



## *Mortality – The Next Funding Challenge*

*Integrating  
Design  
& Delivery*

We all contend with mortality, but most of us can wait until we die to do so. Actuaries and plan sponsors need to worry about it a little sooner. Mortality rates are dropping, which is an actuary's way of saying people are living longer. For the sponsors of pension plans, this means that pension costs for both accounting and funding purposes may be going up. This communiqué will be of interest to the sponsors of defined benefit pension plans, especially if the mortality table used for valuation purposes has not been changed in a long time.

For many years, the standard mortality table for actuarial valuation purposes was the GAM-1983 table. This table was intentionally a little conservative when it was introduced since a margin for future mortality improvements was built into it. Throughout the 1980s and 1990s, mortality rates did continue to improve. A subcommittee of the Society of Actuaries reviewed annuitant experience between

1986 and 1990 from 11 large U.S. insurance companies and concluded that a new mortality table was warranted. As a result, a new table called the UP-1994 table was created.

At the same time, the subcommittee concluded that mortality rates would continue to decline in future and developed a scale (Scale AA) to enable actuaries to project these expected improvements up to any future date. For example, the following table shows the percentage increase (decrease) in the cost of an immediate annuity if the UP-1994 (projected to 2003) were used instead of GAM-1983:

Age	Male	Female
45	2.2%	0%
55	3.0%	0%
65	4.6%	-0.8%
75	7.3%	0.8%
85	5.2%	-2.3%

Very broadly, we might expect that using this projected UP-1994 table would increase liabilities and normal cost by about 3% to 5% for male plan members but produce no increase in the case of female members. Of course, the experience of every plan will vary somewhat, depending on the demographics.

The question is whether mortality has improved enough in Canada to justify the use of the UP-1994 table. As noted, this table was developed based on U.S. experience and similar Canadian experience does not exist on the same scale. Still, indirect evidence would suggest that moving to UP-1994 should be seriously considered for almost any plan

that is still using GAM-1983. The Office of the Superintendent of Financial Institutions indicates in its 2001 report on the Canada Pension Plan that the population is aging, due to reductions in mortality rates. The Life Tables for Canada 1990-92 projected forward with actual and anticipated improvements in mortality indicate that life expectancy has increased by 10% (5%) for males (females) between 1986 and 2000.

There might be some situations where use of GAM-1983 or similar table might still be more appropriate. For instance, mortality is known to vary by type of work with hourly workers in more physically demanding occupations generally experiencing higher mortality rates.

If your plans are still being valued using GAM-1983 or similar table, you may wish to engage in a discussion with your actuary about the merits of upgrading to the UP-1994 table. That discussion would also involve issues such as the degree of projected future mortality improvements that should be factored in and the timing of the adoption of the new table.

For further information, please contact us at **[info@morneausobeco.com](mailto:info@morneausobeco.com)**.

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