



Pension Benefit Guaranty Corporation (PBGC) Investment Policy: Issues for Congress

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Summary

The Pension Benefit Guaranty Corporation (PBGC) is a federal corporation established under Title IV of the Employee Retirement Income Security Act of 1974 (ERISA, P.L. 93-406). The PBGC insures private pension beneficiaries against the complete loss of accrued benefits if their defined benefit pension plan is terminated without adequate funding. The PBGC receives no appropriations from general revenue. Its operations are financed by insurance premiums set by Congress and paid by sponsors of defined benefit plans, investment income from the assets in its trust fund, and recoveries from the companies formerly responsible for the trustee plans.

The PBGC insures the pension benefits of 44 million workers and retirees. In FY2007, the PBGC paid about \$4.3 billion in benefits to almost 1.3 million workers whose pension plans had failed. The PBGC currently has a \$14.1 billion deficit in assets necessary to satisfy all claims made through FY2007. Although the PBGC's liabilities are not explicitly backed by the full faith and credit of the federal government, Congress could face political pressure to bail out the PBGC at taxpayer expense should the agency become financially insolvent.

As of September 30, 2007, the value of the PBGC's total investments, including cash and investment income, was approximately \$62.6 billion. Premium income is required by law to be invested in debt obligations guaranteed by the U.S. government. The assets from terminated plans and their sponsors are accounted for in a trust fund that was most recently valued at \$48.1 billion. There are no statutory limitations on how PBGC can invest the assets in its trust fund.

In February 2008, the PBGC announced that it had adopted a new investment policy aimed at generating higher investment returns. The new policy allocates 45% of the assets to fixed-income investments, 45% to equity investments and 10% to alternative investment classes, including real estate and private equity. The PBGC's previous investment policy, adopted in 2004, set an equity investment target of 15% to 25%, with the remaining assets allocated primarily to fixed income investments.

If the PBGC's higher expected investment returns are accompanied by reduced risk—as the PBGC has asserted—then U.S. taxpayers, as the ultimate guarantors of PBGC insurance, will be better off. However, if the higher returns are accompanied by commensurately higher risk, then taxpayers are neither better nor worse off, because the PBGC's true financial condition will not have changed. Taxpayers would be worse off under the new policy if higher investment returns forestall fundamental reforms in the pension insurance system—such as adopting risk-based premiums—that could result in improving the long-term financial condition of the agency. Taxpayers, who would benefit from reduced exposure to the risk of having to bail out the PBGC if fundamental reforms in PBGC financing and governance were enacted, will be worse off if the agency does not achieve the reduction in its deficit that it has predicted the new investment policy will attain.

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Background on the PBGC

The Pension Benefit Guaranty Corporation (PBGC) is a federal corporation established under Title IV of the Employee Retirement Income Security Act of 1974 (ERISA, P.L. 93-406). The PBGC insures private pension beneficiaries against the complete loss of accrued benefits if their defined benefit pension plan is terminated without adequate funding. The PBGC receives no appropriations from general revenue. Its operations are financed by insurance premiums set by Congress and paid by sponsors of defined benefit plans, investment income from the assets in its trust fund, and recoveries from the companies formerly responsible for the trusted plans.

The Two Kinds of Pension Plans

There are two kinds of pension plans: “defined benefit” plans and “defined contribution” plans. A participant in a defined benefit plan receives a fixed benefit at retirement prescribed by a formula set forth in the plan, usually based on pay, years of service, or both. The employer makes contributions to the plan based on actuarial calculations designed to ensure that the plan has sufficient funds to pay the future benefit prescribed by the formula. Under a defined contribution plan, no particular benefit is promised. Instead, benefits are based on the balance of an individual account maintained for the benefit of the employee. The benefit received by a participant at retirement is generally dependent on two factors: total contributions made to the plan during the worker’s participation in the plan and the investment experience of the amounts contributed on the employee’s behalf. Under either type of pension plan, employees may be permitted to make contributions. The PBGC insures qualified defined benefit pensions provided by employers in the private sector. A plan is qualified if it meets the requirements of the Internal Revenue Code and ERISA and is thus eligible for favorable tax treatment. Defined contribution plans and nonqualified defined benefit plans are not insured by the PBGC.

In a defined benefit plan, the employer bears the risk of investment losses. The Internal Revenue Code and ERISA contain minimum funding standards that require the employer to make contributions to a defined benefit plan to fund promised benefits. If, for example, the plan experiences poor investment performance or actuarial miscalculations, the employer will be required to make additional contributions to the plan. The minimum funding rules provide for funding over a period of time and do not require the plan to have sufficient assets to pay all the benefits earned under the plan at any particular time. It is possible for a defined benefit plan to terminate without having sufficient assets to pay promised benefits. The PBGC insures defined benefit plan benefits up to certain limits to protect plan participants in the event of such a termination. However, the PBGC may not protect all benefits promised under a plan. Consequently, if a defined benefit plan is terminated while it is not fully funded, the participants might receive less from the PBGC than they were promised under the plan.

The PBGC’s Benefit Guarantee

The PBGC currently insures the pension benefits of 44 million workers and retirees participating in more than 30,000 private-sector defined benefit pension plans. In FY2007, the PBGC paid about \$4.3 billion in benefits to almost 1.3 million individuals whose pension plans had failed.¹

¹ PBGC, *Annual Management Report, 2007*; <http://www.pbgc.gov/docs/2007AMR.pdf>.

The PBGC insures both *single-employer* and *multiemployer* pension plans. The PBGC's single-employer program guarantees payment of basic pension benefits when an underfunded plan terminates. When an underfunded pension plan sponsored by a financially distressed company is terminated, the PBGC takes over the plan assets and assumes responsibility for paying retirement benefits to the plan's participants, subject to the statutory benefit limits.

The Single-Employer Insurance Program

In 2007, the PBGC's single-employer program insured the pensions of 33.8 million workers and retirees in about 28,900 plans. The program is directly responsible for the benefits of about 1.2 million workers and retirees in almost 3,800 trustee pension plans. The PBGC insurance program for single-employer plans reported a deficit of \$13.11 billion in FY2007, based on assets of \$67.24 billion and liabilities of \$80.35 billion.² The deficit for 2007 was \$5 billion less than the \$18.1 billion deficit reported one year earlier. The PBGC reported that the decline in the deficit was due primarily to investment income of \$4.7 billion and a \$2.8 billion actuarial credit as a result of higher valuation interest factors.³

Through the end of FY2006, the PBGC's single-employer program had incurred net claims of \$29.0 billion (see **Table 1**.) Of this amount, nine of the ten largest claims against the PBGC, totaling \$19.8 billion, occurred between 2001 and 2005. The PBGC's net claims equal the portion of guaranteed benefit liabilities not covered by plan assets or recovered from the general assets of the employer. These claims will eventually have to be covered through premiums, earnings on PBGC assets, or other sources of revenue.

The Multiemployer Insurance Program

Multiemployer plans are collectively bargained plans to which more than one company makes contributions. The PBGC's multiemployer program provides financial assistance through loans to insolvent plans to enable them to pay benefits. The PBGC does not become the trustee of insolvent multiemployer plans. These loans (which are typically not repaid) generally continue year after year until the plan no longer needs assistance or has paid all promised benefits at the guaranteed level.

In 2007, the PBGC's multiemployer program insured the pensions of 9.9 million workers and retirees in about 1,530 plans. The multiemployer program reported a net deficit of \$955 million, a \$216 million net deterioration from the end of the previous year.⁴ The loss for the year was due largely to PBGC's booking of additional probable losses from expected future financial assistance to troubled plans. The program had assets of \$1.2 billion and liabilities totaling about \$2.2 billion.

² PBGC, *Annual Management Report, 2007*.

³ In general, changes in pension liabilities are inversely related to changes in interest rates.

⁴ PBGC, *Annual Management Report, 2007*.

Table I. Claims Experience of PBGC Single-Employer Insurance Program and Probable Future Terminations

(in millions of \$)

Year of Termination	Number of Plans	Benefit Liability	Trust Plan Assets	Recoveries from Employers	Net Claims	Average Net Claim Per Terminated Plan
1975-1979	586	397	145	56	196	0.33
1980-1984	621	1,257	514	158	586	0.94
1985-1989	537	2,351	651	159	1,541	2.87
1990-1994	693	5,116	2,275	446	2,396	3.46
1995-1999	440	2,196	1,413	73	710	1.61
2000	72	367	266	15	85	1.19
2001	117	3,687	2,536	185	966	8.26
2002	178	8,243	4,505	278	3,460	19.44
2003	156	13,307	6,922	150	6,235	39.97
2004	145	5,967	2,802	481	2,684	18.51
2005	97	21,592	10,137	1,579	9,876	101.81
2006	31	678	366	13	299	9.66
Subtotal	3,673	65,159	32,532	3,593	29,033	7.91
Probable Future Terminations	27	17,430	12,568	0	4,862	—
Total	3,700	82,589	45,100	3,593	33,895	—

Source: Pension Benefit Guaranty Corporation.

Notes: Stated amounts are subject to change until PBGC finalizes values for liabilities, assets, and recoveries of terminated plans. Amounts in this table are valued as of the date of each plan's termination and differ from amounts reported in PBGC's Financial Statements, which are valued as of the end of the fiscal year. Numbers may not add up to totals due to rounding.

PBGC Benefit Limits

There is a statutory ceiling on the benefits that are insured by the PBGC. A different benefit limit applies to each program. For plans that terminate in 2008, the annual limit for the single-employer program is \$51,750 for a single life annuity payable at age 65. The guarantee for the multiemployer program is much lower. In 2008, for an individual with 30 years of service, the annual guaranteed limit is \$12,870. The annual benefit limits are indexed each year to the average annual increase in wages in jobs covered by Social Security. Because the benefit limit is higher than the pensions earned by most participants in insured plans, most workers in single-employer plans taken over by PBGC receive the full benefit earned at the time of termination. However, the lower guarantee limit for the multiemployer program has left most of the retirees in insolvent plans without their full benefits.⁵

⁵ PBGC, *Annual Management Report, 2007*.

The PBGC currently has a \$14.1 billion deficit in assets necessary to satisfy all claims made through 2007. The Government Accountability Office (GAO) has identified PBGC's single-employer program as "high-risk," stating that "the program remains exposed to the threat of terminations of large underfunded plans in weak industries and of sponsors voluntarily terminating or freezing their [defined benefit] plans."⁶ In 2007, the PBGC's estimated potential exposure to future claims was approximately \$66 billion, down from \$73 billion in 2006.⁷ Not all underfunded pension plans are likely to present claims to the PBGC. The estimate of \$66 billion represents underfunding of plan sponsors whose credit ratings are below investment grade or meet one or more financial distress criteria. It is not an estimate of likely claims against the PBGC.

The PBGC's liabilities are not explicitly backed by the full faith and credit of the federal government.⁸ However, should the agency become financially insolvent, the GAO has noted that "Congress could face enormous pressure to bail out the PBGC at taxpayer expense."⁹

Sources of Funding

The PBGC receives no appropriations from general revenues. Instead, by law the agency's operations are financed from four sources:

- insurance premiums paid by the sponsors of covered private defined benefit pension plans,
- assets from terminated plans taken over by the PBGC,
- investment income, and
- recoveries from sponsors of terminated pension plans in bankruptcy proceedings.

In addition, the PBGC has the authority to borrow up to \$100 million from the U.S. Treasury.

PBGC Premiums

Unlike insurers in the private sector, the PBGC cannot set the premiums for the insurance it provides. Plan sponsors are required by law to purchase insurance from the PBGC, and the insurance premiums are set by Congress. Historically, premiums have been the most reliable source of PBGC revenue. The agency received \$1.557 billion in premium revenue in 2007.¹⁰

An employer that maintains a single-employer defined benefit pension plan must pay an annual premium for each participant in the plan. The PBGC's single-employer premium income was \$1.48 billion in FY2007. Initially set at \$1 per participant by ERISA in 1974, Congress has raised

⁶ United States Government Accountability Office, *High-Risk Series: An Update*, January 2007, at <http://www.gao.gov/new.items/d07310.pdf>.

⁷ PBGC, *Annual Management Report, 2007*.

⁸ 29 U.S.C. § 1302(g)(2).

⁹ David Walker, Testimony of the Comptroller General, Hearing of the Senate Commerce, Science, and Transportation Committee, "The Impact of Federal Pensions and Bankruptcy Policy on the Financial Health of the Airline Industry," October 7, 2004.

¹⁰ PBGC, *Annual Management Report, 2007*.

the premium periodically since then. The Omnibus Budget Reconciliation Act of 1987 (P.L. 100-203) imposed an additional variable rate premium on underfunded plans. The variable rate premium was initially set at \$6 for each \$1,000 of the plan's unfunded vested benefits, up to a maximum of \$34 per participant.

The Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508) increased the basic per capita premium to \$19, and the variable rate premium to \$9 for each \$1,000 of the plan's unfunded vested benefits, up to a maximum of \$53 per participant. Beginning in 1991, the maximum variable rate premium was \$72 per participant. The Retirement Protection Act of 1994 (P.L. 103-465) left the per capita premium at \$19 per participant. However, the cap on the variable rate premium was phased out over a three-year period beginning in 1994.

The Deficit Reduction Act of 2005 (DRA, P.L. 109-171) increased the per capita premium from \$19 to \$30 for 2006 and indexed the premium to the annual rate of growth in the national average wage beginning in 2007. The 2008 premium rate for single-employer plans is \$33 per participant. The DRA also created a new premium of \$1,250 per participant to be assessed on any underfunded single-employer plan that undergoes a distress termination or is involuntarily terminated by the PBGC, to be paid annually for each of the three years following the date of termination, or if later, the employer's exit from bankruptcy. This premium is in addition to any other PBGC premiums that are due for the plan year. As enacted by the DRA, the special premium would not have applied to plans terminated after December 31, 2010.

The Pension Protection Act of 2006 (PPA, P.L. 109-280) made the special termination premium permanent for plans that undergo a distress termination or are involuntarily terminated by the PBGC. The PPA also made the variable rate premium of \$9 per \$1,000 of underfunding more widely applicable. Prior to enactment of the PPA, the variable rate premium was waived for an underfunded plan if it was not underfunded in any two consecutive years out of the previous three years. Under the PPA, the variable premium is assessed on all underfunded plans, regardless of the plan's funding status in earlier years.

The premium for multiemployer plans was initially \$0.50 per participant. The Multiemployer Pension Plan Amendments Act of 1980 (P.L. 96-364) raised the premium to \$1.40 for years after 1980. This premium was set to increase gradually to \$2.60. The DRA of 2005 increased the flat-rate per-participant premium for multiemployer defined benefit plans from \$2.60 to \$8.00. For the 2007 plan year and later plan years, the premium will be adjusted annually by the rate of growth in the national average wage. The PBGC's multiemployer premium income equaled \$81 million in FY2007.

As shown in **Table 2**, since 1998, growth in the PBGC's premium revenue has been outpaced by increases in benefit payments to plan beneficiaries and administrative and investment expenses.

Table 2. PBGC Premium Revenue and Benefit Payments, 1997-2007

(in millions of \$)

Fiscal Year	Total Premium Revenue	Benefit Payments	Administrative and Investment Expenses	Premiums Minus Benefit Payments and Expenses
1997	1,090	824	155	111
1998	989	848	158	-17

Fiscal Year	Total Premium Revenue	Benefit Payments	Administrative and Investment Expenses	Premiums Minus Benefit Payments and Expenses
1999	925	902	161	-138
2000	831	903	167	-239
2001	845	1,043	184	-382
2002	812	1,538	225	-951
2003	973	2,489	290	-1,806
2004	1,485	3,007	288	-1,810
2005	1,477	3,686	342	-2,551
2006	1,500	4,082	405	-2,987
2007	1,557	4,266	378	-3,087

Source: Pension Benefit Guaranty Corporation.

Recent Reforms

Although the PBGC's net position has improved \$9.2 billion since 2004, it fell \$31.0 billion from 2001 to 2004. Many factors contributed to the large swing in PBGC's funded position, chief among them the terminations in 2002 and 2005 of several large pension plans in the steel and airline industries with high levels of underfunding. Falling interest rates (used to discount future benefit payments) significantly increased the value of PBGC's liabilities, and poor stock market returns in 2001 and 2002 resulted in negative investment income.

In part to address the PBGC's deteriorating funded status, Congress passed the Pension Protection Act of 2006, the most comprehensive reform of the nation's pension laws since the enactment of ERISA in 1974. The PPA established new funding rules for defined benefit plans, increased the flat-rate premium paid by pension plan sponsors, and required the variable premium to be assessed on all underfunded plans. The PPA provided for exceptions to some of the new funding rules for plans sponsored by commercial airlines.

Although the impact of these reforms is still unclear, the Congressional Budget Office (CBO) has stated that the PPA failed to address the underlying structural problems facing the PBGC, because the increased premiums are not commensurate with the amount of unfunded pension claims from terminated plans that the PBGC is likely to assume in the future.¹¹

The future financial condition of the PBGC is highly uncertain because it depends greatly on how many private pension plans terminate and on the amount of underfunding in those plans. Both factors are difficult to forecast. Over its history, a relatively few pension plans with very large unfunded liabilities have dominated the PBGC's claims, and its future may likewise depend significantly on the fate of a few large plans. Future terminations will be influenced by overall economic conditions, the prosperity of particular industries, competition from abroad, and a variety of factors that are specific to particular firms—such as their competitiveness in their

¹¹ CBO, Letter to Honorable George Miller, Chairman, House Committee on Education and Labor, April 24, 2008, at http://www.cbo.gov/ftpdocs/91xx/doc9156/04-24-Miller-PBGC_Letter.pdf.

industries, their agreements with labor groups, and the credit ratings. In addition, the PBGC's losses with respect to future terminations will depend on how well companies fund their plans.

The PBGC's exposure to pension plan underfunding can shift dramatically from year to year in response to conditions in the stock market and changes in interest rates. A recent report by Credit Suisse Equity Research estimated that the funded status of defined benefit pension plans operated by companies in the *Standard & Poor's 500* had declined by about \$170 billion from the end of 2007 to the middle of 2008, due primarily to poor investment returns. In the aggregate, pension plans were overfunded by \$60 billion at the end of 2007 and were underfunded by \$110 billion by the middle of 2008.¹² Pension plan funding levels had seen steady improvement since 2002, when pension plans had more than \$200 billion in underfunding.

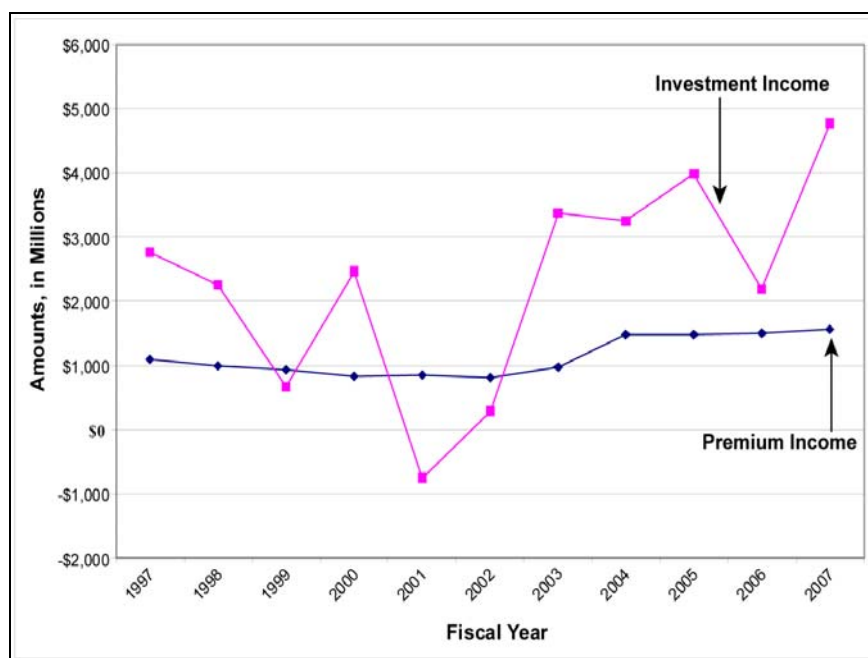
Background on PBGC Investment Policy

PBGC's Investment Income

In recent years, investment income from the PBGC's assets has outpaced premium income as a source of revenue, as shown in **Figure 1**. The sources of the assets invested by the PBGC are premium revenues, assets of terminated plans, and recoveries from the general assets of plan sponsors. The termination of several large pension plans in 2002 and 2005 contributed to a large increase in the assets in PBGC's investment portfolio. As of September 30, 2007, the value of the PBGC's total investments, including cash and investment income, was approximately \$62.6 billion. The PBGC's investment income in FY2007 was \$4.76 billion. The rate of return on investment was approximately 7.6%.

¹² Credit Suisse, *Pension Plans Losing Ground*, July 18, 2008.

Figure I. PBGC Income from Premiums and Investment Earnings, 1997-2007



Source: PBGC annual reports, 1997-2007.

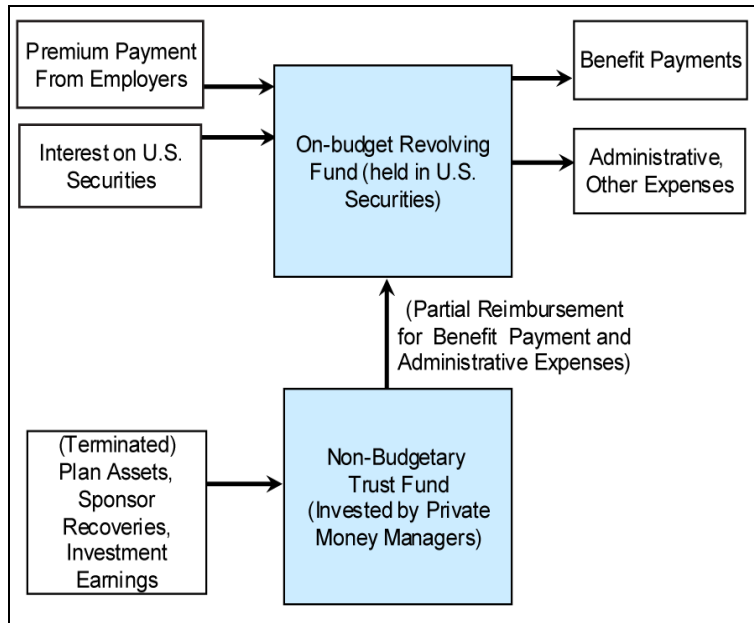
The PBGC maintains two separate financial programs, each consisting of a *revolving fund* and a *trust fund*, to sustain its single-employer and multiemployer plan insurance programs. Premium revenues are accounted for in revolving funds that are included in the federal budget. By law, the PBGC is required to invest certain revolving fund assets in debt obligations issued or guaranteed by the United States, while other assets can be invested in other debt obligations.¹³ Current policy is to invest these revolving funds only in Treasury securities. At the end of FY2007, the revolving funds' value was \$14.5 billion.

The assets from terminated pension plans and recoveries from the general assets of plan sponsors are accounted for in a trust fund that is not included in the federal budget. Trust fund assets were most recently valued at \$48.1 billion. There are no statutory limitations on how the PBGC can invest the assets in its trust fund.

Figure 2 diagrams the relationship between the PBGC's financing and its payment of guaranteed benefits to plan participants.

¹³ PBGC has seven revolving funds, referred to collectively as "the revolving fund." Total revolving fund income, including cash and investment income, as of September 30, 2007, was approximately \$1.0 billion for Fund 1, \$1.2 billion for Fund 2, and \$12.3 billion for Fund 7. ERISA authorized the establishment of Funds 3, 4, 5 and 6 for special purposes that have never been utilized by the PBGC. Excess funds in Revolving Funds 1 and 2 may be invested in obligations issued or guaranteed by the United States. The corporation may invest excess funds in Revolving Fund 7 in such debt obligations as the corporation considers appropriate.

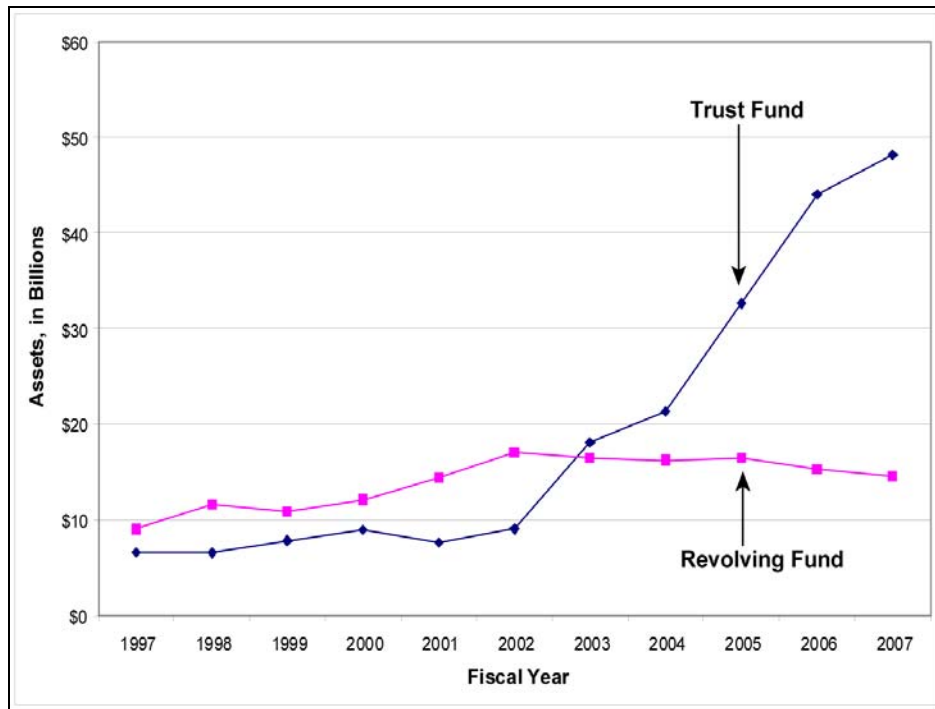
Figure 2. Financial Structure of the PBGC



Source: Congressional Budget Office.

As shown in **Figure 3**, PBGC’s trust fund has grown significantly since 2003, while the size of the revolving fund has remained relatively steady, despite recent increases in both the variable premium and flat-rate premium.

Figure 3. PBGC Assets Held in Trust Fund and Revolving Fund, 1997-2007



Source: Annual Reports of the PBGC, 1997-2007.

Accounting in the Federal Budget

The assets in PBGC's investment portfolio are only partly accounted for in the federal budget. The *revolving fund* is a budgetary account, meaning that cash flows into and out of the account appear in the federal budget. In contrast, PBGC's *trust fund* is nonbudgetary. When the PBGC assumes control of the assets of an underfunded pension plan that has been terminated, those assets do not appear on the federal balance sheet, and transfers of such assets to the PBGC are not treated as receipts to the government.¹⁴ Although investment returns to the revolving fund appear as a receipt or outlay (in the case of negative returns) for the federal government, investment returns to the trust fund do not.

Oversight of PBGC Investments

Under federal law, the PBGC's investment policy statement must be approved by PBGC's Board of Directors, which consists of the Secretary of Labor, the Secretary of the Treasury, and the Secretary of Commerce.¹⁵ According to PBGC's by-laws, the Board reviews the investment policy statement at least every two years and approves the investment policy statement at least every four years.¹⁶ The PBGC's investment policy is implemented by PBGC's staff, but PBGC does not actively manage its portfolio. Invested assets are managed by professional management firms or are invested in passive market index funds, subject to PBGC oversight.

PBGC's New Investment Policy

In February 2008, the PBGC announced that it had adopted a new investment policy aimed at generating higher investment returns while providing increased protection against the risk of increasing its deficit over time. As shown in **Table 3**, the new policy allocates 45% of the PBGC's assets to fixed-income investments, 45% to equity investments, and 10% to alternative investment classes, including real estate and private equity.

Table 3. Target Asset Allocation of PBGC Trust Fund, 2008

Asset Class	Allocation
Core Equities	39%
US Equities	20%
Non-U.S. Equities	19%
Alternative Equities (emerging markets)	6%
Core Fixed Income	40%
Long-term Corporate Bonds	14%
Long-term Treasury Bonds	22%

¹⁴ For more information, see CRS Report RS22650, *The Pension Benefit Guaranty Corporation and the Federal Budget*, by William Klunk.

¹⁵ For a more detailed discussion of the Boards' oversight responsibilities, see GAO report 08-667, *PBGC ASSETS: Implementation of New Investment Policy Will Need Stronger Board Oversight* at <http://www.gao.gov/new.items/d08667.pdf>.

¹⁶ See 73 *Federal Register* 29,985 (May 23, 2008).

Asset Class	Allocation
Treasury Inflation Protected Securities	4%
Alternative Fixed Income	5%
High-yield Bonds	2%
Emerging-market Bonds	3%
Other Investments	10%
Real Estate	5%
Private Equity	5%
Total	100%

Source: Pension Benefit Guaranty Corporation.

The PBGC’s previous investment policy, adopted in 2004, set an equity investment target of 15% to 25%, with the remaining assets to be allocated primarily to fixed income investments. In practice, the PBGC’s actual asset allocation differed slightly from the target allocations. As shown in **Table 4**, the PBGC’s new policy significantly expands PBGC’s exposure to alternative asset classes and equity securities.

Table 4. Previous PBGC Target Investment Allocation, Actual Investment Allocations, and New Target Allocation
(in %)

Asset Class	Previous Target	FY2004 Actual	FY2005 Actual	FY2006 Actual	FY2007 Actual	New Target
Equity Securities	15-25	37.55	26.34	27.24	31.57	45
Fixed Maturity	75-85	62.07	73.54	72.75	68.35	45
Other Alternatives	-	0.39	0.12	0.01	0.07	10

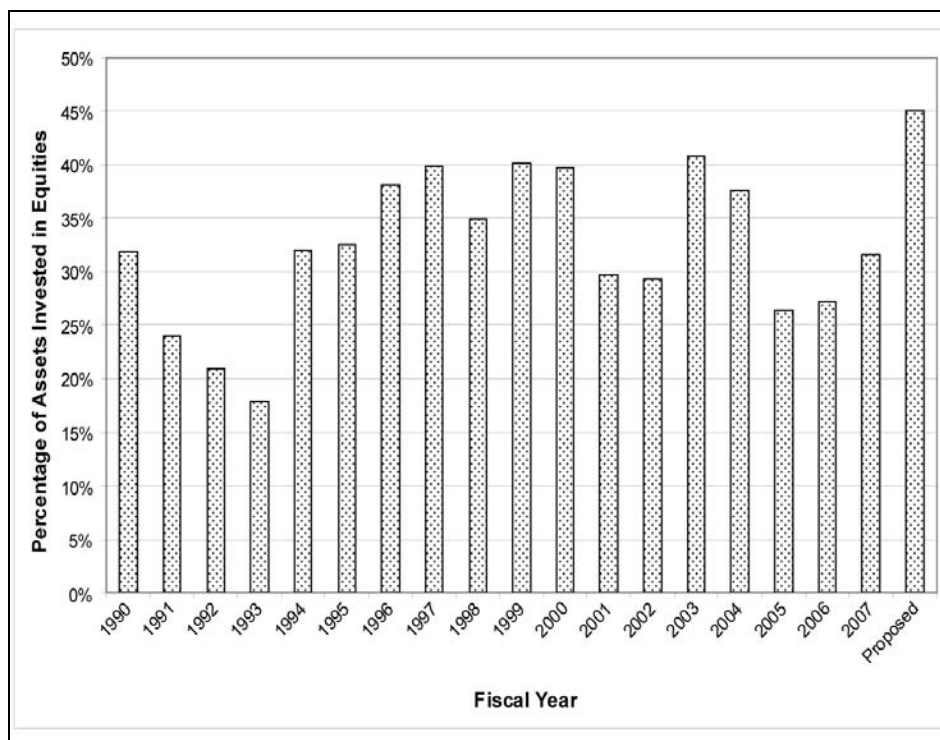
Source: CRS analysis of data from the Pension Benefit Guaranty Corporation.

Note: Numbers may not add up to 100% due to rounding.

Throughout its history, the PBGC has shifted the investment of trust fund assets between bonds and stocks with changes in its leadership and in financial analysts’ theories of risk management. From the agency’s inception in 1974 until 1990, the PBGC Board approved a policy of investing primarily in equity securities, aiming to maximize investment returns. In 1990, the PBGC reduced its equity exposure and increased its investment in long-term bonds with maturities matched to the agency’s liabilities. Beginning in 1994, it switched back to a policy of greater investment in equities.

As shown in **Figure 4**, the PBGC’s investments in equities have ranged between 18% and 40% of assets since 1990. The investment policy announced in February 2008, with a target of investing 45% of assets in equities, would result in the PBGC’s highest percentage investment in equities at any time since 1990.

Figure 4. Percentage of PBGC Assets Invested in Equities, 1990-2007



Source: Annual Reports of the PBGC, 1990-2007.

The PBGC has stated that the objective of the new investment policy is to “prudently maximize investment returns in order to meet the Corporation’s current and future obligations.”¹⁷ The PBGC has stated that it expects the policy to generate higher returns and to reduce risk by diversifying its asset allocation, including investment in alternative assets such as private equity.¹⁸ A forecasting model developed by PBGC’s investment consultant, Rocaton Investment Advisors, LLC, suggested that shifting the PBGC’s allocation from fixed income to equities and/or alternative asset classes would improve the PBGC’s financial condition in the long-run. According to the Rocaton analysis, the new asset mix chosen by PBGC gives the agency a 57% likelihood of full funding within ten years, compared to 19% under the previous policy.¹⁹ The study by Rocaton estimated that, compared to the previous policy, the PBGC’s expected funded ratio would be higher, and its worst-case funded ratio would be lower, under the new investment policy compared to the previous policy.

Investment Strategies

Other things being equal, higher expected rates of return on investment are associated with higher levels of investment risk. However, the PBGC has asserted that even though its equity exposure is

¹⁷ Millard, Charles. “PBGC’s New Diversified Investment Policy,” *Pension & Benefits Daily*. Vol. 8, No. 42 (March 4, 2008).

¹⁸ PBGC press release, “PBGC Announces New Investment Policy,” February 18, 2008, at <http://www.pbgc.gov/media/news-archive/news-releases/2008/pr08-19.html>. Hereafter cited as “PBGC press release, February 18, 2008.”

¹⁹ PBGC press release, February 18, 2008.

increasing, it expects its new investment policy to *reduce* its overall risk through asset diversification. Under the new policy, the PBGC would hold 45% of its assets in equities, 45% in bonds, and 10% in alternative investments. The PBGC's previous investment portfolio was less diversified, consisting mainly of long-term, investment-grade bonds.

The PBGC also has stated that its long-term investment horizon allows it to benefit from what is sometimes called "time diversification." This is a theory of investment that asserts that the risk associated with investing in stocks decreases over time.²⁰ In its analysis for the PBGC, Rocatton stated that, "investors with time horizons of 10-20 years and greater seem well-positioned to wait out market volatility and realize the significant long-term rewards of investing in riskier assets."²¹ Although there is general agreement among economists on the benefits of asset diversification with respect to portfolio risk, there is a divergence of opinion as to whether or not investment risk associated with a particular asset or class of assets declines as the period of time that the asset is held increases.

The changes in the PBGC's investment policy in 2004 and 2008 embody two very different approaches to investment risk that reflect this divergence of opinion. These approaches can be referred to as a "total return" strategy and an "asset-liability matching" strategy.

The "Total Return" Approach

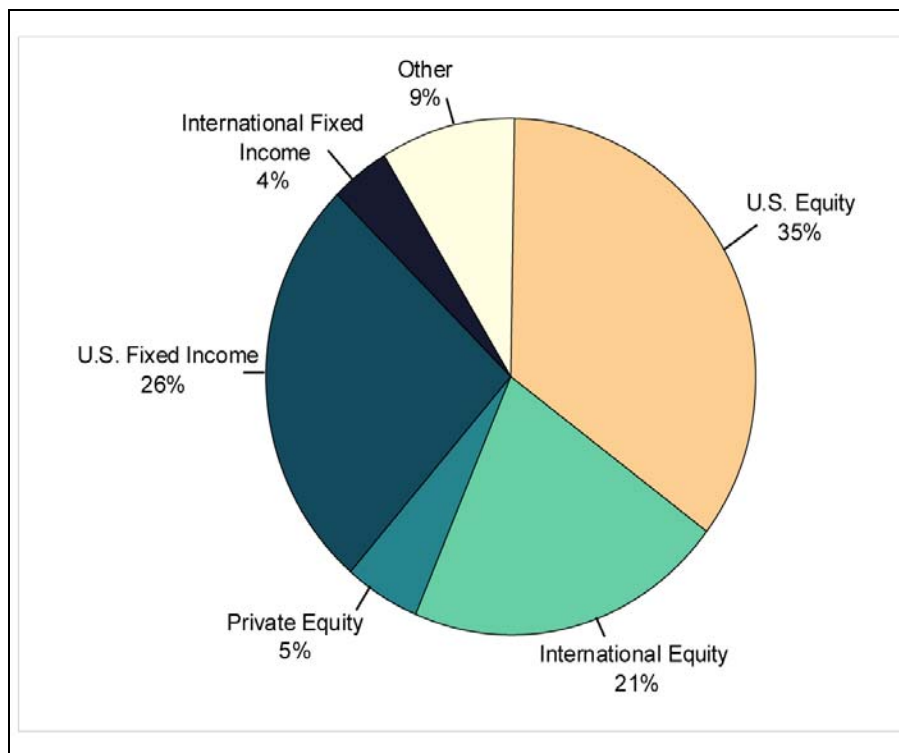
The new PBGC investment strategy, with its emphasis on increasing the proportion of assets invested in equities, is based in part on the assumption that the higher expected rate of return on equities will result in the PBGC's assets growing faster than its liabilities. This approach is used by a majority of the pension plans that the PBGC insures (see **Figure 5**). Asset allocation decisions are based upon what investors believe will deliver the highest possible return for a given level of risk, measured as the likely deviation of rates of return around the average. Common stocks—equities—have a higher expected rate of return than bonds, but they also are riskier in that the actual rates of return vary more around the average than the rates of return on bonds. Investors with long time horizons often invest a greater percentage of assets in equities than investors with shorter-term time horizons. They expect that the higher long-run expected rate of return on equities will offset the risk associated with the greater volatility of the rate of return on equities.²²

²⁰ PBGC press release, February 18, 2008.

²¹ Rocatton Investment Advisors, LLC., *Pension Benefit Guaranty Corporation Investment Policy and Strategy Discussion*, December 4, 2007, p. 67.

²² This investment strategy is the basis for the allocation of assets in the "life-cycle" funds offered by many 401(k) plans. The assets of younger plan participants, who will not need access to their retirement funds for many years, are invested primarily in equities under the assumption that their long time horizon will give their investment portfolios time to recover from short-term declines in the stock market. As participants grow older, and are nearer to retirement, their assets are slowly re-allocated to a heavier concentration in bonds, which have a lower expected rate of return than stocks, but also are less subject to large capital losses than stocks.

Figure 5. Average Percentage Allocation of Assets Among the 200 Largest Defined Benefit Pension Plans, 2007



Source: *Pensions and Investments*, 2007 year-end survey of defined benefit plans.

Note: The “Other” category includes investments in cash (1.2%), real estate equity (3.6%), and other unspecified investments.

The PBGC would now have a significantly higher funded status had the agency recently been more heavily invested in equities than its previous policy allowed. The PBGC is required by the Pension Protection Act of 2006 to estimate the effects of an asset allocation of 60% to the Standard & Poor’s 500 equity index and 40% to the Shearson-Lehman Aggregate Bond Index. For the fiscal year ending September 30, 2007, this allocation would have increased the assets of the PBGC by an estimated \$2.3 billion. Over the five-year period ending September 30, 2007, the PBGC’s assets would have been an estimated \$7.3 billion higher with a portfolio invested 60% in stocks and 40% in bonds.²³

Unlike a corporate pension plan, however, the PBGC is fully exposed to the risk of investment losses. Corporate pension plans may be encouraged to invest in equities by the presence of PBGC insurance. A company sponsoring an insured pension has a sort of “heads we win, tails you lose” relationship with the PBGC. In contrast, the PBGC has no other party onto which it can offload its unfunded liabilities except, ultimately, the taxpayers. The GAO has noted that

Investments in riskier assets with higher expected rates of return may allow financially weak plan sponsors and their plan participants to benefit from the upside of large positive returns on pension plan assets without being truly exposed to the risk of losses. The benefits of plan

²³ PBGC, *Annual Management Report 2007*.

participants are guaranteed by PBGC, and weak plan sponsors that enter bankruptcy can often have their plans taken over by PBGC.²⁴

The “Asset-Liability Matching” Approach

The assumption that the risk of holding stocks decreases as the period of time that they are held increases is disputed by some economists. These economists assert that the risk associated with stocks actually *rises* with the length of time that they are held. They note that

If stocks were not risky in the long run, then the financial services industry would be quite willing to provide—maybe even for free—long-term financial contracts that provide a rock solid guarantee that investors would not lose money if they held on to a broadly diversified stock portfolio for, say, 30 years. Yet such long-term put option contracts do not even exist, because financial market participants believe that the risk of such a contract is increasing with the time horizon, not decreasing.²⁵

Modern portfolio theory holds that the higher expected return on stocks is exactly the price of the risk associated with the investment and that the risk-adjusted rates of return on stocks and bonds are equal. Despite the higher expected nominal rate of returns on stocks, the present value of \$1 invested in bonds at any given time is equal to the present value of \$1 invested in stocks. The higher rate of return on stocks—the so-called “equity premium”—represents compensation to an investor for taking on the additional risk, measured as the standard deviation on the expected rate of return, of holding stocks rather than bonds.²⁶ Given this risk, a pension fund, for example, should choose an asset allocation that minimizes the risk that the fund will be unable to pay its liabilities when they come due as a result of an untimely decline in the value of equities. This approach—often called asset-liability matching—favors investment in fixed-income instruments, such as bonds, with maturities that are matched to the times at which the pension plan’s liabilities will come due for payment.²⁷

The value of a pension plan’s liabilities is greatly influenced by changes in interest rates. Like bonds, changes in pension plan liabilities are inversely related to changes in interest rates. Liabilities increase when interest rates fall and decrease when interest rates rise.²⁸ Some economists have argued that pension plans should invest all of their assets in bonds that are

²⁴ David Walker, Comptroller General of the United States, “The Pension Benefit Guaranty Corporation and Long-Term Budgetary Challenges,” June 9, 2005. Testimony before the Committee on the Budget, House of Representatives, at <http://www.gao.gov/new.items/d05772t.pdf>.

²⁵ Brown, Jeffrey R., Hassett, Kevin A. and Smetters, Kent A., “Top Ten Myths of Social Security Reform,” October 2005, at <http://ssrn.com/abstract=1150180>.

²⁶ The standard deviation of the rate of return is a measure of the likely variation of annual rates of return around the average—or expected—rate of return.

²⁷ Jeremy Gold and Nick Hudson, “Creating Value in Pension Plans—Gentlemen Prefer Bonds,” *Journal of Applied Corporate Finance*, 2003.

²⁸ A bond with a face value of \$1,000 that pays annual interest of \$50 (or 5%) could be sold for \$1,250 if interest rates were to fall to 4% because \$50 is 4% of 1,250. However, the bond could be sold for only \$833 if interest rates were to rise to 6% because \$50 is 6% of \$833. When the bond matures, the original issuer will pay the holder the face value of \$1,000, regardless of the prevailing rate of interest. Maturity-matched pension plan portfolios are thus “immunized” against the risk of unfavorable changes in interest rates.

matched to the plan's expected cash flows in order to avoid the possibility that the pension plan will be forced to sell bonds that have not yet reached maturity at a time of rising interest rates.²⁹

In contrast, investing assets in equities can be a poor hedge against interest rate swings. Stock prices often rise when interest rates fall, providing protection from interest rate risk, but there have been periods when this was not true, including the period from 2000 to 2002, when a bear market in stocks coincided with falling interest rates. In 2004, soon after experiencing capital losses in equity investment, the PBGC announced that it would adopt an asset-liability matching approach to investing its assets, thus reducing its equity exposure in favor of fixed-income securities matched to its liabilities. At that time, the PBGC noted that adopting a portfolio concentrated in high-quality, long-term bonds would bring it closer to the portfolios held by insurance companies, which have historically limited their equity exposure. According to the American Council of Life Insurers (ACLI), bonds represent the majority of assets held by private life insurance providers. While equity represents about 5% of total insurance company assets, 72% of insurance company assets are in bonds.³⁰

There is some evidence that corporate pension plans also are exploring asset-liability matching as an investment strategy. Provisions in the PPA and the enactment of Financial Accounting Standard No. 158 provide incentives for pension fund managers to move away from more volatile pension investments such as stocks. The PPA reduced the number of years over which plans can "smooth" (average) their investment gains and losses, and FAS 158 requires corporations that sponsor defined benefit pensions to put the funded status of the plan on their balance sheets, rather than in a footnote as was required before.³¹

The pension actuarial firm, Milliman, Inc., reported in a recent study that the percentage of pension plan assets invested in equities declined from 60% in 2006 to 55% in 2007.³² A recent examination of investment allocations made in 2007 by the defined benefit pension plans of firms in the Standard & Poor's 500 index noted that firms were reducing their pension plans' investment in equities in favor of increased investment in bonds and other assets, including hedge funds and private equity. However, in this survey the median equity allocation in 2007 was still 63%, down only slightly from the 65% median allocation in 2006.³³

Because the pension plans that the PBGC insures are heavily invested in equities, an asset-liability matching approach would help to ensure that the PBGC's own financial condition would not deteriorate at the same time that the assets held by the pension plans it insures are declining in value. If the PBGC invests substantially in equities, it risks having to take over underfunded plans at the same time that its own assets are declining in value because pension plan underfunding often increases during periods of falling stock prices.

²⁹ Bodie, Zvi. "On Asset-Liability Matching and Federal Deposit and Pension Insurance." *Federal Reserve Bank of St. Louis Review*, July/August 2006, 88(4), pp. 323-29, at <http://research.stlouisfed.org/publications/review/06/07/Bodie.pdf>.

³⁰ ACLI, Fact Book 2007.

³¹ For an explanation of the smoothing provisions of the PPA, see CRS Report RL33703, *Summary of the Pension Protection Act of 2006*, by (name redacted).

³² Milliman, 2008 Pension Funding Study. The study includes the 100 U.S. public companies with the largest defined benefit pension assets whose 2007 annual reports were released by March 15, 2008.

³³ Credit Suisse, *Pension Plans Losing Ground*. July 18, 2008.

Implications of the New Policy

PBGC's Future Financial Condition

The PBGC's decision in 2008 to reduce asset-liability matching in favor of a strategy aimed at generating higher expected returns was driven in part by the agency's concerns about its deficit. The PBGC's previous investment policy was not designed to maximize investment income, but to keep the agency's deficit from deteriorating further while policymakers pursued reforms to address PBGC's funding deficit. However, even after the PPA was enacted, the President's Budget for FY2009 noted that "neither the single-employer nor multiemployer program has the resources to satisfy fully the agency's long-term obligations to plan participants."³⁴

The PBGC has limited authority to adopt policies that could directly affect its financial condition. Unlike insurers in the private sector, it has no authority to set the premiums for the insurance it provides. It cannot strengthen the funding requirements for insured plans, reduce the amount of pension benefits that it insures, or reject companies that it deems excessively risky to insure. All of these authorities rest exclusively with the United States Congress. The companies that sponsor defined benefit pension plans have a financial interest in lobbying Congress to persuade it not to make PBGC premiums too high or plan funding requirements too onerous, because increases in premiums and stricter funding standards directly affect these firms' annual profit-and-loss statements.

The PBGC is required by law to invest its income from premiums in securities backed by the full faith and credit of the U.S. government. It has the legal authority, however, to invest its trust fund, consisting mainly of the assets of underfunded plans for which the PBGC has become the trustee, in assets of its choice. In announcing the new investment policy adopted in 2008, the PBGC stated its desire to maximize its investment income, and thus reduce its deficit. However, while the PBGC has asserted that its new policy will be less risky in the long-term than its previous policy, some of the assumptions underlying that assertion are open to question.

The PBGC adopted its new investment policy in part in response to an analysis of investment options conducted for the agency by Rocation Investment Advisors, LLC. The conclusions reached in that analysis are sensitive to the methods and assumptions on which they were based. An assessment of the relative risks of the PBGC's previous investment policy and its new policy, for example, depends largely on how the risk associated with each class of assets in the portfolio is measured, and on the relative weights of each class of asset in the old and new portfolios.

The risk associated with holding a given financial asset is that the actual rate of return will deviate from the expected rate of return. This risk is measured as the standard deviation of the rate of return. The more volatile the asset—that is, the more widely actual annual rates of return are dispersed around the average—the greater the standard deviation. In its study for the PBGC, Rocation assumed that the rate of return on long-term Treasury bonds (with a 15-year average duration³⁵) will have a standard deviation of 11.2%. CRS examined rates of return on long-term

³⁴ *Budget of the United States Government, Fiscal Year 2009—Appendix*, p. 747, at <http://www.whitehouse.gov/omb/budget/fy2009/appendix.html>.

³⁵ Duration is a measurement of a bond's price sensitivity to changes in market interest rates. For a typical bond, duration is less than the bond's time to maturity. Price volatility is greater for a bond with longer duration compared to (continued...)

Treasury bonds over the period from 1926 through 2007 and found the standard deviation around the mean real rate of return to be 8.4% for 10-year Treasury bonds and 11.2% for 30-year Treasury bonds.³⁶ The Rocaton study assumed that the rate of return on U.S. equities would have a standard deviation of 15%. CRS examined rates of return on U.S. equities as measured by the Standard & Poor's 500 index over the period from 1926 through 2007 and found the standard deviation around the mean annual real rate of return to be 20%. Rocaton's lower estimate of the volatility of returns on stocks could be significant to the extent that it could appear to make investments in stocks less risky than the historical data indicate.

A determination as to whether the PBGC's new, more equity-heavy investment policy will be less risky than the previous, more bond-heavy investment policy depends in part on the estimated volatility of the rates of return on stocks and bonds. It is not clear from the report prepared by Rocaton whether the analysts conducted a sensitivity analysis in which the key assumptions—such as the standard deviations of the rates of return on stocks and bonds—were changed to evaluate the effect on the results of the analysis. To the extent that the relative riskiness of the PBGC's new investment policy compared to its previous policy is directly influenced by these and other key assumptions, it would be prudent for the model used by Rocaton to be subjected to a sensitivity analysis.

It is possible that the shift away from asset-liability matching to an investment policy focused on earning higher rates of return on investment could increase the risk that the PBGC will experience a decline in the value of its investments at the same time that the plans it insures are becoming increasingly underfunded. In a stock market downturn, the plans that PBGC stands to inherit are likely to have experienced a drop in the value of their assets. If it were more heavily invested in equities, the PBGC would be exposed to the same investment losses as the plans that it insures, effectively giving the PBGC “double-exposure” to the effect of a stock market decline as the agency's liabilities were increasing.

Although the PBGC's statements about the new investment policy have emphasized the Corporation's long-term investment horizon, the PBGC still needs access to cash in the short-run to pay the benefits of beneficiaries in the plans it has trusteeed. When looking at the PBGC's current and potential future cash needs, Rocaton noted that the duration of the PBGC's current liabilities allows the Corporation to weather short-term volatility in its investment portfolio. However, Rocaton did not examine PBGC's contingent liabilities—the liabilities that the PBGC has not yet assumed from underfunded plans that have yet to terminate—noting only that these liabilities are uncertain in both timing and magnitude.

In contrast to the PBGC's new investment policy, the asset allocation strategy of the Pension Protection Fund (PPF), the government-sponsored guarantor of defined benefit pensions in the United Kingdom, attempts to mitigate the risk of the Fund's assets declining concurrently with an increase in the under-funding of the pension plans it insures.³⁷ As **Table 5** shows, the PPF is invested predominantly in fixed income securities.

(...continued)

a similar bond with a lower duration.

³⁶ From 1926 through 2007, both 10-year and 30-year Treasury bonds had a mean real rate of return of 5.3%. Rates of return were obtained from <http://www.globalfinancialdata.com>.

³⁷ Pension Protection Fund, “Statement of Investment Principles,” July 2008, at http://www.pensionprotectionfund.org.uk/sip_july_2008.pdf.

Table 5. Asset Allocation of UK Pension Protection Fund, 2008

Asset	Allocation (%)
Cash	20.0
Global Bonds	50.0
UK Equities	12.5
Global Equities	7.5
Property	7.5
Currency Overlay	2.5
Total	100

Source: UK Pension Protection Fund.

Risks for Taxpayers

The PBGC's previous asset-liability matching investment strategy had very little chance of eliminating the PBGC's deficit. According to PBGC's former Director, Steven Kandarian, the previous investment strategy was a tool to keep the program from falling further into deficit while policymakers pursued long-term solutions to the problem of pension underfunding.³⁸ The new policy will likely generate higher average annual returns than the previous policy. However, it also increases the likelihood that the PBGC will suffer investment losses concurrently with an increase in the underfunding of the plans that it insures.

If the PBGC's new investment policy generates higher expected returns, accompanied by reduced risk—as the PBGC and Rocaon have asserted—then U.S. taxpayers, as the de facto guarantors of PBGC insurance, will be better off. If the higher returns are accompanied by commensurately higher risk, then taxpayers are neither better nor worse off, because the PBGC's true financial condition will not have changed. However, if that higher risk results in investment losses that the agency would not have experienced under the previous policy, and the PBGC's deficit grows, then taxpayers will be worse off.

Taxpayers also could be worse off if higher investment returns forestall fundamental reforms in PBGC financing, such as adopting risk-based premiums, that could improve the long-term financial condition of the agency and reduce the risk that they will at some point in the future have to bail out an insolvent PBGC.

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³⁸ PBGC press release, January 29, 2004.

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