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EMPLOYEE BENEFITS

Companies' Retiree Health Liabilities Large, Advance Funding Costly

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The Honorable J.J. Pickle
Chairman, Subcommittee on Oversight
Committee on Ways and Means
House of Representatives

The Honorable Rod Chandler
Committee on Ways and Means
House of Representatives

This report is in response to your request that we estimate U.S. companies' liabilities for retiree health benefits. It expands on the initial estimates of company liabilities we presented September 15, 1988, in testimony before the Subcommittee on Oversight of the House Committee on Ways and Means.

Background

Companies have been financing retiree health care for years. Although seen as a low-cost employee benefit decades ago, such care now has become a major concern for employers because of both demographic and economic trends. Retiree health costs have skyrocketed, in part because there are more retirees than ever before—workers retire earlier and live longer. Another significant factor driving up the cost of health care is medical inflation, which is currently outpacing general inflation by close to 4 percentage points annually. The combination of more retirees receiving higher cost medical benefits is stretching companies' resources. In 1988, companies paid $9 billion for health care for 7 million retirees and their dependents (see app. I).

As Costs Rise, Security of Retiree Health Benefits Questioned

The growing cost has raised questions about the security of retiree health benefits and companies' ability to pay future costs. In contrast to pension plans, where monies are set aside to pay future benefits, companies generally handle costs for retiree health benefits on a pay-as-you-go (PAYG) basis out of current revenue. By and large, companies do not prefund future retiree health care costs. Also, in contrast to pensions, employees do not vest (gain ownership) in their retiree health benefits prior to retirement. As a result, employees will not receive retiree health benefits if the company plan is terminated.

As of 1983, estimates of companies' aggregate liabilities[1] for future retiree health benefits ranged from about $100 billion to $2 trillion. The size and range of these estimates caused members of the Congress to ask us to investigate the validity of the projections.

Accounting Board Proposes New Standards for Company Reporting of Health Benefit Liabilities

Concerns about whether and how retiree health benefit costs should be reflected in company financial statements also have arisen in the accounting profession. The Financial Accounting Standards Board (FASB) has announced its intention to require that companies compute and report on their financial statements the present value of their liabilities for future retiree health benefits. FASB is a private organization that sets accounting standards for company financial statements. The Securities and Exchange Commission recognizes FASB standards as providing substantial authoritative support for purposes of complying with securities' laws.

In 1982, FASB tentatively decided that postretirement benefits are a form of deferred compensation. Based on that premise, it issued a draft on February 14, 1989, proposing new standards for postretirement health benefits (see app. II). If the standards are issued as proposed, FASB plans to require implementation of most provisions in 1992. Starting that year, a transition obligation is to be recorded on a company's balance sheet and an accrual charge deducted from revenues on the company's income statement. But companies are not required actually to set aside money, so cash flow need not be affected directly by FASB standards.

Many companies, particularly those with an older work force and many retirees, are concerned that the FASB-proposed disclosure will adversely affect their short-run financial position as portrayed in their financial statements. These mature companies may be required to report initially much higher liabilities than firms of the same size and with similar retiree health benefit plans but younger work forces and fewer retirees. If the proposed standards take effect, companies will be required to report annual contribution amounts. For 30 years, they would be reporting a higher annual expense than PAYG costs. After 2018, the annual contribution amounts would be less than PAYG. Thus, companies' long-term gains from compliance with proposed FASB standards would not appear until many years into the future.

[1] Attorneys, accountants, actuaries, and economists use the term liabilities in different ways. We use it to refer to the obligation to pay future benefits promised to workers and retirees.

Because of rising retiree health costs, companies now offering retiree health benefits will be under increased pressure to reduce liabilities, by either canceling the plans or shifting more of the costs of the plans to their retirees. In the past, employer reduction of retiree health benefits has been the subject of litigation. Although courts have indicated that, under certain circumstances, employers may reduce such benefits, commentators view the courts as being in general disagreement over their approach to such cases.

Companies that do not reduce substantially their future retiree health benefit liabilities are likely to be interested in funding that liability to insure the long-term security of promised benefits and stability of their financial situation. However, with respect to advance funding, federal tax law currently favors retiree health benefit plans less than pension plans. As a result, companies generally do not fund health benefit liabilities in advance (see app. III). The Congress may be faced with either giving companies greater tax breaks for advance funding of these benefits or seeing an increasing number of companies curtail or drop health insurance coverage for their retirees.

Results in Brief

The nation's private employers have accumulated significant obligations to their current and retired employees for retiree health benefits. We estimate $227 billion or about one-fourteenth of the value of all companies' stocks in 1988 is owed. In addition, companies can anticipate $175 billion in future accruals for their active workers, for a total retiree health benefit liability of $402 billion.

But the impact on companies' financial statements is less under the FASB's proposed transition requirement that one-fifteenth, or, by our estimate, $15 billion in liabilities be stated annually. Advance funding of benefits, while costly at first, would secure benefits and stabilize companies' annual expenditures. If begun in 1988, by 2022 annual contributions for retiree health care under advance funding and the PAYG mechanism now generally used would be equal. Subsequently, PAYG funding would exceed advance funding on an annual basis.

Courts sometimes have allowed companies seeking to ease the growing impact of retiree health costs to cut benefits for current retirees or require them to share in costs. For current workers, a company probably can legally change the retiree health plan it has promised them. The rate of changes in retiree health plans by employers is increasing, although most companies probably wish to continue coverage. Recent legislation

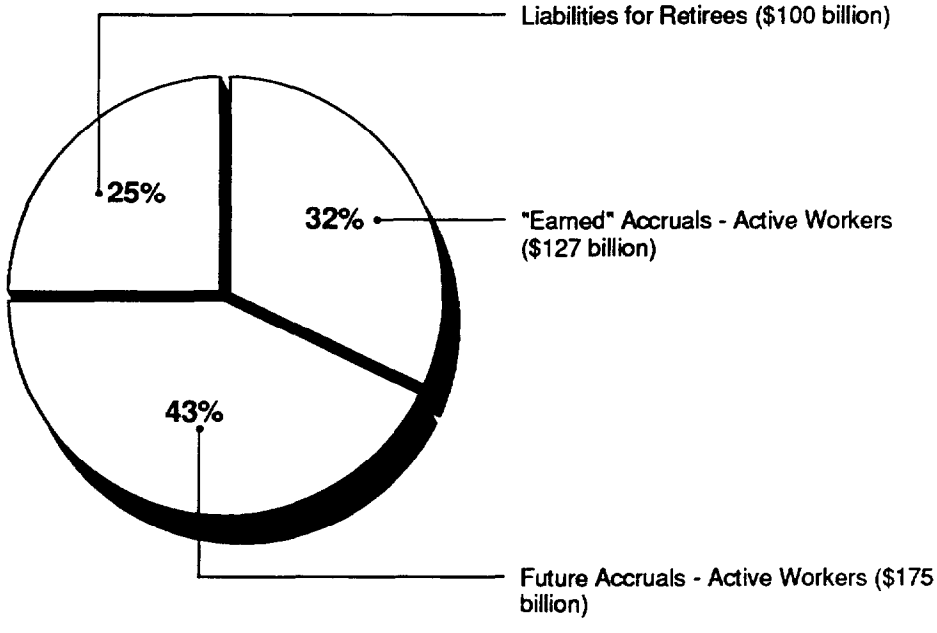
generally prohibits companies that file for bankruptcy from changing or terminating such plans.

The Congress may wish to protect retirees' health care coverage by requiring employers to advance-fund such benefits or provide coverage that retirees can buy at group rates. Adding corporate tax breaks to protect retiree health benefits could increase the federal budget deficit while failing to give employers sufficient incentives to offset rising health care costs.

Total Retiree Health Liabilities Estimated at $402 Billion

As of 1988, American corporations had significant total liabilities (called "expected benefit obligations" by FASB) of $402 billion for retiree health benefits, we estimate. Of this, the accrued portion is $227 billion—about one-fourteenth of the value of the companies' stocks ($3.1 trillion) that year. About $100 billion of the "accumulated benefit obligations" (FASB's term) is owed for current retirees and $127 billion accrued (earned) by current employees (see fig.1).

Figure 1: Breakdown of Private Companies' Estimated Total Liabilities for Retiree Health Benefits (As of 1988)



The $227 billion obligation could reduce companies' net worth by as much as 7 percent on average. It is the amount that would have been

disclosed on companies' balance sheets had (1) FASB's proposed standards always been in effect and (2) the method we used to calculate liabilities always been used. But the initial impact on company financial statements is drastically reduced in FASB's proposed transition obligation, which calls for one-fifteenth of the estimated accrued liability, or $15 billion, to be reported yearly.

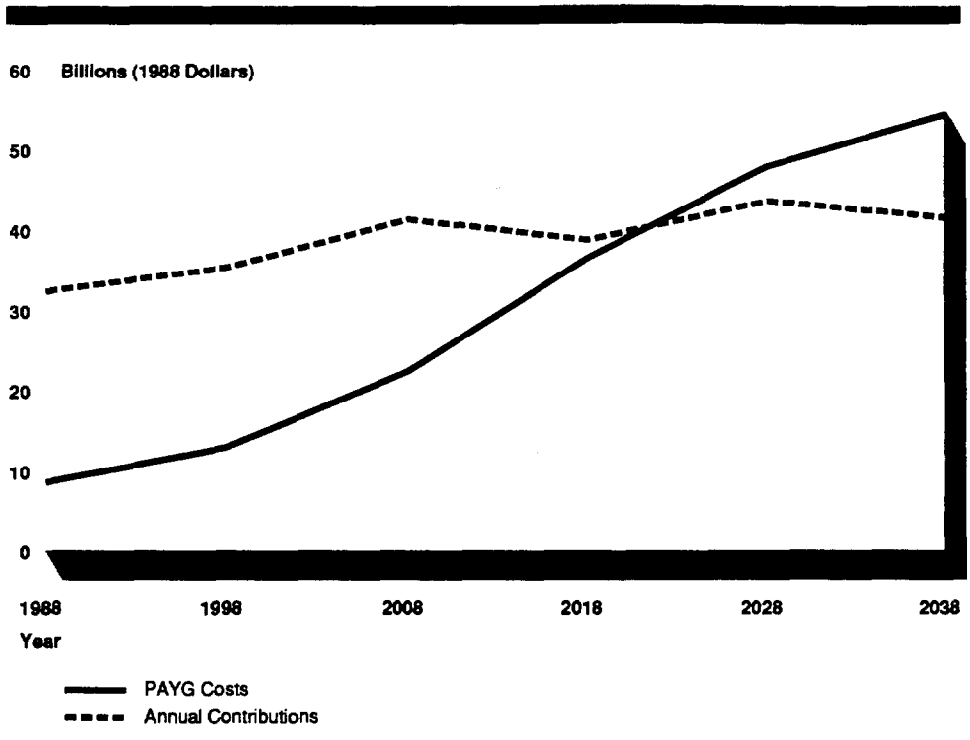
Our liability estimates

- are based on company retiree health plans in existence and retirees covered in 1988,
- assume no changes in plan provisions (see apps. IV and V),
- are not adjusted for any savings to companies from the Medicare Catastrophic Coverage Act of 1988,
- are sensitive to the assumptions used in making them (see app. IV) (e.g., under different assumptions accrued liabilities in 1988 could range from $187 to $290 billion), and
- are most sensitive to assumed rates of future growth in medical costs.

Funding in advance, as is now done for pensions, would stabilize companies' annual expenditures and make benefits more secure, but would be very costly. To start advance-funding their health benefit payments, for example, companies would have had to set aside an estimated $32 billion, which is 3 1/2 times PAYG costs. However, these PAYG costs would grow in 20 years from under $9 billion in 1988 to over $22 billion in 2008 (1988 dollars) if coverage and benefits did not change (see fig. 2). Annual contributions would be higher than PAYG costs until 2022, when both amounts would equal about $39 billion (1988 dollars). Thereafter, PAYG expenses would continue to rise while funding costs would level off.

Had companies contributed a tax-deductible $32 billion to a fund in 1988, we estimate that the tax revenue lost to the federal treasury in that year would be about $7 billion more than current revenue losses for retiree health benefits. These contribution amounts would be one-tenth of the estimated 1988 pretax profits of American corporations.

Figure 2: PAYG Costs and Annual Contributions to Fund Retiree Health Liabilities in Constant 1988 Dollars (1988-2038)



Companies' Rights to Change Benefits Sometimes Upheld

Recognizing the impact of retiree health costs on current profits and anticipating the pending FASB standards, companies increasingly are changing their health plans to shift costs or reduce benefits. These actions have not gone unchallenged by retirees.

In a general sense, federal court decisions indicate that, where retiree health benefits have not yet vested, companies may have latitude to modify such benefit plans and require retirees to pay more of plan costs. At 29 companies, officials told us that they believe companies have the right to modify or terminate benefits for active workers and retirees.[2] Of the 29 companies, 27 had language in their plans reserving the right to modify or terminate plans.

Companies now appear to be changing plans at an increasing rate. According to a recent survey on retiree medical coverage, employers are introducing changes in plan provisions that not only reduce coverage

[2]Employee Benefits: Company Actions to Limit Retiree Health Costs (GAO/HRD-89-31BR, Feb. 1989).

but also continue to shift a portion of costs to retirees.[3] About 40 percent of employers in the survey's sample changed their plans' provisions in 1988 as opposed to 17 percent in 1986. But companies have a long-term view of employee relations, some analysts note, and most want to continue to provide medical care insurance, though at less-generous levels.

While companies may have some latitude to change retiree health plans, recent legislation has placed restrictions on such changes once a company declares bankruptcy. In July 1986, one of the largest companies in the United States, the LTV Corporation, filed for reorganization under U.S. bankruptcy laws. LTV took the position that these laws allowed the company to terminate retiree health benefits to over 78,000 retirees. Almost immediately following LTV's filing, the Congress enacted temporary legislation that required LTV to continue to provide health benefits to its retirees. To replace the temporary legislation, the Congress enacted the Retiree Benefits Bankruptcy Protection Act of 1988, which became law in June of that year. This act prohibits companies that file for chapter 11 bankruptcy from modifying retiree health benefits, unless, based on specified conditions, the bankruptcy court orders such modifications or the trustee in bankruptcy and the retirees agree to such modifications.

Policy Options for the Congress

The Congress can set the stage for protecting promised retiree health insurance by legislative action if it so decides. Several congressional options are available, ranging from

- requiring advance funding by companies under a full pension-type model regulated by comprehensive legislation such as the Employee Retirement Income Security Act of 1974 (ERISA) to
- requiring that retirees be allowed to buy health insurance at group rates from their former employers at little or no direct cost to companies.

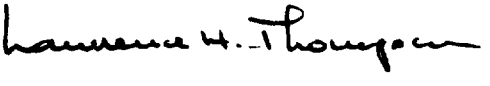
Many companies may urge that the Congress provide additional tax incentives to encourage advance funding of retiree health benefits. However, any broadening of tax preferences will create near-term additional tax losses for the federal treasury at a time when closing the budget deficit is both difficult and important. Even with additional tax advantages, the increasing annual costs that many employers will have to bear

[3]The Wyatt Company, "Retiree Medical Plans: Problems on the Horizon," The Compensation and Benefits File, Jan. 1989, pp. 5-11.

in order to continue to finance retiree health benefits may affect their willingness to offer these benefits to future retirees.

We did not obtain formal agency comments on this report but discussed our estimate of retiree health liabilities with officials from the Department of Labor's Office of Policy Research under the Pension and Welfare Benefit Administration and incorporated their comments where appropriate.

As arranged with your office, we are sending copies of this report to interested Senate and House committees. We will make copies available to others on request. The major contributors to this report are listed in appendix VI.



Lawrence H. Thompson
Assistant Comptroller General

Contents

Abbreviations

CPI	Consumer Price Index
CPIMC	Consumer Price Index for Medical Care
CPS	Current Population Survey
DEFRA	Deficit Reduction Act of 1984
ERISA	Employee Retirement Income Security Act of 1974
FASB	Financial Accounting Standards Board
GNP	gross national product
HIAA	Health Insurance Association of America
PAYG	pay-as-you-go
PVFB	present value of future benefits
VEBA	voluntary employee benefit association

Companies' Retiree Health Liabilities Large, Advance Funding Costly

Currently, the nation's private employers pay retiree health benefits almost exclusively on a pay-as-you-go (PAYG) basis. As of 1988, companies faced total liabilities of $402 billion to pay the retiree health benefits of all currently covered workers and retirees, we estimate. Had these companies fully funded[1] their accrued liabilities as they arose, they would have accumulated an estimated $227 billion by 1988 for (1) the health care expenses of retired workers and (2) that portion of future retiree health care expenses already "earned" by current employees, based on the years they worked through 1988.

Companies' annual PAYG costs for retirees' health benefits will grow, by our estimate, from under $9 billion in 1988 to over $39 billion in 2020 (in 1988 dollars), assuming no change in coverage and benefits. But if the nation's employers had started to fund these payments as many defined benefit pension plans are funded, they would have contributed an estimated $32 billion in 1988. By 2020, advance funding contributions and PAYG costs would be equal—$39 billion. After that year, PAYG costs would exceed advance funding costs. If these advance funding costs were tax deductible and companies had begun funding their liabilities in 1988, companies would have avoided paying about $7 billion more in 1988 federal corporate income taxes than they avoided on a PAYG basis.

Magnitude of Companies' Liabilities Significant

By 1992, the Financial Accounting Standards Board (FASB) is expected to require companies to begin reporting accrued retiree health benefit liabilities on their financial statements. The impact on corporate balance sheets will be significant. If calculated the same as pension liabilities are, these accrued retiree health liabilities for 1988 would equal about one-fourteenth of the value of stocks (market capitalization) of publicly held U.S. corporations. The accrued amount, not the total liability, is the figure that proposed FASB standards would require to be included on companies' books. However, the accrued amount will be subject to a transition adjustment. The proposed transition obligation would be recorded in equal annual increments over 15 years.

In 1988, the stocks of U.S. corporations were valued at $3.1 trillion according to data from the Federal Reserve Board. For the same year, we estimate accrued retiree health liabilities to be $227 billion. The accrued amount represents the money companies would have had on hand had they fully funded their retiree health obligations as they were

[1] At an assumed 7-percent annual interest return.

earned by employees. Total retiree health liabilities of $402 billion—of which the accrued liabilities were about 57 percent—equaled about one-eighth of companies stock values in 1988. Of the $402 billion total liabilities, about a quarter or $100 billion was for already-retired workers and the remaining $302 billion for current workers, as figure 1 shows.

The accrued liabilities of $227 billion can be divided into three parts:

1. Of the $100 billion for the already-retired, $19 billion for early retirees (those under age 65) and $81 billion is for workers retired at the usual age of 65.

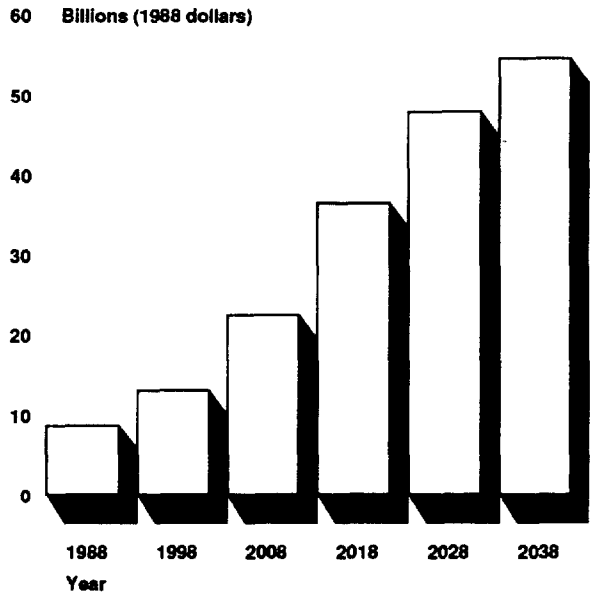
2. For current workers, the accrued liability is $127 billion, calculated the same way pension liabilities are commonly determined. Viewed as pension liabilities, retirees' benefits are "fully" earned and active workers' future benefits are "partially" earned.

3. The remainder, $175 billion, consists of active workers' future liabilities attributable to their future years of service.

PAYG Benefit Payments Rising

Because most companies pay their health liabilities as they are incurred, the growing number of retirees and the rising cost of medical care will cause their projected retiree health benefit payments to rise rapidly during the next 20 years (see fig. I.1). The growth in coverage is due to high birth rates in the 1920s and expansion in employment following World War II. About 7 million retirees (29 percent of them early retirees) are receiving health benefits through company plans, we estimate, and about $9 billion will be paid in benefits in 1988. Over 58 percent of these payments go to early retirees. We project that annual benefit payments to all retirees will increase by nearly 160 percent to over $22 billion in today's dollars by 2008—a growth rate of about 4.9 percent per year in real terms.

Figure I.1: Projected Annual Retiree Health Benefit Payments for Covered Retirees in Constant 1988 Dollars (1988-2043)



Higher Annual Payments Needed to Advance Fund Liabilities

To begin advance funding their accrued liabilities of $227 billion, the nation's employers would have to have contributed an estimated $32 billion in 1988. Using the projected unit credit method[2] as follows, this contribution would have consisted of the sum of

- an amortized payment to finance accrued liabilities, about $18 billion over a 25-year period, and
- a yearly cost accrual or "normal cost," which for 1988 would be about $14 billion.

This compares with $9 billion in PAYG costs.

Advance Funding Costs Exceed PAYG Costs for 22 Years

Projected company contributions for advance funding would grow slowly from the $32 billion level in 1988 to over $39 billion in today's dollars by 2020. Initially, these contributions would be three and one-half times estimated PAYG costs in 1988. During the same period, PAYG

[2]A pension funding method that assigns to each year of service a pro rata part of a worker's projected benefit at retirement.

costs are projected to rise rapidly from under $9 billion to over $39 billion. Benefit payments would exceed annual contributions for the first time in 2021, we project, and would continue to do so for each subsequent year (see fig. 2).

Burden of Advance Funding Increases With Delay in Starting

Both retiree health benefit payments and the number of retirees are continuing to increase. Thus, the longer companies wait to begin advance funding these benefits, the higher their costs will be. If, for example, companies wait until 1998 to begin advance funding retiree health benefits, we estimate their first-year contributions under the projected unit credit method would be over $55 billion in 1988 constant dollars. The greater annual contributions result primarily from projected increases of (1) 2.1 million retirees (net) receiving health benefits by 1998, (2) 4.4 million active workers age 40 and over, and (3) 39 percent in medical costs per retiree (in 1988 dollars).

But if companies had begun funding their retiree health liabilities in 1988, their first-year contributions would have been $32 billion. This is about one-tenth the value of the estimated pretax profits of American companies (estimated by the Department of Commerce at $311 billion).

The funding contributions for retiree health benefits would be a large share of companies' pretax profits in good years and could be a burden in years of low profits. Additionally, the profits and first-year funding contributions are not evenly distributed across firms, so the impact on profits could be excessively burdensome to some companies

Tax Revenue Reduced by Advance Funding

If in 1988, all companies currently offering retiree health benefits had begun funding these benefits and funding costs were tax deductible, we estimate the federal treasury could have lost up to $7 billion more in taxes than the estimated $2.7 billion 1988 tax loss on the $9 billion of PAYG benefits. Our estimate assumes that no advance funding took place before 1988 and that a 30-percent tax rate would apply to the sponsoring companies. If companies had funded their plans and received deductions from taxable income for their funding contributions—which would include $8.6 billion companies could have deducted in 1988—an additional $23.8 billion could have been deducted.

Probably not all companies would begin funding, nor do all companies pay corporate income taxes in each year. Thus, likely tax expenditures

would have been less than $7 billion if funding had been initiated in 1988.

Tax losses would be larger in future years because contributions would grow to over $41 billion and interest earned on the accumulating fund would not be taxed. For example, net tax losses from deducting both interest and contributions from taxable income would reach about $19 billion in 2008 (in 1988 dollars) when annual contributions are projected to grow to about $39 billion.

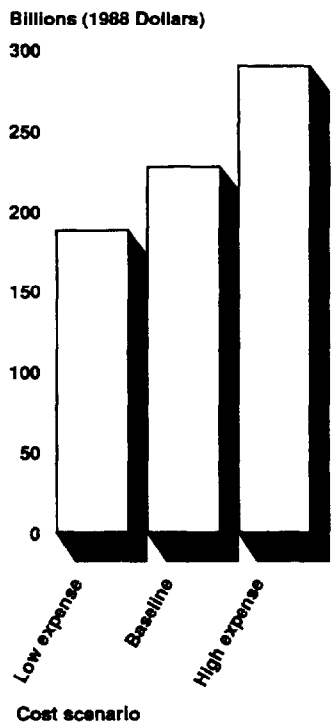
Differing Values for Variables Affect Estimates

Dollar estimates of companies' liabilities are sensitive to the values of the variables used in the analysis. Because a range of reasonable values is plausible, we performed a sensitivity analysis on several variables to identify how the liability estimate would change if higher or lower values were used.

The values we selected to analyze fell into a "high" or a "low" expense category. (See app. IV for more detail on this analysis.) Under a "high" expense scenario, we chose values of the variables that increased our baseline liabilities. Under the "low" expense scenario, values that decrease our baseline estimate were chosen. For example, we changed our model to reflect varying numbers of current workers and retirees expected to receive retiree health benefits, their life expectancy, and companies' benefit payments for medical services provided in the future.

Medical inflation was the variable to which the estimate was most sensitive. When other variables were changed, they caused smaller (less than 5 percent) changes. When we combined all variables in our model into a high- and low-expense estimate, companies' estimated total retiree health liabilities in 1988 range from as low as $328 billion to as high as $521 billion. The amount of money companies would have had on hand in 1988 had they been fully funding their accrued liabilities under our assumptions and methods ranges from $187 billion to $290 billion (see fig. I.2).

Figure I.2: Range of Companies' Estimated Accrued Liabilities for Active Workers and Retirees as of 1988



Proposed FASB Requirement to Change Accounting Standards for Postretirement Health Benefits

News Release
Financial Accounting Standards Board
401 Merritt 7, P.O. Box 5116, Norwalk, Conn. 06856-5116 (203) 847-0700

Contact: Deborah Harrington

FOR IMMEDIATE RELEASE

FASB PROPOSAL WOULD CHANGE ACCOUNTING FOR
POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

NORWALK, CT, Feb. 14--A proposal issued today by the Financial Accounting Standards Board would change the way companies account for postretirement benefits other than pensions that have been promised to retirees.

Companies often provide their employees with a variety of benefits that will be available during their retirement, the most familiar being the monthly pension payment. Many companies also provide their retirees with other benefits, the most common of which are health care and life insurance benefits. Currently, most companies account for these other benefits on a "pay as you go" basis, meaning that the cost is recognized when it is paid, not when the employee provides service to the company in exchange for the benefits. Consequently, the obligation to provide benefits to the employee in the future is not included on the company's balance sheet with its other liabilities. "For some companies," said FASB Project Manager Diana Scott, "the obligation to provide postretirement benefits may be an employer's greatest single liability."

The basis for the Board's proposal, Ms. Scott said, "is that, like pensions, other postretirement benefits are a form of deferred compensation.

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Like other forms of deferred compensation," she continued, "the Board believes that postretirement benefits should be recognized in a company's financial statements when they are earned by the employee."

The exposure draft would require companies to accrue the expected cost of postretirement benefits during the years the employee provides service to the company, based on the terms of the plan. "Unquestionably," Ms. Scott said, "measuring the expected benefit requires estimates of uncertain future events because the dollar amounts of those benefits are not fixed at the time they are earned. However, the Board believes that the company's best estimate of the cost of those benefits is better than implying, by a failure to accrue anything, that there is no obligation and no cost."

The proposal calls for measurement of a transition obligation that is the unrecognized and unfunded obligation for benefits earned prior to adoption of a final Statement on this project. That amount would be disclosed in footnotes and would be recognized as expense and as a liability over the average remaining working life of current plan participants (or fifteen years if longer). Immediately recognizing the entire transition amount would not be permitted. Ms. Scott noted, however, that beginning in 1997, companies would have to recognize on their balance sheets a liability that at a minimum would include the unfunded obligation for retirees and other plan participants fully eligible for benefits.

Certain footnote disclosures also would be required by the exposure draft. The disclosures would be similar to those required for pensions, but some additional information would be required. "The most notable addition to the disclosures," according to Ms. Scott, "would be the assumed health

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care cost trend rate and the effect on the accumulated obligation and annual cost for health care plans of a one-percentage-point increase (or decrease) in the trend rate. Variations in the estimate of the health care cost trend rate can produce significant changes in the measure of postretirement benefit cost," she said. "The Board believes that this disclosure is critical for comparing employers' estimated costs."

If adopted as a final Statement, most provisions of the proposal would become effective in calendar year 1992. The proposal would become effective in 1994 for nonpublic companies that sponsor no plan with more than 100 participants and for non-U.S. plans. The minimum liability provisions would become effective for all companies beginning in 1997.

The deadline for receiving comments on the proposal, "Employers' Accounting for Postretirement Benefits Other Than Pensions," is August 14, 1989. The Board will hold public hearings on the proposed accounting standard in New York City on October 10-12, and in Washington, D.C. on November 2-3.

# # #

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Current Tax Policies for Funding Retiree Health Benefits

Advance funding of retiree health liabilities may be the only way that many U.S. companies will be able to pay promised benefits in the future. Companies have given various reasons for not building up reserves in the past to pay such costs. Some prefer the pay-as-you-go method because costs are small; others do not want to commit themselves to providing lifetime health benefits to retirees as such a prefunding posture would imply. In addition, even though two vehicles are available for tax-deductible contributions, tax incentives may not be sufficiant to induce companies to advance-fund.

Few companies now fund their retiree health payments in advance, even though they can receive tax deductions for doing so. The Internal Revenue Code provides that employers may either (1) establish a voluntary employee benefits association (VEBA) fund under section 501(c)(9) or (2) set aside funds in a qualified pension plan under section 401(h). These tax-advantaged funding options were intended to encourage companies to set aside money to pay retiree health benefits. It seems neither method has provided substantial encouragement for them to do so.

Voluntary Employee Benefit Associations

Until the Congress passed the Deficit Reduction Act (DEFRA) in 1984, some tax practitioners recommended that employers make their contributions for retiree health benefits to VEBA trusts. Before DEFRA, funds contributed to a VEBA trust received tax treatment similar to that given employers' contributions to qualified pension plans, but with fewer restrictions.

The Congress restricted the tax subsidies available through VEBAs for several reasons.[1] It was concerned that (1) small employers were on the verge of expanding the use of VEBAs as a tax shelter, (2) VEBA rules allowed employers to take deductions before making payments, thus allowing an excessive tax-free accumulation of funds, (3) tax revenue lost to the Treasury as a result of prefunding could be unacceptable, and (4) VEBAs were not subject to nondiscrimination rules, which ensure that a broad cross section of workers in a sponsoring company receive benefits.

Employers still may receive tax deductions, within certain limits, for contributions to VEBAs to fund their retiree health liabilities. The effect

[1]Joint Committee on Taxation, Staff. General Explanation of the Revenue Provisions of the Deficit Reduction Act of 1984, Dec. 31, 1984, pp. 775-84.

of DEFRA rules, however, was to discourage VEBA use by requiring the following:

- Contributions to VEBA trusts for retiree health benefits are limited by a requirement that the cost of health benefits for future retirees used in the calculations be the same as the cost of health benefits provided to current retirees. But adjustments for future medical inflation are not permitted by law. Thus, companies could not fund their retiree health liabilities if they limited contributions to the amounts allowed by available tax rules.
- Investment earnings on reserves held in VEBAs for postretirement medical benefits may be subject to the tax on unrelated business income. Because such a tax would lower the funds' income, companies would have to make higher contributions to advance fund their retiree health liabilities.

Funding Retiree Health Benefits Through Employers' Pension Plans

The Internal Revenue Code also allows companies to make tax-deductible contributions to their pension plans to fund their retiree health obligations. Under section 401(h), a defined benefit pension plan may provide for the payment of health expenses of retired employees and their dependents through contributions to a separate account maintained under the plan. Medical benefits, together with life insurance benefits, under this section, must be subordinate to the plan's retirement benefits. Specifically, nonpension contributions cannot exceed 25 percent of the aggregate contributions made to the pension plan.

This method of advance funding has been used rarely. The 25-percent limit may not permit contributions to existing pension plans as large as needed to fully fund accrued health liabilities. This is the case for many companies with a high ratio of retirees to workers. Also, because many companies' pension plans are overfunded, allowable pension contributions are very low, even zero, thereby effectively preventing tax-deductible contributions for retiree health.[2]

[2]However, the Internal Revenue Service issued a private letter ruling, permitting such contributions in at least one instance. See Bureau of National Affairs, Daily Tax Report, Apr. 3, 1989, pp. G-3 to G-5.

Data Used to Estimate U.S. Companies' Retiree Health Liabilities

To develop our baseline estimate of private sector employers' total and accrued liabilities for retiree health benefits, we

1. estimated the number of workers expected to receive retiree health benefits and companies' average expected cost of providing early and normal retiree health benefits;

2. made assumptions about worker and retiree mortality, the percentages of workers retiring at ages 60 and 65, and future medical inflation rates; and

3. selected a discount rate to make present-value calculations.

To arrive at values for our baseline estimate of companies' liabilities, we reviewed and combined information from a number of sources to estimate a model of retiree health liabilities developed by the Department of Labor.[1] Our model of companies' liabilities estimated the numbers of active and retired workers covered by company-sponsored retiree health plans and the projected average costs of these benefits. The stream of estimated future benefit payments was discounted to obtain the present value of these future liabilities. The model's output—potential retiree health liabilities and funding costs—depend on a variety of demographic, economic, and actuarial assumptions. For example, we needed to estimate (a) the ages and numbers of covered workers and retirees, (b) employers' past and projected average costs of providing retiree health benefits, and (c) future mortality rates and medical inflation. Because of the inherent uncertainty in these parameters, we performed sensitivity analyses of retiree health liabilities and funding costs to different parameter values. We then combined these values to create high and low boundaries around the baseline estimate.

Retirees Covered by Company-Sponsored Health Benefit Plans

About 7 million retired workers received company-sponsored retiree health benefits in 1988, according to our estimates. We calculated this number as follows:

1. To arrive at the number of covered retirees in 1983 who survived to 1988, we (a) accepted Labor's estimate of the number of retirees receiving pensions in 1983, (b) estimated how many of these had company-

[1] U.S. Department of Labor, Pension and Welfare Benefits Administration, Employer-Sponsored Retiree Health Insurance, May, 1986, app. D, pp. 73-79.

sponsored health coverage, and (c) applied mortality rates from a commonly used actuarial table (UP84[2]).

2. To determine the number of active workers who would retire between 1983 and 1988 and receive health benefits, we estimated (a) the number of active workers who would retire during that period, (b) the number of these workers whose companies provided retiree health benefits, and (c) the number of covered workers who would survive to 1988 to receive these benefits.

As a starting point for approximating the number of retirees receiving health benefits in 1988, we used data on retirees receiving pensions in 1983. According to the Census Bureau's Current Population Survey (CPS),[3] about 7 million retired workers received pension benefits from private-sector employers in 1983. About 60 percent of active workers whose employers offered group health insurance would have this coverage continued after retirement, a 1984 survey by the Health Insurance Association of America (HIAA)[4] showed. Because most firms with retiree health plans also sponsor pension plans, we multiplied the total number of pension recipients (7.1 million) by 60 percent and estimated that 4.2 million retirees received employer-sponsored health benefits in 1983.

These estimates have both a downward and upward inherent bias. On one hand, to the extent that some workers without pensions were receiving retiree health benefits, our estimates are understated. On the other hand, retiree health coverage expanded rapidly during the 1960s and 1970s. To the extent that older retirees in 1983 therefore were less likely to be receiving retiree health benefits, our use of HIAA's 60-percent coverage figure may overstate coverage in the already retired population.

In updating the 1983 information on retirees to 1988, we applied commonly used mortality rates and estimated that about 3.5 million of the covered retirees survived. Using CPS data on active workers in 1983, HIAA's coverage rates, and our retirement rate assumption (described below), we estimated that an additional 3.1 million workers retired with

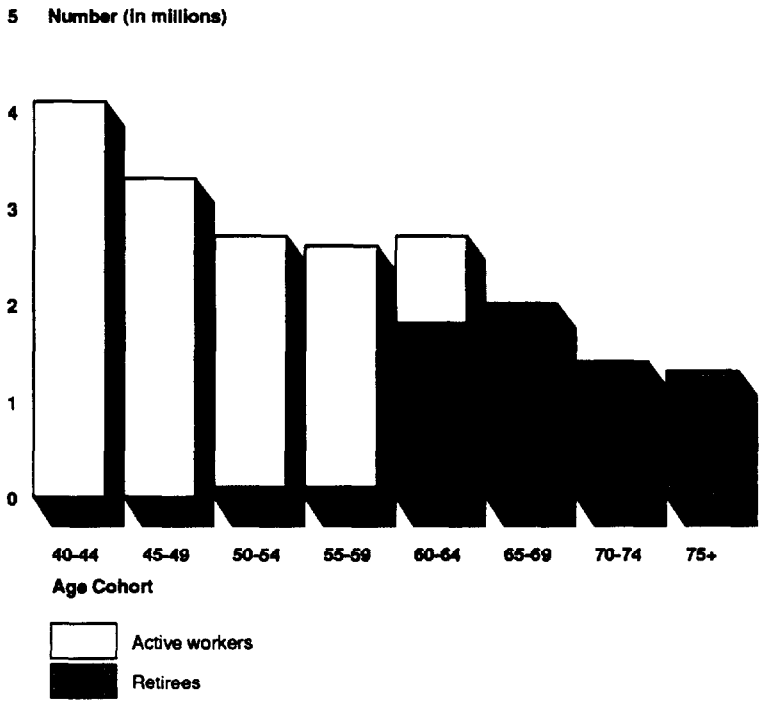
[2]William W. Fellers and Paul H. Jackson, The UP-84 Table, The Wyatt Company, May 22, 1975, table 10, p. 18.

[3]U.S. Department of Commerce, Bureau of the Census, Money Income of Households, Families, and Persons in the United States, 1983, Series P-60, table 50, p. 172.

[4]Health Insurance Association of America, A Profile of Group Major Medical Expense Insurance in the United States, p. 13.

health benefits after 1983 and survived to 1988. In total, about 6.6 million retirees received employer-sponsored retiree health benefits in 1988, according to our estimates. The estimated numbers of retiree beneficiaries in 1988 by age group are shown in fig. IV.1.

Figure IV.1: Estimated Number of Workers and Retirees Covered by Companies' Retiree Health Plans by 5-Year Age Cohorts (1988)



Retirement Rate and Age Assumptions

Most workers retire between 60 and 65 at an average retirement age of about 62. We assumed that 60 percent of workers would retire at age 60 (early retirement) and the remaining 40 percent at age 65 (normal retirement). This assumption allowed us to estimate the retiree health liabilities for workers who retired between 1983 and 1988 and those who will retire in future years. Common in actuarial valuations, this type of simplified assumption results in an average retirement age of 62 years.

Active Workers Covered in 1988

In 1983, 66.2 million active workers in 1983 had employer-or union-sponsored group health insurance, according to the CPS. After subtracting local, state, and federal government workers with group health coverage, we estimated that 51.9 million private workers had this kind of insurance. From the HIAA survey, we estimated that about 60 percent of these private workers (31.4 million) in 1983 were in company-sponsored group health plans that continue coverage for retirees. This is 42 percent of the 74.3 million nonagricultural workers in the U.S. private sector in 1983 reported by the CPS.

For computational ease, we grouped the 66.2 million workers in the CPS in 1983 into 5-year age groups. Assuming that the estimated 31.4 million with retiree health coverage were distributed similarly by age, we aged these groups to 1988 and added new entrants at age 40 to the covered population in each year. We ignored workers under age 40 in our estimates of retiree health liabilities because studies have shown that, on average, workers have about 25 years of service with their last employer before retirement. From CPS age-specific data, we estimated that in 1988 there were 13.4 million active workers ages 40 to 64 with retiree health coverage. We also applied mortality rates to each group in each year, as described below. The resulting covered population at ages 40 and over in 1988 appears in fig. IV.1.

In sum, our estimates of total and accrued liabilities for retiree health benefits in 1988 were based on two groups of people: (1) the estimated 6.6 million retirees already receiving health benefits and (2) the estimated 13.4 million active workers ages 40-64 with retiree health coverage.

Companies' Retiree Health Costs

We estimated employers' retiree health costs for 1988 at $777 per retiree age 65 and over and $2,602 per retiree under 65. Employers' health expenditures are greater for workers who retire before age 65 because they are not yet eligible for Medicare. For retirees age 65 and over, Medicare pays for most medical expenditures, thereby reducing employer health expenditures. In addition, some early retirees may have poorer health when they retire than workers of the same age who remain on the job.

Future Insurance Costs Estimated

To estimate future health insurance costs, we started with Labor's estimate of $553 as the 1983 average annual insurance premium for employer-provided health benefits for retirees aged 65 and over. This

estimate was based on 1977 National Medical Care Expenditure Survey data, updated to 1983 by Labor. For retirees under age 65, we adjusted Labor's estimate and estimated $1,852 as the average 1983 annual insurance premium for employer-provided health benefits for under-65 retirees. Both Labor's and GAO's cost estimates include an amount for spousal and dependent coverage.

We projected these average cost estimates to 1988, using the Consumer Price Index for Medical Care (CPIMC), which increased by about 40 percent from 1983 to 1988. This raised age 65-and-over costs to $777 and under-age-65 costs to $2,602 in 1988 (including an adjustment for higher costs for early retirees than the average for active workers from data provided by the Washington Business Group on Health). Using our medical inflation assumption (described below), based on historical rates, we projected the 1988 annual costs into the future. We did not consider any company savings from Medicare catastrophic medical insurance in this projection.

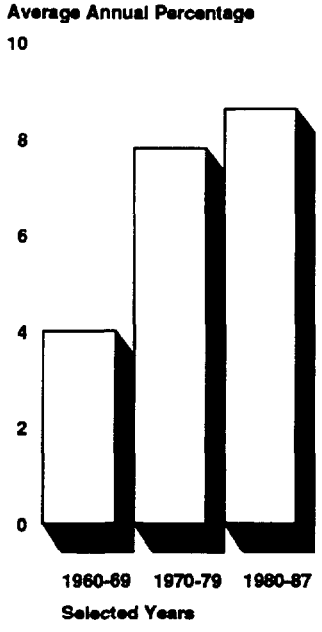
Future Medical Inflation Considered

The historical rise in companies' average retiree health costs has resulted from increases in medical personnel and supply costs, new and expensive technology (e.g., CAT scans), and higher utilization (e.g., more frequent mammograms and more numerous lab tests). Because of these factors and expectations by some experts that Medicare will require recipients or employers to shoulder a greater share of their medical expenses in the future, employers' cost of providing health benefits to retirees is expected to continue to rise faster than general inflation.

The Consumer Price Index (CPI), which measures general inflation, is based on prices of several household budget items including food, transportation, housing, and medical care. The CPIMC measures medical inflation—it represents the price of a market basket of health care services. In each decade since 1960, the yearly average CPIMC has risen (see fig. IV.2), from 4.0 to 7.8 to 8.6 percent during the 1960s, 1970s, and 1980s, respectively. Likewise, medical inflation has exceeded general inflation since 1960. Over the period we examined (1960-87), the CPIMC averaged 1.6 percentage points per year more than the CPI. During the period 1970-87, it rose on average 1.7 percentage points faster per year than the CPI. Most recently (1980-87), the CPIMC averaged 3.5 percentage points more than the CPI (see fig. IV.3).

To estimate companies' future retiree health benefit payments, we used a graded medical inflation factor based on the expectation that the CPIMC

Figure IV.2: Medical Cost Inflation (1960-87)

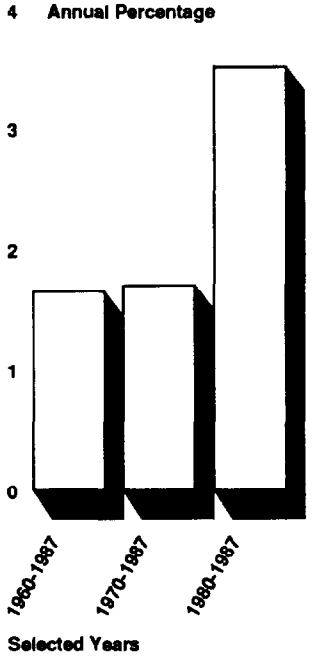


Source: Economic Report of the President 1988 (Washington, D.C., U.S. Government Printing Office), table B-58, p. 313.

will continue to outpace the CPI but that the difference between the rates will decline. We assumed that medical inflation will exceed the CPI by 3.5 percentage points a year through 2001, by 2.75 percentage points a year through 2015, and by 2 percentage points a year thereafter.

In making assumptions about future health care inflation, we considered the relationship between health care expenses and the gross national product (GNP). Health expenditures were 11.1 percent of GNP in 1987, according to the Health Care Financing Administration. If GNP grows at a 2-percent real rate and medical inflation were to rise 4 percentage points faster than the CPI for each of the next 30 years, starting in 1988, health expenditures would grow from 11.1 percent in 1987 to 19.7 percent of GNP in 2018 (see fig. IV.4). If medical inflation were 2.5 percentage points greater than the CPI (the assumption used by Labor in its estimate for 1983), health expenditures would rise to 12.8 percent of GNP. Our graded medical inflation assumption is intermediate to these extremes, raising the health share of GNP to 14.9 percent in 30 years and remaining constant thereafter.

Figure IV.3: Differences Between Medical and General Inflation for Selected Years (1960-87)



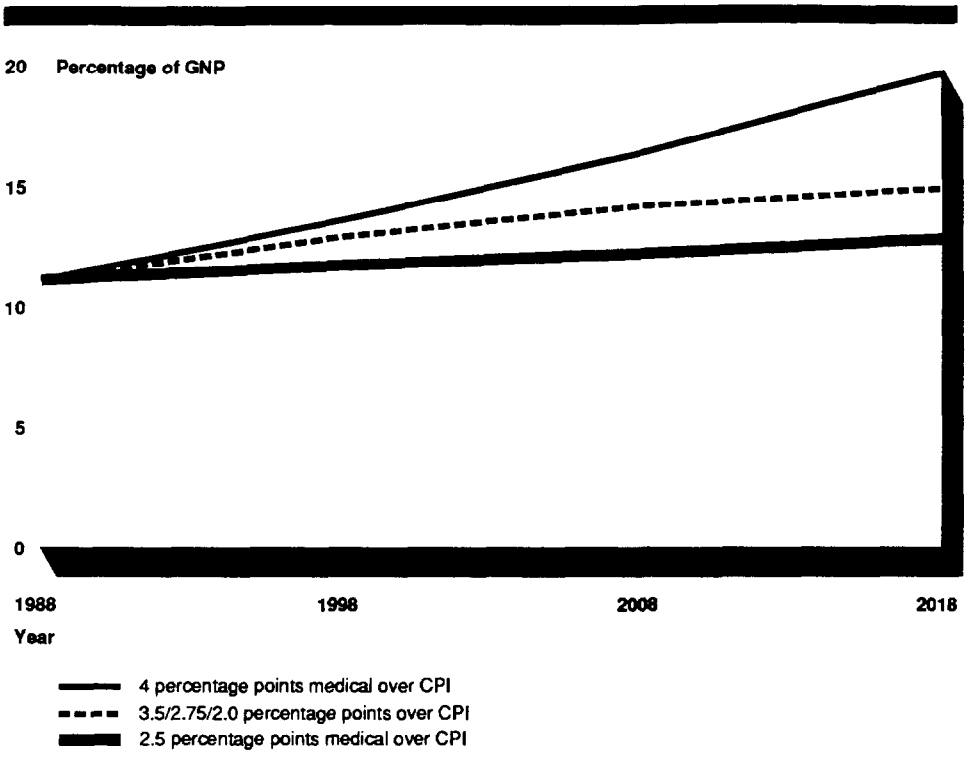
Source: Economic Report of the President 1988 (Washington, D.C., U.S. Government Printing Office), table B-58, p. 313.

In our sensitivity analyses, we changed the graded medical inflation assumption to a 4/3/2- and a 3/2.5/2-percentage point excess over the CPI for our high and low estimates, respectively. Under the high-cost scenario, in 30 years, the share of GNP going to health care expenditures would rise to 16.4 percent and under the low-cost scenario, to 13.5 percent.

Discount Rate Assumption

To obtain the present value of future retiree health benefits in 1988, we used a 7-percent discount rate. In health benefit valuations, the discount rate is less important than its relation to the rate of general and medical inflation. For our model, we assumed a 5-percent future annual inflation rate and a 7-percent discount rate, which means our assumed real rate of return on investments is 2 percent. We netted out the 5-percent general inflation from our assumed medical inflation to obtain constant 1988-dollar estimates.

Figure IV.4: Effect of Excess Medical Cost Inflation on Expenditures for Medical Care as a Percent of GNP (1988-2018)



Mortality Assumption

In estimating how long workers and retirees will live, we used a standard unisex mortality table, adjusted to reflect expected mortality improvement. We selected the UP-1984 mortality table because it (1) is commonly used by actuaries and is recognized by government agencies as an appropriate basis for valuing pension benefits and (2) can be adjusted for expected mortality improvements by lowering the expected probability of dying at each age.

Sensitivity Analysis

The effects on total liabilities of changing the values of selected variables in the model singly and in combination are shown in table IV.1. By this analysis, estimated liabilities are sensitive to medical cost inflation and life expectancy. For example, by using a lower medical inflation rate, our baseline estimate of total liabilities fell by 6 percent. Slightly higher or lower mortality changed estimated liabilities by 4 percent. Other variables had less impact. For instance, very large changes in early retirement rates (10 percent in either direction) had a relatively

small impact because early retirees have only a few years of eligibility for this benefit. Once the retirees reach age 65, we assumed, companies pay the same for them as they do for those who retire at 65.

First-year contributions could range from a low of $26 billion to a high of $42 billion, according to our analysis. The lower contribution level would fund our low-expense estimate of employers' accrued liabilities ($187 billion); the higher level, our high-expense estimate ($290 billion). We amortized accrued liabilities over 25 years for our baseline estimate of $32 billion for first-year contributions and for the sensitivity analysis.

Changing only the length of the amortization period in the unit credit method caused our estimate of first-year contributions to vary by $7 billion (in 1988 dollars) around the baseline value of $32.4 billion. The shorter period—15 years—would raise annual contributions by 15.7 percent (to $37.5 billion), while the longer period—35 years—would reduce annual contributions by 5.6 percent (to $30.6 billion).

Table IV.1: Sensitivity of Estimated Total Liabilities of $402 Billion to Different Values for Selected Variables (1988)

Dollars in billions

			Total liabilities for retiree health benefits by scenario			
	Alternative values		Low expense		High expense	
Variable	Base-line	Range (low/high)	Liabilities	Percentage decrease	Liabilities	Percentage increase
Age-65 retirees with health plans (percent with pensions)	58.7	55.9/61.6	$397	1	$408	1
Early retirees (percent of all retirees)	60.0	50.0/70.0	383	5	421	5
Early retirees with health plans (percent of early retirees)	60.5	58.0/68.25	391	3	438	9
Life expectancy at age 65 (years)	16.7	16.0/17.4	385	4	419	4
Medical inflation in excess of CPI (percentage points)						
1988-2001	3.5	3.0/4.0				
2002-2015	2.75	2.5/3.0				
2016-	2.0	2.0/2.0	377	6	430	7
Low- and high-expense range (dollars)	all	all	328	18	521	30

GAO's Method for Estimating 1988 Retiree Health Liabilities and Annual Contributions to Begin Advance Funding

Our estimates of employers' 1988 total and accrued liabilities for retiree health benefits were based on a model of companies' projected benefit payments. The data sources and assumptions underlying the model are set forth in appendix IV.

We calculated retiree health liabilities by

1. projecting annual benefit payouts for active workers and retirees, using assumptions about mortality and future increases in medical care costs;

2. converting these benefit payouts to present values at an assumed discount rate; and

3. selecting a pension-funding method to estimate the accrued portion of total liabilities and the contribution that would be needed as of 1988 to begin advance-funding the benefits.

Projecting Numbers of Retirees and Costs for Health Benefits

Using data on pensioners and active workers with employer-sponsored group health coverage, we constructed populations of retirees and workers receiving retiree health benefits in 1988. We grouped these populations into 5-year age cohorts of workers and retirees age 40 and above (see table V.1).

We then projected each cohort into the future, using age-specific probabilities of death or mortality rates. For example, of the 2 million retirees age 65-69 receiving health benefits in 1988, we estimated that about 45,000 would die within a year. This left about 1.95 million alive in 1989. The number of expected deaths was based on mortality rates from a table commonly used by actuaries in pension valuations (see app. IV for a discussion of this table). We continued the process into future years until there were no more survivors from the cohort.

Table V.1: Distribution of the Initial Population in Companies With Retiree Health Plans in 1988

Age in 1988	Active workers (millions)	Age in 1988	Retirees (millions)
40-44	4.07	Under 55	0.08
45-49	3.32	55–64	1.84
50-54	2.56	65–69	2.00
55-59	2.53	70–74	1.38
60-64	0.92	Over 74	1.30
Totals	**13.40**		**6.60**

As an example, table V.2 shows every fifth year of the projection for the 65-69 cohort.

Table V.2: Projected Employer Health Payments for the Cohort of Retirees Ages 65-69 in 1988, in 5-Year Increments (1988-2023)

Year	Retirees in 1988 (millions)	Per retiree cost	Benefit payments (billions)
1988	2.00	$777	$1.55
1993	1.74	1,168	2.03
1998	1.41	1,757	2.48
2003	1.02	2,623	2.68
2008	0.61	3,810	2.32
2013	0.28	5,533	1.55
2018	0.08	7,925	0.63
2023	0.01	11,115	0.11

Benefit Payouts for Retirees

Employers' average annual cost to provide health benefits for a retiree 65 or older (including the cost for any dependents) was $777 in 1988, we estimated. We projected this average cost into the future using assumed future medical inflation rates. (Our cost estimates and inflation assumption are discussed in appendix IV.) Then, by multiplying the number of expected retirees by the projected average annual health cost per retiree, we estimated retiree health care costs in future years. For example, table II.2 shows every fifth year of the projected payout for the cohort of retirees ages 65-69 in 1988.

Present Value of Future Benefits Calculated

Employers' total liabilities for retiree health benefits are presented in terms of present values of future benefits (PVFB). Present values are sums of money that, if invested now at a given rate of compound interest, will accumulate exactly to specified amounts at specified future dates. To convert future benefit payments to PVFBs we used discount "factors"—amounts that grow at the assumed interest rate to $1 in specified numbers of years. We chose a 7-percent annual interest rate to arrive at PVFBs for our cohorts.

For example, table V.3 shows the results of this conversion for every fifth year of the 65-to-69 cohort projection. We totaled the payments for each year (the last column of the table) and all intermediate years to arrive at the present value in 1988 of $28 billion for the health benefits expected to be paid to this cohort.

The average employer annual health cost for cohorts of retirees younger than 65 is higher until they reach age 65 than for other retirees, as the younger retirees are not yet eligible for Medicare. Thus, we estimated, the average employer health cost per pre-65 retiree in 1988 was $2,602 (see app. IV). Using our medical inflation rate assumptions, we projected this cost into the future.

To reach the present value of $99.5 billion for future health benefits for the 6.6 million persons already retired in 1988, we estimated the initial per capita early and normal retiree health costs, and the initial numbers of retirees. Also, we used certain mortality, medical inflation, and interest rate assumptions. Were alternate values of health costs, numbers of retirees, or assumptions used, a different present value would result.

Table V.3: 1988 Present Value of Future Benefit Payments for Retirees Ages 65-69 in 1988 (1988-2023)

Year	Retirees in 1988 (millions)	Benefit payments (billions)	Factor	Present value (billions)
1988	2.00	$1.55	1.000	$1.55
1993	1.74	2.03	0.713	1.45
1998	1.41	2.48	0.508	1.26
2003	1.02	2.68	0.362	0.97
2008	0.61	2.33	0.258	0.60
2013	0.28	1.55	0.184	0.29
2018	0.08	0.66	0.131	0.08
2023	0.01	0.13	0.094	0.01

All of the $99.5 billion would be accrued as of 1988, under the projected unit credit funding method that we used. Accrued liabilities represent amounts attributed by this method to the past service of workers. Because retirees' service is all in the past, the present value of their future health benefits is 100-percent accrued, by definition.

Age of Retirement Calculated for Active Workers

Calculating employers' liabilities for future retiree health benefits of active workers required us to make assumptions about the ages at which workers would retire. In pension plans, actuaries often assume one or two ages of retirement, even though they know that workers retire at several ages. These ages—often the plan's early and normal retirement ages—produce present values reasonably close to those that would result from several retirement ages.

Because retiree health costs differ before and after age 65, we selected two retirement ages for use in our model: 60 and 65. Using CPS data on the age at retirement of private pensioners, we assumed for our baseline estimates that 60 percent of workers would retire early at age 60 and 40 percent at the normal age of 65.

Benefits Projected for Each 5-Year Cohort

For each 5-year cohort of active workers in the U.S. in 1988, we estimated that 60.5 percent of those retiring at age 60 and 58.7 percent of those retiring at age 65 would be covered. According to our estimates, the cohort ages 45-49 of 3.3 million workers was divided into 1.3 million workers expected to retire at age 65 and 2.0 million expected to retire early. As with the retiree cohorts, we applied mortality rates to estimate the future survivors from these subgroups. We then multiplied the number of future retirees by our projected average health costs to determine the benefit payouts for each of these groups. Finally, we calculated the present value of the projected benefit payouts. As an example, table V.4 shows every fifth year of this projection for the 45-49 age cohort.

Table V.4: Projected Benefits of the Cohort Ages 45-49 in 1988 (1988-2043)

Year	Employees (in millions) retiring at Age 60	Age 65	Average annual cost per retiree	Benefit payout (billions)	Present value (billions)
1988	2.02	1.30	•	•	•
1993	1.97	1.28	•	•	•
1998	1.91	1.23	•	•	•
2003	1.80	1.17	$8,785[a]	$15.81	$5.72
2008	1.59	1.07	3,810	10.13	2.61
2013	1.39	0.93	5,533	12.84	2.36
2018	1.12	0.75	7,925	14.82	1.94
2023	0.81	0.54	11,115	15.01	1.41
2028	0.49	0.33	15,590	12.78	0.86
2033	0.22	0.15	21,865	8.09	0.39
2038	0.07	0.04	30,667	3.37	0.10
2043	0.01	0.01	43,012	0.86	0.02

[a]Pre-65 cost for age 60 retirees.

Accrued Liabilities Calculated for Workers Over 40 and Retirees

To determine what portion of the total 1988 liabilities for active workers age 40 and over was accrued, we prorated the liabilities for each cohort by the ratio of average service since age 40 to expected service at retirement. (This proration is commonly employed in the actuarial funding method we used, the projected unit credit method.)

For example, we assumed that the 1.3 million workers aged 45 to 49 in 1988 (who were expected to retire at age 65) had about 7 years of service on average and would have 25 years of service at retirement. Thus, roughly 7/25 (28 percent) of the present value of their retiree health benefits was accrued, by our calculation. For the 2.0 million workers who were expected to retire at age 60, we calculated that about 7/20 (35 percent) of the total liabilities for their retiree health benefits was accrued. Of the $402 billion in total 1988 liabilities for the five (5-year) cohorts of active workers age 40 and over and for persons already retired, $227 billion was accrued, as table V.5 shows.

Table V.5: Estimated 1988 Employer Liabilities for Retiree Health Benefits by Age Cohort in 1988

Dollars in billions

Age in 1988	Accrued liability	Total liability
40-44	$9.3	$95.7
45-49	25.8	77.2
50-54	33.5	58.6
55-59	46.3	57.2
60-64	12.3	13.9
Retirees	99.5	99.5
Total	**$226.8**	**$402.2**

Funding Considerations

If retiree health plans were subject to pension funding standards, employers would be required to make annual contributions for benefits accruing during the year (normal cost) and for the amortization of any existing unfunded accrued liabilities. Funding regulations permit several funding methods, each of which develops different normal costs and accrued liabilities. We selected the projected unit credit method because it is the method FASB prescribes for reporting pension liabilities on financial statements.

Normal Cost Calculated

The normal cost is the portion of the PVFB of active workers attributed to the current year. In the projected unit credit method, the normal cost is often defined as a fraction of a worker's PVFB, the numerator of which is 1 and the denominator of which is the projected years of service at retirement. For example, for the 2.0 million workers in the cohort ages 45 to 49 expected to retire at age 60, this fraction would be 1/20. The PVFB for early retirees was $57.6 billion and the normal cost was 1/20 x $57.6 billion = $2.9 billion; 1.3 million workers will retire at age 65 with

a normal cost of $0.8 billion. The normal costs we arrived at for all our cohorts of active workers are shown in table V.6.

Table V.6: Estimated Normal Costs for Active Workers in 1988

Dollars in billions

Age in 1988	Normal cost
40-44	$4.5
45-49	3.7
50-54	2.8
55-59	2.7
60-64	0.6
Total	**$14.3**

Amortization of Unfunded Accrued Liabilities

We estimated U.S. companies' accrued liabilities for retiree health benefits at $226.8 billion in 1988. As few retiree health plans are prefunded and the amounts accumulated negligible, we treated all the accrued liabilities as unfunded. We used a 25-year amortization of these unfunded liabilities for our baseline estimate for a pension-type funding scenario. Additionally, we estimated contributions that amortize unfunded liabilities over shorter and longer periods (see app. IV).

Full Funding Amount

At 7-percent interest, a 25-year amortization payment on $226.8 billion is $18.19 billion per year. Combined with a normal cost of $14.26 billion, we estimate that about $32.45 billion would be needed in 1988 to fund retiree health liabilities in advance.

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