

mortality differs widely by ages at entry in its relation to the British Offices' Table.

While the ratios of actual to expected deaths are lower than 100 p.c. of the British Offices' Annuity Tables, they are higher than in our experience to 1904. To obtain the experience from the anniversaries of 1904 to the anniversaries of 1910, we have accordingly prepared the following tables:—

MEN.						
Lives.		Amounts of Annuity.				
Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	Annuity Payments expected to cease by Death.	Annuity Payments actually ceasing by Death.	Ratio of Actual to Expected.	
To 1910	1,519	1,295	85 p.c.	\$893,550	\$845,010	95 p.c.
To 1904	746	599	76	437,134	374,600	86
1904-1910	773	726	94 p.c.	\$456,416	\$470,410	103 p.c.

WOMEN.						
Lives.		Amounts of Annuity.				
Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	Annuity Payments expected to cease by Death.	Annuity Payments actually ceasing by Death.	Ratio of Actual to Expected.	
To 1910	1,890	1,585	84 p.c.	\$765,780	\$665,390	87 p.c.
To 1904	943	756	80	364,918	302,700	83
1904-1910	947	829	88 p.c.	\$400,862	\$362,690	90 p.c.

The foregoing indicates that there has been an increase in the mortality, and in order to determine the annuity years in which this increase has taken place, we have combined the statistics for the first five annuity years, and for all years after the fifth. In the previous investigation the mortality in the first five annuity years was unusually low, being 71 p.c. for men and 73 p.c. for women. The following tables show the experience for the first five annuity years between 1904 and 1910:—

EXPERIENCE OF FIRST FIVE ANNUITY YEARS.

Men.			Women.			
Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	
To 1910	680	583	86 p.c.	761	595	78 p.c.
To 1904	439	394	71	441	321	73
1904-1910	250	279	112 p.c.	320	274	86 p.c.

It is apparent from the foregoing that there has been a great increase in the mortality during the first five annuity years; in fact, the entire increase has come during these years, as may be seen from the following table, prepared for the sixth and succeeding annuity years:—

EXPERIENCE OF SIXTH AND SUCCEEDING ANNUITY YEARS.—

LIVES.						
Men.			Women.			
Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	Expected Deaths.	Actual Deaths.	Ratio of Actual to Expected.	
To 1910	839	712	85 p.c.	1,129	990	88 p.c.
To 1904	316	265	84	502	435	87
1904-1910	523	447	85 p.c.	627	555	89 p.c.

The experience after the fifth annuity year up to the anniversary in 1904 is practically the same percentage of the British Offices' Table as the experience since that time. We thus have confirmatory evidence that the experience after the fifth annuity year among American and Canadian annuitants is from 10 p.c. to 15 p.c. less than the graded rates of mortality in the British Offices' Experience; but there is some doubt regarding the experience of the first five years, and it would accordingly be advisable to wait for a

few years before providing tables of net premiums and reserves for use by the companies. This is a matter, however, which should be referred to the Council for attention, and, if they desire graduated rates of mortality prepared on our present experience, we shall be glad to undertake the work and present at a future meeting the results, together with samples of the net premiums and reserves.

It is possible that the increase in the ratio of actual to expected deaths of new issues since the last experience was published is partly due to greater care being taken to determine the true ages of the applicants for annuities. Prior to 1905 it had not been brought forcibly to the attention of the actuaries that the mortality among American and Canadian annuitants was so much lower than the British experience, and it may have occurred to many of them that part of this low ratio of actual to expected mortality may have been due to overstating the ages. I am not expressing this view as a personal opinion, but merely as a possible explanation of the increase in the ratios during the last six years. An additional few years' experience will help us to solve the problem.

MR. FRANK SANDERSON BECOMES A CONSULTING ACTUARY.

A notable point of development in Canadian life insurance is signified by the announcement that Mr. Frank Sanderson, LL.D., F.F.A., F.A.S., has opened his offices at 703 Confederation Life Building, Toronto, as a consulting actuary. This is the first time in Canada that such an announcement has been made, Mr. Sanderson being the first Canadian consulting actuary. It is a happy omen for the future development of actuarial science in the Dominion that this departure has been made by an actuary whose eminence in his profession is widely recognised, and who is as distinguished for the unselfish labor which he has given to the advancement of insurance science in Canada as in the practice of his profession.

Mr. Sanderson's actuarial career dates from 1887, when he graduated from Toronto University, immediately afterwards entering upon life insurance work in the actuarial department of the Manufacturers Life. In 1890 he went to London and Edinburgh, where he passed examinations of the Institute of Actuaries of Great Britain and the Faculty of Actuaries of Scotland. Joining the staff of the Canada Life, in 1892, he was in the following year appointed assistant actuary under Mr. A. G. Ramsay. Three years later he prepared the mortality experience of the company from 1847 to 1893, which even to the present day remains the only one dealing with any Canadian life insurance company. In 1899, when the head office of the Canada Life was removed to Toronto, Mr. Sanderson became actuary, a position he has filled up to the present time, while as is also well known, for several years he acted as joint general manager.

During the past ten years Mr. Sanderson has taken an active part in all life insurance matters in Canada, including the important negotiations in connection with the Dominion Act. He has been one of the examiners of the Actuarial Society of America, and later a member of its Council. In the Toronto Institute he has always been prominent, and is an ex-president of the Actuarial Club of Toronto. In addition to being a fellow of the Actuarial Society