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Period Life Expectancy at Age 65 at Selected Years

YEAR	CANADA			U.K.			U.S.		
	MALES	FEMALES	FEM-MALE	MALES	FEMALES	FEM-MALE	MALES	FEMALES	FEM-MALE
1941	12.8	14.1	1.3	11.4	13.4	2.0	12.2	13.8	1.6
1951	13.4	15.0	1.6	11.7	14.3	2.6	12.8	15.2	2.3
1961	13.6	16.3	2.7	12.0	15.3	3.3	13.1	16.1	3.0
1971	13.9	17.6	3.7	12.2	16.1	3.9	13.1	17.1	4.0
1981	14.7	19.0	4.3	13.0	16.9	3.9	14.2	18.6	4.3
1991	15.6	19.7	4.1	14.1	17.9	3.8	15.2	19.2	4.0
2001	17.0	20.4	3.4	15.9	19.0	3.1	16.1	19.1	3.0
2011	19.0	21.9	2.9	18.2	20.7	2.5	17.2	19.5	2.3

Two overall approaches have been taken to develop mortality projections: (1) statistical projections (that is, relying on time series or regression extrapolation); and (2) by-cause projections (at least for the next, say, 20 years). It is interesting that all three social security departments make use of both techniques in one way or another. Nonetheless, all three panelists focused significant attention on their efforts to understand the underlying drivers of long-term mortality experience, considering the expected significance of changes in mortality in the selection of the projection factors used.

Although there are differences in the detailed steps involved and factors considered in the projections for each country, there appears to be a consensus among social security actuaries that future mortality improvement will likely not be as large as it has been in some past periods of exceptional improvement. This is in part because of changes in demographics, prevention activity intensity, health care technologies and medicines, introduction of more extensive public health coverage, supply of services and quality of health care. Nevertheless, the U.K. ultimate

improvement factors are broadly similar to the rate of improvement experienced over the last 70 to 100 years, with American and Canadian ultimate factors decreasing on a percentage basis as attained age increases.

The methods and assumptions used in these projections are subject to regular peer reviews and adjustment based on new data, the objective of which is to maintain their high quality and to incorporate, as much as practical, the best possible approaches and information sources. For example, Canada

been shown to be consistent with opinions of independently developed expert opinion of medical staff of likely mortality trends by age and condition conducted at Johns Hopkins University.

MORTALITY EXPERIENCE, PROJECTIONS AND OBSERVATIONS

All three countries have seen significant mortality improvement for more than a century, seemingly with no end in sight. The extent and patterns of future improvement will play a highly significant role in upcoming

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is subject to triennial reviews by a panel of actuaries, and the American projections have been subject to ideas and opinions of quadrennial technical panels consisting of actuaries, demographers and economists. The U.K. regularly convenes a panel of experts to provide input into the demographic aspects of social security projections, while U.S. Social Security mortality projections have recently

debates concerning how best to address financing challenges facing all social security programs, especially as and after the baby boomers retire.

Historical mortality experience of their respective countries was contrasted with those of other countries. Key metrics focused on were primarily life expectancy