TRANSACTIONS OF SOCITY OF ACTUARIES 1963 REPORTS

III. MORTALITY UNDER TERM CONVERSIONS BETWEEN 1954 AND 1961 POLICY ANNIVERSARIES

Because of the lack of any intercompany study of mortality on policies issued as a result of the exercise of the conversion privilege included in term insurance policies and riders, and because of the increased sales of term insurance, the Committee on Mortality under Ordinary Insurances and Annuities sent questionnaires on September 5, 1961, to companies which in the past have contributed to studies made by this Committee, inquiring as to whether they would be willing to contribute to such a study, and if so, in what form their data were available.

Based on the replies of 46 companies, the Committee determined that such a study was feasible, and on April 9, 1962, invitations to contribute were sent to the 27 companies which had expressed a willingness to make some contribution. The specifications for the study are reproduced in the Appendix.

Data have been furnished by the 21 companies shown in Table 1. Included in this table are percentages of the total exposures that were contributed by each of these companies to the various sections of the study.

SCOPE OF THE STUDY

Nature of Study

The study was restricted to conversions of term insurance originally issued at standard rates. Companies were asked where possible to subdivide data according to sex, type of underwriting (i.e., medical or non-medical), type of term insurance, type of conversion (i.e., at the end of or prior to the end of the conversion period), and, for those policies converted at the end of the conversion period, the type of conversion privilege (i.e., the interval between the end of the conversion period and the end of the term coverage). Data were requested by number of policies and amount of insurance.

The study was developed in two parts. For Part A, to which all of the 21 participating companies contributed, duration was measured from date of conversion of the term policy to a permanent plan of insurance. For Part B, to which 12 companies contributed, duration was measured from the original date of issue of the term policy, though of course no exposure was included prior to date of conversion. The Part A data were analyzed by insured's age at conversion and duration since conversion for the first

fifteen years following conversion, and by the insured's attained age for the later durations. The Part B data were analyzed by the insured's age at issue of the original term policy and the duration since issue of that policy for the first fifteen years, and by the insured's attained age at later durations.

The Part A ratios are intended to represent the mortality on converted policies relative to the mortality on contemporaneously issued newly underwritten permanent plan policies with which they are combined for

TABLE 1

LIST OF CONTRIBUTING COMPANIES

AND PROPORTION OF TOTAL EXPOSURES CONTRIBUTED BY EACH

TO EACH PART OF THE STUDY

		Part A		Равт В
	Number of Policies	Amount of Insurance	Number of Policies	Amount of Insurance
Acacia Mutual	.1% .3 5.8 1.2	.1% .4 6.5 2.1	* 8.3%	.1%
Equitable, Iowa	5.7	4.4	8.2	6.7
Equitable, N.Y	10.4 1.0	8.7 1.4 *	14.9 1.4	13.2 2.1
Lincoln National Massachusetts Mutual.	2.2 8.9	2.7 10.2	12.8	15.5
Metropolitan	5.5 .8 1.1	6.5 1.2 1.9	1.2	1.9
New England Mutual New York Life	4.5 3.0	5.7 2.9	6.4 4.4	8.7 4.4
Northwestern Mutual Penn Mutual Prudential	12.9 16.1 1.5	14.2 11.9 .9	23.2	18.0
Sun Life, Canada Travelers	1.3 14.1	1.2 13.4	1.8 17.4	1.9 17.7
Union Central	3.6	3.7		
Total	100.0%	100.0%	100.0%	100.0%
Total exposure	2,718,830	\$20,549,363,997	1,891,503	\$13,563,505,936
Total claims	22,995	150,677,654	17,258	110,457,727

^{*} Less than .1%.

[†] Data by number of policies not provided.

premium and dividend purposes. Ratios may be expected to exceed 100 per cent because duration has been measured from date of conversion rather than from date of underwriting selection. They can be expected to increase with age at conversion and duration elapsed at conversion, and to decrease with duration elapsed after conversion. Ratios in excess of 100 per cent are not, therefore, representative of antiselection.

The Part B results, on the other hand, are intended to yield an indication of the antiselection exercised by the insured when he decides whether or not to convert his term insurance. The ratios are also influenced by any antiselection exercised by the insured at the original date of issue of the term coverage, as indicated by any excess mortality experienced during the term period prior to conversion. In general, in attempting to compare the relative mortality for various subdivisions of the experience, such as by type of conversion, by type of term plan, by sex, by type of underwriting, etc., inferences which are more valid can be drawn from working with the Part B ratios than with the Part A ratios. A simple comparison of ratios from Part A may be misleading because of a different composition of data by duration elapsed from underwriting selection.

Since the companies contributed in different degrees to the various subdivisions of the study, comparability of the mortality ratios is affected to some extent by the relative mortality levels of the different companies. The extent of these variations is shown in Tables 24 and 25, which show the mortality ratios by company for each of the types of term insurance studied.

Companies were also asked to supply certain additional information to aid in the analysis of the results of the study. Nineteen companies responded to this request in some degree.

Years of Exposure and Issue

In order to obtain maximum statistical reliability, as many years of exposure as possible were desired. At the same time, distortions due to the secular trend of mortality were to be avoided. Because the mortality level had changed relatively little since 1954, it was decided to use an exposure period from 1954 to 1961 policy anniversaries. Also, it was felt that by using this period, the new 1955–60 Basic Tables could be considered to be a satisfactory measure of the standard medical mortality during the period of the study.

Although it might have been desirable to obtain greater consistency in the years of issue to be included, the preliminary survey indicated a wide variation in the issue years for which the companies were able to contribute data. Therefore, in order to obtain the maximum amount of data, it was decided to place no limits on the years of issue to be contributed.

Basis of Expected Deaths

Expected deaths were based on the 1955–60 Basic Tables described in TSA 1962 Reports, 44–58. For data contributed on male lives, expected deaths were based on the 1955–60 Male Basic Tables, and for data contributed on female lives, on the 1955–60 Female Basic Tables. When it was not possible to split data by sex, the 1955–60 Combined Basic Tables were used. Of the total exposure contributed, 75 per cent by number of policies and 80 per cent by amount of insurance was coded male, and 2 per cent by number and 1 per cent by amount was coded female. The balance was not split by sex.

PART A—DURATION MEASURED FROM DATE OF CONVERSION ANALYSIS BY TYPE OF TERM INSURANCE AND CONVERSION PRIVILEGE

In Table 2, the results of Part A of the study are analyzed by type of conversion and type of conversion privilege. Tables 3 to 7 subdivide this analysis by type of term insurance. For purposes of this analysis, medical and nonmedical and male and female data were combined. Although this may have created some distortion of the results, it was not considered to be significant. By combining these categories, it was possible to include a substantial volume of data which the contributing companies were unable to split by sex and underwriting class. At the bottom of each of Tables 2 to 7 the estimated percentages by amount of insurance of non-medical data and of female data are shown, based on the data for which these splits were available.

In several cases the results for Part B were at variance with Part A because some companies with unusually high or low mortality did not contribute to Part B. Therefore the ratios in Tables 2 to 9 for all ages and durations combined have been shown both including and excluding those companies which did not contribute to Part B.

General Comments on Results-All Term Plans Combined

Table 2 shows the mortality experience for all types of term insurance combined. This table in general shows the magnitude of the excess mortality experienced on attained age conversions when duration is measured from date of conversion. As with the other tables in this group, the results are shown separately for policies converted prior to the end of the period during which conversion was permitted, those converted at the end of the conversion period and those for which this information was not available.

The total exposure for Part A was 2,718,830 by number of policies and

TABLE 2

CONVERSIONS FROM ALL TERM PLANS COMBINED

PART A

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

				ERSION]			Con	VERSION	AT END C	or Convi	ersion P od and I	ERIOD WI	TH INTE	RVAL BET ERAGE O	ween E	ND OF		En	D OR PR	OR VONEY		Total	
	Age at	DURA- TION FROM	TOE	ND OF PI	ERIOD		0 Years			1-3 Year	rs	4 Ye	ars and	Over	1	Inknow	n	STAT	US UNE	NOWN			
	Conversion	CONVER-	No.	Ra	atio	No.	Ra	ıtio	No.	Ra	atio	No.	Ra	tio.	No.	Ra	ıtio	No.	Ra	tio	No. Act.	Ra	tio
			Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Deaths	No.	Amt.
<i>A</i> &			-	•		<u>'</u>		<u> </u>	·	·			SELECT										
	15–24	1 2 3 4- 5	2 4 3 2			3 2 1 2			1									3 6 4 4			8 12 9 8	257%*	213%*
	:	6-10 11-15	3	12467	15067	5	12207#	20007 *										$\frac{\frac{2}{2}}{21}$	151%*	119%*		107*	110*
	25-34	Total 1 2 3 4-5 6-10 11-15	20 27 20 25 43 89 87	150%* 98* 110* 103* 116 96		14 17 14 11 19 38 76	153%* 221%* 169* 122* 124* 113* 112		!			4 1 2 1 2			1 4			30 23 31 46 123 120	143%* 100* 123* 95* 112 107	176%* 89* 132* 107* 97	78 57 70 111 256 286	162% 107 120 103 115 104	175% 95 124 106 109 118
		Total	291	107%	112%	175	124%	135%	4			10	211%*	257%*	5			373	110%	111%	858	112%	117%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			ersion l			Conv					eriod wi			WEEN EN	(D OF			or Prous Unk			Total	
Age at Conversion	Dura- tion from	10 1) Years			1-3 Year	s	4 Ye	ars and	Over	1	Unknow	n	SIAI	US UNK	NOWN			
CONVERSION	CONVER- SION	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	atio	No.	Ra	ıtio	No.	Ra	itio	No.	R	ıtio	No.	Ra	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			·		·			<u>'</u>			SELI	ст—Сөп	tinued			1		!	<u> </u>		!	<u>i</u>
35-44	1 2 3 4-5 6-10 11-15	84 85 82 170 339 420	158% 132 114 116 111 117	154% 142 100 126 103 113	24 31 24 47 144 295	123%* 133* 92* 89* 107 123	128%* 129* 77* 84* 118 126	2 2 4 19 25	175%* 127*	157%* 124*	4 6 4 6 18 20	146%* 101*	174%* 87*	11 8 11 15 31	238%* 170* 113* 150*	318%* 146* 131* 168*	101 99 106 194 547 552	163% 131 124 102 107 112	175% 109 120 108 115 127	226 229 229 436 1,098 1,321	155% 130 116 106 110 116	161% 125 107 112 113 122
	Total	1,180	118%	117%	565	114%	115%	52	136%	122%	58	109%	104%	85	152%	174%	1,599	113%	121%	3,539	116%	119%
45-54	1 2 3 4-5 6-10 11-15	171 191 161 314 493 489	225% 188 138 136 122 129	234% 184 154 149 130 143	59 64 57 148 361 450	236% 190 135 151 137 128	230% 134 137 128 125 129	6 12 7 27 56 78	259%* 217* 147 128	154%* 271* 118 141	9 4 3 9 10 24	107%* 162*	134%* 144*	29 23 30 59 53 13	314%* 184* 205* 199 129 162*	371%* 181* 267* 269 125 129*	134 135 164 325 831 757	180% 140 141 126 118 117	155% 109 136 135 114 118	408 429 422 882 1,804 1,811	212% 169 141 139 124 124	204% 145 147 147 121 128
	Total	1,819	139%	152%	1,139	140%	133%	186	149%	150%	59	133%	142%	207	180%	212%	2,346	124%	122%	5,756	134%	137%
55-64	1 2 3 4-5 6-10 11-15	172 214 186 333 426 204	281% 255 188 172 158 130	252% 234 165 144 161 129	43 50 52 100 250 129	281%* 226 187 151 178 120	240%* 190 153 146 154 126	13 4 9 13 43 60	498%* 127* 135* 138	316%* 80* 162* 160	18 28 30 60 57 8	325%* 352* 309* 300 218	383%* 329* 347* 334 247	10 15 21 17 25 1	213%* 221* 257* 108* 146*	257%* 315* 340* 127* 148*	77 110 81 179 453 361	214% 232 139 136 130 120	156% 207 109 122 132 113	333 421 379 702 1,254 763	266% 245 183 161 151 124	222% 223 158 143 150 122
	Total	1,535	178%	168%	624	164%	155%	142	147%	148%	201	268%	300%	89	166%	202%	1,261	137%	131%	3,852	161%	156%
65 and over	1 2 3 4-5 6-10 11-15	4 3 7 3 12 4	193%*	127%*	89 99 77 131 106 3	560% 389 283 253 215	556% 400 331 223 234	1 4 2			1 6 5 16 40 9	293%* 209*	331%* 165*				21 17 16 29 57 49	393%* 259* 236* 200* 158 174*	594%* 292* 169* 169* 159 181*	115 125 106 179 219 67	462% 343 272 236 196 132	479% 324 265 206 186 123
	Total	33	161%*	125%*	505	292%	303%	7			77	170%	141%				189	194%	211%	811	239%	230%

49

TABLE 2-Continued

			ersion I			Conv	ERSION A	AT END O	F Conve	RSION P	eriod wi Ind of Ti	TH INTER	RVAL BET	ween Ex	ND OF			d or Pri			TOTAL	
AGE AT	DURA- TION FROM	TO E.	ND OF PE	ERIOD		0 Years			1-3 Year	rs	4 Ye	ars and	Over		Unknowr	1	JIAI	US ONE				
Conversion	CONVER- SION	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
				!	1			r .	<u>, , , , , , , , , , , , , , , , , , , </u>		SELE	ct—Cont	inued	,	<u> </u>				,			
All ages	1 2 3 4- 5 6-10 11-15	460 517 464 865 1,365 1,207	217% 189 148 140 128 121	207% 177 141 138 129 128	235 260 222 447 900 958	278% 228 167 157 144 124	241% 185 146 134 134 127	21 16 22 44 123 166	279%* 161* 180* 164* 149	228%* 85* 137* 168* 143	36 44 43 93 126 63	205%* 211* 194* 236 186 114	206%* 182* 219* 279 198 104	50 46 62 92 113 23	263% 180* 208 154 141 155*	318% 219* 260 193 145 128*	366 390 402 777 2,013 1,841	182% 156 137 121 117 116	171% 131 127 123 118 120	1,168 1,273 1,215 2,318 4,640 4,258	215% 183 151 138 128 120	200% 160 141 136 126 124
,	Total	4,878	140%	143%	3,022	150%	144%	392	148%	147%	405	182%	195%	386	169%	199%	5,789	124%	124%	14,872	136%	137%
									,			Ultimati	F.	1.								
Att. age 30-39		110 536 819 348 25	103% 102 114 102 99*	106% 103 124 104 102*	7 103 546 1,042 424 31	109% 113 115 104 110*	115% 112 117 109 115*	2 16 92 55 5	71%* 117 97	58%* 136 113	13 11 9 2	145%* 98*	165° * 86*	2 5 18 19 2	88%* 153*	79%* 140 *	125 586 1,588 1,301 275	111% 87 102 103 90	110% 90 110 102 96	13 342 1,702 3,570 2,156 340	137%* 108 99 108 103 94	107%* 110 100 116 104 99
	Total	1,842	107%	113%	2,153	112%	114%	170	105%	120%	35	125%*	115%*	46	105%*	95%*	3,877	99€	103%	8,123	104%	108%
Grand total		6,720	129%	136%	5,175	131%	131%	562	132%	138%	440	175%	188%	432	158%	188%	9,666	112%	117%	22,995	123%	127%
Grand total— "Part B" companies only		5,162	120%	128%	4,033	118%	123%	562	132%	138%	409	185%	203%	432	158%	188%	7,196	110%	1120%	17,794	117%	123%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female. * Radios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

\$20,549,363,997 by amount of insurance. There were 22,995 death claims totaling \$150,677,654 of insurance.

The over-all mortality ratio was 123 per cent by number of policies and 127 per cent by amount of insurance. During the first fifteen years after conversion the ratios were 136 per cent by number and 137 per cent by amount. There was considerable variation in the mortality by age at conversion, the ratios by amount varying from a low of 117 per cent for ages 25–34 at conversion to 230 per cent for ages 65 and over at conversion. The ratios in general increased with increasing age at conversion, which probably in part reflects increasing duration since issue of the term policy.

Mortality ratios generally showed a decrease by duration from conversion, the ratios by amount for all ages combined varying from 200 per cent for duration 1, to 124 per cent for durations 11–15, and 108 per cent for durations 16 and over. This decreasing pattern existed for each of the age groups studied except for durations 11–15, which showed higher mortality than durations 6–10 for ages at conversion under 55 and substantially lower ratios for ages 55 and over. As mentioned previously, the decrease in mortality ratios by duration after conversion is in large part due to the use of a select mortality table as the basis of expected mortality.

The over-all mortality ratio by amount of insurance for conversions prior to the end of the period during which conversion was permitted was 136 per cent, which was higher than the ratio of 131 per cent for policies converted at the end of the term (and conversion) period. However, these ratios are affected by the relative proportions of select and ultimate data in these categories. During the select period, the corresponding ratios were 143 and 144 per cent, respectively, while the ultimate ratios were 113 and 114 per cent, respectively. As Tables 3 to 7 indicate, the ratios are also affected to a substantial extent by variations in the type of term insurance included in these two categories. When this factor is considered, the conversions prior to the end of the conversion period generally have a somewhat lower mortality than those converted at the end of the conversion period.

The over-all ratios for individual companies ranged from a low of 95 per cent by number of policies and 100 per cent by amount of insurance to a high of 202 per cent by number of policies and 192 per cent by amount of insurance (excluding one high-ratio company which contributed only 7 actual deaths). The median ratios were 129 per cent by number of policies and 124 per cent by amount of insurance.

For policies converted at the end of the period during which conversion was permitted, mortality ratios increased with increasing periods between

the expiry of the conversion privilege and the end of the term coverage. Where conversion was permitted until the end of the term coverage, the over-all ratio was 131 per cent, whereas when conversion was permitted only until from 1 to 3 years prior to expiry of the term coverage, the ratio was 138 per cent; and when conversion was permitted only until 4 years or more prior to expiry of the term coverage, the ratio was 188 per cent. Part of the reason for this may be that companies tend to restrict conversions more for longer-term policies than for the short-term policies such as 5 or 10 Year Term. Since the conversions on these longer term policies occur further from the date of original underwriting, the mortality ratios on this business would tend to be higher when duration is measured from date of conversion. This theory is supported by the fact that the corresponding differences in Part B of the study are considerably smaller. Even to the extent that this variation in mortality is not due to differences in duration from original issue, the cost of the excess mortality on conversions is not necessarily reduced if conversion is permitted until the end of the term period, since other factors such as the proportion of term policies which are converted must also be considered.

Term Plans Providing for Automatic Conversion within 10 Years

Table 3 shows the mortality experience on conversions from term plans which provided for automatic conversion within 10 years of original issue. For policies converted at the end of the conversion period, no split was made according to the length of time between expiry of the conversion privilege and expiry of the term coverage; however, it may be assumed that all of this category of business permitted conversion up to date of expiry of the term coverage, since only a negligible amount of data was coded otherwise.

As might be expected because of the automatic feature of the conversion privilege, presumably resulting in a high rate of conversion at a relatively early duration after issue, the mortality was generally more favorable for this type of term insurance than for any of the other types, with an over-all ratio of 111 per cent by amount as compared with 127 per cent for all categories combined. Seven companies contributed to this category, with individual company ratios by amount of insurance ranging from a low of 70 per cent (based on 76 deaths) to a high of 124 per cent.

Conversions at the end of the conversion period showed slightly higher mortality by number of policies than those taking place prior to the end of the conversion period, the over-all ratios being 114 and 108 per cent, respectively. There was little difference by amount of insurance, the ratios being 117 and 116 per cent.

Conversions for which the "end" or "prior" status (i.e., whether conversion was made at or prior to the end of the conversion period) could not be determined showed a mortality ratio of 100 per cent, which was somewhat lower than either of the other categories. However, all of this category was submitted by one company, whose contribution had a generally lower than average level of mortality.

Renewable Term Plans Providing Level Amounts of Insurance

Table 4 shows the mortality experience on conversions from renewable term plans providing level amounts of insurance.

This category had an over-all mortality ratio of 183 per cent by number of policies and 166 per cent by amount of insurance, which was somewhat higher than the ratio for all term plans combined. Eight companies contributed to this category, although only four of them had enough data to give results of any significance. Among these four, individual company ratios by amount of insurance ranged from a low of 107 per cent to a high of 188 per cent.

The results of this experience were largely influenced by data from two companies. One company's contribution accounted for 1,136 of the 1,336 deaths for conversions prior to the end of the conversion period and all of the 475 deaths for conversions at the end of the conversion period where conversion was permitted to the end of the term coverage. Elimination of this company's contribution would have reduced the ratios mentioned above to 126 per cent by number of policies and 124 per cent by amount of insurance. The other company's contribution accounted for all of the 93 deaths for which the "end" or "prior" status could not be determined.

Where conversion was permitted until the end of the term coverage, the mortality ratio for all companies combined was 328 per cent by amount of insurance on conversions at the end of the conversion period, as compared with 157 per cent for policies converted prior to the end of the conversion period. For policies converted at the end of the conversion period when conversion was permitted only until one year from the end of the term coverage, the mortality ratio by amount dropped to 207 per cent, based, however, on only 31 deaths. For conversions for which the "end" or "prior" status is not known, the ratio was 123 per cent. The reason for this relatively low mortality is not readily apparent but may be due to variations between companies.

Decreasing Term Plans

Table 5 shows the mortality experience on conversions from decreasing term plans. This category, which had relatively few data, had an over-all

TABLE 3 Conversions from Term Plans Providing Automatic Conversion within Ten Years PART A

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

	!			ERSION PRI			ersion at 1 version Pe			ND OR PRI TUS UNKN			TOTAL	
	Age at Conversion	DURATION FROM CONVERSION	No.	Rat	io	No.	Ra	tio	No.	Ra	utio	No.	Ra	ıtio
			Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
				<u> </u>				Seli	ECT		<u> </u>	, ₁ ,		<u>'</u>
15-24		1 2 3 4-5 6-10 11-15				2 2 1 2 1 4			1			4 2 1 3 1 5		
		Total				12	160%*	180%*	4			16	151%*	153%
25-34		1 2 3 4-5 6-10 11-15	3 1 1 3 9 8 	77%*	61%*	16 14 10 16 35 62	218%* 179* 118* 114* 116* 109	210%* 196* 37* 122* 124* 127	3 2 6 11	86%*		20 15 14 21 50 81	181%* 125* 108* 98* 118 101	192%' 123* 96* 112* 113 122 122%

Approximately 6 per cent of data is nonmedical. Approximately 3 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

	_		ersion Pri nd of Peri			rsion at 1 version Pe			nd or Pric tus Unkno			TOTAL	
AGE AT Conversion	Duration FROM Conversion	No.	Rat	io	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
							Select-	Continued					
35-44	1 2 3 4 5 6-10 11-15	6 10 5 15 38 35	135%* 103* 158* 99*	166%* 130* 162* 83*	18 21 17 31 101 240	110%* 110* 82* 79* 102 123	112%* 114* 75* 83* 114 129	5 11 5 13 35 71	254%* 109* 94* 105	103%* 131* 88* 117	29 42 27 59 174 346	113%* 136* 80* 90 109 116	110%* 126* 67* 105 117
!	Total	109	114%	116%	428	110%	112%	140	108%	108%	677	110%	112%
45-54	1 2 3 4-5 6-10 11-15	10 7 11 8 35 50	189%* 133* 120* 128	161%* 146* 176* 137	32 22 26 59 159 332	200%* 112* 112* 126 120 129	196%* 103* 131* 96 112 129	8 10 18 29 69 102	129%* 182* 128* 105 108	68%* 135* 88* 80 117	50 39 55 96 263 484	186% 113* 133 113 115 124	191% 98* 136 84 111 127
!	Total	121	116%	134%	630	127%	122%	236	114%	102%	987	122%	118%
55-64	1 2 3 4-5 6-10 11-15	1 9 7 2			15 12 12 21 44 38	209%* 136* 117* 110* 128* 93*	161%* 198* 80* 129* 131 121*	5 5 12 10 45 41	227%* 86* 156* 115*	189%* 106* 132* 106*	21 17 25 40 96 81	178%* 110* 135* 110* 142 104	134%* 156* 106* 124* 142 114
	Total	20	107%*	107%*	142	118%	132%	118	134%	132%	208	123%	129%

TABLE 3-Continued

			ersion Pri d of Peri		1	rsion at version Pi			nd or Pri tus Unkn			Total	
Age at Conversion	DURATION FROM CONVERSION	No.	Rati	o	No.	Ra	itio	No.	Ra	ıtio	No.	Ra	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
							SELECT	Continued					
65 and over	1 2 3 4-5 6-10				2						2		
	11-15										2		
All ages	Total 1 2 3 4-5 6-10 11-15	20 18 18 35 89 95	121%* 88* 78* 84* 138 110	88%* 109* 80* 93* 169 108	83 71 68 129 340 676	172% 125 107 107 114 122	164% 135 101 100 116 123	21 26 38 55 155 226	169%* 152* 178* 114 112 107	206%* 103* 141* 106 92 116		160% 122 115 104 117 117	156% 121 106 100 117 123
	Total	275	109%	116%	1,367	120%	122%	521	116%	113%	2,163	118%	1189

Approximately 6 per cent of data is nonmedical. Approximately 3 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 3—Continued

			ersion Pri nd of Peri			RSION AT		_	nd or Pric tus Unkne			TOTAL	
AGE AT Conversion	DURATION FROM CONVERSION	No.	Ra	tio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			·				Ulti	MATE				· .	
Att. age 30-39					4						4		
40-49 50-59 60-69		25 87 140	109%* 97 124	117%* 118 136	97 495 948	112% 111 113	117% 111 116	14 162 547	69%* 84 97	67%* 86 104	136 744 1,645	105% 102 108	109% 105 113
70-79 80 and over		16 	69*	39*	383 26	105 104*	108 115*	459 89	102 83	89 74	858 115	102 87	94 80
	Total	268	107%	116%	1,953	111%	113%	1,271	95%	93%	3,492	104%	105%
Grand total		543	108%	116%	3,320	114%	117%	1,792	101%	100%	5,655	109%	111%
Grand total—"Part B" companies only		511	111%	124%	3,276	115%	118%	1,792	101%	100%	5,579	110%	112%

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

			ERSION F		WITH	INTERVA	L BETWE	OF CONVE	e Convi	ERSION	ı	d or Pri us Unkn			Total	
AGE AT CONVERSION	DURATION FROM					0 Years		1 Y	car and	Over						
·	Conversion	No.	Ra	itio	No.	Ra	ıtio	No.	R:	ıtio	No.	Ra	itio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
							4		SELECT				<u> </u>			
15-24	1 2 3	1 1 2												1 1 2		
	4- 5 6-10 11-15	1 1												1 1		
	Total	6												6		
25-34	1 2 3 4-5	5 1 2 7	10207*	14507 *							1 1 5 3			6 2 7 10 16	114%*	90% 142*
	6–10 11–15 Total		· · · · · ·	145%* 									153%*		169* 125%*	

Approximately 7 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			ERSION I		WITH	Interva	L BETWE	DE CONVE EN END O TERM CO	F CONVE	RSION		d or Pri			Total	
Age at Conversion	DURATION FROM					0 Years		1 Ye	ear and	Over						
	Conversion	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	itio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
	,	20 153%*	,	·		<u>'</u>	Selec	ct—Con	linued	,					·	
35-44	1 2 3 4-5 6-10 11-15	15 22 26	153%* 95* 130* 84* 104*	141%* 56* 96* 83* 85*							7 5 6 8 5			27 20 28 34 42 42	167%* 103* 133* 88* 95*	169%* 60* 142* 122* 82*
45-54	Total 1 2 3 4-5 6-10 11-15	75 80 63 128	193	88% 271% 168 140 178 101							7 6 3	112%*		82 86 66 142	107% 248% 187 129 154 106	109% 238% 152 135 165 99
	Total	443	155%	159%							38	109%*	98%*	481	150%	147%
55-64	1 2 3 4-5 6-10 11-15	126 112 196	265 201	328% 304 193 163 140				2 1 2 4 4 2			1 2 1 3 4			129 115 203 159	319% 262 199 186 152 108*	307% 285 185 157 140 70*
	Total	696	201%	198%				15	169%*	158%*	11	136%*	69%*	722	199%	189%

TABLE 4-Continued

		1	rersion l		WITH	INTERVA	L BETWE	OF CONVE EN END C TERM C	r Convi	ERSION		id or Pri fus Unkn			Total	
Age at Conversion	DURATION FROM					0 Years	i	1 Y	ear and	Over						
	Conversion	No.	Ra	ıtio	No.	R	ıtio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ıtio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
						<u>'</u>		SELE	er Con	tinued						•
65 and over	1 2 3 4-5 6-10 11-15				98 68 123	599% 414 270 256 228	625% 434 332 230 254	1						101 69 123	595% 425 272 255 227	622% 449 333 229 252
	Total				475	307%	328%	8						483	309%	331%
All ages	1 2 3 4-5 6-10 11-15	223 201 358 294	260% 204 163 158 130 111*	253% 187 149 152 114 92*	98 68	599% 414 270 256 228	625% 434 332 230 254	4 3 - 5 5			14	185%* 134* 126* 128* 81*	152%* 73* 175* 141* 91*	339 287 513 417	303% 235 178 172 140 117*	265% 193 168 158 122 89*
	Total	1,293	167%	1570%	475	307%	328%	23	219%*	! 204%*	03	119%	123%	1,884	185%	166%

Approximately 7 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			version l		WITH	Interva	AT END O L BETWEE END OF	END O	F CONVE	RSION	l	d or Pr			Total	
Age at Conversion	Duration FROM					0 Years		1 Y	ear and	Over						
CONVERSION	Conversion	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	itio	No.	Ra	ıtio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			!	,_ !					ULTIMAT	E	<u>'</u>	<u>'</u>	<u> </u>	<u> </u>		<u>'</u>
Att. age 30–39			l		, , , , , ,				,							
40-49 50-59 60-69 70-79		4 16 21	175%*	249%*										4 16 27	175%* 106*	249%
80 and over		21						2						4		
	Total	43	121%*	148%*				8						51	131%	151%
Grand total		1,336	165%	157%	475	307%	328%	31	223%*	207%*	93	119%	123%	1,935	183%	166%
Grand total— "Part B" companies only	. ,	200	122%	122%	. ,			31	223%*	207%*	93	119%	123%	324	125%	124%

9

TABLE 5 CONVERSIONS FROM DECREASING TERM PLANS PART Λ

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955–60 Basic Tables

	Age at Conversion	DURATION FROM CONVERSION		version P End of Pe		VERSION VAL BET VERSION TER	ION AT ENE PERIOD WIT WEEN END PERIOD ANI M COVERAGE Vear and O	en Inter- of Con- o End of a of		nd or Pri fus Unkn			TOTAL	
			No.	Ra	tio	No.	R:	itio	No.	Ra	itio	No.	Ra	tio
			Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
ς,					— <u>— — — — — — — — — — — — — — — — — — </u>		<u></u>	SELL	т		<u>' </u>	<u> </u>		
	15-24	1 2												
		3 4- 5 6-10 11-15												
		Total							! 					
•	25-34	1 2 3 4- 5 6-10 11-15	2 2 3 2 1			3			1 1 1			6 3 5 3 1		
		Total	10	175%*	175%*	5			3			18	182%*	197%

Approximately 2 per cent of data is nonmedical. Approximately 1 per cent of data is female.

TABLE 5-Continued

Age at Conversion	DURATION FROM CONVERSION		version P End of Pe		VERSION VAL BE VERSION TER	PERIOD AT END PERIOD WITTWEEN END PERIOD ANI EM COVERAGE Year and O	OF CON- DEND OF E OF;		End or Pri			TOTAL	
		No.	Ra	tio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ntio
	·	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
							SELECT—Co	ntinued		·			
35-44	1 2 3	9 8 5			4 3			1 1			14 12 7	156%* 141*	180%* 151*
	4- 5 6-10 11-15	11 8	226%*	166%*	1			1 6			13 14	141* 304*	115* 417*
	Total	41	200%*	188%*	9			10	151%*	252%*	60	154%	162%
45–54	1 2 3 4-5 6-10 11-15	14 5 6 8 4	350%*	227%*	3 2 2 3			3 2 1 3 3			20 9 9 14 7	272%* 185*	203%*
	Total	37	216%*	290%*	10	115%*	150%*	12	177%*	168%*	59	181%	237%

Age at	DURATION		version P End of Pe		VERSION	HON AT END PERIOD - Co	neinued		nd or Prio			Total	
Conversion	FROM Conversion	No.	Ra	itio	No.	Rat	tio	No.	Ra	tio	No.	Ra	ıtio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			·	···		·	Sки ст. т.	ntinued					
55-64	1 2	3 3						1			4 4		
	3 4- 5 6-10	1			1			1			1 2		
	11-15 Total	7			1			3			11	158%*	239%*
65 and over	1 2 3												
	4- 5 6-10 11-15												
	Total												
All ages	1 2 3 4-5 6-10	28 18 15 21 13	254%* 172* 169* 194* 226*	219%* 251* 227* 156* 361*	10 5 4 6	139%	'40% *	5 3 5 9			44 28 22 32 22	214%* 142* 131* 155* 211*	201%* 179* 179* 142* 382*
	11–15 Total	95	201%	228%	25	102%*	04%*	28	168%*	210%*	148	167%	197%

			version P End of Pe	,	VERSION	ION AT END PERIOD—C	Continued		nd or Prie tus Unkn			TOTAL	
Age At Conversion	DURATION FROM CONVERSION	No.	Ra	ıtio	No.	Year and O	ver Lio	No.	Ra	tío	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
							Ultim/	\TE					
Att. age 30-39													
60–69													
	Total												
Grand total		95	201%	228%	25	102%*	104%*	28	168%*	210%*	148	167%	197%
Grand total—"Part B" companies only		55	176%	205%				28	168%*	210%*	83	173%	206%

mortality ratio of 167 per cent by number of policies and 197 per cent by amount of insurance. The ratio of 167 per cent was higher than that for any of the other categories of term coverage except renewable term plans providing level amounts of insurance, and the ratio by amount of 197 per cent was higher than that for any of the other categories studied. The ratio for policies converted prior to the end of the conversion period was 228 per cent, which was substantially higher than that for other term plans.

All Other Term Plans

Table 6 shows the mortality experience on conversions from term plans not included in the three categories discussed above. Generally, this includes conversions from the longer term forms such as Term to Age 65, shorter nonrenewable term forms not automatically convertible, and level term riders.

The over-all mortality ratio was 129 per cent by number and 134 per cent by amount of insurance. Ten companies contributed to this category, with individual company ratios by amount of insurance ranging from a low of 100 per cent (excluding one low-ratio company which contributed only 13 actual deaths) to a high of 190 per cent.

As with the other categories of data, conversions made prior to the end of the conversion period showed lower mortality than conversions at the end of the conversion period, the ratio by amount on conversions made prior to the end of the conversion period being 130 per cent as compared with ratios of from 138 per cent to 230 per cent, depending on the type of conversion privilege, for conversions made at the end of the conversion period.

As with the renewable term plans, conversions for which the "end" or "prior" status could not be determined exhibited a better mortality than the other categories in the table, the over-all ratio being 118 per cent. There does not appear to be any good explanation for this, but it may be due to lack of homogeneity because of variations either by company or by type of term insurance. Of the total of 1,542 deaths in this category, 1,210 were contributed by a single company.

Term Plans Not Identified by Type

Table 7 shows the mortality experience on conversions from plans for which the type of term insurance was not identifiable. The over-all level of mortality for this category of data was 119 per cent by number and 125 per cent by amount of insurance. Twelve companies contributed to this category, with individual company ratios by amount of insurance

TABLE 6

CONVERSIONS FROM ALL OTHER TERM PLANS

PART A

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

		Coxy	ERSION]	PRIOR		Con					eriod wi End of T			rween E of:	ND OF		F	or Pr	IOP		Total	
AGE AT	DURA- TION FROM		ND OF P			0 Years			1-3 Year	s	4 Ye	ars and	Over		Unknowi	1		rus Ünki			TOTAL	
Conversion	CONVER- SION	No.	Ra	ıtio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ıtio	No.	Ra	itio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
				·						·	·	SELECT					1		<u>'</u>	·		
15-24	1 2	1 2			1												4			2 6		
	3 4-5 6-10 11-15	1 4 1			1			1												1 1 4 2		
	Total	9			2			1									4			16	141%*	142%
25-34	1 2 3 4-5 6-10 11-15	8 5 9 13 34 44	78%* 91* 94*	73%* 108* 123*	1 2 1 14	134%*	133%*	2						1 4			6 4 6 10 21 34	94%* 94* 118*	96%* 84* 118*	15 9 18 26 61 93	130%* 119* 89* 96 106	128%* 139* 85* 104 120
	Total	113	93%	107%	19	128%*	135%*	4						5			81	103%	96%	222	101%	106%
35-44	1 2 3 4-5 6-10 11-15	29 37 39 91 166 246	147%* 144* 127* 131 99 121	162%* 181* 118* 143 91 120	3 7 8 21 52	102%* 119	135%* 106	2 4 19 25	175%* 127*	157%* 124*	2 1 2			10 8 11 14 29 5	230%* 182* 114* 159*	331%* 159* 119* 190*	16 21 21 37 137 165	117%* 125* 108* 89* 120 129	109%* 99* 103* 85* 118 146	60 75 74 154 374 493	144 142 120 114 113 124	157% 157 111 119 109 128
	Total	608	118%	121%	91	113%	119%	52	136%	122%	5			77	158%	185%	397	119%	119%	1,230	121%	123%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

				rersion I			Conv		AT END O							ID OF			d or Pr us Unkn			Total	
	Age at	DURA- TION FROM	TOE	ND OF PI	ERIOD		0 Years		1	l−3 Year	s	4 Ye	ars and	Over	1	Unknowr		STAT	US UNEN	OWN			
	Conversion	CONVER- SION	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	ıtio	No. Act.	Ra	ıtic	No. Act.	Ra	tio	No.	Ra	tio	No. Act.	Rai	tio
			Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Deaths	No.	Amt.
				· -					··			SELE	ст—Сон	tinued									
68	4 5–5 4	1 2 3 4- 5 6-10 11-15	48 65 55 138 312 381	173%* 172 117 131 128 130	204%* 185 110 131 130 145	8 15 13 30 81 109	237°[* 157* 162* 162 122	141%;* 170* 196* 160 126	6 12 7 27 56 78	259%* 217* 147 128	154%* 271* 118 141	1 1 2 1			29 23 29 57 50 4	333%* 195* 210* 203 133	410°%* 198* 278* 269 133	27 26 31 65 202 149	189%* 137* 132* 123 134 101	139%* 112* 127* 134 130 89	120 141 136 318 703 722	202% 175 137 146 135 121	207% 162 136 156 132 126
		Total	909	133%	140%	256	145%	155%	186	149%	150%	7			102	186%	228%	500	123%	118%	2,140	136%	141%
	55-64	1 2 3 4-5 6-10 11-15	50 55 48 100 234 193	279% 240 165* 158 161 130	239% 162 160* 127 171 131	11 11 8 17 68 80	381%* 249* 139* 180 129	557 %* 200* 234 157 126	13 4 9 13 43 60	127* 135* 138	317%* 80* 162* 160	16 27 28 55 53 6	338%* 389* 323* 307 231	391%* 350* 366* 343 261	10 15 21 17 22	2250%* 232* 268* 113* 136*	274%* 332* 354* 133* 147*	16 23 20 39 104 90	214%* 229* 157* 132* 130 129	235%* 148* 161* 113* 121 125	116 135 134 241 524 430	289% 249 198 163 157 132	280% 191 210 151 161 134
		Total	680	159%	155%	195	157%	186%	142	148%	148%	185	289%	322%	86	170%	212%	292	139%	131%	1,580	163%	165%
	65 and over	1 2 3 4-5 6-10 11-15	1 2 2 7 4			1 1 1 1 2			1 4 2			1 3 4 16 39 6	305°, * 212*	-370(*)				9 7 7 20 27 18	278°5* 167* 183*	228%* 149* 182*	10 12 15 39 78 32	193%* 187* 206* 258* 188 101*	172* 106* 114* 219* 157 99*
		Total	16	130%*	1095%*	6			7			69	158%	13.1%.				88	210%	190%	186	174%	145%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			VERSION NO OF P			Con	VERSION C	AT END	of Conv	ersion I	PERIOD W	ITH INTE	RVAL BE	TWEEN E	ND OF			ID OR PR			TOTAL	
Age at Conversion	DURA- TION FROM			ERIOD		0 Years			1-3 Year	rs .	4 Ye	ars and	Over		Unknow	1	STAT	us Unki	NOWN		TOTAL	
CONVERSION	CONVER- SION	No.	R	atio	No. Act.	Ra	.tio	No. Act.	Ra	ıtio	No. Act.	Ra	ıtio	No.	Ra	ıtio	No.	Ra	itio	No.	R	atio
		Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
											Sele	ct—Con	inued	· · · · · · · · · · · · · · · · · · ·						1	<u> </u>	<u>r</u>
All ages	1 2 3 4-5 6-10 11-15	136 165 153 345 757 869	188% 175 132 134 126 125	193% 169 126 130 129 133	24 34 23 58 172 258	236%* 238* 131* 144 152 123	305%* 181* 176* 180 150 121	21 16 22 44 123 166	279%* 161* 180* 164* 149	229%* 85* 137* 168* 143	19 32 34 72 96	255%* 305* 272* 292 225 69*	271%* 260* 299* 324 219 68*	49 46 61 89 105	274%* 190* 216 158 144 164*	344%* 236* 273 193 153 181*	74 85 85 171 491 456	170% 155 130 120 128 119	154% 118 125 117 123 117	323 378 378 779 1,744 1,772	203% 182 150 142 135 123	206% 161 149 144 133 127
	Total	2,425	132%	136%	569	141%	155%	392	148%	147%	266	228%	237%	360	175%	212%	1,362	127%	122%	5,374	138%	141%
										······	τ	JLTIMATI				<u>.</u>				!	1	<u></u>
Att. age 30-39. 40-49. 50-59. 60-69. 70-79. 80 and over.		51 280 539 283 22	99% 102 113 106 106*	104% 97 124 114 105*	3 6 51 94 41 5	131% 128 97*	131% 146 115*	2 16 92 55 5	71%* 117 97	58%* 136 113	1 1 3						18 45 67 48 2	129%* 81* 95 119*	130%* 80* 79 112*	7 77 393 793 430 34	102% 100 112 104 109*	110% 94 120 113 109*
	Total	1,179	108%	114%	200	120%	132%	170	105%	120%	5			•			180	97%	91%	1,734	107%	112%
Grand total		3,604	123%	130%	769	134%	150%	562	132%	138%	271	219%	230%	360	170%	208%	1,542	123%	118%	7,108	129%	134%
Grand total— "Part B" companies only		3,560	123%	131%	757	134%	151%	562	132%	138%	265	223%	239%	360	170%	208%	1,542	123%	118%	7,046	129%	135%

TABLE 7

Conversions from Term Plans Not Identified by Type

PART A

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

			ersion l		Con			F CONVE							id or Pri rus Unkn			Total	
Age at	DURATION FROM	тоЕ	ND OF PE	ERIGD		0 Years		Ov	er 5 Ye	ırs	1	Unknown	ı	SIAI	IDS ONEN				
Conversion	Conversion	No.	Ra	tio	No.	Ra	.tio	No.	Ra	tio	No	Ra	tio	No.	Ra	tio	No.	Ra	itio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt	Act Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			1	<u> </u>	!. <u>.</u>	-	<u>'</u>	<u>' </u>		 Sе1	ЕСТ								
15-24	1 2 3	1												1 2 4			1 3 5		
	4- 5 6-10 11-15	1 2												3 2 1			3 3 3		
	Total	5					,							13	126%*	103%*	18	128%*	114%
25-34	1 2 3 4-5 6-10 11-15	18 32	159* 126*	216%* 168* 154* 128* 133*	1 2			1 1 1 1 2						17 16 31 93	95* 92* 117	161%* 105* 105* 107* 101	28 26 51 128	164%* 135* 113* 112 120 105	178% 125* 116* 119 106 114
	Total	115	134%	151%	3			5						253	110%	108%	376	117%	119%

Approximately 7 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10, 49 deaths inclusive. No ratios shown for fewer than ten deaths.

		1	version :	-	Con					ERIOD WI					ND OR PR			Total	
AGE AT	DURATION FROM	10.	SAD OF 1	ERIOD		0 Years		0	ver 5 Ye	ars		Unknow	n	SIA	IUS UNK	NOWN			
Conversion	Conversion	No.	R	ıtio	No.	Ra	ıtio	No.	Ra	ıtio	No.	R	atio	No.	Ra	atio	No.	R	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
			·				·			Select-	-Continue	d		1	!	•	<u>'</u>		<u>' </u>
35–44	1 2 3 4–5 6–10 11–15	20 15 11 27 90 139	205%* 132* 87* 100* 119	202%* 127* 91* 129* 116 115	3 3 7 8 22 3	145%*	142%*	1 2 5 16 20	135%* 105*	164%* 90*	1 1 2 4				176% 123 130 107 104 107	187% 119 117 99 116 121	96 80 93 176 494 482	181% 125 128 107 109 110	188% 118 116 107 117 118
	Total	302	117%	121%	46	172%*	154%*	44	114%*	124%*	8			1,021	111%	120%	1,421	114%	120%
45–54	1 2 3 4-5 6-10 11-15	34 26 32 50	253%* 299* 211* 134* 109 125	281%* 288* 338* 228* 126 134	27 18 59	425%* 351* 167* 180 152	520%* 278* 116* 159 132	5 8 23	174*	156*	1 2 3 9			214 549	178% 142 145 125 116 125	157% 119 142 149 115 132	154	207% 181 153 134 119 127	189% 149 164 160 117 133
	Total	219	151%	199%	253	178%	166%	42	141%*	152%*	15	126%*	94%*	1,560	126%	130%	2,089	133%	139%
55-64	1 2 3 4-5 6-10 11-15	15 30 24 28 34 1	177%* 302* 230 152* 175*	140%* 180* 134* 136* 139*	27 32 62 138	324%* 303* 253* 178 201 228*	187%* 166* 180* 116 183 196*				3			79 48 126 300	220% 249 125* 144 127 118	138% 248 75* 133 137 108	136	223% 267 168 152 146 120	141% 225 96 131 142 108
	Total	132	195%	142%	287	213%	163%				3			837	136%	133%	1,259	153%	136%

TABLE 7-Continued

			version l				AT END C								d or Pri			Total	
Age at	DURATION FROM	10 E	ND OF I	LATOD		0 Years		0.	ver 5 Ye	ırs		Unknown	١	SIAI	IUS UNEN	OWN			
Conversion	Conversion	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
						<u> </u>				Select-	Continue	i	'						<u> </u>
65 and over	1 2 3	4 2 5			1									12 10 9	412%* 286*	831%* 398*	17 12 20	390%* 209* 342*	654% 298* 261*
	4- 5 6-10 11-15	5			7 7 1									9 30	150* 169*	169* 180*	17 42 32	140* 157* 170*	119* 156* 176*
	Total	17	206%*	147%*	22	216%*	207%*							101	183%	234%	140	190%	219%
All ages	1 2 3 4-5 6-10 11-15	93 77 106 212	212% 236 180 127 125 116	213% 203 197 161 123 123	57 63 137 290	255%* 297 236 179 172 183*	330*% 196 167 142 151 158*	5 3 2 11 25 45	146%* 118* 134*	227%* 147* 126*	1 1 3 8 3	149%*	93%*	260 261 518 1,338	185 157 135 121 115 117	172 148 120 127 119 123	367 413 404 775 1,873 1,471	200 181 151 129 122 119	184 157 134 134 122 123
	Total	790	139%	151%	611	194%	164%	91	128%	142%	26	111%*	88%*	3,785	123%	127%	5,303	131%	132%

Approximately 7 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 7—Continued

			version :		ī					eriod wit				1	D OR PR			Total	
AGE AT	Duration From	10 2	200 01 1	EKIOD		0 Years		0	ver 5 Ye	ars		Unknowi	n	STA	TUS UNK	NOWN			
Conversion	Conversion	No.	Ra	itio	No.	Ra	ıtio	No.	Ra	itio	No.	Ra	ıtio	No.	R	atio	No.	R	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
				-					·	Ulti	MATE	, <u></u> .	,	<u>'</u>	<u>'</u>				
Att. age 30–39. 40–49. 50–59. 60–69. 70–79.	Total	34 165 124 28 1	105%* 104 103 106*	100%* 99 103 101*				12 10 	117*	170%* 103* 127%*	2 5 18 19 2	104%* 185*	162*	379 974	119% 89 105 103 95	120% 94 116 110 116	129 561 1,126 841 187	115% 94 105 104 95	97 114 110 114
Grand total	,	1,142	126%	135%	611	194%	164%	113	128%	139%	72	118%					<u> </u>	l	-
Grand total— "Part B" companies only		836	112%	114%			,	113	128%	139%	72	118%	99%	3,741	109%	116%	4,762	110%	125%

ranging from a low of 110 per cent to a high of 192 per cent (excluding one high-ratio company which contributed only 7 actual deaths).

The ratio for all companies combined for conversions made prior to the end of the conversion period was 135 per cent by amount as compared to 164 per cent for conversions at the end of the conversion period where conversion was permitted to the end of the term coverage. For policies converted at the end of the conversion period where there were more than five years between the end of the conversion period and the end of the term coverage, the mortality ratio by amount was 139 per cent; however, all of the 113 deaths in this category were contributed by a single company.

For policies converted at the end of the conversion period where the restriction on the conversion period was not identifiable, the mortality ratio was only 99 per cent by amount; however, all of the 72 deaths in this category were contributed by a single company. For policies for which the "end" or "prior" status was not known the ratio by amount was 122 per cent.

PART A—DURATION MEASURED FROM DATE OF CONVERSION ANALYSIS BY SEX AND TYPE OF UNDERWRITING

Table 8 analyzes the mortality experience by sex, and Table 9 compares the experience on term policies originally issued medically with those originally issued on a nonmedical basis.

Analysis by Sex

Nineteen of the twenty-one companies contributing to Part A were able to split their data by sex. Only 172 deaths, or about 1 per cent of the total, were female, and as a result it was not possible to subdivide these data by type of term insurance or conversion privilege and obtain any meaningful results.

Table 8 shows the comparison of male and female mortality subdivided by age and duration groups. Ratios for female lives are based on the 1955–60 Female Basic Tables.

Although based on relatively few data, it appears that female conversion mortality is about the same relative to standard issues as is male conversion mortality, the ratios by amount being 129 per cent for females as compared with 126 per cent for males.

Analysis by Type of Underwriting

Fourteen out of twenty-one companies were able to split their data between conversions from term policies originally issued medically and those originally issued nonmedically. Of the total exposure of the twenty-

TABLE 8

Analysis of Term Conversion Mortality by Sex Part A

All Conversion Codes Combined

All Term Plans Combined, Medical and Nonmedical Combined Mortality Ratios to 1955–60 Male or Female Basic Tables†

	Duration	No. Аст.	DEATHS	RATIO I	ву Амт.
Age at Conversion	FROM Conversion	Male	Female	Male	Female
			Select		
То 34	1 2 3	63 53 58	4	181% 110 129	
	4- 5 6-10 11-15	79 196 221	1 3 3	100 100 115	
	Total	670	12	115%	144%*
35-54	1 2 3 4-5 6-10 11-15	478 517 497 1,012 2,365 2,543	9 7 7 6 18 25	181% 140 137 130 119 125	75%* 209*
	Total	7,412	72	130%	129%
55 and over	1 2 3 4-5 6-10 11-15	246 297 273 499 1,116 717	4 8 5 6 7 9	217% 209 152 141 148 123	
	Total	3,148	39	151%	132%*
All ages	1 2 3 4-5 6-10 11-15	787 867 828 1,590 3,677 3,481	17 16 12 13 28 37	189% 154 140 131 125 124	238%* 209* 59* 130* 79* 170*
	Total	11,230	123	134%	131%
			Ultimate		
Att. age 30–39. 40–49. 50–59. 60–69. 70–79. 80 and over.		10 226 1,226 2,647 1,460 185	1 5 9 17 16	112%* 108 100 115 102 87	160%* 100*
	Total	5,754	49	107%	119%*
Grand total		16,984	172	126%	129%
Grand total—"Part B" companies only		13,806	130	125%	105%

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

 $[\]dagger$ Male mortality ratios are based on the 1955–60 Male Basic Tables, female mortality ratios on the 1955–60 Female Basic Tables.

TABLE 9

COMPARISON OF TERM CONVERSION MORTALITY ACCORDING TO WHETHER OFIGINAL TERM POLICY WAS MEDICAL OR NONMEDICAL PART A

All Conversion Codes Combined—Male and Female Combined Mortality Ratios to 1955–60 Basic Tables

AGE AT CONVERSION	DURATION	TERM PLANS PROVIDING AUTOMATIC CONVERSION WITHIN TEN YEARS					ALL OTHER L. THOSE N BY F		1	ALL TERM PLANS COMBINED				
	FROM Conversion	No. Act. Deaths		Ratio by Amount		No. Act. Deaths		Ratio by Amount		No. Act. Deaths		Ratio by Amount		
		Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed	
			Spirct											
То 34	1 2 3 4-5 6-10 11-15	16 17 11 23 51 83	84 1	196%* 134* 88* 116* 111 121		39 35 48 73 179 192	7 7 10 10 10 9	154%* 87* 142* 100 105 117	173%*	55 52 59 96 230 275	15 7 11 11 10 12	168% 102 126 111 107 118	154%* 112* 150* 85* 96*	
	Total	201	16	123%	146%*	566	50	115%	115%	767	66	117%	121%	
35-54	1 2 3 4-5 6-10 11-15	77 77 82 155 430 805	2 4 7 25	152% 109 107 94 113 124	135%*	337 347 371 788 1,897 1,993	15 28 16 32 55 86	174% 136 136 139 118 122	114%* 234* 137* 151* 110 160	414 424 453 943 2,327 2,798	17 32 16 32 62 111	169% 130 129 129 117 123	121%* 247* 122* 137* 111 154	
	Total	1,626	38	115%	125%*	5,733	232	129%	143%	7,359	270	126%	140%	

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 9-Continued

Age at Conversion	DURATION FROM CONVERSION	TERM PLANS PROVIDING AUTOMATIC CONVERSION WITHIN TEN YEARS					ALL OTHER L. THOSE N BY F			ALL TERM PLANS COMBINED			
		No. Act. Deaths		Ratio by Amount		No. Act. Deaths		Ratio by Amount		No. Act. Deaths		Ratio by Amount	
		Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.
		Select-Continued											
55 and over	1 2 3 4-5 6-10 11-15	21 17 27 40 96 80	1	129%* 153* 114* 122* 142 113		165 202 172 334 766 632	24 34 35 69 99 24	243% 199 152 134 144 125	440%* 465* 330* 280 222 105*	186 219 199 374 862 712	24 34 35 69 99 25	220% 190 145 132 143 123	434%* 459* 328* 279 222 107*
	Total	281	1	129%		2,271	285	148%	248%	2,552	286	145%	248%
All ages	1 2 3 4-5 6-10 11-15	114 111 120 218 577 968	10 4 4 1 7 29	154% 120 106 101 117 122 118%	295%* 138* 130%	541 584 591 1,195 2,842 2,817 8,570	46 69 58 111 164 119	188% 147 141 136 123 123	214%* 309 215 218 169 135	655 695 711 1,413 3,419 3,785	56 73 62 112 171 148	180% 141 133 128 122 122 129%	222% 298 206 207 165 135

TABLE 9-Continued

AGE AT Conversion	DURATION FROM CONVERSION	TERM PLANS PROVIDING AUTOMATIC CONVERSION WITHIN TEN YEARS				1	ALL OTHER JOSE NOT IC			ALL TERM PLANS COMBINED			
		No. Act. Deaths		Ratio by Amount		No. Act. Deaths		Ratic by Amount		No. Act. Deaths		Ratio by Amount	
		Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.
			Ultivate										
Att. age 30–39		4 127 633 1,380 806 111	9 111 255 52 4	106% 107 113 94 79	97% 115 107	9 186 875 1,772 1,217 221	20 83 163 81 4	113% 96 118 110 115	86%* 95 108 138	13 313 1,508 3,152 2,023 332	29 194 418 133 8	108%* 110 101 116 103 99	114%* 96 112 122
,	Total	3,061	431	104%	109%	4,280	351	111%	110%	7,341	782	108%	109%
Grand total		5,169	486	111%	111%	12,850	918	126%	152%	18,019	1,404	121%	134%
Grand total "Part B" com- panies only		5,093	486	112%	111%	11,152	876	126%	152%	16,245	1,362	121%	134%

^{*}Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

one companies by amount, 5 per cent was coded as nonmedical, 80 per cent as medical, and 15 per cent as unknown. Table 9 shows the results separately for conversions from term plans providing for automatic conversion within 10 years, and all other conversions.

There was a higher concentration of nonmedical data in the ultimate than in the select portion of the study. This characteristic of the data may be the result of changes which have taken place over the years in the types of policies which companies would issue on a nonmedical basis. There appears to be little difference in mortality in the ultimate portion of the table between the medically examined issues and the nonmedical issues. In the select portion of the table, however, there is a significant difference between the mortality ratios, especially at ages 55 and over. The relation of nonmedical to medical mortality was substantially different in Part B, however.

Of the total of 1,404 deaths which were coded as nonmedical, 756 were contributed by a single company and a total of 534 by two other companies.

PART B—DURATION MEASURED FROM ORIGINAL DATE OF ISSUE OF TERM POLICY. ANALYSIS BY TYPE OF TERM INSURANCE AND CONVERSION PRIVILEGE

The results of Part B of the study are analyzed by type of conversion and type of conversion privilege in Table 10. Tables 11 to 15 subdivide this analysis by type of term insurance. As with Part A, medical and nonmedical and male and female data have been combined, thus making it possible to include a substantial volume of data which could not be split by sex or underwriting class. At the bottom of each of Tables 10 to 15 the estimated percentages by amount of insurance of nonmedical data and of female data are shown, based on the data for which these splits were available.

General Comments on Results-All Term Plans Combined

Table 10 shows the mortality experience for all term plans combined. This table in general shows the mortality experienced on attained age conversions when duration is measured from the original date of issue of the term policy.

The total exposure of Part B was 1,891,503 by number of policies and \$13,563,505,936 by amount of insurance, resulting in 17,258 death claims totaling \$110,457,727.

The over-all mortality ratio was 106 per cent by number of policies and 109 per cent by amount of insurance. There was considerably less variation by age, duration, type of conversion, and type of conversion

CONVERSIONS FROM ALL TERM PLANS COMBINED

PART B

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955 60 Basic Tables

			ERSION I			Con		at End o							ND OF			d or Pr			Total	
TERM ISSUE	DURA- TION FROM	10 E	ND OF PE	RIOD		0 Years			1–3 Year	5	4 Ye	ars and	()ver		Unknown	1	SIAI	US UNK	IOWN			
AGE	TERM Issue	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio.	No.	Ra	rio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
									<u>'</u>			SELECT	·	: · 								
15 - 24	1- 3 4- 5 6-10 11-15	1 1 16 17	102%* 133*	96% * 114*	4 5 15 5	164%*	132%*	i			2			1			7 3 9 7			12 9 41 32	179%* 121* 113*	228%* 102* 107*
	Total	35	101%*	87%*	29	155%*	175%*	1			2			1			26	114%*	107%*	94	118%	117%
25-34	1- 3 4- 5 6-10 11-15	5 26 128 167	93%* 94 96	82%* 101 105	5 13 79 66	107%* 119 98	88%* 115 138	3 8			8			4 43	121%*	145%*	18 31 101 115	110%* 104* 93 93	120%* 102* 105 107	28 70 315 407	88%* 100 99 98	89%* 91 105 115
	Total	326	93%	98%	163	108%	120%	11	135%*	121%*	8			47	121%*	141%*	265	95%	107%	820	98%	107%
35-44	1- 3 4- 5 6-10 11-15	8 48 334 444	90%* 112 107	114%* 118 103	8 16 131 218	77%* 86 111	70%* 92 111	10 48	64%* 153*	59%* 138*	12	92%*	120%*	1 16 124	117%* 137	164%* 162	19 47 297 453	79%* 84* 104 115	59%* 62* 105 124	35 112 788 1,299	71%* 85 103 114	61%* 84 108 117
	Total	834	106%	107%	373	99%	101%	58	122%	107%	12	92%*	120%*	141	134%	161%	816	107%	105%	2,234	107%	108%
45-54	1- 3 4- 5 6-10 11-15	17 56 234 333	109%* 115 99 123	100%* 116 114 117	7 14 183 205	86%* 125 117	120% * 121 115	4 23 44	123°6* 110*	97/1; * 110*	f			42 47	167";* 103*	208%* 87*	18 34 266 335	100%* 77* 112 104	122%,* 78* 102 91	42 108 749 964	105%* 98 113 113	109%* 100 114 104
	Total	640	112%	115%	409	119%	117%	71	119%	109%	1			89	124%	134%	653	105%	96%	1,863	112%	109%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female.

* Ratios based on 16-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 10-Continued

			rersion I			Conv		at End o							ND OF			d or Pri us Unkn			Total	
TERM ISSUE	DURA- TION FROM	10 E	ND OF FE	.RIOD		0 Years		:	l-3 Years	5	4 Ye	ars and	Over	1	Unknowi	1	SIAI	US UNK	OWN			
AGE	TERM Issum	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	.tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
											Sele	CT—Coni	inued		' 					,		·
55 and over	1- 3 4- 5 6-10 11-15	5 5 43 36	112%* 95*	80%* 131*	2 1 42 51	101%* 124	143%* 130	1 8 15	194%*	202%*				7			4 3 36 80	74%* 127	56%* 121	11 10 136 182	114%* 40* 97 120	104%* 20* 91 126
	Total	89	99%	91%	96	108%	127%	24	204%*	182%*				7			123	98%	76%	339	104%	95%
All ages	1- 3 4- 5 6-10 11-15	36 136 755 997	72%* 94 104 110	72%* 99 111 109	26 49 450 545	125%* 88 108 112	139%* 88* 112 117	5 45 115	109%* 136	88%* 130	1 22	85%*	113%*	1 69 215	139% 122	186% 133	66 118 709 990	99% 82 103 109	92% 71 99 109	128 309 2,029 2,884	93% 89 105 111	90% 85 108 113
	Total	1,924	105%	107%	1,070	109%	113%	165	129%	115%	23	87%*	115%*	285	125%	146%	1,883	104%	99%	5,350	107%	107%
	ļ		·		!			•				Ultimati	E		·					!	!	1
Att. age 30-39		11 273 1,067 1,387 474 24	97%* 105 109 113 103 96*	101%* 113 113 122 104 97*	18 219 850 1,381 464 31	130%* 118 113 114 104 109*	148%* 127 111 115 109 115*	19 83 213 77 4	180%* 100 113 96	141%* 93 134 98	24 51 214 94 3	145%* 102 135 107	163%* 110 143 102	1 26 49 49 20 2	144%* 84* 110* 154*	171%* 93* 121* 143*	6 214 912 1,921 1,447 280	101% 94 100 103 92	108% 95 108 101 96	36 775 3,012 5,165 2,576 344	112%* 110 104 108 104 94	110%* 119 106 116 103 98
	Total	3,236	109%	115%	2,963	112%	114%	396	108%	118%	386	123%	127%	147	108%	117%	4,780	99%		11,908	106%	110%
Grand total		5,160	108%	111%	4,033	111%	114%	561	114%	117%	409	120%	126%	432	118%	138%	6,663	101%	101%	17,258	106%	109%

privilege than for Part A. During the select period, the ratios by age were fairly constant (about 108 per cent by amount) for issue ages 25–54, slightly higher (117 per cent) for issue ages 15–24, and slightly lower (95 per cent) for issue ages 55 and over. The ultimate mortality also showed some decrease with increasing age, ranging from a high of 119 per cent by amount for attained ages 40–49 to 98 per cent for ages 80 and over.

Mortality ratios generally were relatively low for the first five durations, and somewhat higher for durations 6 and over.

For policies converted prior to the end of the period during which conversion was permitted, the ratio by amount was 111 per cent. For policies converted at the end of the conversion period, the ratios were 114 per cent where conversion was permitted to the end of the term coverage, 117 per cent where conversion was permitted only until from one to three years prior to the end of the term coverage, and 126 per cent where conversion was permitted only until four years or more prior to the end of the term coverage. The differences between these ratios were smaller than the corresponding differences in Part A. For policies converted at the end of the conversion period for which the limitation on the conversion privilege was not identifiable, the ratio was 138 per cent.

The over-all ratios for individual companies ranged from a low of 81 per cent by number of policies and 84 per cent by amount of insurance to a high of 153 per cent by number of policies and 149 per cent by amount of insurance (excluding one high-ratio company which contributed only 2 actual deaths). The median ratios were 111 per cent by number of policies and 113 per cent by amount of insurance.

Term Plans Providing for Automatic Conversion within 10 Years

Table 11 shows the mortality experience on conversions from term plans which provided for automatic conversion within 10 years of original issue. For policies converted at the end of the conversion period, all of the data were coded as indicating that conversion was permitted until expiry of the term coverage.

The mortality generally was slightly more favorable for these conversions than for conversions from other term plans, the over-all ratio being 105 per cent by amount of insurance as compared with 109 per cent for all term plans combined. Six companies contributed to this category, with individual company ratios by amount of insurance ranging from a low of 86 per cent (excluding one low-ratio company which contributed only 10 actual deaths) to a high of 117 per cent.

Conversions at the end of the conversion period had a mortality ratio of 109 per cent by number of policies and 110 per cent by amount of

TABLE 11—Conversions from Term Plans Providing Automatic Conversion within Ten Years Part B

Male and Female, Medical and Nonmedical Combined (Mortality Ratios to 1955-60 Basic Tables)

	D		NVERSION PI END OF PER			rsion at H version Pe			END OR PRICATUS UNKNO			Total	
Term Issue Age	DURATION FROM TERM ISSUE	No. Act.	Ra	itio	No. Act.	Ra	ıtio	No. Act.	Ra	tio	No. Act.	Ra	.tio
		Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.
							SEL	ECT					<u>'</u>
15-24	1- 3 4- 5 6-10 11-15				4 5 14 5	164%*	122%*	1 1 1			5 6 15 5	141%*	97%*
	Total				28	163%*	176%*	3			31	140%*	142%*
25-34	1- 3 4- 5 6-10 11-15	5 13 8	105%*	133%*	5 13 71 59	107%* 120 102	88%* 117 147	1 15 18	131%* 99*	134%* 159*	6 18 99 85	97%* 120 99	81%* 122 138
	Total	26	90%*	95%*	148	111%	123%	34	106%*	141%*	208	107%	121%
35-44	1- 3 4- 5 6-10 11-15	7 38 40	125%* 128*	156%* 112*	8 16 96 154	78%* 80 100	70%* 91 99	2 6 51 62	107% 92	80% 126	10 29 185 256	77%* 83* 94 101	93%* 67* 99 109
	Total	85	116%	118%	274	91%	95%	121	98%	98%	480	96%	99%
45-54	1- 3 4- 5 6-10 11-15	3 9 29 21	106%* 87*	133%* 149*	7 13 118 136	81%* 112 114	100%* 96 117	2 9 49 70	92%* 105	83%* 70	12 31 196 227	99%* 100* 105 108	171%* 82* 97 103
	Total	62	98%	132%	274	111%	105%	130	101%	83%	466	106%	101%

Approximately 7 per cent of data is nonmedical. Approximately 3 per cent of data is female.

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^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			NVERSION PE END OF PER			ersion at I version Pe		!	Ind or Pricatus Unkne			TOTAL	
TERM ISSUE AGE	DURATION FROM TERM ISSUE	No. Act.	Ra	tio	No. Act.	Ra	tio	No. Act.	Ra	tio	No. Act.	Ra	tio
		Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.
			<u></u>			<u> </u>	SELIGIT	Continued	! ———	' <u></u> -	•		
55 and over	1- 3				2						2		
	4- 5 6-10 11-15	9			1 23 21	93%* 134*	136%* 144*	11 18	103%* 166*	119%* 150*	2 43 43	108%* 150*	135% 168*
	Total	13	142%*	148%*	47	102%*	121%*	30	118%*	100%*	90	111%	118%
All ages	1- 3 4- 5 6-10 11-15	3 21 89 73	88%* 117 107	64%* 143 126	26 48 322 375	126%* 87* 101 107	140%* 82* 102 114	6 17 127 168	99%* 103 102	56%* 89 105	35 86 538 616	94%* 89 104 105	125%; 71 105 113
	Total	186	105%	120%	771	103%	106%	318	102%	95%	1,275	103%	105%
							Ult	i Imate		1	'	!	! <u> </u>
Att. age 30-39 40-49 50-59 60-69 70-79 80 and over		2 35 109 162 17	108%* 96 120 73*	116%* 104 130 45*	12 184 720 1,168 396 25	123%* 118 111 111 107 99*	141%* 127 110 113 111 114*	1 25 257 644 478 89	65%* 86 96 100 84	86%* 83 105 86 74	15 244 1,066 1,974 891 114	121%* 107 103 107 102 87	142%* 118 102 111 94 80
	Total	325	106%	112%	2,505	111%	113%	1,474	94%	92%	4,304	104%	104%
Grand total		511	106%	116%	3,276	109%	110%	1,702	95%	93%	5,579	104%	105%

Approximately 7 per cent of data is nonmedical. Approximately 3 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

insurance, as compared with 106 per cent by number and 116 per cent by amount for policies converted prior to the end of the conversion period.

Conversions for which the "end" or "prior" status could not be determined had a mortality ratio of 93 per cent by amount, which was lower than either of the other categories. However, all of this category of data was submitted by one company, whose contribution had a generally lower than average level of mortality.

Renewable Term Plans Providing Level Amounts of Insurance

Table 12 shows the mortality experience on conversions from renewable term plans providing level amounts of insurance. Of the 325 deaths in this category, 127 resulted from the contribution of a single company. The over-all ratio was 103 per cent by number of policies and amount of insurance, which was considerably lower than the ratios of 183 per cent by number of policies and 166 per cent by amount of insurance developed for this category of data in Part A. This large difference occurred because one company with a relatively high level of mortality in this category did not contribute to Part B.

Decreasing Term Plans

Table 13 shows the mortality experience on conversions from decreasing term plans. As was the case in Part A, this category showed the highest mortality of any of the categories studied, the ratio by amount being 164 per cent, based on only 82 deaths, however. Very little exposure and no deaths were coded as arising from policies converted at the end of the conversion period.

All Other Term Plans

Table 14 shows the mortality experience on conversions from term plans not included in the three categories discussed above. The over-all mortality by amount of insurance was 112 per cent as compared with 109 per cent for conversions from all term plans combined. Nine companies contributed to this category, with individual company ratios ranging from a low of 86 per cent (excluding one low-ratio company which contributed only 13 actual deaths) to a high of 151 per cent.

Conversions made prior to the end of the conversion period had a mortality ratio by amount of 112 per cent as compared with ratios for conversions at the end of the conversion period of from 117 per cent to 147 per cent by amount depending on the type of conversion privilege. By number of policies, the ratios were lower and within a much narrower range, the ratio for conversions prior to the end of the conversion period being 109 per cent, and for conversions at the end of the conversion period ranging from 114 per cent to 124 per cent.

TABLE 12—Conversions from Renewable Term Plans Providing 1.44 IL Amount of Insurance Part B

Male and Female, Medical and Nonmedical Combined (Mortality Ratios to 1955-60 Basic Tables)

			NVERSION PE End of Pei			ersion at 1 version Pe			ND OR PRIC			TOTAL	
TERM ISSUE AGE	DURATION FROM TERM ISSUE	No. Act.	Ra	tio	No. Act.	Ra	tio	No. Act.	Ra	ıtio	No. Act.	Ra	tio
		Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.
							SEL	ECT			'	,	<u> </u>
15-24	1- 3 4- 5 6-10 11-15												
	Total		. ,										
25–34	1- 3 4- 5 6-10 11-15	3 7 8						1 10 4	370%*	306%*	1 13 11 8	282% 77*	238%
	Total	18	130%*	109%*				15	104%*	116%*	33	117%*	1129
35-44	1- 3 4- 5 6-10 11-15	2 3 23 21	100%* 104*	113%* 104*				4 5 23	101%*	178%*	6 8 46 25	100%* 100*	147% 104*
	Total	49	94%*	90%*				36	95%*	141%*	85	95%	114%
45-54	1- 3 4- 5 6-10 11-15	2 13 29 16	182%* 106* 71*	139%* 103* 88*	1			2 1 28 9	122%*	67%*	4 14 58 25	107%* 114 92*	81% 85 127*
	Total	60	100%	99%	1			40	112%*	88%*	101	105%	94%

Approximately 7 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			NVERSION PE END OF PER			ersion at E version Pe			End or Prio atus Unkno			TOTAL	
Term Issue Age	DURATION FROM TERM ISSUE	No. Act.	Ra	tio	No. Act.	Ra	tio	No. Act.	Ra	tio	No. Act.	Ra	tio
		Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.	Deaths	No.	Amt.
						·	Select	Continued	,				
55 and over	1- 3 4- 5 6-10 11-15	1 1						3			1 1 3		
	Total	2						3			5		
All ages	1- 3 4- 5 6-10 11-15	5 20 59 45	121%* 97 84*	91%* 101 85*	1			7 16 58 13	100%* 103 112*	82%* 102 171*	12 36 118 58	78%* 110* 100 87	80%* 86* 102 101
	Total	129	93%	88%	1			94	102%	108%	224	96%	97%
			<u>'</u>		t	<u> </u>	Ulti	MATE	<u>'</u>				
Att. age 30–39													
40-49 50-59 60-69 70-79 80 and over		12 29 28 2	337%* 112* 96*	508%* 164* 91*	15 13 2	137%* 133*	158%* 78*				12 44 41 4	337%* 120* 105*	508%* 163* 88*
oo and over	Total	71	116%	153%	30	142%*	126%*				101	123%	147%
Grand total	,	200	100%	99%	31	143%*	128%*	94	102%	108%	325	103%	103%

TABLE 13 CONVERSIONS FROM DECREASING TERM PLANS PART B

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

	DURATION		rersion l			d or Pr us Unkn			TOTAL	
Term Issue Age	FROM TERM Issue	No.	Ra	ıtio	No.	Ra	itio	No.	Ra	tio
	15502	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
						SELECT	t			
15-24	1-3 4-5 6-10				1			1		
	11-15				1			11		
	Total				2	*********		2		
25-34	1- 3 4- 5 6-10 11-15	5 1			2 2 1			2 7 2		
	Total	6			5			11	96%*	71%*
35–44	1- 3 4- 5 6-10 11-15	6 18 4	177%*	203%*	 5 9			6 23 13	141%* 263*	162%* 444*
:	Total	28	153%*	189%*	14	148%*	225%*	42	151%*	199%*
45-54	1- 3 4- 5 6-10 11-15	2 3 11 2	165%*	133%*	5			2 3 16 2	142%*	124%*
	Total	18	140%*	144%*	5			23	118%*	123%*
55 and over	1- 3 4- 5 6-10 11-15	1			1			3		
	Total	3			1			4		
All ages	1- 3 4- 5 6-10 11-15	4 9 35 7	165%*	158%*	2 2 12 11	89%* 334*	80%* 670*	6 11 47 18	94%* 136* 201*	147%* 133* 404*
	Total	55	138%	163%	27	131%*	168%*	82	135%	164%

Approximately 4 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

[†] No ultimate data.

TABLE 14 Conversions from All Other Term Plans ${\bf Part~B}$

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955–60 Basic Tables

				ERSION I			Conv		AT END C						WEEN E	ND OF	•	E	D OR PE	lor		TOTAL	
	TERM ISSUE Age	DURATION FROM TERM	TOL	ND OF PI	ERIOD		0 Years			1-3 Year	s	4 Ye	ars and	Over		Unknowi	1	STAT	us Unki	IOWN		10182	
	AGE	Issue	No. Act.	Ra	tio	No. Act.	Ra	tio	No.	Ra	itio	No.	Ra	itio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio
			Deaths	No.	Amt.	Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
													SELECT	<u> </u>	•			'				·	<u>'</u>
89	15-24	1- 3 4- 5 6-10 11-15	1 1 5 7			1			1						1			2 4			5 1 9 12	89%*	73%*
		Total	14	82%*	65%*	1			1						1			10	119%*	81%*	27	92%*	74%*
	25-34	1- 3 4- 5 6-10 11-15	3 10 70 91	75%* 92 89	68%* 97 101	8 7			3 8						4 41	118%*	145%*	9 5 39 58	83%* 85	104%* 94	12 15 124 205	107%* 57* 91 94	82%* 52* 100 107
		Total	174	89%	95%	15	88%*	88%*	11	135%*	121%*				45	121%*	146%*	111	82%	91%	356	91%	98%
	35–44	1- 3 4- 5 6-10 11-15	6 25 206 306	84%* 104 107	116% * 105 104	35 64	105%* 150	97%* 164	10 48	64%* 153*	59%* 138*	1			13 124	134%* 142	182%* 168	9 21 116 233	95%* 104 115	55%* 100 115	15 46 380 776	85%* 87* 103 120	66%* 88* 103 121
		Total	543	104%	105%	99	130%	129%	58	122%	107%	1			137	141%	170%	379	110%	101%	1,217	112%	110%
	45-54	1- 3 4- 5 6-10 11-15	7 30 159 289	108%* 94 133	136%* 112 116	1 65 69	160% 123	193% 110	23 44	123%* 110*	97%* 110*				40 39	188%* 92*	226%* 85*	3 16 100 167	106%* 120 108	133%* 126 93	10 51 387 608	75%* 116 116 119	49%* 144 130 105
		Total	485	115%	115%	135	140%	155%	71	119%	109%				79	124%	141%	286	111%	106%	1,056	117%	117%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 14-Continued

			ERSION I			Conv							RVAL BET ERAGE OI		ID OF			d or Pri			Total	
TERM ISSUE	DURATION FROM	10 E	ND OF PE	ERIOD		0 Years	-	1	l-3 Year:	5	4 Ye	ars and	Over		Unknowr	1	STAT	US UNK	OWN			
Age	TERM Issue	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	ıtio	No.	Ra	tio	No.	Ra	tio	No.	Ra	tio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
											Sele	ст Сол	tinucd									
55 and over	1- 3 4- 5 6-10 11-15	2 4 32 32	112%* 107*	76%* 154*	19 30	117%* 124*	164%* 123*	1 8 15	194%*	202%*				7			3 1 12 38	53%* 114*	31%* 100*	5 6 78 115	100% 117	80% 123
)	Total	70	106%	93%	49	121%*	144%*	24	204%*	182%*				7			54	87%	64%	204	108%	93%
All ages	1- 3 4- 5 6-10 11-15	19 70 472 725	87%* 89 99 113	72%* 108 104 110	1 128 170	130% 128	150% 127	5 45 115	109%* 136	88%* 130	1			64 205	160% 121	206% 137	28 43 269 500	110%* 78* 101 108	64%* 76* 100 103	47 119 978 1,716	99%* 87 106 115	68%* 97 111 113
	Total	1,286	105%	106%	299	129%	140%	165	129%	115%	1			269	129%	154%	840	104%	98%	2,860	110%	110%
					·				·		ι	LTIMATE	:	·								
Att. age 30-39		7 142 656 1,045 401 21	107% 112 113 106 103*	118% 115 122 110 98*	6 35 130 213 68 6	120%* 124 129 92	123%* 115 139 95	19 83 213 77 4	180%* 100 113 96	141%* 93 134 98	1 5 176 81 1	136% 105	146% 105	1 24 38 27 1	149%* 80* 115*	176%* 92* 151*	73 212 271 158 3	106% 95 99 115	116% 93 92 118	15 294 1,124 1,945 786 35	101%* 114 107 114 105 104*	97%* 123 107 121 109 97*
	Total	2,272	111%	117%	458	120%	124%	396	108%	118%	264	125%	130%	91	101%	122%	718	101%	99%	4,199	110%	115%
Grand total		3,558	109%	112%	757	124%	133%	561	114%	117%	265	12477	131%	360	120%	147%	1,558	103%	98%	7,059	110%	112%

Approximately 6 per cent of data is nonmedical. Approximately 2 per cent of data is female. *Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

		1	version l					of Conve						1	D OR PR			Total	
TERM ISSUE AGE	Duration FROM	10 E	ND OF PI	ERIOD		0 Years		Ov	er 5 Ye	ars	1	Unknowi	n	STAT	rus Unkn	IOWN		TOTAL	
	TERM ISSUE	No.	Ra	stio	No.	Ra	itio	No.	Ra	itio	No.	Ra	ıtio	No.	Ra	tio	No.	R	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
								,		SEL	ECT			'. <u></u>	<u>'</u>	<u> </u>		1	<u></u>
15–24	1- 3 4- 5 6-10 11-15	11 10	179%* 224*	211%* 216*				2						1 2 6 2			1 2 17 14	158%* 189*	166%* 197*
	Total	21	161%*	170%*				2						11	93%*	90%*	34	132%*	134%*
25-34	1- 3 4- 5 6-10 11-15	2 8 33 59	86%* 104	94%* 124				8			2			7 14 41 38	117%* 104* 109*	130%* 121* 106*	9 22 74 107	117%* 94 104	114%* 107 116
	Total	102	97%	109%				8			2			100	108%	113%	212	101%	110%

Approximately 7 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

Approximately 7 per cent of data is nonmedical. Approximately 1 per cent of data is female.

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

			version 1					OF CONVE							D OR PRI			TOTAL	
Term Issue Age	DURATION FROM	то Е	END OF P	ERIO D		0 Years		Ov	er 5 Ye	ırs		Unknown		STAT	rus Unkn	OWN			
	TERM ISSUE	No.	Ra	ıtio	No.	Ra	itio	No.	Ra	.tio	No.	Ra	tio	No.	Ra	tio	No.	Ra	atio
		Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.	Act. Deaths	No.	Amt.
									S	ELECT (Continued	!							
All ages	1- 3 4- 5 6-10 11-15	5 16 100 147	96%* 112 104	91%* 118 102				21	86%*	110%*	1 5 10	127%*	63%*	23 40 243 298	91%* 76* 107 111	73%* 67* 106 113	28 57 348 476	88%* 80 106 108	77%* 70 108 108
	Total	268	105%	107%				21	86%*	110%*	16	81%*	69%*	604	105%	102%	909	104%	102%
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-						ULTI	MATE								
Att. age 30-39		2 96 290 151 28 1	101% 105 105 104*	105% 104 106 99*				23 46 23	146%* 98* 126*	162%* 110* 106*	22	104%* 104* 184*	97%* 82* 161*	463	99 103 103	111% 106 117 109 117	6 237 810 1,202 858 191	108% 101 103 104 96	112% 106 114 109 116
	Total	568	104%	104%				92	113%	116%		122%	104%	2,588	102%	112%	<u> </u>		111%
Grand total		836	104%	105%		<i></i>		113	106%	115%	72	110%	88%	3,192	103%	109%	4,213	103%	108%

 \ddot{z}

The mortality ratio of 98 per cent by amount of insurance on policies for which the "end" or "prior" status could not be determined was the lowest of any of the categories on this table. Of the 1,558 deaths in this category, 1,226 were contributed by a single company.

Term Plans Not Identified by Type

Table 15 shows the mortality on conversions from plans for which the term form was not identifiable. The over-all level of mortality by amount was 108 per cent as compared with 109 per cent for all term plans combined. For conversions made prior to the end of the conversion period, the ratio was 105 per cent by amount as compared with 115 per cent for conversions at the end of the conversion period where there were more than five years between the end of the conversion period and the end of the term coverage; however, all of the 113 deaths in this latter category were contributed by a single company.

For policies converted at the end of the conversion period where the the restriction on the conversion period was not identifiable, the mortality ratio was only 88 per cent by amount; however, all of the 72 deaths in this category were contributed by a single company. For policies for which the "end" or "prior" status was not known, the ratio by amount was 109 per cent.

PART B—DURATION MEASURED FROM ORIGINAL DATE OF ISSUE OF TERM POLICY, ANALYSIS BY SEX AND TYPE OF UNDERWRITING

Table 16 analyzes the mortality experience by sex, and Table 17 compares the experience on conversions from term policies originally issued medically with those originally issued on a nonmedical basis.

Analysis by Sex

Eleven of the twelve companies contributing to Part B were able to split their data by sex. Only 127 deaths, or about 1 per cent of the total, were female, and as a result it was not possible to subdivide the results by type of term insurance or conversion privilege and obtain any meaningful results.

Table 16 shows the comparison of male and female mortality subdivided by age and duration groups. Ratios for female lives are based on the 1955-60 Female Basic Tables.

Although in Part A the female conversion mortality is about the same relative to standard medically examined issues as the male conversion mortality, in Part B the female mortality ratio by amount of insurance was 87 per cent as compared with 109 per cent for males. This apparent discrepancy resulted from the fact that several companies which showed

TABLE 16 Analysis of Term Conversion Mortality by Sex

PART B

All Conversion Codes Combined All Term Plans Combined, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Male and Female Basic Tables†

Term	DURATION	No. Аст	. Deaths	RATIO	ву Амт.
ISSUE AGE	FROM TERM ISSUE	Male	Female	Male	Female
			SEI	LECT	
То 34	1- 3 4- 5	28 56	2	117%* 89	
	6–10 11–15	260 319	6 3	102 113	
	Total	663	11	106%	105%*
35–54	1- 3 4- 5	60 188	2 5	85% 97	
	6–10 11–15	1,287 1,938	20 10	111 113	141%* 19*
	Total	3,473	37	110%	88%*
55 and over	1- 3 4- 5	11		120%*	
	6–10 11–15	125 157	1 1	94 122	
	Total	302	2	96%	
All ages	1- 3 4- 5 6-10 11-15	99 253 1,672 2,414	4 5 27 14	94% 89 108 114	131%*
	Total	4,438	50	108%	85%
		· · · · · · · · · · · · · · · · · · ·	ULTI	MATE	I
Att. age					
30–39		28 538	2 5	119%* 121	
50–59		2,232	19	106	58%*
60-69		4,030	33	116	126* 67*
70-79 80 and over		1,823 184	17	102 86	
	Total	8,835	77	110%	92%
Grand total		13,273	127	109%	87%

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

 $[\]dagger$ Male mortality ratios are based on the 1955-60 Male Basic Tables, female mortality ratios on the 1955-60 Female Basic Tables.

very high female mortality in Part A did not contribute to Part B. As shown in Table 8, if the experience of the companies not contributing to Part B were eliminated from Part A, the female mortality ratio in Part A would be 105 per cent instead of 129 per cent. Elimination of the corresponding data on male lives would change the mortality ratio in Part A from 126 per cent to 125 per cent.

Analysis by Type of Underwriting

Eleven out of the twelve companies contributing to Part B were able to split their data between conversions from term policies originally issued medically and those originally issued nonmedically. Of the total exposure by amount, 6 per cent was coded as nonmedical, 92 per cent as medical, and 2 per cent as unknown. Table 17 shows the comparison of medical and nonmedical mortality separately for conversions from term policies providing for automatic conversion within 10 years, and all other conversions.

Although in Part A the nonmedical mortality was higher than the medical mortality in both the select and ultimate periods, in Part B the select nonmedical mortality ratio was 99 per cent as compared with 106 per cent for the select medical mortality. This may be due to variations in mortality levels between companies. Of the total of 1,135 nonmedical deaths contributed to Part B, 531 were from a single company, and a total of 534 were contributed by two other companies.

ANALYSIS OF ADDITIONAL DATA SUBMITTED BY CONTRIBUTING COMPANIES ON AN OPTIONAL BASIS

As mentioned previously, companies were asked to supply certain additional information in order to aid in the analysis of the results of the study. The details of the information requested are shown in the Appendix. Unfortunately, many companies were unable to supply the requested information except to a limited extent, and so the results of this portion of the study are necessarily somewhat inconclusive.

Comparison of Mortality on Term Policies with Mortality on Permanent Plan Policies and Mortality on Converted Policies

Companies were asked to contribute data showing the mortality which they had experienced during the period of the study on term plans and on regularly underwritten permanent plans. Ten companies provided usable data for this portion of the study.

Table 18 shows the ratios by amount of insurance of the mortality on term plans to the corresponding mortality on permanent plans, and Table 19 shows the ratios by amount of insurance of the mortality on term plans

TABLE 17

COMPARISON OF TERM CONVERSION MORTALITY ACCORDING TO WHETHER ORIGINAL TERM POLICY WAS MEDICAL OR NONMEDICAL

PART B

All Conversion Codes Combined, Male and Female Combined Mortality Ratios to 1955-60 Basic Tables

			PLANS PROVIVERSION WIT				ALL OTHER IOSE NOT ID			Aı	L TERM PL	ans Combin	NED
TERM ISSUE AGE	DURATION FROM TERM ISSUE	No. Act	t. Deaths	Ratio by	Amount	No. Act	. Deaths	Ratio by	Amount	No. Act	. Deaths	Ratio by	Amount
		Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed.
			_				Se	LECT					
То 34	1- 3 4- 5 6-10 11-15	7 22 106 89	4 2 8 1	93%* 121 136		23 45 213 328	6 9 22 15	95%* 89* 98 109	124%* 88*	30 67 319 417	10 11 30 16	111%* 91 105 115	93%* 108* 118* 80*
	Total	224	15	124%	96%*	609	52	102%	103%	833	67	108%	101%
35-54	1- 3 4- 5 6-10 11-15	21 60 376 478	1 5 5	130%* 75 98 106		47 144 1,053 1,688	2 6 16 34	59%* 90 113 112	76%* 98*	68 204 1,429 2,166	3 6 21 39	78% 85 109 111	84%* 98*
	Total	935	11	100%	100%*	2,932	58	109%	97%	3,867	69	106%	97%
55 and over.	1- 3 4- 5 6-10 11-15	2 2 43 43		135%* 168*		9 7 84 137		70% 119		11 9 127 180		106%* 90 129	
	Total	90		118%		237		88%		327		96%	

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

TABLE 17—Continued

		1	PLANS PROV VERSION WIT				ALL OTHER IOSE NOT ID			Aı	L TERM PL	ans Combi	NED
TERM ISSUE AGE	DURATION FROM TERM ISSUE	No. Act	t. Deaths	Ratio by	Amount	No. Act	. Deaths	Ratio by	/ Amount	No. Act	. Deaths	Ratio by	Amount
		Med.	Nonmed.	Med.	Nonmed.	Med.	Nonmed	Med	Nonmed.	Med.	Nonmed.	Med.	Nonmed.
					·	'	Select-	-Continued	3				
All ages	1- 3 4- 5 6-10 11-15	30 84 525 610	5 2 13 6	125%* 71 105 113	109%*	79 196 1,350 2,153	8 15 38 49	72% 85 108 112	121%* 99* 94*	109 280 1,875 2,763	13 17 51 55	87% 81 107 112	110%* 109* 101 92
	Total	1,249	26	105%	98%*	3,778	110	106.07	99%	5,027	136	106%	99%
			!!				ULTI	MATE	1				
Att. age 30-39		15 232 934 1,715 838 110	12 132 259 53 4	145%* 117 103 111 93 79	135%* 101 114 108	21 500 1,826 2,916 1,576 226	31 120 275 109 4	94%* 120 107 118 107 114	87%* 124 141 131	36 732 2,760 4,631 2,414 336	43 252 534 162 8	113%* 119 106 115 102 98	108%* 110 127 122
	Total	3,844	460	104%	110%	7,065	539	115%	133%	10,909	999	109%	121%
Grand total	· 	5,093	486	104%	109%	10,843	649	110%	127%	15,936	1,135	108%	119%

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than ten deaths.

to the 1946–49 Basic Tables. Also shown for both tables are the over-all ratios of conversion mortality by number of policies and by amount of insurance for Parts A and B. These ratios are shown to the 1955–60 Basic Tables in Table 18 and to the 1946–49 Basic Tables in Table 19. The Part A ratios are of limited value since they are based on duration as measured from date of conversion, and therefore can be expected to be substantially higher than the ratios for term insurance mortality shown in the upper part of the table, which are based on duration as measured from date of original issue.

The tables indicate that there appears to be little correlation between the level of term insurance mortality and that of conversion mortality. It also appears that, at least among those companies contributing to this portion of the study, there is relatively little difference between term and permanent mortality, although there is considerable variation between companies.

Correlation of Rates of Conversion of Term to Permanent Insurance with Mortality on Converted Policies

Companies were asked to contribute data on the rate of conversion by amount of insurance from term to permanent plans. Eight companies provided usable data for this portion of the study.

Table 20 shows the rates of conversion and the mortality ratios on converted policies. It was hoped that this portion of the study would indicate the effect on conversion mortality of the rate of conversion of term policies. However, so few companies were able to contribute to this portion of the study that the results are somewhat inconclusive.

Correlation of Proportion of Business Sold on Term Plans with Mortality on Converted Policies

Companies were asked to estimate the percentage of their total new business by amount of insurance (excluding term conversion) which was written on convertible term plans (including term riders), by year of issue for those years of original issue being contributed to the study. Where possible, they were asked to subdivide these percentages between level term and decreasing term plans. Seventeen companies contributed to this portion of the study.

Table 21 shows the proportion of business sold on term plans by year of issue, and Tables 22 and 23 subdivide these percentages between level and decreasing term plans. Also shown in these tables are the over-all ratios of conversion mortality by number of policies and by amount of insurance for Parts A and B.

TABLE 18

RATIOS OF MORTALITY ON TERM INSURANCE TO CORRESPONDING MORTALITY ON PERMANENT PLANS, BY AMOUNT OF INSURANCE

						Сомі	NY.				
TERM ISSUE AGE	DURATION	A	В	С	D		11	I	J	К	N
15-24	1- 5 6-10 11-15	78%* 126*								92%*	
	16 and over										
	Total	94%								103%*	
25-34	1- 5 6-10 11-15	93% 106 98		114%*	192%*	109%*	98%* 80* 90*	55%* 141*	150%*	103% 100 55*	131%* 60*
	16 and over						128*				
	Total	99%	108%	134%*	161%*	102%*	104%	79%*	151%*	93%	81%*
35-44	1- 5 6-10 11-15 16 and over	103% 102 120		94%*	93% 79*	117%*	69% 86 77 111	80%* 159 114*	114%* 142*	109% 84 85*	75%* 92*
	Total	108%	89%	93%*	92%	102%	91%	111%	116%	95%	82%
45-54	1- 5 6-10 11-15 16 and over	113% 129 118		68%*	97% 89*	126%*	80% 83* 97* 190*	126% 100* 218*	81%*	160% 64*	101%*
	Total	122%	96%	83%*	96%	142%*	103%	131%	69%*	120%	77%*

^{*} Ratios based on total term claims of \$100,000-\$199,999. No ratios shown for total claims less than \$100,000.

[†] Did not contribute to Part B.

TERM ISSUE AGE	Duration					Сом	PANY				
TERM ISSUE AGE	DURATION	А	В	С	D	G	11	I	J	К	N
55 and over	1- 5 6-10 11-15 16 and over	106% 92			112%*		100%*	182%*	227%*		195%*
	Total	102%	71%*	,	116%*		84%*	144%*	214%*		145%*
All ages	1- 5 6-10 11-15 16 and over	109% 114 116 110		84% 120*	106% 91	115% 82* 107	85% 83 83 125	113% 127 145*	116% 98*	111% 93 78* 80*	91% 74
	Total	112%	94%	94%	102%	111%	98%	120%	111%	91%	83%
Exposure period		1955-60	1959	1959-60	1950-55	1954-61	1959-61	1954-61	1954-61	N.A.	1957-61
	М	ORTALITY	RATIOS T	O 1955–60 I	BASIC TAB	LES OF CO	NVERTED	POLICIES		<u> </u>	<u>r</u>
Part A: By number of po By amount of ins Part B:	surance	202% 188	194% 164	119% 124	122% 124	131% 138	129% 141	184% 188	109% 118	109% 116	136% 142
By number of po By amount of ins	liciessurance	†	†	115 117	114 113	111 116	112 120	147 149	95 101	103 108	†

TABLE 19

RATIOS OF MORTALITY ON TERM INSURANCE TO 1946-49
BASIC TABLES, BY AMOUNT OF INSURANCE

Term Issue					(Company				
AGE	DURATION	A	В	С	G	Н	I	J	К	N
15-24	1- 5 6-10 11-15 16 and over	69%* 97*							71%*	
	Total	76%							79%*	
25-34	1- 5 6-10 11-15 16 and over	81% 92 89		103%*	7707*	83%* 60* 71* 95*	4277* 106*	139%*	81% 86 48*	44% 50*
	Total	87%	101%	11777*	71%*	70%	627.*	1297;*	79.07	47%
3544	1- 5 6-10 11-15 16 and over	103% 96 114		947[+	10407* 57*	8457 81 74 88	138 104*	117*	1170 72 67*	100°7 92*
	Total	104%	87%	87°7*	91%	82%	98%	9707	76%	96℃
45-54	1- 5 6-10 11-15 16 and over	112% 124 107		63%*	126%*	87% 85* 83* 146*	123°6 80* 168*	65%*	99%	82% 55*
i	Total	116%	104%	75%*	120%*	92%	111%	60%*	84%	70℃
55 and over	1- 5 6-10 11-15 16 and over	116% 94				82%*	133%*	183%*		228%
	Total	107%	72%*			69%*	114%*	164%*		131%
All ages	1- 5 6-10 11-15 16 and over	102% 104 107 99		81% 100*	101% 67*	87% 77 75 96	97% 104 120*	100% 85*	82% 75 60* 70*	78% 77
	Total	102%	95%	84%	92%	85%	101%	95%	77%	78%
Exposure pe- riod		1955–60	1959	1959-60	1954–61	1959–61	1954-61	1954–61	N.A.	 1957–6

Part A: By number of policies By amount of policies Part B: By number of policies By amount of policies	141% 142 †	163% 140 †	103% 108 100 102	115% 122 96 100	112% 122 97 105	162% 165 127 129	96% 103 83 88	94% 100 89 93	119% 124 †
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^{*} Ratios based on total term claims of \$100,000-\$499,999. No ratios shown for total claims less than \$100,000.

[†] Did not contribute to Part B.

TABLE 20

CORRELATION OF RATES OF CONVERSION OF TERM TO PERMANENT INSURANCE WITH MORTALITY ON CONVERTED POLICIES

	Conv	AUTOMAT ERTIBLE W 10 YEARS	ITHIN		RENEWABLI ERM PLAN			eckeasin erm Plan		1	ALL OTHE ERM PLAN			RM COVER OT SPECIFI	
Company	Conv.	Ratio b	y Amt.	Conv.	Ratio b	y Amt.	Conv.	Ratio b	y Amt.	Conv.	Ratio l	y Amt.	Conv.	Ratio b	by Amt.
	Rate	Pt. A	Pt. B	Rate	Pt. A	Pt. B	Rate	Pt. A	Pt. B	Rate	Pt. A	Pt. B	Rate	Pt. A	Pt. E
- 5			-			Annual R	ate—Prior	to End o	f Convers	ion Period					
				3.1%	168%	†								, ,	
)	9.0%	109% 68*									115% 99* 122*	105% † 110*			
				1.0			.1			2.5	174	143	5.5%		979
						R:	ate at End	of Conve	rsion Peri	od		<u> </u>		1	
A	80.3%	124%	117%		332%	†									
D F G.	57.0 56.8 53.4	120 71*	116 †				24.7%	104%*		39.0% 46.8 35.1	146% 104* 194*	127% † 155*			
[[] J K										23.0	217	162	21.2% 65.0		108% 115

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than 10 deaths.

[†] Did not contribute to Part B.

Issue									COMPAN	īΥ							
YEAR	A	В	C†	E	G	н	I	J	К	L	М	N	О	Q	R	s	Т
1960 1959 1958 1957 1956	5.7 5.6 5.9	36.2% 36.4 37.5 31.3 24.7	3.2%	30.0% 20.2 22.2 24.0	5.3 6.0 8.1	47.9	30.7% 28.4 30.8 28.3 28.4	32.9% 33.1 34.2 29.8 29.4	38.1% 35.7 35.7 34.2 36.8	42.9 42.4 39.4	22.1	29.8	25.5% 25.8 29.7	30.0 29.0	27.9 26.9	44.8 37.2	39.0% 39.0 35.0 35.0 44.0
1955	. 13.4 . 12.9 . 12.6	29.4 28.6 28.7 26.5 28.0	6.3 8.8 5.3 4.5 3.8		9.0 8.1 6.9	44.4 45.8 43.7 43.4 41.5	9.5 7.7 7.6 7.5 7.9	31.3 28.0 11.1 8.1 9.0	36.3 36.3 32.7 30.0 29.0			42.2 40.4 41.4	28.9 26.4	32.0 31.0 31.0	33.2 28.2 27.4 28.5 31.3	40.9 40.1 37.3 39.2 39.1	38.0 40.0 40.0 32.0 25.0
1950			5.8 5.1 3.4 2.2 1.9		8.9 6.4 4.5	49.8 56.2 55.2 48.5 43.5	8.7 8.2 6.9 4.7 2.9	10.8 7.4 4.5 4.1 3.8	33.3 29.1 23.9 21.1 19.7				27.4 25.5	36.0 36.0 29.0	33.5 33.2 33.2 29.3 25.2	44.4 40.8 39.4 32.3 29.5	45.0
1945 1944 1943 1942 1941			1.5 1.4 1.5 2.2 2.4			39.3		3.3 3.3 3.1 4.2 4.7	18.0 16.7 16.8 18.7 20.0					21.0 20.0 25.0 31.0 30.0	17.6 15.6 17.9 20.0 12.3	24.8 19.2 20.1 24.8	

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than 10 deaths.

[†] Includes level term plans only.

TABLE 21—Continued

Issue Year	-		<u> </u>	<u> </u>		1	(COMPAN	Y	<u> </u>	1	i				,
12/14	A	В	Ct	E	G	н	I	J	К	L	M	N	0	Q	R	s	Т
1940 1939			3.1			38.8			22.3					34.0	19.0		
1938 1937 1936			3.5 3.3 3.1			38.0 30.0 28.3			22.4					27.0 28.0	18.7 17.7 18.6		
1935 1934 1933	1		3.6 4.2 5.8			25.8								36.0	17.4 21.2		
1932	1	.	5.9 4.3											46.0	22.6 20.1 21.4		
			MOI	RTALIT	Y RATIO	OS TO 1	955-60	BASIC '	TABLES	OF CON	VERTE	D POLI	CIES				
Part A: By number By amount Part B:	202% 188	194% 164	119% 124	186% 174	131% 138	129% 141	18 4 % 188	109% 118	109% 116	170%* 129*	122% 120	136% 142	95% 100	104% 103	114% 121	186% 192	223% 303*
By number By amount	†	†	115 117	†	111 116	112 120	147 149	95 101	103 108	†	153 104	†	81 84	95 92	107 112	†	189* 250*

TABLE 22
PROPORTION OF BUSINESS SOLD ON LEVEL TERM COVERAGE

	Issue							Company						
	YEAR	В	С	E	G	I	J	K	L	М	N	О	R	Т
1	960	4.3% 4.7 4.7 3.0 3.2	3.2% 4.0 6.3	18.9% 11.6 13.5 16.4	2.8% 2.4 3.3 5.0 4.9	4.7% 4.9 6.7 6.1 7.5	22.8% 22.0 20.5 11.3 8.6	36.2% 33.7 33.5 32.4 34.9	37.0% 42.2 42.4 39.4 25.3	20.6% 19.4 18.6 23.6 22.6	27.4% 25.0 19.8 13.1 20.0	17.3% 17.2 19.2 19.8	27.9% 26.3 25.2 29.0 30.3	14.0% 13.0 10.0 9.0 16.0
1	955 954 953 952 951	3.2 2.9 2.9 3.3 3.4	6.3 8.8 5.3 4.5 3.8		5.6 6.3 5.3 3.9 4.0	9.5 7.7 7.6 7.5 7.9	9.8 9.2 8.9 7.5 8.1	34.1 34.1 30.8 28.4 27.1		23.7 26.7	15.1 19.3 18.7 20.9 22.9	22.3 21.4 19.0 17.5 17.5	31.4 26.4 26.4 28.5 31.3	14.0 15.0 16.0 11.0 9.0
1	950 949 948 947 946		5.8 5.1 3.4 2.2 1.9		5.2 5.0 4.6 4.5 1.6	8.7 8.2 6.9 4.7 2.9	9.7 7.4 4.5 4.1 3.8	31.3 29.1 23.9 21.1 19.7					33.5 33.2 33.2 29.3 25.2	18.0
1	945 944 943 942 941		1.5 1.4 1.5 2.2 2.4				3.3 3.3 3.1 4.2 4.7	18.0 16.7 16.8 18.7 20.0					17.6 15.6 17.9 20.0 12.3	

TABLE 22-Continued

Issue							COMPANY						
YEAR	В	С	Е	G	I	J	К	L	М	N	0	R	Т
1940 1939 1938 1937 1936 1935 1934 1933 1932 1931		2.8% 3.1 3.5 3.3 3.1 3.6 4.2 5.8 5.9 4.3			1		22.3					17.6% 19.0 18.7 17.7 18.6 17.4 21.2 22.6 20.1 21.4	
Part A: By number By amount Part B: By number By amount	† †	119% 124 115 117	RTALITY †	127% 138 108 116	187% 190 149 151	109% 118 95 101	ABLES OF	† †	121% 119 105 103	† †	95% 99 80 83	116% 123 108 113	† †

[†] Contribution not split between level and decreasing term.

Although the tables indicate substantial variations in the proportion of business sold on term plans and in the conversion mortality, there does not appear to be any significant correlation between the two sets of figures.

Variation by Company in Mortality Ratios on Converted Policies

As mentioned previously, there were substantial variations by company in the mortality ratios for the various categories of conversions which were studied. To give a better indication of the scope of these variations, the individual company mortality ratios are shown by type of term insurance in Table 24 for Part A and in Table 25 for Part B.

TABLE 23

Proportion of Business Sold on Decreasing Term Coverage

Issue											(lom	PAN	ev.											
YEAR		В	:	Ŀ		G	1	I	i	J		K		L	:	М		N			O	i	R		T
1960	31	900	11	10	,	3 1%	26	047	10	10	1	94,	ij	.39	in i	2.8	G 1	1.8	C,			1	.70	; 2	5 0
1959	51		8			2.9	2.3	5	11	ï	2	Ü		ï		2 7		0 6			21	. 1	11	` !	6.0
1958	32			7		2.7	24		13			2			- 1			0.6			6		. 7		5.0
1957	28		7	6		3.1	22		18			8				2 6		8.7		10			- 8		6.0
1956	21	. 5				2.0	20	9	20	. 8	1	9			1 2	2.6	1	4 9		10	. 5	1	. 8	2	8 0
1955	26	2				2 2	i		5.	5	2	,				3.2		2.6			.3	٠,	8	,	4 0
			()			2.7	[118			2	: 1					$\tilde{2}.\tilde{9}$			5		-8		$\frac{1}{5}.0$
	25				1	2 8	1			. 2	1 1	ő).(1 7		1 4	.1		0		$\frac{3}{4}.0$
1952	23				4	3 0				.6	î	6	i '					$\hat{0}$ 5		1 4	.6		U		ĭ.ŏ
	24					3.6				9		9	100		T			3.3			.3	1.			6 0
1701	24				Τ.	0.0	111		ļ			•	i'							0		i		1	
1950	23	9	١			4.0	l		1 1	. 1	1 2	0	١				!			11	. 4	İ.,		. 2	7.0
1949						3.9			1						.1.		İ.	·		8	. 7	1		٠Ĺ.	
1948			l			1.8	1		1				1						, .	7	. 7				
	1		Ι.,		1		111		1				1		- ['		- ['			1		1		- 1	

MORTALITY RATIOS TO 1955-60 BASIC TABLES OF CONVERTED POLICIES

Part A:					Ì							
By number	l †	† 1	157%*			+	Ť	168年*	+			Ť
By amount	†	†	140*			ŧ	†	210*	Ť			
Part B:		l .			}		١.,					١.
By number			132*			1 1		131*				Ī
By amount.			120*			†		168*				Ť
-	l			1	ŀ	l i				ł	i i	

^{*} Ratios based on 10-49 deaths inclusive. No ratios shown for fewer than 10 deaths.

[†] Contribution not split between level and decreasing term.

TABLE 24 VARIATION IN MORTALITY RATIOS BY COMPANY

PART A

All Ages and Durations Combined Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

				TYPE	of Tee	M Insu	RANCE					
Company		Conv. hin Yrs.	Le Rene	vel wable		reas- ng		ll her		ot ent.	То	TAL
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
A. B. C. D. E. F. G. I. J. K. L. M. N. O. Q. C. S. T. U.	119% 113 83 96* 116	124% 118 70 82* 123	157 † 119 103	173 † † 124 107	225%* 161 157* 203* †	237%* 185 140* 317* † † 210*	124%	125% 100 152 167 190 117 118 53* 117 123	194% 186 103 120 109 170* 136 140 108 186 †	174 110 118 116 129* 142 121 113 192 †	202% 194 119 122 186 104 131 129 184 109 170* 122 136 95 140 104 114 1186	188% 164 124 124 174 108 138 141 188 116 129* 120 142 100 121 103 121 103 121
Total	109%	111%	183%	166%	167%	197%	129%	134%	119%	125%	123%	1270

^{*} Ratios based on 10-49 deaths inclusive.

TABLE 25

VARIATION IN MORTALITY RATIOS BY COMPANY

PART B

All Ages and Durations Combined Male and Female, Medical and Nonmedical Combined Mortality Ratios to 1955-60 Basic Tables

		Type of Term Insurance										
Company	Auto. wit 10			vel wable		reas-	A Otl	.ll her	N Ide	ot ent.	To	TAL
	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.	No.	Amt.
C D	115% 111	117% 114	92%*	54%*	170%*	191%*	115%	113%			115%	117% 113
<u>G</u>	75*	64*			132*	120*	115	130			îii	116
H	110	116	126	139	154*	243*	113	123			112	120
			1	!	1	†	149	151			147	149
k		· · · · · ·	Ţ	Ţ	Ť	†	95	101	10107	10000	95	101
M .			103	109	131*	168*	105	102	103%	108%	103 110	108 104
ĵ.,,	81	86	83	86	†	100.	55*	43*			81	84
Q	95	93	Ť	Ť			94	86			95	92
R					†	†	108	113	105	108	107	112
r									†	t	†	Ť
Total	104%	105%	103%	103%	135%	164%	110%	112%	103%	108%	106%	109%

^{*} Ratios based on 10-49 deaths inclusive.

[†] Fewer than ten deaths.

[†] Fewer than ten deaths.

APPENDIX

The Society of Actuaries' Committee on Mortality under Ordinary Insurances and Annuities is undertaking a study of the mortality experience on term conversions, including conversions of term riders. Your company replied to a questionnaire dated September 5, 1961, concerning this study. You are now invited to contribute to the study.

The study will cover the experience between 1954 and 1961 anniversaries under standard Ordinary policies converted from term insurance. Computation of expected deaths will be done by the Committee. Full details of the scope and procedures for the investigation are given in the enclosed instructions.

If you do not find it feasible to contribute your company's experience in the precise form requested, you are invited to submit it in such modified form as may be more practical (e.g., omitting certain years of issue), with a statement of the basis on which your data have been compiled.

In order to help the Committee better analyze the individual company results, you are also requested to provide as much of the following information as can be obtained at reasonable cost. This part of the study is optional.

- 1. Please estimate the percentage of your total new business by amount of insurance (excluding term conversions) written on convertible term plans (including term riders), by year of issue for those years of original issue being contributed to the study. If possible, these percentages should be shown separately for level term and decreasing term plans.
- 2. The Committee would like to be able to compare the level of mortality by amount on term insurance prior to conversion with mortality on insurance originally issued on permanent plans. For this purpose, please furnish, to the extent possible, the data called for by the attached table. If it is not convenient to furnish data in the manner indicated by the table, any similar information giving a split between term and permanent plans will be welcome.
- 3. The Committee would like to have an indication of the rate of conversion by amount of insurance on term plans having a conversion privilege
 - a) At the end of the conversion period. This should be determined by dividing the amount converted at the "end of the period" (see instructions for Column 11 of Part A) by the amount eligible to convert at that time.
 - b) Before the end of the conversion period. This should be expressed as an annual rate of conversion.

If possible, these rates should be shown separately for the term plan classifications shown in the instructions for Column 12 of Parts A and B.

The Committee would like to have all contributions by October 1, 1962. Please address them as shown on page 8 of the instructions. If you are unable to contribute, please let me know.

Sincerely yours,
A. P. Morton
Chairman

MORTALITY ON TERM AND PERMANENT PLANS

(See Item 2. of covering letter)

Data should be based on the same issue years and observation period as are being contributed to the study of term conversions.

		R	ATIOS TO 1946-	49 BASIC TABLE	s
		Term	Plans	Perman	ent Plans
		Amount		Amount	
Age Group		of Actual	Mortality	of Actual	Mortality
at Issue	Duration	Deaths	Ratio	Deaths	Ratio
15-24	1- 5				
	6-10				
	11-15				
	16 and over				
	Total				
25-34	1- 5				
	6-10				
	11-15				
	16 and over				
	Total				
35-44	1- 5				
	6-10				
	11-15				
	16 and over				
	Total				
45-54	1- 5				
	6-10				
	11-15				
	16 and over				
	Total				
55 and over	1-5				
	6–10				
	11-15				
	16 and over				
	Total				
Total	1-5				
	6-10				
	11-15				
	16 and over				
	Total				

Instructions for Contribution to Investigation of Mortality under Term Conversions

This study is to cover the mortality under individual life insurance policies issued as a result of the exercise of the conversion privilege included in term insurance policies. The experience is to be studied from 1954 to 1961 policy anniversaries.

GENERAL INSTRUCTIONS

The study is divided into two parts. Part A studies mortality with duration measured from the year in which the policy was converted. Part B studies mortality with duration measured from the year of issue of the original term policy. It is recognized that some companies will be unable to contribute to Part B because of lack of available data. It is also recognized that some companies will be unable to make some of the subdivisions of data which have been re-

quested. Therefore codes have been provided for submitting combined data, if necessary. Companies are of course urged to subdivide data where feasible. If data can be subdivided in part, please do so, contributing the balance on a combined basis.

The following classes of policies should be excluded. If it is not feasible to do so, please inform the Committee in the letter of transmittal accompanying your company's contribution which of them are included.

- 1. Group conversions.
- 2. Substandard policies.
- 3. Joint life policies.
- 4. Policies issued by exercise of guaranteed insurability riders.
- 5. Dependent conversions from family plans.
- 6. Policies on extended term or reduced paid-up.
- 7. Term riders retained as term insurance after conversion.
- 8. Policies requiring any type of underwriting at the time of conversion.
- 9. Conversions to policies dated back to some year prior to that of conversion.
- Policies not subject to normal medical or nonmedical underwriting at time or original issue. For example, exclude cases written on a guaranteed issue basis.

The recommended practice for suicides during the exclusion period, compromised claims, and limited benefits paid under aviation exclusion clauses is to include them in the exposure for the full amount and in claims for the amount paid. Please describe any variations from this practice in the letter of transmittal.

Data are requested for all years of original issue and all years of conversion through 1960. If it is necessary to limit your contribution to particular years of issue or conversion, please describe these limits in the letter of transmittal. Data for both parts should be submitted on a 15-year select basis, as described below.

The Committee will calculate tabular deaths for all contributions.

INSTRUCTIONS FOR COMPLETING SUMMARY CARDS PART A: STUDY OF MORTALITY WITH DURATION MEASURED FROM DATE OF CONVERSION

Columns	Item	Instructions
1-3 4 5-6	Company code number Identification code Age at conversion	Your company code number is ———. Gangpunch 1. For the select portion of the study (i.e., within 15 years of conversion), submit data by five-year age groups at conversion according to the following code:

Age Group	Code
15-19	1.5
20-24	20
2529	25
• • • • • • • • • • •	
	1.0
60~64	60
65~69	65
70 and over	70

Columns	Item	Instructions
		Exclude conversions below age 15. For the ultimate portion of the study, submit data by individual attained age. Punch the individual attained age in Columns 5-6.
7–8	Duration since conversion	Data should be submitted for the select portion of the study by individual duration since conversion. Code as 01 to 15. For the ultimate portion of the study, punch XX (numeric).
9	Sex	Male 1. Female 2. If unable to split data by sex, code 9.
10	Medical code	Code according to type of underwriting at time of issue of original term policy as follows: Medical 1. Nonmedical 2. If unable to split data by underwriting class, code 9.
11	Conversion code	For policies converted before the end of the period during which conversion was permitted, code 1. "End of the period" is defined as the policy year at the end of which the conversion privilege expires. However, companies may use a different definition if more convenient; if they do, they should state their definition in the letter of transmittal. For policies converted at the end of the period during which conversion was permitted, code according to the number of years between expiry of the conversion privilege and expiry of the term insurance coverage, as follows: Number of Years Code 0* 2 1-3 3 4-5 4 Over 5 5 Unknown 6 * This means policies convertible until end of term insurance period. Note.—For renewable term policies, use the final expiry date of the conversion privilege (not renewal dates) in deter-
12	Policy plan group—before conversion	mining code. If unable to split data in this manner, code 9. Code according to the policy plan before conversion as follows: Code 1 for plans providing for automatic conversion within 10 years of original issue. Code 2 for renewable term plans providing a level amount of insurance. Code 3 for decreasing term plans (including decreasing term riders) such as mortgage insurance, etc.

Columns	Item	Instructions
		Code 4 for all other term plans (including level term riders).
		If unable to split data in this manner, code 9.
13-19		Leave blank.
20–26	Exposed (policies)	Punch the number of policies exposed, if available. If not, punch X (numeric) in Column 26, and leave rest of field blank.
27–38	Exposed (amounts)	Punch amount to the nearer \$1. If a company summarizes in units greater than \$1, fill in any zeros required to maintain the alignment of the decimal point.
39–43	Actual deaths (policies)	Punch the number of policies terminated by death, if such figures are available. If not, punch X (numeric) in Column 43, and leave rest of field blank.
44-53	Actual deaths (amounts)	Punch amount to the nearer \$1. If a company summarizes in units greater than \$1, fill in any zeros required to maintain the alignment of the decimal point.
54-80		Leave blank.

PART B: STUDY OF MORTALITY WITH DURATION MEASURED FROM DATE
OF ISSUE OF ORIGINAL TERM POLICY

	OF ISSUE OF ORK	GINAL TERM POLICY
Columns	Item	Instructions
1-3 4 5-6	Company code number Identification code Age at issue of original term policy	See instructions for Part A. Gangpunch 2. For the select portion of the study (i.e., within 15 years of issue of original term policy), submit data by five-year age groups at issue of the original term policy according to the following code:
		Age Group Code 15-19 15 20-24 20 25-29 25 60-64 60 65-69 65 70 and over 70
		Exclude policies originally issued below age 15.
		For the ultimate portion of the study, submit data by individual attained age. Punch the individual attained age in Columns 5-6.
7-8	Duration since issue	Data should be submitted for the select portion of the study by individual duration since issue of the original term policy. Code as 01 to 15. For the ultimate portion of the study, punch XX (numeric).
9	Sex	Male 1. Female 2. If unable to split data by sex, code 9.
10	Medical code	Code according to type of underwriting at time of issue of original term policy as follows: Medical 1.

Columns	Item	Instructions
		Nonmedical 2. If unable to split data by underwriting class, code 9.
11	Conversion code	For policies converted before the end of the period during which conversion was permitted, code 1. "End of the period" is defined as the policy year at the end of which the conversion privilege expires. However, companies may use a different definition if more convenient; if they do, they should state their definition in the letter of transmittal.
		For policies converted at the end of the period during which conversion was permitted, code according to the number of years between expiry of the conversion privilege and expiry of the term insurance coverage, as follows:
		Number of Years Code 0* 2 1-3 3 4-5 4 Over 5 Unknown 6
		*This means policies convertible until end of term insurance period. NOTE.—For renewable term policies, use the final expiry date of the conversion privilege (not renewal dates) in determining code.
12	Policy plan group—before conversion	If unable to split data in this manner, code 9. Code according to the policy plan before conversion as follows: Code 1 for plans providing for automatic conversion within 10 years of original is-
		sue. Code 2 for renewable term plans providing a level amount of insurance. Code 3 for decreasing term plans (including decreasing term riders) such as mortgage
		insurance, etc. Code 4 for all other term plans (including level term riders). If unable to split data in this manner, code 9.
13–19 20–26	Exposed (policies)	Leave blank. Punch the number of policies exposed, if available. If not, punch X (numeric) in Column 26, and leave rest of field blank.
27–38	Exposed (amounts)	Punch amount to the nearer \$1. If a company summarizes in units greater than \$1, fill in any zeros required to maintain the alignment of the decimal point.
39-43	Actual deaths (policies)	Punch the number of policies terminated by death, if such figures are available. If not, punch X (numeric) in Column 43, and leave rest of field blank.

Columns	Item	Instructions
44-53	Actual deaths (amounts)	Punch amount to the nearer \$1. If a company summarizes in units greater than \$1, fill in any zeros required to maintain the alignment of the decimal point.
54-80		Leave blank.

Transmission of Data

Contributions are to be transmitted for each part with control totals by sex (Col. 9) and medical code (Col. 10). Control totals should include card count, and exposures and deaths by number of policies and amount of insurance.

Although the Committee is not specifying any particular card stock, it would be appreciated if the contributions for Part A of the study could be submitted on left corner-cut stock and those for Part B on right corner-cut stock. It also would be appreciated if each company's contribution could be sorted on Columns 9 (major) to 12 (minor), separately for each part, prior to transmission. Each company should review its contribution carefully before submitting it, making sure that all fields in the transmittal cards are properly punched.

Please address your contributions to Mr. Morrison H. Beach, Second Vice-President and Actuary, Life Actuarial Department, The Travelers Insurance Company, Hartford, Connecticut. The Committee would like to have your contributions by October 1, 1962.

Sincerely yours,
A. P. Morton
Chairman