

May 2005

PRIVATE PENSIONS

Recent Experiences of Large Defined Benefit Plans Illustrate Weaknesses in Funding Rules





Highlights of [GAO-05-294](#), a report to congressional committees

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Why GAO Did This Study

Pension funding rules are intended to ensure that plans have sufficient assets to pay promised benefits to plan participants. However, recent terminations of large underfunded plans, along with continued widespread underfunding, suggest weaknesses in these rules that may threaten retirement incomes of these plans' participants, as well as the future viability of the Pension Benefit Guaranty Corporation (PBGC) single-employer insurance program. We have prepared this report under the Comptroller General's authority, and it is intended to assist the Congress in improving the financial stability of the defined benefit (DB) system and PBGC. We have addressed this report to each congressional committee of jurisdiction to help in their deliberations. This report examines: (1) the recent funding and contribution experience of the nation's largest private DB plans; (2) the funding and contribution experience of large underfunded plans, and the role of the additional funding charge (AFC); and (3) the implications of large plans' recent funding experiences for PBGC, in terms of risk to the agency's ability to insure benefits.

What GAO Recommends

The Congress should consider broad pension reform that is comprehensive in scope and balanced in effect. However, if features of current regulation are retained, Congress should consider measures to strengthen the AFC and limit the use of funding standard account credits to substitute for cash contributions. www.gao.gov/cgi-bin/getrpt?GAO-05-294.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Barbara Bovbjerg at (202) 512-7215 or bovbjergb@gao.gov.

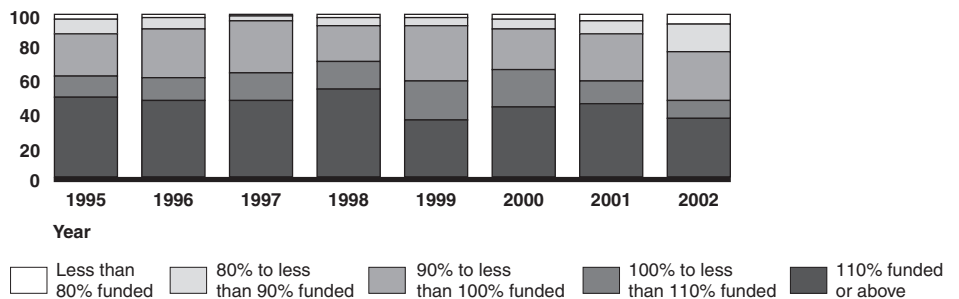
What GAO Found

Each year from 1995 to 2002, while most of the largest DB pension plans had assets that exceeded their current liabilities, 39 percent of plans on average were less than 100 percent funded. By 2002, almost one-fourth of the 100 largest plans were less than 90 percent funded. Further, because of leeway in the actuarial methodology and assumptions sponsors may use to measure plan assets and liabilities, underfunding may actually have been more severe and widespread than reported. Additionally, 62.5 percent of sponsors of the largest plans each year on average made no cash contribution because the rules allow sponsors to satisfy minimum funding requirements through plan accounting credits that substitute for cash contributions.

From 1995 to 2002, only 6 unique plans in our sample were subject to an additional funding charge (AFC), the primary funding mechanism to address underfunding, a total of 23 times. By the time a firm was subject to an AFC, its plan was likely significantly underfunded, and such plans remained poorly funded. By using other funding credits, just over 30 percent of the time sponsors of these plans were able to forgo cash contributions in the years their plans were assessed an AFC. Two very large and significantly underfunded plans terminated without their sponsors owing a cash contribution in the 3 years prior to termination, illustrating further weaknesses in the AFC.

To the extent that financially weak firms sponsor underfunded plans, weaknesses in funding rules create a potentially large financial risk to PBGC and thus retirement security generally. From 1995 to 2002, on average each year, 9 of the largest 100 plans had a sponsor with a speculative grade credit rating, suggesting financial weakness and poor creditworthiness. Plans of speculative grade-rated sponsors had lower average funding levels and were more likely to incur an AFC than other plans. As of September 30, 2004, PBGC estimated that plans of financially weak companies with a "reasonably possible" chance of termination had plans with an estimated \$96 billion in underfunding.

Funding Levels among the Annual 100 Largest DB Plans, 1995–2002
Percentage of 100 largest DB plans



Source: GAO analysis of PBGC Form 5500 research data.

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Abbreviations

AFC	additional funding charge
DB	defined benefit
DRC	deficit reduction contribution
ERISA	Employee Retirement Income Security Act
FFL	full funding limitation
FSA	funding standard account
IRC	Internal Revenue Code
OBRA '87	Omnibus Budget Reconciliation Act of 1987
PBGC	Pension Benefit Guaranty Corporation
PRAD	Policy, Research and Analysis Department
S&P	Standard and Poor's

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United States Government Accountability Office
Washington, DC 20548

May 31, 2005

Congressional Committees

The Pension Benefit Guaranty Corporation's (PBGC) single-employer insurance program is a federal program that insures certain benefits of the more than 34 million worker, retiree, and separated vested participants of over 29,000 private sector defined benefit (DB) pension plans. In recent years, because of unfavorable economic conditions and the collapse of large underfunded pension plans sponsored by well-known firms like Bethlehem Steel, U.S. Airways, and United Airlines, the program's financial condition has worsened significantly. From a \$9.7 billion surplus at the end of fiscal year 2000, the program reported a \$23.3 billion deficit as of September 2004, including a \$12.1 billion loss for fiscal year 2004.¹ In addition, financially weak firms sponsored DB plans with a combined \$96 billion of underfunding as of September 2004, up from \$35 billion as of 2 years earlier.² These figures illustrate both PBGC's current financial difficulties and the ongoing threat underfunded DB pension plans pose to the agency.

The Employee Retirement Income Security Act of 1974 (ERISA), as amended, and the Internal Revenue Code (IRC) prescribe pension funding rules to determine how much a firm sponsoring a DB pension plan (or "sponsor") must contribute to its plans each year.³ An amendment to ERISA and the tax code added the additional funding charge (AFC), a

¹This figure represents the excess of the net present value of PBGC's single-employer program's future benefit payments to participants of terminated plans, plus expenses, over the program's assets, plus anticipated losses from probable future terminations. The \$23.3 billion deficit for fiscal year 2004 already includes the recent takeover by PBGC of several United Airlines pension plans.

²The recent downgrading of the credit ratings for Ford and General Motors to non-investment grade status is likely to raise this \$96 billion figure significantly.

³For key legislative changes that have affected the single-employer program, see GAO, *Pension Benefit Guaranty Corporation: Single-Employer Pension Insurance Program Faces Significant Long-Term Risks*, [GAO-04-90](#) (Washington, D.C.: Oct. 29, 2003), appendix II.

supplementary charge assessed to sponsors of certain underfunded plans.⁴ While these funding rules seek to ensure that plans contain sufficient assets to pay promised pension benefits to plan participants, recent terminations of large and severely underfunded pension plans have called into question their effectiveness.

We have prepared this report under the Comptroller General's authority, and it is intended to assist the Congress in improving the financial stability of the defined benefit system and PBGC. As it may prove helpful in the deliberations of committees with jurisdiction over pension issues, we have addressed this report to each of these committees. In previous reports, we have called for comprehensive DB pension reform that, among other elements, would include changes to the current funding rules to encourage firms to better, and more transparently, fund their plans. We have also called for a range of PBGC insurance program and other related reforms.⁵ Because of the risks facing the single-employer program, in July 2003 we placed the program on our high-risk list of government operations facing significant vulnerabilities.⁶ Further, there are parallels between the financial problems of the DB pension system and those of Social Security, currently the focus of domestic public policy debate, as well as the broader long-term budgetary challenges facing the federal government.⁷

To assess how well the minimum funding rules have performed and to better understand how key rules work to protect plans from becoming severely underfunded, we will address the following issues: (1) the recent trend in funding and contribution behavior for the nation's largest private

⁴The AFC comprises different additional charges for specific underfunded plan liabilities, including the deficit reduction contribution, or DRC. Because the AFC combines the DRC with other charges and offsets, we refer to the AFC, instead of the DRC, throughout this report as the "bottom line" additional charge that some underfunded plans owe.

⁵Previously reported reforms include strengthening funding rules applicable to poorly funded plans; modifying PBGC single-employer program guarantees; restructuring PBGC premiums; and improving the availability of information about plan investments, termination funding status, and program guarantees. Several variations of reform were discussed within each reform option. For further information, see [GAO-04-90](#).

⁶For further information on the challenges facing PBGC, see GAO, *Pension Benefit Guaranty Corporation Single-Employer Pension Insurance Program: Long-Term Vulnerabilities Warrant High-Risk Designation*, [GAO-03-1050SP](#) (Washington, D.C.: Jul. 23, 2003), and *High-Risk Series: An Update*, [GAO-05-207](#) (Washington, D.C.: Jan. 2005).

⁷See GAO, *21st Century Challenges: Re-Examining the Base of the Federal Government*, [GAO-05-325SP](#) (Washington, D.C.: Feb. 2005).

DB plans, (2) the funding and contribution experience of large underfunded plans and the role of the AFC, and (3) the implications of large plans' recent funding experience for PBGC, in terms of risk to the agency's ability to insure benefits.

Our analysis focused on DB pension data for the 100 largest plans as ranked by current liabilities reported on Schedule B of the Form 5500⁸ each year from 1995 to 2002, as well as on financial information on sponsors of these large plans.⁹ For details on our scope and methodology, please see appendix I. Our work was done in accordance with generally accepted government auditing standards from November 2003 to May 2005.

Results in Brief

From 1995 to 2002, while most of the 100 largest plans had assets that exceeded their current liabilities, on average 39 of these plans each year were less than 100 percent funded on a current liability basis; that is, their plans' current liabilities exceeded plan assets reported at their actuarial value. Overall, reported plan funding levels were generally stable and strong over the late 1990s, with no more than 9 of the 100 largest plans less than 90 percent funded in any year from 1996 to 2000. However, by 2002 over half of the 100 largest plans were less than 100 percent funded, and approximately one-fourth of plans were less than 90 percent funded. Further, because of leeway in the actuarial methodology and assumptions that sponsors may use to measure plan assets and liabilities, underfunding may actually have been more severe and widespread than reported on the

⁸Form 5500 is a disclosure form that private sector employers with qualified pension plans are required to file with the Internal Revenue Service (IRS), Labor's Employee Benefit Security Administration (EBSA), and PBGC. IRS administers and enforces tax code provisions concerning private pension plans, EBSA enforces ERISA requirements regarding disclosure and other issues, and PBGC insures the benefits of participants in most private sector defined benefit pension plans that are eligible for preferential tax treatment.

⁹These 100 plans are not a "closed group." For example, a plan that is one of the 100 largest plans in one year may not be in the sample of plans if its liabilities are not in the 100 largest plans for other years. Twenty-five plans are in the sample every year from 1995 to 2002, and 51 plans are in at least 7 of the 8 years of the sample. From 1995 to 2002 we witness 187 distinct plan identifiers called the employee identification number (EIN) and plan identification number (PIN). However, the actual number of completely unrelated plans in our sample may be lower than the 187 reported because a number of plan sponsors in our sample merged or changed names. For various reasons, EINs and PINs used to identify Form 5500 filings can change throughout the life cycle of a plan. These changes can occur because of changes in corporate structure, the sale of a division or plant to another firm, or filer error.

Form 5500. Additionally, each year on average 62.5 percent of sponsors of the 100 largest plans made no annual cash contributions to their plans. One key reason for limited or no contributions is that the funding rules allow a sponsor to satisfy minimum funding requirements without necessarily making a cash contribution each year, even though the plan may be underfunded.

From 1995 to 2002, very few sponsors of the 100 largest plans were required to pay an additional funding charge (AFC), a funding mechanism designed to reduce severe plan underfunding. Most of the affected plans were less than 80 percent funded by the time they were assessed an AFC, and those that owed an AFC were likely to remain significantly underfunded and owe the AFC again in the future. Further, sponsors of 2 severely underfunded plans that terminated were sometimes subject to a small or no AFC, and made no cash contributions in the 3 years prior to termination. Because funding rules allow sponsors owing an AFC to use credits other than cash contributions to satisfy funding requirements, sponsors' contributions on average were less than the AFC assessed. Just over 30 percent of the time a plan was assessed an AFC, the sponsor of that plan did not make a cash contribution in the year that the AFC was assessed.

Underfunded plans sponsored by financially weak firms pose a greater risk to PBGC than do other plans. From 1995 to 2002, on average, 9 percent of the largest 100 plans each year had a sponsor with a speculative grade credit rating, suggesting these firms' financial weakness and poor creditworthiness. Firms with a speculative grade credit rating were more likely to sponsor underfunded plans, implying that these plans presented a significant risk to PBGC and other premium payers. As a group, these plans had lower average funding levels and were more likely to incur an AFC. In addition, speculative grade-rated sponsors generally had a higher incidence of using the highest legally allowable interest rate to discount reported plan liabilities. The use of higher interest rates tends to depict plan funding in a more optimistic light. To the extent that the interest rates used by plans are overly optimistic, these plans have the potential to create additional financial exposure and thus risk to PBGC. Of PBGC's 41 largest claims in which the rating of the sponsor was known, 39 have involved plan sponsors that were rated as speculative grade just prior to termination. Among these claims, over 80 percent of plan sponsors were rated as speculative grade 10 years prior to termination. The future outlook is similar: Plans sponsored by companies with speculative grade credit ratings and classified by PBGC as "reasonably possible" for termination represent an estimated \$96 billion in potential claims.

Because the current DB pension funding rules appear to expose PBGC and participants to the risk that plans will have insufficient assets to pay promised benefits, this report raises two matters for congressional consideration. To the extent that the current funding framework is retained, these matters regard reforms to the funding rules that might be considered to reduce the number and severity of underfunded plans and the single-employer program's financial exposure.

Background

In DB plans, formulas set by the employer determine employee benefits. DB plan formulas vary widely, but benefits are frequently based on participant pay and years of service, and typically paid upon retirement as a lifetime annuity, or periodic payments until death.¹⁰ Because DB plans promise to make payments in the future, and because tax-qualified DB plans must be funded, employers must use present value calculations to estimate the current value of promised benefits.¹¹ The calculations require making assumptions about factors that affect the amount and timing of benefit payments, such as an employee's retirement age and expected mortality, and about the expected return on plan assets, expressed in the form of an interest rate. The present value of accrued benefits calculated using mandated assumptions is known as a plan's "current liability." Current liability provides an estimate of the amount of assets a plan needs today to pay for promised benefits.

Before the enactment of ERISA, few rules governed the funding of DB pension plans, and participants had little assurance that they would receive the benefits promised. ERISA, and several amendments to the law

¹⁰Lifetime annuities may also offer the option of continuing payments to a survivor after the participant's death. Some DB plans also offer the option of taking benefits as a lump-sum payment. For more on pension dispositions, see GAO, *Private Pensions: Participants Need Information on Risks They Face in Managing Pension Assets at and during Retirement*, [GAO-03-810](#) (Washington, D.C.: Jul. 29, 2003). In recent years, some sponsors have converted their traditional DB plans to so-called hybrid, or cash balance, plans. Cash balance plans are a form of defined benefit plan that determines benefits on the basis of hypothetical individual accounts and commonly offer a lump-sum feature. For more information on cash balance plans, see GAO, *Private Pensions: Implications of Conversions to Cash Balance Plans*, [HEHS-00-185](#) (Washington, D.C.: Sept. 29, 2000), and *Cash Balance Plans: Implications for Retirement Income*. [HEHS-00-207](#) (Washington, D.C.: Sept. 29, 2000).

¹¹Present value calculations reflect the time value of money—that a dollar in the future is worth less than a dollar today, because the dollar today can be invested and earn interest. Using a higher interest rate will lower the present value of a stream of payments because it implies that a lower level of assets today will be able to fund those future payments.

since its passage, established minimum funding requirements for sponsors of pension plans in order to try to ensure that plans contain enough assets to pay promised benefits. In principle, a sponsor must annually fund the amount required to fund the plan's "normal cost," the amount of earned benefits allocated during that year, plus a specified portion of other liabilities that may be amortized over a period of years.

Compliance with the minimum funding requirements is recorded through the plan's funding standard account (FSA). The FSA tracks events that affect the financial health of a plan during that plan year: credits, which reflect improvements to the plan's assets, such as contributions, amortized experience gains,¹² and interest; and charges, which reflect an increase in the plan's financial requirements, such as the plan's normal cost and amortized charges such as the initial actuarial liability, experience losses, and increases in a plan's benefit formula.¹³ If FSA credits exceed charges in a given plan year, the plan's FSA registers a net "credit balance" that may be carried forward to the next plan year; conversely, a prior year's funding deficiency also carries forward. The FSA credit balance at year-end is equal to the FSA credit balance at the beginning of the year plus FSA credits less FSA charges. Compliance with the minimum funding standard requires that the FSA balance at the end of the year is non-negative. An existing credit balance accrues interest and may be drawn upon to help satisfy minimum funding requirements for future plan years, and therefore may offset the need for future cash contributions.

ERISA and the IRC prescribe rules regarding the assumptions that sponsors must use to measure plan liabilities and assets. For example, for plan years 2004 and 2005, the IRC specifies that the interest rate used to calculate a plan's current liability must fall within 90 to 100 percent of the weighted average of the rate on an index of long-term investment-grade corporate bonds during the 4-year period ending on the last day before the

¹²Experience gains and losses reflect, among other things, the difference between actual asset performance and the assumed rates of return on assets for the plan, as reported in previous years.

¹³Plans may amortize experience gains or losses over a 5-year period. Changes in the terms of the plan arising from plan amendments may be amortized over a 30-year period. Thus, these events continue to affect the FSA and plan funding for several years after they occur.

beginning of the plan year.¹⁴ Similarly, rules dictate that sponsors report an “actuarial” value of assets that must be based on reasonable assumptions and must take into account the assets’ market value.¹⁵ This value may differ in any given year, within a specified range,¹⁶ from the current market value of plan assets, which plans also report. While different assumptions will change a plan’s reported assets and liabilities, sponsors eventually must pay the amount of benefits promised; if the assumptions used to compute current liability differ from the plan’s actual experience, current liability will differ from the amount of assets actually needed to pay benefits.¹⁷

Funding rules generally treat a plan as an ongoing entity, and plans do not necessarily have to maintain an asset level equal to current liabilities every year. However, the funding rules include certain mechanisms that are intended to keep plans from becoming too underfunded. One such mechanism is the AFC, introduced by the Omnibus Budget Reconciliation Act of 1987 (OBRA ‘87). The AFC requires sponsors of plans with more than 100 participants that have become underfunded to a prescribed level to make additional plan contributions in order to prevent funding levels from falling too low. With some exceptions, plans with an actuarial value of assets below 90 percent of current liabilities are affected by the AFC

¹⁴The rate used to calculate current liability has usually been based on the 30-year Treasury bond rate, with the allowable range above and below the 4-year weighted average varying in different years. The Pension Funding Equity Act of 2004 replaced the Treasury bond rate with the corporate index for plan years 2004 and 2005. See IRC Section 412(b)(5)(B)(ii)(II). For further discussion of rates used to discount pension liabilities, see GAO, *Private Pensions: Process Needed to Monitor the Mandated Interest Rate for Pension Calculations*, [GAO-03-313](#) (Washington, D.C.: Feb. 27, 2003).

¹⁵26 U.S.C. 412(c)(2)(A).

¹⁶Actuarial asset values cannot be consistently above or below market, but in a given year may be anywhere from 80 to 120 percent of the market asset level.

¹⁷A plan’s current liability may differ from its “termination liability,” which measures the value of accrued benefits using assumptions appropriate for a terminating plan. Sponsors are required to provide PBGC with termination liability information if, among other things, the aggregate unfunded vested benefits of plans maintained by the contributing sponsor and the members of its controlled group exceed \$50 million. See 29 U.S.C. 1310. For further discussion of current versus termination liability, see [GAO-04-90](#), appendix IV.

rules.¹⁸ The rules for determining the amount of the AFC are complex, but they generally call for sponsors to pay a percentage of their unfunded liability. Under current law, plans that owe an AFC may still apply FSA credits to meet their funding obligation and therefore may not be required to satisfy the AFC with a cash contribution.

In addition to setting funding rules, ERISA established PBGC to guarantee the payment of the pension benefits of participants, subject to certain limits, in the event that the plan could not.¹⁹ Under ERISA, the termination of a single-employer DB plan may result in an insurance claim with the single-employer program if the plan has insufficient assets to pay all benefits accrued under the plan up to the date of plan termination.²⁰ PBGC may pay only a portion of a participant's accrued benefit because ERISA places limits on the PBGC benefit guarantee. For example, PBGC generally does not guarantee benefits above a certain amount, currently \$45,614 annually per participant at age 65.²¹ Additionally, benefit increases arising from plan amendments in the 5 years immediately preceding plan termination are not fully guaranteed, although PBGC will pay a portion of

¹⁸ A single-employer plan may be subject to an AFC in a plan year if plan assets fall below 90 percent of current liabilities. However, a plan is not subject to an AFC if the value of plan assets (1) is at least 80 percent of current liability and (2) was at least 90 percent of current liability for at least 2 consecutive of the 3 immediately preceding years. To determine whether the AFC applies, the IRC requires sponsors to calculate current liabilities using the highest interest rate allowable for the plan year. See 26 U.S.C. 412(l)(9)(C).

¹⁹ Some DB plans are not covered by PBGC insurance; for example, plans sponsored by professional service employers, such as physicians and lawyers, with 25 or fewer active participants.

²⁰ The termination of a fully funded DB plan is called a standard termination. Plan sponsors may terminate fully funded plans by purchasing a group annuity contract from an insurance company, under which the insurance company agrees to pay all accrued benefits, or by paying lump-sum benefits to participants if permissible. The termination of an underfunded plan, termed a distress termination, is allowed if the plan sponsor requests the termination and the sponsor satisfies other criteria. Alternatively, PBGC may initiate an "involuntary" termination. PBGC may institute proceedings to terminate a plan if the plan has not met the minimum funding standard, the plan will be unable to pay benefits when due, a reportable event has occurred, or the possible long-run loss to PBGC with respect to the plan may reasonably be expected to increase unreasonably if the plan is not terminated. See 29 U.S.C. 1342(a).

²¹ This guarantee level applies to plans that terminate in 2005. The amount guaranteed is adjusted (1) actuarially for the participant's age when PBGC first begins paying benefits and (2) if benefits are not paid as a single-life annuity. Because of the way ERISA allocates plan assets to participants, certain participants can receive more than the PBGC guaranteed amount.

these increases.²² Further, PBGC's benefit guarantee is limited to the monthly straight life annuity benefit the participant would receive if she were to commence the annuity at the plan's normal retirement age.²³ Sponsors of PBGC-insured DB plans pay annual premiums to PBGC for their coverage. Premiums have two components: a per participant charge paid by all sponsors (currently \$19 per participant), and a "variable-rate" premium that some underfunded plans pay based on the level of unfunded benefits.²⁴

Despite the presence of minimum funding rules and the AFC, plan underfunding has persisted. In recent years, the level of total plan underfunding has increased rapidly, from about \$39 billion in 2000 to an amount estimated to exceed \$450 billion as of September 30, 2004. While the single-employer program has over \$39 billion in assets to pay benefits in the near term, it already faces liabilities of over \$62 billion. Thus, there is concern that the expected continued termination of large plans by bankrupt sponsors will push the program more quickly into insolvency, generating greater pressure on the Congress, and ultimately the taxpayers, to provide PBGC financial assistance to avoid reductions in guaranteed payments to retirees.²⁵ Because of concerns about the long-term viability of the single-employer program, as illustrated by its growing accumulated deficit (see fig. 1), in July 2003 we placed the program on GAO's high-risk list of agencies and programs that need broad-based transformations to address major challenges. In October 2003, we identified several

²²The guaranteed amount of the benefit amendment is calculated by multiplying the number of years the benefit increase has been in effect, not to exceed 5 years, by the greater of (1) 20 percent of the monthly benefit increase calculated in accordance with PBGC regulations or (2) \$20 per month. See 29 C.F.R. 4022.25(b).

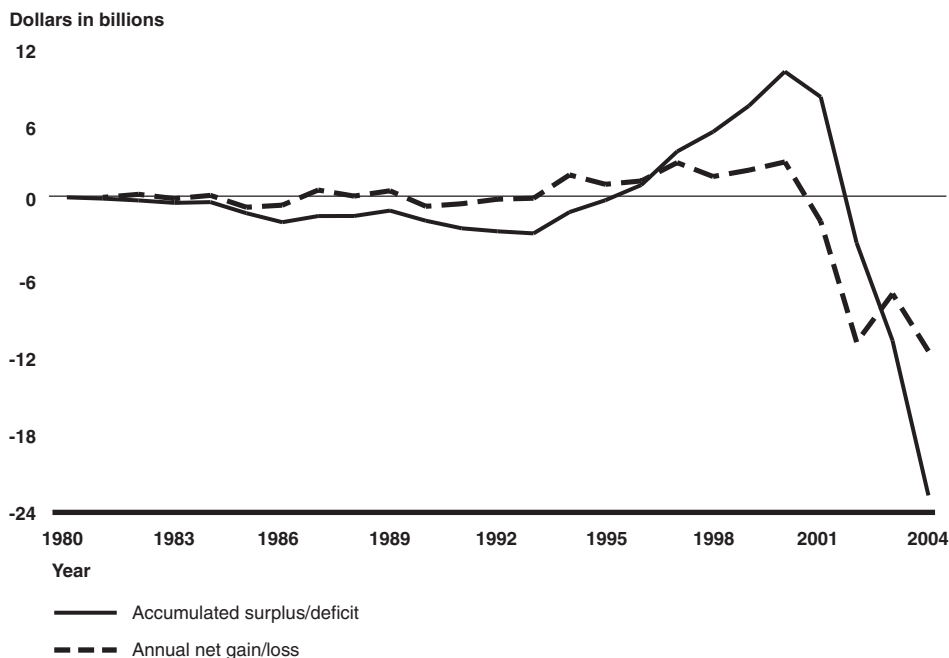
²³For more on PBGC guarantee limits, see Pension Benefit Guaranty Corporation, *Pension Insurance Data Book 1999* (Washington, D.C., Summer 2000), pp. 2-14.

²⁴The additional premium equals \$9.00 for each \$1,000 (or fraction thereof) of unfunded vested benefits. However, no such premium is charged for any plan year if, as of the close of the preceding plan year, contributions to the plan for the preceding plan year were not less than the full funding limitation for the preceding plan year.

²⁵PBGC has available a \$100 million line of credit from the U.S. Treasury for liquidity purposes if funds generated from premium receipts and investment activities are insufficient to meet operating cash needs in any period. However, while PBGC is a government corporation under ERISA, it is not backed by the full faith and credit of the federal government. For projections of the magnitude and timing of insolvency of PBGC's single employer program, see, for example, "PBGC: Updated Cash Flow Model from COFFI," Center on Federal Financial Institutions (COFFI) (Washington, D.C.: Nov. 18, 2004).

categories of reform that the Congress might consider to strengthen the program over the long term. We concluded that the Congress should consider comprehensive reform measures to reduce the risks to the program's long-term financial viability.²⁶ These suggested reforms included strengthening funding rules, along with possibly modifying program guarantees; restructuring PBGC premiums; improving the transparency of plan and program information; and certain other reforms.

Figure 1: Accumulated Surplus/Deficit and Annual Net Gain/Loss of PBGC Single-Employer Program



Source: the Pension Benefit Guaranty Corporation.

GAO has a statutory responsibility for auditing the overall financial position of the executive branch of the U.S. government. In a recent report, we describe the serious challenges facing the nation from current fiscal policies that, if unchecked, will lead to large, escalating, and unsustainable budget deficits.²⁷ This fiscal challenge stems in part from

²⁶GAO 04-90.

²⁷See GAO-05-325SP.

increasing obligations of retirement-related programs like Social Security, which faces long-term financial insolvency because of increased life expectancy. Improvements in life expectancy have extended the average amount of time spent by workers in retirement, from 11.5 years in 1950 for the average male worker to 18 years as of 2003.

In February 2005, the Administration proposed several measures designed to strengthen funding for single-employer DB pension plans.²⁸ The main elements of reform include (1) reforming the funding rules to ensure that sponsors keep their retirement promises; (2) improving disclosure to workers, investors, and regulators about pension plan status; and (3) reforming premiums to better reflect a plan's risk and restoring the PBGC to financial health. The Administration asserts that such changes would shore up the structural problems in the DB system and strengthen the system's financial health.

Many of the 100 Largest Plans' Liabilities Exceeded Plan Assets from 1995 to 2002, and Few Sponsors Were Required to Make Cash Contributions

From 1995 to 2002, while most of the 100 largest plans had sufficient assets to cover their plan liabilities, many did not. On average, each year 39 of these plans were less than 100 percent funded, and 10 had assets below 90 percent of their current liabilities. Reported funding levels for the group generally were stable and strong from 1996 to 2000, but they worsened somewhat in 2001 before deteriorating noticeably in 2002. Furthermore, because of leeway in the actuarial methodology and assumptions sponsors may use to measure plan assets and liabilities, underfunding may actually have been more severe and widespread than reported at the end of the period. Because of flexible funding rules permitting the use of accounting credits other than cash contributions to satisfy minimum funding obligations, on average 62.5 of the 100 largest plans each year received no cash contributions from their sponsors, including 41 percent of plans that were less than 100 percent funded.

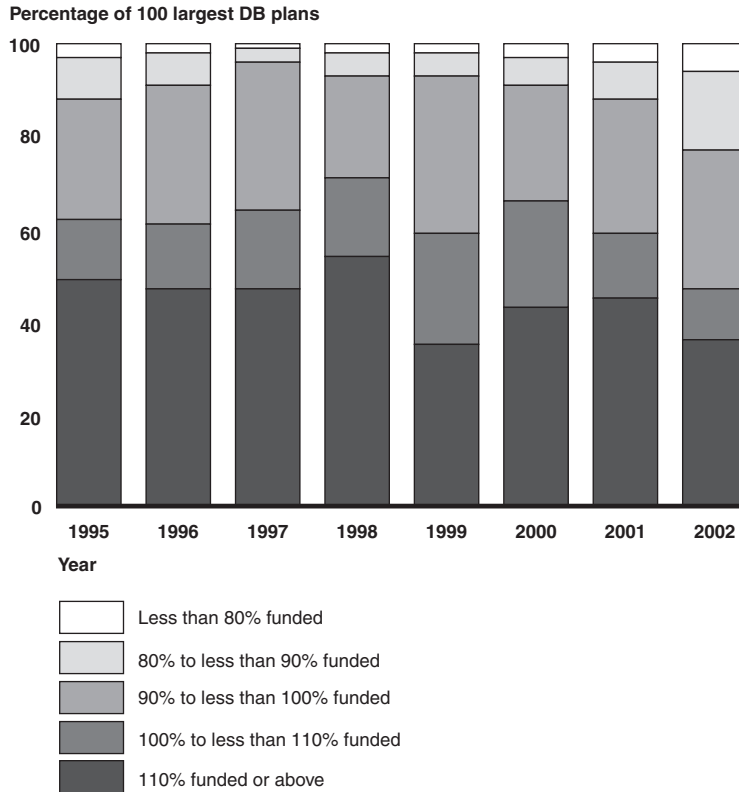
²⁸See <http://www.dol.gov/ebsa/pdf/SEPproposal2.pdf>. Also see [GAO-04-90](#), appendix III, for more discussion of the Administration's earlier pension reform proposal, announced on July 8, 2003.

**Many Plans Each Year
Were Underfunded, and
More Became
Underfunded in Recent
Years**

The 100 largest plans each year from 1995 to 2002 contained mostly well-funded plans. However, on average 39 of these plans each year were less than 100 percent funded; that is, for these plans, current liabilities exceeded the reported actuarial value of assets in the plan. An average of 10 plans each year had asset levels below 90 percent of their current liability, and 3 plans were less than 80 percent funded (see fig. 2).²⁹

²⁹An underfunded plan does not necessarily indicate that the sponsor is unable to pay current benefits. Underfunding means that the plan does not currently have enough assets to pay all accrued benefits, a portion of which will be paid in the future, under the given actuarial assumptions about asset rate of return, retirement age, mortality, and other factors that affect the amount and timing of benefits.

Figure 2: Almost One-Fourth of the Largest Pension Plans Were Less than 90 Percent Funded on a Current Liability Basis in 2002



Source: GAO analysis of PBGC Form 5500 research data.

As a group, funding levels among the 100 largest plans were reasonably stable and strong from 1996 to 2000. Except for 1999, in no year did more than 39 plans have liabilities exceeding assets, and no more than 9 plans each year were below 90 percent funded. In 2001 there were signs of increased underfunding, and by 2002, more than half of the largest plans were less than 100 percent funded, with 23 plans less than 90 percent funded. Two factors in the deterioration of many plans' finances were the decline in stock prices and in interest rates. From 2000 to 2002, the Standard & Poor's (S&P) 500 stock index declined sharply each year. Given that DB plans on average held approximately half of their assets in

stocks from 1995 to 2000,³⁰ the decline in stock prices meant a sharp decline in the value of many plans' pension assets. In addition, over the sample period, 30-year Treasury bond rates, which served as the benchmark for the rate used by plans to calculate pension liabilities, generally fell steadily, raising liabilities.³¹ The combination of lower asset values and higher pension liabilities had a serious adverse effect on overall defined benefit funding levels.

Rules May Allow Reported Funding Levels to Overstate Current Funding Levels

Accurate measurement of a plan's liabilities and assets is central to the sponsor's ability to maintain assets sufficient to pay promised benefits, as well as to the transparency of a plan's financial health. Because many plans chose allowable actuarial assumptions and asset valuation methods that may have altered their reported liabilities and assets relative to market levels, it is possible that funding over our sample period was actually worse than reported for a number of reasons. These include the use of above-market rates that differ from market values and the use of actuarial asset values that may differ from current asset values. Two large plans that terminated in 2002 illustrate the potential discrepancies between reported and actual funding.

Use of an Above-Market Interest Rate to Calculate Liabilities

Reported current liabilities are calculated using a weighted average of rates from the 4-year period before the plan year. This weighting offers sponsors the advantage of being able to smooth fluctuations in liabilities that sharp swings in interest rates would cause, thereby reducing volatility in minimum funding requirements and making funding more predictable. However, the weighting reduces the accuracy of liability measurement because the rate anchoring reported liabilities is likely to differ from current market values. If the rates used to calculate current liabilities are falling, this would have the effect of decreasing the rise in reported liabilities associated with lower rates, making plans appear better funded

³⁰See Board of Governors of the Federal System, "Flow of Funds Accounts of the United States," Table L.119.b, Dec. 9, 2004. This approximation likely understates stock holdings as a share of pension assets, as DB plans also held assets in mutual fund shares, which may also contain stocks.

³¹Generally, a lower interest rate will raise plan liabilities, because a lower rate implies a lower rate of return on plan assets, requiring a higher level of assets to pay for benefits. However, in calculating current liabilities, the IRC allowed plans to use an interest rate above the benchmark 4-year weighted average, possibly offsetting the effects of lower rates on current liability. For example, sponsors could pick a rate up to 105 percent of the weighted average 30-year Treasury rate for plans in 1999; in 2002, this upper range was changed to 120 percent of the weighted average. See 26 U.S.C. 412(b)(5)(B).

than they actually were. In a rising interest rate environment, the opposite would be true. However, because rules allowed sponsors to measure liabilities using a rate above the 4-year weighted average, sponsors could reduce plan current liabilities compared with what their value would be if calculated at current rates.³² The 4-year weighted average of the reference 30-year Treasury bond rate exceeded the current market rate in 76 percent of the months between 1995 and 2002, and the highest allowable rate for calculating current liabilities exceeded the current rate in 98 percent of those months. Sponsors of the plans in our sample chose the highest allowable interest rate to value their current liabilities 62 percent of the time from 1995 to 2002.

Use of Actuarial versus Current Asset Values

Similarly, for assets, the actuarial value of assets used for funding may differ from current market values. The actuarial value of assets cannot be consistently above or below market, but in a given year may be anywhere from 80 to 120 percent of market asset level. In our sample, 86 percent of plans reported a different value for actuarial and market assets. On average, using the market value instead of actuarial value of assets would have raised reported funding levels by 6.5 percent each year. However, while the market value exceeded actuarial value of assets during the late 1990s, when plan funding was generally strong, in the weaker funding year of 2002 market assets dipped below actuarial assets. In 2001 and 2002, calculating plan funding levels using market assets would have greatly increased the number of plans below 90 percent funded each year. A similar calculation for 2002 would have drastically increased the number of large plans below 80 percent funded, from 6 to 24. Thus, we see some evidence that using actuarial asset values lowered the volatility of reported funding levels relative to those using market asset values. However, the actuarial value of assets also may have disguised plans' funded status as their financial condition worsened.

³²In 1987, the permissible range was not more than 10 percent above, and not more than 10 percent below, the weighted average of the rates of interest on 30-year Treasury bond securities during the 4-year period ending on the last day before the beginning of the plan year. The top of the permissible range was gradually reduced by 1 percent per year, beginning with the 1995 plan year, to not more than 5 percent above the weighted average rate effective for plan years beginning in 1999. The top of the permissible range was increased to 20 percent above the weighted average rate for 2002 and 2003. For 2004 and 2005, the Congress changed the reference rate from the 30-year Treasury bond rate to a rate based on long-term investment-grade corporate bonds, and reset the allowable range for plans to 90 to 100 percent of this rate.

Two Terminated Plans Showed Large Differences between Reported and Actual Funding

Some prominent recent plan terminations reveal some extreme discrepancies between reported plan funding levels and market funding levels. The Bethlehem Steel Corporation in 2002 reported that its plan was 85.2 percent funded on a current liability basis, yet the plan terminated later that year with assets of less than half of the value of promised benefits. The PBGC single-employer program suffered a \$3.7 billion loss as a result of that termination, its largest ever at the time. Similarly, LTV Steel Company reported that its pension plan for hourly employees was over 80 percent funded on its Form 5500 filing for plan year 2001. When this plan terminated in March, 2002, it had assets equal to 52 percent of benefits, a shortfall of \$1.6 billion.³³

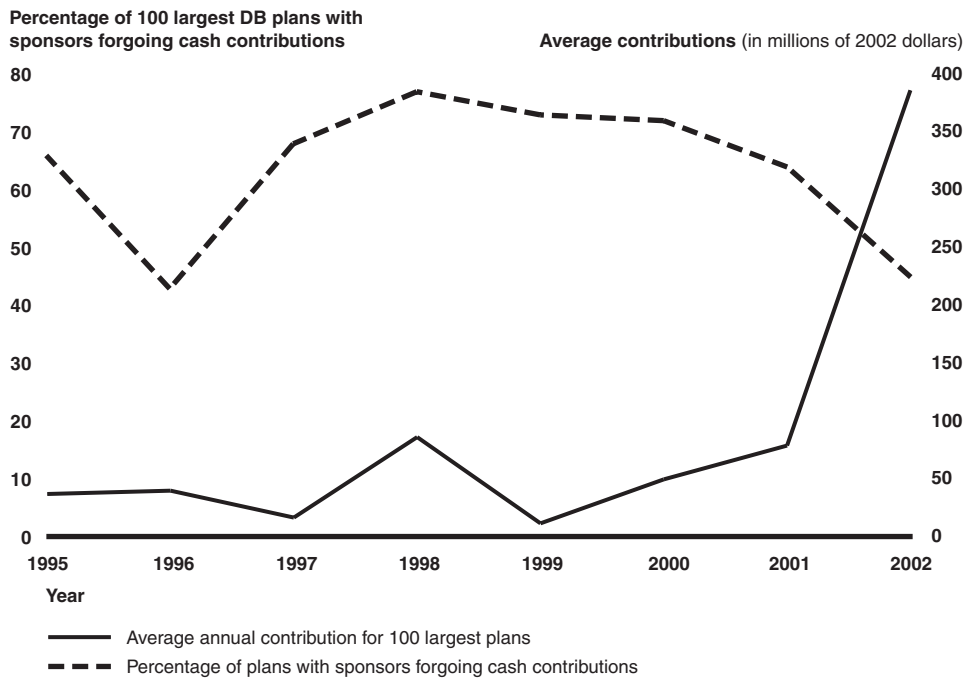
Most Sponsors Most Years Made No Cash Contributions to Plans but Satisfied Funding Requirements through Use of Accounting Credits

For the 1995 to 2002 period, the sponsors of the 100 largest plans each year on average made relatively small cash contributions to their plans. Annual cash contributions for the 100 largest plans averaged approximately \$97 million on plans averaging \$5.3 billion in current liabilities.³⁴ This average contribution level masks a large difference in contributions between 1995 and 2001, during which period annual contributions averaged \$62 million (in 2002 dollars), and in 2002, when contributions increased significantly to \$395 million per plan. Further, in 6 of the 8 years in our sample, a majority of the largest plans made no cash contribution to their plan (see fig. 3). On average each year, 62.5 plans received no cash contribution, including an annual average of 41 percent of plans that were less than 100 percent funded.

³³Several factors may explain the wide discrepancy between reported funding levels and actual funding levels at termination. Reported funding levels may use an actuarial value of assets, which may exceed the market value at termination. In addition, termination liabilities are valued using a different interest rate than that used for current liabilities. Further, current liabilities and termination liabilities may be measured at different times. Unfunded shutdown benefits may also raise termination liabilities. For more discussion of the differences between termination and current liabilities, see [GAO-04-90](#), appendix IV.

³⁴Figures are in 2002 dollars. The \$97 million in contributions includes contributions from both employers and employees, although the vast majority of contributions come from employers. For 1995, the data set contains only employer contributions.

Figure 3: Most Sponsors Made No Cash Contribution Most Years



Source: GAO analysis of PBGC Form 5500 research data.

Note: Average contributions for 2002 are largely driven by one sponsor's contribution to its plan. Disregarding this \$15.2 billion contribution reduces the average plan contribution for 2002 from \$399 million to \$246 million.

The funding rules allow sponsors to meet their plans' funding obligations through means other than cash contributions. If a plan has sufficient FSA credits from other sources, such as an existing credit balance or large interest or amortization credits, to at least match its FSA charges, then the plan does not have to make a cash contribution in that year. Because meeting minimum funding requirements depends on reconciling total annual credits and charges, and not specifically on cash contributions, these other credits can substitute for cash contributions.

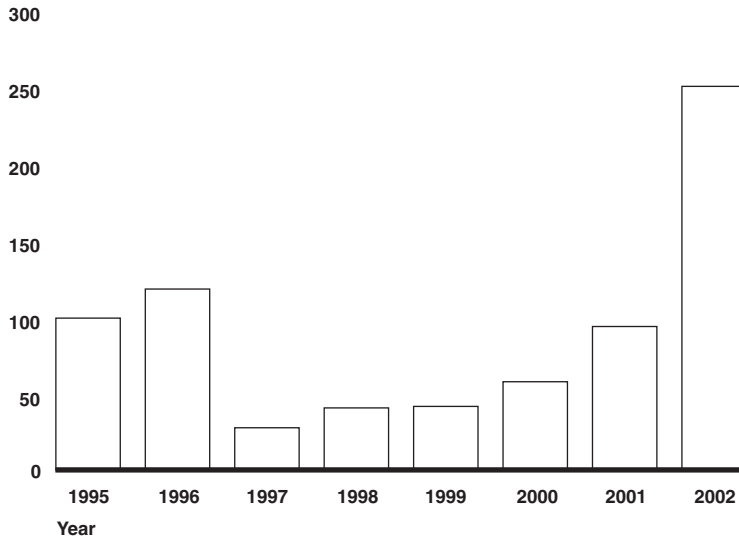
From 1995 to 2002, it appears that many of the largest plan sponsors substituted a significant amount of FSA credits for cash contributions. The average plan's credit balance carried over from a prior plan year totaled about \$572 million (2002 dollars) each year, and 88 percent of plans on average carried forward a prior credit balance into the next plan year from 1995 to 2002. Not only could these accumulated credit balances help a plan to meet minimum funding obligations in future years, but they also accrue

interest that further augments a plan's FSA credits. In contrast to large prior-year credit balances, annual cash contributions averaged only \$97 million, in 2002 dollars. On average each year, cash contributions represented 90 percent of the minimum required annual funding (from cash and credits).³⁵ However, this average figure was elevated by high levels of contributions by some plans in 1995, 1996 and 2002. From 1997 to 2000, when funding levels were generally strong, cash contributions averaged only 42 percent of minimum required annual contributions (see fig. 4). During these years, a majority of plans in our sample received no cash contribution (see fig. 5). Cash contributions represented a smaller percentage of annual minimum required funding during years when plans were generally well funded, indicating that in these years more plans relied more heavily on credits to meet minimum funding obligations.

³⁵Minimum required annual funding equals annual total FSA charges, less net amortization credits and interest applied to these amortization credits.

Figure 4: Average Cash Contributions, as a Percentage of Minimum Required Annual Funding, Were Lowest during Strong Funding Years

Average cash contribution, as a percentage of plans' minimum required funding



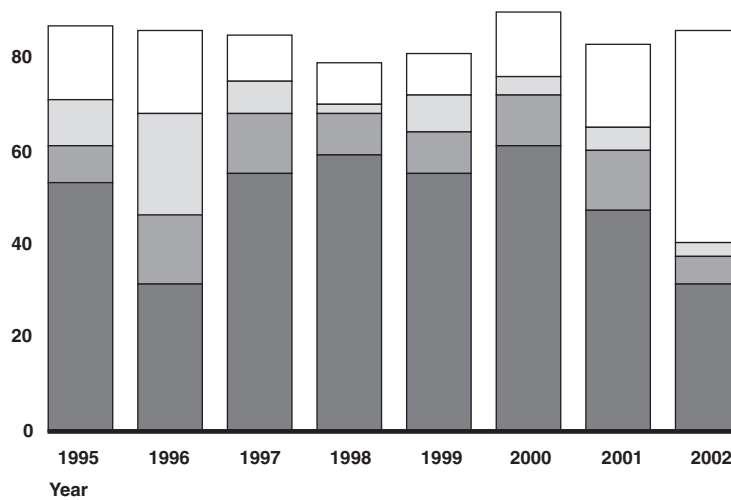
Source: GAO analysis of PBGC Form 5500 research data.

Note: This figure reports the average percentage across plans for each year. Minimum required annual funding equals total FSA charges, less amortization credits and interest on these credits. Sponsors can use other FSA credits, if applicable, to satisfy minimum funding requirements in lieu of cash. Plans with missing components of the minimum required annual funding calculation or with credits that exceed charges (1 plan per year on average) are excluded from the figure.

Figure 5: Distribution of Average Cash Contributions, as a Percentage of Minimum Required Annual Funding, Illustrates that Plans Relied More Heavily on FSA Credits to Meet Minimum Funding Obligations from 1997 to 2000

Percentage of 100 largest DB plans

100



- Cash contributions accounted for 100% or more of minimum required annual funding
- Cash contributions accounted for 50% to less than 100% of minimum required annual funding
- Cash contributions accounted for greater than 0% to less than 50% of minimum required annual funding
- Cash contributions accounted for 0% of minimum required annual funding

Source: GAO analysis of PBGC Form 5500 research data.

Note: Minimum required annual funding equals total FSA charges, less amortization credits and interest on these credits. Sponsors can use other FSA credits, if applicable, to satisfy minimum funding requirements in lieu of cash. Plans with missing components of the minimum required annual funding calculation or with credits that exceed charges (1 plan per year on average) are excluded from the figure.

In addition to large credit balances brought forward from prior years, sponsors added funding credits from other sources. For example, plans reported approximately \$42 million (2002 dollars) each year in net interest credits. These credits accrue to a plan's FSA like interest on a bank account, accruing to an existing credit balance at the beginning of the plan year and to other credits, such as contributions, added during the plan year. Rules also allow plans to accrue credits from the excess of a plan's calculated minimum funding obligation above the plan's full funding

limitation; these credits averaged \$47 million (2002 dollars) from 1995 to 2002.³⁶ Other plan events result in plan charges, which reflect events that increase the plan's obligations. For example, plans reported annual amortization losses, which could result from actual investment rates of return on plan assets below assumed rates of return (including outright losses) or increases in the generosity of plan benefits; these net amortization charges averaged almost \$28 million (2002 dollars) in our sample. Total funding credits, offset by charges, may help satisfy a plan's minimum funding obligation, substituting for cash contributions, and may explain why a significant number of sponsors made zero cash contributions to their plans in many years.

FSA Accounting Rules Can Make Required Contributions Less Volatile but May Obscure Funded Status and Reduce Contributions

The FSA credit accounting system provides some advantages to DB plan sponsors. Amortization rules require the sponsor to smooth certain events that affect plan finances over several years, and accumulated credit balances act as a buffer against swings in future funding requirements.³⁷ These features often allow sponsors to better regulate their annual level of contributions. In contrast, contributions and funding levels might fluctuate greatly from year to year if funding were based strictly on yearly differences between the market value of plan assets and current liabilities. Thus, a contribution system with an FSA accounting feature may make funding requirements less volatile and contributions more predictable than one in which funding was based entirely on current assets and liabilities. Similarly, current-law measurement and funding rules provide a plan with some ability to dampen volatility in required funding caused by economic events that may sharply change a plan's liabilities or assets. Pension experts told us that this predictability and flexibility make DB sponsorship more attractive to employers.³⁸

³⁶Full funding limitation rules set a ceiling for minimum annual funding requirements for a plan each year, based on the plan's liabilities.

³⁷Some experts argue that since a pension plan represents a long-term financial commitment between a firm and its employees, and since current liability measures include many benefits that will not be paid until far in the future, it makes sense to smooth out year-to-year fluctuations rather than force each plan to balance assets and liabilities at all times.

³⁸There are investment techniques, such as purchasing fixed income assets whose payouts match the plan's expected payouts, that could make pension funding relatively predictable, even without FSA smoothing. One possible reason that such techniques are not widely used may be they are believed to be more expensive, over the long term than an asset allocation with significant equity investment exposure.

However, the FSA accounting system, by smoothing annual contributions and liabilities, may distort a plan's funding level. For example, suppose a sponsor accrues a \$1 million credit balance from making a contribution above the required minimum in a year. Suppose then that this \$1 million purchases assets that lose all of their value by the following year. Even though the plan no longer had this \$1 million in assets, the sponsor could still use that credit balance (plus interest on the credit balance) to reduce this year's contribution to the plan. Because of amortization rules, the sponsor would have to report only a portion of that lost \$1 million in asset value as a plan charge the following year.³⁹ Similarly, sponsors are required to amortize the financial effect of a change in a plan's benefit formula, which might result in increased benefits and therefore a higher funding obligation, over a 30-year period. Thus, even though higher benefits would immediately raise a plan's obligation to fund, the sponsor could spread this effect in the plan's FSA over 30 years. This disconnection between the reported and current market condition of plan finances raises the risk that plans will not react quickly enough to deteriorating plan conditions. Further, it reduces the transparency of plan financial information to stakeholders, such as participants, and investors.

The experience of two large plans that terminated in a severely underfunded state help illustrate the potential disconnection between FSA accounting and the plan's true funded status. As stated earlier, the Bethlehem Steel Corporation and LTV Steel Company both had plans terminate in 2002, each with assets approximately equal to 50 percent of the value of benefits. Yet each plan was able to forgo a cash contribution each year from 2000 to 2002, instead using credits to satisfy minimum funding obligations, primarily from large accumulated credit balances from prior years. Despite being severely underfunded, each plan reported an existing credit balance in 2002, the year of termination (see table 1).

³⁹Conversely, a plan that experiences a large gain in assets must spread this gain over several years, which would make the plan appear to be more poorly funded than it actually was.

Table 1: FSA Credits and Charges for Bethlehem Steel and LTV Steel Plans, 2000-2002

Figures in millions of dollars

Year	Bethlehem Steel			LTV Steel		
	2000	2001	2002	2000	2001	2002
Additional funding charge	0	0	181.2	2.2	73.3	79.4
Total FSA charges	277.0	281.0	457.9	351.8	342.9	179.4
Prior year credit balance	980.4	710.8	508.3	1294.3	1257.3	1169.2
Cash contribution	0	0	0	0	0	0
Total FSA credits	987.9	789.3	579.6	1609.1	1512.1	1218.5
End-of-year credit balance	710.8	508.3	121.7	1257.3	1169.2	1039.1
Funded percentage (actuarial assets/current liabilities)	85.8%	83.9%	85.2%	88.1%	81.6%	58.4%
Funded percentage at termination (plan assets/future benefits)			48.8%			51.9%

Source: GAO Analysis of PBGC Form 5500 research data.

Note: For funded percentage at termination represents market-valued assets as a percentage of PBGC-guaranteed benefits, plus any additional benefits funded by the plan's assets after allocation under section 4044 of ERISA. These benefits are valued at the PBGC interest rate, which is different than that used to value current liability on Form 5500. For more discussion of the differences between termination and current liabilities, see [GAO-04-90](#), appendix IV.

Full Funding Limitation Rule May Have Allowed Some Plan Sponsors to Forgo Plan Contributions

Another possible explanation for the many instances in which sponsors made no annual cash contribution regards the full funding limitation (FFL). The FFL is a cap on minimum required contributions to plans that reach a certain funding level in a given plan year.⁴⁰ However, the FFL does not necessarily represent the contribution that would raise plan assets to the level of current liability. Between 1995 and 2002, rules permitted some plans with assets as low as 90 percent of current liability to reach the FFL, meaning that a plan could be considered fully funded without assets sufficient to cover all accrued benefits. The FFL is also distinct from the

⁴⁰As with other funding rules, determining a plan's FFL is complicated. From 1995 to 2002, the FFL equaled the higher of (1) 90 percent of the plan's current liability or (2) the lower of (a) the accrued plan liability or (b) 150 to 170 percent (depending on the year) of the current liability. As of the 2004 plan year, the 150 to 170 percent measure no longer factors in the determination of the FFL. For our sample of plans, an average of 4 plans per year were above 150 to 170 percent (depending on the year) of the current liability and had an FFL of zero. This means the sponsors of these plans were most likely unable to make additional contributions unless they paid an excise tax.

plan's annual maximum tax-deductible contribution.⁴¹ Because sponsors may be subject to an excise tax on contributions above the maximum, the annual maximum contribution can act as a real constraint on cash contributions. In contrast, the FFL represents a "maximum minimum" contribution for a sponsor in a given year—a ceiling on the sponsor's minimum funding obligation for the plan.

Flexibility in the FFL rule has allowed many plan sponsors to take steps to minimize their contributions. In our sample, from 1995 to 2002 approximately two-thirds of the sponsors in each year made an annual plan contribution at least as large as the plan's FFL. However, in 65 percent of these instances, the sponsor had chosen the highest allowable rate to calculate current liability; using a lower rate to calculate current liability may have resulted in a higher FFL, and therefore may have required a higher contribution. Further, the FFL was equal to zero for 60 percent of plans each year, on average. This means that these plans were permitted to forgo cash contributions as a result of the FFL rule. This reflects the fact that if a plan's FFL equaled zero, that plan had assets at least equal to 90 percent of current liabilities that year and would not be required to make an additional contribution.

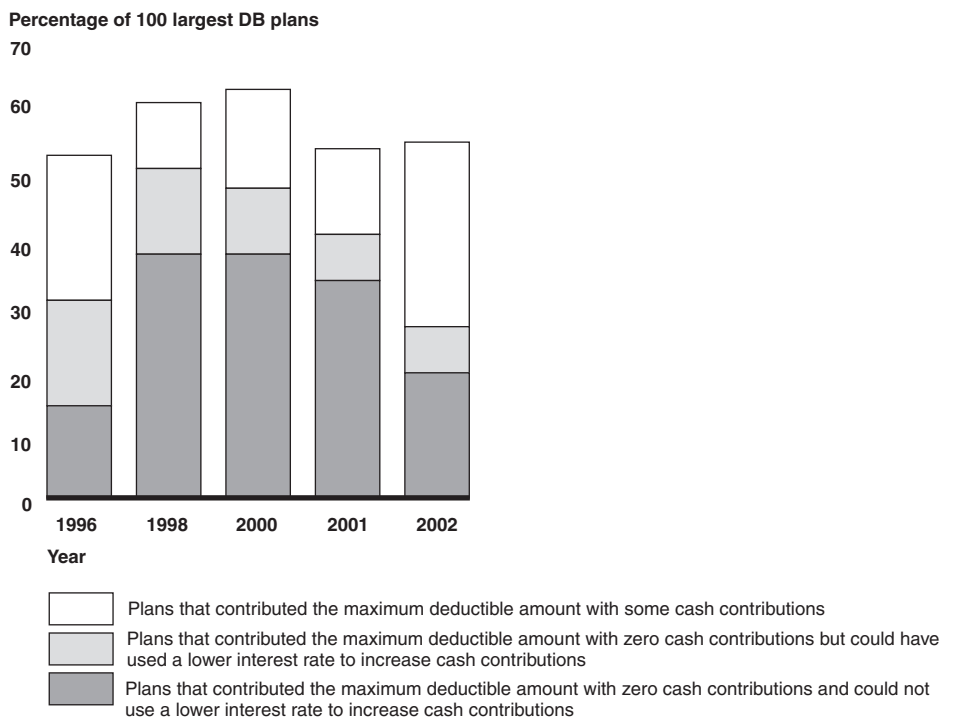
The interaction between the FFL rule and the annual maximum tax-deductible contribution also has implications for the amount that plan sponsors can contribute. In some years, the maximum deductible contribution rules truly constrained some sponsors from making any cash contribution. In 1998, 50 of 60 plans that contributed to the maximum deductible amount had a maximum deductible contribution of zero (see fig. 6). This meant that any cash contribution into those plans that year would generally subject the sponsor to an excise tax.⁴² For 37 of these plans, this was the case even if the sponsor had chosen the lowest statutorily allowed interest rate for plan funding purposes, which would have produced the highest calculated current liabilities. This constraint did not apply to as many plans in some other years. For example, in 1996, 52 plans contributed the maximum deductible amount. Thirty of these

⁴¹A plan's maximum deductible contribution is based on some of the same criteria as the FFL determination. A sponsor may also contribute up to the unfunded current liability level in each year.

⁴²For years after 2001, an employer may elect not to count contributions as nondeductible up to the full-funding limitation that is based on the accrued liability. Therefore, it could be possible for a sponsor to contribute more than the maximum deductible amount and still avoid the excise tax. See 26 U.S.C. 4972(c)(7).

plans had a maximum deductible contribution of zero. However, 16 of these 30 could have chosen a lower rate to raise their maximum deductible contribution level.

Figure 6: For Selected Years from 1996 to 2002, Most Sponsors Contributed the Plan’s Maximum Deductible Amount, Which for a Number of Plans Was Zero



Source: GAO analysis of PBGC Form 5500 research data matched to PBGC study on maximum deductible cash contributions.

Note: Years of analysis are not continuous, as the PBGC study on maximum deductible contributions was conducted for years shown. Information on maximum deductible contributions is missing for between 7 and 17 plans each year. Data for these plans were either missing or incomplete to calculate the plan contributions with respect to the maximum deductible contribution.

Very Few Sponsors of Underfunded Large Plans Paid an AFC from 1995 to 2002

From 1995 to 2002, an average of only 2.9 of the 100 largest DB plans each year were assessed an additional funding charge, the funding mechanism designed to prevent severe plan underfunding, even though on average 10 percent of plans each year reported funding levels below 90 percent. Over the entire 8-year period, only 6 unique plans that placed among the 100 largest plans in any year from 1995 to 2002 owed an AFC. These 6 plans owed an AFC during the period a total of 23 times in years in which they were among the 100 largest plans, meaning that plans that were assessed an AFC were likely to owe it again. On average, by the time a

plan was assessed an AFC, it was significantly underfunded and was likely to remain chronically underfunded in subsequent years. Further, during this period, 2 of these 6 plans that owed an AFC were terminated, each with assets far below promised benefits and each without having had to make a cash contribution in the 3 years prior to termination. As with plans in general, funding rules allowed sponsors owing an AFC to use FSA credits to help meet their funding obligations, in some years allowing sponsors to forgo cash contributions altogether.

Few Plans Were Assessed an AFC, and These Plans Were Likely to Be Very Underfunded

Funding rules dictate that a sponsor of a plan with more than 100 participants in which the plan's actuarial value of assets fall below 90 percent of liabilities, measured using the highest allowable interest rate, may be liable for an AFC in that year. More specifically, a plan that is between 80 and 90 percent funded is subject to an AFC unless the plan was at least 90 percent funded in at least 2 consecutive of the 3 previous plan years.⁴³ A plan with assets below 80 percent of liabilities, calculated using the highest allowable rate, is assessed an AFC regardless of its funding history.

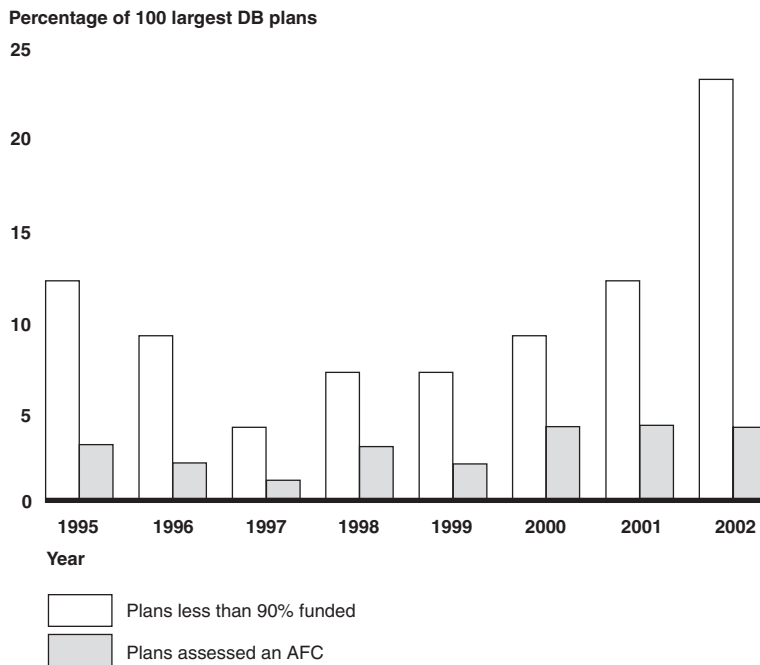
Despite the statutory threshold of a 90 percent funding level for some plans to owe an AFC, in practice a plan needed to be much more poorly funded to become subject to an AFC. While about 10 plans in our sample each year had funding below 90 percent on a current liability basis, on average fewer than 3 plans each year owed an AFC (see fig. 7). From 1995 to 2002, only 6 of the 187 unique plans that composed the 100 largest plans each year were ever assessed an AFC,⁴⁴ and these plans owed an AFC a total of 23 times in years in which they were among the 100 biggest plans. By the time a sponsor owed an AFC, its plan had an average funding level of 75 percent, suggesting that by the time the AFC was triggered, the plan's financial condition was weak. Further, while we observed 60 instances between 1995 and 2002 in which a plan had funding levels between 80 and 90 percent, only 5 times was a plan in this funding range subject to an

⁴³For example, a sponsor of a plan that is 85 percent funded in 2003 would be exempt from the AFC only if the plan's funding level exceeded 90 percent in 2000 *and* 2001 or in 2001 *and* 2002. See 26 U.S.C. 412(1)(9)(C).

⁴⁴Unique plans refer to the number of plans we observed with distinct plan identifiers called EINs and PINs. See footnote 9 for further information on why the actual number of completely unrelated plans in our sample may be lower than the 187 reported.

AFC. This would indicate that, in practice, 80 percent represented the realistic funding threshold for owing or avoiding the AFC.

Figure 7: Most Plans Less than 90 Percent Funded Were Not Assessed an AFC



Source: GAO analysis of PBGC Form 5500 research data.

AFC rules specify a current liability calculation method that may overstate actual plan funding, relative to using market measures, thereby reducing the number of plans that might be assessed an AFC. To determine if a sponsor owes an AFC, rules dictate that the sponsor calculate current liability using the highest allowable interest rate, which results in a plan's lowest possible measure of current liability. Because the highest allowable rate exceeded current market rates in 98 percent of the months from 1995 to 2002, this likely lowered current liability measures for AFC purposes, which would cause fewer plans to be assessed an AFC. In our sample, 5 plans that reported funding levels below 80 percent on a current liability basis did not owe an AFC, perhaps because current liability does not require the use of the highest allowable interest rate.

Sponsors that owed an AFC had mixed success at improving their plans' financial conditions in subsequent years, and most of these plans remained significantly underfunded. Among the 6 plans that owed the AFC at least

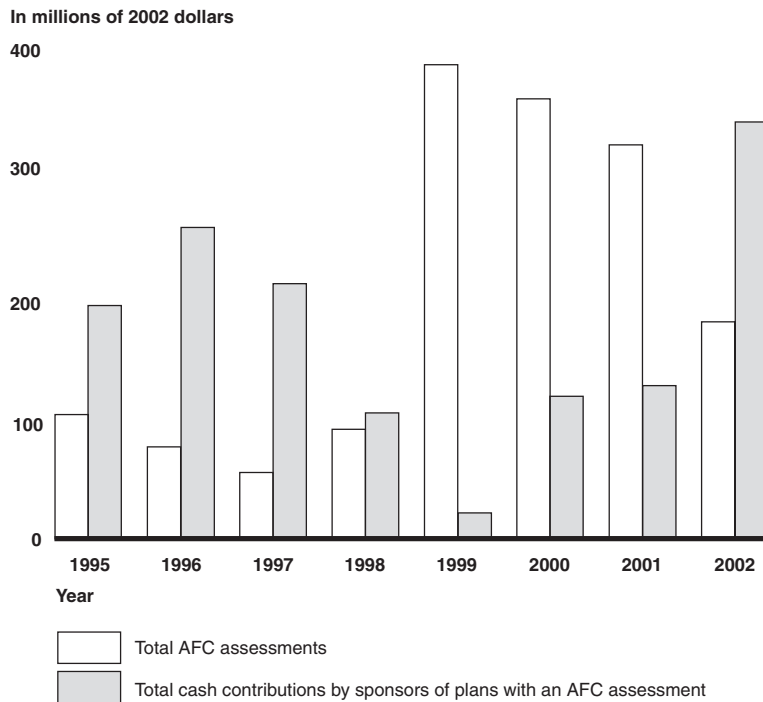
once, funding levels rose slightly from an average 75 percent when the plan was first assessed an AFC to an average 76 percent, looking collectively at all subsequent years. All of these plans were assessed an AFC more than once, and 2 of the 6 plans terminated during the period, each with a severe shortfall of assets relative to promised benefits, creating large losses for PBGC's single-employer insurance program. Further, the AFC was an imperfect mechanism for improving funding of these plans prior to termination. Bethlehem Steel, which terminated its plan in 2002 with a funding level under 50 percent, was subject to an AFC that year, but not from 1997 to 2001. LTV Steel, which terminated its pension plan for hourly employees in 2002 with assets of \$1.6 billion below the value of benefits, did have its plan assessed an AFC each year from 2000 to 2002, but for only \$2 million, \$73 million, and \$79 million, or no more than 5 percent of the eventual funding shortfall. Despite these AFC assessments, LTV contributed no cash to its plan during those years, instead using credits to satisfy its funding obligations (see table 1).

Funding Rules Allow Underfunded Plans, Including Those Owing AFC, to Forgo Cash Contributions

While the formula to determine the amount is complex, the AFC equals approximately 18 to 30 percent of the plan's unfunded liability, with more underfunded plans owing a higher percentage than less underfunded plans.⁴⁵ However, the funding rules allow sponsors to use other FSA credits, in addition to cash contributions, to satisfy minimum funding obligations, including the AFC. Among plans in our sample assessed an AFC, the average annual AFC owed was \$234 million, but annual contributions among this group averaged \$186 million, with both figures in 2002 dollars (see fig. 8). In addition, 61 percent of the time a plan was subject to an AFC, the sponsor used an existing credit balance to help satisfy its funding obligation. When it did so, the sponsor drew \$283 million from the credit balance—well above what sponsors owing an AFC contributed in cash, on average. Just over 30 percent of the time a plan was assessed an AFC, the funding rules allowed the sponsor to forgo a cash contribution altogether that year.

⁴⁵The AFC represents the required payment in excess of the regular ERISA minimum contribution, plus other possible additional charges. A plan owing an AFC must pay between 18 and 30 percent of the plan's "unfunded new liability," or liability incurred by the plan since the start of 1988, plus other charges based on the plan's normal cost and other unfunded liabilities. See 26 U.S.C. 412(l).

Figure 8: AFC Assessments Sometimes Exceeded Cash Contributions of Plans Subject to AFC, 1995-2002



Source: GAO analysis of PBGC Form 5500 research data.

Again, terminated plans provide a stark illustration of weaknesses in the rules' ability to ensure sufficient funding. Bethlehem Steel's plan was assessed an AFC of \$181 million in 2002, but the company made no cash contribution that year, just as it had not in 2000 or 2001, years in which the plan was not assessed an AFC. When the plan terminated in late 2002, its assets covered less than half of the \$7 billion in promised benefits. Similarly, LTV Steel made no contributions to its plan from 2000 to 2002, despite being assessed an AFC in each of those years. Both plans were able to apply existing credits instead of cash to satisfy minimum funding requirements.

Large Plans’ Sponsors’ Credit Ratings Appear Related to Certain Funding Behavior and Represent Risk to PBGC

The recent funding experiences of large plans, especially those plans that are sponsored by financially weak firms, illustrate the limited effectiveness of certain current funding rules and represent a potentially large implicit financial risk to PBGC. From 1995 to 2002, on average, 9 percent of the largest 100 plans had a sponsor with a speculative grade credit rating, suggesting financial weakness and poor creditworthiness. As a group, speculative grade-rated sponsors had lower average funding levels, and were more likely to incur an AFC than other sponsors. In addition, speculative grade-rated sponsors generally had a higher incidence of using the highest legally allowable interest rate to discount reported plan liabilities. Using a higher interest rate lowers a plan’s calculated current liabilities and may lower the plan’s minimum funding requirement; to the extent that this reduces contributions, using the highest allowable interest rate may raise the chances of underfunding and raise the financial exposure to PBGC. Of PBGC’s 41 largest claims since 1975 in which the rating of the sponsor was known, 39 have involved plan sponsors that were rated as speculative grade just prior to termination. Among these claims, over 80 percent of plan sponsors were rated as speculative grade 10 years prior to termination. The future outlook is similar: plans sponsored by companies with speculative grade credit ratings and classified by PBGC as “reasonably possible” of termination represent an estimated \$96 billion in potential claims.

Speculative Grade Sponsors More Likely to Have Lower Funding Levels

The financial health of a plan sponsor may be key to plan funding decisions because sponsors must make funding and contribution decisions in the context of overall business operations. During our 1995 to 2002

sample period, we observed between 7 and 13 plans each year with sponsors that had a speculative grade credit rating.^{46,47}

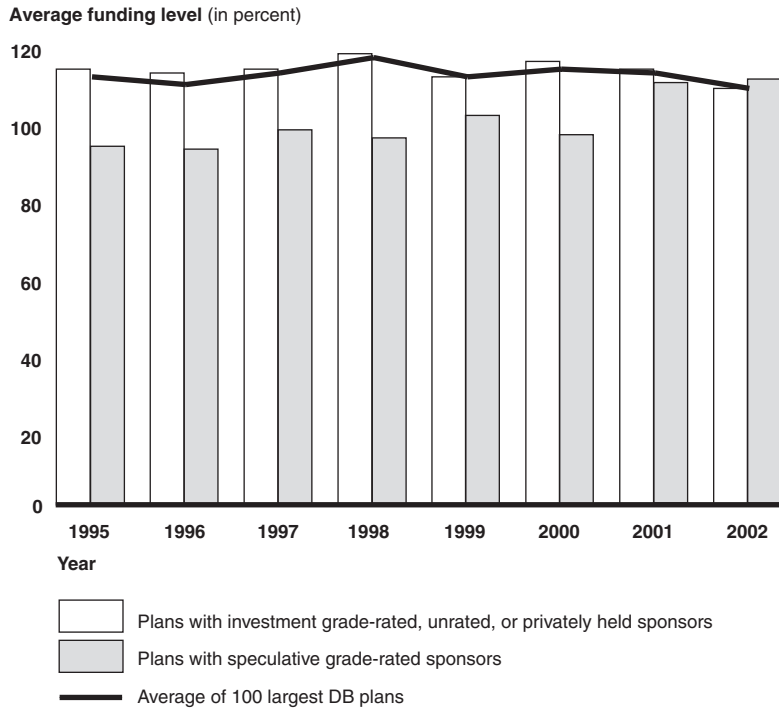
From 1995 to 2002, we observed that plans with speculative grade-rated sponsors had lower levels of average funding compared with the average for the 100 largest plans. For instance, the average funding of plans of sponsors that were rated as speculative grade was 12 percentage points lower on average than the funding level for all plans from 1995 to 2002 (see fig. 9). Applying an alternative measure of plan funding that used the reported market value measure of plan assets, we obtained broadly similar results.⁴⁸ Plans of speculative grade-rated sponsors were also more likely to be underfunded. From 1995 to 2002, each year, on average, 18 percent of speculative grade-rated plans had assets that were below 90 percent of current liability. Plans of nonspeculative grade-rated sponsors had just over half this incidence, or an average of 10 percent of plans funded below 90 percent of current liability.

⁴⁶The number of plans per year in our sample sponsored by firms with a speculative grade rating is: 9 plans in 1995; 11 plans in 1996; 7 plans in 1997; 7 plans in 1998; 8 plans in 1999; 8 plans in 2000; 13 plans in 2001; and 12 plans in 2002.

⁴⁷Credit ratings are generally considered to be a useful proxy for a firm's financial health. A credit rating, generally speaking, is a rating service's current opinion of the creditworthiness of an obligor with respect to a financial obligation. It typically takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. Moody's and Standard and Poor's (S&P) are two examples of well-known ratings services. We use S&P ratings throughout our report. S&P long-term credit ratings are divided into several categories ranging from AAA, reflecting the strongest credit quality, to D, reflecting the lowest. Ratings from AA to CCC may be modified by the addition of a plus or minus sign to show relative standing within the major rating categories. The term "investment grade" was originally used by various regulatory bodies to connote obligations eligible for investment by institutions such as banks, insurance companies, and savings and loan associations. Over time, this term gained widespread usage throughout the investment community. Ratings in the four highest categories, AAA, AA, A, BBB, generally are recognized as being investment grade. Debt rated BB or below generally is referred to as speculative grade. Sometimes the term "junk bond" is used as a more irreverent expression for this category of riskier debt.

⁴⁸Using reported market assets as the numerator of the funding percentage, the average funding of plans of sponsors that were rated as speculative grade was 17 percentage points lower on average than the funding level for all plans over the 1995-2002 period.

Figure 9: Plans Sponsored by Firms with a Speculative Grade Rating Generally Had Lower Levels of Funding on a Current Liability Basis



Source: GAO analysis of PBGC Form 5500 research data and COMPUSTAT data.

Large plans sponsored by firms with a speculative grade rating were also more likely to incur an AFC. While speculative grade-rated sponsors accounted for only 9 percent of all sponsors from 1995 to 2002, they accounted for just over one-third (8 of 23) of all instances in which a sponsor was required to pay an AFC.⁴⁹ No high investment grade sponsors (those rated AAA or AA) were required to pay an AFC for this period. While the AFC is intended to be a backstop for underfunded plans, for our sample, it affected only those plans that were rated A or lower. The AFC may, to some extent, protect PBGC from additional losses so plans cannot become even more underfunded, especially if the plan is at risk for financial distress. However, to the extent that speculative grade-rated sponsors are considered to pose a significant risk for near-term bankruptcy, the AFC may not be an effective mechanism for improving a

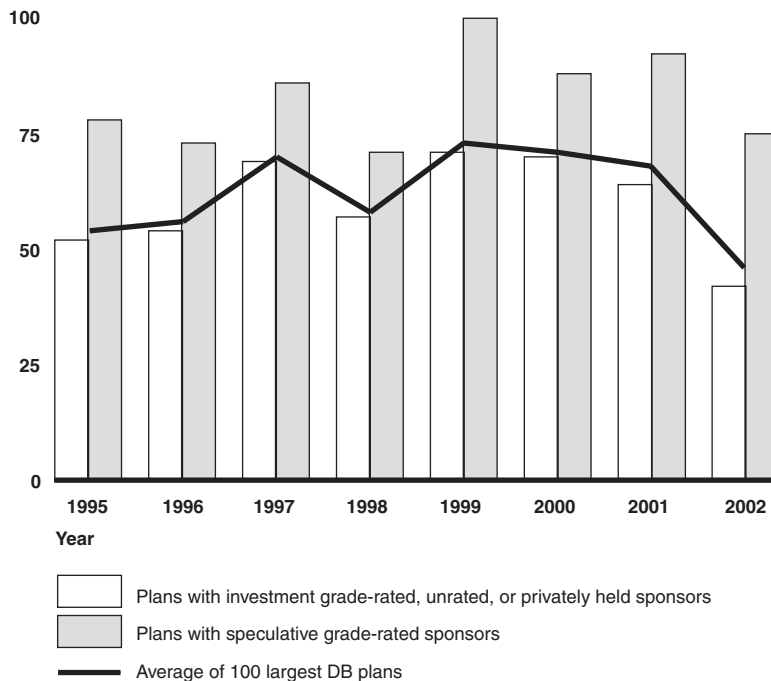
⁴⁹Six sponsors had plans that were assessed an AFC a total of 23 times during the period.

plan's funding level. Plan sponsors that are in financial distress are, by definition, having difficulty paying off debts and may be ill equipped to increase cash contributions to their plan. That is, the AFC itself may be a symptom of plan distress rather than a solution to improve a plan's funding level. AAA or AA rated sponsors, on the other hand, were not assessed an AFC from 1995 to 2002, as they likely had the financial flexibility to increase contributions to avoid consistently falling below funding levels that would have triggered the AFC.

Large plans with sponsors rated as speculative grade were generally more likely to report current liabilities calculated by using the highest allowable interest rate under the minimum funding rules. While a majority of sponsors from all credit rating categories used the highest allowable interest rate over the entire 1995 to 2002 period, speculative grade-rated sponsors used the highest rate at an incidence 23 percentage points above the incidence for all other plans in the sample (see fig. 10). The use of higher interest rates likely lowers a plan's reported current liability and minimum funding requirement. To the extent that this depresses cash contributions, such plans may have a higher chance of underfunding, thus creating additional financial risk to PBGC.

Figure 10: Sponsors with Speculative Grade Ratings Are More Likely to Use the Highest Allowable Interest Rate to Estimate Current Plan Liabilities

Percentage of plans with current liability calculated using the highest allowable interest rate



Source: GAO analysis of PBGC Form 5500 research data and COMPUSTAT data.

Speculative Grade-Rated Sponsors Represent Greater Risks to PBGC

Financial strength of plan sponsors' business operations has been a key determinant of risk to PBGC. Financially weak sponsors are, by the nature of the insurance offered by PBGC, likely to cause the most financial burden to PBGC and other premium payers. For instance, PBGC typically trustees a plan when a covered sponsor is unable to financially support the plan, such as in the event of bankruptcy or insolvency.⁵⁰ Current funding rules, coupled with the presence of PBGC insurance, may create certain incentives for financially distressed plan sponsors to avoid or postpone contributions and increase benefits. Many of the minimum funding rules are designed so that sponsors of ongoing plans may smooth contributions over a number of years. Sponsors that are in financial distress, however, may have a more limited time horizon and place other financial priorities above "funding up" their pension plans. To the extent that moral hazard from the presence of PBGC insurance causes financially troubled sponsors to alter their funding behavior, PBGC's potential exposure increases.⁵¹

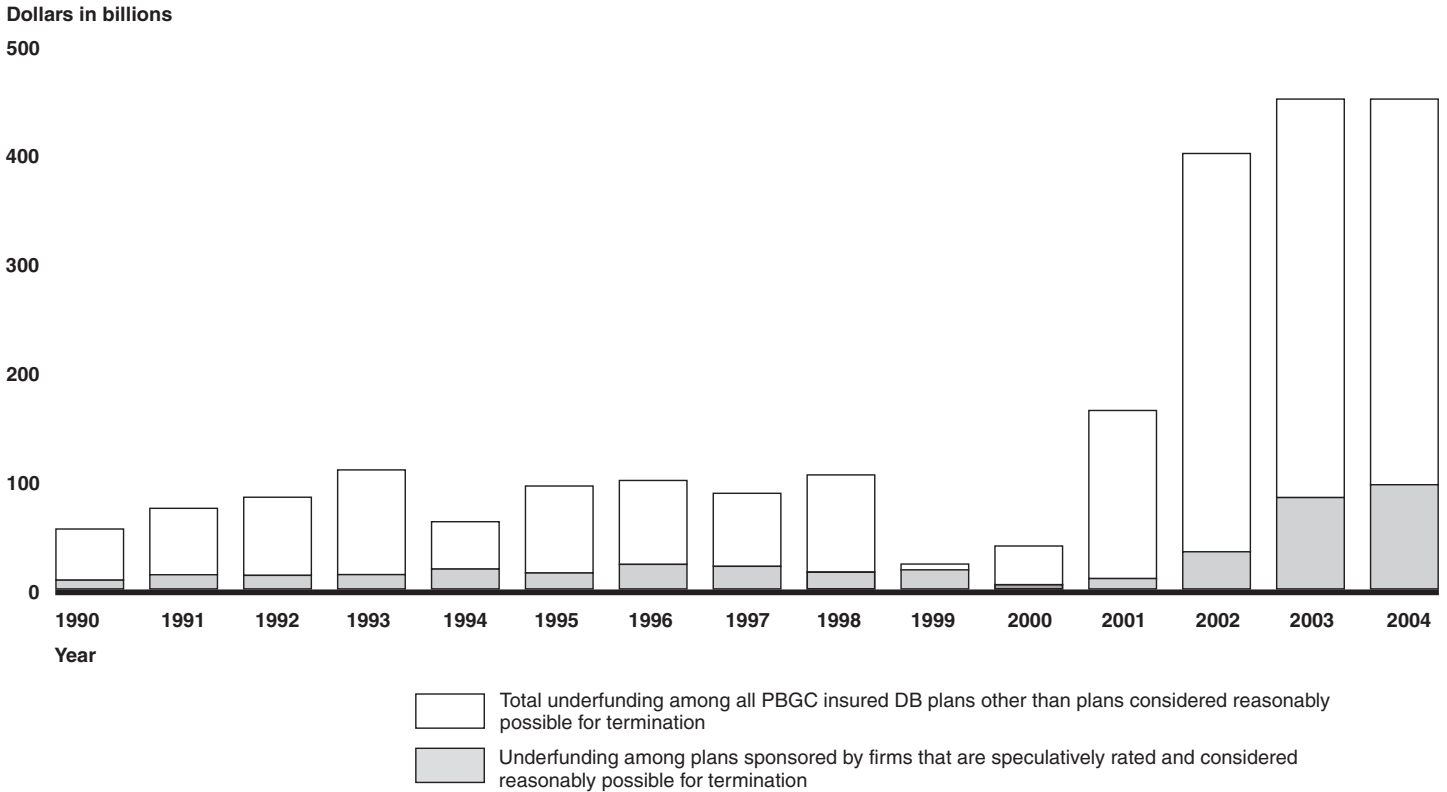
Underfunded plans sponsored by financially weak firms pose the greatest immediate threat to PBGC's single-employer program. PBGC's best estimate of the total underfunding of plans sponsored by companies with credit ratings below investment grade and classified by PBGC as reasonably possible to terminate was an estimated \$96 billion as of September 30, 2004 (see fig. 11).⁵²

⁵⁰In particular, a distress termination of a single employer's plan may occur if the employer meets one of the following conditions: (1) liquidation in bankruptcy or insolvency proceedings, (2) reorganization in bankruptcy or insolvency proceedings where bankruptcy court determines termination is necessary to allow reorganization, or (3) termination in order to enable payment of debts while staying in business or to avoid unreasonably burdensome pension costs caused by a decline of the employer's covered workforce.

⁵¹For a discussion of moral hazard incentives, see GAO, *Private Pensions: Airline Plans' Underfunding Illustrates Broader Problems with the Defined Benefit Pension System*. [GAO-05-108T](#) (Washington, D.C.: Oct. 7, 2004).

⁵²Criteria used for classifying a company as a reasonably possible include, but are not limited to, one or more of the following conditions: The plan sponsor is in Chapter 11 reorganization; funding waiver pending or outstanding with the IRS; sponsor missed minimum funding contribution; sponsor's bond rating is below-investment-grade for Standard & Poor's (BB+) or Moody's (Ba1); sponsor has no bond rating but unsecured debt is below investment grade; or sponsor has no bond rating, but the ratio of long-term debt plus unfunded benefit liability to market value of shares is 1.5 or greater.

Figure 11: Total Underfunding among All DB Plans, and among Those Considered by PBGC as Reasonably Possible for Termination, Has Increased Markedly since 2001



Source: PBGC 2003 annual data book and PBGC 2004 annual report.

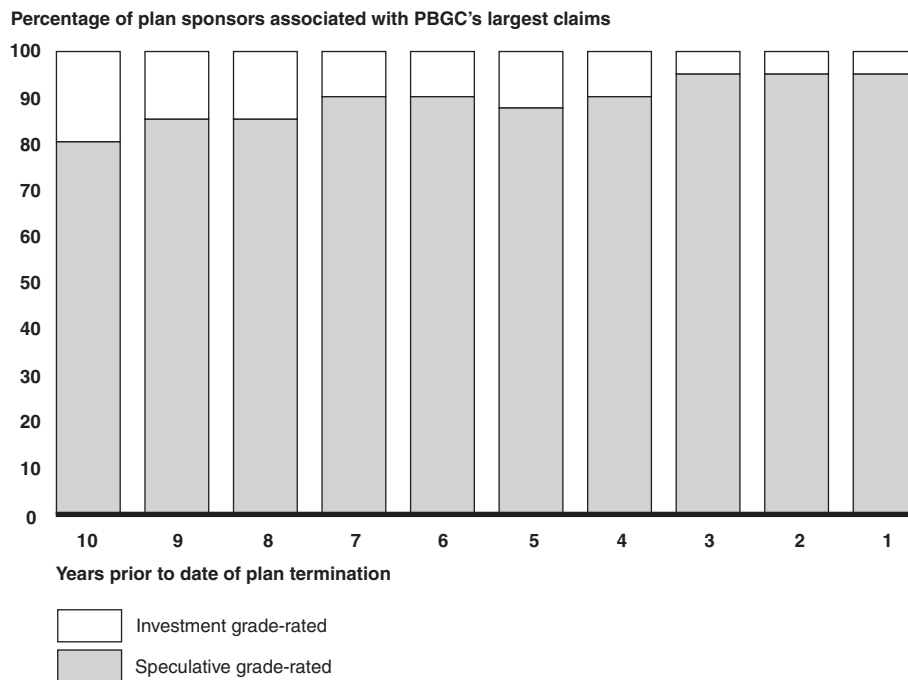
Note: Underfunding figures for non-reasonably possible plans represent the end of the calendar year, except for 2004, which represents the end of fiscal year 2004 (September 30, 2004). Figures for reasonably possible plans are taken as of the end of each fiscal year.

PBGC’s claims experience shows that financially weak plans have been a source of substantial claims. Of the 41 largest claims in PBGC history in which a rating was known, 39 of the plan sponsors involved were credit rated as speculative grade 3 years prior to termination (see fig. 12). These claims account for 67 percent of the value of total gross claims on the single-employer program from 1975 to 2004.⁵³ Most of the plan sponsors involved in these claims were given speculative grade ratings for many more years prior to their eventual termination. Even 10 years prior to plan

⁵³Gross claims are the present value of future benefits less trusteed plan assets.

termination, 33 of the 41 plan sponsors involved in the largest gross claims, in which the rating of the sponsor was known, were rated as speculative grade.⁵⁴

Figure 12: Over 80 Percent of Sponsors Associated with PBGC's Largest Termination Claims Had Speculative Grade Ratings 10 Years prior to Termination



Source: PBGC.

Note: Based on 41 of PBGC's largest gross claims in which the rating of the sponsor was known, representing over 67 percent of total gross claims from 1975 to 2004. These 41 claims may include sponsors with more than one plan and are not limited to those plans in our sample. Ratings based on S&P rating.

⁵⁴Speculative grade-rated issues tend to exhibit significant risk compared with other rated issues, even under short time horizons. Historical ratings indicate that speculative grade-rated plans are much more likely to default on obligations than investment grade-rated issues. For instance, over a 3-year period, the highest speculative grade (BB) rated issue defaults roughly 7 percent of the time, or 4.3 times more frequently than the lowest investment grade rating (BBB). Further, even lower-rated speculative grade issuers tend to have even higher default probabilities over a 3-year period—defaulting 19 and 45 percent of the time for B and CCC/C rated companies respectively. Typically, an issued rating does not change much from year to year. For example, looking at S&P ratings over the 1981-2003 period, AAA-rated issuers were still rated AAA 1 year later 88 percent of the time and B rated-issuers remained B 1 year later 74 percent of the time.

Conclusions

Widely reported recent large plan terminations by bankrupt sponsors and the financial consequences for PBGC have pushed pension reform into the spotlight of national concern. Our past work has shown that the roots of these current pension problems are broad and structural in nature, and that the private DB pension system requires meaningful and comprehensive reform. The Administration has already presented a proposal for reform and others may soon emerge from the Congress. While the complexity of the challenges suggests a considerable debate ahead, the emerging consensus that action needs to be taken may be cause for optimism.

Our analysis here examines the effectiveness of certain funding rules and suggests that these rules have contributed to the general underfunding of pensions and, indirectly, to PBGC's recent financial difficulties. The persistence of a large number of underfunded plans, even during the strong economic period of the late 1990s, implies that current funding rules are not stringent enough to ensure that sponsors can fund their pensions adequately. Perhaps even more troubling is that current rules for measuring and reporting plan assets and liabilities may not reflect true current values and may understate the funding problem. Further, the very small number of sponsors of underfunded plans that pay the AFC indicates that the rule needs to be strengthened if it is to serve as the primary mechanism for shoring up assets in underfunded plans.

The current rules have the reasonable and important goals of long-term funding adequacy and short-term funding flexibility so as to reduce annual contribution volatility. However, our work shows that although the current system permits flexibility, it also permits reported plan funding to be inadequate, misleading, and opaque, and even so, funding and contributions for some plans can still swing wildly from year to year. This would appear not to serve the interest of any DB pension stakeholders effectively. The challenge is determining how to achieve a balance of interests: how to temper the need for funding flexibility with accurate measurement, adequate funding, and appropriate transparency. Our work shows that although the current system permits flexibility, it also permits reported plan funding to be inadequate, misleading, and opaque, and even so, funding and contributions for some plans can still swing wildly from year to year. This would appear not to serve the interest of any DB pension stakeholders effectively.

Despite flaws in the funding rules, our work here shows that most of the largest plans appear to be adequately funded. Rules should acknowledge that funding will vary with cyclical economic conditions, and even

sponsors who make regular contributions may find their plans underfunded on occasion. Periodic and mild underfunding is not usually a major concern, but it becomes a threat to workers' benefits and to PBGC when the sponsor becomes financially weak and the risk of bankruptcy and plan termination becomes likely. This suggests that perhaps the stringency of certain funding rules can be adjusted depending on the financial strength of the sponsor, with stronger sponsors being allowed greater latitude in funding and contributions than weaker sponsors that might present a near-term bankruptcy risk.⁵⁵ However, focusing more stringent funding obligations on weak plans and sponsors is difficult in that strong firms and industries can quickly become risky ones, and once sponsors and plans become too weak, it may be difficult for them to make larger contributions and still recover.

It should be noted also that while change in the funding rules is an essential piece of the reform puzzle, it is certainly not the only piece. Indeed, pension reform is a challenge precisely because of the necessity of fusing together so many complex, and sometimes competing, elements into a comprehensive proposal. Ideally, effective reform would

- improve the accuracy of plan asset and liability measurement while minimizing complexity and maintaining contribution flexibility;
- develop a PBGC insurance premium structure that charges sponsors fairly, based on the risk their plans pose to PBGC, and provides incentives for sponsors to fund plans adequately;
- address the issue of severely underfunded plans making lump-sum payments;
- resolve outstanding controversies concerning cash balance and other hybrid plans by safeguarding the benefits of workers regardless of age; and
- improve plan information transparency for PBGC, plan participants, unions, and investors in a manner that does not add considerable burden to plan sponsors.

⁵⁵The Administration proposal moves in this direction by suggesting sponsors of different financial strength have different funding targets. See *Strengthen Funding for Single Employer Pension Plans*, U.S. Department of Labor, Employee Benefits Security Administration, February 7, 2005.

Developed in isolation, solutions to some of these concerns could erode the effectiveness of other reform components or introduce needless complexity. As deliberations on reform move forward, it will be important that each of these individual elements be designed so that all work in concert toward well-defined goals.

This reform effort should also be understood in the context of the problems facing other components of retirement security and the federal budget generally. For example, Social Security, Medicare, and Medicaid serve the larger population of retired and disabled workers, many of whom are also affected by DB reform. The demographic dynamics of increased longevity in life and retirement affecting the DB system also affect these other programs, intensifying existing fiscal pressures on the federal budget. Thus, DB pension reform, with these other issues, has important implications both for the distribution of retirement income for current and future generations and for our overall success in addressing these broader budgetary challenges.⁵⁶

Even with meaningful, carefully crafted reform, it is possible that some DB plan sponsors may choose to freeze or terminate their plans. Sponsor exit is a serious concern, given the important role DB plans play in providing retirement security. However, this is a natural consequence of the inherent trade-off that exists in a private pension system that on one hand depends on voluntary plan sponsorship and on the other is tax subsidized and backed by federal insurance in order to promote the retirement security of our nation's workers. The overarching goals of balanced pension reform, and particularly of funding rule reform, should be to protect workers' benefits by providing employers the flexibility they need in managing their pension plans while also holding those employers accountable for the promises they make to their employees.

⁵⁶For more discussion, see [GAO-04-325SP](#), pp. 54-57.

Matters for Congressional Consideration

As we have noted in previous reports,⁵⁷ the Congress should consider broad pension reform that is comprehensive in scope and balanced in effect. Along with changes in the areas of PBGC's premium structure, lump-sum distributions, shutdown benefits, and other areas, funding rule changes should be an essential element of DB pension reform. Such reform may result in a system with features very different from the framework currently governing DB plans and PBGC. However, significant reforms that would place the DB system and PBGC on a sounder financial footing could also be enacted and could retain many of the features of the current regulatory system. Should the Congress choose to move in this latter direction, this report highlights certain areas where carefully crafted changes could improve plan funding. Specifically, the Congress should consider measures that include

- **Strengthening the additional funding charge.** One way to do this would be to consider raising the threshold levels of funding that trigger the AFC so that any sponsor with a plan less than 90 percent funded would have to make additional contributions. So that plans do not have an incentive to fund just barely above 90 percent, additional consideration may be given for a gradual phase-in of the AFC for plans that are underfunded between 90 percent and 100 percent of current liability. Requiring that financially weak plans that owe an AFC base their contributions on termination liability rather than current liability might add stringency to the minimum funding rules and might be appropriate, since weak sponsors of underfunded plans present a greater risk of distress termination to PBGC than other sponsors. These reforms could be enacted singly or jointly, but each would subject more plans to an AFC, and the reforms would shore up at-risk plans before underfunding becomes severe.
- **Limiting the use of FSA credits toward meeting minimum funding requirements.** We have noted that some sponsors repeatedly relied on FSA credits, such as a prior year credit balance or net interest credits, to avoid making cash contributions to their plans, and that this has been particularly problematic for underfunded plans prior to their

⁵⁷See [GAO-04-90](#); [GAO-05-108T](#); GAO, *Pension Benefit Guaranty Corporation: Single-Employer Pension Insurance Program Faces Significant Long-Term Risks*, [GAO-03-873T](#) (Washington, D.C.: Sept. 4, 2003); *Pension Benefit Guaranty Corporation: Long-Term Financing Risks to Single-Employer Insurance Program Highlight Need for Comprehensive Reform*, [GAO-04-150T](#) (Washington, D.C.: Oct. 14, 2003); *Private Pensions: Changing Funding Rules and Enhancing Incentives Can Improve Plan Funding*, [GAO-04-176T](#) (Washington, D.C.: Oct. 29, 2003).

termination. While FSA credits may have the benefit of moderating contribution volatility in the near term, they also have the weakness of allowing the sponsors of severely underfunded plans to avoid cash contributions and may contribute to volatility later. The Congress should consider ways, even if it retains the FSA, to scale back the substitution of credits for annual cash contributions.

While admittedly an extremely complicated matter, meaningful effective reform must confront the issue of accurate measurement. We found that that the measurement techniques of assets and liabilities that are permitted under current funding rules can result in distortions masking the true funding status of a plan and can permit sponsors to avoid making plan contributions. Techniques that lead to misleading indicators of plan health and impede information transparency are a disservice to all key stakeholders; to plan participants in making retirement decisions; to unions seeking to bargain in the interests of their members; to current and potential shareholders in deciding where to invest; and finally to the public, which is the ultimate protector of employee benefits.

Agency Comments

We provided a draft of this report to the Department of Labor, Treasury, and PBGC. The Department of Labor and PBGC provided written comments, which appear in appendix III and appendix IV. Both the Department of Labor's and PBGC's comments generally agree with the findings and conclusions of our report. Treasury did not provide written comments. The Department of Labor, Treasury, and PBGC also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the Secretary of Labor, the Secretary of the Treasury, and the Executive Director of the PBGC, appropriate congressional committees, and other interested parties. We will also make copies available to others on request. In addition, the report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you have any questions concerning this report, please contact me at (202) 512-7215. Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made contributions are listed in appendix V.

A handwritten signature in black ink that reads "Barbara Bovbjerg". The signature is written in a cursive style with a large, looped initial "B".

Barbara Bovbjerg, Director
Education, Workforce, and Income Security Issues

List of Congressional Committees

The Honorable Charles E. Grassley
Chairman

The Honorable Max Baucus
Ranking Minority Member
Committee on Finance
United States Senate

The Honorable Michael B. Enzi
Chairman

The Honorable Edward M. Kennedy
Ranking Minority Member
Committee on Health, Education, Labor, and Pensions
United States Senate

The Honorable John A. Boehner
Chairman

The Honorable George Miller
Ranking Minority Member
Committee on Education and the Workforce
House of Representatives

The Honorable William M. Thomas
Chairman

The Honorable Charles B. Rangel
Ranking Minority Member
Committee on Ways and Means
House of Representatives

Appendix I: Scope and Methodology

To describe recent pension funding trends, we analyzed data from Schedule B of the Form 5500. This schedule contains information on plan assets, liabilities, contributions, funding standard account (FSA) credits and charges, and additional funding charge (AFC) calculations.

Problems with the electronic data of the Form 5500 are well documented.¹ To mitigate problems associated with the data we used Form 5500 research data from the Pension Benefit Guaranty Corporation's (PBGC) Policy, Research and Analysis Department (PRAD). PRAD analysts routinely and systematically correct the raw 5500 data submitted by plans, and PRAD 5500 data are thought to be the most accurate electronic versions. Although we did not independently audit the veracity of the PRAD data, we performed routine data reliability checks. In instances where the data reliability checks revealed inconsistencies, we contacted a PRAD analyst to check and, if appropriate, correct the electronic data using information provided to PRAD in hard copy.

For our analysis, we worked with a subset of the PBGC research data that included the 100 largest plans, measured by current liability, annually from 1995 to 2002.² In 2002, the most recent, nearly complete year of available Form 5500 data, these 100 plans, with average liabilities per plan of \$6.7 billion and 94,000 participants, represented approximately 50 percent of the total liabilities and about 28 percent of the total participants of the approximately 30,000 defined benefit (DB) plans that filed a Form 5500 for plan year 2002 as of February 2005. Thus, while our sample data set represents only a small portion of the total plans in the single-employer program, it constitutes a significant proportion of the liabilities of the DB system and the financial risk to PBGC while allowing for more manageable analysis. We did not directly test or compare our sample for generalizability across the entire sample of single-employer plans.

¹See GAO, *Private Pensions: Participants Need Information on the Risks of Investing in Employer Securities and the Benefits of Diversification*, [GAO-02-943](#) (Washington, D.C.: Sept. 6, 2002); *Retirement Income Data: Improvements Could Better Support Analysis of Future Retirees' Prospects*, [GAO-03-337](#) (Washington, D.C.: Mar. 21, 2003); *Private Pensions: Multiemployer Plans Face Short- and Long-Term Challenges*, [GAO-04-423](#) (Washington, D.C.: Mar. 26, 2004); and *Private Pensions: Publicly Available Reports Provide Useful but Limited Information on Plans' Financial Condition*, [GAO-04-395](#) (Washington, D.C.: Mar. 31, 2004).

²Each year, our sample contains a new set of 100 largest plans based on the plan liabilities in that year. That is, from year to year, the 100 largest plans will add and subtract plans from other years' 100 largest plans.

For 1999 and 2002, the best available data do not contain all possible plans, and therefore it is possible that in those years complete data sets would yield slightly different samples for our analysis. The 1999 data we received from PBGC came from a sample that was missing an estimated 2,927 of the 37,536 plans in the single-employer program, because of missing electronic records in that year. The 2002 data came from a sample still missing approximately 300 plans, because of ongoing processing. We believe that neither of these factors significantly affects our findings or our conclusions.

To identify how the AFC is calculated and applied, we studied how the relevant Employee Retirement Security Act of 1974 (ERISA) and Internal Revenue Code (IRC) funding rules are applied, conducted a literature review, and interviewed researchers, government officials, pension actuaries, and pension sponsor groups familiar with pension funding rules. To analyze potential risk to PBGC, we matched sponsor credit ratings from the Standard and Poor's (S&P) COMPUSTAT database, provided to us by PBGC, to the sponsor's pension plan data.³ PBGC also provided us with detailed calculations to determine plans' full funding limitations for purposes of the minimum funding requirements. Additionally, to analyze effects of maximum deductible contributions, we matched the results from a previously issued PBGC study on the subject to our sample of plans. Our work was done in accordance with generally accepted government auditing standards.

³In each year of data we matched the relevant December ratings issue for that year. Plans sponsored by a company subsidiary were given the rating of the parent unless the subsidiary had its own rating. Additionally, the same sponsor may sponsor a number of plans in the largest 100 plans for any given year. We observe a number of sponsors with multiple plans in any given year of our sample.

Appendix II: Statistics for Largest 100 Defined Benefit Plans, 1995-2002

Table 2: Average Plan Size and Funding Levels

(Dollar figures in millions of 2002 dollars)

	Mean	Median
Current liability	\$5,341.6	\$3,065.7
Actuarial asset levels	\$6,019.3	\$3,397.9
Number of participants (actual)	80,431	59,508
Plan funding levels ^a	112.7%	106.2%
Plans below 100% funded	38.9	
Plans below 90% funded	10.4	
Plans below 80% funded	2.9	
Funding gap, plans below 100% funded ^b	\$425.7	\$215.7
Plans using highest allowable interest rate to calculate liabilities	62.0%	

Source: GAO analysis of PBGC Form 5500 research data.

Notes: All figures represent per plan annual averages, from 1995 to 2002, except as described differently. Annual dollar figures adjusted to 2002 dollars using annual consumer price index (CPI) data.

Median figures reported are the average of individual year median values.

For analysis, each year contains that year's 100 largest plans, ranked by current liabilities. From 1995 to 2002, 187 unique plans appear in at least 1 year's sample of 100 largest plans. See footnote 9 in main text for further explanation.

^aFunding levels calculated using actuarially measured assets as a percentage of current liabilities.

^bFunding gap equals current liabilities less actuarially valued assets, for underfunded plans.

Table 3: Cash Contributions

(Dollar figures in millions of 2002 dollars)

	Mean	Median
Total cash contributions	\$97.4	\$9.4
Contributions/minimum funding obligation	90.5%	19.1%
Sponsors forgoing cash contributions	62.5%	
Underfunded plans receiving no cash contribution	41.1%	

Source: GAO analysis of PBGC Form 5500 research data.

Notes: All figures represent per plan annual averages, from 1995 to 2002, except as described differently. Annual dollar figures adjusted to 2002 dollars using annual CPI data.

Median figures reported are the average of individual year median values.

For analysis, each year contains that year's 100 largest plans, ranked by current liabilities. From 1995 to 2002, 187 unique plans appear in at least 1 year's sample of 100 largest plans. See footnote 9 in main text for further explanation.

Table 4: Funding Standard Account (FSA) Credits, Other than Cash Contributions

(Dollar figures in millions of 2002 dollars)

	Mean	Median
Plans drawing down accumulated credit balance	15.4%	
Accumulated credit balance from prior years	\$573.7	\$123.4
Net amortization credits	-\$27.8	\$0
Full funding limitation credits	\$46.7	\$17.0
Net interest credits	\$42.2	\$4.9

Source: GAO analysis of PBGC Form 5500 research data.

Notes: All figures represent per plan annual averages, from 1995 to 2002, except as described differently. Annual dollar figures adjusted to 2002 dollars using annual CPI data.

Median figures reported are the average of individual year median values.

For analysis, each year contains that year's 100 largest plans, ranked by current liabilities. From 1995 to 2002, 187 unique plans appear in at least 1 year's sample of 100 largest plans. See footnote 9 in main text for further explanation.

Table 5: Full Funding Limitation (FFL)

(Dollar figures in millions of 2002 dollars)

	Mean	Median
FFL amount	\$645.6	\$24.3
Plans with FFL = 0	60.1%	
Sponsors contributing at least as much as FFL	64.4%	
Instances in which plan making contribution at least equal to FFL used highest allowable interest rate	65.5%	

Source: GAO analysis of PBGC Form 5500 research data.

Notes: All figures represent per plan annual averages, from 1995 to 2002, except as described differently. Annual dollar figures adjusted to 2002 dollars using annual CPI data.

Median figures reported are the average of individual year median values.

For analysis, each year contains that year's 100 largest plans, ranked by current liabilities. From 1995 to 2002, 187 unique plans appear in at least 1 year's sample of 100 largest plans. See footnote 9 in main text for further explanation.

**Appendix II: Statistics for Largest 100
Defined Benefit Plans, 1995-2002**

Table 6: Additional Funding Charge (AFC)

Dollar figures in millions of 2002 dollars

	Mean	Median
Plans subject to AFC ^a	2.9	
AFC amount assessed	\$234.1	\$148.2
Current liabilities of plans subject to AFC	\$3,836.7	\$3,693.6
Funding gap of plan assessed an AFC	\$837.1	\$953.0
Funded percentage of plan subject to AFC	78.2%	74.7%
Plans below 90% funded subject to AFC	27.7%	
Plans 80 to 90% funded subject to AFC	8.3%	
Cash contribution, plans subject to AFC	\$185.7	\$118.9
Plans subject to AFC forgoing cash contribution	30.4%	
Plans subject to AFC drawing down credit balance	60.9%	

Source: GAO analysis of PBGC Form 5500 research data.

Notes: Figures in this table represent averages and medians of those plans subject to an AFC for the entire sample period, except as described differently. Annual dollar figures adjusted to 2002 dollars using annual CPI data.

Median figures reported are the average of individual year median values.

For analysis, each year contains that year's 100 largest plans, ranked by current liabilities. From 1995 to 2002, 187 unique plans appear in at least 1 year's sample of 100 largest plans. See footnote 9 in main text for further explanation.

^aThis represents the average annual number of plans subject to an AFC. From 1995 to 2002, we observed 6 unique plans assessed an AFC, all of which had repeat AFC assessments.

Appendix III: Comments from the Department of Labor

U.S. Department of Labor

Assistant Secretary for
Employee Benefits Security Administration
Washington, D.C. 20210



May 6, 2005

Ms. Barbara Bovbjerg, Director
Education, Workforce, and Income Security Issues
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Bovbjerg:

The U.S. Government Accountability Office's (GAO) report, "Private Pensions: Recent Experiences of Large Defined Benefit Plans Illustrate Weaknesses in Funding Rules," shows the need for comprehensive pension reform. The study documents that a large part of today's severe funding and contribution problems can be traced directly to the funding rules themselves. The report provides a detailed analysis of how specific aspects of the current rules fail to ensure adequate funding. Underfunded plan terminations strain the pension insurance system and jeopardize the retirement security of the 34 million Americans participating in single-employer defined benefit plans. That is why the Administration supports comprehensive reform to improve pension security for workers and retirees.

We agree with GAO's findings that underfunded plans of financially weak plan sponsors create a severe financial risk to the Pension Benefit Guaranty Corporation and to retirement security generally. We also agree that credit balances, funding holidays, and smoothing mechanisms have contributed to the widespread plan underfunding that we see today. Moreover, as your report demonstrates, these mechanisms mask underfunding, so that plan sponsors and participants discover too late and all too suddenly the need for drastic measures to address severe cumulative underfunding.

The Administration appreciates GAO's excellent work in this important area. The Administration's proposal addresses the issues raised in this report within the framework of a comprehensive reform plan, promoting sound funding while providing plan sponsors with the tools to manage volatility. We look forward to working with the Congress to implement these needed reforms.

Sincerely,

A handwritten signature in black ink, appearing to read "Ann L. Combs".

Ann L. Combs
Assistant Secretary of Labor

Appendix IV: Comments from the Pension Benefit Guaranty Corporation



Pension Benefit Guaranty Corporation
1200 K Street, N.W., Washington, D.C. 20005-4026

Office of the Executive Director

May 9, 2005

Ms. Barbara Bovbjerg, Director
Education, Workforce and Income Security Issues
U.S. Government Accountability Office
441 G Street NW
Washington, D.C. 20548

Dear Ms. Bovbjerg:

The PBGC is pleased to comment on GAO's draft report, *Recent Experiences of Large Defined Benefit Plans Illustrate Weaknesses in Funding Rules*.

The report provides compelling evidence of the need for broad pension reform that is comprehensive in scope. It documents the weaknesses in the current pension funding rules that have contributed to severe pension underfunding. It also highlights how underfunded plan terminations strain the pension insurance program and jeopardize the retirement security of the 34 million Americans participating in single-employer defined benefit plans.

As you noted in the report, the Administration recently proposed a comprehensive pension reform package that will strengthen the defined benefit pension system by (1) reforming the funding rules to ensure that sponsors keep their retirement promises; (2) improving disclosure to workers, retirees, investors, and regulators about the funding status of pension plans; and (3) reforming PBGC premiums to better reflect risk.

We strongly agree with GAO that weaknesses in the current funding rules have led to severe pension underfunding that puts workers and retirees at risk. When an underfunded plan terminates, participants can lose as much as half or two-thirds of their promised benefits. We would also note that large losses in the pension insurance program pose risks to plan sponsors and taxpayers.

There are two points the PBGC would like to emphasize. The first is that the underfunding problems addressed in the report have become more severe since the years primarily focused on in the report (1995-2002). At the end of fiscal 2002, PBGC's single-employer program had a deficit of \$3.6 billion, which grew to \$11.2 billion at the

end of fiscal 2003 and, as your report notes, to \$23.3 billion by the end of fiscal 2004. In addition, the total underfunding in single-employer plans sponsored by financially weak firms grew from \$35 billion at the end of 2002 to \$96 billion at the end of 2004. This disturbing trend underscores the need for congressional action.

The second point is the need for comprehensive reform of the defined benefit pension system. The GAO report focuses on the weaknesses in the funding rules and the need for funding reform. But it also concludes that funding rule changes are an essential piece of a comprehensive reform package, and warns against adopting individual reforms in isolation. This report refers to GAO's earlier report, *Single-Employer Pension Insurance Program Faces Significant Long-Term Risks (04-90)*, that also concluded that Congress should consider comprehensive pension reform measures. Thus, the GAO's conclusions are consistent with the Administration's comprehensive reform approach that would not only reform the funding rules but also would also improve disclosure and rationalize PBGC premiums.

We appreciate GAO's work in this important area and look forward to working with GAO and the Congress on measures to strengthen the defined benefit system and pension insurance program.

Sincerely,



Bradley D. Belt

Appendix V: GAO Contact and Staff Acknowledgments

Contact

Barbara Bovbjerg (202) 512-7215.

Staff Acknowledgments

In addition to the contact above, Charles A. Jeszeck, Charles J. Ford, Joseph Applebaum, Mark M. Glickman, Scott Heacock, Roger J. Thomas, and Amy Vassalotti made important contributions to this report.

Glossary

Actuarial value of assets—the smoothed value of DB plan assets, reflecting recent market levels of assets. Rules dictate that the reported actuarial assets must be between 80 and 120 percent of market asset levels and cannot be consistently above or below market values.

Additional funding charge (AFC)—a surcharge assessed to DB plans that fail specific funding level requirements that increases the minimum required funding obligation for the plan sponsor.

Credit balance—the excess of credits over charges in a plan's funding standard account, which can be carried forward to meet funding obligations in future years.

Current liabilities—the measured value of a DB plan's accrued benefits using an interest rate and other assumptions specified in applicable laws and regulations.

Defined benefit (DB) pension plan—a pension plan that promises a guaranteed benefit, generally based on an employee's salary and years of service. (A different type of pension plan, a defined contribution, or DC, plan, instead provides an individual account to an employee, to which employers, employees, or both make periodic contributions.)

Employee Retirement Income Security Act of 1974 (ERISA)—the federal law that sets minimum standards regarding management, operation, and funding of pension plans sponsored by private employers.

Full funding limitation (FFL)—a limit on the required amount a sponsor must contribute to a plan each year, dependent on the plan's funding level.

Funded ratio—the ratio of plan assets to plan liabilities.

Funding standard account (FSA)—a plan's annual accounting record, recording events that reflect an increase in a plan's obligations (charges) and those that reflect an increase in the plan's ability to pay benefits (credits).

Maximum deductible contribution—the maximum a sponsor can generally contribute to a plan without facing an excise tax on the excess contribution.

Normal cost—the cost of pension benefits allocated to a specific plan year.

Termination liabilities—the measured value of a DB plan's accrued benefits, using assumptions appropriate for a terminating plan.

Related GAO Products

Pension Benefit Guaranty Corporation Structural Problems Limit Agency's Ability to Protect Itself from Risk, [GAO-05-360T](#). Washington, D.C.: March 2, 2005.

Private Pensions: Airline Plans' Underfunding Illustrates Broader Problems with the Defined Benefit Pension System. [GAO-05-108T](#). Washington, D.C.: October 7, 2004.

Pension Plans: Additional Transparency and Other Actions Needed in Connection with Proxy Voting. [GAO-04-749](#). Washington, D.C.: August 10, 2004.

Private Pensions: Publicly Available Reports Provide Useful but Limited Information on Plans' Financial Condition. [GAO-04-395](#). Washington, D.C.: March 31, 2004.

Private Pensions: Timely and Accurate Information Is Needed to Identify and Track Frozen Defined Benefit Plans. [GAO-04-200R](#). Washington, D.C.: December 17, 2003.

Pension Benefit Guaranty Corporation: Single-Employer Pension Insurance Program Faces Significant Long-Term Risks. [GAO-04-90](#). Washington, D.C.: October 29, 2003.

Private Pensions: Changing Funding Rules and Enhancing Incentives Can Improve Plan Funding. [GAO-04-176T](#). Washington, D.C.: October 29, 2003.

Pension Benefit Guaranty Corporation: Long-Term Financing Risks to Single-Employer Insurance Program Highlight Need for Comprehensive Reform. [GAO-04-150T](#). Washington, D.C.: October 14, 2003.

Pension Benefit Guaranty Corporation: Single-Employer Pension Insurance Program Faces Significant Long-Term Risks. [GAO-03-873T](#). Washington, D.C.: September 4, 2003.

Options to Encourage the Preservation of Pension and Retirement Savings: Phase 2. [GAO-03-990SP](#). Washington, D.C.: July 29, 2003.

Private Pensions: Participants Need Information on Risks They Face in Managing Pension Assets at and during Retirement. [GAO-03-810](#). Washington, D.C.: July 29, 2003.

Related GAO Products

Private Pensions: Process Needed to Monitor the Mandated Interest Rate for Pension Calculations. [GAO-03-313](#). Washington, D.C.: February 27, 2003.

Answers to Key Questions About Private Pension Plans. [GAO-02-745SP](#). Washington, D.C.: September 18, 2002.

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