event that these firms became troubled. These 21 banking companies and two thrifts all had assets (in 1999 dollars) of more than \$50 billion, which was greater than the smallest of the 11 institutions identified by the Comptroller of the Currency in 1984 as potentially too big to fail (Walter and Weinberg 2002, p. 381). The liabilities that Walter and Weinberg assumed the market would be highly likely to view as protected were deposits of more than \$100,000 (deposits of less than \$100,000 are included in the “Explicitly Guaranteed Liabilities” column in the tables), federal funds loans made to the 21 banks and two thrifts, and repo transactions with these banks and thrifts. Though we intend to use a similar methodology for estimating the size of implicit guarantees for banking companies in 2009, events during the recent financial crisis required some adjustments.

Support for Stress-Tested Financial Companies

Given that the government had responded aggressively to problems in financial firms during the financial turmoil of 2008–2009, our challenge is to decide which institutions have implicit guarantees. Here we maintain that market participants were very likely to assume that the liabilities of the financial firms that were stress tested early in 2009 (participants in the Supervisory Capital Assessment Program—SCAP) had a strong likelihood of receiving federal backing if they suffered financial distress. Indeed, the announcement of the stress tests in February 2009 came with a promise of government-provided capital for stress-tested institutions that were shown to be in need of additional capital:

Under [the Treasury’s Capital Assistance Program] CAP, federal banking supervisors will conduct forward-looking assessments [SCAP stress tests] to evaluate the capital needs of the major U.S. banking institutions under a more challenging economic environment. Should that assessment indicate that an additional capital buffer is warranted, banks will have

² An explanation of the factors underlying the large increase is provided below.

an opportunity to turn first to private sources of capital. In light of the current challenging market environment, the Treasury is making government capital available immediately through the CAP to eligible banking institutions to provide this buffer. (FinancialStability.gov 2009)

Additionally, a number of these firms did, in fact, receive government aid in the form of capital injections in 2008 and early 2009 through the Treasury's Capital Purchase Program or in response to the stress tests (FinancialStability.gov 2010, pp. 21, 27, 67–80). This aid, both the aid promised under the CAP and aid received through the Capital Purchase Program, reduced the likelihood that *all* liabilityholders of the protected firms would suffer losses, so here we include *all* liabilities of the stress-tested banking institutions in our safety net calculation.

While some observers in 2009 may have viewed the likely passage of financial reform legislation as diminishing federal backing, we nevertheless count the liabilities of the stress-tested firms. Legislation that was intended to limit the chance that financial institutions would receive federal aid was being considered in the U.S. Congress during 2009. If market participants were convinced that such legislation would forestall any opportunity for the creditors of the largest financial institutions to be protected by the federal government, then our calculation might appropriately exclude the liabilities of stress-tested banking institutions. In fact, most of the legislative proposals included language that called for the closure of troubled financial firms with losses to equityholders and at least some creditors (though at least one leading proposal contained protections for creditors of financial firms if the failure of such a firm might create a systemic risk).³ Nevertheless, legislative proposals contained provisions meant to establish a mechanism that could clearly identify “systemically important” financial firms. Such mechanisms seem likely to encourage market participant expectations of federal aid to the creditors of the largest (i.e., systemically important) firms. Given the ambiguous effect of the reform proposals on the probability of federal aid to the largest banking firms, and the clear protections provided for troubled firms and for their creditors during the financial turmoil, we retain their liabilities in our estimate of liabilities protected by the safety net, in keeping with Walter and Weinberg (2002). (In a later section we remove the liabilities of stress-tested institutions and re-estimate the size of the safety net—see Table 2.)

As indicated earlier, the total liabilities of the 19 stress-tested bank holding companies, less their liabilities that were explicitly covered by deposit insurance, summed to \$7.3 trillion (“Implicitly Guaranteed Liabilities” column in

³ See H.R. 4173 as of December 2, 2009, p. 370, available at: http://www.house.gov/apps/list/press/financialsvcs_dem/presscfpa_121109.shtml.

the tables). This sum equals about 45 percent of all banking and savings firm liabilities.

Increased Ceiling on Insured Deposits

Several Federal Deposit Insurance Corporation (FDIC) programs expanded the explicit portion of the safety net for banks and thrifts (“Explicitly Guaranteed Liabilities” column in the tables) beyond the long-standing \$100,000 coverage for deposits (which are also included in the “Explicitly Guaranteed Liabilities” column in the tables).⁴ For example, in October 2008 the Emergency Economic Stabilization Act of 2008 temporarily increased FDIC deposit insurance coverage from \$100,000 to \$250,000, until December 31, 2009. In May 2009, the \$250,000 cap was extended to December 31, 2010, by the Helping Families Save Their Homes Act. In July 2010, legislation made permanent the \$250,000 coverage limit (Federal Deposit Insurance Corporation 2010a).

Transaction Account Guarantee Program

Further, in October 2008 the FDIC implemented a program to insure uninsured deposits (those deposits in accounts containing more than \$250,000) in noninterest-bearing transactions accounts for those insured banks and thrifts wishing to participate. The program is temporary. At first it covered such transactions accounts until December 31, 2009. Later the FDIC extended the program’s coverage until June 30, 2010, and then extended it again until December 31, 2010, with a pre-announced option to extend it an additional 12 months (Federal Deposit Insurance Corporation 2010a).⁵ This program, the Transaction Account Guarantee Program (TAGP), added \$834 billion to our “Explicitly Guaranteed Liabilities” column in the tables for banking and savings firms (Federal Deposit Insurance Corporation 2009c).

Debt Guarantee Program

Last, in October 2008 the FDIC offered, to banking and savings institutions wishing to participate, the option to receive FDIC insurance coverage for senior unsecured debt issued by such institutions. This Debt Guarantee Program

⁴ Since April 2006, deposits in certain retirement accounts at banks and thrifts have been protected by the FDIC up to \$250,000 (Federal Deposit Insurance Corporation 2006). Deposits in such accounts, up to the \$250,000 ceiling, are included in the “Explicitly Guaranteed Liabilities” column of our tables.

⁵ The Dodd-Frank Wall Street Reform and Consumer Protection Act extended coverage for noninterest-bearing transaction accounts through December 31, 2012 (Federal Deposit Insurance Corporation 2010c).

(DGP) at first covered debt issued by June 30, 2009, and maturing by June 30, 2010. The DGP was later extended to cover debt issued by October 31, 2009, and maturing by December 31, 2012. As of December 31, 2009, the program was insuring \$309 billion in debt (Federal Deposit Insurance Corporation 2009b).

3. OTHER COMPONENTS OF THE SAFETY NET

As in 1999, we include for 2009 the liabilities of government-sponsored enterprises (direct GSE liabilities plus the dollar amount of mortgage-backed security guarantees) in the “Implicitly Guaranteed Liabilities” column in the tables. Earlier we noted that government guarantees can often modify market prices. Though our article has made no attempt to measure the size of guarantees’ effect on market prices, in the case of the GSEs’ implicit guarantee, the size of the effect on market prices has been estimated by Passmore (2005) and others.⁶ Passmore (2005) estimates that the average homeowner saved between 3 and 11 basis points on his or her mortgage because of the implicit guarantee. The subsidy lowers the GSEs’ borrowing costs, and some of this saved borrowing cost is passed on to homeowners by the GSE in the form of lowered mortgage interest rates. Passmore calculates that about half of the guarantee’s benefit flows to the shareholders of the GSEs. While the Treasury made clear its support for Fannie Mae and Freddie Mac once these two financial firms were placed in conservatorship in September 2008, the support was not as strongly stated as that given to insured deposits, so we leave these liabilities in the implicit column in the tables.⁷

We estimate the amount of private pensions explicitly guaranteed in 2009 by the Pension Benefit Guarantee Corporation (PBGC) based on the latest private pension data available, which are data for 2007 (Pension Benefit Guarantee Corporation 2010, pp. 83, 105). Our admittedly rough 2009 figure is derived by simply adjusting the 2007 figure by twice the average annual growth rate of private pension liabilities for the previous 10 years (1997–2007).

We also count all of the liabilities of American International Group (AIG) as implicitly guaranteed in the “Other Financial Firms” row in the tables.⁸

⁶ Beyond Passmore, the Congressional Budget Office (2001) also developed estimates of the GSEs’ guarantee on mortgage interest rates.

⁷ We treat Fannie Mae and Freddie Mac as private entities and therefore include their liabilities in our table, consistent with the way Walter and Weinberg treated these entities, even though the status of Fannie Mae and Freddie Mac as privately owned firms is more ambiguous now than in 1999.

⁸ The insured deposit liabilities of AIG’s savings bank are not included in the “Other Financial Firms” row since these liabilities were included in the “Banking and Savings Firms” row. While AIG owns a savings bank, it is not classified as a bank holding company (and does not file a bank holding company report [Y9C] with federal regulators), so we do not include it in the Banking and Savings Firms row.

We count their liabilities as such because of the aid provided them by the Federal Reserve and the U.S. Treasury following AIG's financial problems in September 2008. Because there were no clear signals about whether aid might be forthcoming for other large, nonbank financial firms (beyond the stress test firms), we did not include the liabilities of any firms other than AIG in the "Other Financial Firms" row in tables.

4. ALTERNATIVE ESTIMATES OF THE SIZE OF THE SAFETY NET

As has been noted, Table 1 is based on several assumptions similar to those made by Walter and Weinberg in 2002. For example, we assumed that all liabilities of stress-tested bank holding companies would be protected, not just the liabilities representing FDIC-insured bank deposits. What would be the size of the safety net if these assumptions were changed?

Contrary to our assumption about the likely protection of liabilityholders of stress-tested companies, one can imagine circumstances under which such liabilityholders might be left unprotected. If one of these companies were to fail at a time when financial markets were broadly healthy, policymakers could more easily allow the company to be handled as a bankruptcy so that no government funds are employed to protect liabilityholders (of course, the holders of FDIC-insured deposits would still be covered given that such deposits are protected regardless of the circumstances surrounding the failure). In times of general financial market strength, the failure of a large holding company could perhaps be absorbed without worries of a cascade of additional failures. And at such times, if the firm were handled through the Dodd-Frank Act's orderly liquidation process, it is possible that neither the government nor other financial firms would provide funds to protect liabilityholders.⁹

While investors might expect large financial firm failures to typically occur in times of widespread financial weakness, and therefore anticipate that their investments would be protected, some large firms have failed in times of financial market health. One such example was London-based Barings Bank, which failed when financial markets were broadly strong in 1995. Its failure was because of the huge trading losses generated by one unchecked Barings trader who took large, unauthorized futures positions. Given that there are circumstances under which the holders of stress-tested company liabilities might be left unprotected, dropping the assumption of their coverage and recalculating our estimate of implicitly guaranteed liabilities seems worthwhile.

⁹ The Orderly Liquidation Authority section of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 contains provisions that allow funds gathered from assessments on the largest financial firms to be used to protect liabilityholders.

Table 2 Estimated Federal Financial Safety Net, Narrowly Defined

Financial Firms	Explicitly Guaranteed Liabilities	Implicitly Guaranteed Liabilities	Explicitly and Implicitly Guaranteed Liabilities	Total Liabilities
Banking and Savings Firms (Includes BHCs)	5,392 33.2%		5,392 33.2%	16,249
Credit Unions	725 88.7%		725 88.7%	817
Government-Sponsored Enterprises				
Fannie Mae		3,345	3,345	3,345
Freddie Mac		2,333	2,333	2,333
Farm Credit System		188	188	188
Federal Home Loan Banks		973	973	973
Total		6,838 100%	6,838 100%	6,838
Private Employer Pension Funds	2,799 85.5%		2,799 85.5%	3,273
Other Financial Firms				15,158
Total for Financial Firms	8,915 21.1%	6,838 16.2%	15,753 37.2%	42,335

Notes: Data from December 2009, in billions of dollars. Figures may not sum exactly due to rounding. The figures in the column "Explicitly and Implicitly Guaranteed Liabilities" are the sum of the numbers in the first two columns, "Explicitly Guaranteed Liabilities" and "Implicitly Guaranteed Liabilities." See Appendix for table legend.

Large financial firms that are not bank holding companies might receive no protection in such instances, so we also drop liabilities of AIG from those liabilities with implicit backing.

Also, we included in our explicitly insured deposits category those deposits covered by the FDIC's temporary guarantee programs, since these programs were in place in 2009. But under the debt guarantee program no new debt issues were covered after October 31, 2009 (Federal Deposit Insurance Corporation 2010b). The TAGP was set to expire as of the end of 2010, though the Dodd-Frank Act extended it to December 31, 2012. In the case of future financial firm failures, such programs may not be in place, and might not be reinstated. Therefore, re-estimating our measure of the size of the safety net without considering these deposits as protected also seems worthwhile.

Table 2 contains our estimate of the size of the safety net without including the liabilities of the stress-tested bank holding companies, AIG, and the FDIC temporary insurance program deposits. These changes mean that, compared to Table 1, the proportion of liabilities receiving explicit and implicit guarantees falls to 37.2 percent.

Additionally, while we assume that the liabilityholders of the housing and farm credit GSEs will be protected from loss, as were such holders of Fannie Mae and Freddie Mac debt during the 2007–2009 financial crisis, under some circumstances such holders might be left unprotected. As in the case of the stress-tested companies, if a GSE were to fail during a period in which financial markets were healthy, policymakers might leave debtholders unprotected. Therefore, it is possible that one might want to exclude the liabilities of the GSEs from the calculation of the safety net. If the \$6.8 trillion in liabilities of the GSEs were removed (which are the only implicitly guaranteed liabilities in Table 2), then our measure of the safety net would shrink to 21 percent of total liabilities in Table 2, the amount of explicit liabilities shown in Table 2.

Some readers might contend that one category of liabilities, which we have excluded from our safety net estimate, could legitimately be added: money market mutual fund liabilities. In the creation of our tables, and in Walter and Weinberg (2002), mutual fund liabilities are excluded because the principal value of mutual fund investments, including money market mutual fund investments, can decline, without the mutual fund defaulting, if the entity in which the funds are invested defaults. As a result, these investments are akin to equity and unlike private liabilities—the focus of our estimates—which typically must pay back full principal (or else be in default). For example, an investor in a money market mutual fund, which in turn invested in financial firm commercial paper, could lose principal if the commercial paper was not repaid, but the mutual fund can continue to operate (i.e., not default).¹⁰ This

¹⁰ Money market mutual funds are loath to pay back less than full principal (“break the buck” in mutual fund parlance), and few have done so over time. Instead, the money market

view of money market mutual fund investments as equity must be tempered, however, by events in 2008. Specifically, the Treasury stepped in and protected investors in mutual funds from losses, thereby treating investments in the funds like other guaranteed *liabilities*, in which losses are prevented by government assistance or guarantees. As a result, one might argue that our estimates of the fraction of total liabilities carrying a government guarantee—both the numerator and denominator—should include money market mutual funds. If one adds the amount of such fund balances outstanding at the end of 2009 (\$3.3 trillion [Investment Company Institute 2010]) to our estimates in the column “Explicitly and Implicitly Guaranteed Liabilities” in Table 1, the proportion would increase to 62 percent. The Table 2 figure would increase to 42 percent.

5. CONCLUSION

Recent government actions by legislators and financial regulators expanded the federal financial safety net. Such actions include augmentation of deposit insurance, debt guarantees for banking companies, aid to stress-tested financial firms, and, perhaps, various regulatory reform legislative proposals. As discussed in Walter and Weinberg (2002), this expansion has likely encouraged a view that liabilityholders will be protected by the federal government in times of financial difficulty in the future. As a result of this expectation of government protection, liabilityholders will exercise less oversight over financial firm risk taking than they would without this expectation, financial firms will undertake more risk, and financial market decisions will be distorted and inefficient.

mutual fund's parent typically injects funds to allow the fund to pay back full principal. This behavior by mutual fund parent companies indicates that parent companies and investors may well view money market mutual fund investments more as liabilities than equity, regardless of the fact that money market mutual funds can break the buck without defaulting.

APPENDIX A: LEGEND TO TABLE 1

- Banking and Savings Firms¹¹
 - Explicitly Guaranteed Liabilities
 - * FDIC-insured deposits of all commercial banks and savings institutions including transaction accounts covered by the FDIC's TAGP, plus debt guaranteed by the FDIC's DGP
 - Implicitly Guaranteed Liabilities
 - * Total liabilities of the 19 stress-tested institutions, less FDIC-insured deposits and accounts covered by TAGP and debt covered by DGP for the 19 stress-tested institutions

- Credit Unions
 - Explicitly Guaranteed Liabilities
 - * National Credit Union Administration-insured shares and deposits

- Government Sponsored Enterprises
 - Implicitly Guaranteed Liabilities of:
 - * Fannie Mae
 - Total liabilities
 - Fannie Mae mortgage-backed securities held by third parties
 - Other guarantees
 - * Freddie Mac
 - Total liabilities
 - Freddie Mac participation certificates and structured securities held by third parties
 - * Farm Credit System
 - Total liabilities
 - Farmer Mac guarantees
 - * Federal Home Loan Banks
 - Total liabilities

¹¹ See Section 4 for a description of the differences between Table 1 and Table 2 estimates.

- Private Employer Pension Funds
 - Explicitly Guaranteed Liabilities
 - * Pension liabilities backed by the PBGC
- Other Financial Firms
 - Explicitly Guaranteed Liabilities
 - * Total liabilities of AIG, less FDIC-insured deposits of AIG Federal Savings Bank

APPENDIX B: DATA APPENDIX TO TABLE 1

Banking and Savings Firms—Explicitly Guaranteed Liabilities:

“Estimated FDIC-insured deposits” of commercial banks, savings institutions, and U.S. branches of foreign banks (Federal Deposit Insurance Corporation 2009a), plus “Amount Guaranteed” in the Transaction Account Guarantee Program (Federal Deposit Insurance Corporation 2009c), plus “Debt Outstanding” in the Debt Guarantee Program (Federal Deposit Insurance Corporation 2009b).

Banking and Savings Firms—Implicitly Guaranteed Liabilities:

Total liabilities of the 19 stress-tested institutions found in the Y9C (quarterly bank holding company financial reports), less 1) the explicitly guaranteed deposits of the banks and savings institutions owned by these 19 firms, and 2) the FDIC-insured debt (insured under the DGP) of each of these institutions. The estimated FDIC-insured deposits and the guaranteed amount in noninterest-bearing transaction accounts for each bank can be found on the FDIC’s website in the “Institution Directory” (www2.fdic.gov/idasp). The amount of DGP debt of each firm can be found on the firms’ 10Ks.

Banking and Savings Firms—Total Liabilities:

Total liabilities from the following sources: For large (consolidated assets of over \$500 million) bank holding companies, Consolidated Financial Statements for Bank Holding Companies (FR Y9C); for small (consolidated assets less than \$500 million) bank holding

companies, Parent Company Only Financial Statements for Small Bank Holding Companies (FR Y9SP)—from which consolidated total liabilities can be derived; for banks not owned by a bank holding company, Consolidated Reports of Condition and Income for a Bank (FFIEC 031 and FFIEC 041); and for all thrift liabilities, Thrift Financial Reports.

Credit Unions—Explicitly Guaranteed Liabilities:

Total insured shares at the \$250,000 limit (National Credit Union Administration 2009).

Credit Unions—Total Liabilities:

Board of Governors (2010), Table L.115—Credit Unions, “Total liabilities.”

Government-Sponsored Enterprises:

Fannie Mae:

Total liabilities, plus Fannie Mae MBS held by third parties, plus other guarantees found in the Fannie Mae 10K, “Item 6. Selected Financial Data” (p. 70).

Freddie Mac:

10K report of Freddie Mac, “Total liabilities” (“Consolidated Balance Sheets,” p. 209), plus “Total PCs and Structured Securities issued” (“Item 6. Selected Financial Data,” p. 57), less “Total Freddie Mac PCs and Structured Securities held” in Freddie Mac portfolio (Table 28, p. 104).

Farm Credit System:

Farm Credit System (2010), “Total liabilities” (“Combined Statement of Condition Data,” p. 3), plus “Farmer Mac guarantees” (p. 12).

Federal Home Loan Banks:

Federal Home Loan Banks (2010), “Total liabilities” (“Combined Statement of Condition,” p. 194).

Private Employer Pension Funds—Explicitly Guaranteed Liabilities:

Liabilities of all pension funds insured by the PBGC (which insures only defined benefit plans) were \$2,559 billion in 2007, the latest date for which data are reported (Pension Benefit Guarantee Corporation

2010, pp. 83, 105). This figure is inflated by twice (because 2007–2009 involves two years of growth) the average annual growth rate of PBGC-insured pension liabilities from 1997–2007 to obtain our estimate of all liabilities in pension funds insured by the PBGC as of December 31, 2009 (\$2,946 billion). Since PBGC covers pensions only up to a specified maximum payment per year, a portion of beneficiaries’ pensions in guaranteed plans—those with pensions paying above this maximum—are not insured. According to the PBGC, this portion is estimated to be 4–5 percent (Pension Benefit Guarantee Corporation 2007, p. 24; Pension Benefit Guarantee Corporation 1997, footnote to Table B-5). To arrive at the guaranteed portion of PBGC guaranteed pension fund liabilities, we multiplied total 2009 fund liabilities (\$2,946 billion) by 0.95 to yield \$2,799 billion.

Private Employer Pension Funds—Total Liabilities:

There appears to be no data on the total liabilities of all private employer-defined benefit pension funds. Therefore, we estimate our total liability figure based on PBGC data. To derive our figure, we begin with our previously determined estimate of all private pension fund liabilities that are included in PBGC (\$2,946) and then divide it by 0.9 to arrive at our total liability figure of \$3,273 billion. The PBGC insures only about two-thirds of private sector single-employer-defined benefit plans, but almost all multi-employer plans (Pension Benefit Guarantee Corporation 2009, p. 5). Among the types of defined benefit plans PBGC does not insure are small (fewer than 25 employees) plans maintained by small professional service employers like doctors, lawyers, and accountants. Since the PBGC excludes only the smaller single-employer plans, and includes most multi-employer plans, we assume that it covers well more than 66 percent (i.e., two-thirds) of all liabilities, setting our estimate at 90 percent.

Other Financial Firms—Implicitly Guaranteed Liabilities:

“Total liabilities of AIG” found in its 10K report, less “estimated insured deposits” of AIG Federal Savings Bank found on the FDIC’s website in the “Institution Directory” (<http://www2.fdic.gov/idasp>).

Other Financial Firms—Total Liabilities:

Board of Governors (2010), Tables L.116—Property-Casualty Insurance Companies; L.117—Life Insurance Companies; L.126—Issuers

of Asset-Backed Securities; L.127—Finance Companies; L.128—Real Estate Investment Trusts; L.129—Security Brokers and Dealers; L.131—Funding Corporations, less taxes payable whenever a figure for taxes was reported on these tables.

REFERENCES

- Board of Governors of the Federal Reserve System. 2010. Level Tables in Federal Reserve statistical release Z.1, “Flow of Funds Accounts of the United States.” www.federalreserve.gov/releases/z1/20100311/z1r-4.pdf (11 March).
- Congressional Budget Office. 2001. *Federal Subsidies and the Housing GSEs*. Washington, D.C.: Government Printing Office.
- Diamond, Douglas, and Philip Dybvig. 1983. “Bank Runs, Deposit Insurance, and Liquidity.” *Journal of Political Economy* 91 (June): 401–19.
- Farm Credit System. 2010. “2009 Annual Information Statement of the Farm Credit System.” www.farmcredit-ffcb.com/farmcredit/serve/public/finin/annin/report.pdf?assetId=150693&uniq=1277320695095 (1 March).
- Federal Deposit Insurance Corporation. 2006. “FDIC Insurance for Retirement Accounts Increased to \$250,000.” www.fdic.gov/news/news/press/2006/pr06029.html (14 March).
- Federal Deposit Insurance Corporation. 2009a. “Table III-B: Estimated FDIC-Insured Deposits by Type of Institution.” www2.fdic.gov/qbp/2009dec/qbp.pdf (31 December).
- Federal Deposit Insurance Corporation. 2009b. “Table IV-C: Debt Issuance Under Guarantee Program.” www2.fdic.gov/qbp/2009dec/qbp.pdf (31 December).
- Federal Deposit Insurance Corporation. 2009c. “Table III-C: Transaction Account Guarantee Program.” www2.fdic.gov/qbp/2009dec/qbp.pdf (31 December).
- Federal Deposit Insurance Corporation. 2010a. “Changes in FDIC Deposit Insurance Coverage.” www.fdic.gov/deposit/deposits/changes.html.
- Federal Deposit Insurance Corporation. 2010b. “Temporary Liquidity Guarantee Program, Second Quarter 2010.” www2.fdic.gov/qbp/2010jun/qbptlgp.html (31 August).

- Federal Deposit Insurance Corporation. 2010c. "FDIC Board Proposes Rules on Temporary Unlimited Deposit Insurance Coverage for Noninterest-Bearing Transaction Accounts." www.fdic.gov/news/news/press/2010/pr10217.html (27 September).
- Federal Home Loan Banks. 2010. "2009 Combined Financial Report." www.fhlf-of.com/ofweb_userWeb/resources/09yrend.pdf (30 March).
- FinancialStability.gov. 2009. "U.S. Treasury Releases Terms of Capital Assistance Program." www.financialstability.gov/latest/tg40.html (25 February).
- FinancialStability.gov. 2010. "Troubled Assets Relief Program (TARP): Monthly 105(a) Report—July 2010." [www.financialstability.gov/docs/105CongressionalReports/July%202010%20105\(a\)%20Report_Final.pdf](http://www.financialstability.gov/docs/105CongressionalReports/July%202010%20105(a)%20Report_Final.pdf) (10 August).
- Investment Company Institute. 2010. "Weekly Total Net Assets (TNA) and Number of Money Market Mutual Funds." www.ici.org/pdf/mm_data_2010.pdf.
- National Credit Union Administration. 2009. "2009 Yearend Statistics for Federally Insured Credit Unions." www.ncua.gov/Resources/Reports/statistics/Yearend2009.pdf.
- Passmore, Wayne. 2005. "The GSE Implicit Subsidy and the Value of Government Ambiguity." *Real Estate Economics* 33 (July): 465–86.
- Pension Benefit Guarantee Corporation. 1997. "Pension Insurance Data Book 1996." www.pbgc.gov/docs/1996databook.pdf.
- Pension Benefit Guarantee Corporation. 2007. "Pension Insurance Data Book 2006." www.pbgc.gov/docs/2006databook.pdf.
- Pension Benefit Guarantee Corporation. 2009. "Pension Insurance Data Book 2008." www.pbgc.gov/docs/2008databook.pdf.
- Pension Benefit Guarantee Corporation. 2010. "Pension Insurance Data Book 2009." www.pbgc.gov/docs/2009databook.pdf.
- Walter, John R., and John A. Weinberg. 2002. "How Large Is the Federal Financial Safety Net?" *Cato Journal* 21 (Winter): 369–93.