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CANADA PENSION PLAN SUBSIDIES

By T. H. Dancy

The following table demonstrates the built-in subsidy to a male individual contributor to the Canada Pension Plan. Disability and survivor benefits have been excluded although it has been assumed that the contributor will survive to age 65 and contribute in all years. Earnings are based on the Years Maximum Pension Earnings level each year which is based on the average industrial wage. Under the Canada Pension Plan the greatest subsidy exists for those at or above the Y.M.P.E., and the amendments at January 1, 1974 increased that subsidy.

The Y.M.P.E. is currently being increased rapidly to account for previous wage increases and, the illustration has been based on a Y.M.P.E. of $13,000 for 1981 as a starting point for a single male then aged 25 years. The calculations use two sets of assumptions included in the Actuarial Report for the Canada Pension Plan as at December 31, 1973.

Assumptions

	Reasonable Stability	*Moderate Inflation*
Salary scale	3½%	5½%
Interest rate	4½%	6½%
Cost of Living Index	1%	3%
Post-retirement interest rate net of inflation	3½%	3½%

Mortality: G.A. 51 projection C to retirement (70 years from 1951)

Benefits: Unguaranteed life annuity (no other benefits)

Table

	Reasonable Stability	*Moderate Inflation*
Accumulated Contributions (1981 to retirement)	$81,748	$175,046
CPP Pensions at age 65	12,433 p.a.	26,255 p.a.
Pension from accumulated contributions only	6,270 p.a.	13,426 p.a.
Pension provided by subsidy	6,136 p.a.	12,799 p.a.
Present value of subsidy		
at retirement	80,349	166,865
at entry	13,812	13,439
Value of the subsidy at retirement in 1974 dollars	50,336	41,593

Clearly, these figures indicate the need for an increase in the contribution rates from the present 1.8% of salary up to the Y.M.P.E. by both the employer and employee. No such scheduled increase has been announced by the Government. The Statutory Actuarial Report #3 as at December 31, 1973 indicates that current contributions will cease to cover benefits and expenses by 1982 and that the fund will start to decrease in 1990 until exhausted by the year 2000.

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CIVIL SERVICE RETIREMENT SYSTEM

The Fifty-Second Annual Report of the Board of Actuaries of the Civil Service Retirement System, House Document No. 94-203; U.S. Government Printing Office, 1975.

by Thomas P. Bleakney, and Richard R. Joss

Both the title and the dull format in the usual Government Printing Office style would seem to insure this document's instantaneous consignment to dead storage. However, behind the cover of this small pamphlet is a concise, well-written report discussing a number of the issues facing not only federal pension programs at the present time, but all pensions in an inflationary economy. For example, several of the 11 pages devoted to the main report discuss the implications of "static" assumptions (ignoring inflation) as opposed to "dynamic" assumptions (including inflation).

The report is a valuation of the Civil Service System as of June 30, 1972. In addition to presenting conventional cost figures consistent with previous reports, it also expands substantially upon this in several ways:

(1) In spite of the fact that the 1972 normal cost rate (13.64%) turned out to be less than the agency-employee contribution rate (14%), the Board of Actuaries recommended no reduction in the last, due to the uncertainties surrounding the other matters discussed in the report.

(2) The Board pointed out that under the static assumptions, future inflation was not considered on the liability side of the ledger (in the form of an inflationary salary scale). On the other hand, the current inflationary trend

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surely had affected the assumed interest rate (5%), the key ingredient on the potential asset side.

(3) Going further than just making the above statement, and indeed going further than required by law, the Board presented tables demonstrating the effect on costs of two sets of inflation assumptions.

Students of the fine points of funding federal plans may wish to review Walter Shur's excellent paper of several years ago, "Financing the Federal Retirement Systems" (*TSA* XVI, p. 265). Mr. Shur pointed out that the "problem of federal retirement plan financing is inextricably woven into the fabric of over-all fiscal policy." Thus, as Mr. Shur elsewhere noted, higher federal taxes to fund federal systems would result in a transfer of debt (the funds' increased assets) from the public to the retirement funds. "If higher taxes will put the economy of the future in a better position to bear the burden of retirement payments, then higher taxes are desirable with or without a reserve method of financing and the point should be argued on economic grounds, not on actuarial grounds." Despite this argument, Mr. Shur recommended normal cost plus interest funding for the sound financing of the federal systems.

The report of the Board of Actuaries noted that such a recommendation was not their function, but that it was incumbent upon them "to point out that the present approach to funding this System will lead to spiraling costs in the future, not only in dollar amounts but as a percentage of covered payroll." Apparently, projections have been made to illustrate this point, but the report itself gives adequate proof to the actuarial reader. The accompanying table of employer costs, calculated in various manners, is indicative of the current level of underfunding of this system. All figures are employer contributions approximately as of the valuation date, June 30, 1972.

The static assumptions include a 5% interest rate and a total annual salary increment in the 2% to 2½% per year range. Of the two dynamic scales adopted, the one assuming the greater inflation (Dynamic II) used a 6% interest rate and a total annual salary growth rate in the 5% to 5½% range, plus the assumption that CPI increases after retirement will be at the rate of 4% per year. Because of the effect of the well-publicized "kicker" in the System's formula for calculating cost-of-living increases, the 4% annual CPI growth rate assumption translates roughly to a 5.2% annual increase in retired life benefits.

The report discusses the problem produced by applying ERISA standards to the Civil Service Plan, which is not governed by ERISA. The report points out that "the past service funding requirements of . . . ERISA . . . seem to require level dollar funding . . . Whether a level percentage of payroll funding of past service would be acceptable under ERISA for an inflation-indexed plan such as the Civil Service plan is problematical." This topic will probably get increasing attention in the private sector in the next few years, as actuaries become more familiar with ERISA requirements and at the same time presumably move increasingly to inflation-adjusted actuarial assumptions.

An added bonus for readers of the report is the set of detailed statistical tables in the appendices, including analyses of the changes in assumptions between 1970 and 1972. A major contributor to additional actuarial costs, incidentally, was the assumption changes reflecting increased rates of retirement experienced by the System between valuations.

The actuarial profession owes a debt of gratitude to the Board of Actuaries, Edwin F. Boynton, F.S.A., Douglas C. Borton, F.S.A., and Russell R. Reagh, F.C.A. □

	In Billions
Current Contribution Rate	$ 4.1
Normal Cost Plus Interest, Static Assumptions	6.8
Normal Cost Plus Level Percent of Payroll, Dynamic II Assumptions	12.1
Normal Cost Plus 40-Year Level Dollar (ERISA basis), Dynamic II Assumptions	17.8

1980 CENSUS

The Census Bureau is actively working on plans for the 1980 census and important decisions have to be made in the relatively near future. For example, the full content of the basic census questionnaire must be determined by the spring of 1977 so that further preparatory steps can be accomplished successfully.

Although there are many constraints on the census in terms of what and how much information can be collected and tabulated, the Bureau believes that it is very important to obtain and review the recommendations of as wide a range of users and potential users of decennial census data as possible. The Census Bureau is therefore anxious to have the ideas of the members of the Society of Actuaries.

If you have any suggestions, questions, or comments on the 1980 census, please send them to: Director, U.S. Bureau of the Census, Washington, D.C. 20233.

Actuarial Meetings

May 13, Baltimore Actuaries Club

May 18, Denver Actuarial Club

May 19, Seattle Actuarial Club

May 25, Joint Meeting—Boston and Hartford Actuaries' Clubs

June 10, Baltimore Actuaries Club

June 10, Denver Actuarial Club

June 10 and 11, Actuaries Club of Southwest

June 22, San Francisco Actuarial Club