THE AMERICAN ACADEMY OF ACTUARIES

Enrolled Actuaries REPORT

Volume 25 / Number 1 / Spring 2000

Productivity Growth May Hold the Key

Solving the Baby Boom Retirement Crisis

by Robert L. Brown

This article is adapted from a paper Robert L. Brown presented in Washington in February at the Retirement 2000 conference, which was co-sponsored by the Academy and the Society of Actuaries.

In its complete version, the paper, "Impacts on Economic Security Programs of Rapidly Shifting Demographics," describes demographic changes related to baby boomers' retirement and the effects of these changes on Social Security, pension plans, and savings plans in the United States and Canada.

We are today in the midst of the longest bull market ever seen. Why is this? One reason has to be the demographics of the investment market. The baby boom is in its period of saving for retirement, either individually or through an employer-sponsored pension plan. This should continue for at least another 20 years.

But what happens when the baby boom retires?

What happens when baby boomers turn to their consumption phase and wish to liquidate their savings? What happens to government-sponsored social security, to employer-sponsored pension assets, and to individual savings when everyone wants to liquidate and consume, but not produce?

More Workers, or More Productivity?

The equilibrium between production and consumption (and the equilibrium that will assure share values) can be maintained if we find a way to produce more goods and services when needed. That can be achieved in two ways. We can maintain or increase the size of the labor force. Or we can increase the productivity of every worker.

Maintaining or increasing the size of the labor force will most likely necessitate providing significant incentives for workers to stay active longer. However, previous research has indicated that the extra period of work that would be necessary to maintain economic balance is not as dramatic as one might presume. Instead of talking about shifting the retirement age from 65 to 69, for example, a worker who would now expect to retire at age 60 might stay in the labor force until age 64 or perhaps until age 66. That's all.

(As an aside, it is interesting that while the United States has already announced a two-stage rise in the normal retirement age for Social Security, from age 65 to age 67, Canada rejected that as a public policy initiative in the latest round of social security reforms.)

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Focusing on Cash Balance

In its work on the cash balance controversy and related topics, the Academy has covered a lot of territory since the issue moved into the national spotlight last May. If you haven't kept up, here are some of the highlights:

• May 5, 1999: Academy President Richard Robertson sends an editorial to the *Wall Street Journal* saying that actuaries, as a profession, believe employees should have meaningful information about their pension benefits. The letter is a response to a *Journal* article on several pension actuaries' comments about the consequences of cash balance conversions.

• May 6, 1999: Senior Pension Fellow Ron Gebhardtsbauer testifies on cash balance plans before the Labor Department's ERISA Advisory Council. Gebhardtsbauer describes the evolution of cash balance plans and their advantages and disadvantages. He also calls for enhanced disclosure for participants.

• June 9, 1999: The Academy's senior pension fellow testifies for a second time before the Labor Department's ERISA Advisory Council. Gebhardtsbauer discusses options for improving disclosure during conversions.

• June 30, 1999: The Academy's Pension Committee sends a letter to Senate Finance Committee Chairman William Roth (R-Del.) about providing more disclosure to employees when pension plans are amended and there might be a reduction in future benefit accruals. The Academy proposes more detailed disclosure than is currently required, saying that participants should receive more meaningful information but that any new requirements should not excessively burden employers.

• Sept. 21, 1999: On behalf of the Academy, Gebhardtsbauer testifies on cash balance plans before the Senate Committee on Health, Education, Labor and Pensions. His testimony emphasizes that participants should have meaningful information when plans are converted from a traditional defined-benefit plan to a cash balance arrangement. In response to questions about actuaries' comments reported in the *Journal*, Gebhardtsbauer points out that such issues are referred to the Actuarial Board for Counseling and Discipline (ABCD) for review and investigation.

• October 26, 1999: Representatives from the Academy meet with officials from an Equal Employment Opportunity Commission (EEOC) task force on cash balance plans, which

Pension Committee Chairperson Don Segal and Committee member Christine Mahoney compare notes after Feb 7 meetings with the congressional staff.

is investigating whether conversions to cash balance plans result in age discrimination. The Academy provides a technical overview of how cash balance plans work.

• Nov. 8, 1999: The Pension Practice Council sends a letter to Sen. Edward Kennedy (D-Mass.) about a pension provision in his pending amendment to Senate bankruptcy legislation (S. 625). The provision prohibits "wear-away" whenever amendments are made to pension plans. The Academy letter, which is also distributed to every member of the Senate, expresses concern about the unintended consequences the provision could have on the defined-benefit pension system.

• Dec. 1, 1999: Academy and American Society of Pension Actuaries representatives meet with Labor Department officials to discuss the recent controversy over the role of pension actuaries during cash balance conversions.

• Jan. 10, 2000: Gebhardtsbauer participates in a town hall forum with IBM employees, Sen. Rod Grams (R-Minn.) and Rep. Gil Gutknecht (R-Minn.). Gebhardtsbauer participates as an independent adviser who answers technical questions from the IBM employees.

• January and February 2000: In a series of meetings with staffers for legislators who have shown an interest in cash balance issues, Academy representatives and congressional staff discuss professionalism issues that have surfaced in the cash balance debate.

• January 24, 2000: Academy President Steve Kern sends a letter to every member of Congress explaining the Code of Professional Conduct and the ABCD discipline process.

The letter reminds lawmakers that the Academy is committed to ensuring that the profession continues to deserve its reputation for integrity and professionalism.

• Jan. 18, 2000: ABCD representatives meet with Labor Department officials, at the request of Labor Secretary Alexis Herman, and report that the discussion is "very positive and productive." The Labor Department is examining the role of employers and actuaries in cash balance conversions.

• Jan. 27, 2000: The Academy, along with the four other U.S.-based actuarial organizations, publishes an ad in Roll Call and the Hill, two newspapers widely read on Capitol Hill. The ad, which is reproduced on this page, calls for increased disclosure for pension participants.

• Feb. 7, 2000: Members of the Academy's Pension Committee meet with staffers in 18 congressional offices to discuss pension issues. The Pension Committee members reiterate the profession's support for increased disclosure and caution that some pension-related legislative proposals could harm the private pension system as a whole.

And those are just the highlights. The list doesn't include, for instance, the luncheon for congressional staffers where Gebhardtsbauer gave a cash balance overview and moderated a discussion on the topic. That was Feb. 16, 1999 — months before the subject moved from an obscure technical issue to a national political topic. The list also doesn't include Gebhardtsbauer and Assistant Public Policy Director David Rivera's ongoing meetings with various congressional staffers to discuss legislative cash balance issues.

And among the Academy's current projects, a participant-oriented brochure on cash balance plans is expected to be completed soon. Copies of the brochures will be distributed to all congressional offices, and congressional staff will be encouraged to give the brochures to constituents who have cash balance questions.

EA Meeting to Air Cash Balance Views

Cash balance plans — creative retirement solution or discriminatory method to cut future benefits? The Enrolled Actuaries Meeting in Washington March 26-29 will be the place to hear pension experts on both sides of this debate.

Experts pro and con will discuss the issue at one of the meeting's general sessions. Another general session will take a broader perspective, exploring related legislative efforts, actuarial ethics and pension system economics.

The meeting will also include workshops, lectures and panel sessions on a wide variety of pension practice topics. And the March 28 luncheon will feature husband-and-wife political opposites Mary Matalin and James Carville.

The Academy and the Conference of Consulting Actuaries are sponsoring the meeting. More information is available at www.ccactuaries.com.

American Workers Deserve to Know

A Message about Pension Benefits from the U.S. Actuarial Profession

AS EXPERTS ON FUTURE COSTS, actuaries make sure that insurance and pension benefits will be there when we need them. As professionals, actuaries work in the public interest.

OVER THE PAST FEW MONTHS, the actuarial role in cash balance pension conversions has come under scrutiny. For the record, actuaries are bound by their code of professional conduct to act honestly and perform services with integrity and are subject to counseling and discipline when they fail to meet the code. Actuaries also believe that American workers should have access to meaningful information about their pension benefits.

EMPLOYEES SHOULD:

▲ Receive clear and understandable information about their pensions.

▲ Know if pension changes are expected to reduce future benefits.

▲ Be able to compare options and understand the consequences of their choices.

▲ Be able to request information about their specific situation.

WE STAND READY TO WORK WITH CONGRESS to ensure that workers obtain information to plan for a secure retirement and that America's successful, voluntary private pension system is strengthened.

For more information, contact:

American Academy of Actuaries
Rick Lawson, Executive Director
202-223-8196

American Society of Pension Actuaries
Brian Graff, Executive Director
703-516-9300

Casualty Actuarial Society

Conference of Consulting Actuaries

Society of Actuaries

The Academy and other organizations representing actuaries published this ad in January in Roll Call and the Hill.

Required 4010 PBGC Filings for Large Groups

By Karen Krist

All EAs who work on large companies' pension plans should make sure they're alerting clients who must file reports under ERISA Section 4010.

ERISA Section 4010 was enacted in 1994 with the purpose of giving the Pension Benefit Guaranty Corp. (PBGC) accurate information about controlled groups whose pension plans comprise PBGC's largest exposure to pension underfunding. The fact that PBGC now receives Section 4010 information is one of the main reasons PBGC was able to eliminate the annual "top 50" list of companies with the largest pension underfunding.

PBGC has long recognized that the majority of defined benefit pension plan underfunding is concentrated in the plans of a few large controlled groups. PBGC's Early Warning Program monitors these plans and the financial status of the plan sponsors. The Early Warning Program uses information from many sources, but among the most important are annual reports made under ERISA Section 4010. The program makes extensive use of the information contained in the Section 4010 reports to monitor PBGC's risks.

Annual filings under ERISA Section 4010 are due 105 days after the end of the controlled group's information year, usually the same as the plan sponsor's fiscal year. For controlled groups with calendar information years, filings are due April 17, 2000 for the year that ended Dec. 31, 1999. (The normal deadline would be April 14, but special leap year and weekend rules apply.)

Understanding the Requirements

Each year approximately 80 to 100 controlled groups must give PBGC financial and actuarial information required by Section 4010. The number varies from year to year, depending on interest rates and the condition of pension fund assets at the end of the year. Though some controlled groups report every year, many of them go in and out of reporting status from year to year. All EAs working on large companies' pension plans should to be aware of the reporting requirements under Section 4010.

For Section 4010 to fulfill its intended purpose, all controlled groups required to report must do so, and the reporting must be complete and accurate. In past years, some filings contained errors, and not all groups reported that were required to do so. In some cases, companies subsequently told PBGC that they had received improper or incomplete advice from their actuaries. EAs should understand the filing requirements and should be certain that they are alerting clients who may be Section 4010 filers.

Who Has to File

Two calculations of pension underfunding are used for Section 4010 reports. The "gateway" calculation determines whether there is $50 million of underfunding among all the underfunded plans in the controlled group. If the $50 million threshold is met, the controlled group is a Section 4010 filer and additional calculations are required.

The underfunding of all plans sponsored by the controlled group is added together to test for the $50 million threshold. In large controlled groups, this often means that calculations made by more than one EA must be consolidated. *In the gateway calculation, overfunded plans are not considered*. If the total underfunding on this basis is at least $50 million, a Section 4010 filing must be made for the entire controlled group.

The gateway calculation is meant to be relatively easy, using information the plans' EAs may have already calculated for other purposes. It is a test that all large controlled groups should be making to determine their Section 4010 filing status. Because funding assumptions may differ from assumptions used for the gateway test, controlled groups that have not had to make minimum funding contributions for years may be required to file.

The gateway calculation essentially uses vested liabilities as calculated for PBGC variable premium purposes. For plans at the full funding limit that do not pay variable premiums, the EA may have to do this calculation solely for Section 4010 purposes.

If a controlled group is a Section 4010 filer, detailed actuarial calculations are required. Certain small plans and well-funded plans are exempt from the detailed reporting requirements. Benefit liabilities for non-exempt plans must be calculated using interest rates, mortality, assumed retirement ages and the loading for administrative expenses prescribed under Section 4044.

Filing Errors

Sometimes, filings contain errors in the assumptions used or in application of the assumptions. In these cases, PBGC asks the plan sponsor for corrected information. The most common error actuaries make in these calculations is to not use the complete set of PBGC assumptions. Most often, actuaries do not add the administrative expense load. Some use the plan's valuation retirement age assumption rather than the retirement assumptions specified in the regulations. The filing will be rejected by PBGC unless the complete set of prescribed assumptions is used.

In additional to reporting benefit liabilities, a Section 4010 filer must also report plan asset information and controlled group financial information and supply copies of the plan's annual actuarial valuation reports.

More Information

Many questions about actuarial reporting under Section 4010 are answered in Section 4010 regulations and in PBGC's *Technical Update 96-3*. You can find these, as well as other PBGC information, at www.pbgc.gov. You may also call Senior Actuary Ruth Williams or me at 202-326-4070. We will answer preliminary questions on a no-client-name basis.

Karen Krist is the chief actuary in PBGC's Corporate Finance and Negotiations Department, which is also called PBGC's Early Warning Program.

Automatic Approval Clarified for Method Changes

by Bruce C. Gaffney

IRS Revenue Procedure 99-45 expands and clarifies guidance provided in Rev. Procs. 95-51 and 98-10 concerning automatic approval for changes in the funding method used to determine contribution requirements. Rev. Proc. 99-45, which took effect Jan. 1. 1999:

- Adds cases in which automatic approval is granted for funding method changes in connection with plan mergers.
- Modifies the requirements for obtaining automatic approval for a change in method resulting from a change in valuation software.
- Lowers the certification requirement in some special cases.
- Clarifies the rules regarding automatic approval and negative unfunded liabilities.

Plan Mergers

Previously, automatic approval was unavailable for changes in method made in connection with a plan merger. Rev. Proc. 99-45 describes criteria under which automatic approval can now be obtained for certain mergers. The rules for obtaining automatic approval differ for de minimis mergers and other mergers. The requirements of Section 414(l) are used to determine when a merger is deemed to be de minimis (generally, when the assets of the smaller plan are less than 3 percent of the assets of the larger plan; Reg. Section 1.414(l)-1(h) provides more detailed guidance).

For a de minimis merger, automatic approval will apply if the funding method of the larger plan is maintained and the impact of the merger (i.e., the change in assets and liabilities due to including the smaller plan) is treated as an experience gain or loss.

The smaller plan will have a final plan year ending on the date of the merger, which may be a short plan year. The merger should be reflected in the larger plan's valuation, which is coincident with or next following the merger date. Thus, a mid- year merger will not be reflected in the valuation of the larger plan for the plan year in which the merger occurs.

For a merger that is not de minimis, the criteria for automatic approval are more stringent. These requirements include the following:

- The actuarial cost method (but *not* the asset valuation method) for each merged plan must be a standard method described in Section 3 of Rev. Proc. 95-51.
- The plans must have the same plan year.
- The valuation date for each plan must be either the first or last day of the plan year.
- The date of the merger must be the first or last day of the plan year.

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DJIA Companies Benefit From DB Plans

Boosting Blue Chip Bottom Lines

by Adam Reese and Gordon Gould

The gains on Wall Street are having a positive impact on pension expense, contributions, and funded status.

Since the inception of 401(k) plans in the early 1980s, defined contribution plans have played an increasing role in the retirement programs of large companies. Yet, despite their growing popularity, almost all large employers continue to sponsor defined-benefit plans — including 28 of the 30 companies that make up the Dow Jones Industrial Average (DJIA).

The big gains in financial markets in recent years have brought significant financial benefits to companies with large defined-benefit (DB) pension funds. To understand the significance of recent capital market performance on corporate earnings and balance sheets, we examined the FAS 87 statements and other publicly available financial information filed by the 28 blue chip companies with DB plans. (We studied companies that were in the DJIA as it existed in 1998; in 1999 four constituent companies of the DJIA were replaced, reducing the number of DJIA companies with DB plans but increasing the total assets and liabilities.)

Reaping Financial Rewards

It is clear from our study that major corporations sponsoring defined-benefit plans are reaping widespread financial rewards from the large increase in the value of plan assets. The gains on Wall Street are having a positive impact on pension expense, contributions and funded status.

In terms of ongoing financial management, DB plans are proving to be winners on several fronts:

- They continue to operate at extremely low expense levels and, in the case of a growing number of companies, provide pension income.
- Their impact on corporate cash flow remains minimal.
- While pension obligations are growing, pension plans remain well funded.

Low Expense Levels

We found that pension expense at the DJIA companies has fallen to very low levels, reflecting the fact that retirement plans are generally well funded. The companies' total pension expense fell to about $1 billion in 1998 from $2.6 billion in 1997, excluding special one-time costs for severance and early retirement benefits.

For nine DJIA companies, a surplus of assets over liabilities allowed them to record pension income for 1998, up from six companies in 1997.

By some broad measures of financial performance, the level of pension expense was barely visible. Excluding special charges, average per-company expense in 1998 totaled only $40 million — less than 0.1 percent of revenue. Meanwhile, annual service cost was about $7 billion in 1998.

Manageable Contributions

The fact that the DJIA pension plans are well funded is also enabling these employers to minimize cash contributions to the plans. Annual contributions have stayed at relatively small and manageable levels of approximately $4 billion.

At the same time, these plans are continuing to provide substantial payments to plan participants and beneficiaries. Benefits paid to retirees in 1998 totaled over $21 billion. That's up 7.5 percent from the amount paid out in 1997, and it represents a stream of payments that is likely to keep rising as the number of retirees increases.

Increases in Plan Obligations

Pension benefit obligations at the end of 1998 totaled $353 billion, up from $323 billion in 1997, but the benefits of the companies in our survey remained well funded: The average funded ratio for the blue chips' pension funds was 107 percent in 1998.

The increases in pension fund obligations over the past few years are attributable to both the accumulation of additional benefits and the effect of declining discount rates. For example, the average discount rate declined from 7.1 percent at year-end 1997 to 6.7 percent at year-end 1998.

Rising Asset Values

In total, as of year-end 1998 the DJIA companies had accumulated $377 billion in their pension plans. The average value of plan assets per company reached $13.5 billion, an increase of 17 percent in two years. This growth in asset values is attributable to strong investment performance, as benefit payments for most plans exceeded company contributions.

Combined, the companies' pension plans produced an investment return of $40.0 billion in 1998, far above the $29.5 billion reflected as a credit in determining pension expense under FAS 87.

This excess return will offset costs in future years, and it represents a significant source of future income to the companies and their shareholders.

Adam Reese, a consulting actuary with Towers Perrin, is the editor of The Actuarial Update. Gould is Towers Perrin's chief actuary.

Method Changes, *continued from page 5*

• Neither plan can have had a funding deficiency in the last full plan year that ended on or before the merger date.

If these criteria are met, the funding method change will be granted automatic approval only if certain procedures are followed concerning the actuarial cost method, asset valuation method and the components of the funding standard account.

Software, Certification and Liability

Change in Valuation Software. The requirements for receiving automatic approval for a change in method resulting from a change in valuation software include the provision that the net charge to the funding standard account under the new software must vary no more than 2 percent from the net charge under the previous software. This test can now be applied to either the current or prior year.

Certification by the Plan Administrator. In general, plan administrators or sponsors must indicate their agreement to any method change on Form 5500. For the "special approvals" described in Section 4 of Rev. Proc. 95-51 (except for a change in the method used by a fully funded terminated plan) the requirement can now be satisfied by notifying plan administrators or sponsors of the change.

Negative Unfunded Liability. Rev. Proc. 99-45 clarifies when a method change that produces a negative unfunded liability is not granted automatic approval. Automatic approval is prohibited only if the new method is a spread-gain method that uses the unfunded liability in determining normal cost.

Bruce Gaffney is a consulting actuary with Ropes & Gray in Boston.

Baby Boom, *continued from page 1*

What may be more important in this analysis is that the proposed four to six years of extra labor force participation does not include any assumed improvement in worker productivity. This is an important element.

Today, in both Canada and the United States there are close to five workers for every retired elderly person. However, by the year 2040 it is projected that that ratio will be closer to 2.5:1 (assuming that today's labor force participation rates remain unchanged). This means an effective doubling of the demands per worker to provide goods and services to the retired elderly.

Targeting 0.9 Percent Annual Growth

However, if every worker could become twice as productive between now and 2040, then the required transfer of wealth from workers to retirees could occur without any shift in labor force participation rates. A doubling of productivity over a 40-year period requires only 1.7 percent real growth in productivity per annum.

These were growth rates that were achieved in the 1950s, but have not been seen over the past decade. However, with proper education of the workforce and sufficient capital investment per worker, there is no reason why these growth rates could not be achieved, and the problem solved, with no shift in the age at retirement.

Even if productivity grows at lesser rates, it may be unnecessary to dramatically raise the retirement age.

Assuming a 0.9 percent annual increase in productivity (which is exactly what was achieved in Canada from 1976 to 1998) the median Canadian retirement age needed to achieve the production:consumption equilibrium would decrease until 2017, when it would reach a minimum of 60.3 years. The median retirement age would increase slightly between 2017 and 2034, reaching a maximum of 60.9 years in 2034. Then it is again projected to decrease (to 60.6 in 2041 and 60.0 in 2047).

These are not merely theoretical goals that could be achieved if correct public policy is legislated (e.g., a rise in the age of eligibility for Social Security). Rather, these are events that are inevitable in a stable economy.

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