

## TRANSACTIONS OF SOCIETY OF ACTUARIES 1956 REPORTS

### II. MORTALITY UNDER SETTLEMENT OPTIONS AND DEFERRED ANNUITIES BETWEEN 1950 AND 1955 ANNIVERSARIES

**T**HIS report covers the intercompany experience under settlement options and deferred annuities between 1950 and 1955 anniversaries. Previous studies dealt with the experience between 1934 and 1940 anniversaries (*TASA XLII*, 172-180), that between 1940 and 1945 anniversaries (*TASA XLVIII*, 133-165), and that between 1945 and 1950 anniversaries (*TSA 1951 Reports*, 19-71). The present study includes the experience under the following three major categories of contracts for male and female lives separately:

1. Life income settlements—with a guaranteed period or a refund provision—arising out of death claims, subdivided into
  - a) Payee elections
  - b) Nonpayee elections
2. Life income settlements—with a guaranteed period or a refund provision—arising out of the maturity of endowment or retirement income policies or the cash surrender of insurance or annuity contracts, subdivided into
  - a) Other than pension trust issues
  - b) Pension trust issues
3. Maturities of deferred annuity contracts (including maturities at optional retirement dates) with a death benefit prior to maturity and a cash value at maturity substantially equal to the reserve, subdivided into
  - a) Annuities with a guaranteed period or a refund provision, further subdivided into (i) other than pension trust issues and (ii) pension trust issues
  - b) Annuities without a guaranteed period or a refund provision, further subdivided into (i) other than pension trust issues and (ii) pension trust issues

The reader is referred to *TSA 1951 Reports*, pp. 19-20, where particulars will be found regarding the types of cases included under each of the above categories, except that life income settlements and deferred annuity maturities arising out of pension trust business are shown separately in this report for the first time.

As in the previous report, expected deaths were calculated on the 1937 Standard Annuity Table (using a five-year age setback of the male table as the female table) and also on the Annuity Table for 1949 Ultimate.

The names of the 18 contributing companies and their proportionate contributions to the three major categories of contracts in this study are given in Table A of the Appendix. The companies were requested to omit

from their contributions data on elections arising from death claims where the type of election was unknown.

EXPERIENCE UNDER LIFE INCOME SETTLEMENTS  
ARISING FROM DEATH CLAIMS

The experience under life income settlements arising from death claims presented here is based on 472,637 contract years of exposure involving \$260,786,403 of annual income; 9,101 contracts involving \$5,259,001 annual income were terminated by death. An analysis of the exposures and of the deaths by sex, type of election, and duration is given in Table B of the Appendix. It should be noted that females accounted for 97% of the total exposure by amounts of annual income. Among females, 50% of the exposure (by amounts of annual income) was on payee elections and 50% on nonpayee elections. Among males, the corresponding figures were 35% and 65%. Attention is also called to the substantial proportion of the experience in the "certain" period. This reflects the fact that 40% of the total exposure (by amounts of annual income) was in the first five durations, and that a substantial proportion of the exposure in the sixth and subsequent durations was also in the "certain" period, which generally runs for ten or twenty years.

The mortality ratios on the 1937 Standard Annuity Table for males and females are presented in Tables 1 and 2, respectively. The mortality ratios are given separately for payee and nonpayee elections by ten-year attained age groups, and for durations 1-2, 3-5, 6 and over, and all durations combined. Corresponding mortality ratios on the Annuity Table for 1949 Ultimate (*a*-1949 Ultimate Table) are shown in Tables 3 and 4 for males and females, respectively. The details of the experience by ten-year attained age groups for each of the first five durations and for durations 6 and over are set forth in Table E of the Appendix.

The main features of the experience as brought out in Tables 1, 2, 3, and 4 may be summarized as follows:

1. *Mortality Ratios on 1937 Standard Annuity Table*

On the 1937 Standard Annuity Table, the mortality ratios by sex for the aggregate experience under payee and nonpayee elections combined were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	117%	125%
Female.....	86%	87%

The aggregate mortality ratios for female payee elections were significantly below 85% of the 1937 Standard Annuity Table, both by num-

TABLE 1  
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Payee Elections								
Under 50.....	*	*	*	114%	*	*	*	149%
50-59.....	*	*	136%	83	*	*	103%	75
60-69.....	*	*	79	70	*	*	114	89
70-79.....	*	*	111	109	*	*	123	136
80 and over.....	*	*	134	124	*	*	122	116
All.....	*	75%	112%	99%	*	125%	122%	114%
Nonpayee Elections								
Under 50.....	*	*	93%	87%	*	*	97%	95%
50-59.....	*	257%	179	175	*	382%	211	213
60-69.....	*	*	108	117	*	*	62	71
70-79.....	*	215	143	139	*	180	174	146
80 and over.....	*	*	119	147	*	*	154	192
All.....	111%	177%	128%	133%	68%	203%	131%	135%
Payee and Nonpayee Elections Combined								
Under 50.....	*	*	96%	93%	*	*	119%	111%
50-59.....	*	144%	166	141	*	223%	173	160
60-69.....	*	83	96	95	*	58	81	78
70-79.....	*	167	124	121	*	216	142	140
80 and over.....	*	*	127	135	*	*	134	148
All.....	79%	122%	121%	117%	56%	166%	126%	125%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 2  
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Payee Elections								
Under 50.....	*	75%	87%	72%	*	110%	89%	79%
50-59.....	43%	52	67	59	58%	61	77	69
60-69.....	38	75	67	65	42	73	69	66
70-79.....	53	73	90	85	59	72	90	84
80 and over.....	75	89	126	122	48	99	120	115
All.....	45%	72%	88%	81%	50%	74%	89%	82%
Nonpayee Elections								
Under 50.....	93%	86%	103%	97%	113%	71%	100%	96%
50-59.....	51	83	76	72	65	77	76	74
60-69.....	60	67	74	70	60	66	75	70
70-79.....	102	98	95	96	80	99	95	94
80 and over.....	105	114	128	125	110	174	131	134
All.....	75%	85%	96%	91%	73%	90%	97%	92%
Payee and Nonpayee Elections Combined								
Under 50.....	73%	82%	98%	88%	83%	85%	97%	90%
50-59.....	47	67	72	66	62	69	77	71
60-69.....	48	72	69	67	51	70	72	68
70-79.....	77	83	92	89	70	85	92	89
80 and over.....	95	102	127	124	90	141	126	125
All.....	60%	78%	91%	86%	62%	82%	93%	87%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 3  
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Payee Elections								
Under 50.....	*	*	*	<i>234%</i>	*	*	*	<i>267%</i>
50-59.....	*	*	<i>174%</i>	<i>108</i>	*	*	<i>133%</i>	<i>97</i>
60-69.....	*	*	<i>97</i>	<i>86</i>	*	*	<i>141</i>	<i>111</i>
70-79.....	*	*	<i>124</i>	<i>121</i>	*	*	<i>137</i>	<i>152</i>
80 and over.....	*	*	<i>123</i>	<i>114</i>	*	*	<i>110</i>	<i>106</i>
All.....	*	<i>93%</i>	<i>124%</i>	<i>113%</i>	*	<i>156%</i>	<i>135%</i>	<i>130%</i>
Nonpayee Elections								
Under 50.....	*	*	<i>171%</i>	<i>172%</i>	*	*	<i>176%</i>	<i>175%</i>
50-59.....	*	<i>338%</i>	<i>232</i>	<i>228</i>	*	<i>503%</i>	<i>276</i>	<i>279</i>
60-69.....	*	*	<i>134</i>	<i>144</i>	*	*	<i>77</i>	<i>88</i>
70-79.....	*	<i>236</i>	<i>160</i>	<i>155</i>	*	<i>203</i>	<i>196</i>	<i>164</i>
80 and over.....	*	*	<i>109</i>	<i>135</i>	*	*	<i>142</i>	<i>177</i>
All.....	<i>142%</i>	<i>233%</i>	<i>153%</i>	<i>162%</i>	<i>86%</i>	<i>258%</i>	<i>159%</i>	<i>166%</i>
Payee and Nonpayee Elections Combined								
Under 50.....	*	*	<i>176%</i>	<i>186%</i>	*	*	<i>213%</i>	<i>203%</i>
50-59.....	*	<i>188%</i>	<i>214</i>	<i>183</i>	*	<i>291%</i>	<i>226</i>	<i>208</i>
60-69.....	*	<i>101</i>	<i>118</i>	<i>116</i>	*	<i>72</i>	<i>100</i>	<i>97</i>
70-79.....	*	<i>183</i>	<i>138</i>	<i>135</i>	*	<i>242</i>	<i>159</i>	<i>157</i>
80 and over.....	*	*	<i>117</i>	<i>124</i>	*	*	<i>122</i>	<i>135</i>
All.....	<i>100%</i>	<i>156%</i>	<i>139%</i>	<i>138%</i>	<i>71%</i>	<i>209%</i>	<i>147%</i>	<i>149%</i>

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

**TABLE 4**  
**LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES**  
**EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES**  
**MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE**

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Payee Elections								
Under 50 . . . . .	<i>*</i>	<i>166%</i>	<i>189%</i>	<i>157%</i>	<i>*</i>	<i>236%</i>	<i>191%</i>	<i>170%</i>
50-59 . . . . .	<i>84%</i>	101	130	114	<i>112%</i>	118	149	132
60-69 . . . . .	60	119	104	102	66	116	109	104
70-79 . . . . .	65	88	106	101	71	87	107	100
80 and over . . . . .	<i>67</i>	79	109	106	<i>47</i>	89	104	101
All . . . . .	<i>66%</i>	<i>101%</i>	<i>108%</i>	<i>103%</i>	<i>72%</i>	<i>102%</i>	<i>108%</i>	<i>104%</i>
Nonpayee Elections								
Under 50 . . . . .	<i>206%</i>	<i>191%</i>	<i>223%</i>	<i>212%</i>	<i>244%</i>	<i>154%</i>	<i>216%</i>	<i>206%</i>
50-59 . . . . .	99	161	148	140	126	149	147	143
60-69 . . . . .	96	108	116	111	95	105	119	111
70-79 . . . . .	123	116	112	114	96	118	113	112
80 and over . . . . .	<i>91</i>	99	107	106	95	153	111	114
All . . . . .	<i>108%</i>	<i>119%</i>	<i>115%</i>	<i>115%</i>	<i>104%</i>	<i>123%</i>	<i>116%</i>	<i>116%</i>
Payee and Nonpayee Elections Combined								
Under 50 . . . . .	<i>161%</i>	<i>182%</i>	<i>212%</i>	<i>193%</i>	<i>178%</i>	<i>184%</i>	<i>208%</i>	<i>195%</i>
50-59 . . . . .	92	130	139	127	120	134	148	138
60-69 . . . . .	76	114	109	106	81	111	113	107
70-79 . . . . .	93	100	109	106	85	102	109	105
80 and over . . . . .	<i>83</i>	90	108	106	79	126	108	108
All . . . . .	<i>88%</i>	<i>109%</i>	<i>111%</i>	<i>108%</i>	<i>89%</i>	<i>113%</i>	<i>112%</i>	<i>109%</i>

\* Less than 10 contracts terminated by death.

*None*: Italics indicate less than 50 but not less than 10 contracts terminated by death.

ber of contracts and by amounts of annual income. The aggregate mortality ratios for female nonpayee elections were significantly below 95% of the 1937 Standard Annuity Table. For males, only the payee elections showed an aggregate mortality ratio (by number of contracts) below 100% of the 1937 Standard Annuity Table, chiefly because of low mortality ratios in the important age range from 50 to 69.

### 2. *Mortality Ratios on Annuity Table for 1949*

On the Annuity Table for 1949 Ultimate, the mortality ratios by sex for the aggregate experience under payee and nonpayee elections combined were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	138%	149%
Female.....	108%	109%

Only for female payee elections at ages 60 and over was the aggregate mortality ratio significantly below 110% of the Annuity Table for 1949. For male payee elections at the advanced ages, for which the aggregate mortality ratios had been below 100% of the Annuity Table for 1949 in the experience between 1945 and 1950 anniversaries, the mortality ratios in the present study were generally in excess of 100% of the Annuity Table for 1949.

### 3. *Mortality by Sex*

On the 1937 Standard Annuity Table, the mortality ratios for females were markedly lower than for males in most classifications. On the Annuity Table for 1949, the mortality ratios were also generally lower for females than for males.

### 4. *Payee vs. Nonpayee Elections Mortality*

As in previous studies, the experience under payee elections was materially lower than under nonpayee elections. This difference in mortality was much more marked for males than for females. Specifically, the mortality ratios for the over-all experience on male nonpayee elections were from about 35 to 50 percentage points higher than those on payee elections by number of contracts, and, depending upon the mortality table used, from about 20 to 35 percentage points higher by amounts of annual income. For females, the mortality differentials were only 10 or 12 percentage points. In an earlier report (*TASA XLVIII*, 146) it had been suggested that the rather high mortality under male nonpayee elections possibly was due to the inclusion of a sizable proportion of impaired lives.

### 5. *Select Mortality*

In the case of male nonpayee elections, the mortality in the first and second durations was somewhat lower than in subsequent durations. On female payee elections, the mortality in the first and second durations (all ages combined) was from about 30 to 40 percentage points lower than in subsequent durations, almost identical with the figures in the previous report. On female nonpayee elections, the mortality in the first and second durations (all ages combined) was only from about 10 to 20 percentage points lower than in subsequent durations. This corroborates earlier findings of an appreciable degree of temporary selection on female payee elections, even when allowance is made for the possibility that part of the lower mortality in the first duration could be due to the automatic exclusion of those deaths among payees which occurred between the date of death of the insured and the date on which the life income settlement was to become effective (*TASA XLVIII*, 150).

### 6. *Mortality by Number and by Amounts*

For male payee elections, mortality ratios by number of contracts were generally lower than by amounts of annual income. In the case of male nonpayee elections and for both payee and nonpayee elections among females, there was relatively little difference between the mortality ratios by number of contracts and amounts of annual income.

#### EXPERIENCE UNDER LIFE INCOME SETTLEMENT OPTIONS ARISING FROM MATURITIES AND SURRENDERS

The experience under life income settlements arising from maturities and surrenders here presented is based on 336,313 contract years of exposure involving \$157,826,755 of annual income; 7,652 contracts involving \$3,766,156 annual income were terminated by death. An analysis of the exposures and of the deaths by sex, duration, and separately for pension trust issues and for other than pension trust issues is given in Table C of the Appendix. In sharp contrast to the very small proportion (3%) of male lives under life income settlements arising from death claims, the proportion of male lives under life income settlements arising from maturities and surrenders was 61% (of the total exposure by amounts of annual income). Only 4% of the exposure was on pension trust issues, the overwhelming proportion of which (94%) was on male lives. It is also noteworthy that the experience under life income settlements arising from maturities and surrenders was even more heavily concentrated in the "certain" period than that under the life income settlements arising from death claims. In the case of life income settlements arising from maturities and surrenders, some 58% of the total exposure (by



amounts of annual income) was in the first five durations, compared with 40% for life income settlements arising from death claims.

The mortality ratios on the 1937 Standard Annuity Table are presented in Tables 5 and 6, separately for pension trust issues and for other than pension trust issues, and separately for males and females by ten-year attained age groups, and for durations 1-2, 3-5, 6 and over, and all durations combined. Corresponding mortality ratios on the Annuity Table for 1949 Ultimate (*a*-1949 Ultimate Table) are given in Tables 7 and 8 for males and females, respectively. The details of the experience by ten-year attained age groups for each of the first five durations and for durations 6 and over are given in Table F of the Appendix.

The main features of the experience as brought out in Tables 5, 6, 7, and 8 may be summarized as follows:

### 1. *Mortality Ratios on 1937 Standard Annuity Table*

On the 1937 Standard Annuity Table, the mortality ratios by sex for the aggregate experience were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	83%	81%
Female.....	64%	64%

On other than pension trust issues most of the mortality ratios in the age range 50 to 69 were below 75% of the 1937 Standard Annuity Table. For females in this age range the mortality ratios on other than pension trust issues were significantly below 60% of this Table.

### 2. *Mortality Ratios on Annuity Table for 1949*

On the Annuity Table for 1949 Ultimate, the mortality ratios by sex for the aggregate experience were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	96%	95%
Female.....	87%	86%

For all durations combined, only the female experience in the age range from 60 to 69 was below 85% of the Annuity Table for 1949 Ultimate.

### 3. *Mortality by Sex*

On the 1937 Standard Annuity Table, the mortality ratios for females were lower than for males in most classifications. On the Annuity Table for 1949, the mortality ratios for females were also usually lower than for males but the differences were generally less than on the 1937 Standard Annuity Table.

TABLE 5  
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES  
AND SURRENDERS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Other Than Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	66%	74%	63%	69%	57%	78%	77%	71%
60-69.....	69	71	79	73	70	71	78	72
70-79.....	84	88	88	87	87	90	85	86
80 and over.....	68	102	110	108	74	79	114	108
All.....	72%	77%	90%	82%	72%	76%	88%	81%
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	290%	*	*	302%	448%	*	*	376%
60-69.....	89	99%	*	92	78	99%	*	86
70-79.....	77	97	113%	91	64	87	101%	78
80 and over.....	*	*	*	*	*	*	*	*
All.....	89%	101%	113%	95%	78%	93%	114%	85%
Other Than Pension Trust and Pension Trust Issues Combined								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	75%	77%	63%	73%	65%	78%	77%	73%
60-69.....	73	73	79	74	71	73	79	74
70-79.....	83	88	88	87	83	89	85	86
80 and over.....	67	101	110	108	72	77	113	107
All.....	75%	78%	90%	83%	73%	77%	88%	81%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 6  
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES  
AND SURRENDERS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Other Than Pension Trust Issues								
Under 50.....	*	*	<i>119%</i>	<i>80%</i>	*	*	<i>96%</i>	<i>63%</i>
50-59.....	<i>41%</i>	<i>54%</i>	55	50	<i>34%</i>	<i>52%</i>	46	45
60-69.....	46	54	52	51	43	51	53	50
70-79.....	92	68	73	73	108	75	74	76
80 and over.....	*	<i>100</i>	102	102	*	77	100	101
All.....	<i>50%</i>	<i>57%</i>	<i>70%</i>	<i>64%</i>	<i>52%</i>	<i>56%</i>	<i>71%</i>	<i>64%</i>
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	*	*	*	*	*	*	*	*
70-79.....	*	*	*	*	*	*	*	*
80 and over.....	*	*	*	*	*	*	*	*
All.....	*	*	*	<i>51%</i>	*	*	*	<i>38%</i>
Other Than Pension Trust and Pension Trust Issues Combined								
Under 50.....	*	*	<i>119%</i>	<i>80%</i>	*	*	<i>96%</i>	<i>63%</i>
50-59.....	<i>43%</i>	<i>54%</i>	55	51	<i>34%</i>	<i>52%</i>	46	45
60-69.....	46	54	52	51	43	51	53	50
70-79.....	89	69	73	73	104	74	74	75
80 and over.....	*	<i>100</i>	102	102	*	77	100	101
All.....	<i>50%</i>	<i>57%</i>	<i>70%</i>	<i>64%</i>	<i>51%</i>	<i>56%</i>	<i>70%</i>	<i>64%</i>

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 7  
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES  
AND SURRENDERS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Other Than Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	85%	94%	81%	88%	73%	99%	99%	90%
60-69.....	86	87	98	90	87	87	97	89
70-79.....	95	98	99	98	99	101	96	97
80 and over.....	66	98	106	103	71	76	109	104
All.....	88%	91%	100%	95%	88%	91%	99%	94%
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	377%	*	*	394%	569%	*	*	477%
60-69.....	110	121%	*	113	96	121%	*	106
70-79.....	90	111	129%	105	74	100	116%	90
80 and over.....	*	*	*	*	*	*	*	*
All.....	109%	121%	131%	114%	94%	111%	131%	102%
Other Than Pension Trust and Pension Trust Issues Combined								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	96%	98%	81%	93%	83%	100%	98%	94%
60-69.....	90	89	98	92	88	89	98	91
70-79.....	94	99	99	99	94	100	97	97
80 and over.....	65	97	106	103	70	74	109	103
All.....	91%	93%	100%	96%	89%	92%	99%	95%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 8  
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES  
AND SURRENDERS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Other Than Pension Trust Issues								
Under 50.....	*	*	257%	182%	*	*	205%	137%
50-59.....	<i>79%</i>	<i>103%</i>	106	97	<i>66%</i>	<i>99%</i>	88	86
60-69.....	75	84	81	81	71	79	82	79
70-79.....	113	83	88	88	134	91	89	91
80 and over.....	*	92	91	91	*	71	88	90
All.....	81%	86%	88%	87%	83%	84%	87%	86%
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	*	*	*	*	*	*	*	*
70-79.....	*	*	*	*	*	*	*	*
80 and over.....	*	*	*	*	*	*	*	*
All.....	*	*	*	75%	*	*	*	56%
Other Than Pension Trust and Pension Trust Issues Combined								
Under 50.....	*	*	257%	181%	*	*	205%	137%
50-59.....	<i>83%</i>	<i>102%</i>	106	98	<i>67%</i>	<i>99%</i>	88	86
60-69.....	75	84	81	81	70	80	82	79
70-79.....	111	84	88	88	129	90	89	91
80 and over.....	*	92	91	91	*	71	88	90
All.....	81%	86%	88%	87%	82%	84%	87%	86%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

#### 4. *Select Mortality*

The mortality in the first and second durations (all ages combined) under life income settlements arising from maturities and surrenders was about 15 or 20 percentage points lower than in the sixth and subsequent durations on the 1937 Standard Annuity Table and about 5 or 10 percentage points lower on the Annuity Table for 1949 Ultimate.

#### 5. *Mortality by Number and by Amounts*

On other than pension trust issues the mortality ratios by amounts of annual income were not materially different from those by number of contracts. In the relatively small experience on pension trust issues the mortality ratios by amounts of annual income were generally somewhat lower than those by number of contracts.

#### 6. *Pension Trust vs. Other Than Pension Trust Issues*

At ages under 70 the mortality ratios on pension trust issues were significantly higher than on other than pension trust issues. Very high mortality was experienced on pension trust contracts at attained ages 50–59. This high mortality may be due to the inclusion of an appreciable proportion of impaired lives who retired early because of a disability.

#### 7. *Mortality According to Age at Which Life Income Began*

To bring out the mortality under life income settlements arising from maturities and surrenders according to the age at which life income began, the experience during the first five durations was retabulated for age groups at issue under 60, 60–65, and 66 and over. Mortality ratios on the 1937 Standard Annuity Table are shown in Table 9 and on the Annuity Table for 1949 Ultimate in Table 10.

These tables show the relatively high mortality referred to above in the first five contract years under pension trust settlements where payments began at ages under 60. On other than pension trust issues the mortality on contracts where payments began between the ages of 60 and 65 was generally lower than on contracts where payments began at ages under 60 or at ages 66 and over, contrary to the experience between 1945 and 1950 anniversaries.

#### 8. *Settlements Arising from Maturities and Surrenders Compared with Payee Election Settlements Arising from Death Claims*

A comparison of the experience under life income settlements arising from maturities and surrenders with that under payee election life income settlements arising from death claims is given in Table 11. This table shows the mortality ratios on the Annuity Table for 1949 Ultimate only,

TABLE 9  
 LIFE INCOME SETTLEMENTS ARISING FROM  
 MATURITIES AND SURRENDERS  
 EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
 ACCORDING TO AGE AT WHICH LIFE INCOME BEGAN  
 Durations 1-5 Combined  
 MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE  
 Number of Deaths† in Parentheses

AGE AT WHICH LIFE INCOME BEGAN	BY NUMBER OF CONTRACTS		BY AMOUNTS OF ANNUAL INCOME	
	Males	Females	Males	Females
Other Than Pension Trust Issues				
Under 60.....	72% ( 192)	50% (130)	69%	45%
60-65.....	70 (1129)	50 (424)	71	48
66 and over.....	84 ( 816)	69 (201)	84	77
All.....	75% (2137)	54% (755)	75%	54%
Pension Trust Issues				
Under 60.....	217% ( 17)	286% ( 2)	230%	120%
60-65.....	97 ( 141)	48 ( 6)	82	48
66 and over.....	84 ( 142)	55 ( 5)	80	31
All.....	93% ( 300)	58% ( 13)	83%	42%
Other Than Pension Trust and Pen- sion Trust Issues Combined				
Under 60.....	76% ( 209)	51% (132)	72%	45%
60-65.....	72 (1270)	50 (430)	72	48
66 and over.....	84 ( 958)	69 (206)	83	76
All.....	77% (2437)	54% (768)	75%	54%

† Number of contracts terminated by death.

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**TABLE 10**  
**LIFE INCOME SETTLEMENTS ARISING FROM**  
**MATURITIES AND SURRENDERS**  
**EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES**  
**ACCORDING TO AGE AT WHICH LIFE INCOME BEGAN**  
**Durations 1-5 Combined**  
**MORTALITY RATIOS ON a-1949 ULTIMATE TABLE**  
**Number of Deaths† in Parentheses**

AGE AT WHICH LIFE INCOME BEGAN	BY NUMBER OF CONTRACTS		BY AMOUNTS OF ANNUAL INCOME	
	Males	Females	Males	Females
Other Than Pension Trust Issues				
Under 60 .....	93% (192)	96% (130)	88%	85%
60-65 .....	87 (1129)	80 (424)	87	77
66 and over.....	94 (816)	87 (201)	94	96
All.....	90% (2137)	84% (755)	90%	84%
Pension Trust Issues				
Under 60 .....	277% (17)	455% (2)	290%	239%
60-65 .....	120 (141)	76 (6)	102	76
66 and over.....	100 (142)	75 (5)	94	42
All.....	113% (300)	87% (13)	100%	62%
Other Than Pension Trust and Pen- sion Trust Issues Combined				
Under 60 .....	99% (209)	97% (132)	92%	85%
60-65 .....	89 (1270)	80 (430)	88	77
66 and over.....	95 (958)	87 (206)	94	94
All.....	92% (2437)	84% (768)	91%	83%

† Number of contracts terminated by death.



**TABLE 11**  
**COMPARISON OF**  
**(A) LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS**  
**WITH**  
**(B) PAYEE ELECTION LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS**  
**EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES**  
**MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE**

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Males		Females		Males		Females	
	A	B	A	B	A	B	A	B
Durations 1-5								
Under 50.....	*	*	*	<i>125%</i>	*	*	*	<i>153%</i>
50-59.....	97%	*	94%	94	93%	*	85%	115
60-69.....	90	*	80	96	89	*	76	97
70-79.....	97	<i>110%</i>	92	80	98	<i>196%</i>	102	81
80 and over.....	88	*	<i>99</i>	76	73	*	<i>118</i>	77
All.....	92%	77%	84%	88%	91%	117%	83%	91%
Durations 6 and over								
Under 50.....	*	*	<i>257%</i>	<i>189%</i>	*	*	<i>205%</i>	<i>191%</i>
50-59.....	<i>81%</i>	<i>174%</i>	106	130	<i>98%</i>	<i>133%</i>	88	149
60-69.....	98	97	81	104	98	141	82	109
70-79.....	99	<i>124</i>	88	106	97	<i>137</i>	89	107
80 and over.....	106	<i>123</i>	91	109	109	<i>110</i>	88	104
All.....	100%	124%	88%	108%	99%	135%	87%	108%
All Durations								
Under 50.....	*	<i>234%</i>	<i>181%</i>	<i>157%</i>	*	<i>267%</i>	<i>137%</i>	<i>170%</i>
50-59.....	93%	<i>108</i>	98	114	94%	97	86	132
60-69.....	92	<i>86</i>	81	102	91	<i>111</i>	79	104
70-79.....	99	121	88	101	97	152	91	100
80 and over.....	103	<i>114</i>	91	106	103	<i>106</i>	90	101
All.....	96%	113%	87%	103%	95%	130%	86%	104%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

by attained age groups for the first five durations, for the sixth and subsequent durations, and for all durations combined.

The figures in Table 11 indicate that the mortality ratios for life income settlements arising from maturities and surrenders were generally lower than for payee election life income settlements arising from death claims, the differential being greater in the sixth and subsequent durations than in the first five durations.

#### COMPARISON WITH PREVIOUS EXPERIENCE UNDER LIFE INCOME SETTLEMENT OPTIONS

A comparison of the experience under life income settlement options between 1945 and 1950 anniversaries with that between 1950 and 1955 anniversaries is given in Table 12. This table shows the mortality ratios on the Annuity Table for 1949 Ultimate, by broad attained age groups for the first five durations, the sixth and subsequent durations, and all durations combined, separately for payee elections (including life income settlements arising from maturities and surrenders) and nonpayee elections.

The main features of the comparisons in Table 12 may be summarized as follows:

1. Under male payee elections there was a decrease in the aggregate mortality ratios both by number of contracts and by amounts of annual income. This reflected chiefly decreases in the mortality ratios at attained ages 60-69. These decreases occurred, however, for the most part only under settlements arising from maturities and surrenders; the mortality ratios for male payee elections arising from death claims generally increased. The mortality ratios under female payee elections also decreased generally, by number of contracts and by amounts of annual income, both under payee elections arising from death claims and under settlements arising from maturities and surrenders.

2. From the period 1945-50 to the period 1950-55 there was a decrease in the aggregate mortality ratio under male nonpayee elections by amounts of annual income. This reflected chiefly the appreciably lower mortality ratio in the age group 60-69. There was, however, a slight increase in the aggregate mortality ratio under male nonpayee elections by number of contracts. Under female nonpayee elections, there was a decrease in the aggregate mortality ratio, both by number of contracts and by amounts of annual income, mainly due to the decrease in mortality ratios in the sixth and subsequent durations.

Some few data are available as to the trend of mortality under life income settlements over a longer period of years. Table 13 shows the over-

**TABLE 12**  
**COMPARISON OF EXPERIENCES UNDER LIFE INCOME SETTLEMENT OPTIONS**  
**1945-1950 EXPERIENCE WITH 1950-1955 EXPERIENCE**  
**MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE**

	ATTAINED AGES	DURATIONS 1-5		DURATIONS 6 AND OVER		ALL DURATIONS	
		1945-50	1950-55	1945-50	1950-55	1945-50	1950-55
Male Payee Elections Arising from Maturities, Surrenders and Death Claims							
By Number of Contracts	Under 60	87%	97%	117%	98%	93%	97%
	60-69	102	90	105	98	102	92
	70 and over	87	96	108	102	102	100
	All	96%	92%	108%	101%	102%	97%
By Amounts of Annual Income	Under 60	78%	93%	89%	111%	79%	97%
	60-69	111	89	104	99	110	91
	70 and over	82	96	112	100	103	99
	All	101%	91%	110%	100%	105%	96%
Male Nonpayee Elections Arising from Death Claims							
By Number of Contracts	Under 60	209%	203%	280%	209%	253%	207%
	60-69	137	180	201	134	168	144
	70 and over	186	191	86	133	111	145
	All	171%	192%	154%	153%	160%	162%
By Amounts of Annual Income	Under 60	118%	241%	237%	240%	185%	240%
	60-69	206	121	215	77	209	88
	70 and over	269	169	117	170	159	169
	All	205%	183%	162%	159%	180%	166%
Female Payee Elections Arising from Maturities, Surrenders and Death Claims							
By Number of Contracts	Under 60	119%	96%	145%	132%	129%	113%
	60-69	101	87	109	96	105	92
	70 and over	89	83	110	100	105	98
	All	101%	87%	112%	100%	108%	97%
By Amounts of Annual Income	Under 60	112%	107%	150%	143%	126%	123%
	60-69	104	87	114	101	109	94
	70 and over	90	85	106	100	102	98
	All	101%	88%	111%	102%	107%	98%

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 12—Continued

	ATTAINED AGES	DURATIONS 1-5		DURATIONS 6 AND OVER		ALL DURATIONS	
		1945-50	1950-55	1945-50	1950-55	1945-50	1950-55
		Female Nonpayee Elections Arising from Death Claims					
By Number of Contracts	Under 60	121%	144%	140%	162%	130%	154%
	60-69	111	102	127	116	121	111
	70 and over	113	112	129	110	125	110
	All	114%	114%	129%	115%	124%	115%
By Amounts of Annual Income	Under 60	128%	148%	159%	159%	142%	153%
	60-69	116	101	124	119	121	111
	70 and over	111	115	126	112	122	113
	All	116%	115%	129%	116%	124%	116%

TABLE 13

TREND OF MORTALITY UNDER LIFE INCOME SETTLEMENTS  
MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

Sex	EXPERIENCE BETWEEN ANNIVERSARIES				
	1924 and 1934*	1934 and 1940*	1940 and 1945*	1945 and 1950*	1950 and 1955
By Number of Contracts					
Males.....		98%	95%	89%	85%
Females.....		88	87	82	80
Both Sexes	102%	90%	89%	84%	81%
By Amounts of Annual Income					
Males.....		95%	97%	92%	83%
Females.....		96	87	84	82
Both Sexes	105%	96%	90%	86%	83%

\* 1924-1934 TASA XLII, 173-177; 1934-1940 TASA XLII, 173-177; 1940-1945 TASA XLVIII, 141; 1945-1950 TSA 1951 Reports, 35.

all mortality ratios on the 1937 Standard Annuity Table developed in the four previous studies compared with the corresponding mortality ratios in the present study.

The figures in Table 13 indicate clearly that mortality under life income settlements has been decreasing over the years. It should be noted that the use of the 1937 Standard Annuity Table as a basis for calculating expected deaths tends to produce an understatement in the long-term decrease in mortality because the more recent studies include larger proportions of the exposure in the sixth and subsequent durations and at the older ages, where the mortality ratios on the 1937 Standard Annuity Table are higher.

#### EXPERIENCE UNDER MATURED DEFERRED ANNUITIES

The experience under matured deferred annuity contracts here presented is based on 513,041 contract years of exposure involving \$188,745,-895 of annual income; 13,884 contracts involving \$5,296,112 annual income were terminated by death. An analysis of the exposures and of the deaths by sex, type of annuity (refund or nonrefund), and duration is given in Table D of the Appendix. It should be noted that males accounted for 46% of the total exposure by amounts of annual income. Among males, 89% of the exposure (by amounts of annual income) arose from contracts with a guaranteed period or a refund provision. Among females, the corresponding figure was 75%. About 52% of the total exposure (by amounts of annual income) was concentrated in the first five durations. Pension trust issues accounted for 11% of the exposure (by amounts of annual income) under contracts with a guaranteed period or refund provision on male lives; however, they comprised an almost negligible part of the experience under contracts without a guaranteed period or refund provision on male lives and under all contracts on female lives.

A summary of the experience under matured deferred annuities is given in Table 14. A detailed comparison of the experience on male lives under pension trust and under other than pension trust issues on contracts with a guaranteed period or refund provision is shown in Tables 15 and 16.

Tables 15 and 16 indicate that, as in the case of life income settlements arising from maturities and surrenders, pension trust issues at attained ages under 60 experienced rather high mortality. The experience under pension trust issues at attained ages 70-79 was also appreciably higher than under other than pension trust issues. Because of the relatively small volume of pension trust issues, the experience under pension trust and other than pension trust issues was combined for the remainder of this analysis.

**TABLE 14**  
**MATURED DEFERRED ANNUITIES**  
**EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES**

	BY NUMBER OF CONTRACTS		BY AMOUNTS OF ANNUAL INCOME	
	Males	Females	Males	Females
Mortality Ratios on 1937 Standard Annuity Table Number of Deaths† in Parentheses				
<i>With</i> a Guaranteed Period or Refund Provision				
Other Than Pension Trust . . . . .	93% (4349)	82% (6066)	92%	80%
Pension Trust . . . . .	102% (687)	46% (18)	89%	80%
<i>Without</i> a Guaranteed Period or Refund Provision				
Other Than Pension Trust . . . . .	80% (608)	76% (2129)	68%	70%
Pension Trust . . . . .	98% (25)	30% (2)	87%	43%
Mortality Ratios on <i>a</i> -1949 Ultimate Table Number of Deaths† in Parentheses				
<i>With</i> a Guaranteed Period or Refund Provision				
Other Than Pension Trust . . . . .	107% (4349)	105% (6066)	106%	104%
Pension Trust . . . . .	122% (687)	66% (18)	104%	114%
<i>Without</i> a Guaranteed Period or Refund Provision				
Other Than Pension Trust . . . . .	91% (608)	96% (2129)	78%	91%
Pension Trust . . . . .	116% (25)	45% (2)	103%	61%

† Number of contracts terminated by death.

TABLE 15  
 MATURED DEFERRED ANNUITIES WITH A GUARANTEED  
 PERIOD OR REFUND PROVISION—MALE LIVES  
 EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
 MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
	Other Than Pension Trust Issues							
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	121%	109%	54%	101%	80%	97%	98%	92%
60-69.....	103	87	84	91	100	98	87	96
70-79.....	80	95	94	93	67	92	88	86
80 and over.....	*	*	102	100	*	*	109	108
All.....	99%	91%	93%	93%	88%	96%	91%	92%
	Pension Trust Issues							
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	308%	1131%	*	539%	635%	371%	*	546%
60-69.....	95	91	*	94	77	83	*	80
70-79.....	66	111	124%	102	94	66	124%	95
80 and over.....	*	*	*	*	*	*	*	*
All.....	92%	104%	126%	102%	85%	77%	123%	89%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 16  
 MATURED DEFERRED ANNUITIES WITH A GUARANTEED  
 PERIOD OR REFUND PROVISION—MALE LIVES  
 EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
 MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
	Other Than Pension Trust Issues							
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	156%	138%	68%	129%	103%	124%	125%	117%
60-69.....	128	107	104	112	125	121	107	118
70-79.....	94	109	105	104	78	106	98	97
80 and over.....	*	*	99	98	*	*	107	106
All.....	121%	109%	103%	107%	108%	115%	101%	106%
	Pension Trust Issues							
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	396%	1473%	*	696%	800%	469%	*	688%
60-69.....	118	110	*	115	95	101	*	98
70-79.....	77	127	142%	117	109	75	141%	109
80 and over.....	*	*	*	*	*	*	*	*
All.....	112%	124%	144%	122%	102%	91%	138%	104%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.



In Tables 17 and 18 are presented the mortality ratios on the 1937 Standard Annuity Table for contracts with and without a guaranteed period or refund provision for males and females, respectively, on the basis just indicated. The mortality ratios are given by ten-year attained age groups and for durations 1-2, 3-5, 6 and over, and all durations combined. Corresponding mortality ratios on the Annuity Table for 1949 Ultimate are shown in Tables 19 and 20 for males and females, respectively. The details of the experience by ten-year attained age groups for each of the first five durations and for durations 6 and over are set forth in Table G of the Appendix.

The main features of the experience as brought out in Tables 17, 18, 19, and 20 may be summarized as follows:

1. *Mortality Ratios on 1937 Standard Annuity Table*

On the 1937 Standard Annuity Table, the mortality ratios by sex for the aggregate experience under deferred annuities with and without a guaranteed period or refund provision were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	93%	89%
Female.....	80%	78%

For females the aggregate mortality ratio by amounts of annual income was 70% under deferred nonrefund annuities and 80% under deferred refund annuities, while for males the corresponding ratios were 68% and 92%, respectively. The mortality ratios by number of contracts were somewhat higher. As in the 1945-50 experience, the mortality ratios for females were particularly low at ages 60-69.

2. *Mortality Ratios on Annuity Table for 1949*

On the Annuity Table for 1949 Ultimate, the mortality ratios by sex for the aggregate experience under deferred annuities with and without a guaranteed period or refund provision were:

	By Number of Contracts	By Amounts of Annual Income
Male.....	107%	103%
Female.....	102%	100%

For females the aggregate mortality ratio by amounts of annual income was 91% under deferred nonrefund annuities and 104% under deferred refund annuities, while for males the corresponding ratios were 78% and 106%, respectively. The mortality ratios by number of contracts were somewhat higher.

TABLE 17  
 MATURED DEFERRED ANNUITIES—MALE LIVES  
 EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
 MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
<i>Contracts with a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	135%	132%	54%	117%	90%	99%	98%	96%
60-69.....	101	88	84	92	95	96	87	94
70-79.....	75	98	95	94	74	88	90	87
80 and over.....	*	*	102	101	*	*	109	107
All.....	97%	93%	94%	94%	88%	93%	92%	92%
<i>Contracts without a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	55%	79%	60%	67%	36%	59%	37%	47%
70-79.....	*	65	91	85	*	51	81	74
80 and over.....	*	*	111	111	*	*	126	126
All.....	51%	74%	90%	81%	34%	56%	82%	68%
All Contracts								
Under 50.....	*	*	*	264%	*	*	*	400%
50-59.....	127%	123%	52%	109	85%	94%	90%	90
60-69.....	95	86	81	88	88	91	81	88
70-79.....	73	95	95	93	71	86	88	86
80 and over.....	*	*	104	102	*	*	112	110
All.....	92%	91%	94%	93%	83%	90%	91%	89%

\* Less than 10 contracts terminated by death.

*NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.*

TABLE 18  
 MATURED DEFERRED ANNUITIES—FEMALE LIVES  
 EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
 MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
<i>Contracts with a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	77%	56%	57%	63%	70%	64%	104%	74%
60-69.....	72	72	71	72	75	68	64	68
70-79.....	59	77	84	83	66	112	80	82
80 and over.....	*	131	119	119	*	282	116	118
All.....	71%	73%	86%	82%	73%	80%	82%	80%
<i>Contracts without a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	123%	102%	*	114%	77%	60%	*	71%
60-69.....	35	53	63%	54	30	53	59%	50
70-79.....	63	78	83	82	86	86	80	81
80 and over.....	*	*	113	114	*	*	99	100
All.....	43%	60%	83%	76%	40%	61%	78%	70%
<i>All Contracts</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	85%	64%	68%	72%	71%	63%	103%	74%
60-69.....	62	67	68	67	64	64	63	63
70-79.....	60	77	84	82	70	106	80	82
80 and over.....	*	150	117	118	*	290	112	113
All.....	64%	70%	85%	80%	65%	75%	81%	78%

\* Less than 10 contracts terminated by death.

Note: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 19  
MATURED DEFERRED ANNUITIES—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
Contracts <i>with</i> a Guaranteed Period or Refund Provision								
Under 50 . . . . .	*	*	*	*	*	*	*	*
50-59 . . . . .	174%	168%	63%	149%	116%	126%	125%	123%
60-69 . . . . .	125	107	104	113	118	118	107	115
70-79 . . . . .	88	112	106	106	86	101	100	99
80 and over . . . . .	*	*	100	99	*	*	107	165
All . . . . .	118%	111%	105%	109%	106%	111%	103%	106%
Contracts <i>without</i> a Guaranteed Period or Refund Provision								
Under 50 . . . . .	*	*	*	*	*	*	*	*
50-59 . . . . .	*	*	*	*	*	*	*	*
60-69 . . . . .	68%	96%	74%	82%	45%	72%	46%	57%
70-79 . . . . .	*	74	102	96	*	58	91	84
80 and over . . . . .	*	*	107	107	*	*	122	121
All . . . . .	62%	89%	100%	92%	42%	68%	91%	78%
All Contracts								
Under 50 . . . . .	*	*	*	55%	*	*	*	68%
50-59 . . . . .	164%	156%	66%	140	109%	119%	115%	115
60-69 . . . . .	118	106	100	109	110	112	100	108
70-79 . . . . .	85	109	106	104	83	98	99	97
80 and over . . . . .	*	*	101	100	*	*	109	108
All . . . . .	112%	109%	104%	107%	101%	107%	101%	103%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 20  
MATURED DEFERRED ANNUITIES—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and over	All	1-2	3-5	6 and over	All
<i>Contracts with a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	149%	107%	108%	121%	136%	122%	199%	142%
60-69.....	118	113	108	112	124	106	98	107
70-79.....	78	97	100	99	88	140	95	99
80 and over.....	*	121	108	109	*	256	105	107
All.....	113%	109%	103%	105%	115%	118%	98%	104%
<i>Contracts without a Guaranteed Period or Refund Provision</i>								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	238%	196%	*	221%	148%	114%	*	136%
60-69.....	59	84	95%	84	50	83	90%	78
70-79.....	84	99	99	98	115	109	95	97
80 and over.....	*	*	103	104	*	*	91	92
All.....	70%	91%	99%	96%	65%	91%	94%	91%
All Contracts								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	165%	123%	131%	138%	138%	121%	196%	141%
60-69.....	102	105	104	104	105	100	96	99
70-79.....	79	97	100	99	93	133	95	99
80 and over.....	*	137	107	107	*	262	101	103
All.....	102%	104%	102%	102%	103%	111%	97%	100%

\* Less than 10 contracts terminated by death.

Note: Italics indicate less than 50 but not less than 10 contracts terminated by death.

### 3. *Mortality by Sex*

Under refund annuities at attained ages under 80 the aggregate mortality ratios for females were generally lower than for males on both the 1937 Standard Annuity Table and the Annuity Table for 1949 Ultimate. Under nonrefund annuities at attained ages under 80 the aggregate mortality ratios for females were generally higher than for males, except by number of contracts on the 1937 Standard Annuity Table.

### 4. *Refund vs. Nonrefund Annuities*

The over-all mortality ratios on refund annuities were from about 5 to 15 percentage points higher by number of contracts and from about 10 to 25 percentage points higher by amounts of annual income than on nonrefund annuities. The differentials were greater in the early durations.

### 5. *Select Mortality*

For deferred refund annuities the mortality ratios in the first and second durations were generally about the same as those in subsequent durations except for ages 70-79, where they were about 20 percentage points lower. This indicates that temporary selection was apparently absent on deferred refund annuities except for the age group noted. In the case of deferred nonrefund annuities, the mortality ratios in the first and second durations (all ages combined) were substantially below those in the sixth and later durations—about 30 percentage points lower for females on the Annuity Table for 1949 Ultimate, and about 40 to 50 percentage points lower for males on the Annuity Table for 1949 Ultimate and the same for both males and females on the 1937 Standard Annuity Table.

### 6. *Mortality by Number and by Amounts*

The mortality ratios by amounts of annual income were generally lower than by number of contracts, the differentials being generally greater for nonrefund than for refund annuities, pointing to some anti-selection by amounts.

### 7. *Mortality According to Age at Which Life Income Began*

To bring out the mortality under deferred annuities according to the age at which life income began, the experience during the first five durations was retabulated by age groups at issue under 60, 60-65, and 66 and over. The results are shown in Tables 21 and 22.

**TABLE 21**  
**MATURED DEFERRED ANNUITIES**  
**EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES**  
**ACCORDING TO AGE AT WHICH LIFE INCOME BEGAN**  
**Durations 1-5 Combined**  
**MORTALITY RATIOS ON 1937 STANDARD ANNUITY TABLE**  
**Number of Deaths† in Parentheses**

AGE AT WHICH LIFE INCOME BEGAN	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	With Guaranteed Period or Refund Provision		Without Guaranteed Period or Refund Provision		With Guaranteed Period or Refund Provision		Without Guaranteed Period or Refund Provision	
	Males	Females	Males	Females	Males	Females	Males	Females
Other Than Pension Trust Issues								
Under 60...	108% (168)	67% (124)	46% (7)	81% (37)	91%	70%	27%	48%
60-65.....	96 (977)	73 (1015)	68 (121)	48 (247)	102	71	49	46
66 and over	87 (575)	73 (404)	47 (37)	66 (115)	83	91	39	70
All....	94% (1720)	72% (1543)	61% (165)	54% (399)	93%	77%	45%	53%
Pension Trust Issues								
Under 60...	627% (53)	0% (0)	795% (7)	0% (0)	520%	0%	1508%	0%
60-65.....	91 (283)	54 (9)	101 (10)	39 (1)	73	96	55	82
66 and over	87 (213)	42 (7)	67 (7)	39 (1)	85	90	63	38
All....	97% (549)	46% (16)	113% (24)	36% (2)	81%	89%	97%	54%
Other Than Pension Trust and Pension Trust Issues Combined								
Under 60...	135% (221)	67% (124)	86% (14)	80% (37)	98%	70%	70%	48%
60-65.....	95 (1260)	73 (1024)	70 (131)	48 (248)	97	71	49	46
66 and over	87 (788)	72 (411)	50 (44)	66 (116)	83	91	41	70
All....	95% (2269)	72% (1559)	65% (189)	54% (401)	91%	77%	47%	53%

† Number of contracts terminated by death.

TABLE 22  
MATURED DEFERRED ANNUITIES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES  
ACCORDING TO AGE AT WHICH LIFE INCOME BEGAN  
Durations 1-5 Combined  
MORTALITY RATIOS ON  $\alpha$ -1949 ULTIMATE TABLE  
Number of Deaths† in Parentheses

AGE AT WHICH LIFE INCOME BEGAN	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	With Guaranteed Period or Refund Provision		Without Guaranteed Period or Refund Provision		With Guaranteed Period or Refund Provision		Without Guaranteed Period or Refund Provision	
	Males	Females	Males	Females	Males	Females	Males	Females
Other Than Pension Trust Issues								
Under 60...	138% (168)	127% (124)	59% (7)	150% (37)	117%	133%	35%	89%
60-65...	118 (977)	117 (1015)	84 (121)	78 (247)	126	114	60	75
66 and over...	101 (575)	95 (404)	55 (37)	88 (115)	96	119	46	94
All...	113% (1720)	111% (1543)	74% (165)	85% (399)	112%	117%	54%	82%
Pension Trust Issues								
Under 60...	813% (53)	0% (0)	1061% (7)	0% (0)	664%	0%	1915%	0%
60-65...	112 (283)	85 (9)	124 (10)	64 (1)	90	152	68	131
66 and over...	102 (213)	56 (7)	78 (7)	51 (1)	98	119	73	50
All...	117% (549)	67% (16)	135% (24)	53% (2)	97%	128%	116%	78%
Other Than Pension Trust and Pension Trust Issues Combined								
Under 60...	172% (221)	127% (124)	111% (14)	148% (37)	125%	132%	89%	89%
60-65...	117 (1260)	117 (1024)	86 (131)	78 (248)	120	114	60	75
66 and over...	101 (788)	94 (411)	58 (44)	87 (116)	96	119	49	94
All...	114% (2269)	110% (1559)	78% (189)	84% (401)	109%	117%	58%	82%

† Number of contracts terminated by death.



These tables show very high mortality (referred to before) in the first five contract years under pension trust deferred annuities maturing at ages under 60. This experience is similar to that shown in Tables 9 and 10 for pension trust settlements arising from the maturity or surrender of life insurance at ages under 60. In Table 22, the mortality ratios on the Annuity Table for 1949 Ultimate generally decrease with increase in the age at which life income began, for both the pension trust and other than pension trust issues.

#### 8. *Deferred Annuities Compared with Settlements Arising from Maturities*

A comparison of the experience under deferred refund annuities with that under life income settlements arising from maturities and surrenders is given in Table 23. This table shows the mortality ratios on the Annuity Table for 1949 Ultimate only, by attained ages for the first five durations, the sixth and subsequent durations, and all durations combined.

Table 23 shows that the mortality ratios under deferred refund annuities were generally higher than under life income settlements arising from maturities and surrenders. For both males and females the differential was largely concentrated at ages under 70 in the first five contract years, where it amounted to about 30 percentage points. The figures suggest that the over-all selection exercised under life income settlements arising from maturities and surrenders is more pronounced than under deferred refund annuities. As noted previously, among the early retirements under deferred refund annuity contracts there may be included a sizable proportion of impaired lives.

#### COMPARISON WITH PREVIOUS EXPERIENCE UNDER MATURITIES OF DEFERRED ANNUITY CONTRACTS

A comparison of the experience under maturities of deferred annuities between 1945 and 1950 anniversaries (*TSA* 1951 Reports, 38-39) with the experience between 1950 and 1955 anniversaries is given in Table 24. This table shows the mortality ratios on the Annuity Table for 1949 Ultimate, by broad attained age groups for the first five durations, the sixth and subsequent durations, and all durations combined, separately for refund and nonrefund annuities.

The main features of the comparison as brought out in Table 24 may be summarized as follows:

1. The mortality ratios for males decreased from the period 1945-50 to the period 1950-55 in every category but one. The decrease by amounts of annual income was greater under nonrefund than under refund an-

TABLE 23  
 COMPARISON OF  
 (A) MATURED DEFERRED ANNUITIES WITH A GUARANTEED  
 PERIOD OR REFUND PROVISION  
 WITH  
 (B) LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS  
 MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNTS OF ANNUAL INCOME			
	Males		Females		Males		Females	
	A	B	A	B	A	B	A	B
Durations 1-5								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	170%	97%	124%	94%	122%	93%	128%	85%
60-69.....	115	90	115	80	118	89	113	76
70-79.....	103	97	91	92	95	98	124	102
80 and over.....	57	88	119	99	75	73	161	118
All.....	114%	92%	110%	84%	109%	91%	117%	83%
Durations 6 and over								
Under 50.....	*	*	*	257%	*	*	*	205%
50-59.....	68%	81%	108%	106	125%	98%	199%	88
60-69.....	104	98	108	81	107	98	98	82
70-79.....	106	99	100	88	100	97	95	89
80 and over.....	100	106	108	91	107	109	105	88
All.....	105%	100%	103%	88%	103%	99%	98%	87%
All Durations								
Under 50.....	*	*	*	181%	*	*	*	137%
50-59.....	149%	93%	121%	98	123%	94%	142%	86
60-69.....	113	92	112	81	115	91	107	79
70-79.....	106	99	99	88	99	97	99	91
80 and over.....	99	103	109	91	105	103	107	90
All.....	109%	96%	105	87%	106%	95%	104%	86%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 24

COMPARISON OF EXPERIENCES UNDER MATURED DEFERRED ANNUITIES  
 1945-1950 EXPERIENCE WITH 1950-1955 EXPERIENCE  
 MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

	ATTAINED AGES	DURATIONS 1-5		DURATIONS 6 AND OVER		ALL DURATIONS	
		1945-50	1950-55	1945-50	1950-55	1945-50	1950-55
Male Contracts <i>with</i> a Guaranteed Period or Refund Provision							
By Number of Contracts	Under 60	157%	177%	211%	70%	166%	154%
	60-69	132	115	168	104	138	113
	70 and over	122	102	111	105	114	104
	All	130%	114%	121%	105%	126%	109%
By Amounts of Annual Income	Under 60	172%	130%	167%	128%	171%	129%
	60-69	133	118	137	107	134	115
	70 and over	100	94	115	102	109	100
	All	123%	109%	119%	103%	121%	106%
Male Contracts <i>without</i> a Guaranteed Period or Refund Provision							
By Number of Contracts	Under 60	*	*	*	*	*	*
	60-69	89%	84%	222%	74%	115%	82%
	70 and over	115	65	104	103	107	98
	All	96%	78%	123%	100%	109%	92%
By Amounts of Annual Income	Under 60	*	*	*	*	*	*
	60-69	83%	61%	213%	46%	110%	57%
	70 and over	84	52	103	98	98	91
	All	83%	58%	120%	91%	102%	78%
Female Contracts <i>with</i> a Guaranteed Period or Refund Provision							
By Number of Contracts	Under 60	194%	126%	201%	110%	195%	123%
	60-69	117	115	115	108	116	112
	70 and over	107	93	113	102	112	101
	All	118%	110%	114%	103%	116%	105%
By Amounts of Annual Income	Under 60	149%	127%	172%	198%	153%	142%
	60-69	112	113	119	98	114	107
	70 and over	113	125	109	97	110	101
	All	114%	117%	112%	98%	113%	104%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

TABLE 24—Continued

	ATTAINED AGES	DURATIONS 1-5		DURATIONS 6 AND OVER		ALL DURATIONS	
		1945-50	1950-55	1945-50	1950-55	1945-50	1950-55
Female Contracts <i>without</i> a Guaranteed Period or Refund Provision							
By Number of Contracts	Under 60	<i>152%</i>	<i>214%</i>	*	*	<i>150%</i>	<i>220%</i>
	60-69	89	75	98%	95%	92	84
	70 and over	91	97	105	100	103	100
	All	91%	84%	103%	99%	99%	96%
By Amounts of Annual Income	Under 60	<i>116%</i>	<i>128%</i>	*	*	<i>118%</i>	<i>135%</i>
	60-69	80	70	101%	90%	86	78
	70 and over	75	112	100	94	95	96
	All	80%	82%	100%	94%	92%	91%

\* Less than 10 contracts terminated by death.

NOTE: Italics indicate less than 50 but not less than 10 contracts terminated by death.

nuities, and tended to be less at ages 70 and over than at ages under 70. The mortality ratios under female refund annuities generally decreased moderately from the period 1945-50 to the period 1950-55, the decreases being greatest at ages under 60 and least in the age group 60-69. The reductions in mortality ratios were quite small under female nonrefund annuities.

2. Broadly speaking, there was no clear-cut variation in the decreases in mortality ratios by duration.

## APPENDIX

TABLE A  
CONTRIBUTING COMPANIES  
PROPORTION OF TOTAL EXPOSURES\* CONTRIBUTED BY EACH

COMPANY	LIFE INCOME SETTLEMENTS ARISING FROM		
	Death Claims	Maturities and Surrenders	Deferred Annuities
New York Life.....	11.9%	12.0%	12.2%
Equitable (N.Y.).....	11.5	3.6	36.9
Northwestern Mutual....	10.8	8.1	1.9
Prudential.....	8.9	3.7	2.5
Metropolitan.....	6.0	6.5	.....
Penn Mutual.....	5.9	5.3	5.2
Mutual Life.....	5.5	3.9	2.7
Travelers.....	5.5	13.7	3.0
New England Life.....	5.2	8.7	2.6
Mutual Benefit.....	5.2	5.5	.1
Aetna.....	4.9	8.2	.7
Massachusetts Mutual....	4.0	5.2	9.1
Union Central.....	3.4	2.0	2.3
Provident Mutual.....	2.8	3.2	2.5
John Hancock.....	2.5	2.1	6.7
Connecticut Mutual.....	2.1	2.9	2.8
Sun Life.....	2.0	1.6	6.4
Connecticut General.....	1.9	3.8	2.4
Total.....	100.0%	100.0%	100.0%

\* By Amounts of Annual Income.

**TABLE B**  
**EXPOSURES AND DEATHS UNDER LIFE INCOME SETTLEMENTS**  
**ARISING FROM DEATH CLAIMS**

DURATIONS	TYPE OF ELECTION					
	Payee		Nonpayee		Payee and Nonpayee Combined	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
Exposures						
<i>Males:</i>						
1-5 .....	2,327	\$ 1,170,717	3,868	\$ 2,022,930	6,195	\$ 3,193,647
6 and over .....	3,530	1,723,021	7,938	3,323,401	11,468	5,046,422
All .....	5,857	\$ 2,893,738	11,806	\$ 5,346,331	17,663	\$ 8,240,069
<i>Females:</i>						
1-5 .....	81,786	\$ 47,268,110	82,837	\$ 52,756,041	164,623	\$100,024,151
6 and over .....	158,876	77,905,945	131,475	74,616,238	290,351	152,522,183
All .....	240,662	\$125,174,055	214,312	\$127,372,279	454,974	\$252,546,334
Deaths						
<i>Males:</i>						
1-5 .....	25	\$ 18,689	61	\$ 36,777	86	\$ 55,466
6 and over .....	124	61,390	165	71,415	289	132,805
All .....	149	\$ 80,079	226	\$ 108,192	375	\$ 188,271
<i>Females:</i>						
1-5 .....	940	\$ 597,804	1,086	\$ 780,447	2,026	\$ 1,378,251
6 and over .....	3,689	1,879,446	3,011	1,813,033	6,700	3,692,479
All .....	4,629	\$ 2,477,250	4,097	\$ 2,593,480	8,726	\$ 5,070,730

**TABLE C**  
**EXPOSURES AND DEATHS UNDER LIFE INCOME SETTLEMENTS**  
**ARISING FROM MATURITIES AND SURRENDERS**

DURATIONS	OTHER THAN PENSION TRUST ISSUES		PENSION TRUST ISSUES		OTHER THAN PENSION TRUST AND PENSION TRUST ISSUES COMBINED	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
Exposures						
<i>Males:</i>						
1-5.....	91,164	\$54,877,528	9,497	\$5,509,993	100,661	\$60,387,521
6 and over...	64,221	35,036,152	595	296,639	64,816	35,332,791
All.....	155,385	\$89,913,680	10,092	\$5,806,632	165,477	\$95,720,312
<i>Females:</i>						
1-5.....	79,693	\$30,761,241	1,055	\$ 362,629	80,748	\$31,123,870
6 and over...	89,988	30,958,169	100	24,404	90,088	30,982,573
All.....	169,681	\$61,719,410	1,155	\$ 387,033	170,836	\$62,106,443
Deaths						
<i>Males:</i>						
1-5.....	2,137	\$ 1,258,443	300	\$ 159,113	2,437	\$ 1,417,556
6 and over...	2,665	1,404,637	30	15,476	2,695	1,420,113
All.....	4,802	\$ 2,663,080	330	\$ 174,589	5,132	\$ 2,837,669
<i>Females:</i>						
1-5.....	755	\$ 295,660	13	\$ 3,343	768	\$ 299,003
6 and over...	1,752	629,484	0	0	1,752	629,484
All.....	2,507	\$ 925,144	13	\$ 3,343	2,520	\$ 928,487

**TABLE D**  
**EXPOSURES AND DEATHS UNDER MATURED DEFERRED ANNUITIES**

DURATIONS	OTHER THAN PENSION TRUST ISSUES		PENSION TRUST ISSUES		OTHER THAN PENSION TRUST AND PENSION TRUST ISSUES COMBINED	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
EXPOSURES						
With a Guaranteed Period or Refund Provision						
<i>Males:</i>						
1-5 .....	58,055	\$37,632,914	15,967	\$7,288,625	74,022	\$44,921,539
6 and over...	54,858	30,380,014	2,207	1,109,134	57,065	31,489,148
All.....	112,913	\$68,012,928	18,174	\$8,397,759	131,087	\$76,410,687
<i>Females:</i>						
1-5.....	109,711	\$35,841,819	1,544	\$ 421,646	111,255	\$36,263,465
6 and over...	154,002	40,376,931	159	46,517	154,161	40,423,448
All.....	263,713	\$76,218,750	1,703	\$ 468,163	265,416	\$76,686,913
Without a Guaranteed Period or Refund Provision						
<i>Males:</i>						
1-5.....	8,530	\$ 4,779,541	587	\$ 233,082	9,117	\$ 5,012,623
6 and over...	9,126	4,536,414	98	33,475	9,224	4,569,889
All.....	17,656	\$ 9,315,955	685	\$ 266,557	18,341	\$ 9,582,512
<i>Females:</i>						
1-5.....	38,189	\$11,813,652	275	\$ 53,464	38,464	\$11,867,116
6 and over...	59,699	14,186,243	34	12,424	59,733	14,198,667
All.....	97,888	\$25,999,895	309	\$ 65,888	98,197	\$26,065,783



TABLE D—Continued

DURATIONS	OTHER THAN PENSION TRUST ISSUES		PENSION TRUST ISSUES		OTHER THAN PENSION TRUST AND PENSION TRUST ISSUES COMBINED	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
DEATHS						
With a Guaranteed Period or Refund Provision						
<i>Males:</i>						
1-5 . . . . .	1,720	\$ 1,150,637	549	\$ 223,084	2,269	\$ 1,373,721
6 and over . . . . .	2,629	1,409,624	138	71,466	2,767	1,481,090
All . . . . .	4,349	\$ 2,560,261	687	\$ 294,550	5,036	\$ 2,854,811
<i>Females:</i>						
1-5 . . . . .	1,543	\$ 542,540	16	\$ 8,584	1,559	\$ 551,124
6 and over . . . . .	4,523	1,108,446	2	240	4,525	1,108,686
All . . . . .	6,066	\$ 1,650,986	18	\$ 8,824	6,084	\$ 1,659,810
Without a Guaranteed Period or Refund Provision						
<i>Males:</i>						
1-5 . . . . .	165	\$ 68,600	24	\$ 8,405	189	\$ 77,005
6 and over . . . . .	443	198,335	1	374	444	198,709
All . . . . .	608	\$ 266,935	25	\$ 8,779	633	\$ 275,714
<i>Females:</i>						
1-5 . . . . .	399	\$ 122,524	2	\$ 701	401	\$ 123,225
6 and over . . . . .	1,730	382,552	0	0	1,730	382,552
All . . . . .	2,129	\$ 505,076	2	\$ 701	2,131	\$ 505,777

TABLE E

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PAYEE ELECTIONS

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON G-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50.....	144	80,988	1	180	.64	382	156%	47%	.28	213	357%	85%
50-59.....	127	52,518	0	0	1.65	696	0	0	1.27	539	0	0
60-69.....	86	42,763	0	0	2.16	1,123	0	0	1.80	903	0	0
70-79.....	31	22,067	0	0	1.52	1,052	0	0	1.35	909	0	0
80 and over...	1	229	0	0	.11	25	0	0	.11	26	0	0
All Ages....	389	198,565	1	180	6.08	3,278	16%	5%	4.81	2,590	21%	7%
<i>Duration 2</i>												
Under 50.....	184	101,924	0	0	.86	492	0%	0%	.37	270	0%	0%
50-59.....	124	51,506	0	0	1.61	656	0	0	1.20	501	0	0
60-69.....	108	47,895	2	1,504	2.67	1,203	75	125	2.19	966	91	156
70-79.....	42	27,899	2	1,034	2.22	1,445	90	72	2.01	1,271	100	81
80 and over...	2	806	0	0	.22	85	0	0	.22	87	0	0
All Ages....	460	230,030	4	2,538	7.58	3,881	53%	65%	5.99	3,095	67%	82%
<i>Duration 3</i>												
Under 50.....	183	89,928	1	720	.88	460	114%	157%	.36	257	278%	280%
50-59.....	111	50,216	1	1,356	1.47	643	68	211	1.10	491	91	276
60-69.....	117	47,897	0	0	3.03	1,210	0	0	2.49	971	0	0
70-79.....	29	14,816	1	346	1.70	886	59	39	1.56	801	64	43
80 and over...	5	1,525	0	0	.53	158	0	0	.54	162	0	0
All Ages....	445	204,382	3	2,422	7.61	3,357	39%	72%	6.05	2,682	50%	90%

<i>Duration 4</i>												
Under 50.....	183	87,885	3	1,916	.89	434	337%	441%	.34	241	882%	795%
50-59.....	152	79,844	1	347	2.06	1,088	49	32	1.57	841	64	41
60-69.....	115	45,467	1	513	3.21	1,273	31	40	2.65	1,028	38	50
70-79.....	36	22,408	5	5,819	2.06	1,306	243	446	1.88	1,186	266	491
80 and over....	5	1,138	0	0	.59	136	0	0	.63	145	0	0
All Ages.....	491	236,742	10	8,595	8.81	4,237	114%	203%	7.07	3,441	141%	250%
<i>Duration 5</i>												
Under 50.....	194	129,737	0	0	.90	625	0%	0%	.39	330	0%	0%
50-59.....	161	90,255	0	0	2.13	1,229	0	0	1.68	949	0	0
60-69.....	132	48,884	5	1,086	3.78	1,404	132	77	3.08	1,134	162	96
70-79.....	47	29,947	2	3,868	2.53	1,661	79	233	2.29	1,483	87	261
80 and over....	8	2,175	0	0	.91	240	0	0	.98	251	0	0
All Ages.....	542	300,998	7	4,954	10.25	5,159	68%	96%	8.42	4,147	83%	119%
<i>Durations 6 and over</i>												
Under 50.....	923	551,887	5	5,345	4.64	3,066	108%	174%	2.54	1,751	197%	305%
50-59.....	751	381,524	14	5,484	10.29	5,321	136	103	8.03	4,125	174	133
60-69.....	895	360,782	20	11,382	25.25	9,982	79	114	20.52	8,057	97	141
70-79.....	728	323,418	46	22,518	41.26	18,354	111	123	37.01	16,432	124	137
80 and over....	233	105,410	39	16,661	29.15	13,676	134	122	31.79	15,109	123	110
All Ages.....	3,530	1,723,021	124	61,390	110.59	50,399	112%	122%	99.89	45,474	124%	135%
<i>All Durations</i>												
Under 50.....	1,811	1,042,349	10	8,161	8.81	5,459	114%	149%	4.28	3,062	234%	267%
50-59.....	1,426	705,863	16	7,187	19.21	9,633	83	75	14.85	7,446	108	97
60-69.....	1,453	593,688	28	14,485	40.10	16,195	70	89	32.73	13,059	86	111
70-79.....	913	440,555	56	33,585	51.29	24,704	109	136	46.10	22,082	121	152
80 and over....	254	111,283	39	16,661	31.51	14,320	124	116	34.27	15,780	114	106
All Ages.....	5,857	2,893,738	149	80,079	150.92	70,311	99%	114%	132.23	61,429	113%	130%

TABLE E—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PAYEE ELECTIONS

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON $\alpha$ -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	1,899	926,283	1	299	7.88	4,025	13%	7%	3.58	1,876	28%	16%
50-59.....	5,051	2,792,372	17	11,983	48.45	27,085	35	44	24.93	13,989	68	86
60-69.....	6,434	3,928,075	30	20,751	121.67	74,427	25	28	76.23	46,677	39	44
70-79.....	2,089	1,453,533	34	22,905	76.87	54,006	44	42	63.45	44,647	54	51
80 and over	141	94,372	3	979	9.86	6,443	30	15	10.83	7,003	28	14
All Ages.	15,614	9,194,635	85	56,917	264.73	165,986	32%	34%	179.02	114,192	47%	50%
<i>Duration 2</i>												
Under 50...	1,781	865,915	4	1,356	7.34	3,738	54%	36%	3.39	1,742	118%	78%
50-59.....	5,061	2,775,513	25	19,196	48.80	26,902	51	71	25.22	13,927	99	138
60-69.....	6,768	4,139,428	65	43,105	128.88	79,087	50	55	80.99	49,779	80	87
70-79.....	2,415	1,612,951	55	45,042	89.65	60,814	61	74	74.01	50,628	74	89
80 and over	180	133,422	14	6,555	12.89	9,328	109	70	14.38	10,283	97	64
All Ages.	16,205	9,527,229	163	115,254	287.56	179,869	57%	64%	197.99	126,359	82%	91%
<i>Duration 3</i>												
Under 50...	1,700	826,364	6	6,242	7.08	3,614	85%	173%	3.21	1,693	187%	369%
50-59.....	4,886	2,684,703	20	19,459	47.48	26,326	42	74	24.58	13,627	81	143
60-69.....	6,885	4,134,402	95	60,770	131.56	79,535	72	76	82.83	50,202	115	121
70-79.....	2,710	1,718,010	70	36,729	101.22	64,817	69	57	83.87	53,989	83	68
80 and over	240	169,163	12	9,703	17.24	12,016	70	81	19.30	13,360	62	73
All Ages.	16,421	9,532,642	203	132,903	304.58	186,308	67%	71%	213.79	132,871	95%	100%

<i>Duration 4</i>												
Under 50..	1,615	755,761	1	622	6.67	3,280	15%	19%	3.06	1,534	33%	41%
50-59.....	4,759	2,569,042	24	11,242	46.22	25,095	52	45	23.82	12,975	101	87
60-69.....	7,074	4,128,794	101	57,086	135.83	79,716	74	72	85.65	50,394	118	113
70-79.....	2,974	1,892,618	81	60,924	111.97	71,733	72	85	93.17	59,845	87	102
80 and over	300	184,501	23	14,080	21.61	13,016	106	108	24.14	14,400	95	98
All Ages.	16,722	9,530,716	230	143,954	322.30	192,840	71%	75%	229.84	139,148	100%	103%
<i>Duration 5</i>												
Under 50..	1,497	701,105	8	4,101	6.25	3,038	128%	135%	2.75	1,427	291%	287%
50-59.....	4,607	2,454,820	28	15,330	44.91	24,034	62	64	23.24	12,430	120	123
60-69.....	7,153	4,163,537	107	58,227	137.58	80,478	78	72	86.87	50,921	123	114
70-79.....	3,219	1,955,278	94	55,297	121.91	74,621	77	74	101.72	62,451	92	89
80 and over	348	208,148	22	15,821	25.32	14,857	87	106	28.54	16,507	77	96
All Ages.	16,824	9,482,888	259	148,776	335.97	197,028	77%	76%	243.12	143,736	107%	104%
<i>Durations 6 and over</i>												
Under 50..	8,321	3,378,241	31	12,953	35.52	14,474	87%	89%	16.43	6,776	189%	191%
50-59.....	28,839	13,507,466	193	104,282	286.20	135,148	67	77	148.49	70,158	130	149
60-69.....	64,542	32,106,460	847	438,259	1,273.15	633,206	67	69	810.88	403,253	104	109
70-79.....	47,002	23,348,104	1,635	818,098	1,824.32	908,832	90	90	1,538.29	767,443	106	107
80 and over	10,172	5,565,674	983	505,854	780.96	423,231	126	120	901.46	485,846	109	104
All Ages.	158,876	77,905,945	3,689	1,879,446	4,200.15	2,114,891	88%	89%	3,415.55	1,733,476	108%	108%
<i>All Durations</i>												
Under 50..	16,813	7,453,669	51	25,573	70.74	32,169	72%	79%	32.42	15,048	157%	170%
50-59.....	53,203	26,783,916	307	181,492	522.06	264,590	59	69	270.28	137,106	114	132
60-69.....	98,856	52,600,696	1,245	678,198	1,928.67	1,026,449	65	66	1,223.45	651,226	102	104
70-79.....	60,409	31,980,494	1,969	1,038,995	2,325.94	1,234,823	85	84	1,954.51	1,039,003	101	100
80 and over	11,381	6,355,280	1,057	552,992	867.88	478,891	122	115	998.65	547,399	106	101
All Ages.	240,662	125,174,055	4,629	2,477,250	5,715.29	3,036,922	81%	82%	4,479.31	2,389,782	103%	104%

TABLE E—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—NONPAYEE ELECTIONS

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON a-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	581	273,800	2	309	2.15	1,185	93%	26%	.88	649	227%	48%
50-59.....	138	89,950	0	0	1.73	1,139	0	0	1.35	871	0	0
60-69.....	65	41,855	2	1,008	1.76	1,189	114	85	1.44	959	139	105
70-79.....	32	28,398	0	0	1.88	1,619	0	0	1.73	1,452	0	0
80 and over	14	3,612	4	1,164	1.90	486	211	240	2.14	536	187	217
All Ages.	830	437,615	8	2,481	9.42	5,618	85%	44%	7.54	4,467	106%	56%
<i>Duration 2</i>												
Under 50...	541	264,415	1	588	1.96	1,077	51%	55%	.80	572	125%	103%
50-59.....	142	101,551	1	102	1.80	1,260	56	8	1.33	959	75	11
60-69.....	74	43,844	5	1,935	1.98	1,242	253	156	1.65	997	303	194
70-79.....	27	25,993	0	0	1.63	1,512	0	0	1.45	1,364	0	0
80 and over	10	3,880	5	2,473	1.24	426	403	581	1.33	446	376	554
All Ages.	794	439,683	12	5,098	8.61	5,517	139%	92%	6.56	4,338	183%	118%
<i>Duration 3</i>												
Under 50...	503	247,697	1	880	1.92	1,003	52%	88%	.79	537	127%	164%
50-59.....	137	84,909	3	3,523	1.75	1,057	171	333	1.33	805	226	438
60-69.....	75	39,989	4	1,348	1.95	1,117	205	121	1.65	901	242	150
70-79.....	33	32,025	1	128	1.84	1,713	54	7	1.70	1,513	59	8
80 and over	5	2,119	2	1,078	.64	256	313	421	.69	274	290	393
All Ages.	753	406,739	11	6,957	8.10	5,146	136%	135%	6.16	4,030	179%	173%

<i>Duration 4</i>												
Under 50..	509	236,401	3	2,876	1.82	970	165%	296%	.83	503	361%	572%
50-59.....	158	87,021	5	2,702	2.01	1,100	249	246	1.54	843	325	321
60-69.....	64	36,656	2	1,018	1.70	987	118	103	1.43	793	140	128
70-79.....	36	37,432	3	4,145	2.00	2,041	150	203	1.82	1,812	165	229
80 and over	4	2,286	2	662	.52	321	385	206	.58	359	345	184
All Ages.	771	399,796	15	11,403	8.05	5,419	186%	210%	6.20	4,310	242%	265%
<i>Duration 5</i>												
Under 50..	486	209,223	0	0	1.71	818	0%	0%	.74	425	0%	0%
50-59.....	136	75,415	6	5,493	1.68	907	357	606	1.27	683	472	804
60-69.....	73	36,713	1	63	1.94	969	52	7	1.62	777	62	8
70-79.....	22	15,926	7	4,037	1.27	867	551	466	1.15	776	609	520
80 and over	3	1,820	1	1,245	.43	286	233	435	.47	327	213	381
All Ages.	720	339,097	15	10,838	7.03	3,847	213%	282%	5.25	2,988	286%	363%
<i>Durations 6 and over</i>												
Under 50..	4,212	1,659,671	18	7,686	19.32	7,921	93%	97%	10.50	4,359	171%	176%
50-59.....	1,775	763,709	41	20,909	22.94	9,894	179	211	17.71	7,578	232	276
60-69.....	1,267	631,130	38	10,837	35.19	17,456	108	62	28.43	14,062	134	77
70-79.....	478	199,120	38	18,851	26.51	10,803	143	174	23.77	9,611	160	196
80 and over	206	69,771	30	13,132	25.15	8,513	119	154	27.40	9,241	109	142
All Ages.	7,938	3,323,401	165	71,415	129.11	54,587	128%	131%	107.81	44,851	153%	159%
<i>All Durations</i>												
Under 50..	6,832	2,891,207	25	12,339	28.88	12,974	87%	95%	14.54	7,045	172%	175%
50-59.....	2,486	1,202,555	56	32,729	31.91	15,357	175	213	24.53	11,739	228	279
60-69.....	1,618	830,187	52	16,209	44.52	22,960	117	71	36.22	18,489	144	88
70-79.....	628	338,894	49	27,161	35.13	18,555	139	146	31.62	16,528	155	164
80 and over	242	83,488	44	19,754	29.88	10,288	147	192	32.61	11,183	135	177
All Ages.	11,806	5,346,331	226	108,192	170.32	80,134	133%	135%	139.52	64,984	162%	166%

TABLE E—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—NONPAYEE ELECTIONS

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1947 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	4,313	2,180,166	22	15,179	16.06	8,327	137%	182%	7.26	3,869	303%	392%
50-59.....	6,474	3,980,143	29	24,101	60.25	37,624	48	64	30.90	19,362	94	124
60-69.....	5,739	4,106,659	52	33,093	106.97	78,053	49	42	66.78	49,060	78	67
70-79.....	2,121	1,644,239	53	45,492	79.65	62,102	67	73	66.27	51,722	80	88
80 and over	298	209,703	24	19,982	22.97	16,205	104	123	26.44	18,874	91	106
All Ages.	18,945	12,120,910	180	137,847	285.90	202,311	63%	68%	197.65	142,887	91%	96%
<i>Duration 2</i>												
Under 50...	3,790	1,921,829	6	2,586	14.05	7,362	43%	35%	6.31	3,420	95%	76%
50-59.....	6,031	3,659,407	30	23,014	56.47	34,760	53	66	28.96	17,894	104	129
60-69.....	5,554	3,978,890	74	59,043	103.92	75,765	71	78	64.95	47,685	114	124
70-79.....	2,217	1,719,807	113	56,578	83.19	64,959	136	87	69.19	54,077	163	105
80 and over	304	216,817	25	15,773	23.73	16,350	105	96	27.51	18,680	91	84
All Ages.	17,896	11,496,750	248	156,994	281.36	199,196	88%	79%	196.92	141,756	126%	111%
<i>Duration 3</i>												
Under 50...	3,485	1,752,645	7	1,790	12.78	6,735	55%	27%	5.85	3,117	120%	57%
50-59.....	5,355	3,227,992	45	26,233	50.62	30,909	89	85	26.01	15,928	173	165
60-69.....	5,260	3,687,081	65	49,320	98.90	69,725	66	71	61.87	43,767	105	113
70-79.....	2,163	1,726,383	88	64,520	81.58	65,511	108	98	68.11	54,660	129	118
80 and over	327	234,046	25	28,674	24.96	17,439	100	164	28.63	19,807	87	145
All Ages.	16,590	10,628,147	230	170,537	268.84	190,319	86%	90%	190.47	137,279	121%	124%



<i>Duration 4</i>												
Under 50..	3,083	1,511,571	8	3,403	11.25	5,727	71%	59%	5.10	2,651	157%	128%
50-59.....	4,746	2,791,072	32	21,347	44.91	26,807	71	80	23.07	13,824	139	154
60-69.....	5,084	3,462,522	73	47,700	95.85	65,241	76	73	60.02	40,866	122	117
70-79.....	2,129	1,697,039	77	66,054	81.59	64,695	94	102	68.42	54,129	113	122
80 and over	360	241,569	29	23,367	27.14	17,961	107	130	31.01	20,422	94	114
All Ages.	15,402	9,703,773	219	161,871	260.74	180,431	84%	90%	187.62	131,892	117%	123%
<i>Duration 5</i>												
Under 50..	2,685	1,290,297	14	7,132	9.73	4,877	144%	146%	4.26	2,249	329%	317%
50-59.....	4,172	2,477,883	35	15,230	39.90	24,023	88	63	20.53	12,402	170	123
60-69.....	4,705	3,176,804	53	31,622	88.89	60,163	60	53	55.74	37,760	95	84
70-79.....	2,117	1,645,316	74	61,795	81.57	63,866	91	97	68.64	53,875	108	115
80 and over	325	216,161	33	37,419	24.48	16,128	135	232	27.84	18,288	119	205
All Ages.	14,004	8,806,461	209	153,198	244.57	169,057	85%	91%	177.01	124,574	118%	123%
<i>Durations 6 and over</i>												
Under 50..	19,961	9,158,695	76	34,479	73.75	34,439	103%	100%	34.09	15,988	223%	216%
50-59.....	28,824	15,108,280	211	111,734	276.51	146,674	76	76	142.61	75,784	148	147
60-69.....	43,570	26,179,518	627	386,711	850.59	512,959	74	75	539.84	325,961	116	119
70-79.....	29,498	18,618,267	1,105	694,713	1,160.79	731,279	95	95	985.10	617,031	112	113
80 and over	9,622	5,551,478	992	585,396	777.74	446,122	128	131	923.78	529,082	107	111
All Ages.	131,475	74,616,238	3,011	1,813,033	3,139.38	1,871,473	96%	97%	2,625.42	1,563,846	115%	116%
<i>All Durations</i>												
Under 50..	37,317	17,815,203	133	64,569	137.62	67,467	97%	96%	62.87	31,294	212%	206%
50-59.....	55,602	31,244,777	382	221,659	528.66	300,797	72	74	272.08	155,194	140	143
60-69.....	69,912	44,591,474	944	607,489	1,345.12	861,906	70	70	849.20	545,099	111	111
70-79.....	40,245	27,051,051	1,510	989,152	1,568.37	1,052,412	96	94	1,325.73	885,494	114	112
80 and over	11,236	6,669,774	1,128	710,611	901.02	530,205	125	134	1,065.21	625,153	106	114
All Ages.	214,312	127,372,279	4,097	2,593,480	4,480.79	2,812,787	91%	92%	3,575.09	2,242,234	115%	116%

TABLE F

LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Con- tracts	Amounts of Annual Income	Number of Con- tracts	Amounts of Annual Income	Number of Con- tracts	Amounts of Annual Income	Number of Con- tracts	Amounts of Annual Income	Number of Con- tracts	Amounts of Annual Income	Number of Con- tracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50 . . . . .	331	144,811	0	0	1.96	874	0%	0%	1.05	528	0%	0%
50-59 . . . . .	3,400	2,079,266	30	17,439	46.48	28,553	65	61	36.19	22,210	83	79
60-69 . . . . .	14,862	9,104,387	265	160,794	399.08	242,410	66	66	320.28	194,446	83	83
70-79 . . . . .	2,509	1,398,452	106	60,929	131.62	72,969	81	83	115.99	64,271	91	95
80 and over . . . . .	105	55,377	6	3,657	10.89	5,801	55	63	11.18	5,990	54	61
All Ages . . . . .	21,207	12,782,293	407	242,819	590.03	350,607	69%	69%	484.69	287,445	84%	84%
<i>Duration 2</i>												
Under 50 . . . . .	303	128,129	1	630	1.70	766	59%	82%	.95	465	105%	135%
50-59 . . . . .	3,115	1,947,334	30	14,841	44.51	28,052	67	53	34.70	21,939	86	68
60-69 . . . . .	13,601	8,335,305	281	171,600	387.01	235,041	73	73	311.72	189,243	90	91
70-79 . . . . .	2,467	1,390,121	116	68,032	133.57	74,914	87	91	118.40	66,367	98	103
80 and over . . . . .	146	64,813	12	5,635	15.41	6,802	78	83	16.02	7,051	75	80
All Ages . . . . .	19,632	11,865,702	440	260,738	582.20	345,575	76%	75%	481.79	285,065	91%	91%
<i>Duration 3</i>												
Under 50 . . . . .	278	107,208	0	0	1.64	562	0%	0%	.86	331	0%	0%
50-59 . . . . .	2,881	1,829,723	31	19,232	42.99	27,575	72	70	33.71	21,641	92	89
60-69 . . . . .	12,325	7,596,417	257	160,126	371.68	227,164	69	70	300.93	183,834	85	87
70-79 . . . . .	2,432	1,313,368	121	70,367	134.42	72,263	90	97	119.86	64,288	101	109
80 and over . . . . .	184	98,401	24	11,673	19.21	10,118	125	115	19.94	10,513	120	111
All Ages . . . . .	18,100	10,945,117	433	261,398	569.94	337,682	76%	77%	475.30	280,607	91%	93%

<i>Duration 4</i>												
Under 50...	266	96,924	2	453	1.57	518	127%	87%	.80	302	250%	150%
50-59.....	2,619	1,663,350	26	13,181	40.75	26,360	64	50	31.96	20,758	81	63
60-69.....	11,288	6,905,996	274	168,161	360.77	218,619	76	77	293.92	177,984	93	94
70-79.....	2,492	1,358,268	123	68,649	139.54	75,404	88	91	124.78	67,267	99	102
80 and over..	195	108,450	17	4,992	20.69	11,498	82	43	21.56	11,946	79	42
All Ages..	16,860	10,132,988	442	255,436	563.32	332,399	78%	77%	473.02	278,257	93%	92%
<i>Duration 5</i>												
Under 50...	243	92,631	2	731	1.39	492	144%	149%	.76	285	263%	256%
50-59.....	2,233	1,433,666	31	28,105	35.85	23,865	86	118	28.14	18,822	110	149
60-69.....	9,829	5,999,388	225	130,719	329.25	199,382	68	66	269.94	163,318	83	80
70-79.....	2,847	1,503,782	134	67,814	157.17	83,144	85	82	140.29	74,211	96	91
80 and over..	213	121,961	23	10,683	22.77	13,025	101	82	23.82	13,552	97	79
All Ages..	15,365	9,151,428	415	238,052	546.43	319,908	76%	74%	462.95	270,188	90%	88%
<i>Durations 6 and over</i>												
Under 50...	1,072	429,732	4	325	6.26	2,463	64%	13%	3.55	1,459	113%	22%
50-59.....	4,686	2,165,503	43	24,637	67.93	31,986	63	77	53.04	25,012	81	99
60-69.....	20,975	12,328,182	487	282,580	615.02	360,213	79	78	497.58	291,379	98	97
70-79.....	32,360	17,680,773	1,518	800,882	1,732.05	939,735	88	85	1,534.31	831,147	99	96
80 and over..	5,128	2,431,962	613	296,213	555.79	260,858	110	114	580.72	271,733	106	109
All Ages..	64,221	35,036,152	2,665	1,404,637	2,977.05	1,595,255	90%	88%	2,669.20	1,420,730	100%	99%
<i>All Durations</i>												
Under 50...	2,493	999,435	9	2,139	14.52	5,675	62%	38%	7.97	3,370	113%	63%
50-59.....	18,934	11,118,842	191	117,435	278.51	166,391	69	71	217.74	130,382	88	90
60-69.....	82,880	50,269,675	1,789	1,073,980	2,462.81	1,482,829	73	72	1,994.37	1,200,204	90	89
70-79.....	45,107	24,644,764	2,118	1,136,673	2,428.37	1,318,429	87	86	2,153.63	1,167,551	98	97
80 and over..	5,971	2,880,964	695	332,853	644.76	308,102	108	108	673.24	320,785	103	104
All Ages..	155,385	89,913,680	4,802	2,663,080	5,828.97	3,281,426	82%	81%	5,046.95	2,822,292	95%	94%

TABLE F—Continued

LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50.....	779	336,108	0	0	2.93	1,277	0%	0%	1.33	588	0%	0%
50-59.....	4,433	1,698,439	14	5,623	41.73	15,958	34	35	21.35	8,165	66	69
60-69.....	11,221	4,301,549	71	28,246	191.25	73,319	37	39	115.50	44,286	61	64
70-79.....	736	316,972	26	12,821	26.20	11,396	99	113	21.18	9,252	123	139
80 and over....	26	12,533	3	2,954	1.85	843	162	350	2.00	905	150	326
All Ages....	17,195	6,665,601	114	49,644	263.96	102,793	43%	48%	161.36	63,196	71%	79%
<i>Duration 2</i>												
Under 50.....	716	331,174	1	298	2.73	1,269	37%	23%	1.13	588	88%	51%
50-59.....	4,089	1,530,115	19	4,770	39.66	14,896	48	32	20.42	7,670	93	62
60-69.....	10,711	4,089,474	105	34,966	192.95	73,588	54	48	118.58	45,247	89	77
70-79.....	917	409,385	28	15,292	32.68	14,572	86	105	26.41	11,776	106	130
80 and over....	30	16,850	2	2,824	2.12	1,164	94	243	2.33	1,270	86	222
All Ages....	16,463	6,376,998	155	58,150	270.14	105,489	57%	55%	168.87	66,551	92%	87%
<i>Duration 3</i>												
Under 50.....	658	303,691	2	266	2.52	1,184	79%	22%	1.05	541	190%	49%
50-59.....	3,958	1,490,683	16	5,493	39.85	15,097	40	36	20.70	7,822	77	70
60-69.....	10,268	3,881,134	109	40,225	195.50	73,958	56	54	122.55	46,424	89	87
70-79.....	1,041	468,534	26	18,082	37.97	17,262	68	105	31.18	14,201	83	127
80 and over....	38	21,919	2	720	2.78	1,515	72	48	3.01	1,642	66	44
All Ages....	15,963	6,165,961	155	64,786	278.62	109,016	56%	59%	178.49	70,630	87%	92%

<i>Duration 4</i>												
Under 50.....	639	282,457	2	1,614	2.31	1,132	87%	143%	.99	522	202%	309%
50-59.....	3,653	1,409,188	13	4,607	38.29	14,919	34	31	20.00	7,822	65	59
60-69.....	9,788	3,670,909	107	37,567	196.48	73,848	54	51	125.82	47,318	85	79
70-79.....	1,244	534,718	30	12,939	45.21	19,726	66	66	37.12	16,240	81	80
80 and over...	48	31,437	3	1,117	3.34	2,133	90	52	3.61	2,296	83	49
All Ages....	15,372	5,928,709	155	57,844	285.63	111,758	54%	52%	187.54	74,198	83%	78%
<i>Duration 5</i>												
Under 50.....	592	240,241	1	198	2.20	940	45%	21%	.89	425	112%	47%
50-59.....	3,267	1,242,856	32	12,475	35.52	13,677	90	91	18.77	7,241	170	172
60-69.....	9,218	3,436,415	98	34,254	193.84	72,402	51	47	126.44	47,252	78	72
70-79.....	1,568	668,375	40	15,357	57.35	24,879	70	62	47.33	20,615	85	74
80 and over...	55	36,085	5	2,952	3.90	2,562	128	115	4.20	2,820	119	105
All Ages....	14,700	5,623,972	176	65,236	292.81	114,460	60%	57%	197.63	78,353	89%	83%
<i>Durations 6 and over</i>												
Under 50.....	2,727	1,033,433	13	3,846	10.96	4,019	119%	96%	5.05	1,876	257%	205%
50-59.....	9,893	2,792,191	54	12,870	98.57	28,201	55	46	51.12	14,671	106	88
60-69.....	38,203	12,795,365	402	136,184	770.19	258,066	52	53	494.12	165,596	81	82
70-79.....	34,716	12,646,893	953	353,051	1,305.62	478,234	73	74	1,085.24	398,484	88	89
80 and over...	4,449	1,690,287	330	123,533	324.40	124,003	102	100	364.33	139,702	91	88
All Ages....	89,988	30,958,169	1,752	629,484	2,509.74	892,523	70%	71%	1,999.86	720,329	88%	87%
<i>All Durations</i>												
Under 50.....	6,111	2,527,104	19	6,222	23.65	9,821	80%	63%	10.44	4,540	182%	137%
50-59.....	29,293	10,163,472	148	45,838	293.62	102,748	50	45	152.36	53,391	97	86
60-69.....	89,409	32,174,846	892	311,442	1,740.21	625,181	51	50	1,103.01	396,123	81	79
70-79.....	40,222	15,044,877	1,103	427,542	1,505.03	566,069	73	76	1,248.46	470,568	88	91
80 and over...	4,646	1,809,111	345	134,100	338.39	132,220	102	101	379.48	148,635	91	90
All Ages....	169,681	61,719,410	2,507	925,144	3,900.90	1,436,039	64%	64%	2,893.75	1,073,257	87%	86%

TABLE F—Continued

LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON a-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50.....	6	371	0	0	.04	2	0%	0%	.02	2	0%	0%
50-59.....	156	48,776	11	5,188	2.34	754	470	688	1.79	592	615	876
60-69.....	3,318	1,907,093	77	29,879	99.18	57,061	78	52	80.19	46,073	96	65
70-79.....	544	357,159	18	5,614	24.46	16,283	74	34	20.87	13,939	86	40
80 and over....	3	1,526	0	0	.26	133	0	0	.26	130	0	0
All Ages.....	4,027	2,314,925	106	40,681	126.28	74,233	84%	55%	103.13	60,736	103%	67%
<i>Duration 2</i>												
Under 50.....												
50-59.....	95	25,725	0	0	1.45	404	0%	0%	1.13	320	0%	0%
60-69.....	2,006	1,158,225	67	42,981	63.17	36,564	106	118	51.29	29,673	131	145
70-79.....	509	328,330	19	14,756	23.60	15,612	81	95	20.29	13,466	94	110
80 and over....	2	1,631	0	0	.18	144	0	0	.18	141	0	0
All Ages.....	2,612	1,513,911	86	57,737	88.40	52,724	97%	110%	72.89	43,600	118%	132%
<i>Duration 3</i>												
Under 50.....												
50-59.....	45	13,321	0	0	.69	213	0%	0%	.54	167	0%	0%
60-69.....	1,028	602,016	38	17,824	33.49	19,648	113	91	27.30	16,002	139	111
70-79.....	349	230,557	19	13,603	16.75	11,267	113	121	14.49	9,754	131	139
80 and over....	2	5,007	0	0	.18	446	0	0	.18	439	0	0
All Ages.....	1,424	850,901	57	31,429	51.11	31,574	112%	100%	42.51	26,362	134%	119%

<i>Duration 4</i>												
Under 50.....	2	160	0	0	.00	0	0%	0%	.00	0	0%	0%
50-59.....	31	8,307	4	657	.51	139	784	473	.39	111	26	592
60-69.....	590	359,360	19	16,605	20.04	12,364	95	134	16.48	10,144	115	164
70-79.....	269	164,297	13	6,035	13.14	8,284	99	73	11.43	7,226	114	84
80 and over...	2	5,007	0	0	.19	479	0	0	.19	481	0	0
All Ages.....	894	537,131	36	23,297	33.88	21,266	106%	110%	28.49	17,962	126%	130%
<i>Duration 5</i>												
Under 50.....	2	160	0	0	.00	0	0%	0%	.00	0	0%	0%
50-59.....	14	3,704	1	141	.24	61	417	231	.17	48	588	294
60-69.....	312	159,274	7	2,791	10.90	5,576	64	50	9.02	4,591	78	61
70-79.....	211	128,604	7	3,037	10.50	6,551	67	46	9.22	5,735	76	53
80 and over...	1	1,383	0	0	.11	150	0	0	.11	155	0	0
All Ages.....	540	293,125	15	5,969	21.75	12,338	69%	48%	18.52	10,529	81%	57%
<i>Durations 6 and over</i>												
Under 50.....	6	480	0	0	.03	3	0%	0%	.00	0	0%	0%
50-59.....	4	1,290	0	0	.06	19	0	0	.04	16	0	0
60-69.....	142	83,334	5	4,743	4.29	2,595	117	183	3.53	2,102	142	226
70-79.....	434	202,213	24	10,272	21.29	10,136	113	101	18.54	8,849	129	116
80 and over...	9	9,322	1	461	.84	876	119	53	.84	877	119	53
All Ages.....	595	296,639	30	15,476	26.51	13,629	113%	114%	22.95	11,844	131%	131%
<i>All Durations</i>												
Under 50.....	16	1,171	0	0	.07	5	0%	0%	.02	2	0%	0%
50-59.....	345	101,123	16	5,986	5.29	1,590	302	376	4.06	1,254	394	477
60-69.....	7,396	4,269,302	213	114,823	231.07	133,808	92	86	187.81	108,585	113	106
70-79.....	2,316	1,411,160	100	53,319	109.74	68,133	91	78	94.84	58,969	105	90
80 and over...	19	23,876	1	461	1.76	2,228	57	21	1.76	2,223	57	21
All Ages.....	10,092	5,806,632	330	174,589	347.93	205,764	95%	85%	288.49	171,033	114%	102%

TABLE F—Continued

LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON G-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50.....	8	1,849	0	0	.04	10	0%	0%	.02	4	0%	0%
50-59.....	26	6,219	2	170	.25	67	800	254	.16	33	250	515
60-69.....	376	139,941	4	837	7.22	2,714	55	31	4.56	1,711	88	49
70-79.....	45	17,520	0	0	1.41	561	0	0	1.06	428	0	0
80 and over.....												
All Ages.....	455	165,529	6	1,007	8.92	3,352	67%	30%	5.80	2,176	103%	46%
<i>Duration 2</i>												
Under 50.....	5	359	0	0	.03	2	0%	0%	.01	0	0%	0%
50-59.....	14	2,829	0	0	.15	30	0	0	.09	16	0	0
60-69.....	220	70,926	1	174	4.38	1,443	23	12	2.84	929	35	19
70-79.....	43	18,460	1	109	1.41	618	71	18	1.11	486	90	22
80 and over.....												
All Ages.....	282	92,574	2	283	5.97	2,093	34%	14%	4.05	1,431	49%	20%
<i>Duration 3</i>												
Under 50.....	2	73	0	0	.01	0	0%	0%	.00	0	0%	0%
50-59.....	9	1,191	0	0	.09	13	0	0	.06	7	0	0
60-69.....	122	40,428	2	616	2.52	843	79	73	1.65	548	121	112
70-79.....	28	12,151	2	268	1.00	436	200	61	.79	355	253	75
80 and over.....												
All Ages.....	161	53,843	4	884	3.62	1,292	110%	68%	2.50	910	160%	97%



<i>Duration 4</i>												
Under 50.....												
50-59.....	5	629	0	0	.04	6	0%	0%	.03	3	0%	0%
60-69.....	69	23,067	1	1,169	1.50	510	67	229	1.02	339	98	345
70-79.....	17	6,142	0	0	.57	211	0	0	.45	166	0	0
80 and over.....												
All Ages.....	91	29,838	1	1,169	2.11	727	47%	161%	1.50	508	67%	230%
<i>Duration 5</i>												
Under 50.....												
50-59.....	2	296	0	0	.02	3	0%	0%	.01	2	0%	0%
60-69.....	48	15,142	0	0	1.13	344	0	0	.77	229	0	0
70-79.....	16	5,407	0	0	.53	172	0	0	.39	135	0	0
80 and over.....												
All Ages.....	66	20,845	0	0	1.68	519	0%	0%	1.17	366	0%	0%
<i>Durations 6 and over</i>												
Under 50.....												
50-59.....												
60-69.....	32	9,533	0	0	.72	206	0%	0%	.48	135	0%	0%
70-79.....	68	14,871	0	0	2.26	510	0	0	1.80	403	0	0
80 and over.....												
All Ages.....	100	24,404	0	0	2.98	716	0%	0%	2.28	538	0%	0%
<i>All Durations</i>												
Under 50.....	15	2,281	0	0	.08	12	0%	0%	.03	4	0%	0%
50-59.....	56	11,164	2	170	.55	119	364	143	.35	61	571	279
60-69.....	867	299,037	8	2,796	17.47	6,060	46	46	11.32	3,891	71	72
70-79.....	217	74,551	3	377	7.18	2,508	42	15	5.60	1,973	54	19
80 and over.....												
All Ages.....	1,155	387,033	13	3,343	25.28	8,699	51%	38%	17.30	5,929	75%	56%

TABLE G

MATURED DEFERRED ANNUITIES WITH A GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	61	33,422	0	0	.31	163	0%	0%	.13	96	0%	0%
50-59.....	1,932	1,113,512	37	14,592	26.11	15,166	142	96	20.19	11,746	183	124
60-69.....	8,457	5,373,187	239	139,706	229.34	147,012	104	95	184.12	118,077	130	118
70-79.....	1,762	1,700,312	50	56,664	78.30	74,185	64	76	66.88	63,008	75	90
80 and over	20	15,299	1	153	1.77	1,357	56	11	1.75	1,338	57	11
All Ages.	12,232	8,235,732	327	211,115	335.83	237,883	97%	89%	273.07	194,265	120%	109%
<i>Duration 2</i>												
Under 50...	67	35,630	2	4,904	.31	157	645%	124%	.13	90	538%	449%
50-59.....	1,888	1,099,120	27	10,151	26.61	15,706	101	65	20.77	12,248	130	83
60-69.....	8,364	5,248,877	247	160,394	242.25	152,161	102	105	195.45	122,740	126	131
70-79.....	1,912	1,857,728	84	50,260	88.66	85,716	95	59	76.03	73,410	110	68
80 and over	47	28,949	2	457	4.21	2,602	48	18	4.17	2,571	48	18
All Ages.	12,278	8,270,304	362	226,166	362.04	256,342	100%	88%	296.55	211,059	122%	107%
<i>Duration 3</i>												
Under 50...	63	26,483	0	0	.32	125	0%	0%	.13	75	0%	0%
50-59.....	1,771	1,021,414	26	9,734	26.17	15,273	99	64	20.56	11,981	126	81
60-69.....	7,901	4,791,086	222	168,754	243.14	147,158	91	115	197.23	119,327	113	141
70-79.....	2,059	1,755,656	82	76,354	100.77	85,832	81	89	87.32	74,290	94	103
80 and over	27	24,104	3	6,235	2.57	2,274	117	274	2.59	2,275	116	274
All Ages.	11,821	7,618,743	333	261,077	372.97	250,662	89%	104%	307.83	207,948	108%	126%

<i>Duration 4</i>												
Under 50...	63	34,612	0	0	.33	189	0%	0%	.15	113	0%	0%
50-59.....	1,589	926,743	29	12,973	24.67	14,528	118	89	19.42	11,420	149	114
60-69.....	7,359	4,349,009	223	143,166	239.87	140,926	93	102	195.86	114,951	114	125
70-79.....	2,262	1,773,041	105	71,701	116.57	92,299	90	78	102.03	80,909	103	89
80 and over	24	18,695	1	119	2.31	1,790	43	7	2.32	1,800	43	7
All Ages.	11,297	7,102,100	358	227,959	383.75	249,732	93%	91%	319.78	209,193	112%	109%
<i>Duration 5</i>												
Under 50...	67	33,014	0	0	.34	181	0%	0%	.18	112	0%	0%
50-59.....	1,291	769,680	23	18,547	20.94	12,595	110	147	16.55	9,930	139	187
60-69.....	6,436	3,743,284	166	96,050	219.59	126,582	76	76	180.40	103,869	92	92
70-79.....	2,603	1,837,664	150	108,888	137.47	99,649	109	109	120.94	88,156	124	124
80 and over	30	22,393	1	835	2.92	2,177	34	38	2.92	2,197	34	38
All Ages.	10,427	6,406,035	340	224,320	381.26	241,184	89%	93%	320.99	204,264	106%	110%
<i>Durations 6 and over</i>												
Under 50...	314	149,456	1	909	1.45	710	69%	128%	.70	399	143%	228%
50-59.....	2,151	1,125,633	18	17,323	33.58	17,618	54	98	26.45	13,879	68	125
60-69.....	13,718	8,107,643	343	210,973	408.90	243,570	84	87	331.24	197,418	104	107
70-79.....	34,023	18,621,826	1,788	920,457	1,910.82	1,048,504	94	898	1,709.24	938,420	105	98
80 and over	4,652	2,375,456	479	259,962	471.37	237,584	102	109	482.16	242,127	99	107
All Ages.	54,858	30,380,014	2,629	1,409,624	2,826.12	1,547,986	93%	91%	2,549.79	1,392,243	103%	101%
<i>All Durations</i>												
Under 50...	635	312,617	3	5,813	3.06	1,525	98%	381%	1.42	885	211%	657%
50-59.....	10,622	6,056,102	160	83,320	158.08	90,886	101	92	123.94	71,204	129	117
60-69.....	52,235	31,613,086	1,440	919,043	1,583.09	957,409	91	96	1,284.30	776,382	112	118
70-79.....	44,621	27,546,227	2,259	1,284,324	2,432.59	1,486,185	93	86	2,162.44	1,318,193	104	97
80 and over	4,800	2,484,896	487	267,761	485.15	247,784	100	108	495.91	252,308	98	106
All Ages.	112,913	68,012,928	4,349	2,560,261	4,661.97	2,783,789	93%	92%	4,068.01	2,418,972	107%	106%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITH A GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1957 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	100	54,509	0	0	.30	190	0%	0%	.09	85	0%	0%
50-59.....	3,204	1,080,573	30	9,424	30.03	10,080	100%	93%	15.37	5,151	195	183
60-69.....	16,902	5,679,249	262	92,989	282.04	95,400	93	97	169.10	57,325	155	162
70-79.....	1,761	745,706	27	11,309	53.13	22,258	51	51	39.82	16,579	68	68
80 and over..	40	17,471	5	932	2.52	1,168	198	80	2.60	1,251	192	75
All Ages...	22,007	7,577,508	324	114,654	368.02	129,096	88%	89%	226.98	80,391	143%	143%
<i>Duration 2</i>												
Under 50...	92	54,129	2	420	.21	193	952%	218%	.12	87	667%	483%
50-59.....	2,915	982,334	15	4,373	28.23	9,471	53	46	14.47	4,863	104	90
60-69.....	17,214	5,571,268	165	54,715	305.34	99,351	54	55	186.96	60,912	88	90
70-79.....	2,028	840,011	43	21,397	64.69	26,596	66	80	49.52	20,283	87	105
80 and over..	36	16,771	0	0	2.35	1,177	0	0	2.47	1,294	0	0
All Ages...	22,285	7,464,513	225	80,905	400.82	136,788	56%	59%	253.54	87,439	89%	93%
<i>Duration 3</i>												
Under 50...	93	55,315	0	0	.25	199	0%	0%	.08	88	0%	0%
50-59.....	2,880	953,240	21	10,995	29.52	9,732	71	113	15.29	5,052	137	218
60-69.....	17,020	5,364,608	232	77,055	322.10	102,094	72	75	201.71	64,036	115	120
70-79.....	2,253	893,283	57	50,533	76.12	30,180	75	167	59.73	23,691	95	213
80 and over..	38	16,233	1	3,334	2.58	1,214	39	275	2.78	1,373	36	243
All Ages...	22,284	7,282,679	311	141,917	430.57	143,419	72%	99%	279.59	94,240	111%	151%

<i>Duration 4</i>												
Under 50...	94	55,012	0	0	24	199	0%	0%	.08	90	0%	0%
50-59.....	2,645	891,619	17	2,853	28.48	9,546	60	30	14.93	5,008	114	57
60-69.....	16,511	5,048,936	232	57,588	332.34	102,257	70	56	212.80	65,621	109	88
70-79.....	2,546	952,690	64	29,310	89.68	33,677	71	87	71.85	26,983	89	109
80 and over.	45	13,497	7	3,660	3.07	904	228	405	3.27	966	214	379
All Ages..	21,841	6,961,754	320	93,411	453.81	146,583	71%	64%	302.93	98,668	106%	95%
<i>Duration 5</i>												
Under 50...	99	53,797	0	0	.25	195	0%	0%	.08	88	0%	0%
50-59.....	2,251	749,951	9	3,903	25.28	8,375	36	47	13.41	4,442	67	88
60-69.....	15,401	4,500,807	247	67,544	324.49	95,289	76	71	211.30	62,175	117	109
70-79.....	3,495	1,239,870	103	38,934	123.73	44,230	83	88	99.53	35,731	103	109
80 and over.	48	10,940	4	1,272	3.27	755	122	168	3.52	819	114	155
All Ages..	21,294	6,555,365	363	111,653	477.02	148,844	76%	75%	327.84	103,255	111%	108%
<i>Durations 6 and over</i>												
Under 50...	538	223,430	1	600	1.59	719	63%	83%	.63	331	159%	181%
50-59.....	3,453	1,134,923	21	12,601	36.97	12,055	57	105	19.34	6,306	109	200
60-69.....	54,326	14,655,206	836	202,048	1,180.41	314,055	71	64	775.95	205,447	108	98
70-79.....	84,722	21,571,814	2,742	662,846	3,267.96	831,163	84	80	2,746.61	698,214	100	95
80 and over.	10,963	2,791,558	923	230,351	773.78	198,417	119	116	851.41	219,195	108	105
All Ages..	154,002	40,376,931	4,523	1,108,446	5,260.71	1,356,409	86%	82%	4,393.94	1,129,493	103%	98%
<i>All Durations</i>												
Under 50...	1,016	496,192	3	1,020	2.84	1,695	106%	60%	1.08	769	278%	133%
50-59.....	17,348	5,792,640	113	44,149	178.51	59,259	63	75	92.81	30,822	122	143
60-69.....	137,374	40,820,074	1,974	551,939	2,746.72	808,446	72	68	1,757.82	515,516	112	107
70-79.....	96,805	26,243,374	3,036	814,329	3,675.31	988,104	83	82	3,067.06	821,481	99	99
80 and over.	11,170	2,866,470	940	239,549	787.57	203,635	119	118	866.05	224,898	109	107
All Ages..	263,713	76,218,750	6,066	1,650,986	7,390.95	2,061,139	82%	80%	5,784.82	1,593,486	105%	104%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITHOUT A GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	5	1,060	0	0	.03	7	0%	0%	.01	5	0%	0%
50-59.....	197	99,825	0	0	2.51	1,367	0	0	1.90	1,056	0	0
60-69.....	1,400	781,771	17	7,119	39.35	21,762	43	33	31.67	17,480	54	41
70-79.....	177	121,265	1	668	7.59	5,118	13	13	6.47	4,314	15	15
80 and over.....												
All Ages..	1,779	1,003,921	18	7,787	49.48	28,254	36%	28%	40.05	22,855	45%	34%
<i>Duration 2</i>												
Under 50...	10	2,097	0	0	.06	13	0%	0%	.03	8	0%	0%
50-59.....	173	88,266	2	374	2.25	1,203	89	31	1.70	929	118	40
60-69.....	1,460	825,331	24	6,550	43.56	24,366	55	27	35.25	19,677	68	33
70-79.....	178	119,231	5	1,248	8.07	5,384	62	23	6.93	4,587	72	27
80 and over.....												
All Ages..	1,821	1,034,925	31	8,172	53.94	30,966	57%	26%	43.91	25,201	71%	32%
<i>Duration 3</i>												
Under 50...	12	3,901	0	0	.09	29	0%	0%	.03	18	0%	0%
50-59.....	148	63,939	0	0	1.96	895	0	0	1.54	695	0	0
60-69.....	1,339	766,364	25	10,036	42.29	23,817	59	42	34.38	19,325	73	52
70-79.....	220	147,882	2	419	10.40	6,920	19	6	8.98	5,934	22	7
80 and over.....	1	307	0	0	.09	27	0	0	.09	26	0	0
All Ages..	1,720	982,393	27	10,455	54.83	31,688	49%	33%	45.02	25,998	60%	40%

<i>Duration 4</i>												
Under 50...	9	3,495	1	691	.07	27	429%	559%	.04	19	500%	637%
50-59.....	180	71,859	2	639	2.57	1,080	78	59	2.01	846	100	76
60-69.....	1,172	665,527	26	15,982	39.34	22,022	66	73	32.31	17,989	80	89
70-79.....	272	175,080	9	4,337	13.44	8,619	67	50	11.68	7,468	77	58
80 and over.	1	307	1	307	.09	29	111	59	.09	29	111	59
All Ages..	1,634	916,268	39	21,956	55.51	31,777	70%	69%	46.13	26,351	85%	83%
<i>Duration 5</i>												
Under 50...	5	807	0	0	.02	4	0%	0%	.02	3	0%	0%
50-59.....	168	70,841	0	0	2.55	1,099	0	0	1.95	864	0	0
60-69.....	1,084	571,140	38	12,143	38.52	19,926	99	61	31.79	16,392	120	74
70-79.....	317	199,020	12	8,087	16.22	10,128	74	80	14.22	8,850	84	91
80 and over.	2	226	0	0	.21	23	0	0	.21	24	0	0
All Ages..	1,576	842,034	50	20,230	57.52	31,180	87%	65%	48.19	26,133	104%	77%
<i>Durations 6 and over</i>												
Under 50...	28	2,813	0	0	.12	12	0%	0%	.06	6	0%	0%
50-59.....	301	111,497	2	226	4.77	1,783	42	13	3.77	1,406	53	16
60-69.....	1,912	1,125,113	36	12,771	58.80	34,027	61	38	47.86	27,593	75	46
70-79.....	6,045	2,903,261	307	132,916	334.15	162,095	92	82	297.91	144,795	103	92
80 and over.	840	393,730	98	52,422	88.84	41,719	110	126	92.05	43,305	106	121
All Ages..	9,126	4,536,414	443	198,335	486.68	239,636	91%	83%	441.65	217,105	100%	91%
<i>All Durations</i>												
Under 50...	69	14,173	1	691	.39	92	256%	751%	.19	59	526%	1,171%
50-59.....	1,167	506,227	6	1,239	16.61	7,427	36	17	12.87	5,796	47	21
60-69.....	8,367	4,735,246	166	64,601	261.86	145,920	63	44	213.26	118,456	78	55
70-79.....	7,209	3,665,739	336	147,675	389.87	198,264	86	74	346.19	175,948	97	84
80 and over.	844	394,570	99	52,729	89.23	41,798	111	126	92.44	43,384	107	122
All Ages..	17,656	9,315,955	608	266,935	757.96	393,501	80%	68%	664.95	343,643	91%	78%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITHOUT A GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—OTHER THAN PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON G-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	8	3,138	0	0	.03	12	0%	0%	.00	5	0%	0%
50-59.....	703	233,434	7	1,658	6.91	2,302	101	72	3.58	1,188	196	140
60-69.....	6,219	2,061,325	39	11,146	100.67	34,180	39	33	59.82	20,474	65	54
70-79.....	450	172,305	3	1,460	13.23	5,050	23	29	9.77	3,722	31	39
80 and over..	1	344	0	0	.06	21	0	0	.06	21	0	0
All Ages..	7,381	2,470,546	49	14,264	120.90	41,565	41%	34%	73.23	25,410	67%	56%
<i>Duration 2</i>												
Under 50...	11	5,105	0	0	.06	20	0%	0%	.00	9	0%	0%
50-59.....	602	192,378	9	1,585	5.97	1,929	151	82	3.06	998	294	159
60-69.....	6,490	2,039,121	36	9,872	112.18	36,059	32	27	68.04	22,064	53	45
70-79.....	578	218,895	17	8,902	18.00	6,780	94	131	13.59	5,109	125	174
80 and over..	1	344	0	0	.07	22	0	0	.07	24	0	0
All Ages..	7,682	2,455,843	62	20,359	136.28	44,810	45%	45%	84.76	28,204	73%	72%
<i>Duration 3</i>												
Under 50...	7	3,312	0	0	.02	10	0%	0%	.00	4	0%	0%
50-59.....	595	192,117	5	1,132	6.23	2,031	80	56	3.17	1,062	158	107
60-69.....	6,494	1,955,598	49	16,620	119.34	36,616	41	45	73.97	22,846	66	73
70-79.....	711	262,813	16	5,945	23.28	8,595	69	69	17.98	6,643	89	89
80 and over..	2	430	0	0	.20	36	0	0	.27	43	0	0
All Ages..	7,809	2,414,270	70	23,697	149.07	47,288	47%	50%	95.39	30,598	73%	77%



<i>Duration 4</i>												
Under 50...	4	2,575	0	0	.00	6	0%	0%	.00	2	0%	0%
50-59.....	565	174,500	8	1,402	6.21	1,931	129	73	3.27	1,018	245	138
60-69.....	6,243	1,823,345	57	15,857	122.08	36,046	47	44	77.33	22,911	74	69
70-79.....	836	298,267	20	13,225	28.44	10,173	70	130	22.40	8,018	89	165
80 and over..	3	586	2	500	.28	47	714	64	.36	58	556	862
All Ages...	7,651	2,299,273	87	30,984	157.01	48,203	55%	64%	103.36	32,007	84%	97%
<i>Duration 5</i>												
Under 50...	6	4,064	0	0	.01	8	0%	0%	.00	4	0%	0%
50-59.....	437	128,591	5	732	4.96	1,481	101	49	2.63	793	190	92
60-69.....	6,033	1,647,004	89	23,862	123.82	34,079	72	70	79.89	22,031	111	108
70-79.....	1,186	393,543	36	8,540	40.83	13,543	88	63	32.43	10,740	111	80
80 and over..	4	518	1	86	.35	42	286	205	.45	52	222	165
All Ages...	7,666	2,173,720	131	33,220	169.97	49,153	77%	68%	115.40	33,620	114%	99%
<i>Durations 6 and over</i>												
Under 50...	66	18,188	0	0	.22	60	0%	0%	.08	28	0%	0%
50-59.....	631	168,972	9	1,694	6.90	1,834	130	92	3.52	962	256	176
60-69.....	21,378	5,219,344	297	68,055	473.98	114,503	63	59	313.54	75,443	95	90
70-79.....	33,025	7,743,486	1,060	240,991	1,275.79	299,644	83	80	1,073.18	252,252	99	96
80 and over..	4,599	1,036,253	364	71,812	321.96	72,197	113	99	352.57	78,864	103	91
All Ages...	59,699	14,186,243	1,730	382,552	2,078.85	488,238	83%	78%	1,742.89	407,549	99%	94%
<i>All Durations</i>												
Under 50...	102	36,382	0	0	.34	116	0%	0%	.08	52	0%	0%
50-59.....	3,533	1,089,992	43	8,203	37.18	11,508	116	71	19.23	6,021	224	136
60-69.....	52,857	14,745,737	567	145,412	1,052.07	291,483	54	50	672.59	185,769	84	78
70-79.....	36,786	9,089,309	1,152	279,063	1,399.57	343,785	82	81	1,169.35	286,484	99	97
80 and over..	4,610	1,038,475	367	72,398	322.92	72,365	114	100	353.78	79,062	104	92
All Ages...	97,888	25,999,895	2,129	505,076	2,812.08	719,257	76%	76%	2,215.03	557,388	96%	91%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITH A GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON a-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	20	2,745	6	217	.16	17	750%	276%	.09	10	667%	170%
50-59.....	181	25,602	8	3,564	2.54	376	315	948	1.98	299	404	192
60-69.....	4,247	1,645,896	121	33,098	126.02	48,973	96	68	101.67	39,483	119	84
70-79.....	934	560,212	30	33,514	42.74	26,057	70	129	36.69	22,422	82	149
80 and over..	9	13,190	0	0	.92	1,342	0	0	.94	1,379	0	0
All Ages..	5,391	2,247,645	165	70,393	172.38	76,765	96%	92%	141.37	63,593	117%	111%
<i>Duration 2</i>												
Under 50...	14	2,528	0	0	.11	17	0%	0%	.07	10	0%	0%
50-59.....	114	13,616	5	157	1.68	210	298	75	1.30	166	385	95
60-69.....	3,126	1,335,982	93	36,741	98.23	42,028	95	87	79.65	34,048	117	108
70-79.....	889	532,763	26	15,192	42.09	25,673	62	59	36.26	22,202	72	68
80 and over..	11	16,144	1	1,514	1.14	1,682	88	90	1.19	1,737	84	87
All Ages..	4,154	1,901,033	125	53,604	143.25	69,610	87%	77%	118.47	58,163	106%	92%
<i>Duration 3</i>												
Under 50...	7	2,313	0	0	.06	16	0%	0%	.03	10	0%	0%
50-59.....	75	9,455	15	919	1.12	152	339	605	.86	119	744	772
60-69.....	2,080	931,306	67	22,228	68.87	31,048	97	72	56.10	25,299	119	88
70-79.....	667	371,084	30	14,658	32.74	18,642	92	79	28.44	16,229	105	90
80 and over..	6	8,927	1	2,160	.67	1,039	149	208	.70	1,106	143	195
All Ages..	2,835	1,323,085	113	39,965	103.46	50,897	109%	79%	86.13	42,763	131%	93%

<i>Duration 4</i>												
Under 50...	1	2,003	0	0	.01	15	0%	0%	.00	9	0%	0%
50-59.....	21	4,574	0	0	.32	77	0	0	.24	63	0	0
60-69.....	1,556	737,314	50	18,518	54.77	26,329	91	70	45.00	21,641	111	86
70-79.....	529	310,196	27	7,138	27.41	16,671	99	43	24.04	14,728	112	48
80 and over..	3	2,297	0	0	.31	246	0	0	.31	253	0	0
All Ages...	2,110	1,056,384	77	25,656	82.82	43,338	93%	59%	69.59	36,694	111%	70%
<i>Duration 5</i>												
Under 50.....												
50-59.....	16	3,036	4	136	.24	55	667%	247%	.19	43	105%	316%
60-69.....	1,029	481,077	30	21,983	38.70	18,415	78	119	32.07	15,281	94	144
70-79.....	425	269,077	35	11,347	22.68	14,752	154	77	20.03	13,084	175	87
80 and over..	7	7,288	0	0	.66	699	0	0	.68	704	0	0
All Ages...	1,477	760,478	69	33,466	62.28	33,921	111%	99%	52.97	29,112	130%	115%
<i>Durations 6 and over</i>												
Under 50.....												
50-59.....	2	276	0	0	.04	5	0%	0%	.03	4	0%	0%
60-69.....	178	38,621	7	2,057	5.83	1,341	120	153	4.77	1,100	147	187
70-79.....	1,989	1,028,929	124	65,462	99.68	52,871	124	124	87.06	46,398	142	141
80 and over..	38	41,308	7	3,947	3.65	4,061	192	97	3.68	4,116	190	96
All Ages...	2,207	1,109,134	138	71,466	109.20	58,278	126%	123%	95.54	51,618	144%	138%
<i>All Durations</i>												
Under 50.....	42	9,589	6	217	.34	65	1,765%	334%	.19	39	3,158%	556%
50-59.....	409	56,559	32	4,776	5.94	875	539	546	4.60	694	696	688
60-69.....	12,216	5,170,196	368	134,625	392.42	168,134	94	80	319.26	136,852	115	98
70-79.....	5,433	3,072,261	272	147,311	267.34	154,666	102	95	232.52	135,063	117	109
80 and over..	74	89,154	9	7,621	7.35	9,069	122	84	7.50	9,295	120	82
All Ages...	18,174	8,397,759	687	294,550	673.39	332,809	102%	89%	564.07	281,943	122%	104%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITH A GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON a-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50...	2	1,800	0	0	.00	3	0%	0%	.00	1	0%	0%
50-59.....	40	11,787	0	0	.40	132	0	0	.21	70	0	0
60-69.....	457	110,310	2	1,227	8.87	2,155	23	57	5.65	1,367	35	90
70-79.....	91	30,362	0	0	2.83	947	0	0	2.16	718	0	0
80 and over.....												
All Ages..	590	154,259	2	1,227	12.10	3,237	17%	38%	8.02	2,156	25%	57%
<i>Duration 2</i>												
Under 50...	1	1,676	0	0	.00	3	0%	0%	.00	1	0%	0%
50-59.....	14	5,330	0	0	.15	58	0	0	.09	32	0	0
60-69.....	292	75,173	2	568	5.93	1,497	34	38	3.81	953	52	60
70-79.....	84	32,556	3	900	2.67	1,053	112	85	2.04	811	147	111
80 and over.....	2	393	1	170	.14	27	714	630	.14	29	714	586
All Ages..	393	115,128	6	1,638	8.89	2,638	67%	62%	6.08	1,826	99%	90%
<i>Duration 3</i>												
Under 50...	1	1,676	0	0	.00	3	0%	0%	.00	2	0%	0%
50-59.....	8	2,289	0	0	.08	23	0	0	.04	12	0	0
60-69.....	190	47,459	2	624	3.97	998	50	63	2.58	648	78	96
70-79.....	53	17,949	1	186	1.76	638	57	29	1.41	511	71	36
80 and over.....	1	223	0	0	.08	18	0	0	.09	21	0	0
All Ages..	253	69,596	3	810	5.89	1,680	51%	48%	4.12	1,194	73%	68%

<i>Duration 4</i>												
Under 50 . . . . .	1	1,676	0	0	.00	4	0%	0%	.00	2	0%	0%
50-59 . . . . .	10	2,450	0	0	.11	28	0	0	.05	15	0	0
60-69 . . . . .	130	32,014	0	0	2.85	703	0	0	1.88	465	0	0
70-79 . . . . .	40	12,295	1	240	1.40	431	71	56	1.12	342	89	70
80 and over . . . . .	1	223	0	0	.09	19	0	0	.10	23	0	0
All Ages . . . . .	182	48,658	1	240	4.45	1,185	22%	20%	3.15	847	32%	28%
<i>Duration 5</i>												
Under 50 . . . . .												
50-59 . . . . .	10	2,450	0	0	.11	29	0%	0%	.06	16	0%	0%
60-69 . . . . .	80	22,195	3	1,669	1.86	531	161	314	1.24	363	242	460
70-79 . . . . .	35	9,137	1	3,000	1.22	330	82	909	.96	270	104	111
80 and over . . . . .	1	223	0	0	.09	21	0	0	.12	26	0	0
All Ages . . . . .	126	34,005	4	4,669	3.28	911	122%	513%	2.38	675	168%	692%
<i>Durations 6 and over</i>												
Under 50 . . . . .												
50-59 . . . . .	7	2,658	0	0	.08	32	0%	0%	.05	18	0%	0%
60-69 . . . . .	63	10,421	0	0	1.29	220	0	0	.85	142	0	0
70-79 . . . . .	85	32,807	2	240	2.98	1,098	67	22	2.42	861	83	28
80 and over . . . . .	4	631	0	0	.29	47	0	0	.32	55	0	0
All Ages . . . . .	159	46,517	2	240	4.64	1,397	43%	17%	3.64	1,076	55%	22%
<i>All Durations</i>												
Under 50 . . . . .	5	6,828	0	0	.00	13	0%	0%	.00	6	0%	0%
50-59 . . . . .	89	26,964	0	0	.93	302	0	0	.50	163	0	0
60-69 . . . . .	1,212	297,572	9	4,088	24.77	6,104	36	67	16.01	3,938	56	104
70-79 . . . . .	388	135,106	8	4,566	12.86	4,497	62	102	10.11	3,513	79	130
80 and over . . . . .	9	1,693	1	170	.69	132	145	129	.77	154	130	110
All Ages . . . . .	1,703	468,163	18	8,824	39.25	11,048	46%	80%	27.39	7,774	66%	114%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITHOUT A GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON a-1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50												
50-59	15	4,218	0	0	25	74	0%	0%	.20	59	0%	0%
60-69	124	47,165	2	670	3.69	1,432	54	47	3.01	1,157	66	58
70-79	45	21,954	1	1,794	1.97	960	51	187	1.69	816	59	220
80 and over												
All Ages	184	73,337	3	2,464	5.91	2,466	51%	100%	4.90	2,032	61%	121%
<i>Duration 2</i>												
Under 50												
50-59	4	480	0	0	.05	7	0%	0%	.04	5	0%	0%
60-69	107	45,556	6	3,418	3.26	1,416	184	241	2.64	1,148	227	298
70-79	38	18,754	0	0	1.75	867	0	0	1.50	744	0	0
80 and over	3	953	0	0	.26	85	0	0	.26	84	0	0
All Ages	152	65,743	6	3,418	5.32	2,375	113%	144%	4.44	1,981	135%	173%
<i>Duration 3</i>												
Under 50												
50-59	5	1,064	0	0	.08	16	0%	0%	.05	13	0%	0%
60-69	76	28,500	6	1,029	2.45	949	245	108	1.98	775	303	133
70-79	28	13,135	2	480	1.38	660	145	73	1.20	573	167	84
80 and over	3	953	0	0	.29	91	0	0	.29	91	0	
All Ages	112	43,652	8	1,509	4.20	1,716	190%	88%	3.52	1,452	227%	104%

<i>Duration 4</i>												
Under 50.....												
50-59.....	5	1,064	0	0	.09	19	0%	0%	.06	14	0%	0%
60-69.....	55	21,090	4	701	1.91	744	209	94	1.58	612	253	115
70-79.....	19	7,421	0	0	1.02	401	0	0	.89	355	0	0
80 and over.....	2	606	0	0	.21	63	0	0	.21	64	0	0
All Ages.....	81	30,181	4	701	3.23	1,227	124%	57%	2.74	1,045	146%	67%
<i>Duration 5</i>												
Under 50.....												
50-59.....	2	967	0	0	.04	18	0%	0%	.02	14	0%	0%
60-69.....	39	15,321	0	0	1.44	575	0	0	1.17	475	0	0
70-79.....	15	3,275	3	313	.80	179	375	175	.73	158	411	198
80 and over.....	2	606	0	0	.23	67	0	0	.23	70	0	0
All Ages.....	58	20,169	3	313	2.51	839	120%	37%	2.15	717	140%	44%
<i>Durations 6 and over</i>												
Under 50.....												
50-59.....	27	8,306	0	0	.90	277	0%	0%	.76	227	0%	0%
60-69.....	69	24,563	0	0	3.27	1,131	0	0	2.87	970	0	0
70-79.....	2	606	1	374	.24	72	417	519	.25	77	400	486
80 and over.....												
All Ages.....	98	33,475	1	374	4.41	1,480	23%	25%	3.88	1,274	26%	29%
<i>All Durations</i>												
Under 50.....												
50-59.....	31	7,793	0	0	.51	134	0%	0%	.37	105	0%	0%
60-69.....	428	165,938	18	5,818	13.65	5,393	132	108	11.14	4,394	162	132
70-79.....	214	89,102	6	2,587	10.19	4,198	59	62	8.88	3,616	68	72
80 and over.....	12	3,724	1	374	1.23	378	81	99	1.24	386	81	97
All Ages.....	685	266,557	25	8,779	25.58	10,103	98%	87%	21.63	8,501	116%	103%

TABLE G—Continued

MATURED DEFERRED ANNUITIES WITHOUT A GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES  
EXPERIENCE BETWEEN 1950 AND 1955 ANNIVERSARIES—PENSION TRUST ISSUES

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		BASED ON 1937 STANDARD ANNUITY TABLE				BASED ON <i>a</i> -1949 TABLE			
					Expected Deaths		Mortality Ratio		Expected Deaths		Mortality Ratio	
	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income	Number of Contracts	Amounts of Annual Income
<i>Duration 1</i>												
Under 50.....												
50-59.....	9	153	0	0	.10	1	0%	0%	.04	1	0%	0%
60-69.....	59	12,998	0	0	1.09	262	0	0	.68	167	0	0
70-79.....	9	2,727	0	0	.28	90	0	0	.22	69	0	0
80 and over.....												
All Ages..	77	15,878	0	0	1.47	353	0%	0%	.94	237	0%	0%
<i>Duration 2</i>												
Under 50.....												
50-59.....	8	349	0	0	.08	4	0%	0%	.05	3	0%	0%
60-69.....	51	10,215	1	411	.96	208	104	198	.62	134	161	307
70-79.....	12	3,390	0	0	.40	116	0	0	.31	92	0	0
80 and over.....												
All Ages..	71	13,954	1	411	1.44	328	69%	125%	.98	229	102%	179%
<i>Duration 3</i>												
Under 50.....												
50-59.....	7	127	0	0	.08	1	0%	0%	.04	1	0%	0%
60-69.....	41	8,614	0	0	.80	191	0	0	.51	125	0	0
70-79.....	7	1,877	1	290	.24	67	417	433	.19	53	526	547
80 and over.....												
All Ages..	55	10,618	1	290	1.12	259	89%	112%	.74	179	135%	162%



<i>Duration 4</i>												
Under 50...												
50-59.....	7	127	0	0	.08	1	0%	0%	.04	1	0%	0%
60-69.....	30	5,913	0	0	.58	134	0	0	.38	90	0	0
70-79.....	8	2,190	0	0	.27	76	0	0	.23	61	0	0
80 and over.....												
All Ages..	45	8,230	0	0	.93	211	0%	0%	.65	152	0%	0%
<i>Duration 5</i>												
Under 50...												
50-59.....	4	88	0	0	.05	1	0%	0%	.03	1	0%	0%
60-69.....	12	1,389	0	0	.23	25	0	0	.13	16	0	0
70-79.....	11	3,307	0	0	.39	113	0	0	.30	90	0	0
80 and over.....												
All Ages..	27	4,784	0	0	.67	139	0%	0%	.46	107	0%	0%
<i>Durations 6 and over</i>												
Under 50...												
50-59.....												
60-69.....	20	6,957	0	0	.42	146	0%	0%	.25	94	0%	0%
70-79.....	14	5,467	0	0	.53	197	0	0	.43	160	0	0
80 and over.....												
All Ages..	34	12,424	0	0	.95	343	0%	0%	.68	254	0%	0%
<i>All Durations</i>												
Under 50...												
50-59.....	35	844	0	0	.39	8	0%	0%	.20	7	0%	0%
60-69.....	213	46,086	1	411	4.08	966	25	43	2.57	626	39	66
70-79.....	61	18,958	1	290	2.11	659	47	44	1.68	525	60	55
80 and over.....												
All Ages..	309	65,888	2	701	6.58	1,633	30%	43%	4.45	1,158	45%	61%