

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1988-90 REPORTS**

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

**INDIVIDUAL ANNUITANT MORTALITY STUDY
POLICY YEARS 1980-1988**

This report was prepared by the Subcommittee on Annuity Mortality of the Committee on Life Insurance 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 on the Individual Annuitant Mortality Study began in 1983. The first data were submitted in 1984. It has been a lengthy process getting all the submissions clear of errors. Some inconsistencies remain. However, because we do not have any reason to believe that any errors remain which are large enough to invalidate the aggregate results, we are publishing our study at this time.

This study will 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.

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 *ISA 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 mortality ratio for males in single life policies and in joint policies with both alive is 95 percent and 73 percent, respectively; 105 percent and 35 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.

All reports are done on the basis of age nearest birthday. Most data were contributed on this basis. Age last birthday data were 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
1981	4	36,744	912	85.4%
1982	4	43,173	1,294	88.9
1983	6	56,875	1,440	85.2
1984	6	64,009	1,837	95.9
1985	7	99,451	2,787	96.5
1986	7	108,914	3,281	108.7
1987	5	106,537	3,210	100.6
1988	4	104,113	3,084	97.3

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. Only two companies contributed data for all years of experience. 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. This is quite surprising. However, only two companies have data spanning all years of experience, and both of these had one year of exceptionally light mortality in the early 1980s. It may be that a different trend would have been observed if all companies had contributed data for all years.

As an aside on the trend in mortality, it is interesting to note that most companies showed a high year for mortality in 1986, and for some 1987 was high as well. The nuclear reactor at Chernobyl exploded on 26 April 1986, and a radioactive plume reached us about two weeks later. The up-tick in American mortality in the summer of 1986 is noted in *The Economist*, 30 January 1988, p. 67. (Deaths in the summer of 1986 would fall partly in the 1985-86 policy year and partly in 1986-87.)

Although the data are collected on a 10-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 for RRSP and nonregistered business. We also might have expected that RRSP mortality ratios would be higher than nonregistered, but surprisingly, the opposite is true. It appears that we can state that RRSP mortality is lighter than nonregistered with a fairly 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.

There appears to be a significant degree of antiselection by amount for males, but not for females.

Nonrefund business shows lower mortality ratios than on 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.

The following table summarizes aggregate single life mortality ratios.

Year of Experience	Number of Policies		Annualized Income	
	Male	Female	Male	Female
1981	0.911	0.797	0.896	0.823
1982	1.072	1.087	0.909	0.914
1983	0.963	0.925	0.835	0.993
1984	1.074	0.966	0.986	0.820
1985	1.026	0.994	0.961	1.009
1986	1.057	1.138	1.010	1.236
1987	1.071	1.114	0.963	1.077
1988	1.026	1.064	0.938	1.080
All	1.035	1.035	0.953	1.049

5. 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 experience.
2. Registration type should be taken into account in forming a mortality assumption.

6. CONTRIBUTING COMPANIES

The following table of contributing companies shows the proportion of deaths, on single life policies, submitted for all years of 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.

Aetna Canada	0.3%
Canada Life	34.3
Confederation Life	7.0
Crown Life	6.5
Great-West Life	14.6
Industrielle-Alliance	0.1
Manufacturers Life	10.5
Mutual Life	26.1
Standard Life	0.5

7. INDEX TO TABLES

Year of Experience	Sex	Tax Type	No.
1981-88	Male & Female	All	1
1981-88	Male	All	2
1981-88	Female	All	3
1981-88	Male	RRSP	4
1981-88	Male	RPP	5
1981-88	Male	Nonregistered	6
1981-88	Female	RRSP	7
1981-88	Female	RPP	8
1981-88	Female	Nonregistered	9
1981	Male	All	10
1981	Female	All	11
1982	Male	All	12
1982	Female	All	13
1983	Male	All	14
1983	Female	All	15
1984	Male	All	16
1984	Female	All	17
1985	Male	All	18
1985	Female	All	19
1986	Male	All	20
1986	Female	All	21
1987	Male	All	22
1987	Female	All	23
1988	Male	All	24
1988	Female	All	25

TABLE 1

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 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

	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								
1	75,788	239,119,685	919	2,665,649	1,061.74	3,410,098	86.6	78.2
2	71,356	217,842,928	1,105	3,312,894	1,110.61	3,394,576	99.5	97.6
3	65,838	195,455,616	1,135	3,465,548	1,124.97	3,317,374	100.9	104.5
4	60,543	174,315,413	1,130	2,875,865	1,130.04	3,166,027	100.0	90.8
5	54,094	146,946,576	1,186	2,972,531	1,107.54	2,923,342	107.1	101.7
6-10	177,172	362,982,159	4,773	8,715,763	4,601.97	9,049,932	103.7	96.3
By Issue Age								
0-59	58,980	254,183,334	514	1,612,141	406.07	1,476,583	126.6	109.2
60-64	121,412	311,926,055	1,751	3,961,282	1,565.92	3,909,908	111.8	101.3
65-69	207,612	445,408,516	4,109	8,263,097	4,139.10	8,788,040	99.3	94.0
70 and over	116,788	325,144,474	3,875	10,171,731	4,025.79	11,086,818	96.3	91.7
Total Select	504,791	1,336,662,377	10,248	24,008,250	10,136.88	25,261,349	101.1	95.0
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	19,481	26,703,174	290	340,643	198.66	257,737	146.0	132.2
70-74	26,140	27,360,007	662	881,874	597.42	664,998	110.8	132.6
75-79	49,802	47,954,267	2,023	1,877,536	1,945.93	1,962,213	103.9	95.7
80-84	35,579	32,611,409	2,424	2,303,714	2,263.02	2,153,567	107.1	107.0
85-89	16,380	12,749,859	1,776	1,504,252	1,641.28	1,295,926	108.2	116.1
90 and over	9,487	6,581,206	1,662	1,168,092	1,649.10	1,136,438	100.8	102.8
Total Ultimate	156,868	153,959,920	8,836	8,076,110	8,295.42	7,470,879	106.5	108.1
Grand Total	661,659	1,490,622,297	19,084	32,084,360	18,432.30	32,732,228	103.5	98.0

TABLE 2

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988

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

	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								
1	40,414	140,988,638	623	1,869,829	704.48	2,407,295	88.4	77.7
2	38,647	131,080,337	763	2,374,767	742.66	2,416,352	102.7	98.3
3	36,231	120,465,254	798	2,523,115	757.40	2,384,700	105.4	105.8
4	33,827	108,856,108	758	1,932,200	768.01	2,296,796	98.7	84.1
5	31,054	94,441,497	818	2,087,394	767.62	2,163,961	106.6	96.5
6-10	108,142	250,580,758	3,458	6,609,754	3,336.85	7,014,286	103.6	94.2
By Issue Age								
0-59	32,098	163,249,018	318	1,114,497	274.24	1,142,899	115.8	97.5
60-64	65,418	192,775,453	1,185	2,800,431	1,067.87	2,925,652	111.0	95.7
65-69	124,250	291,205,962	3,103	6,467,908	3,028.79	6,832,679	102.4	94.7
70 and over	66,549	199,182,160	2,613	7,014,224	2,706.12	7,782,159	96.6	90.1
Total Select	288,315	846,412,592	7,218	17,397,059	7,077.02	18,683,391	102.0	93.1
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	9,018	15,599,168	177	258,119	118.13	179,128	149.8	144.1
70-74	12,328	15,961,073	381	592,488	369.53	478,197	103.0	123.9
75-79	27,809	31,817,163	1,382	1,338,360	1,314.49	1,501,210	105.1	89.2
80-84	19,028	20,911,866	1,523	1,643,923	1,424.64	1,560,728	106.9	105.3
85-89	6,349	5,776,982	810	733,468	739.33	668,278	109.6	109.8
90 and over	2,975	2,355,997	537	464,555	571.51	452,143	93.9	102.7
Total Ultimate	77,505	92,422,247	4,808	5,030,912	4,537.63	4,839,685	106.0	104.0
Grand Total	365,820	938,834,839	12,026	22,427,971	11,614.65	23,523,075	103.5	95.3

TABLE 3
 CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 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

	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								
1	35,374	98,131,047	296	795,820	357.26	1,002,803	82.9	79.4
2	32,709	86,762,591	342	938,127	367.95	978,224	92.9	95.9
3	29,607	74,990,362	337	942,433	367.57	932,674	91.7	101.0
4	26,716	65,459,305	372	943,665	362.03	869,231	102.8	108.6
5	23,040	52,505,079	368	885,137	339.91	759,380	108.3	116.6
6-10	69,030	112,401,401	1,315	2,106,009	1,265.12	2,035,646	103.9	103.5
By Issue Age								
0-59	26,882	90,934,316	197	497,645	131.83	333,684	149.1	149.1
60-64	55,994	119,150,602	566	1,160,851	498.05	984,255	113.5	117.9
65-69	83,362	154,202,554	1,006	1,795,189	1,110.31	1,955,361	90.6	91.8
70 and over	50,239	125,962,314	1,262	3,157,507	1,319.67	3,304,659	95.6	95.5
Total Select	216,476	490,249,785	3,030	6,611,191	3,059.85	6,577,959	99.0	100.5
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	10,464	11,104,006	113	82,524	80.53	78,609	140.3	105.0
70-74	13,812	11,398,934	282	289,386	227.89	186,800	123.5	154.9
75-79	21,994	16,137,105	641	539,176	631.44	461,003	101.5	117.0
80-84	16,551	11,699,543	901	659,791	838.37	592,839	107.5	111.3
85-89	10,032	6,972,877	966	770,784	901.95	627,648	107.1	122.8
90 and over	6,512	4,225,210	1,126	703,538	1,077.60	684,295	104.4	102.8
Total Ultimate	79,363	61,537,673	4,028	3,045,198	3,757.79	2,631,194	107.2	115.7
Grand Total	295,839	551,787,458	7,058	9,656,389	6,817.64	9,209,153	103.5	104.9

TABLE 4

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 ALL COMPANIES TO DATE
 MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; RRSF ONLY, 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								
1	27,966	93,347,950	431	1,348,598	495.92	1,664,245	86.9	81.0
2	28,065	92,635,210	530	1,712,845	550.17	1,799,410	96.3	95.2
3	26,334	85,353,234	571	1,789,816	564.08	1,789,835	101.2	100.0
4	24,180	73,999,401	548	1,512,125	566.86	1,691,226	96.7	89.4
5	21,819	62,551,129	563	1,447,313	557.61	1,555,705	101.0	93.0
6-10	71,285	158,676,616	2,318	4,226,428	2,272.60	4,717,187	102.0	89.6
By Issue Age								
0-59	13,068	59,337,044	124	282,222	122.69	461,252	100.7	61.2
60-64	43,555	131,050,768	779	1,918,183	703.02	1,967,954	110.7	97.5
65-69	89,433	216,616,771	2,209	4,865,687	2,189.61	5,073,416	100.9	95.9
70 and over	53,594	159,558,958	1,850	4,971,034	1,991.91	5,714,986	92.9	87.0
Total Select	199,649	566,563,540	4,961	12,037,125	5,007.23	13,217,608	99.1	91.1
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	3,477	7,530,643	67	136,581	45.24	83,801	148.1	163.0
70-74	5,324	8,463,113	152	321,810	160.57	255,458	94.7	126.0
75-79	12,509	16,572,545	594	652,877	588.53	779,452	100.8	83.8
80-84	8,896	11,290,253	660	877,225	661.34	837,278	99.7	104.8
85-89	1,541	1,771,539	197	208,955	173.95	198,074	113.0	105.5
90 and over	198	140,091	32	19,440	34.28	23,769	91.9	81.8
Total Ultimate	31,944	45,768,183	1,700	2,216,886	1,663.91	2,177,832	102.2	101.8
Grand Total	231,593	612,331,723	6,661	14,254,011	6,671.13	15,395,440	99.8	92.6

TABLE 5
 CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 ALL COMPANIES TO DATE
 MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; RPP ONLY, 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								
1	1,546	7,073,869	25	60,890	21.73	91,018	115.0	66.9
2	1,473	6,425,508	25	44,237	22.46	91,590	111.3	48.3
3	1,415	5,995,311	28	71,137	24.21	95,306	115.7	74.6
4	1,344	5,390,812	43	74,734	25.01	94,391	171.9	79.2
5	1,242	4,596,486	31	75,818	25.06	90,064	123.7	84.2
6-10	5,660	13,606,524	190	522,973	145.05	348,650	131.0	150.0
By Issue Age								
0-59	2,350	9,346,782	29	106,130	21.56	79,725	134.5	133.1
60-64	3,178	12,636,959	70	255,285	53.72	195,720	130.3	115.1
65-69	6,241	17,238,827	204	462,302	149.03	380,305	136.6	121.6
70 and over	912	3,865,943	40	56,073	39.21	155,269	100.7	36.1
Total Select	12,680	43,088,510	342	849,789	263.51	811,019	129.8	104.8
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,814	1,939,818	35	25,731	24.25	26,947	144.3	95.5
70-74	1,276	1,522,518	45	96,235	37.81	45,022	119.0	213.7
75-79	3,317	4,045,886	191	203,979	157.76	190,399	121.1	107.1
80-84	2,332	2,346,158	198	191,761	174.92	175,553	113.2	109.2
85-89	880	761,169	119	110,405	103.06	88,804	115.5	124.3
90 and over	449	325,281	95	83,580	80.54	55,722	118.0	149.9
Total Ultimate	10,065	10,940,829	683	711,690	578.33	582,498	118.1	122.2
Grand Total	22,745	54,029,339	1,025	1,561,479	841.85	1,393,517	121.8	112.1

TABLE 6

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 ALL COMPANIES TO DATE
 MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (TSA XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY, 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								
1	10,902	40,566,819	167	460,341	186.83	652,033	89.4	70.6
2	9,109	32,019,619	208	617,685	170.03	525,352	122.3	117.6
3	8,482	29,116,709	199	662,162	169.12	499,559	117.7	132.5
4	8,303	29,465,895	167	345,341	176.14	511,179	94.8	67.6
5	7,993	27,293,882	224	564,263	184.96	518,192	121.1	108.9
6-10	31,197	78,297,618	950	1,860,353	919.20	1,948,449	103.4	95.5
By Issue Age								
0-59	16,681	94,565,192	165	726,145	129.99	601,922	126.9	120.6
60-64	18,685	49,087,726	337	656,964	311.14	761,978	108.2	86.2
65-69	28,577	57,350,365	690	1,139,920	690.15	1,378,958	100.0	82.7
70 and over	12,043	35,757,260	724	1,987,117	675.00	1,911,904	107.2	103.9
Total Select	75,986	236,760,542	1,915	4,510,145	1,806.28	4,654,763	106.0	96.9
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	3,728	6,128,707	75	95,807	48.64	68,380	154.2	140.1
70-74	5,729	5,975,443	184	174,444	171.15	177,716	107.2	98.2
75-79	11,983	11,198,732	597	481,505	568.20	531,359	105.1	90.6
80-84	7,801	7,275,455	665	574,938	588.38	547,896	113.0	104.9
85-89	3,928	3,244,274	495	414,109	462.32	381,400	107.0	108.6
90 and over	2,329	1,890,625	410	361,535	456.69	372,602	89.8	97.0
Total Ultimate	35,496	35,713,235	2,425	2,102,336	2,295.39	2,079,354	105.6	101.1
Grand Total	111,482	272,473,777	4,340	6,612,481	4,101.67	6,734,118	105.8	98.2

TABLE 7

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 ALL COMPANIES TO DATE
 FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; RRSP ONLY, 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								
1	25,817	63,271,476	200	503,161	250.44	617,413	79.9	81.5
2	24,651	59,268,514	231	561,808	263.82	631,242	87.6	89.0
3	22,083	51,538,547	222	534,112	259.51	603,362	85.5	88.5
4	19,413	42,946,454	240	521,180	250.29	551,817	95.9	94.4
5	16,168	33,028,918	213	454,053	226.69	463,438	94.0	98.0
6-10	40,610	59,035,235	649	954,819	679.20	962,985	95.6	99.2
By Issue Age								
0-59	10,694	27,963,644	103	230,651	58.62	128,252	175.7	179.8
60-64	38,907	80,520,465	356	746,369	340.38	656,917	104.6	113.6
65-69	63,510	115,301,109	706	1,246,961	831.32	1,438,359	84.9	86.7
70 and over	35,633	85,303,927	590	1,305,153	699.62	1,606,727	84.3	81.2
Total Select	148,742	309,089,144	1,755	3,529,133	1,929.94	3,830,256	90.9	92.1
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	2,102	2,256,529	33	22,859	17.70	18,806	183.6	121.5
70-74	3,414	2,967,456	74	86,467	56.30	48,423	131.4	178.6
75-79	5,475	4,032,885	165	124,371	154.28	112,544	106.9	110.5
80-84	2,624	2,003,203	129	102,321	127.61	98,250	100.7	104.1
85-89	441	361,542	39	36,103	37.15	29,728	103.6	121.4
90 and over	38	19,014	9	5,862	5.43	2,622	156.5	223.5
Total Ultimate	14,092	11,640,627	447	377,982	398.48	310,374	112.2	121.8
Grand Total	162,834	320,729,771	2,202	3,907,115	2,328.42	4,140,629	94.6	94.4

TABLE 8

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988

ALL COMPANIES TO DATE

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

SINGLE LIFE POLICIES ONLY; RPP ONLY, 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								
1	783	2,433,900	10	25,035	5.74	17,191	174.1	145.6
2	758	2,213,764	9	24,262	6.24	17,678	144.3	137.2
3	670	1,922,092	7	17,160	6.16	17,138	113.7	100.1
4	591	1,620,738	9	15,188	6.18	16,231	145.5	93.6
5	528	1,262,958	8	30,411	5.77	13,622	138.7	223.2
6-10	1,721	2,704,975	34	56,547	21.39	31,921	158.9	177.1
By Issue Age								
0-59	1,306	3,140,949	13	34,304	5.97	13,384	217.6	256.3
60-64	1,503	4,023,634	24	66,633	13.18	32,743	178.3	203.5
65-69	1,883	4,088,422	28	53,552	23.75	48,267	117.9	110.9
70 and over	360	905,422	13	14,115	8.57	19,387	145.8	72.8
Total Select	5,051	12,158,427	77	168,603	51.48	113,781	149.6	148.2
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	683	543,329	11	7,031	5.04	4,473	208.3	157.2
70-74	533	443,487	10	7,009	8.77	7,298	114.0	96.0
75-79	1,109	859,671	23	18,312	31.97	24,741	71.9	74.0
80-84	768	449,662	52	26,227	38.85	22,734	133.9	115.4
85-89	354	264,162	32	19,362	30.86	23,340	103.7	83.0
90 and over	95	55,910	25	11,108	14.45	8,737	169.6	127.1
Total Ultimate	3,541	2,616,220	152	89,047	129.93	91,323	117.0	97.5
Grand Total	8,592	14,774,647	229	257,650	181.41	205,104	126.2	125.6

TABLE 9

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1988
 ALL COMPANIES TO DATE
 FEMALE LIVES ONLY; EXPECTED: 1983 BASIC FEMALE (TSA XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; NONREGISTERED ONLY, 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								
1	8,774	32,425,671	86	267,624	101.08	368,199	85.1	72.7
2	7,300	25,280,313	102	352,057	97.90	329,304	104.2	106.9
3	6,854	21,529,723	108	391,161	101.90	312,174	106.0	125.3
4	6,712	20,892,113	123	407,297	105.56	301,183	116.5	135.2
5	6,344	18,213,203	147	400,673	107.46	282,320	136.8	141.9
6-10	26,699	50,661,191	632	1,094,643	564.53	1,040,741	112.0	105.2
By Issue Age								
0-59	14,883	59,829,723	81	232,690	67.23	192,047	119.7	121.2
60-64	15,584	34,606,503	186	347,849	144.48	294,596	128.7	118.1
65-69	17,970	34,813,023	272	494,677	255.24	468,735	106.6	105.5
70 and over	14,247	39,752,965	660	1,838,240	611.48	1,678,545	107.9	109.5
Total Select	62,683	169,002,214	1,198	2,913,455	1,078.43	2,633,922	111.1	110.6
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	7,679	8,304,149	70	52,635	57.78	55,329	121.1	95.1
70-74	9,866	7,987,991	198	195,910	162.83	131,079	121.3	149.5
75-79	15,410	11,244,550	453	396,494	445.19	323,718	101.8	122.5
80-84	13,159	9,246,678	721	531,243	671.91	471,855	107.2	112.6
85-89	9,237	6,347,174	896	715,320	833.95	574,579	107.4	124.5
90 and over	6,380	4,150,286	1,093	686,568	1,057.72	672,936	103.3	102.0
Total Ultimate	61,730	47,280,826	3,429	2,578,169	3,229.38	2,229,498	106.2	115.6
Grand Total	124,413	216,283,040	4,627	5,491,624	4,307.81	4,863,419	107.4	112.9

TABLE 10

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1981
 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

	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								
1	3,579	10,574,511	53	139,194	59.13	161,674	89.6	86.1
2	2,461	5,253,622	41	120,282	45.72	94,973	89.7	126.6
3	1,878	3,271,151	31	54,502	38.22	64,834	81.1	84.1
4	1,614	2,247,245	34	42,038	36.24	49,513	93.8	84.9
5	1,828	2,946,780	51	62,279	44.45	70,433	114.7	88.4
6-10	5,059	5,658,168	149	129,550	155.07	179,575	96.1	72.1
By Issue Age								
0-59	2,204	6,475,123	21	21,121	18.25	43,749	112.3	48.3
60-64	3,458	5,868,293	62	66,330	54.01	83,464	113.9	79.5
65-69	7,376	11,099,096	161	212,076	166.58	236,000	96.4	89.9
70 and over	3,382	6,508,966	117	248,319	140.00	257,789	83.2	96.3
Total Select	16,419	29,951,477	359	547,845	378.84	621,002	94.8	88.2
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	448	562,059	10	20,274	6.62	8,612	151.1	235.4
70-74	573	692,289	24	34,530	17.11	20,427	140.3	169.0
75-79	1,317	1,186,039	59	52,475	62.76	55,805	93.2	94.0
80-84	915	797,219	53	50,670	69.63	60,190	75.4	84.2
85-89	427	318,100	42	25,948	50.22	38,019	82.6	68.2
90 and over	231	173,562	26	18,121	41.35	32,647	61.7	55.5
Total Ultimate	3,908	3,729,267	212	202,016	247.68	215,701	85.6	93.7
Grand Total	20,327	33,680,744	571	749,861	626.52	836,703	91.1	89.6

TABLE 11

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1980 AND 1981
 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

	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								
1	2,520	4,801,318	18	29,617	24.36	46,666	73.9	63.5
2	1,576	2,548,387	12	17,751	16.42	25,369	73.1	70.0
3	1,182	1,474,401	10	18,008	14.38	18,676	69.5	96.4
4	1,051	1,174,357	6	7,303	13.26	14,903	45.3	49.0
5	1,112	1,285,099	13	24,899	16.73	22,626	77.7	110.0
6-10	3,394	3,011,525	52	52,936	65.86	68,764	79.0	77.0
By Issue Age								
0-59	2,139	3,725,105	5	4,668	9.99	13,731	50.0	34.0
60-64	2,938	3,356,215	14	10,665	25.31	26,715	53.3	39.9
65-69	3,893	4,238,002	39	49,691	49.15	50,841	78.3	97.7
70 and over	1,866	2,975,767	54	85,491	66.56	105,717	81.1	80.9
Total Select	10,835	14,295,087	111	150,514	151.01	197,003	73.5	76.4
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	799	593,461	11	7,343	6.11	4,461	171.7	164.6
70-74	990	645,994	10	12,043	16.38	10,754	58.0	112.0
75-79	1,333	741,293	29	26,183	38.19	21,359	75.9	122.6
80-84	1,126	627,113	47	25,698	57.95	32,415	80.2	79.3
85-89	842	456,679	59	26,906	76.07	41,027	77.6	65.6
90 and over	493	239,077	76	36,712	81.92	39,558	92.2	92.8
Total Ultimate	5,582	3,303,616	230	134,883	276.63	149,573	83.1	90.2
Grand Total	16,417	17,598,703	341	285,397	427.64	346,576	79.7	82.3

TABLE 12

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1981 AND 1982
 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

	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								
1	4,150	17,510,091	57	128,335	70.49	264,845	80.9	48.5
2	3,535	10,435,092	53	136,745	64.41	175,125	82.3	78.1
3	2,419	5,112,124	57	124,122	49.07	99,048	116.2	125.3
4	1,848	3,215,533	43	43,367	41.38	69,869	103.9	62.1
5	1,579	2,204,137	40	56,738	38.88	52,598	102.9	107.9
6-10	6,029	7,811,261	213	279,965	185.92	242,655	114.6	115.4
By Issue Age								
0-59	2,564	10,838,278	25	63,992	20.81	69,651	120.1	91.9
60-64	4,165	9,696,485	66	87,644	64.19	130,556	102.8	67.1
65-69	8,658	16,012,101	198	287,519	196.25	335,872	100.9	85.6
70 and over	4,175	9,741,375	174	330,118	168.89	368,062	103.0	89.7
Total Select	19,560	46,288,238	463	769,272	450.14	904,141	102.9	85.1
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	498	569,005	13	5,366	6.94	8,109	187.3	66.2
70-74	655	770,087	19	13,354	19.37	22,684	95.5	58.9
75-79	1,435	1,312,049	73	66,198	68.36	61,931	106.0	106.9
80-84	1,029	928,288	93	73,222	77.11	69,620	120.6	105.2
85-89	502	347,165	68	33,099	58.86	40,300	115.5	82.1
90 and over	252	225,765	51	84,390	46.15	42,123	110.5	200.3
Total Ultimate	4,369	4,152,358	316	275,628	276.79	244,767	114.2	112.6
Grand Total	23,929	50,440,596	779	1,044,900	726.93	1,148,908	107.2	90.9

TABLE 13

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1981 AND 1982
 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

	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								
1	3,140	8,434,126	28	52,422	29.90	79,408	93.7	66.0
2	2,506	4,766,850	31	37,740	26.75	51,290	115.9	73.6
3	1,566	2,528,358	21	46,623	17.98	27,768	116.8	167.9
4	1,172	1,455,791	14	14,147	15.40	19,681	90.9	71.9
5	1,045	1,167,078	17	17,772	14.57	16,370	116.7	108.6
6-10	3,887	3,806,310	61	64,495	73.48	84,930	83.0	75.9
By Issue Age								
0-59	2,322	5,419,961	12	10,730	10.87	19,326	110.4	55.5
60-64	3,562	5,031,266	34	42,421	30.20	38,643	110.9	109.8
64-69	4,994	6,774,988	55	68,082	62.38	78,646	87.4	86.6
70 and over	2,439	4,932,299	72	111,968	74.62	142,832	96.5	78.4
Total Select	13,316	22,158,513	172	233,199	178.07	279,447	96.6	83.5
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	852	687,322	11	5,779	6.20	4,818	169.4	119.9
70-74	1,023	654,135	23	12,649	16.89	10,810	133.2	117.0
75-79	1,454	846,309	54	30,250	41.62	23,987	128.5	126.1
80-84	1,165	663,497	48	20,460	59.60	33,920	80.5	60.3
85-89	884	501,471	90	47,376	79.98	44,959	112.5	105.4
90 and over	551	279,199	119	55,858	91.31	45,921	129.8	121.6
Total Ultimate	5,928	3,631,932	343	172,372	295.61	164,415	116.0	104.8
Grand Total	19,244	25,790,445	515	405,571	473.69	443,862	108.7	91.4

TABLE 14

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1982 AND 1983
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

	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								
1	5,124	18,969,309	79	257,302	90.34	325,813	87.4	79.0
2	5,397	24,981,600	77	266,676	98.37	398,564	78.3	66.9
3	4,458	14,680,652	76	190,676	86.66	256,597	87.7	74.3
4	3,144	7,119,302	56	81,747	67.63	146,966	82.8	55.6
5	2,623	5,281,896	74	106,465	62.79	121,192	117.9	87.8
6-10	9,299	17,558,704	294	479,502	279.20	483,405	105.3	99.2
By Issue Age								
0-59	4,121	21,359,036	19	50,726	32.40	136,931	57.1	37.0
60-64	6,782	19,386,744	85	159,976	105.27	273,245	80.3	58.5
65-69	12,645	28,994,314	299	553,233	292.31	628,872	102.1	88.0
70 and over	6,499	18,851,370	255	618,435	255.03	693,488	99.8	89.2
Total Select	30,045	88,591,463	656	1,382,368	685.00	1,732,536	95.8	79.8
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	747	842,701	10	9,715	9.94	11,076	100.6	87.7
70-74	1,059	1,249,782	39	39,067	31.60	37,376	123.4	104.5
75-79	2,135	2,019,303	118	96,569	101.82	95,192	115.9	101.4
80-84	1,546	1,436,045	95	98,807	115.27	108,099	82.0	91.4
85-89	662	493,984	93	92,736	76.97	57,072	120.8	162.5
90 and over	326	221,047	30	20,341	59.78	41,632	49.3	48.9
Total Ultimate	6,473	6,262,861	384	357,233	395.38	350,447	97.1	101.9
Grand Total	36,518	94,854,324	1,040	1,739,601	1,080.38	2,082,983	96.3	83.5

TABLE 15

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1982 AND 1983
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

	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								
1	4,290	12,032,953	31	54,297	42.82	119,402	72.4	45.5
2	3,786	11,781,793	39	133,415	39.95	116,898	97.6	114.1
3	2,886	5,787,865	33	75,758	33.30	66,934	99.1	113.2
4	1,863	3,059,851	30	40,263	22.74	35,622	131.9	113.0
5	1,379	1,872,372	22	27,167	19.36	28,319	113.6	95.9
6-10	5,361	6,417,581	105	122,188	94.65	122,201	110.9	100.0
By Issue Age								
0-59	3,082	9,140,286	20	34,073	14.68	32,912	132.8	103.5
60-64	5,318	9,993,854	55	81,761	45.27	77,350	120.4	105.7
65-69	7,232	12,291,978	94	157,668	90.70	143,548	103.6	109.8
70 and over	3,934	9,526,298	92	179,586	102.17	235,565	90.0	76.2
Total Select	19,565	40,952,415	260	453,088	252.82	489,375	102.8	92.6
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,108	1,055,236	9	15,304	8.02	6,904	112.2	221.7
70-74	1,365	883,288	11	9,429	22.35	14,493	49.2	65.1
75-79	2,053	1,241,078	47	54,085	58.62	35,039	80.2	154.4
80-84	1,647	1,004,380	90	66,465	84.14	51,059	106.4	130.2
85-89	1,094	620,701	84	52,132	97.40	55,035	86.2	94.7
90 and over	736	381,136	96	58,899	121.09	62,358	78.9	94.5
Total Ultimate	8,002	5,185,818	336	256,312	391.62	224,887	85.8	114.0
Grand Total	27,567	46,138,233	596	709,400	644.44	714,262	92.5	99.3

TABLE 16

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1983 AND 1984

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

	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								
1	4,234	12,149,589	73	193,395	73.88	222,120	98.8	87.1
2	5,162	18,870,821	115	397,069	99.51	355,069	115.6	111.8
3	5,339	24,749,108	118	462,530	106.86	431,363	110.4	107.2
4	4,400	14,484,881	82	217,427	94.30	279,665	87.0	77.7
5	3,117	7,141,428	71	131,719	73.82	163,289	96.2	80.7
6-10	10,670	21,061,258	321	592,582	320.45	586,848	100.2	101.0
By Issue Age								
0-59	4,215	21,524,669	46	193,226	34.89	147,524	130.4	131.0
60-64	7,582	22,078,417	135	362,076	120.06	325,066	112.0	111.4
65-69	13,865	32,780,478	339	733,042	327.77	737,216	103.4	99.4
70 and over	7,261	22,073,522	261	706,379	286.09	828,548	91.2	85.3
Total Select	32,922	98,457,085	780	1,994,722	768.81	2,038,354	101.5	97.9
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	808	1,039,117	23	18,283	10.57	12,538	212.8	145.8
70-74	1,204	1,365,686	38	26,923	35.63	40,333	106.6	66.8
75-79	2,546	2,753,159	97	104,846	120.73	129,583	80.3	80.9
80-84	1,905	1,764,986	193	175,040	142.62	133,328	135.3	131.3
85-89	729	594,822	83	53,076	84.44	68,846	98.3	77.1
90 and over	398	278,894	116	68,661	74.06	53,178	156.0	129.1
Total Ultimate	7,589	7,796,663	549	446,828	468.06	437,806	117.3	102.1
Grand Total	40,511	106,253,748	1,329	2,441,550	1,236.87	2,476,160	107.4	98.6

TABLE 17

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1983 AND 1984
 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

	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								
1	3,759	9,219,448	23	42,125	38.58	95,808	59.6	44.0
2	4,331	12,117,874	30	94,559	47.43	132,125	63.2	71.6
3	3,771	11,685,141	32	84,712	43.86	127,039	73.0	66.7
4	2,863	5,721,885	29	35,273	36.43	73,094	79.6	48.3
5	1,862	3,044,821	27	53,960	25.21	39,300	107.1	137.3
6-10	5,897	7,387,933	98	106,475	103.92	144,459	94.3	73.7
By Issue Age								
0-59	3,152	9,906,841	19	49,203	15.46	37,229	122.9	132.2
60-64	6,037	12,029,454	50	83,830	52.20	95,665	95.8	87.6
65-69	8,471	15,012,104	76	91,515	107.87	179,722	70.0	50.9
70 and over	4,824	12,228,704	95	192,558	119.89	299,209	78.8	64.4
Total Select	22,483	49,177,102	239	417,104	295.42	611,825	80.9	68.2
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,180	1,217,310	14	5,099	8.71	7,948	160.7	64.2
70-74	1,452	1,061,460	23	14,864	23.80	17,284	96.7	86.0
75-79	2,321	1,521,230	52	36,702	66.80	43,248	77.1	84.9
80-84	1,762	1,057,492	122	80,641	89.92	53,732	135.1	150.1
85-89	1,196	714,471	110	69,520	106.76	63,852	102.6	108.9
90 and over	822	432,602	146	89,564	137.43	72,593	105.9	123.4
Total Ultimate	8,732	6,004,564	465	296,389	433.41	258,657	107.3	114.6
Grand Total	31,215	55,181,666	704	713,493	728.84	870,482	96.6	82.0

TABLE 18

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1985
 ALL COMPANIES TO DATE
 MALE LIVES ONLY; EXPECTED: 1983 BASIC MALE (734 XXXIII, 695)
 SINGLE LIFE POLICIES ONLY; ALL TAX TYPES COMBINED, 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								
1	6,754	24,510,789	121	393,607	117.80	423,318	102.7	93.0
2	5,947	16,320,745	133	354,208	117.69	332,198	113.0	106.6
3	6,549	23,380,082	148	477,964	139.73	481,542	105.9	99.3
4	6,671	29,833,008	158	428,569	146.72	557,473	107.7	76.9
5	5,371	16,426,922	127	374,209	129.16	357,205	98.3	104.8
6-10	17,759	34,181,228	547	862,732	561.10	1,014,557	97.5	85.0
By Issue Age								
0-59	5,152	27,241,229	51	162,355	43.87	183,830	115.1	88.3
60-64	10,913	32,293,873	197	453,014	175.98	478,747	111.7	94.6
65-69	21,440	50,402,820	548	1,074,779	526.82	1,174,625	103.9	91.5
70 and over	11,547	34,714,853	440	1,201,142	465.54	1,329,092	94.4	90.4
Total Select	49,051	144,652,774	1,234	2,891,289	1,212.20	3,166,293	101.8	91.3
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,356	2,087,051	29	37,339	16.66	24,704	171.0	151.1
70-74	1,862	2,513,420	59	197,311	55.47	74,962	105.5	263.2
75-79	4,210	4,892,728	203	196,642	198.36	229,628	102.3	85.6
80-84	2,972	3,153,263	236	263,604	222.09	234,409	106.0	112.5
85-89	1,013	916,171	126	110,874	118.30	105,741	106.1	104.9
90 and over	468	375,966	80	57,772	92.42	73,244	86.6	78.9
Total Ultimate	11,880	13,938,598	731	863,540	703.30	742,690	103.9	116.3
Grand Total	60,931	158,591,372	1,965	3,754,829	1,915.51	3,908,983	102.6	96.1

TABLE 19

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1984 AND 1985
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

	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								
1	5,918	17,172,734	41	127,372	61.17	176,464	67.0	72.2
2	5,186	12,293,219	52	140,407	61.94	154,816	83.9	90.7
3	5,461	14,891,866	52	175,758	67.67	182,864	76.8	96.1
4	4,738	14,716,842	57	151,957	62.29	175,513	91.5	86.6
5	3,535	6,727,486	65	100,907	50.89	99,576	127.7	101.3
6-10	10,049	12,878,433	195	259,237	194.64	264,450	100.2	98.0
By Issue Age								
0-59	3,913	13,737,422	31	65,557	19.14	48,653	161.9	134.7
60-64	8,931	19,205,603	79	148,994	77.95	153,323	101.4	97.2
65-69	13,669	24,886,796	143	255,124	181.59	309,236	78.8	82.5
70 and over	8,375	20,850,760	209	485,964	219.93	542,471	95.0	89.6
Total Select	34,887	78,680,580	462	955,638	498.61	1,053,683	92.7	90.7
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,537	1,702,271	17	13,596	11.52	11,744	147.6	115.8
70-74	2,084	1,835,661	46	33,564	34.22	29,816	133.0	112.6
75-79	3,408	2,591,231	117	97,513	98.13	74,217	119.2	131.4
80-84	2,511	1,820,212	122	82,675	128.03	93,034	95.3	88.9
85-89	1,626	1,261,272	162	205,310	146.52	114,244	110.2	179.7
90 and over	1,026	634,347	157	106,058	171.69	104,027	91.4	102.0
Total Ultimate	12,191	9,844,993	620	538,714	590.11	427,082	105.1	126.1
Grand Total	47,078	88,525,573	1,082	1,494,352	1,088.72	1,480,765	99.4	100.9

TABLE 20

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1985 AND 1986
 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

	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								
1	5,710	18,853,742	89	367,534	103.13	337,132	86.3	109.0
2	6,799	24,891,808	151	423,320	130.92	471,789	115.3	89.7
3	5,906	16,391,581	131	430,479	129.53	367,721	101.1	117.1
4	6,537	23,715,852	172	563,170	154.68	538,149	111.2	104.6
5	6,629	30,020,452	177	598,741	157.63	608,320	112.3	98.4
6-10	19,884	45,633,064	657	1,278,765	613.99	1,286,677	107.0	99.4
By Issue Age								
0-59	5,296	28,388,550	58	271,288	47.10	209,287	122.1	129.6
60-64	11,737	36,614,944	209	507,439	195.19	563,154	107.1	90.1
65-69	22,100	55,509,584	597	1,349,818	548.42	1,324,059	108.8	101.9
70 and over	12,333	38,993,421	514	1,533,465	499.16	1,513,286	103.0	101.3
Total Select	51,465	159,506,499	1,377	3,662,009	1,289.88	3,609,787	106.8	101.4
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,800	3,507,085	27	51,551	22.77	35,532	118.6	145.1
70-74	2,303	3,055,933	62	91,463	69.23	92,388	89.6	99.0
75-79	5,114	6,173,163	263	257,666	240.13	290,394	109.5	88.7
80-84	3,399	3,949,026	256	289,083	253.33	291,397	101.1	99.2
85-89	1,060	1,004,723	131	130,292	123.89	116,215	105.3	112.1
90 and over	437	361,524	88	68,397	85.76	71,097	102.0	96.2
Total Ultimate	14,111	18,051,452	826	888,450	795.11	897,024	103.9	99.0
Grand Total	65,576	177,557,951	2,203	4,550,459	2,084.99	4,506,811	105.7	101.0

TABLE 21

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1985 AND 1986
 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

	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								
1	5,629	15,972,830	69	187,957	59.26	174,729	116.4	107.6
2	6,027	17,498,152	76	218,506	68.99	199,016	110.2	109.8
3	5,219	12,459,550	86	273,733	69.27	173,440	124.2	157.8
4	5,522	15,182,893	89	296,185	76.53	203,712	116.3	145.4
5	4,772	15,057,305	81	281,613	67.02	191,162	120.9	147.3
6-10	11,951	18,111,709	270	382,060	220.07	339,230	122.7	112.6
By Issue Age								
0-59	4,319	15,775,529	31	107,040	21.81	58,953	142.1	181.6
60-64	9,869	22,863,363	134	265,232	88.13	188,231	152.1	140.9
65-69	15,190	30,025,909	243	486,966	203.24	379,569	119.6	128.3
70 and over	9,743	25,617,639	263	780,816	247.95	654,537	106.1	119.3
Total Select	39,120	94,282,439	671	1,640,054	561.12	1,281,290	119.6	128.0
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,766	2,012,222	16	11,166	13.82	14,316	112.2	78.0
70-74	2,412	2,181,716	54	63,926	39.83	35,609	134.3	179.5
75-79	3,741	3,002,179	91	85,611	107.17	85,937	84.4	99.6
80-84	2,699	2,061,510	152	113,894	134.93	103,482	112.3	110.1
85-89	1,618	1,205,473	155	116,349	145.27	108,799	106.7	106.9
90 and over	1,008	683,680	190	118,475	164.00	109,025	115.9	108.7
Total Ultimate	13,243	11,146,777	656	509,420	605.02	457,169	108.4	111.4
Grand Total	52,363	105,429,216	1,327	2,149,474	1,166.15	1,738,458	113.8	123.6

TABLE 22

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1986 AND 1987
 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

	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								
1	5,563	18,920,294	70	191,320	99.51	335,488	70.3	57.0
2	4,799	15,126,684	111	347,852	96.03	298,352	115.6	116.6
3	5,945	21,582,596	134	488,638	125.07	444,178	107.1	110.0
4	5,096	13,311,626	114	276,093	122.78	328,206	92.9	84.1
5	5,777	20,313,812	159	481,542	150.56	515,621	105.6	93.4
6-10	20,920	62,502,533	707	1,537,023	635.87	1,636,669	111.2	93.9
By Issue Age								
0-59	4,664	25,770,955	53	147,214	42.38	191,171	123.9	77.0
60-64	11,286	35,771,487	250	654,720	191.58	571,541	130.2	114.6
65-69	20,588	52,579,058	516	1,226,906	519.74	1,292,142	99.2	95.0
70 and over	11,563	37,636,046	478	1,293,629	476.12	1,503,661	100.3	86.0
Total Select	48,100	151,757,545	1,295	3,322,468	1,229.82	3,558,515	105.3	93.4
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,913	4,499,079	38	72,245	24.29	46,703	154.4	154.7
70-74	2,514	3,609,867	69	120,945	75.56	109,037	91.3	110.9
75-79	5,741	7,404,754	283	306,537	270.61	349,971	104.4	87.6
80-84	3,674	4,597,307	322	388,921	276.07	342,853	116.6	113.4
85-89	1,014	1,053,823	148	144,645	118.67	122,953	124.3	117.6
90 and over	452	363,630	79	75,116	89.57	69,822	87.6	107.6
Total Ultimate	15,306	21,528,459	937	1,108,407	854.78	1,041,339	109.6	106.4
Grand Total	63,406	173,286,004	2,232	4,430,875	2,084.60	4,599,854	107.1	96.3

TABLE 23

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1986 AND 1987
 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

	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								
1	5,220	14,692,401	38	123,671	53.38	150,753	71.2	82.0
2	4,659	12,489,191	48	153,530	53.90	149,924	89.1	102.4
3	5,411	15,392,484	47	106,161	68.41	191,896	68.7	55.3
4	4,835	11,164,947	69	177,391	70.33	168,213	98.1	105.5
5	5,024	13,498,113	78	204,259	76.46	198,082	102.0	103.1
6-10	13,780	28,605,191	285	605,301	244.91	468,690	116.4	129.1
By Issue Age								
0-59	4,042	16,550,175	36	67,513	20.63	61,306	172.1	110.1
60-64	9,883	23,325,275	101	267,217	90.75	201,064	111.3	132.9
65-69	15,262	30,742,815	184	300,092	208.72	402,847	87.9	74.5
70 and over	9,743	25,224,063	245	735,491	247.30	662,341	99.1	111.0
Total Select	38,929	95,842,327	565	1,370,313	567.40	1,327,558	99.6	103.2
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,744	2,125,769	19	13,057	13.98	15,571	136.0	83.9
70-74	2,433	2,301,288	63	65,756	40.30	37,922	156.3	173.4
75-79	3,995	3,243,086	131	102,656	114.68	92,480	114.2	111.0
80-84	2,842	2,247,607	166	150,166	143.25	113,286	115.5	132.6
85-89	1,524	1,208,431	182	134,205	138.01	110,251	131.9	121.7
90 and over	997	756,793	191	121,617	164.19	120,690	116.0	100.8
Total Ultimate	13,535	11,882,973	751	587,456	614.41	490,200	122.2	119.8
Grand Total	52,464	107,725,300	1,316	1,957,769	1,181.81	1,817,758	111.4	107.7

TABLE 24

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1987 AND 1988
 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

	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								
1	5,300	19,500,313	81	199,142	90.20	336,905	89.8	59.1
2	4,547	15,199,965	82	328,615	90.00	290,282	91.1	113.2
3	3,737	11,297,960	103	294,204	82.26	239,416	125.2	122.9
4	4,517	14,928,661	99	279,789	104.28	326,955	94.9	85.6
5	4,130	10,106,070	119	275,701	110.34	275,303	107.8	100.1
6-10	18,522	56,174,542	570	1,449,635	585.24	1,583,899	97.4	91.5
By Issue Age								
0-59	3,885	21,651,179	48	204,576	34.53	160,756	137.6	127.3
60-64	9,497	31,065,211	184	509,234	161.59	499,879	113.6	101.9
65-69	17,580	43,828,514	447	1,030,537	450.91	1,103,893	99.1	93.4
70 and over	9,791	30,662,609	376	1,082,740	415.30	1,288,232	90.5	84.0
Total Select	40,753	127,207,511	1,054	2,827,086	1,062.33	3,052,761	99.2	92.6
Ultimate Experience -- Policy Years 11 and Over								
By Attained Age								
0-69	1,451	2,493,073	29	43,348	20.34	31,853	140.2	136.1
70-74	2,160	2,704,010	72	68,898	65.56	80,988	109.1	85.1
75-79	5,313	6,075,968	287	257,430	251.70	288,706	114.0	89.2
80-84	3,590	4,285,734	276	304,577	268.53	320,831	102.8	94.9
85-89	944	1,048,196	121	142,800	107.99	119,134	112.0	119.9
90 and over	413	355,609	69	71,759	82.42	68,400	83.7	104.9
Total Ultimate	13,869	16,962,589	853	888,810	796.53	909,912	107.1	97.7
Grand Total	54,622	144,170,100	1,907	3,715,896	1,858.86	3,962,673	102.6	93.8

TABLE 25

CANADIAN INDIVIDUAL ANNUITANT EXPERIENCE BETWEEN POLICY ANNIVERSARIES IN 1987 AND 1988
 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

	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								
1	4,898	15,805,237	48	178,359	47.79	159,573	100.4	111.8
2	4,638	13,267,125	54	142,219	52.56	148,786	102.7	95.6
3	4,111	10,770,697	56	161,680	52.71	144,057	106.2	112.2
4	4,672	12,982,739	78	221,146	65.06	178,493	119.9	123.9
5	4,311	9,852,805	65	174,560	69.68	163,945	93.3	106.5
6-10	14,711	32,182,719	249	513,317	267.61	542,923	93.0	94.5
By Issue Age								
0-59	3,915	16,678,999	44	158,862	19.24	61,574	226.1	258.0
60-64	9,459	23,345,575	100	260,732	88.25	203,265	113.3	128.3
65-69	14,652	30,229,963	174	386,053	206.66	410,951	84.2	93.9
70 and over	9,316	24,606,786	233	585,635	241.26	661,988	96.4	88.5
Total Select	37,341	94,861,322	550	1,391,281	555.40	1,337,777	99.0	104.0
Ultimate Experience — Policy Years 11 and Over								
By Attained Age								
0-69	1,478	1,710,416	18	11,181	12.17	12,848	143.8	87.0
70-74	2,054	1,835,393	54	77,156	34.12	30,113	156.8	256.2
75-79	3,690	2,950,700	122	106,177	106.23	84,736	114.4	125.3
80-84	2,801	2,217,735	157	119,794	140.55	111,911	111.3	107.0
85-89	1,248	1,004,380	125	118,988	111.93	89,480	111.7	133.0
90 and over	881	818,378	153	116,357	145.96	130,123	104.8	89.4
Total Ultimate	12,150	10,537,000	627	549,652	550.96	459,211	113.8	119.7
Grand Total	49,491	105,398,322	1,177	1,940,933	1,106.37	1,796,988	106.4	108.0

