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REPORT OF THE SUBCOMMITTEE ON ANNUITY MORTALITY COMMITTEE ON EXPECTED EXPERIENCE* OF THE CANADIAN INSTITUTE OF ACTUARIES

INDIVIDUAL ANNUITANT MORTALITY STUDY POLICY YEARS 1988–1990

This report was prepared by the Subcommittee on Annuity Mortality of the Committee on Expected Experience of the Canadian Institute of Actuaries. The Canadian Institute of Actuaries has given the Society of Actuaries permission to reproduce this report as part of the Society's expansion of its experience studies. Discussions of this report as well as of any experience study are encouraged. The Canadian Institute and the Society intend to cooperate in experience studies to benefit actuaries in both Canada and the United States.

1. INTRODUCTION

Work has been continuing on the Individual Annuitant Mortality Study. This study updates the one published in June 1990.† We intend that this study become an annual publication. We expect it to be sent out about a year after the end of the policy year under study.

Not all contributing companies have finished with their systems for submitting data. We are still expecting some additional submissions for the years covered by this report. We may also receive some revisions to data submitted. Later reports will incorporate these changes to our data and may not agree entirely with this report.

2. DESCRIPTION OF THE STUDY

The study considers experience under Canadian individual annuities. Most of the policies studied are in the payout status, but in some cases experience is included during the deferred period provided the policy has no cash value or right to change the policy.

^{*}J.C. MacKenzie Smith (chairperson), Ian M. Blake, William G. Hicks, Robert C.W. Howard, Garry MacNicholas, and Anna Manning.

[†]Reprinted in Transactions, Society of Actuaries, 1988-89-90 Reports, pp. 195-225.

The study is done on a policy-year basis; that is, the year of study runs between successive policy anniversaries. The "year of experience," as the year under study is known, is referred to by the calendar year in which the policy year ends. The anniversary is with respect to the "determination date." This is the day on which the income was determined and may not be changed; there is a final disposition of funds on that date. Usually the determination date will be the same as the issue date. In the case of an accumulation type of annuity, the determination date would most likely be the date when the policy changes from accumulation status to payout status.

The study uses a ten-year select period. Since there is no published annuitant mortality table with the ten-year select period, the expected for both the select and ultimate periods is calculated using an aggregate table: the 1983 basic table which appears in TSA XXXIII (1981): 695.

Data are segregated by single life policies, joint policies in which both annuitants are still alive at the beginning of the policy year, and joint policies for which only one annuitant is alive at the beginning of the year. All companies had a very low mortality ratio (that is, ratio of actual to expected mortality) for female experience under joint policies with both alive. It is likely that the payee is usually a male, and when the female dies, no need is seen to report the death to the insurance company. Experience under male lives is closer to single life experience, but still too low to be believed. The overall 1980–1990 mortality ratio by number of policies for males in single life policies and in joint policies with both alive is 102 percent and 79 percent, respectively; 101 percent and 46 percent, respectively, for females. Because of the problems with joint data, only single life data are included in this report.

RRSP policies, RPP policies and nonregistered policies are studied separately.

Experience is studied separately by refund and nonrefund. A refund policy is one which provides for the possibility of some payment after the death of the annuitant. The most common refund provision is a continuation of payments for at least a specified number of years. There is very little exposure for nonrefund policies.

A study by amount of annualized income was added this year. This study is described in detail below.

All reports are done on the basis of age nearest birthday. Most data were contributed on this basis. Age last birthday data was split half to the age indicated and half to the next age.

The following gives an overview of the data included in the study. Only single life data are included in the table:

Year of Experience	Number of Companies	Number Exposed	Number of Deaths	Ratio A/E by Income
89 90	5	148,396	4,552 5,657	93.6% 96.9
81–90	11	171,249 921,644	27,667	96.3

3. CAUTIONS

There are some known inconsistencies in the data. We do not know how serious the inconsistencies are, but we do not believe them to be consequential.

Only single life data are included in the report. Joint data were excluded because of the problems of underreporting of deaths.

The data are not homogenous. Although 11 companies contributed to the period 1980–1990, only one company contributed to all the years. Five other companies contributed to at least five of the years. Three companies contributed to only one year. However, the largest four companies are the same for each of the last four years.

There are more deaths in the select period than in the ultimate and substantially more exposure. Therefore, the aggregate mortality ratios represent the effects of the growth in the annuity market and are not representative of the experience of a cohort.

4. OBSERVATIONS

There is no clear trend of mortality improvement. On the contrary, the least squares regression line of the mortality ratios is positively sloped (implying mortality increasing) for both males and females, RRSP and non-registered. This is quite surprising since all other known studies show improvement in mortality. It is possible that the submitted data have been improving in accuracy over the last few years, so that more deaths are being reported in the later years. It is also feasible that late reported deaths have been included in the year of reporting rather than the year of experience. It may be that a different trend would have been observed if all companies had contributed data for all years, but this is not too likely since more companies show positively sloped trends than negatively.

Although the data are collected on a 10-year select basis, there appears to be no effect of selection, except perhaps in the first policy year. This supports the present practice of using aggregate data for constructing annuitant mortality tables. It may be that our reports would be more useful if the detail were by attained age on aggregate data rather than using attained age only for ultimate data.

As expected, mortality ratios for RPP business are significantly higher than those for RRSP and nonregistered business. We also might have expected the RRSP mortality ratios would be higher than nonregistered, but surprisingly, the opposite is true. We can state that RRSP mortality is lighter than nonregistered with a high degree of confidence. RRSP and nonregistered mortality are closer together (RRSP still lower) in the ultimate period, but this probably reflects the fact that virtually all ultimate RRSP business would have been written when deregistration was the only alternative to a life annuity.

Nonrefund business shows lower mortality ratios than refund business, particularly at the early durations. Since there is very little nonrefund business, it is not clear that any valid inferences can be drawn. It must also be borne in mind that refund business is far from homogenous. Business is classified as refund if there is any certain period at all. Thus, a 5-year certain period is combined with certain to age 90.

Previously we reported that there was no apparent antiselection by amount (ratio of actual to expected higher by policies than by annualized income) for females, but a large amount for males. The two most recent years of experience show so much antiselection by amount for females that the study for all years combined now shows antiselection for both males and females.

The following table summarizes aggregate single life mortality ratios:

Year of	Number o	f Policies	Annuali	zed Income
Experience	Male	Female	Male	Female
89	1.019	0.951	0.971	0.851
90	1.017	1.043	0.979	0.947
81-90	1.019	1.006	0.961	0.968

5. STUDY BY INCOME

We have included a new study of single life data by annualized income for males and females and also RRSP and nonregistered. We chose to study the policy years 1984–1990 since the 1985 year of experience marked the change to seriatim data for most contributors. There are three income groups: up to \$1000, \$1000 up to \$5000, and \$5000 and over. The number of deaths in these intervals is large enough for the results to be acceptable, although the number of deaths in the top band is on the low side. Unfortunately, there are not enough data to warrant a further split of the \$5000-and-over group. We will split it further when warranted by more experience or more contributors.

For policy years 1984–1990, seven companies contributed seriatim data with three companies contributing to all six years. However, the largest four companies are the same for each of the last four years.

There is a clear trend in the mortality ratios by income. Mortality decreases as income increases. The decrease in mortality by amount is evident in all studies, male/female, RRSP/nonregistered, select/ultimate. There is only one exception: female, nonregistered, ultimate. Also RRSP mortality is less than nonregistered in each amount/sex grouping for select, and most groupings for ultimate. It is rare to find such unanimity in studies.

The following gives an overview of the data included in the 1984–1990 income study. Only seriatim single life data are included in the table:

Annualized	Number	Number of Deaths	Ratio A/E
Income	Exposed		by Income
0-1000	227,751	9,095	106.8%
1000-5000	284,837	7,533	99.4
5000 +	70,928	1,500	92.2

The following table summarizes aggregate single life mortality ratios for policy years 1984–1990:

Income	Number o	f Policies	Annuali	zed Income
	Male	Female	Male	Female
0-1000 1000-5000 5000 +	1.084 1.005 0.970	1.076 0.987 0.892	1.074 1.000 0.934	1.057 0.981 0.882
All	1.037	1.030	0.976	0.959

The following table summarizes aggregate single life RRSP mortality ratios for policy years 1984–1990:

	Number o	of Policies	Annuali	zed Income
Income	Male	Female	Male	Female
0-1000 000-5000 000 +	1.023 0.985 0.935	1.011 0.881 0.819	1.023 0.979 0.903	0.966 0.880 0.826
All	0.994	0.933	0.948	0.873

The following table summarizes aggregate single life nonregistered mortality ratios for policy years 1984–1990:

		A Commence of the Commence of		zed Income
Income	Male	Female	Male	Female
0-1000 1000-5000 5000 +	1.165 1.037 1.054	1.117 1.124 0.982	1.148 1.042 0.932	1.133 1.123 0.936
All	1.111	1.112	1.002	1.055

6. CONCLUSIONS

In spite of the lack of homogeneity in the data, some qualitative inferences can be drawn.

- 1. The 1983 basic table appears to be reasonably consistent with actual aggregate experience, but it may be on the light side for large policies, particularly if registered.
- 2. Registration type should be taken into account in forming a mortality assumption.
- 3. Amount of annualized income appears to be a significant factor, but the effect has not yet been demonstrated for amounts that are competitively important.

7. CONTRIBUTING COMPANIES

The following table of contributing companies shows the proportion of deaths on single life policies submitted for the 1989 and 1990 years of study.

For the 1980–1990 study, the number of years submitted differs from company to company. At present, the distribution of data is not well-balanced. The balance should improve when all companies contribute data each year.

	1989	1990
Canada Life	21.3%	20.5%
Confederation Life	6.8	3.0
Great-West Life	16.6	19.4
Imperial Life		3.4
London Life		7.1
Manufacturers Life	35.8	30.9
Mutual Life	19.7	15.6

7. INDEX TO TABLES

Year of Experience	Sex	Тах Туре	Income	Table No.
81-90	M&F	All	All	1
81-90	M	All	Ali	1 2
81-90	F	Ali	Ali	3
81-90	l M	RRSP	Ali	1 4
81-90	M	RPP	All	1 2 3 4 5 6 7 8
81-90	M	Nonreg	Ali	6
81-90	F	RRSP	All	7
81-90	F	RPP	All	8
81-90	F	Nonreg	All	l ğ
89	M	All	All	10
89	F	All	All	ii
90	M	All	Ali	12
90	F	All	All	13
85-90	M	All	All	14
85-90	F	All	All	15
85-90	M	All	0-1000	16
85-90	F	All	0-1000	17
85-90	M	All	1000-5000	18
85-90	i F	All	1000-5000	19
85-90	M	All	5000 +	20
85-90	F	All	5000 +	21
85-90	M	RRSP	0-1000	1 22
85-90	F	RRSP	0-1000	23
85-90	M	RRSP	1000-5000	24
85-90	F	RRSP	1000-5000	25
85-90	M	RRSP	5000 +	26
85-90	F	RRSP	5000 +	27
85-90	M	Nonreg	0-1000	28
85-90	F	Nonreg	0-1000	29
85-90	M	Nonreg	1000-5000	30
85-90	F	Nonreg	1000-5000	31
85-90	M	Nonreg	5000+	32
85-90	F	Nonreg	5000 +	33

TABLE 1

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1990
ALL COMPANIES TO DATE

MALE AND FEMALE COMBINED; EXPECTED: 1983 BASIC MALE AND FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

L	E	xposures	Actua	l Deaths	Expects	rd Deaths	Rati	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Expe	rience - Policy Years 1	to 10			
By Policy Year								
1	83,655	272,942,017	1,048	3,014,282	1,176.33	3,861,971	89.1	78.1
2	84,390	262,742,419	1,308	3,936,744	1,313.90	4,112,959	99.6	95.7
3	81,203	244,921,810	1,397	4,310,597	1,387.81	4,162,158	100.7	103.6
4	76,037	222,040,229	1,436	3,834,274	1,437.21	4,103,896	99.9	93.4
5	74,201	207,321,541	1,582	4,241,644	1,546.19	4,231,835	102.3	100.2
6–10	283,279	698,322,725	7,423	16,375,220	7,554.50	17,546,490	98.3	93.3
By Issue Age						İ		Ì
0-59	72,913	361,632,541	619	2,473,336	498.23	2,129,732	124.2	116.1
60–64	158,081	438,387,271	2,277	5,639,657	2,077.01	5,739,716	109.6	98.3
65–69	286,380	635,917,889	5,737	12,374,489	5,945.70	13,233,235	96.5	93.5
70 and Over	165,391	472,353,040	5,561	15,225,279	5,895.00	16,916,625	94.3	90.0
Total Select	682,765	1,908,290,741	14,194	35,712,761	14,415.94	38,019,308	98.5	93.9
			Ultimate Experi	ence — Policy Years 11	and Over			
By Attained Age								
0-69	27,212	48,003,101	374	557,007	284.75	478,183	131.3	116.5
70–74	36,593	44,062,673	889	1,069,554	849.24	1,084,965	104.7	98.6
75–79	77,753	82,613,403	3,165	3,207,099	3,065.23	3,398,134	103.3	94.4
80–84	58,648	61,272,770	3,971	4,124,354	3,756.96	4,067,198	105.7	101.4
85-89	24,996	22,274,049	2,629	2,577,442	2,517.36	2,274,855	104.4	113.3
90 and Over	13,677	10,720,598	2,445	2,036,633	2,384.07	1,845,648	102.6	110.3
Total Ultimate	238,879	268,946,594	13,473	13,572,089	12,857.61	13,148,983	104.8	103.2
Grand Total	921,644	2,177,237,335	27,667	49,284,850	27,273.56	51,168,292	101.4	96.3

TABLE 2

Canadian Individual Annuitant Experience between Policy Anniversaries in 1980 and 1990
All Companies to Date
Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

	Б	oposures	Actua	l Deaths	Expected Deaths		Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Exper	rience - Policy Years 1	to 10			
By Policy Year								
1	43,829	156,379,225	70 9	2,091,488	767.85	2,643,353	92.3	79.1
2	44,855	153,491,642	893	2,868,216	865.53	2,852,804	103.2	100.5
3	44,000	146,177,120	986	3,190,523	926.15	2,930,503	106.5	108.9
4	41,134	133,328,995	972	2,668,558	954.68	2,887,296	101.8	92.4
5	40,552	125,797,480	1,074	2,986,154	1,032.10	3,003,380	104.1	99.4
6–10	165,832	458,768,663	5,272	12,329,949	5,299.44	13,137,623	99.5	93.9
By Issue Age								
0–59	39,438	229,286,080	400	1,868,008	337.49	1,636,242	118.5	114.2
60–64	82,806	262,777,704	1,516	3,995,870	1,382.83	4,203,814	109.6	95.1
65–69	167,374	404,035,943	4,274	9,594,006	4,268.55	10,074,429	100.1	95.2
70 and Over	90,584	277,843,398	3,716	10,677,004	3,856.88	11,540,474	96.3	92.5
Total Select	380,202	1,173,943,125	9,906	26,134,888	9,845.75	27,454,959	100.6	95.2
			Ultimate Experi	ence - Policy Years 11	and Over			
By Attained Age						1		
0–69	13,496	31,099,618	229	426,403	177.69	358,577	128.9	118.9
70–74	18,049	26,741,882	524	703,614	542.60	800,085	96.6	87.9
75–79	44,666	55,510,612	2,148	2,331,641	2,114.54	2,622,550	101.6	88.9
80–84	32,582	40,483,482	2,570	3,032,285	2,440.57	3,020,525	105.3	100.4
85–89	10,723	11,186,514	1,314	1,450,798	1,238.61	1,282,443	106.1	113.1
90 and Over	4,365	3,838,111	835	769,922	831.38	722,151	100.4	106.6
Total Ultimate	123,881	168,860,219	7,620	8,714,663	7,345.39	8,806,331	103.7	99.0
Grand Total	504,083	1,342,803,344	17,526	34,849,551	17,191.14	36,261,291	101.9	96.1

TABLE 3

Canadian Individual Annuitant Experience between Policy Anniversaries in 1980 and 1990
All Companies to Date
Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)
Single Life Policies Only; All Tax Types Combined; Both Refund and Nonrefund

		INOLE LIFE TOLICI	EO ONET, TILL TA	IX TITES COMBINE	D, Bom Reion	7 AND NORKETON	/	
	Exp	osures	Actual	Deaths	Expects	d Deaths	Rati	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Years	1 to 10			
By Policy Year 1 2 3 3 4 5 6-10 6-10 By Issue Age 0-59 60-64 65-69 70 and Over	39,826 39,535 37,203 34,903 33,649 117,447 33,475 75,275 119,006 74,807	116,562,792 109,259,777 98,744,690 88,711,234 81,524,061 239,554,062 132,346,461 175,609,567 231,881,946 194,509,642	339 415 411 464 508 2,151 219 761 1,463 1,845	922,794 1,068,528 1,120,074 1,165,716 1,255,490 4,045,271 605,328 1,643,787 2,780,483 4,548,275	408.48 448.37 461.66 482.52 514.10 2.255.06 160.74 694.18 1,677.16 2,038.12	1,218,618 1,260,156 1,231,655 1,216,600 1,228,454 4,408,867 493,490 1,535,902 3,158,806 5,376,151	83.0 92.6 89.0 96.2 98.8 95.4 136.2 109.6 87.2 90.5	75.7 84.8 90.9 95.8 102.2 91.8 122.7 107.0 88.0 84.6
Total Select	302,563	734,347,616	4,288	9,577,873	4,570.19	10,564,349	93.8	90.7
			Ultimate Expo	rience - Policy Years	1 and Over			
By Attained Age 0-69 70-74 75-79 80-84 85-89 90 and Over Total Ultimate	13,716 18,544 33,087 26,066 14,273 9,312	16,903,483 17,320,791 27,102,791 20,789,288 11,087,535 6,882,487 100,086,375	145 365 1,017 1,401 1,315 1,610 5,853	130,604 365,940 875,458 1,092,069 1,126,644 1,266,711 4,857,426	107.06 306.64 950.69 1,316.39 1,278.75 1,552.70 5,512.22	119,606 284,880 775,584 1,046,674 922,412 1,123,497 4,342,652	135.4 119.0 107.0 106.4 102.8 103.7	109.2 128.5 112.9 104.3 113.5 112.7
Grand Total	417,561	834,433,991	10,141	14,435,299	10,082.41	14,907,001	100.6	96.8

TABLE 4

Canadian Individual Annuitant Experience between Policy Anniversaries in 1980 and 1990
All Companies to Date
Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)
Single Life Policies Only; RRSP Only; Both Refund and Nonrefund

		DINGEE EITE		RRSP UNLY; BUT	II KEI OND KIND I	TOTALLOND	·	
	Ext	osures	Actual	Deaths	Expected		Ratio	ı A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Exp	perience - Policy Years	1 to 10			
By Policy Year								
1	29,635	100,669,680	469	1,476,049	524.88	1,769,648	89.4	83.4
2	30,672	99,722,365	588	1,866,827	602.67	1,938,340	97.6	96.3
3	29,991	93,953,745	662	2,085,236	647.80	1,998,028	102.2	104.4
4	29,046	87,488,594	698	1,964,939	695.85	2,075,789	100.3	94.7
5	29,036	85,590,149	755	2,193,839	764.88	2,238,858	98.7	98.0
6-10	112,363	281,061,750	3,668	8,177,581	3,767.33	9,045,830	97.4	90.4
By Issue Age						1 ' '		
0-59	12,787	59,011,911	125	375,415	127.26	515,340	98.2	72.8
60-64	55,600	175,788,699	1,017	2,730,252	934.97	2,802,103	108.8	97.4
65–69	119,828	295,359,050	3,028	7,216,320	3,090.05	7,386,322	98.0	97.7
70 and Over	72,528	218,326,623	2,670	7,442,484	2,851.12	8,362,729	93.6	89.0
Fotal Select	260,743	748,486,283	6,840	17,764,471	7,003.40	19,066,494	97.7	93.2
			Ultimate Expe	rience - Policy Years	11 and Over			
By Attained Age								
0-69	5,031	12,120,300	85	212,172	69.54	142,746	122.2	148.6
70–74	8,516	13,674,715	242	373,686	258.42	412,255	93.6	90.6
75–79	23,333	31,126,713	1,087	1,284,219	1,100.31	1,467,950	98.8	87.5
80–84	17,686	24,598,127	1,342	1,771,473	1,318.81	1,825,721	101.8	97.0
85–89	3,672	4,374,834	403	510,528	412.97	490,103	97.6	104.2
90 and Over	513	503,887	106	82,072	87.95	83,488	120.5	98.3
Total Ultimate	58,751	86,398,576	3,265	4,234,150	3,248.00	4,422,264	100.5	95.7
Grand Total	319,494	834,884,859	10,105	21,998,621	10,251.40	23,488,758	98.6	93.7

TABLE 5

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1990
ALL COMPANIES TO DATE
MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; RPP ONLY; BOTH REFUND AND NONREFUND

	Exp	osures	Actua	l Deaths	Expects	d Deaths	Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	sperience - Policy Years	1 to 10			
By Policy Year 1	1,828 1,698 1,661 1,606 1,602 8,386 3,186 3,997 8,363 1,235	8,953,609 8,230,471 7,807,353 7,208,183 6,967,105 25,471,939 14,972,876 18,236,393 25,956,614 5,472,777	31 29 29 51 45 260 37 86 267 55	81,033 80,611 75,868 94,378 196,711 886,702 175,222 344,804 702,752 192,525	26.38 25.97 28.43 29.84 32.48 215.65 30.42 67.63 206.39 54.31	117,475 118,382 124,334 124,797 138,280 629,215 136,389 288,294 602,174 225,627	117.5 111.7 102.0 170.9 138.5 120.6 121.6 127.2 129.4 101.3	69.0 68.1 61.0 75.6 142.3 140.9 128.5 119.6 116.7 85.3
Total Select	16,781	64,638,660	445	1,415,303	358.75	1,252,484	124.0	113.0
			Ultimate Exp	erience - Policy Years	11 and Over			
By Attained Age 0-69 70-74 75-79 80-84 85-89 90 and Over	2,668 1,927 4,682 3,410 1,391 616	3,333,326 2,810,584 6,599,452 3,912,305 1,419,859 460,387	51 53 243 299 174 129	61,351 98,851 302,100 368,299 212,324 109,940	34.81 56.81 222.40 257.41 161.44 111.36	44,845 82,731 310,051 293,316 162,818 81,067	146.5 93.3 109.3 116.2 107.8 115.8	136.8 119.5 97.4 125.5 130.4 135.6
Total Ultimate	14,694	18,535,913	949	1,152,795	844.23	974,829	112.4	118.3
Grand Total	31,475	83,174,573	1,394	2,568,098	1,202.99	2,227,313	115.9	115.3

TABLE 6

Canadian Individual Annuitant Experience between Policy Anniversaries in 1980 and 1990
All Companies to Date
Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY: NONREGISTERED ONLY: BOTH REFUND AND NONREFUND

Actual Deaths Expected Deaths Exposures Ratio A/E Number Income Number Income Number Income Number Income Select Experience - Policy Years 1 to 10 By Policy Year 12,366 534,406 756,230 46,755,936 209 216.58 96.5 70.7 45,538,806 276 920,778 236.90 796,081 115.7 12,485 116.5 295 249.92 44,416,022 1,029,419 808,141 12,348 118.0127.4 223 229.00 686,710 88.7 10,482 38,632,218 609,241 97.4 274 33,240,226 626,242 95.1 9.914 595,604 234.73 116.7 6-10 45,083 152,234,974 1,344 3,265,666 1,316.47 3,462,577 102.1 94.3 By Issue Age 0-59..... 23,465 238 1,317,371 179.81 984,514 132.4 133.8 155,301,293 23,209 68,752,612 413 380.23 108.6 82.7 60-64 920,814 1.113,418 2,085,932 80.3 65-69..... 39,183 82,720,279 979 1,674,934 972.11 100.7 70 and Over... 991 2,952,117 16,821 54,043,998 3.041.995 951.45 104.2 103.0 Total Select 102,678 360,818,182 2,621 2,483.60 7,135,981 105.5 97.5 6,955,114 Ultimate Experience - Policy Years 11 and Over By Attained Age 5,797 15,645,992 152,880 73.34 170,986 89.4 0-69..... 93 126.8 229 231,077 10,256,583 227.37 305,100 100.7 75.7 70-74 7,606 818 745,322 791.83 88.3 17,784,447 844,549 103.3 75-79..... 16,651 892,583 864.35 107.5 11,973,050 929 901,487 99.0 80-84.... 11,486 5,391,821 85-89..... 5,660 737 727,946 664.20 629,521 111.0 115.6 90 and Over... 3,236 2,873,837 600 577,910 632.06 557,595 94.9 103.6 63,925,730 3,406 3,327,718 3.253.16 3,409,238 104.7 97.6 Total Ultimate 50,436 6,027 10,282,832 5,736.75 10,545,220 97.5 Grand Total 153,114 424,743,912 105.1

TABLE 7

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1990
ALL COMPANIES TO DATE
FEMALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; RRSP ONLY; BOTH REFUND AND NONREFUND

	Exp	osures	Actua	l Deaths	Expecte	d Deaths	Ratio	A/E
Ī	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	sperience - Policy Years	1 to 10			
By Policy Year 1	28,790 28,437 26,398 25,529 24,655 77,346 12,507 52,927	73,213,454 68,690,095 61,051,991 57,017,444 54,018,690 142,197,536 35,090,739 116,948,865	219 268 272 306 321 1,243	559,899 603,162 645,936 692,691 685,928 2,235,294 243,915 1,173,541	281.30 306.38 311.57 335.80 358.14 1,414.41 68.95 486.92	716,147 738,958 717,633 756,511 794,415 2,572,430 173,176 1,022,829	77.9 87.5 87.3 91.1 89.6 87.9	78.2 81.6 90.0 91.6 86.3 86.9
65–69	91,631 54,090	172,575,509	1,049 949	1,944,430 2,061,024	1,283.79 1,167.94	2,337,618 2,762,470	81.7 81.3	83.2 74.6
Total Select	211,155	456,189,210	2,629	5,422,910	3,007.59	6,296,094	87.4	86.1
			Ultimate Exp	perience - Policy Years	11 and Over			
By Attained Age 0-69	3,235 6,038 11,436 6,668 1,169 141	3,756,930 5,687,612 9,405,528 5,653,828 996,289 94,815	44 114 371 310 105 25	33,901 106,018 280,493 227,910 89,119 24,651	38.27 100.21 324.09 325.24 98.48 20.78	31,460 93,934 265,188 276,052 83,687 13,524	155.7 113.8 114.5 95.3 106.6 120.3	107.8 112.9 105.8 82.6 106.5 182.3
Total Ultimate	28,687	25,595,002	969	762,092	897.07	763,846	108.0	99.8
Grand Total	239,842	481,784,212	3,598	6,185,002	3,904.66	7,059,939	92.1	87.6

TABLE 8

Canadian Individual Annuitant Experience between Policy Anniversaries in 1980 and 1990
All Companies to Date
Female Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; RPP ONLY; BOTH REFUND AND NONREFUND

Actual Deaths Expected Deaths Exposures Ratio A/E Number Number Income Number Income Income Number Income Select Experience - Policy Years 1 to 10 By Policy Year 998 3,424,518 14 42,507 7.52 24,853 186.2 171.0 927 2,953,803 9 22,774 7.45 23,175 120.9 98.3 800 2,434,332 6 17,936 7.30 21,510 82.2 83.4 781 2,225,707 9 17,725 7.98 21,895 81.0 112.8 2,211,937 9 33,373 22,574 745 8.06 111.6 147.8 51 7,231,289 94,723 6-10..... 3,196 41.44 90.678 123.1 104.5 By Issue Age 0-59..... 1,995 15 37,006 9.50 5,526,468 24,873 157.9 148.8 20 60-64 2,094 6,636,769 62,164 18.96 57,489 105.5 108.1 65-69 53 2,815 6,771,361 111.518 37.50 86,060 141.3 129.6 70 and Over... 10 543 1,546,988 18,350 13.78 36,262 72.5 50.6 98 Total Select 7,447 20,481,586 229,038 79.75 204,684 122.9 111.9 Ultimate Experience - Policy Years 11 and Over By Attained Age 0-69..... 982 869,240 7,068 7,217 97.9 10 7,32 136.6 70~74 772 696,354 15 8.313 72.6 12.64 11,450 118.6 75–79 1.564 1.359,825 31 22,105 45.27 39,260 68.5 56.3 80-84 1,217 902,099 83 52,012 61.73 45,646 134.5 113.9 85-89..... 425,664 46 27,506 53.16 37,832 86.5 72.7 605 90 and Over... 184 201,253 35 24,775 27.43 31,007 127.6 79.9 Total Ultimate 5,324 4,454,435 220 141,779 207.56 172,412 106.0 82.2 287.31 Grand total 12,771 24,936,021 318 370,817 377,096 110.7 98.3

TABLE 9

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1990
ALL COMPANIES TO DATE
FEMALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY; BOTH REFUND AND NONREFUND

	Exp	osures	Actua	l Deaths	Expects	ed Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	operience — Policy Years	s 1 to 10			
By Policy Year								-
1	10,038	39,924,820	106	320,388	119.67	477,618	88.6	67.1
2	10,171	37,606,879	138	442,592	134.54 142.79	498,023	102.6 93.1	88.9 92.6
3	10,005	35,258,367	133	456,202	138.75	492,512 438,195	93.1 107.4	103.9
4	8,593 8,249	29,468,083 24,293,434	149 178	455,300 536,189	147.89	411,466	120.4	130.3
5 6–10	36,905	90,125,237	857	1,715,254	799.22	1,745,759	107.2	98.3
By Issue Age	30,903	90,123,237	057	1,713,234	199.22	1,743,733	107.2	76.5
0-59	18,973	91,729,254	98	324,407	82.29	295,441	119.1	109.8
60–64	20,254	52,023,933	216	408,082	188,30	455,584	114.7	89.6
65-69	24,560	52,535,076	361	724,535	355.87	735,128	101.4	98.6
70 and Over	20,174	61,388,557	886	2,468,901	856.39	2,577,418	103.5	95.8
Total Select	83,961	257,676,820	1,561	3,925,925	1,482.85	4,063,571	105.3	96.6
			Ultimate Exp	erience - Policy Years	11 and Over			
By Attained Age								
0-69	9,499	12,277,313	91	89,635	71.47	80,929	127.3	110.8
70–74	11,734	10,936,825	236	251,609	193.79	179,496	121.8	140.2
75–79	20,087	16,337,438	615	572,860	581.33	471,135	105.8	121.6
80-84	18,181	14,233,361	1,008	812,147	929.43	724,975	108.5	112.0
85–89	12,499	9,665,582	1,164	1,010,019	1,127.10	870,893	103.3	116.0
90 and Over	8,987	6,586,419	1,550	1,217,285	1,504.48	1,078,966	103.0	112.8
Total Ultimate	80,987	70,036,938	4,664	3,953,555	4,407.60	3,406,394	105.8	116.1
Grand Total	164,948	327,713,758	6,225	7,879,480	5,890.45	7,469,966	105.7	105.5

TABLE 10

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1988 AND 1989
ALL COMPANIES TO DATE
MALE LINES ON A PROCESSION AND 1989 A

MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

	Ex	posures	Actua	l Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	operience - Policy Years	1 to 10			
By Policy Year								
1	3,198	13,204,285	73	194,169	57.41	226,111	127.2	85.9
2	5,790	21,248,962	107	384,529	106.10	391,883	100.9	98.1
3	4,945	16,666,873	113	351,979	106.65	350,373	106.0	100.5
4	5,379	19,729,403	127	396,695	125.91	411,589	100.9	96.4
5	6,666	24,328,193	150	510,701	169.69	585,206	88.4	87.3
6–10	30,880	105,844,044	976	2,861,588	977.73	2,874,495	99.8	99.6
By Issue Age						, ,		
0-59	6,458	46,763,111	68	447,758	55.36	334,508	122.8	133.9
60–64	13,077	45,535,358	255	788,624	231.86	787,898	110.0	100.1
65-69	23,957	63,855,784	621	1,561,983	655.66	1,729,462	94.7	90.3
70 and Over	13,366	44,867,507	602	1,901,296	600.61	1,987,790	100.2	95.6
Total Select	56,858	201,021,760	1,546	4,699,661	1,543.50	4,839,658	100.2	97.1
			Ultimate Exp	perience — Policy Years	11 and Over			
By Attained Age								
0-69	2,450	6,432,988	37	72,106	32.53	75,366	113.8	95.7
70–74	3,298	5,439,575	92	108,740	99.65	163,479	92.3	66.5
75–79	8,485	11,125,119	413	503,491	401.67	526,105	102.8	95.7
80-84	6,278	8,418,524	489	677,050	468.21	627,319	104.4	107.9
85-89	2,043	2,311,311	245	276,949	232.57	260,984	105.3	106.1
90 and Over	685	693,095	143	90,462	131.82	126,441	108.5	71.5
Total Ultimate	23,239	34,420,612	1,419	1,728,798	1,366.44	1,779,694	103.8	97.1
Grand Total	80,097	235,442,372	2,965	6,428,459	2,909.94	6,619,352	101.9	97.1

TABLE 11

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSAIES IN 1988 AND 1989
ALL COMPANIES COMBINED
FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

	Ex	posures	Actua	l Deaths	Expect	ed Deaths	Ratio	Λ/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	sperience - Policy Years	1 to 10			
By Policy Year								
1	3,452	12,197,399	35	92,460	37.90	142,391	92.3	64.9
2	5,264	16,817,258	60	161,103	56.44	185,603	106.3	86.8
3	4,898	13,907,693	47	130,266	61.22	173,007	76.8	75.3
4	5,501	15,765,213	62	199,873	76.44	212,726	81.1	94.0
5	6,490	18,353,959	86	192,705	99.00	272,029	86.9	70.8
6–10	23,557	57,280,533	374	820,678	445.17	991,650	84.0	82.8
By Issue Age								j .
0–59	5,374	26,463,999	35	100,908	25.85	99,805	135.4	101.1
60–64	12,267	32,412,081	128	305,931	120.32	303,600	106.4	100.8
65–69	19,008	40,881,643	230	542,099	286.03	596,970	80.4	90.8
70 and Over	12,513	34,564,332	271	648,147	343.97	977,030	78.8	66.3
Total Select	49,162	134,322,055	664	1,597,085	776.17	1,977,405	85.5	80.8
			Ultimate Exp	perience - Policy Years	II and Over			
By Attained Age								
0-69	2,179	3,052,491	19	14,100	17.81	21,968	106.7	64.2
70–74	2,941	3,094,329	41	36,756	48.61	50,767	84.4	72.4
75–79	5,751	5,302,450	219	177,719	164.84	152,222	132.9	116.7
80–84	4,674	4,141,088	230	184,070	234.01	207,099	98.3	88.9
85–89	2,220	2,004,277	176	147,908	196.88	176,575	89.4	83.8
90 and Over	1,372	1,243,488	238	216,055	230.17	203,148	103.4	106.4
Total Ultimate	19,137	18,838,123	923	776,608	892.32	811,780	103.4	95.7
Grand Total	68,299	153,160,178	1,587	2,373,693	1,668.50	2,789,185	95.1	85.1

TABLE 12

Canadian Individual Annuitant Experience between Policy Anniversaries in 1989 and 1990
All Companies Combined

Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

Exposures Actual Deaths Expected Deaths Ratio A/E Number Number Income Income Number Income Number Income Select Experience - Policy Years 1 to 10 By Policy Year 3,203 13,386,296 46 156,294 56.57 213,293 73.3 81.3 3,597 14,318,768 84 71.02 311.313 272,782 118.3 114.1 6,294 22,504,784 526,044 145 125.84 439,414 115.2 119.7 18,939,772 5,696 589,098 136.66 451,069 165 120.7 130.6 23,574,012 6,580 192 691,190 171.34 562,831 122.8 112.1127,673,530 3,394,180 3.758.025 6-10..... 36,402 1,110 1.191.84 93.1 90.3 By Issue Age 0–59 45,744,254 82 57.70 6,483 569,152 349,448 142.1 162.9 280 60-64 14,337 51,126,011 797,462 264.48 927,973 105.9 85.9 65-69 26,015 71,996,152 729 2,034,940 735.40 2,032,703 99.1 100.1 70 and Over. . . 14,937 51,530,745 2,266,565 2,387,291 94.9 651 695.69 93.6 Total Select 61,772 220,397,162 1.742 5,668,119 1.753.27 5,697,415 99.4 99.5 Ultimate Experience - Policy Years 11 and Over By Attained Age 0-69 3.347 11.090.896 40 44.60 126,977 89.7 95.4 121,112 70-74 7,500,901 124.79 223,780 4,144 101 108,117 80.9 48.3 15,041,996 499 593,249 502.04 708,159 83.8 75-79..... 10,635 99.4 80-84..... 11,736,065 662 827,603 605.43 873,866 94.7 8,091 109.3 85-89..... 432,075 3.167.794 295 297.64 359.852 120.1 2.603 99.1 90 and Over... 187 148,296 146.0 764 813,173 216,476 138.49 135.0 1,784 2,298,632 Total Ultimate . . 29,584 49,350,825 1,712.98 2,440,930 104.1 94.2 91,356 269,747,987 3,526 7,966,751 97.9 Grand Total 3,466.25 8,138,345 101.7

TABLE 13

Canadian Individual Annutant Experience between Policy Anniversaries in 1989 and 1990
All Companies Combined
Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)
Single Life Policies Only; All Tax Types Combined; Both Refund and Nonrefund

Ĺ	Exp	posures	Actu	il Deaths	Expect	2d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	xperience Policy Years	1 to 10			
By Policy Year								
1	3,343	12,681,083	29	100,863	35.42	134,872	81.9	74.8
2	3,816	13,231,934	41	94,373	46.08	167,951	89.0	56.2
3	5,700	18,078,253	65	178,386	67.28	217,633	96.6	82.0
4	5,806	16,190,163	83	209,766	80.95	229,149	102.5	91.5
5	6,857	18,951,471	85	307,465	107.49	293,555	79.1	104.7
6–10	30,522	78,557,632	566	1,224,957	600.26	1,458,073	94.3	84.0
By Issue Age)
0-59	5,866	29,011,844	31	133,579	29.11	116,709	106.5	114.5
60–64	13,646	37,379,900	146	332,045	139.69	366,559	104.5	90.6
65-69	21,543	48,383,343	318	654,102	339.77	746,225	93.6	87.7
70 and Over	14,989	42,915,449	374	996,084	428.90	1,271,740	87.2	78.3
otal Select	56,044	157,690,536	869	2,115,810	937.47	2,501,233	92.7	84.6
			Ultimate Exp	perience - Policy Years	II and Over			
By Attained Age								
0-69	2,577	4,398,955	26	40,414	20.99	30,872	123.9	130.9
70–74	3,774	4,331,425	95	87,038	62.22	71,147	152.7	122.3
75–79	7,182	6,891,134	236	215,469	205.96	196,311	114.6	109.8
80-84	5,932	5,641,722	337	293,168	297.91	281,178	113.1	104.3
85-89	2,739	2,476,557	256	247,979	243.04	220,598	105.3	112.4
90 and Over	1,645	1,435,861	312	351,464	275.71	238,435	113.2	147.4
otal Ultimate	23,849	25,175,654	1,262	1,235,532	1,105.82	1,038,541	114.1	119.0
irand Total [79,893	182,866,190	2,131	3,351,342	2,043.29	3,539,774	104.3	94.7

TABLE 14

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies to Date

MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (*TSA* XXXIII, 695) SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

	Exp	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Years	1 to 10			
By Policy Year 1	19,994 21,947 23,669 24,424 26,596 118,232	76,093,150 78,358,214 81,833,466 85,703,973 93,465,764 376,458,917	321 479 559 617 715 3,750	1,007,322 1,652,906 1,933,668 1,959,459 2,364,622 10,012,437	352.25 426.96 502.95 577.83 687.89 3,790.00	1,302,878 1,504,640 1,707,360 1,948,070 2,288,966 10,721,217	91.1 112.2 111.1 106.8 103.9 98.9	77.3 109.9 113.3 100.6 103.3 93.4
0-59	23,274 52,776 101,588 57,224 234,862	147,399,652 183,424,860 270,009,249 191,079,723 791,913,484	268 1,042 2,690 2,441 6,441	1,420,466 3,019,675 6,755,836 7,734,437 18,930,414	204.80 916.83 2,716.18 2,500.09 6,337.89	1,114,817 3,070,636 7,078,426 8,209,252 19,473,131	130.9 113.7 99.0 97.6	127.4 98.3 95.4 94.2
	,	7,23,223,131		crience - Policy Years	· · · · · · · · · · · · · · · · · · ·	12,173,121	101.0	
By Attained Age 0–69	9,433 12,553 31,472 22,681 6,841 2,336	25,821,264 19,901,619 41,493,606 30,218,850 7,772,568 2,231,141	144 332 1,540 1,820 853 526	318,643 482,410 1,733,953 2,271,511 1,020,869 475,770	123.33 378.26 1,483.56 1,697.28 785.82 439.30	288,468 596,269 1,954,618 2,250,443 884,878 415,107	116.8 87.8 103.8 107.2 108.5 119.7	110.5 80.9 88.7 100.9 115.4 114.6
Total Ultimate	85,316	127,439,048	5,215	6,303,156	4,907.55	6,389,783	106.3	98.6
Grand Total	320,178	919,352,532	11,656	25,233,570	11,245.44	25,862,914	103.7	97.6

TABLE 15

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES TO DATE
FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; BOTH REFUND AND NONREFUND

	Exp	osurcs	Actu	al Deaths	Expecte	ed Deaths	Ratio	A/E
Ī	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	xperience - Policy Years	s 1 to 10			
By Policy Year								
1	18,744	61,948,495	163	508,230	195.91	664,706	83.2	76.5
2	20,261	61,524,252	218	617,725	232.77	725,527	93.7	85.1
3	21,480	61,900,723	250	704,571	268.17	786,718	93.2	89.6
4	22,252	61,577,812	316	839,744	311.52	857,840	101.4	97.9
5	23,915	63,985,376	353	990,386	369.38	969,849	95.6	102.1
6–10	85,741	198,535,188	1,533	3,188,660	1,619.21	3,545,896	94.7	89.9
By Issue Age								
0–59	19,727	89,568,386	144	440,433	96.60	348,587	149.1	126.3
60–64	47,479	123,420,779	503	1,202,008	455.05	1,123,741	110.5	107.0
65–69	75,767	160,870,580	981	2,057,481	1,115.35	2,288,233	88.0	89.9
70 and Over	49,420	135,612,101	1,205	3,149,394	1,329.95	3,789,974	90.6	83.1
Total Select	192,393	509,471,846	2,833	6,849,316	2,996.95	7,550,535	94.5	90.7
			Ultimate Ex	perience - Policy Years	11 and Over			
By Attained Age								
0-69	8,276	11,939,466	87	82,850	66.56	84,091	130.7	98.5
70–74	11,589	11.806.388	249	246,146	191.42	193,846	130.1	127.0
75–79	21,239	18,441,557	710	587,484	609.09	526,726	116.6	111.5
80-84	16,566	13,720,674	905	699,683	833.57	687,378	108.6	101.8
85–89	8,090	6,499,268	749	588,778	723.00	579,688	103.6	101.6
90 and Over	5,185	4,024,435	939	798,338	864.96	656,698	108.6	121.6
Total Ultimate	70,945	66,431,788	3,639	3,003,279	3,288.60	2,728,426	110.7	110.1
Grand Total	263,338	575,903,634	6,472	9,852,595	6,285.55	10,278,961	103.0	95.9

TABLE 16

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED
MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; INCOME 0-1,000; BOTH REFUND AND NONREFUND

	Exp	osurcs	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Exp	perience - Policy Years	1 to 10			
By Policy Year 1	4,712 5,481 6,079 6,161 6,576 37,922 5,078 13,696 32,598 15,559	3,044,227 3,519,433 3,890,777 3,909,085 4,152,488 22,150,848 2,919,766 8,253,054 19,829,385 9,664,653	92 130 135 154 198 1,294 78 332 862 731	58,276 85,237 90,736 97,416 124,379 746,299 43,444 192,784 513,789 452,326	82.59 106.35 128.09 145.80 170.16 1,268.04 48.45 252.59 897.13 702.85	53,792 68,945 82,427 93,079 108,432 741,901 27,781 149,816 539,282 431,698	111.4 122.2 105.4 105.6 116.4 102.0 161.0 131.4 96.1 104.0	108.3 123.6 110.1 104.7 114.7 100.6 156.4 128.7 95.3 104.8
Total Select	66,931	40,666,858	2,003	1,202,343	1,901.02	1,148,577	105.4	104.7
			Ultimate Expe	erience - Policy Years	11 and Over			
By Attained Age 0-69	4,224 7,358 19,011 14,023 4,703 1,733	2,083,607 3,485,919 9,382,409 6,659,575 2,061,652 696,880	74 217 979 1,167 595 388	35,704 102,753 469,949 555,912 257,250 158,998	58.92 222.01 896.90 1,053.01 542.87 327.41	28,711 105,249 441,999 498,451 237,585 129,797	125.6 97.7 109.2 110.8 109.6 118.5	124.4 97.6 106.3 111.5 108.3 122.5
Total Ultimate	51,052	24,370,042	3,420	1,580,566	3,101.13	1,441,792	110.3	109.6
Grand Total	117,983	65,036,900	5,423	2,782,909	5,002.15	2,590,369	108.4	107.4

TABLE 17

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED
FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; INCOME 0–1,000; BOTH REFUND AND NONREFUND

	JINGLE ISI	TE TOLICIES ONET,	THEE THEN THES	Combined, Incom			TREE OND	
	Ехр	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	lncome
	•		Select Exp	erience - Policy Years	1 to 10			
By Policy Year 1	4,199 4,957 5,533 6,040 6,543 30,920 5,008 14,085 25,048 14,051	2,710,321 3,147,553 3,481,155 3,770,035 4,135,693 17,925,419 2,892,398 8,244,749 15,390,243 8,642,786	40 57 65 91 106 578 51 172 341 373	26,743 35,960 40,890 51,805 67,834 324,638 27,538 95,491 195,513 229,328	43.93 57.25 68.39 82.48 98.72 584.75 28.87 144.65 388.94 373.05	28,025 36,195 43,055 51,636 62,956 339,363 16,246 83,042 235,972 225,970	91.1 99.6 95.0 110.3 107.4 98.8 176.6 118.9 87.7 100.0	95.4 99.3 95.0 100.3 107.7 95.7 169.5 115.0 82.9 101.5
Total Select	58,192	35,170,176	937	547,870	935.52	561,230	100.2	97.6
		<u></u>	Ultimate Expe	rience - Policy Years	II and Over			
By Attained Age 0-69	5,150 8,164 15,734 12,391 6,111 4,026	2,315,043 3,669,441 7,153,528 5,260,142 2,358,085 1,524,961	61 184 525 675 580 710	28,644 83,576 228,185 281,058 226,018 269,052	43.90 135.09 452.42 623.84 546.53 675.27	19,674 60,669 205,530 263,577 210,350 253,994	138.9 136.2 116.0 108.2 106.1 105.1	145.6 137.8 111.0 106.6 107.4 105.9
Total Ultimate	51,576	22,281,200	2,735	1,116,533	2,477.06	1,013,794	110.4	110.1
Grand Total	109,768	57,451,376	3,672	1,664,403	3,412.57	1,575,024	107.6	105.7

TABLE 18

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies Combined

Male Lives Only: Experience 1983 Basic Male (TSA XXXIII 695)

MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (*TSA* XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; INCOME 1,000–5,000; BOTH REFUND AND NONREFUND

	Exp	osures	Actua	l Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	sperience - Policy Years	1 to 10			
By Policy Year								
1	10,768	25,509,761	167	375,586	192.87	457,876	86.6	82.0
2	11,977	28,046,941	264	602,748	235.26	551,141	112.2	109.4
3	12,991	30,319,701	310	746,169	279.10	651,487	111.1	114.5
4	13,505	31,393,091	355	814,302	323.89	752,280	109.6	108.2
5	14,970	34,710,530	391	920,538	392.81	909,243	99.5	101.2
6–10	62,123	139,063,520	1,975	4,310,117	2,013.79	4,469,938	98.1	96.4
By Issue Age								
0-59	10,348	25,261,546	112	303,752	95.11	228,420	117.8	133.0
60–64	28,726	68,779,969	543	1,261,677	496.71	1,179,776	109.3	106.9
65-69	56,079	121,648,078	1,492	3,155,538	1,487.75	3,205,960	100.3	98.4
70 and Over	31,181	73,353,951	1,315	3,048,493	1,358.16	3,177,811	96.8	95.9
Fotal Select	126,334	289,043,544	3,462	7,769,460	3,437.73	7,791,966	100.7	99.7
			Ultimate Exp	perience - Policy Years	11 and Over			
By Attained Age								
0–69	4,017	8,636,743	49	103,512	51.08	108,316	95.9	95.6
70-74	4,469	9,033,166	99	197,141	134.77	272,138	73.5	72.4
75-79	11,351	21,146,081	527	999,336	534.17	994,800	98.7	100.5
80–84	7,706	15,248,552	578	1,134,143	573.33	1,135,075	100.8	99.9
85-89	1,913	3,664,765	228	450,714	217.29	414,935	104.9	108.6
90 and Over	538	1,021,252	130	251,830	99.34	188,929	130.9	133.3
Total Ultimate	29,994	58,750,559	1,611	3,136,676	1,609.98	3,114,194	100.1	100.7
Grand Total	156,328	347,794,103	5,073	10,906,136	5,047.71	10,906,160	100.5	100.0

TABLE 19 CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990 ALL COMPANIES COMBINED FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; ALI, TAX TYPES COMBINED; INCOME 1,000–5,000; BOTH REFUND AND NONREFUND

	Exp	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Years	1 to 10			
By Policy Year								
1	11,093	25,989,820	101	240,732	115.05	271,377	87.8	88.7
2	11,988	27,392,810	128	293,433	136.11	313,593	94.0	93.6
3	12,805	29,007,067	149	332,095	158.40	360,819	94.1	92.0
4	13,348	30,062,831	189	421,565	187.16	423,514	101.0	99.5
5	14,421	32,241,618	205	487,091	225.07	507,476	91.1	96.0
6–10	46,748	99,953,605	823	1,749,600	895.29	1,912,261	91.9	91.5
By Issue Age		1		[(
0–59	9,623	23,090,214	74	177,993	48.18	114,025	153.6	156.1
60–64	27,591	63,100,566	278	621,099	259.63	585,287	107.1	106.1
65–69	44,626	92,549,858	559	1,157,639	642.93	1,321,866	86.9	87.6
70 and Over	28,563	65,907,113	684	1,567,785	766.34	1,767,863	89.3	88.7
Total Select	110,403	244,647,751	1,595	3,524,516	1,717.08	3,789,040	92.9	93.0
			Ultimate Expe	rience - Policy Years	11 and Over			
By Attained Age								
0-69	2,659	5,541,143	23	36,683	19.82	40,496	116.1	90.6
70–74	3,174	5,853,186	61	132,892	52.27	96,121	116.7	138.3
75–79	5,261	9,172,288	177	298,939	149.77	261,101	118.2	114.5
80-84	4,005	7,011,427	224	379,570	201.31	352,682	111.3	107.6
85–89	1,892	3,345,073	164	307,034	168.72	297,301	97.2	103.3
90 and Over	1,115	1,964,721	216	381,967	182.87	322,252	118.1	118.5
Total Ultimate	18,106	32,887,838	865	1,537,085	774.77	1,369,953	111.6	112.2
Grand Total	128,509	277,535,589	2,460	5,061,601	2,491.85	5,158,993	98.7	98.1

TABLE 20

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies Combined

MALE LIVES ON W. EXPERIENCE 1983 Page Male (TSA XXXIII 695)

MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; INCOME 5,000+; BOTH REFUND AND NONREFUND

EXPOSSURES

Actual Deaths

Expected Deaths

	Ехр	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience — Policy Years	1 to 10			
By Policy Year 1	4,514 4,489 4,599 4,758 5,050 18,187 7,848 10,354 12,911	47,539,162 46,791,840 47,622,988 50,401,797 54,602,746 215,244,549 119,218,340 160,391,837 128,531,786	62 85 114 108 126 481 78 167 336	573,460 964,921 1,096,763 1,047,741 1,319,705 4,956,021 1,073,270 1,565,214 3,086,509	76.79 85.34 95.76 108.15 124.93 508.17 61.24 167.53 331.30	791,210 884,554 973,445 1,102,711 1,271,291 5,509,377 858,616 1,741,044 3,333,185	80.7 99.6 119.1 99.9 100.9 94.7 127.4 99.7	72.5 109.1 112.7 95.0 103.8 90.0 125.0 89.9 92.6
70 and Over	10,484	108,061,119	395	4,233,618	439.08	4,599,742	90.0	92.0
Total Select	41,597	462,203,082	976	9,958,611	999.14	10,532,588	97.7	94.6
			Ultimate Exp	erience - Policy Years	II and Over			
By Attained Age 0-69	1,192 726 1,110 952 225 65	15,100,914 7,382,534 10,965,116 8,310,723 2,046,151 513,009	21 16 34 75 30 8	179,427 182,516 264,668 581,456 312,905 64,942	13.33 21.48 52.49 70.94 25.66 12.54	151,441 218,881 517,819 616,917 232,359 96,380	157.6 74.5 64.8 105.7 116.9 63.8	118.5 83.4 51.1 94.3 134.7 67.4
Total Ultimate	4,270	44,318,447	184	1,585,914	196.45	1,833,797	93.7	86.5
Grand Total	45,867	506,521,529	1,160	11,544,525	1,195.59	12,366,385	97.0	93.4

TABLE 21

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED

FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED; INCOME 5,000+; BOTH REFUND AND NONREFUND

	SINGLE LI	FE TOLICIES ONLT,	ALL TAX TIFE	COMBINED, INCO	ME 3,000 + , DOI	H REFUND AND NO	VREFUND	
	Exp	oosures	Actu	al Deaths	Expect	ed Deaths	Rati	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	xperience - Policy Years	1 to 10			
By Policy Year 1	3,452 3,316 3,142 2,864 2,951 8,073 5,096 5,803 6,093	33,248,354 30,983,889 29,412,501 27,744,946 27,608,065 80,656,164 63,585,774 52,075,464 52,930,479	22 33 36 36 42 132	240,755 288,332 331,586 366,374 435,461 1,114,422 234,902 485,418 704,329	36.94 39.41 41.37 41.88 45.58 139.17 19.55 50.76 83.48	365,304 375,738 382,844 382,690 399,418 1,294,272 218,317 455,412 730,395	59.6 83.7 87.0 86.0 92.1 94.8 97.2 104.4 97.0	65.9 76.7 86.6 95.7 109.0 86.1 107.6 106.6 96.4
70 and Over Total Select	6,806 23,798	61,062,202	148 301	1,352,281 2,776,930	190.56 344.35	1,796,141 3,200,264	77.7 87.4	75.3 86.8
Total Spice	23,770	22,,030,525		perience - Policy Years		0,200,201	0	00.0
By Attained Age 0-69	467 251 244 170 87 44	4,083,280 2,283,761 2,115,741 1,449,105 796,110 534,753	3 4 8 6 5	17,523 29,678 60,360 39,055 55,726 147,319	2.84 4.06 6.90 8.42 7.74 6.81	23,921 37,055 60,095 71,120 72,036 80,452	105.7 98.4 116.0 71.2 64.6 190.8	73.3 80.1 100.4 54.9 77.4 183.1
Total Ultimate	1,263	11,262,750	39	349,661	36.78	344,679	106.0	101.4
Grand Total	25,061	240,916,669	340	3,126,591	381.13	3,544,944	89.2	88.2

TABLE 22

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
ALL Companies Combined
Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; RRSP ONLY; INCOME 0-1,000; BOTH REFUND AND NONREFUND

	Ехр	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Exp	perience - Policy Years	1 to 10			
By Policy Year 1	2,262 2,824 3,265 3,862 4,262 25,515	1,490,650 1,851,614 2,136,334 2,513,550 2,767,077 15,190,918	43 55 76 96 124 889	27,688 35,095 50,444 60,974 82,172 526,501	41.73 58.18 73.89 96.07 116.58 898.55	27,521 38,157 48,327 62,621 75,842 534,197	103.0 94.5 102.9 99.9 106.4 98.9	100.6 92.0 104.4 97.4 108.3 98.6
60-64 65-69 70 and Over	7,660 20,683 12,233	4,705,791 12,861,692 7,581,529	187 542 532	113,066 328,218 329,335	149.40 593.39 525.49	90,131 364,627 322,459	125.2 91.3 101.2	125.4 90.0 102.1
Total Select	41,990	25,950,143	1,283	782,874	1,285.01	786,665	99.8	99.5
			Ultimate Expe	rience - Policy Years	11 and Over			
By Attained Age 0-69 70-74 75-79 80-84 85-89 90 and Over	1,885 3,659 10,513 8,118 1,895 278	941,831 1,761,441 5,349,127 3,992,738 860,970 106,760	29 104 505 664 204 62	13,986 50,137 252,785 332,034 97,281 23,909	26.15 111.67 495.02 607.60 213.74 48.24	12,991 53,792 251,685 298,040 96,752 18,225	110.9 93.1 102.0 109.3 95.4 128.5	107.7 93.2 100.4 111.4 100.5 131.2
Total Ultimate	26,348	13,012,867	1,568	770,132	1,502.42	731,485	104.4	105.3
Grand Total	68,338	38,963,010	2,851	1,553,006	2,787.43	1,518,150	102.3	102.3

TABLE 23 CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990 ALL COMPANIES COMBINED FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; RRSP ONLY; INCOME 0-1,000; BOTH REFUND AND NONREFUND

	Exp	osures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience — Policy Year	s 1 to 10			
By Policy Year 1	2,986 3,574 4,088 4,757 5,162 22,722 2,209 10,180 19,650 11,250	1,952,452 2,287,639 2,581,545 2,993,706 3,295,803 13,256,026 1,222,022 5,927,039 12,280,933 6,937,177	24 40 44 61 78 388 28 118 257 232	16,439 26,211 27,591 34,430 49,087 218,663 15,039 67,316 151,903 138,163	30.36 40.27 50.32 64.15 77.01 430.72 14.05 106.24 307.86 264.69	19,747 25,750 31,792 40,456 49,453 252,055 7,521 60,596 189,579 161,557	79.0 99.3 87.4 95.1 101.3 90.1 199.3 111.1 83.5 87.7	83.2 101.8 86.8 85.1 99.3 86.8 200.0 111.1 80.1 85.5
Total Select	43,289	26,367,171	635	372,421	692.83	419,253	91.7	88.8
		·*····································	Ultimate Expo	rience - Policy Years	II and Over		<u> </u>	
By Attained Age 0-69	1,644 3,415 6,797 4,115 731 98	732,834 1,513,740 3,176,772 1,788,810 303,898 35,932	25 65 243 204 62 14	9,924 28,531 104,335 89,027 25,270 6,871	14.72 56.89 193.34 200.59 61.38 14.72	6,452 25,157 90,398 86,767 25,426 5,545	169.9 114.3 125.7 101.7 101.0 95.1	153.8 113.4 115.4 102.6 99.4 123.9
Total Ultimate	16,800	7,551,986	613	263,958	541.62	239,745	113.2	110.1
Grand Total	60,089	33,919,157	1,248	636,379	1,234.45	658,999	101.1	96.6

TABLE 24

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED
MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; RRSP ONLY; INCOME 1,000–5,000; BOTH REFUND AND NONREFUND

	SING	LE LIFE POLICIES C	JNLY; KRSP UNL	Y; INCOME 1,000-	5,000; BOTH KER	UND AND MONRER	UND	
	Ехр	osures	Actual	Deaths	Expecto	d Deaths	Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience — Policy Years	1 to 10			
By Policy Year 1	7,551 8,570 9,494 10,747 12,127 47,527 3,821 21,695 44,859 25,641	18,590,617 20,722,344 22,761,168 25,407,538 28,519,293 106,377,245 9,592,929 53,417,404 98,232,031 61,135,841	107 181 215 280 300 1,536 42 415 1,186 976	254,734 415,299 541,856 650,326 719,901 3,335,482 118,674 975,119 2,527,558 2,296,247	130.56 164.93 202.10 257.27 320.23 1,593.47 38.73 378.25 1,203.98 1,047.59	320,468 397,361 482,875 606,543 751,406 3,550,811 95,444 917,345 2,609,761 2,486,914	82.0 109.7 106.4 108.8 93.7 96.4 108.4 109.7 98.5 93.2	79.5 104.5 112.2 107.2 95.8 93.9 124.3 106.3 96.9 92.3
Total Sclect	96,016	222,378,205	2,619	5,917,598	2,668.55	6,109,464	98.1	96.9
		·	Ultimate Expe	rience - Policy Years	II and Over		<u> </u>	L
By Attained Age 0-69	1,683 2,598 7,568 5,264 881 102	3,704,197 5,293,817 14,107,091 10,696,226 1,764,212 188,930	22 63 357 394 98 24	45,014 125,871 693,153 797,071 215,147 42,887	22.74 79.03 355.55 390.40 97.90 17.15	49,181 160,964 663,121 794,226 195,360 31,710	96.8 79.7 100.4 100.9 100.1 139.9	91.5 78.2 104.5 100.4 110.1 135.2
Total Ultimate	18,096	35,754,473	958	1,919,143	962.77	1,894,563	99.5	101.3
Grand Total	114,112	258,132,678	3,577	7,836,741	3,631.32	8,004,026	98.5	97.9

TABLE 25

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies Combined
Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)
Single Life Policies Only; RRSP Only; Income 1,000-5,000; Both Refund and Nonrefund

Exposures Actual Deaths Expected Deaths Ratio A/E Number Income Number Income Number Income Number Income Select Experience - Policy Years 1 to 10 By Policy Year 82.2 8,067 18,782,448 148.181 77.58 180,235 77.3 60 179,439 91.86 207,695 87.1 8,692 19,666,715 80 86.4 9,347 20,964,938 227,784 108.95 244,234 93.6 93.3 102 294,944 138.90 311,444 95.0 94.7 10.526 23,564,896 132 11,580 25,707,868 146 345,874 170.81 380,650 85.5 90.9 6-10 34,912 73,893,586 546 1,139,048 646.86 1.371.495 84.4 83.1 By Issue Age 4,157 40 181.7 0-59..... 9.848,474 96,560 22.61 53,147 176.9 47,819,968 454,214 443,908 20,935 203 197.33 102.9 102.3 60-64 1,075,882 36,536 75,174,355 427 881,288 81.0 81.9 65-69..... 527.07 49,737,654 1,122,815 70 and Over... 21,496 396 903,208 487.94 81.2 80.4 83,124 182,580,451 2,335,270 2,695,753 86.3 Total Select 1,066 1,234.96 86.6 Ultimate Experience - Policy Years 11 and Over By Attained Age 1,568,265 8,762 13,224 91.5 66.3 0-69 784 6.56 1,300 2,399,111 24 49,210 39,339 125.1 70-74..... 21.41 112.1 2,289 3,945,064 110,759 75-79 70 119,184 64.27 108.9 107.6 1,359 52 88,025 66.57 119,728 78.1 73.5 2,438,572 80-84 24 48,594 20.27 39,239 123.8 85-89..... 242 469,948 118.4 22 37,152 7 10,716 3.06 5,126 228.4 209.1 90 and Over... 327,414 99.1 5,996 10,858,112 183 324,491 182.13 100.5 Total Ultimate...

2,659,761

1,417.09

3,023,167

88.1

88.0

193,438,563

89,120

Grand Total

1,249

TABLE 26

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
ALL Companies Combined
Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; RRSP ONLY; INCOME 5,000+; BOTH REFUND AND NONREFUND

	Exp	oosures	Actua	il Deaths	Expect	ed Deaths	Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	kperience - Policy Years	1 to 10			
By Policy Year								
1	3,147	29,315,765	47 58 75	419,075	53.20	496,006	88.3	84.5
2	3,132	28,679,303	58	567,398	59.57	550,787	97.4	103.0
3	3,235	29,670,224	75	667,259	68.80	635,950	109.0	104.9
4	3,568	34,267,034	88	784,039	85.49	818,834	102.9	95.8
5	3,888	37,718,155	102	1,007,323	102.91	984,908	99.1	102.3
6–10	11,602	116,065,741	327	3,011,699	369.68	3,586,964	88.5	84.0
By Issue Age	2,295	30,339,785	18	172,405	21.83	268,688	82.4	64.2
0–59	2,293 7,513	69,111,288	119	1,047,067	120.17	1,111,259	99.0	94.2
60–64	10,187	92,904,773	264	2,292,912	259.38	2,385,779	101.8	96.1
70 and Over	8,577	83,360,376	296	2,944,409	338.27	3,307,721	87.5	89.0
├-				· 	+ ·	+ 		
Total Select	28,572	275,716,222	697	6,456,793	739.65	7,073,448	94.2	91.3
			Ultimate Exp	perience — Policy Years	11 and Over			
By Attained Age						1		
0-69	511	6,223,841	12	117,142	6.19	61,497	193.8	190.5
70-74	410	4,085,776	13 18 56 14	142,881	12.22	122,206	106.3	116.9
75–79	762	6,812,005	18	132,707	36.21	323,583	49.7	41.0
80-84	746	6,174,779	56	411,664	55.34	454,560	101.2	90.6
85–89	124	1,017,230	14	116,751	14.05	115,822	99.6	100.8
90 and Over	21	132,068	1	5,051	3.37	21,084	29.7	24.0
Total Ultimate	2,574	24,445,699	114	926,196	127.39	1,098,751	89.5	84.3
Grand Total	31,146	300,161,921	811	7,382,989	867.04	8,172,199	93.5	90.3

TABLE 27

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
ALL Companies Combined
Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)
Single Life Policies Only; RRSP Only; Income 5,000+; Both Refund and Nonrefund

	Ex	oosures	Actu	al Deaths	Expect	ed Deaths	Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	xperience — Policy Years	s I to 10			
By Policy Year 1	1,927 1,824 1,716 1,788 1,974 4,557 1,340 3,607 4,297 4,542	15,722,983 14,579,392 13,907,931 15,301,493 16,530,204 39,180,104 14,415,532 29,210,869 33,790,575 37,805,131	12 17 18 20 22 74 9 37 57 60	115,360 130,277 134,433 201,278 172,020 618,040 78,961 347,586 444,614 500,247	18.89 19.86 20.41 24.44 29.90 82.28 6.93 31.66 59.07 98.14	154,281 159,743 166,499 206,602 246,139 680,435 70,222 258,358 464,695 820,424	63.5 85.6 88.2 81.8 73.6 89.9 129.8 116.9 96.5 61.1	74.8 81.6 80.7 97.4 69.9 90.8 112.4 134.5 95.7 61.0
Total Select	13,786	115,222,107	163	1,371,408	195.79	1,613,700	83.3	85.0
			Ultimate Ex	perience — Policy Years	11 and Over			
By Attained Age 0-69 70-74 75-79 80-84 85-89 90 and Over.	101 97 102 69 9	833,692 891,005 870,034 629,883 85,166 0	1 1 1 2 0 0	5,752 5,108 7,817 11,385 0	0.84 1.59 2.86 3.32 0.80 0.00	6,467 14,860 24,383 30,380 7,493 0	119.0 62.8 34.9 60.2 0.0 100.0	88.9 34.4 32.1 37.5 0.0 100.0
Total Ultimate	378	3,309,780	5	30,062	9.41	83,583	53.1	36.0
Grand Total	14,164	118,531,887	168	1,401,470	205.21	1,697,282	81.9	82.6

TABLE 28

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies Combined

Male Lives Only; Expected: 1983 Basic Male (TSA XXXIII, 695)

Single Life Policies Only; Nonregistered Only; Income 0-1,000; Both Refund and Nonrefund

	SINOLE	LIFE I OLICIES ON	. I, NONREGISTERI	ED ONET, INCOME	0-1,000, BOTH P	CEPUND AND NON	REFUND	
	Exp	osures	Actual	Deaths	Expecte	d Deaths	Ratio	o A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Exp	perience — Policy Years	1 to 10			
By Policy Year 1	2,341 2,554 2,654 2,094 2,087 10,779 3,388 5,503 10,486 3,132	1,493,909 1,608,353 1,656,628 1,275,830 1,257,697 6,063,043 1,953,242 3,239,936 6,179,072 1,983,210	44 71 57 53 68 343 49 135 270 182	27,567 48,504 38,865 33,465 39,297 189,704 27,426 73,914 159,335 116,727	38.88 46.41 51.25 45.51 48.43 323.40 28.62 92.73 264.42 168.11	25,253 29,823 32,355 28,079 29,753 182,843 16,510 53,669 153,231 104,696	113.2 153.0 111.2 116.5 140.4 106.1 171.2 145.6 102.1 108.3	109.2 162.6 120.1 119.2 132.1 103.8 166.1 137.7 104.0 111.5
Total Select	22,509	13,355,460	636	377,402	553.88	328,106	114.8	115.0
			Ultimate Expe	erience - Policy Years	11 and Over			
By Attained Age 0-69	1,497 3,058 7,116 4,898 2,341 1,295	721,710 1,420,257 3,425,940 2,260,855 1,011,506 534,360	29 94 403 425 336 287	14,712 44,868 183,707 190,633 137,593 122,127	21.50 91.54 336.68 369.04 274.62 249.55	10,248 42,549 161,853 169,811 118,768 101,670	134.9 102.7 119.7 115.2 122.4 115.0	143.6 105.5 113.5 112.3 115.9 120.1
Total Ultimate	20,205	9,374,628	1,574	693,640	1,342.94	604,899	117.2	114.7
Grand Total	42,714	22,730,088	2,210	1,071,042	1,896.81	933,005	116.5	114.8

TABLE 29 CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990 ALL COMPANIES COMBINED Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)
Single Life Policies Only; Nonregistered Only; Income 0–1,000; Both Refund and Nonrefund

	Exp	osures	Actua	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Year	s 1 to 10			
By Policy Year								
1	1,125	699,648	14	8,896	12.86	7,846	108.9	113.4
2	1,280	790,510	17	9,749	16.19	9,930	105.0	98.2
3	1,333	826,668	21	13,299	17.06	10,599	123.1	125.5
4	1,139	689,500	28	16,235	16.76	10,246	167.0	158.4
5	1,225	746,239	28	18,747	19.78	12,363	141.5	151.6
6–10	7,414	4,227,774	175	101,127	141.99	80,921	123.2	125.0
By Issue Age		1		ĺ	ĺ	1		
0-59	2,469	1,449,757	22	12,296	13.06	7,565	168.5	162.5
60-64	3,549	2,103,962	52	27,035	34.86	20,351	149.2	132.8
65-69	4,806	2,773,815	70	38,841	72.34	41,481	96.8	93.6
70 and Over	2,692	1,652,805	139	89,881	104.39	62,509	133.2	143.8
Total Select	13,516	7,980,339	283	168,053	224.65	131,906	126.0	127.4
			Ultimate Exp	erience - Policy Years	11 and Over			
By Attained Age								
0-69	3,178	1,441,562	34	18,341	26.67	12,089	127.5	151.7
70-74	4,464	2,041,922	113	53,115	73.56	33,657	153.6	157.8
75-79	8,290	3,717,263	264	118,545	240.30	107,647	109.9	110.1
80-84	7,765	3,271,435	429	178,527	397.36	166,784	108.0	107.0
85-89	5,120	1,959,387	504	193,935	462.26	176,648	109.0	109.8
90 and Over	3,854	1,465,433	690	259,746	650.03	245,017	106.1	106.0
Total Ultimate	32,671	13,897,002	2,034	822,209	1,850.18	741,841	109.9	110.8
Grand Total	46,187	21,877,341	2,317	990,262	2,074.83	873,747	111.7	113.3

TABLE 30

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED
MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY; INCOME 1,000–5,000; BOTH REFUND AND NONREFUND

	Exp	oosures	Actual	Deaths	Expecte	d Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience — Policy Years	1 to 10			
By Policy Year								
1	2,989	6,321,543	55	109,801	59.01	128,975	93.2	85.1
2	3,147	6,655,871	79	180,347	66.57	144,242	118.7	125.0
3	3,148	6,703,459	92	197,025	71.24	154,696	129.1	127.4
4	2,364	4,999,327	64	142,315	59.39	127,630	107.8	111.5
5	2,398	5,059,798	77	163,923	63.73	135,468	120.8	121.0
6-10	11,912	26,603,915	365	808,369	353.47	768,217	103.3	105.2
By Issue Age								
0–59	5,640	13,659,292	62	165,957	47.36	112,292	130.9	147.8
60-64	5,894	12,527,621	93	200,171	97.68	211,505	95.2	94.6
65–69	9,144	18,519,524	250	506,573	229.15	469,299	109.1	107.9
70 and Over	5,280	11,637,476	327	729,079	299.21	666,132	109.3	109.4
Total Select	25,958	56,343,913	732	1,601,780	673.41	1,459,228	108.7	109.8
			Ultimate Expe	erience — Policy Years	11 and Over			
By Attained Age								
0-69	1,684	3,757,953	19	43,207	20.40	44,451	93.2	97.2
70-74	1,507	3,000,636	31	56,634	45.09	89,664	68.8	63.2
75–79	2,909	5,263,692	117	202,818	137.78	248,484	84.9	81.6
80–84	1,948	3,602,709	142	256,539	146.10	270,671	97.2	94.8
85–89	879	1,630,858	106	195,418	101.97	188,910	104.0	103.4
90 and Over	376	719,505	93	183,510	71.37	136,887	130.3	134.1
Total Ultimate	9,303	17,975,353	508	938,126	522.71	979,066	97.2	95.8
Grand Total	35,261	74,319,266	1,240	2,539,906	1,196.12	2,438,294	103.7	104.2

TABLE 31

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED

FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY; INCOME 1,000–5,000; BOTH REFUND AND NONREFUND

	ON OLL EI	TE TOERCIES GIVET,	THOMREOIDIE		, = = = = = = =	T REFERENCE		
	Exp	osures	Actual	Deaths	Expecte	ed Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Years	1 to 10			
By Policy Year 1	2,831 3,104 3,251 2,576 2,569 10,616 4,756 6,019 7,270 6,902	6,736,789 7,266,572 7,558,413 5,932,572 5,882,531 23,338,257 11,686,786 13,823,971 15,439,224 15,765,153	37 46 45 54 55 254 24 70 112 285	82,588 108,683 100,118 120,597 134,387 559,083 58,603 157,400 229,246 660,207	35.98 42.75 47.58 45.77 51.37 233.44 22.03 56.09 104.40 274.38	87,439 102,213 112,071 106,274 119,816 506,710 53,127 127,336 219,152 634,907	102.8 107.6 94.6 118.0 107.1 108.8 109.0 124.8 107.3 103.9	94.5 106.3 89.3 113.5 112.2 110.3 123.6 104.6 104.0
Total Select	24,947	56,715,134	491	1,105,456	456.90	1,034,522	107.5	106.9
		<u></u>	Ultimate Exp	erience - Policy Years	11 and Over			
By Attained Age 0-69 70-74 75-79 80-84 85-89 90 and Over Total Ultimate	1,718 1,761 2,789 2,525 1,587 1,074	3,689,219 3,240,027 4,889,025 4,335,888 2,761,218 1,896,492 20,811,869	16 37 105 165 136 204	26,881 83,682 175,352 279,246 253,006 362,530	12.06 29.03 80.20 128.78 142.68 177.07	24,987 53,312 140,567 221,316 247,638 312,557	132.7 127.5 130.9 128.1 95.3 115.2	107.6 157.0 124.7 126.2 102.2 116.0
Grand Total	36,401	77,527,003	1,154	2,286,153	1,026.71	2,034,899	112.4	112.3

TABLE 32

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1990
ALL COMPANIES COMBINED

MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)

SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY; INCOME 5,000+; BOTH REFUND AND NONREFUND

	Ехр	osures	Actual	Deaths	Expect	ed Deaths	Ratio	A/E
	Number	Income	Number	Income	Number	Income	Number	Income
			Select Ex	perience - Policy Years	1 to 10			
By Policy Year				1				
1	1,123	14,890,962	14 25 37	138,578	20.45	253,727	68.4	54.6
2	1,129	14,870,764	25	355,233	22.59	288,685	110.6	123.1
3	1,115	14,369,831	37	414,386	23.04	281,591	160.6	147.2
4	913	12,346,355	17	240,375	17.88	218,186	95.1	110.2
5	877	12,913,775	19	207,740	16.57	207,693	114.7	100.0
6-10	5,517	85,764,560	117	1,396,647	112.64	1,602,458	103.9	87.2
By Issue Age] [1]
0–59	4,960	80,698,111	54	778,523	33.70	513,639	160.2	151.6
60-64	2,137	27,982,776	36	393,184	35.86	480,616	100.4	81.8
65-69	1,844	24,502,474	45	423,553	50.46	680,437	89.2	62.2
70 and Over	1,733	21,972,886	94	1,157,699	93.16	1,177,648	100.9	98.3
Total Select	10,674	155,156,247	229	2,752,959	213.17	2,852,340	107.4	96.5
			Ultimate Exp	erience — Policy Years	II and Over			
By Attained Age								
0-69	607	8,193,923	6	38,041	6.22	81,023	96.5	47.0
70–74	254	2,579,732	2	12,966	7.40	75,375	27.0	17.2
75 - 79	207	2,567,360	10	80,505	9.72	121,438	102.9	66.3
80–84	140	1,481,117	11	87,495	10.75	113,115	102.3	77.4
85–89	78	709,602	14	133,533	9.12	81,708	153.5	163.4
90 and Over	40	352,261	7	59,891	8.41	69,788	83.3	85.8
Total Ultimate	1,326	15,883,995	50	412,431	51.62	542,448	96.9	76.0
Grand Total	12,000	171,040,242	279	3,165,390	264.79	3,394,788	105.4	93.2

TABLE 33

Canadian Individual Annuitant Experience between Policy Anniversaries in 1984 and 1990
All Companies Combined
Female Lives Only; Expected: 1983 Basic Female (TSA XXXIII, 695)

Single Life Policies Only; Nonregistered Only; Income 5,000+; Both Refund and Nonrefund

	Exposures		Actual Deaths		Expected Deaths		Ratio A/E	
	Number	Income	Number	Income	Number	Income	Number	Income
			Select E	xperience - Policy Years	1 to 10			
By Policy Year								
1	1,421	16,248,309	. 8	103,891	17.33	202,129	46.2	51.4
2	1,400	15,371,792	15	146,958	18.85	208,112	79.6	70.6
3	1,336	14,591,273	18 15	197,153	20.16	208,593	89.3	94.5
4	979	11,522,836	15	160,030	16.48	167,464	91.0	95.6
5	877	10,037,425	19	242,027	14.68	143,152	129.4	169.1
6–10	3,201	38,381,495	56	472,324	53.08	575,794	105.5	82.0
By Issue Age								
0–59	3,519	46,929,500	10	155,941	11.53	138,128	86.7	112.9
60–64	1,916	19,667,728	13	100,296	16.63	169,196	78.2	59.3
65–69	1,593	16,983,223	21	219,178	21.83	238,344	96.2	92.0
70 and Over	2,186	22,572,679	87	846,968	90.58	959,576	96.0	88.3
Total Select	9,214	106,153,130	131	1,322,383	140.57	1,505,244	93.2	87.9
			Ultimate Ex	perience — Policy Years	11 and Over			
By Attained Age								
0–69	354	3,170,047	2	11,771	1.89	16,726	105.9	70.4
70–74	144	1,323,317	3	24,570	2.31	21,062	130.0	116.7
75–79	122	1,091,425	7	52,543	3.46	31,205	202.2	168.4
80–84	89 78	704,402	3	20,711	4.48	34,705	66.9	59.7
85–89	78	710,944	5	55,726	6.95	64,544	72.0	86.3
90 and Over	41	447,243	12	141,293	6.37	66,710	188.4	211.8
otal Ultimate	828	7,447,378	32	306,614	25.46	234,952	125.7	130.5
Grand Total	10,042	113,600,508	163	1,628,997	166.03	1,740,196	98.2	93.6