

TRANSACTIONS OF SOCIETY OF ACTUARIES 1961 REPORTS

II. MORTALITY UNDER LIFE INCOME SETTLEMENTS AND MATURED DEFERRED ANNUITIES BETWEEN 1955 AND 1960 ANNIVERSARIES

THIS report covers the intercompany experience under the following three major categories of contracts between 1955 and 1960 anniversaries:

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.The companies were asked to omit data where the type of election was not known.
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.
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.
 - b) Annuities without a guaranteed period or a refund provision.

The results for male and female lives are shown separately. Categories 2 and 3 are further subdivided into pension trust issues and other issues. The experience is given both by number of contracts and by amount of annual income.

Expected deaths were calculated on the Annuity Table for 1949 Ultimate, which was designed to represent the mortality in 1949 under immediate nonrefund annuities after the first contract year. Sections of the report also present an analysis based on this table with Projection B, allowing for mortality improvement from 1950 to the study period. Since the 1937 Standard Annuity Table is no longer satisfactory as a standard of expected deaths, its use for this purpose was discontinued.

Previous studies are listed below:

- 1934–1940 anniversaries—*TASA XLII*, 172–180 (limited to life income settlements)
1940–1945 anniversaries—*TASA XLVIII*, 133–165
1945–1950 anniversaries—*TSA 1951 Reports*, 19–71
1950–1955 anniversaries—*TSA 1956 Reports*, 37–109

Table A of the Appendix shows the names of the 17 contributing companies and their proportionate contributions.

Table B of the Appendix shows the distribution of the contributing companies' aggregate mortality ratios by number of contracts.

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS

The exposures, actual deaths, and expected deaths are shown in Table C of the Appendix. Of the total exposure by amount, 97% is on females. A substantial proportion of the experience is in the "certain" period, which may run up to 20 years.

Tables 1 and 2 present summaries of the mortality ratios by attained age and duration groups for males and females respectively; payee elections and nonpayee elections are shown separately. Combined ratios are

TABLE 1
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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>367%</i>	<i>298%</i>	*	*	<i>130%</i>	<i>114%</i>
50-59.....	*	*	<i>116</i>	<i>121</i>	*	*	<i>91</i>	<i>130</i>
60-69.....	*	*	<i>106</i>	<i>101</i>	*	*	<i>73</i>	<i>71</i>
70-79.....	*	*	<i>100</i>	<i>98</i>	*	*	<i>116</i>	<i>105</i>
80 and over.....	*	*	<i>95</i>	<i>93</i>	*	*	<i>101</i>	<i>96</i>
All.....	<i>110%</i>	<i>86%</i>	<i>109%</i>	<i>106%</i>	<i>95%</i>	<i>83%</i>	<i>100%</i>	<i>97%</i>
Nonpayee Elections								
Under 50.....	*	*	<i>299%</i>	<i>276%</i>	*	*	<i>276%</i>	<i>320%</i>
50-59.....	*	<i>315%</i>	<i>167</i>	<i>183</i>	*	<i>436%</i>	<i>214</i>	<i>239</i>
60-69.....	*	*	<i>127</i>	<i>135</i>	*	*	<i>136</i>	<i>151</i>
70-79.....	*	*	<i>125</i>	<i>123</i>	*	*	<i>149</i>	<i>144</i>
80 and over.....	*	*	<i>98</i>	<i>98</i>	*	*	<i>103</i>	<i>96</i>
All.....	<i>139%</i>	<i>168%</i>	<i>145%</i>	<i>148%</i>	<i>136%</i>	<i>237%</i>	<i>162%</i>	<i>172%</i>

* Less than 10 contracts terminated by death.

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

not shown; since the ratios for payee and nonpayee elections are quite different, the combination of the two would be affected by the proportion of each included, and this proportion varies appreciably among the contributing companies. The exposures by individual duration in Table C indicate that the number of payee elections is decreasing, whereas the number of nonpayee elections is remaining about level.

Male Lives

Of the total exposure by amount 35% was on payee and 65% on nonpayee elections, the same as in the last study.

The volume of experience on male lives is so sparse that few reliable conclusions can be drawn. The mortality on payee elections was fairly

TABLE 2
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *q*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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.....	*	*	207%	172%	*	*	148%	129%
50-59.....	76%	69%	111	96	84%	66%	132	108
60-69.....	75	85	102	96	71	87	100	94
70-79.....	87	71	98	94	92	72	98	95
80 and over.....	83	100	97	97	78	108	98	98
All.....	82%	80%	99%	96%	83%	82%	99%	96%
Nonpayee Elections								
Under 50.....	274%	120%	255%	228%	289%	123%	275%	242%
50-59.....	123	128	130	128	127	132	134	132
60-69.....	79	112	113	108	84	124	112	110
70-79.....	105	107	118	115	101	102	115	112
80 and over.....	96	93	110	107	110	95	113	111
All.....	101%	108%	116%	113%	102%	110%	116%	113%

* Less than 10 contracts terminated by death.

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

close to the *a*-1949 Table, except for some very high ratios at ages under 50. The mortality on nonpayee elections exceeded that on payee elections in the aggregate by 42 percentage points by number and 75 percentage points by amount. In the last study period the corresponding figures were 49 and 36 percentage points respectively.

Female Lives

Of the total exposure by amount 48% was on payee and 52% on non-payee elections, compared with 50% on each in the last study.

The aggregate mortality ratios, both by number and amount, were 96% on payee elections and 113% on nonpayee elections. The difference of 17 percentage points compares with 12 percentage points in the last study. In both studies these differences were much smaller than the corresponding differences for males.

Except for payee elections at the first 5 durations, the mortality ratios at ages under 60 were well above those at ages 60 and over, and, as for males, particularly high ratios were experienced at ages under 50.

The markedly lower mortality observed in the last study at durations 1-2, particularly for payee elections, was not found this time. However, mortality at durations 6 and over was generally higher than at the first 5 durations.

LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS

The exposures, actual deaths, and expected deaths are shown in Table D of the Appendix. Of the total exposure by amount on non-pension trust issues 62% was on male lives; the corresponding figure on pension trust issues was 93%. There has been a considerable increase in settlements of pension trust issues in recent years: they accounted for 12% of the total exposure by amount, compared with 4% in the last study. Well over half the experience on non-pension trust issues and almost all the experience on pension trust issues is in the "certain" period.

Tables 3 and 4 present summaries of the mortality ratios by attained age and duration groups for males and females respectively. The tables show non-pension trust issues and pension trust issues separately. No combination is shown since the two types of business are dissimilar in several ways.

Male Lives

Table 3 shows that, in the aggregate, mortality on non-pension trust issues was slightly below the level of the *a*-1949 Table. At ages under 70, mortality at durations 1-2 was considerably lower than at the later durations.

On pension trust issues, the mortality ratios were mostly above 100% by number but below 100% by amount. Contrary to the experience on non-pension trust issues, the ratios on pension trust issues tended to decrease with age.

Female Lives

As in the last study, the mortality ratios on non-pension trust issues, shown in Table 4, were generally 90% or less both by number and amount. The lowest ratios were found at ages 60-69, a feature also observed in the last study. Mortality at durations 6 and over was somewhat higher

TABLE 3
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES
AND SURRENDERS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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.....	68%	94%	86%	84%	57%	110%	109%	92%
60-69.....	83	95	99	93	87	94	103	95
70-79.....	108	94	99	99	107	87	98	97
80 and over.....	<i>104</i>	103	102	102	77	117	110	109
All.....	89%	95%	100%	97%	90%	94%	102%	98%
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	266%	*	*	224%	86%	*	*	85%
60-69.....	93	116%	161%	105	102	98%	124%	101
70-79.....	91	101	106	102	79	89	98	92
80 and over.....	*	*	111	110	*	*	93	78
All.....	95%	111%	110%	105%	97%	94%	99%	96%

* Less than 10 contracts terminated by death.

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

than at the earlier durations, but the excess was smaller than for female payee elections arising from death claims.

The experience on pension trust issues to females was small. The only conclusion that can be drawn is that the mortality appears to be 15-30 percentage points higher than on non-pension trust issues.

TREND OF MORTALITY UNDER LIFE INCOME SETTLEMENTS

Table 5 presents summaries of the mortality ratios in broad age and duration groups for each of the last four study periods. Pension trust issues were excluded for 1950-1955 and 1955-1960; the increase in their

TABLE 4
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES
AND SURRENDERS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON a-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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.....	*	*	300%	238%	*	*	262%	202%
50-59.....	<i>94%</i>	<i>97%</i>	104	99	<i>76%</i>	<i>83%</i>	105	88
60-69.....	77	78	82	80	81	88	85	85
70-79.....	81	91	86	86	96	103	90	91
80 and over.....	*	59	99	98	*	56	94	94
All.....	80%	83%	89%	87%	84%	90%	90%	90%
Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	<i>109%</i>	<i>129%</i>	*	<i>114%</i>	<i>122%</i>	<i>126%</i>	*	<i>121%</i>
70-79.....	*	92	<i>127%</i>	106	*	101	77%	78
80 and over.....	*	*	*	*	*	*	*	*
All.....	<i>102%</i>	<i>117%</i>	<i>115%</i>	111%	<i>105%</i>	<i>117%</i>	76%	103%

* Less than 10 contracts terminated by death.

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

TABLE 5

TREND OF MORTALITY UNDER LIFE INCOME SETTLEMENTS
EXCLUDING MATURITIES AND SURRENDERS UNDER PENSION TRUST ISSUES
EXPERIENCE BETWEEN ANNIVERSARIES IN INDICATED YEARS
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	DURATIONS 1-5				DURATIONS 6 AND OVER				ALL DURATIONS			
	1940- 45	1945- 50	1950- 55	1955- 60	1940- 45	1945- 50	1950- 55	1955- 60	1940- 45	1945- 50	1950- 55	1955- 60
MALE PAYEE ELECTIONS ARISING FROM MATURITIES, SURRENDERS, AND DEATH CLAIMS												
By Number of Contracts												
Under 60	108%	87%	90%	84%	*	117%	98%	104%	112%	93%	92%	90%
60-69	108	102	87	90	108%	105	98	100	109	102	90	93
70 and over	104	87	96	99	111	108	101	100	108	102	100	100
All	107%	96%	90%	92%	111%	108%	101%	100%	108%	102%	96%	97%
By Amount of Annual Income												
Under 60	109%	78%	89%	90%	*	89%	111%	111%	103%	79%	94%	95%
60-69	92	111	87	91	98%	104	98	102	93	110	90	94
70 and over	93	82	98	95	118	112	100	101	107	103	100	100
All	94%	101%	90%	92%	114%	110%	100%	102%	100%	105%	95%	98%
MALE NONPAYEE ELECTIONS ARISING FROM DEATH CLAIMS												
By Number of Contracts												
Under 60	252%	209%	203%	221%	248%	280%	209%	213%	249%	253%	207%	215%
60-69	179	137	180	161	221	201	134	127	197	168	144	135
70 and over	184	186	191	106	*	86	133	113	116	111	145	111
All	201%	171%	192%	156%	158%	154%	153%	145%	177%	160%	162%	148%
By Amount of Annual Income												
Under 60	412%	118%	241%	336%	343%	237%	240%	233%	372%	185%	240%	265%
60-69	168	206	121	194	210	215	77	136	180	209	88	151
70 and over	190	269	169	109	*	117	170	132	238	159	169	125
All	217%	205%	183%	197%	272%	162%	159%	162%	245%	180%	166%	172%

* Less than 10 contracts terminated by death.

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

TABLE 5—Continued

ATTAINED AGES	DURATIONS 1-5				DURATIONS 6 AND OVER				ALL DURATIONS			
	1940-45	1945-50	1950-55	1955-60	1940-45	1945-50	1950-55	1955-60	1940-45	1945-50	1950-55	1955-60
FEMALE PAYEE ELECTIONS ARISING FROM MATURITIES, SURRENDERS AND DEATH CLAIMS												
By Number of Contracts												
Under 60	144%	119%	96%	88%	152%	145%	132%	119%	146%	129%	113%	104%
60-69	103	101	87	79	114	109	96	93	108	105	92	88
70 and over	100	89	83	82	113	110	100	94	107	105	98	93
All	110%	101%	87%	81%	116%	112%	100%	95%	113%	108%	97%	92%
By Amount of Annual Income												
Under 60	133%	112%	107%	79%	151%	150%	143%	131%	137%	126%	123%	105%
60-69	106	104	87	83	118	114	101	95	110	109	94	90
70 and over	102	90	85	87	104	106	101	96	104	102	98	95
All	109%	101%	89%	85%	112%	111%	102%	97%	111%	107%	98%	94%
FEMALE NONPAYEE ELECTIONS ARISING FROM DEATH CLAIMS												
By Number of Contracts												
Under 60	166%	121%	144%	135%	174%	140%	162%	151%	170%	130%	154%	144%
60-69	129	111	102	98	122	127	116	113	124	121	111	108
70 and over	131	113	112	102	119	129	110	114	122	125	110	111
All	138%	114%	114%	105%	125%	129%	115%	116%	129%	124%	115%	113%
By Amount of Annual Income												
Under 60	158%	128%	148%	138%	191%	159%	159%	155%	172%	142%	153%	148%
60-69	145	116	101	108	116	124	119	112	132	121	111	110
70 and over	139	111	115	102	113	126	112	114	119	122	113	111
All	145%	116%	115%	107%	121%	129%	116%	116%	130%	124%	116%	113%

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

proportion of the total, combined with the different mortality found under them, would obscure the trend. It was not possible to exclude the experience under pension trust issues for 1940-1945 and 1945-1950, but this experience was so small that its effect is negligible. Payee elections and nonpayee elections are shown separately; the experience on payee elections combines settlements arising from death claims and maturities and surrenders.

The experience for 1940-1945 has not previously been published on the *a*-1949 Table. In the report on the 1940-1945 experience the mortality ratios were based on the 1937 Standard Annuity Table. Since this table was not used to calculate expected deaths in the current study, and since it was considered desirable to view trends over a 20-year period, the ratios in the 1940-1945 experience were converted to the *a*-1949 Table by the method described on page 62.

For male payee elections, the mortality ratios by number of contracts dropped steadily over the first three periods shown in Table 5, but actually increased slightly in the latest period. (A similar trend was observed in the male experience on immediate nonrefund annuities—see *TSA* 1959 Reports, page 83.) This increase is attributable to the experience on settlements arising from maturities and surrenders, which accounted for more than 95% of the exposure by amount of annual income. The mortality on male payee elections arising from death claims was lower in the latest than in the preceding study period.

For female payee elections, as for males, the mortality on settlements arising from maturities and surrenders increased slightly in the latest period, while the mortality on settlements arising from death claims continued to decrease. The combination of the two types of payee elections (which are not shown separately in Table 5) produced a pattern of steady mortality improvement through the four study periods shown. The degree of improvement decreases with age. On payee elections the decreases in mortality at durations 1-5 were similar to those at durations 6 and over, but on nonpayee elections the decrease has been greater at durations 1-5.

MORTALITY RATIOS FOR LIFE INCOME SETTLEMENTS ON *a*-1949 TABLE WITH PROJECTION B

Tables 6 and 7 show the mortality ratios for males and females respectively based on the *a*-1949 Table with Projection B. The calculation of expected deaths on this basis is described on page 62.

For nonpayee elections arising from death claims, the mortality ratios were generally well above 100% for both males and females. This was not true of payee elections arising from maturities and surrenders (excluding

TABLE 6
LIFE INCOME SETTLEMENTS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE
WITH PROJECTION B

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and Over	All	1-2	3-5	6 and Over	All
Nonpayee Elections Arising from Death Claims								
Under 50.....	*	*	<i>327%</i>	<i>300%</i>	*	*	<i>303%</i>	<i>351%</i>
50-59.....	*	<i>344%</i>	<i>184</i>	<i>200</i>	*	<i>478%</i>	<i>234</i>	<i>262</i>
60-69.....	*	*	<i>138</i>	<i>147</i>	*	*	<i>148</i>	<i>163</i>
70-79.....	*	*	<i>133</i>	<i>130</i>	*	*	<i>158</i>	<i>152</i>
80 and over.....	*	*	<i>100</i>	<i>99</i>	*	*	<i>105</i>	<i>98</i>
All.....	<i>147%</i>	<i>178%</i>	<i>154%</i>	<i>157%</i>	<i>145%</i>	<i>253%</i>	<i>173%</i>	<i>184%</i>
Payee Elections Arising from Maturities and Surrenders (Excluding Pension Trust Issues) and Death Claims								
Under 50.....	*	*	<i>274%</i>	<i>186%</i>	*	*	<i>182%</i>	<i>122%</i>
50-59.....	<i>76%</i>	<i>104%</i>	<i>99</i>	<i>94</i>	<i>65%</i>	<i>124%</i>	<i>116</i>	<i>103</i>
60-69.....	<i>91</i>	<i>102</i>	<i>108</i>	<i>100</i>	<i>94</i>	<i>102</i>	<i>111</i>	<i>102</i>
70-79.....	<i>114</i>	<i>100</i>	<i>105</i>	<i>105</i>	<i>113</i>	<i>92</i>	<i>104</i>	<i>103</i>
80 and over.....	<i>104</i>	<i>105</i>	<i>104</i>	<i>104</i>	<i>78</i>	<i>119</i>	<i>112</i>	<i>111</i>
All.....	<i>96%</i>	<i>102%</i>	<i>105%</i>	<i>103%</i>	<i>97%</i>	<i>101%</i>	<i>107%</i>	<i>104%</i>
Payee Elections Arising from Maturities and Surrenders Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	<i>292%</i>	*	*	<i>245%</i>	<i>95%</i>	*	*	<i>93%</i>
60-69.....	<i>101</i>	<i>126%</i>	<i>174%</i>	<i>114</i>	<i>110</i>	<i>106%</i>	<i>135%</i>	<i>109</i>
70-79.....	<i>97</i>	<i>108</i>	<i>112</i>	<i>109</i>	<i>85</i>	<i>95</i>	<i>104</i>	<i>98</i>
80 and over.....	*	*	<i>115</i>	<i>114</i>	*	*	<i>96</i>	<i>81</i>
All.....	<i>103%</i>	<i>120%</i>	<i>117%</i>	<i>113%</i>	<i>105%</i>	<i>101%</i>	<i>105%</i>	<i>104%</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—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE
WITH PROJECTION B

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT OF ANNUAL INCOME			
	Durations				Durations			
	1-2	3-5	6 and Over	All	1-2	3-5	6 and Over	All
Nonpayee Elections Arising from Death Claims								
Under 50.....	301%	132%	280%	250%	317%	135%	302%	265%
50-59.....	135	141	143	141	139	144	147	145
60-69.....	86	121	122	117	91	135	121	120
70-79.....	111	114	125	122	107	108	122	118
80 and over.....	98	96	112	109	112	98	116	114
All.....	107%	115%	121%	119%	109%	116%	121%	119%
Payee Elections Arising from Maturities and Surrenders (Excluding Pension Trust Issues) and Death Claims								
Under 50.....	*	*	252%	207%	*	*	196%	164%
50-59.....	94%	92%	119	106	88%	81%	138	110
60-69.....	83	87	101	95	83	95	103	98
70-79.....	90	82	98	96	99	84	101	99
80 and over.....	85	97	100	99	81	107	99	99
All.....	87%	87%	100%	97%	89%	91%	101%	99%
Payee Elections Arising from Maturities and Surrenders Pension Trust Issues								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	119%	139%	*	124%	132%	136%	*	131%
70-79.....	*	98	135%	112	*	107	82%	83
80 and over.....	*	*	*	*	*	*	*	*
All.....	111%	125%	123%	120%	113%	126%	81%	111%

* Less than 10 contracts terminated by death.

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

pension trust issues) and from death claims, where the aggregate ratios were slightly above 100% for males and slightly below 100% for females. For female payee elections at durations 1-5, actual deaths for all ages combined were 13% below the expected by number of contracts, and about 10% below the expected by amount of annual income.

It should be noted that an adjustment to the *a*-1949 Table was originally indicated for life income settlements because of the somewhat different basic mortality level among holders of such settlements as compared with holders of immediate nonrefund annuities (see *TSA I*, pages 434-442).

MATURED DEFERRED ANNUITIES

The exposures, actual deaths, and expected deaths are shown in Table E of the Appendix. Males accounted for 44% of the exposure by amount

TABLE 8
MATURED DEFERRED ANNUITIES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

	BY NUMBER OF CONTRACTS		BY AMOUNT OF ANNUAL INCOME	
	Males	Females	Males	Females
<i>With a Guaranteed Period or Refund Provision</i>				
Other Than Pension Trust...	106% (6,286)	97% (8,740)	106%	94%
Pension Trust.....	132% (2,499)	119% (140)	124%	128%
<i>Without a Guaranteed Period or Refund Provision</i>				
Other Than Pension Trust...	90% (893)	87% (3,002)	88%	83%
Pension Trust.....	120% (74)	46% (9)	144%	66%

NOTE.—Number of contracts terminated by death is shown in parentheses.

of annual income on non-pension trust issues and 92% on pension trust issues. Of non-pension trust issues to males, 88% by amount were with a guaranteed period or refund provision; the corresponding figure for females was 75%. Almost all the pension trust issues, which amounted to 9% of the total exposure, were with a guaranteed period or refund provision. There has been a substantial increase in maturities of deferred pension trust annuities in recent years; it is noteworthy that two companies contributed 75% of the exposure in this category. Table 8 provides a summary of the aggregate mortality ratios and number of contracts terminated by death in each category.

Male Lives

Table 9 shows that in the aggregate the mortality on non-pension trust contracts without a guaranteed period or refund provision—about 90% of expected—was more than 15 percentage points lower than on contracts with such a provision. The difference in mortality ratios between the two types of contracts decreased with advancing age. For contracts with a guaranteed period or refund provision, ratios for ages under 70 markedly exceeded those for ages 70 and over at the early durations.

Pension trust issues experienced higher mortality than other issues, averaging about 130% of expected by number of contracts. The very high mortality at ages 50–59 was probably due to ill-health retirements. The ratios show a pronounced tendency to decrease with age. There are insufficient data on pension trust issues without a guaranteed period or refund provision to permit an analysis by age and duration.

Female Lives

On non-pension trust issues, all of the ratios in Table 10 for all ages combined are below 100%. Mortality on non-pension trust issues without a guaranteed period or refund provision was lower than on those with such a provision, but the difference, about 10 percentage points in the aggregate, was smaller than for males. For females as well as for males, the difference in mortality between refund and nonrefund issues at durations 6 and over decreased with advancing age.

As in the male experience, mortality on pension trust issues was 20–30 percentage points higher than on non-pension trust issues.

TREND OF MORTALITY UNDER MATURED DEFERRED ANNUITIES

Table 11 presents summaries of the mortality ratios in broad age and duration groups for each of the last four study periods. Pension trust issues are excluded for 1950–1955 and 1955–1960. It was not possible to exclude the experience under pension trust issues for 1940–1945 and 1945–1950, but this experience was so small that its effect is negligible.

The experience for 1940–1945 has not previously been published on the *a-1949 Table*. The ratios on the 1937 Standard Annuity Table were converted in the same way as for life income settlements (see page 62).

For both male and female lives, the pattern revealed in Table 11 is similar to that in Table 5. The degree of improvement in mortality has tended to decrease with advancing age. For male lives, there were substantial improvements over 1945–1950 in 1950–1955, but since then mortality has remained about level. The female ratios show a steady improvement extending through the 1955–1960 period.

TABLE 9
MATURED DEFERRED ANNUITIES—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	<i>118%</i>	<i>159%</i>	<i>100%</i>	<i>132%</i>	<i>106%</i>	<i>110%</i>	<i>124%</i>	<i>113%</i>
60-69	123	113	111	115	107	114	109	111
70-79	79	88	106	104	100	77	111	105
80 and over	<i>98</i>	<i>110</i>	101	101	<i>175</i>	<i>102</i>	102	103
All	<i>112%</i>	<i>108%</i>	<i>105%</i>	<i>106%</i>	<i>106%</i>	<i>98%</i>	<i>108%</i>	<i>106%</i>
Without a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	<i>83%</i>	*	*	*	<i>174%</i>
60-69	<i>46%</i>	<i>96%</i>	<i>95%</i>	82	<i>47%</i>	<i>80%</i>	<i>94%</i>	75
70-79	*	<i>116</i>	93	93	*	<i>115</i>	92	91
80 and over	*	*	94	94	*	*	93	92
All	<i>45%</i>	<i>102%</i>	<i>93%</i>	<i>90%</i>	<i>46%</i>	<i>98%</i>	<i>92%</i>	<i>88%</i>
PENSION TRUST ISSUES								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	<i>700%</i>	<i>748%</i>	*	<i>721%</i>	<i>495%</i>	<i>625%</i>	*	<i>514%</i>
60-69	123	149	<i>289%</i>	139	135	145	<i>258%</i>	142
70-79	122	125	119	121	99	107	119	114
80 and over	*	*	91	81	*	*	110	105
All	<i>132%</i>	<i>142%</i>	<i>122%</i>	<i>132%</i>	<i>126%</i>	<i>128%</i>	<i>120%</i>	<i>124%</i>

* Less than 10 contracts terminated by death.

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

TABLE 10
MATURED DEFERRED ANNUITIES—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	148%	108%	110%	120%	129%	123%	100%	119%
60-69	89	101	100	99	74	96	108	97
70-79	85	67	96	94	100	73	96	94
80 and over	96	74	100	100	45	70	92	91
All	92%	93%	98%	97%	82%	90%	96%	94%
Without a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	332%	169%	*	*	247%	128%
60-69	76%	66%	79	74	63%	57%	77	68
70-79	49	70	84	83	51	76	86	84
80 and over	*	*	99	99	*	*	94	94
All	75%	68%	89%	87%	62%	62%	87%	83%
PENSION TRUST ISSUES								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*
60-69	122%	98%	215%	120%	153%	91%	123%	120%
70-79	*	119	113	115	*	179	116	138
80 and over	*	*	*	*	*	*	*	*
All	140%	104%	119%	119%	147%	132%	115%	128%

* Less than 10 contracts terminated by death.

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

TABLE 11

TREND OF MORTALITY UNDER MATURED DEFERRED ANNUITIES
OTHER THAN PENSION TRUST ISSUES
EXPERIENCE BETWEEN ANNIVERSARIES IN INDICATED YEARS
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	DURATIONS 1-5				DURATIONS 6 AND OVER				ALL DURATIONS			
	1940-45	1945-50	1950-55	1955-60	1940-45	1945-50	1950-55	1955-60	1940-45	1945-50	1950-55	1955-60
MALE CONTRACTS with a GUARANTEED PERIOD OR REFUND PROVISION												
By Number of Contracts												
Under 60	178%	157%	147%	144%	*	211%	70%	97%	173%	166%	130%	131%
60-69	134	132	115	117	77%	168	104	111	130	138	112	115
70 and over	105	122	103	87	134	111	103	105	117	114	103	103
All	127%	130%	113%	109%	124%	121%	103%	105%	127%	126%	107%	106%
By Amount of Annual Income												
Under 60	183%	172%	123%	111%	*	167%	128%	121%	185%	171%	124%	113%
60-69	141	133	122	111	73%	137	107	109	136	134	118	111
70 and over	101	100	95	87	121	115	100	108	108	109	99	104
All	130%	123%	112%	101%	113%	119%	101%	108%	127%	121%	106%	106%
MALE CONTRACTS without a GUARANTEED PERIOD OR REFUND PROVISION												
By Number of Contracts												
Under 60	*	*	*	*	*	*	*	*	*	*	*	83%
60-69	104%	89%	79%	77%	204%	222%	75%	95%	114%	115%	78%	82
70 and over	102	115	62	96	102	104	104	93	103	107	99	93
All	103%	96%	74%	82%	123%	123%	100%	93%	108%	109%	91%	90%
By Amount of Annual Income												
Under 60	*	*	*	*	*	*	*	*	*	*	*	173%
60-69	82%	83%	57%	67%	268%	213%	46%	94%	98%	110%	55%	75
70 and over	63	84	48	90	108	103	99	92	85	98	91	92
All	79%	83%	54%	78%	136%	120%	91%	92%	93%	102%	78%	88%

* Less than 10 contracts terminated by death.

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

TABLE 11—Continued

ATTAINED AGES	DURATIONS 1-5				DURATIONS 6 AND OVER				ALL DURATIONS			
	1940- 45	1945- 50	1950- 55	1955- 60	1940- 45	1945- 50	1950- 55	1955- 60	1940- 45	1945- 50	1950- 55	1955- 60
FEMALE CONTRACTS <i>with</i> A GUARANTEED PERIOD OR REFUND PROVISION												
By Number of Contracts												
Under 60	189%	194%	127%	123%	*	201%	110%	110%	189%	195%	124%	120%
60-69	125	117	116	97	129%	115	108	100	124	116	112	99
70 and over	110	107	93	73	123	113	102	98	118	112	101	96
All	124%	118%	111%	93%	126%	114%	103%	98%	124%	116%	105%	97%
By Amount of Annual Income												
Under 60	153%	149%	128%	131%	*	172%	199%	100%	161%	153%	143%	123%
60-69	140	112	113	88	111%	119	98	108	133	114	107	97
70 and over	105	113	125	80	116	109	97	94	109	110	101	93
All	131%	114%	117%	87%	116%	112%	98%	96%	125%	113%	104%	94%
FEMALE CONTRACTS <i>without</i> A GUARANTEED PERIOD OR REFUND PROVISION												
By Number of Contracts												
Under 60	*	152%	216%	116%	*	*	*	330%	*	150%	223%	168%
60-69	98%	89	75	69	169%	98%	95%	79	108%	92	84	74
70 and over	139	91	98	66	108	105	100	90	124	103	100	90
All	108%	91%	85%	70%	124%	103%	99%	89%	113%	99%	96%	87%
By Amount of Annual Income												
Under 60	*	116%	128%	98%	*	*	*	243%	*	118%	135%	127%
60-69	93%	80	70	59	183%	101%	90%	77	105%	86	78	68
70 and over	102	75	112	69	102	100	94	89	104	95	96	88
All	97%	80%	82%	62%	123%	100%	94%	87%	105%	92%	91%	83%

* Less than 10 contracts terminated by death.

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

MORTALITY RATIOS FOR DEFERRED ANNUITIES
ON *a*-1949 TABLE WITH PROJECTION B

Tables 12 and 13 show the mortality ratios, for males and females respectively, based on the *a*-1949 Table with Projection B. The calculation of the expected deaths on this basis is described on page 62.

On male non-pension trust issues with a guaranteed period or refund provision, the projected table provides a margin that decreases with age, being slightly over 10% in the aggregate. For females, the ratios are generally close to 100%. On non-pension trust issues without a guaranteed period or refund provision, the mortality ratios were generally below 100% for both males and females—as much as 20–30 percentage points below in the case of females at durations 1–5. When the *a*-1949 Table was developed, it was recognized that the table might require adjustment for use in connection with deferred annuities on male lives (see *TSA I*, pages 434–435).

COMPARISON OF LIFE INCOME SETTLEMENTS
AND MATURED DEFERRED ANNUITIES

Table 14 presents a comparison of life income settlements arising from death claims (payee elections only), life income settlements arising from maturities and surrenders, and matured deferred annuities, all with a guaranteed period or refund provision. Pension trust issues in the last two categories have been excluded from Table 14 and are shown separately in Table 15.

Table 14 shows that at durations 6 and over the lowest mortality for both males and females was experienced on settlements arising from maturities and surrenders, but the differences tended to disappear at ages 80 and over. In the aggregate the experience on settlements arising from death claims was similar to that on matured deferred annuities. The increase in mortality with duration was most marked on death claim settlements.

On pension trust issues, Table 15 shows that mortality on matured deferred annuities exceeded that on settlements arising from maturities and surrenders for both males and females.

TABLE 12
MATURED DEFERRED ANNUITIES—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE
WITH PROJECTION B

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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								
With a Guaranteed Period or Refund Provision								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	<i>130%</i>	<i>174%</i>	<i>109%</i>	<i>144%</i>	<i>116%</i>	<i>120%</i>	<i>136%</i>	<i>123%</i>
60-69.....	134	122	120	124	116	123	118	120
70-79.....	85	94	113	110	107	82	117	111
80 and over.....	<i>102</i>	<i>113</i>	104	104	<i>181</i>	<i>105</i>	104	105
All.....	<i>121%</i>	<i>116%</i>	<i>111%</i>	<i>113%</i>	<i>114%</i>	<i>106%</i>	<i>114%</i>	<i>112%</i>
Without a Guaranteed Period or Refund Provision								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	<i>92%</i>	*	*	*	<i>190%</i>
60-69.....	<i>50%</i>	<i>103%</i>	<i>103%</i>	88	<i>51%</i>	<i>86%</i>	<i>102%</i>	81
70-79.....	*	<i>124</i>	98	98	*	<i>122</i>	97	97
80 and over.....	*	*	96	96	*	*	95	95
All.....	<i>49%</i>	<i>110%</i>	<i>97%</i>	<i>96%</i>	<i>50%</i>	<i>106%</i>	<i>97%</i>	<i>93%</i>
PENSION TRUST ISSUES								
With a Guaranteed Period or Refund Provision								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	<i>766%</i>	<i>815%</i>	*	<i>787%</i>	<i>541%</i>	<i>680%</i>	*	<i>561%</i>
60-69.....	133	161	<i>312%</i>	151	146	157	<i>279%</i>	154
70-79.....	131	133	127	129	106	114	127	121
80 and over.....	*	*	93	84	*	*	113	108
All.....	<i>142%</i>	<i>153%</i>	<i>129%</i>	<i>141%</i>	<i>136%</i>	<i>137%</i>	<i>127%</i>	<i>133%</i>

* Less than 10 contracts terminated by death.

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

TABLE 13
 MATURED DEFERRED ANNUITIES—FEMALE LIVES
 EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
 MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE
 WITH PROJECTION B

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT 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								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	<i>163%</i>	<i>118%</i>	<i>120%</i>	<i>131%</i>	<i>141%</i>	<i>135%</i>	<i>110%</i>	<i>131%</i>
60-69	97	110	109	107	80	104	117	105
70-79	90	72	101	100	107	78	101	100
80 and over	99	76	103	103	46	72	94	93
All	99%	100%	103%	102%	89%	97%	101%	100%
Without a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	<i>364%</i>	<i>185%</i>	*	*	<i>271%</i>	<i>140%</i>
60-69	83%	71%	85	81	68%	62%	84	73
70-79	52	75	89	88	55	81	91	89
80 and over	*	*	102	102	*	*	96	96
All	81%	73%	94%	91%	68%	67%	92%	88%
PENSION TRUST ISSUES								
With a Guaranteed Period or Refund Provision								
Under 50	*	*	*	*	*	*	*	*
50-59	*	*	*	*	*	*	*	*
60-69	<i>132%</i>	<i>106%</i>	<i>233%</i>	<i>130%</i>	<i>166%</i>	<i>99%</i>	<i>133%</i>	<i>130%</i>
70-79	*	<i>127</i>	<i>121</i>	<i>123</i>	*	<i>190</i>	<i>123</i>	<i>146</i>
80 and over	*	*	*	*	*	*	*	*
All	<i>151%</i>	<i>112%</i>	<i>126%</i>	<i>127%</i>	<i>159%</i>	<i>141%</i>	<i>121%</i>	<i>137%</i>

* Less than 10 contracts terminated by death.

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

TABLE 14

COMPARISON OF CONTRACTS WITH A
GUARANTEED PERIOD OR REFUND PROVISION

(A) PAYEE ELECTION LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS

(B) LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS
—OTHER THAN PENSION TRUST ISSUES

(C) MATURED DEFERRED ANNUITIES—OTHER THAN PENSION TRUST ISSUES

EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS						BY AMOUNT OF ANNUAL INCOME					
	Males			Females			Males			Females		
	A	B	C	A	B	C	A	B	C	A	B	C
	Durations 1-5											
Under 50	*	*	*	<i>120%</i>	*	*	*	*	*	<i>105%</i>	*	*
50-59	*	<i>83%</i>	<i>144%</i>	<i>72</i>	<i>96%</i>	<i>123%</i>	*	<i>88%</i>	<i>108%</i>	<i>74</i>	<i>80%</i>	<i>125%</i>
60-69	<i>87%</i>	<i>90</i>	<i>117</i>	<i>81</i>	<i>78</i>	<i>97</i>	<i>66%</i>	<i>91</i>	<i>111</i>	<i>81</i>	<i>85</i>	<i>88</i>
70-79	*	<i>99</i>	<i>85</i>	<i>76</i>	<i>88</i>	<i>72</i>	*	<i>95</i>	<i>84</i>	<i>79</i>	<i>100</i>	<i>82</i>
80 and over	*	<i>103</i>	<i>106</i>	<i>95</i>	<i>65</i>	<i>82</i>	*	<i>102</i>	<i>133</i>	<i>100</i>	<i>67</i>	<i>61</i>
All	<i>95%</i>	<i>92%</i>	<i>109%</i>	<i>81%</i>	<i>82%</i>	<i>93%</i>	<i>88%</i>	<i>92%</i>	<i>101%</i>	<i>83%</i>	<i>88%</i>	<i>87%</i>
Durations 6 and Over												
Under 50	<i>367%</i>	*	*	<i>207%</i>	<i>300%</i>	*	<i>130%</i>	*	*	<i>148%</i>	<i>262%</i>	*
50-59	<i>116</i>	<i>86%</i>	<i>100%</i>	<i>111</i>	<i>104</i>	<i>110%</i>	<i>91</i>	<i>109%</i>	<i>124%</i>	<i>132</i>	<i>105</i>	<i>108</i>
60-69	<i>106</i>	<i>99</i>	<i>111</i>	<i>102</i>	<i>82</i>	<i>100</i>	<i>73</i>	<i>103</i>	<i>109</i>	<i>100</i>	<i>85</i>	<i>108</i>
70-79	<i>100</i>	<i>99</i>	<i>106</i>	<i>98</i>	<i>86</i>	<i>96</i>	<i>116</i>	<i>98</i>	<i>111</i>	<i>98</i>	<i>90</i>	<i>96</i>
80 and over	<i>95</i>	<i>102</i>	<i>101</i>	<i>97</i>	<i>99</i>	<i>100</i>	<i>101</i>	<i>110</i>	<i>102</i>	<i>98</i>	<i>94</i>	<i>92</i>
All	<i>109%</i>	<i>100%</i>	<i>105%</i>	<i>99%</i>	<i>89%</i>	<i>98%</i>	<i>100%</i>	<i>102%</i>	<i>108%</i>	<i>99%</i>	<i>90%</i>	<i>96%</i>
All Durations												
Under 50	<i>298%</i>	*	*	<i>172%</i>	<i>238%</i>	*	<i>114%</i>	*	*	<i>129%</i>	<i>202%</i>	*
50-59	<i>121</i>	<i>84%</i>	<i>132%</i>	<i>96</i>	<i>99</i>	<i>120%</i>	<i>130</i>	<i>92%</i>	<i>113%</i>	<i>108</i>	<i>88</i>	<i>119%</i>
60-69	<i>101</i>	<i>93</i>	<i>115</i>	<i>96</i>	<i>80</i>	<i>99</i>	<i>71</i>	<i>95</i>	<i>111</i>	<i>94</i>	<i>85</i>	<i>97</i>
70-79	<i>98</i>	<i>99</i>	<i>104</i>	<i>94</i>	<i>86</i>	<i>94</i>	<i>105</i>	<i>97</i>	<i>105</i>	<i>95</i>	<i>91</i>	<i>94</i>
80 and over	<i>93</i>	<i>102</i>	<i>101</i>	<i>97</i>	<i>98</i>	<i>100</i>	<i>96</i>	<i>109</i>	<i>103</i>	<i>98</i>	<i>94</i>	<i>91</i>
All	<i>106%</i>	<i>97%</i>	<i>106%</i>	<i>96%</i>	<i>87%</i>	<i>97%</i>	<i>97%</i>	<i>98%</i>	<i>106%</i>	<i>96%</i>	<i>90%</i>	<i>94%</i>

* Less than 10 contracts terminated by death.

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

TABLE 15
COMPARISON OF CONTRACTS WITH A
GUARANTEED PERIOD OR REFUND PROVISION

(A) LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS
—PENSION TRUST ISSUES

(B) MATURED DEFERRED ANNUITIES—PENSION TRUST ISSUES

EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES
MORTALITY RATIOS ON *a*-1949 ULTIMATE TABLE

ATTAINED AGES	BY NUMBER OF CONTRACTS				BY AMOUNT OF ANNUAL INCOME			
	Males		Females		Males		Females	
	A	B	A	B	A	B	A	B
Durations 1-5								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	235%	715%	*	*	88%	535%	*	*
60-69.....	104	136	118%	109%	100	141	124%	120%
70-79.....	98	124	83	118	86	105	79	163
80 and over.....	*	*	*	*	*	*	*	*
All.....	104%	138%	110%	118%	96%	127%	112%	138%
Durations 6 and Over								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	*	*	*	*	*	*	*	*
60-69.....	161%	289%	*	215%	124%	258%	*	123%
70-79.....	106	119	127%	113	98	119	77%	116
80 and over.....	111	91	*	*	93	110	*	*
All.....	110%	122%	115%	119%	99%	120%	76%	115%
All Durations								
Under 50.....	*	*	*	*	*	*	*	*
50-59.....	224%	721%	*	*	85%	514%	*	*
60-69.....	105	139	114%	120%	101	142	121%	120%
70-79.....	102	121	106	115	92	114	78	138
80 and over.....	110	81	*	*	78	105	*	*
All.....	105%	132%	111%	119%	96%	124%	103%	128%

* Less than 10 contracts terminated by death.

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

APPENDIX

CONVERSION OF MORTALITY RATIOS ON THE 1937 STANDARD ANNUITY TABLE TO THE ANNUITY TABLE FOR 1949 ULTIMATE

Exposures and expected deaths for the period between 1940 and 1945 contract anniversaries by attained age groups are shown in *TASA XLVIII* for each category of settlements. A mortality rate for each age group was calculated by dividing the expected deaths by the exposure. The nearest age on the 1937 Standard Annuity Table corresponding to this rate was determined, and the expected deaths were multiplied by the ratio of the mortality rate on the *a*-1949 Table to the mortality rate on the 1937 Standard Annuity Table at this age. The product was taken as the expected deaths on the *a*-1949 Table.

MORTALITY IMPROVEMENT FACTORS ACCORDING TO PROJECTION B

Expected deaths on the *a*-1949 Table with Projection B were calculated from those on the *a*-1949 Table without projection by multiplying the latter by factors reflecting the improvement in mortality, according to Projection B, through the period covered by the present study. The formula

$$\frac{1}{2} \left[\left(1 - \frac{S_x}{100} \right)^{1955-1950} + \left(1 - \frac{S_x}{100} \right)^{1960-1950} \right]$$

was used to approximate the average improvement factor for the period from 1955 to 1960 anniversaries. This is similar to the formula used for the last study of Mortality under Individual Immediate Annuities (*TSA 1959 Reports*, p. 102).

The accompanying table shows the annual rates of improvement in mortality S_x according to Projection B and the resulting projection factors which were applied to expected deaths for the 1955-1960 experience.

Attained Age	Rate of Decrease per Year in Mortality Rate	Reduction in Mortality Rate from 1950 through 1955-60
10-50.....	1.250%	8.958%
51.....	1.245	8.924
52.....	1.240	8.889
53.....	1.235	8.855
54.....	1.230	8.821
55.....	1.225	8.787
56.....	1.220	8.753
57.....	1.215	8.718
58.....	1.210	8.684
59.....	1.205	8.650
60.....	1.200	8.615
61.....	1.18	8.478
62.....	1.16	8.340
63.....	1.14	8.202
64.....	1.12	8.064
65.....	1.10	7.926
66.....	1.07	7.718
67.....	1.04	7.510
68.....	1.01	7.301
69.....	.98	7.092
70.....	.95	6.882
71.....	.91	6.602
72.....	.87	6.321
73.....	.83	6.039
74.....	.79	5.757
75.....	.75	5.473
76.....	.70	5.117
77.....	.65	4.760
78.....	.60	4.402
79.....	.55	4.043
80.....	.50	3.682
81.....	.45	3.320
82.....	.40	2.956
83.....	.35	2.591
84.....	.30	2.225
85.....	.25	1.858
86.....	.20	1.489
87.....	.15	1.119
88.....	.10	.747
89.....	.05	.374
90 and over..	.00	.000

TABLE A
CONTRIBUTING COMPANIES
PROPORTIONS OF TOTAL EXPOSURES*

COMPANY	LIFE INCOME SETTLEMENTS ARISING FROM			MATURED DEFERRED ANNUITIES	
	Death Claims	Maturities and Surrenders		Other Than Pension Trust Issues	Pension Trust Issues
		Other Than Pension Trust Issues	Pension Trust Issues		
Northwestern Mutual.....	12.1%	8.0%	35.2%		36.3%
New York Life.....	11.2	12.5		12.0%	
Equitable (N. Y.).....	11.2	4.5	3.9	39.3	5.2
Prudential.....	9.5	3.8		3.1	
Metropolitan.....	6.5	7.1			
Penn Mutual.....	6.1	6.0	2.8	5.4	.6
Mutual Benefit.....	5.8	5.0	8.7	.1	4.3
Travelers.....	5.6	15.0		3.2	
New England Life.....	5.5	8.6	19.7	2.8	4.4
Aetna.....	4.9	7.9	1.6	.9	
Mutual Life.....	4.8	2.5		4.3	
Massachusetts Mutual.....	4.4	5.5	12.4	9.3	3.2
Provident Mutual.....	2.9	3.5	.4	2.5	.1
John Hancock.....	2.8	2.5	7.7	5.2	39.3
Connecticut Mutual.....	2.4	3.5	2.6	3.0	1.6
Sun Life.....	2.2	1.4	.5	6.5	1.3
Connecticut General.....	2.1	2.7	4.5	2.4	3.7
Total.....	100.0%	100.0%	100.0%	100.0%	100.0%

* By amount of annual income.

TABLE B
DISTRIBUTION OF COMPANIES' AGGREGATE MORTALITY RATIOS
BY NUMBER OF CONTRACTS

LINE A: NUMBER OF COMPANIES

LINE B: PROPORTION OF CONTRACTS TERMINATED BY DEATH

	ALL COM- PANIES MOR- TALITY RATIO*	PERCENTAGE POINTS BELOW ALL COM- PANIES RATIO				PERCENTAGE POINTS ABOVE ALL COM- PANIES RATIO			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS									
Male Lives									
Payee Elections	106% A (173) B	4 8.1%	1 1.7%	3 10.4%	2 16.2%	1 13.9%	1 18.5%	0 0%	5 31.2%
Nonpayee Elections	148% A (243) B	6 12.3%	1 3.3%	2 26.7%	0 0%	1 10.3%	2 11.1%	0 0%	5 36.3%
Female Lives									
Payee Elections	96% A (6120) B	0 0%	2 7.6%	3 12.6%	2 11.2%	7 56.4%	0 0%	3 12.2%	0 0%
Nonpayee Elections	113% A (5525) B	1 1.3%	1 2.8%	5 24.7%	2 11.2%	5 41.9%	2 8.3%	1 9.8%	0 0%
LIFE INCOME SETTLEMENTS ARISING FROM MATURITIES AND SURRENDERS									
Male Lives									
Other Than Pension Trust Issues	97% A (8199) B	1 5.2%	0 0%	4 20.5%	6 37.5%	2 5.8%	2 23.2%	1 2.6%	1 5.2%
Pension Trust Issues	105% A (1695) B	1 1.1%	0 0%	1 32.3%	2 10.0%	4 36.5%	1 13.9%	0 0%	3 7.2%
Female Lives									
Other Than Pension Trust Issues	87% A (4114) B	0 0%	3 7.7%	2 12.2%	2 28.3%	5 34.6%	2 9.6%	3 7.6%	0 0%
Pension Trust Issues	111% A (123) B	3 5.7%	1 22.0%	1 3.3%	0 0%	0 0%	0 0%	1 31.7%	3 37.3%

*Mortality Ratios on a-1949 Ultimate Table. Number of contracts terminated by death shown in parentheses

TABLE B—Continued

	ALL COMPANIES MORTALITY RATIO*	PERCENTAGE POINTS BELOW ALL COMPANIES RATIO				PERCENTAGE POINTS ABOVE ALL COMPANIES RATIO			
		Over 20	11-20	6-10	0-5	0-5	6-10	11-20	Over 20
MATURED DEFERRED ANNUITIES WITH A GUARANTEED PERIOD OR REFUND PROVISION									
Male Lives									
Other Than Pension Trust Issues	106% A	1	3	1	2	4	1	3	0
(6286) B	4%	14.8%	6.0%	2.4%	57.6%	3.9%	14.9%	0%	
Pension Trust Issues	132% A	2	0	0	2	0	2	0	5
(2499) B	3.5%	0%	0%	76.9%	0%	6.0%	0%	13.6%	
Female Lives									
Other Than Pension Trust Issues	9% A	0	3	2	4	3	1	0	2
(8740) B	0%	5.1%	12.8%	21.9%	56.7%	1.7%	0%	1.8%	
Pension Trust Issues	119% A	2	2	1	1	0	1	1	1
(140) B	7.9%	19.3%	8.6%	43.5%	0%	7.9%	.7%	12.1%	
MATURED DEFERRED ANNUITIES WITHOUT A GUARANTEED PERIOD OR REFUND PROVISION									
Male Lives									
Other Than Pension Trust Issues	90% A	2	3	1	0	2	0	4	2
(893) B	1.6%	9.5%	15.6%	0%	56.6%	0%	12.9%	3.8%	
Pension Trust Issues	120% A	1	0	1	0	0	1	1	1
(74) B	5.4%	0%	4.1%	0%	0%	0%	85.1%	5.4%	
Female Lives									
Other Than Pension Trust Issues	87% A	5	1	2	1	2	1	2	0
(3002) B	5.1%	1.1%	2.4%	0.9%	82.1%	3.6%	4.8%	0%	
Pension Trust Issues	46% A	0	0	2	2	0	0	0	1
(9) B	0%	0%	77.8%	0%	0%	0%	0%	22.2%	

* Mortality Ratios on *a-1949* Ultimate Table. Number of contracts terminated by death shown in parentheses.

TABLE C

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—PAYEE ELECTIONSExpected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50....	105	\$ 66,724	0	\$ 0	.28	\$ 165	0%	0%
50-59.....	96	60,449	1	1,049	1.00	606	100	173
60-69.....	91	53,611	5	1,374	2.03	1,226	246	112
70-79.....	35	23,360	0	0	1.77	1,092	0	0
80 and over..	6	2,742	0	0	.70	320	0	0
All Ages..	333	\$ 206,886	6	\$ 2,423	5.78	\$ 3,409	104%	71%
<i>Duration 2</i>								
Under 50....	103	\$ 63,394	0	\$ 0	.29	\$ 166	0%	0%
50-59.....	98	49,677	2	1,041	1.06	510	189	204
60-69.....	100	63,697	2	2,000	2.25	1,481	89	135
70-79.....	28	15,860	2	818	1.34	739	149	111
80 and over..	10	3,648	1	127	1.12	428	89	30
All Ages..	339	\$ 196,276	7	\$ 3,986	6.06	\$ 3,324	116%	120%
<i>Duration 3</i>								
Under 50....	101	\$ 67,688	0	\$ 0	.27	\$ 170	0%	0%
50-59.....	106	50,456	2	380	1.10	526	182	72
60-69.....	98	56,476	0	0	2.27	1,402	0	0
70-79.....	35	25,155	1	708	1.69	1,158	59	61
80 and over..	7	2,634	1	196	.79	320	127	61
All Ages..	347	\$ 202,409	4	\$ 1,284	6.12	\$ 3,576	65%	36%
<i>Duration 4</i>								
Under 50....	116	\$ 69,763	1	\$ 181	.33	\$ 181	303%	100%
50-59.....	97	47,358	1	2,648	1.03	490	97	540
60-69.....	114	58,277	2	859	2.61	1,421	77	60
70-79.....	41	33,968	4	1,772	2.09	1,657	191	107
80 and over..	4	1,191	0	0	.40	118	0	0
All Ages..	372	\$ 210,557	8	\$ 5,460	6.46	\$ 3,867	124%	141%
<i>Duration 5</i>								
Under 50....	112	\$ 63,571	1	\$ 456	.32	\$ 166	313%	275%
50-59.....	95	47,039	1	764	1.02	487	98	157
60-69.....	105	46,145	1	118	2.36	1,067	42	11
70-79.....	43	33,851	1	1,081	2.22	1,736	45	62
80 and over..	2	787	0	0	.21	83	0	0
All Ages..	357	\$ 191,393	4	\$ 2,419	6.13	\$ 3,539	65%	68%
<i>Durations 1-5</i>								
Under 50....	537	\$ 331,140	2	\$ 637	1.49	\$ 848	134%	75%
50-59.....	492	254,979	7	5,882	5.21	2,619	134	225
60-69.....	508	278,206	10	4,351	11.52	6,597	87	66
70-79.....	182	132,194	8	4,379	9.11	6,382	88	69
80 and over..	29	11,002	2	323	3.22	1,269	62	25
All Ages..	1,748	\$ 1,007,521	29	\$15,572	30.55	\$17,715	95%	88%
<i>Duration 6 and over</i>								
Under 50....	1,116	\$ 594,024	13	\$ 2,652	3.54	\$ 2,043	367%	130%
50-59.....	1,171	649,497	14	5,928	12.11	6,484	116	91
60-69.....	1,338	628,135	32	10,135	30.26	13,873	106	73
70-79.....	956	406,181	49	24,499	48.88	21,140	100	116
80 and over..	292	129,869	36	16,067	37.79	15,835	95	101
All Ages..	4,873	\$2,407,706	144	\$59,281	132.58	\$59,375	109%	100%
<i>All Durations</i>								
Under 50....	1,653	\$ 925,164	15	\$ 3,289	5.03	\$ 2,891	298%	114%
50-59.....	1,663	904,476	21	11,810	17.32	9,103	121	130
60-69.....	1,846	906,341	42	14,486	41.78	20,470	101	71
70-79.....	1,138	538,375	57	28,878	57.99	27,522	98	105
80 and over..	321	140,871	38	16,390	41.01	17,104	93	96
All Ages..	6,621	\$3,415,227	173	\$74,853	163.13	\$77,090	106%	97%

TABLE C—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—PAYEE ELECTIONS
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50	950	\$ 476,290	3	\$ 1,996	1 84	\$ 940	163%	212%
50-59	3,537	1,941,027	11	8,755	17 53	9,746	63	90
60-69	5,808	3,751,778	55	32,254	69 97	46,064	79	70
70-79	2,213	1,600,202	68	45,647	69 27	53,159	98	86
80 and over	238	177,425	21	11,193	18 56	13,511	113	83
All Ages	12,746	\$ 8,036,722	158	\$ 99,845	177.17	\$ 123,420	89%	81%
<i>Duration 2</i>								
Under 50	984	\$ 485,198	4	\$ 1,570	1 91	\$ 955	209%	164%
50-59	3,602	1,958,733	16	7,855	17 93	9,939	89	79
60-69	6,295	3,995,577	55	35,265	76 19	49,131	72	72
70-79	2,595	1,871,991	62	56,882	80 24	58,025	77	98
80 and over	309	227,094	14	12,561	23 55	17,054	59	74
All Ages	13,785	\$ 8,538,594	151	\$ 114,133	199.82	\$ 135,104	76%	84%
<i>Duration 3</i>								
Under 50	932	\$ 469,250	3	\$ 400	1 86	\$ 946	161%	42%
50-59	3,511	1,855,558	12	3,187	17 53	9,456	68	34
60-69	6,453	4,053,612	67	36,163	79 55	50,365	84	72
70-79	2,923	2,060,537	55	42,800	90 50	65,165	61	66
80 and over	365	261,535	31	30,504	28 42	20,167	109	151
All Ages	14,184	\$ 8,700,492	168	\$ 113,054	218.00	\$ 146,099	77%	77%
<i>Duration 4</i>								
Under 50	922	\$ 444,970	0	\$ 0	1 87	\$ 920	0%	0%
50-59	3,401	1,816,941	15	12,240	17 19	9,347	87	131
60-69	6,522	3,998,500	60	39,161	81 50	50,468	74	78
70-79	3,198	2,146,990	83	55,991	100 45	67,976	83	82
80 and over	431	334,228	29	16,030	34 75	26,167	83	61
All Ages	14,474	\$ 8,741,629	187	\$ 123,422	235.76	\$ 154,878	79%	80%
<i>Duration 5</i>								
Under 50	842	\$ 415,107	1	\$ 855	1 71	\$ 840	58%	102%
50-59	3,184	1,596,121	8	2,296	16 07	8,164	50	28
60-69	6,467	3,935,057	79	55,939	81 48	50,132	97	112
70-79	3,542	2,294,263	77	49,590	111 67	72,773	69	68
80 and over	502	399,164	44	37,917	40 77	31,559	108	120
All Ages	14,537	\$ 8,639,712	209	\$ 146,597	251.70	\$ 163,468	83%	90%
<i>Durations 1-5</i>								
Under 50	4,630	\$ 2,290,815	11	\$ 4,821	9 19	\$ 4,601	120%	105%
50-59	17,235	9,168,380	62	34,333	86 30	46,652	72	74
60-69	31,545	19,734,524	316	198,782	388.69	246,160	81	81
70-79	14,471	10,063,983	345	250,910	452 22	317,098	76	79
80 and over	1,845	1,399,446	139	108,205	146 05	108,458	95	100
All Ages	69,726	\$ 42,657,148	873	\$ 597,051	1,082.45	\$ 722,969	81%	83%
<i>Durations 6 and over</i>								
Under 50	6,713	\$ 2,926,530	28	\$ 8,611	13 55	\$ 5,818	207%	148%
50-59	26,500	12,824,930	150	87,003	135.43	66,012	111	132
60-69	73,045	39,268,867	967	512,460	945.42	510,982	102	100
70-79	70,121	38,023,076	2,286	1,248,113	2,343.92	1,267,658	98	96
80 and over	20,335	11,474,122	1,816	1,038,756	1,876.85	1,061,164	97	98
All Ages	196,714	\$104,517,525	5,247	\$2,894,943	5,315.17	\$2,911,634	99%	99%
<i>All Durations</i>								
Under 50	11,343	\$ 5,217,345	39	\$ 13,432	22.74	\$ 10,419	172%	129%
50-59	43,735	21,993,310	212	121,336	221.73	112,664	96	108
60-69	104,590	59,003,391	1,283	711,242	1,334.11	757,142	96	94
70-79	84,592	48,087,059	2,631	1,499,023	2,796.14	1,584,756	94	95
80 and over	22,180	12,873,568	1,955	1,146,961	2,022.90	1,169,622	97	98
All Ages	266,440	\$147,174,673	6,120	\$3,491,994	6,397.62	\$3,634,603	96%	96%

TABLE C—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—NONPAYEE ELECTIONS
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	473	\$ 219,058	0	\$ 0	1.22	\$ 544	0%	0%
50-59.....	171	94,613	1	629	1.60	918	63	69
60-69.....	89	50,411	0	0	1.87	1,076	0	0
70-79.....	39	28,884	1	534	2.04	1,465	49	36
80 and over.....	11	8,238	0	0	1.57	1,057	0	0
All Ages.....	783	\$ 401,204	2	\$ 1,163	8.30	\$ 5,060	24%	23%
<i>Duration 2</i>								
Under 50.....	460	\$ 217,769	6	\$ 1,849	1.10	\$ 525	545%	352%
50-59.....	181	94,575	1	195	1.77	953	56	20
60-69.....	87	54,482	7	4,370	1.93	1,203	363	363
70-79.....	39	27,875	6	5,368	2.02	1,409	297	381
80 and over.....	14	9,042	2	1,255	2.20	1,261	91	100
All Ages.....	781	\$ 403,743	22	\$ 13,037	9.02	\$ 5,351	244%	244%
<i>Duration 3</i>								
Under 50.....	440	\$ 198,073	2	\$ 820	1.03	\$ 479	194%	171%
50-59.....	195	117,200	1	222	1.86	1,183	54	19
60-69.....	73	42,693	2	2,213	1.68	1,011	119	219
70-79.....	32	22,775	3	2,224	1.70	1,257	176	177
80 and over.....	13	7,172	2	620	2.13	1,062	94	58
All Ages.....	753	\$ 387,913	10	\$ 6,099	8.40	\$ 4,992	119%	122%
<i>Duration 4</i>								
Under 50.....	426	\$ 202,527	4	\$ 7,972	1.04	\$ 494	385%	1614%
50-59.....	193	112,896	9	9,713	1.90	1,106	474	878
60-69.....	68	46,154	4	3,628	1.48	1,029	270	353
70-79.....	29	16,319	1	628	1.52	857	66	73
80 and over.....	17	10,523	1	734	2.23	1,239	45	59
All Ages.....	733	\$ 388,419	19	\$ 22,675	8.17	\$ 4,725	233%	480%
<i>Duration 5</i>								
Under 50.....	429	\$ 199,408	0	\$ 0	1.00	\$ 518	0%	0%
50-59.....	197	118,971	8	5,168	1.95	1,177	410	439
60-69.....	77	47,293	1	185	1.71	1,049	58	18
70-79.....	42	33,512	0	0	2.26	1,724	0	0
80 and over.....	14	8,238	5	2,235	2.14	1,135	234	197
All Ages.....	759	\$ 407,422	14	\$ 7,588	9.06	\$ 5,603	155%	135%
<i>Durations 1-5</i>								
Under 50.....	2,228	\$1,036,835	12	\$ 10,641	5.39	\$ 2,560	223%	416%
50-59.....	937	538,255	20	15,927	9.08	5,337	220	298
60-69.....	394	241,033	14	10,396	8.67	5,368	161	194
70-79.....	181	129,365	11	8,754	9.54	6,712	115	130
80 and over.....	69	43,213	10	4,844	10.27	5,754	97	84
All Ages.....	3,809	\$1,988,701	67	\$ 50,562	42.95	\$25,731	156%	197%
<i>Durations 6 and over</i>								
Under 50.....	4,545	\$2,037,514	36	\$ 15,323	12.03	\$ 5,552	299%	276%
50-59.....	2,252	1,194,423	38	26,145	22.69	12,244	167	214
60-69.....	1,268	707,013	35	21,485	27.57	15,798	127	136
70-79.....	679	375,375	41	26,936	32.76	18,096	125	149
80 and over.....	198	82,422	26	10,643	26.59	10,339	98	103
All Ages.....	8,942	\$4,396,747	176	\$100,532	121.64	\$62,029	145%	162%
<i>All Durations</i>								
Under 50.....	6,773	\$3,074,349	48	\$ 25,964	17.42	\$ 8,112	276%	320%
50-59.....	3,189	1,732,678	58	42,072	31.77	17,581	183	239
60-69.....	1,662	948,046	49	31,881	36.24	21,166	135	151
70-79.....	860	504,740	52	35,690	42.30	24,808	123	144
80 and over.....	267	125,635	36	15,487	36.86	16,093	98	96
All Ages.....	12,751	\$6,385,448	243	\$151,094	164.59	\$87,760	148%	172%

TABLE C—Continued

LIFE INCOME SETTLEMENTS ARISING FROM DEATH CLAIMS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—NONPAYEE ELECTIONS
Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	2,744	\$ 1,330,629	9	\$ 5,100	5.01	\$ 2,485	180%	205%
50-59.....	5,630	3,322,734	31	20,151	27.20	16,409	114	123
60-69.....	6,398	4,745,286	64	62,051	76.52	57,610	84	108
70-79.....	2,713	2,271,169	78	57,594	87.03	72,436	90	80
80 and over.....	458	414,011	40	32,230	39.34	35,076	102	92
All Ages.....	17,943	\$ 12,083,829	222	\$ 177,126	235.10	\$ 184,016	94%	96%
<i>Duration 2</i>								
Under 50.....	2,683	\$ 1,322,752	18	\$ 9,115	4.84	\$ 2,429	372%	375%
50-59.....	5,455	3,195,273	35	20,660	26.41	15,730	133	131
60-69.....	6,442	4,789,751	57	35,384	76.91	58,030	74	61
70-79.....	2,855	2,337,238	109	90,994	90.86	74,470	120	122
80 and over.....	519	466,566	41	51,835	45.27	41,476	91	125
All Ages.....	17,954	\$ 12,111,586	260	\$ 207,988	244.79	\$ 192,135	106%	108%
<i>Duration 3</i>								
Under 50.....	2,484	\$ 1,240,531	7	\$ 2,783	4.44	\$ 2,247	158%	124%
50-59.....	5,210	3,025,951	33	18,374	25.52	15,010	129	122
60-69.....	6,380	4,614,123	97	75,018	76.41	55,688	127	135
70-79.....	2,853	2,350,021	76	56,637	90.65	74,750	84	76
80 and over.....	575	461,032	39	38,476	50.45	40,324	77	95
All Ages.....	17,502	\$ 11,691,661	252	\$ 191,288	247.47	\$ 188,019	102%	102%
<i>Duration 4</i>								
Under 50.....	2,325	\$ 1,201,199	6	\$ 2,783	4.12	\$ 2,196	146%	127%
50-59.....	4,934	2,890,072	39	27,342	24.16	14,351	161	191
60-69.....	6,234	4,441,850	77	54,605	75.07	53,840	103	101
70-79.....	2,897	2,421,549	102	89,098	92.69	77,863	110	114
80 and over.....	586	446,286	49	31,724	53.32	39,845	92	80
All Ages.....	16,976	\$ 11,400,956	273	\$ 205,552	249.36	\$ 188,095	109%	109%
<i>Duration 5</i>								
Under 50.....	2,218	\$ 1,165,146	2	\$ 2,546	3.91	\$ 2,138	51%	119%
50-59.....	4,620	2,689,364	21	10,580	22.77	13,421	92	79
60-69.....	6,077	4,279,266	78	71,426	73.88	52,287	106	137
70-79.....	2,892	2,353,309	119	88,551	93.40	76,104	127	116
80 and over.....	632	484,339	63	47,410	57.77	43,225	109	110
All Ages.....	16,439	\$ 10,971,424	283	\$ 220,513	251.73	\$ 187,175	112%	118%
<i>Durations 1-5</i>								
Under 50.....	12,454	\$ 6,260,260	42	\$ 22,327	22.32	\$ 11,495	188%	194%
50-59.....	25,849	15,123,394	159	97,107	126.06	74,921	126	130
60-69.....	31,531	22,870,276	373	298,484	378.79	277,455	98	108
70-79.....	14,210	11,733,286	484	382,874	454.63	375,623	106	102
80 and over.....	2,770	2,272,234	232	201,675	246.15	199,946	94	101
All Ages.....	86,814	\$ 58,259,450	1,290	\$1,002,467	1,227.95	\$ 939,440	105%	107%
<i>Durations 6 and over</i>								
Under 50.....	18,529	\$ 8,853,404	84	\$ 44,429	32.97	\$ 16,147	255%	275%
50-59.....	33,352	17,864,465	215	119,599	165.29	89,356	130	134
60-69.....	56,595	36,187,889	797	512,262	708.25	457,318	113	112
70-79.....	42,440	29,512,132	1,654	1,138,069	1,403.37	987,786	118	115
80 and over.....	13,770	9,396,097	1,485	1,023,977	1,354.61	902,342	110	113
All Ages.....	164,686	\$101,813,987	4,235	\$2,838,336	3,664.49	\$2,452,949	116%	116%
<i>All Durations</i>								
Under 50.....	30,983	\$ 15,113,664	126	\$ 66,756	55.29	\$ 27,642	228%	242%
50-59.....	59,201	32,987,859	374	216,706	291.35	164,277	128	132
60-69.....	88,126	59,058,165	1,170	810,746	1,087.04	734,773	108	110
70-79.....	56,650	41,245,418	2,138	1,520,943	1,858.00	1,363,409	115	112
80 and over.....	16,540	11,668,331	1,717	1,225,652	1,600.76	1,102,288	107	111
All Ages.....	251,500	\$160,073,437	5,325	\$3,840,803	4,892.44	\$3,392,389	113%	113%

TABLE D
LIFE INCOME SETTLEMENTS ARISING FROM
MATURITIES AND SURRENDERS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
OTHER THAN PENSION TRUST ISSUES
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	236	\$ 108,231	0	\$ 0	.69	\$ 343	0%	0%
50-59.....	3,783	2,268,821	31	14,382	41.01	24,529	76	59
60-69.....	20,850	13,034,267	354	224,507	454.27	283,196	78	79
70-79.....	3,413	2,140,085	198	122,964	160.11	99,414	124	124
80 and over.....	196	138,626	17	7,794	20.93	14,920	81	52
All Ages.....	28,478	\$17,690,030	600	\$ 369,647	677.01	\$ 422,402	89%	88%
<i>Duration 2</i>								
Under 50.....	239	\$ 104,581	1	\$ 277	.72	\$ 315	139%	88%
50-59.....	3,540	2,147,780	24	13,465	40.13	24,552	60	55
60-69.....	19,330	12,001,261	396	260,156	446.40	275,768	89	94
70-79.....	3,591	2,190,705	161	94,944	172.56	103,773	93	91
80 and over.....	200	148,079	27	16,078	21.58	16,040	125	100
All Ages.....	26,900	\$16,592,406	609	\$ 384,920	681.39	\$ 420,448	89%	92%
<i>Duration 3</i>								
Under 50.....	212	\$ 98,512	0	\$ 0	.66	\$ 324	0%	0%
50-59.....	3,273	2,042,068	43	38,187	39.41	24,967	109	153
60-69.....	17,485	10,826,556	405	271,795	430.49	265,704	94	102
70-79.....	3,608	2,156,190	152	83,816	179.18	106,091	85	79
80 and over.....	201	147,235	19	8,494	22.22	16,159	86	53
All Ages.....	24,779	\$15,270,561	619	\$ 402,292	671.96	\$ 413,245	92%	97%
<i>Duration 4</i>								
Under 50.....	188	\$ 87,303	0	\$ 0	.61	\$ 276	0%	0%
50-59.....	2,974	1,874,743	39	20,529	37.83	24,281	103	85
60-69.....	15,076	9,251,111	374	208,618	394.36	241,179	95	86
70-79.....	3,645	2,176,093	199	99,125	185.25	109,890	107	90
80 and over.....	225	132,142	31	22,488	24.21	14,270	128	158
All Ages.....	22,108	\$ 13,521,392	643	\$ 350,760	642.26	\$ 389,896	100%	90%
<i>Duration 5</i>								
Under 50.....	168	\$ 86,150	0	\$ 0	.56	\$ 293	0%	0%
50-59.....	2,563	1,615,189	23	19,731	34.23	22,106	67	89
60-69.....	12,868	8,000,947	340	205,919	355.55	220,597	96	93
70-79.....	3,887	2,259,844	174	101,797	194.25	112,132	90	91
80 and over.....	296	173,777	30	26,500	31.59	18,755	95	141
All Ages.....	19,782	\$ 12,135,907	567	\$ 353,947	616.18	\$ 373,883	92%	95%
<i>Durations 1-5</i>								
Under 50.....	1,043	\$ 484,777	1	\$ 277	3.24	\$ 1,551	31%	18%
50-59.....	16,133	9,948,601	160	106,294	192.61	120,435	83	88
60-69.....	85,609	53,114,142	1,869	1,170,995	2,081.07	1,286,444	90	91
70-79.....	18,144	10,922,917	884	502,646	891.35	531,300	99	95
80 and over.....	1,118	739,859	124	81,354	120.53	80,144	103	102
All Ages.....	122,047	\$ 75,210,296	3,038	\$1,861,566	3,288.80	\$2,019,874	92%	92%
<i>Durations 6 and over</i>								
Under 50.....	997	\$ 388,862	4	\$ 2,665	3.24	\$ 1,158	123%	230%
50-59.....	5,276	2,350,222	53	30,457	61.93	27,980	86	109
60-69.....	35,633	22,575,524	851	558,723	856.49	541,803	99	103
70-79.....	61,467	36,311,945	2,958	1,722,896	2,994.45	1,756,917	99	98
80 and over.....	11,015	5,771,212	1,295	722,354	1,269.75	657,589	102	110
All Ages.....	114,388	\$ 67,397,765	5,161	\$3,037,095	5,185.86	\$2,985,447	100%	102%
<i>All Durations</i>								
Under 50.....	2,040	\$ 873,639	5	\$ 2,942	6.48	\$ 2,709	77%	109%
50-59.....	21,409	12,298,823	213	136,751	254.54	148,415	84	92
60-69.....	121,242	75,689,666	2,720	1,729,718	2,937.56	1,828,247	93	95
70-79.....	79,611	47,234,862	3,842	2,225,542	3,885.80	2,288,217	97	97
80 and over.....	12,133	6,511,071	1,419	803,708	1,390.28	737,733	102	109
All Ages.....	236,435	\$142,608,061	8,199	\$4,898,661	8,474.66	\$5,005,321	97%	98%

TABLE D—Continued

LIFE INCOME SETTLEMENTS ARISING FROM
MATURITIES AND SURRENDERS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
OTHER THAN PENSION TRUST ISSUES
Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	520	\$ 253,141	1	\$ 353	89	\$ 433	112%	82%
50-59.....	4,192	1,631,438	18	6,413	20 15	7,893	89	81
60-69.....	12,770	5,000,037	98	39,982	135 01	53,512	73	75
70-79.....	1,010	513,509	32	20,123	28 49	14,374	112	140
80 and over.....	43	21,845	2	412	3 35	1,733	60	24
All Ages.....	18,535	\$ 7,419,970	151	\$ 67,283	187 89	\$ 77,945	80%	86%
<i>Duration 2</i>								
Under 50.....	517	\$ 234,668	1	\$ 143	86	\$ 389	116%	37%
50-59.....	4,212	1,670,676	21	5,971	21 28	8,457	99	71
60-69.....	12,669	4,907,338	116	48,601	142 47	55,387	81	88
70-79.....	1,268	609,315	20	10,272	35 89	17,256	56	60
80 and over.....	52	23,410	4	2,926	4 28	2,046	93	143
All Ages.....	18,718	\$ 7,445,407	162	\$ 67,913	204 78	\$ 83,538	79%	81%
<i>Duration 3</i>								
Under 50.....	493	\$ 227,719	0	\$ 0	82	\$ 375	0%	0%
50-59.....	4,018	1,588,437	24	6,656	21 40	8,469	112	79
60-69.....	12,472	4,840,263	105	49,387	151 01	58,708	70	84
70-79.....	1,388	628,793	35	18,131	41 02	18,749	85	97
80 and over.....	53	21,827	5	1,954	4 55	1,953	110	100
All Ages.....	18,424	\$ 7,307,039	169	\$ 76,128	218 80	\$ 88,254	77%	86%
<i>Duration 4</i>								
Under 50.....	455	\$ 221,111	2	\$ 1,034	78	\$ 361	256%	286%
50-59.....	3,765	1,457,824	21	9,856	21 24	8,249	99	119
60-69.....	11,849	4,576,267	134	50,811	154 33	59,778	87	85
70-79.....	1,529	642,668	44	18,344	46 39	19,723	95	93
80 and over.....	67	32,351	2	1,152	5 64	2,648	35	44
All Ages.....	17,665	\$ 6,930,221	203	\$ 81,197	228 38	\$ 90,759	89%	89%
<i>Duration 5</i>								
Under 50.....	420	\$ 214,980	3	\$ 1,107	74	\$ 371	405%	298%
50-59.....	3,399	1,321,019	16	3,976	20 28	7,918	79	50
60-69.....	11,034	4,242,771	121	55,501	153 47	59,066	79	94
70-79.....	1,791	718,470	50	25,567	53 76	22,015	93	116
80 and over.....	82	34,287	3	969	6 66	2,673	45	36
All Ages.....	16,726	\$ 6,531,527	193	\$ 87,120	234 91	\$ 92,043	82%	95%
<i>Durations 1-5</i>								
Under 50.....	2,405	\$ 1,151,619	7	\$ 2,637	4 09	\$ 1,929	171%	137%
50-59.....	19,586	7,669,394	100	32,872	104 35	40,986	96	80
60-69.....	60,794	23,566,676	574	244,282	736 29	286,451	78	85
70-79.....	6,986	3,112,755	181	92,437	205 55	92,120	88	100
80 and over.....	297	133,720	16	7,413	24 48	11,053	65	67
All Ages.....	90,068	\$35,634,164	878	\$ 379,641	1,074 76	\$ 432,539	82%	88%
<i>Durations 6 and over</i>								
Under 50.....	2,453	\$ 1,213,725	13	\$ 5,526	4 33	\$ 2,108	300%	262%
50-59.....	9,976	3,477,369	54	18,453	51 92	17,646	104	105
60-69.....	55,963	20,444,099	608	229,255	741 47	270,608	82	85
70-79.....	59,894	21,928,548	1,647	632,045	1,914 64	705,016	86	90
80 and over.....	10,892	4,446,414	914	357,733	926 95	379,325	99	94
All Ages.....	139,178	\$51,510,155	3,236	\$1,243,012	3,639 31	\$1,374,703	89%	90%
<i>All Durations</i>								
Under 50.....	4,858	\$ 2,365,344	20	\$ 8,163	8 42	\$ 4,037	238%	202%
50-59.....	29,562	11,146,763	154	51,325	156 27	58,632	99	88
60-69.....	116,757	44,010,775	1,182	473,537	1,477 76	557,059	80	85
70-79.....	66,880	25,041,303	1,828	724,482	2,120 19	797,136	86	91
80 and over.....	11,189	4,580,134	930	365,146	951 43	390,378	98	94
All Ages.....	229,246	\$87,144,319	4,114	\$1,622,653	4,714 07	\$1,807,242	87%	90%

TABLE D—Continued
LIFE INCOME SETTLEMENTS ARISING FROM
MATURITIES AND SURRENDERS—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
PENSION TRUST ISSUES
Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	39	\$ 5,389	0	\$ 0	.18	\$ 25	0%	0%
50-59.....	398	122,168	16	1,817	4.59	1,449	349	125
60-69.....	11,520	6,062,117	236	156,550	267.23	142,792	88	110
70-79.....	940	717,967	24	12,724	36.46	28,527	66	45
80 and over.....	2	2,977	0	0	.17	255	0	0
All Ages.....	12,899	\$ 6,910,618	276	\$171,091	308.63	\$173,048	89%	99%
<i>Duration 2</i>								
Under 50.....	19	\$ 2,118	0	\$ 0	.08	\$ 10	0%	0%
50-59.....	253	87,665	4	329	2.94	1,037	136	32
60-69.....	9,820	5,019,729	243	117,711	245.16	126,645	99	93
70-79.....	1,229	856,298	54	37,484	49.38	34,784	109	108
80 and over.....	6	10,175	0	0	.54	904	0	0
All Ages.....	11,327	\$ 5,975,985	301	\$155,524	298.10	\$163,380	101%	95%
<i>Duration 3</i>								
Under 50.....	6	\$ 922	0	\$ 0	.02	\$ 4	0%	0%
50-59.....	157	46,976	2	231	1.87	549	107	42
60-69.....	7,001	3,702,120	213	93,455	188.80	100,480	113	93
70-79.....	1,594	993,716	61	37,613	65.62	41,621	93	90
80 and over.....	9	13,941	3	1,526	.87	1,316	345	116
All Ages.....	8,767	\$ 4,757,675	279	\$132,825	257.18	\$143,970	108%	92%
<i>Duration 4</i>								
Under 50.....	6	\$ 922	0	\$ 0	.03	\$ 5	0%	0%
50-59.....	109	35,040	4	802	1.37	744	292	182
60-69.....	4,815	2,613,075	162	71,730	138.57	75,618	117	95
70-79.....	1,863	1,112,622	75	41,257	78.80	48,084	95	86
80 and over.....	5	6,761	0	0	.50	686	0	0
All Ages.....	6,798	\$ 3,768,420	241	\$113,789	219.27	\$124,833	110%	91%
<i>Duration 5</i>								
Under 50.....	4	\$ 222	0	\$ 0	.02	\$ 1	0%	0%
50-59.....	56	19,326	1	107	.71	245	141	44
60-69.....	2,845	1,612,166	107	55,524	86.56	49,673	124	112
70-79.....	2,015	1,169,123	98	47,736	87.04	51,846	113	92
80 and over.....	8	9,009	0	0	.74	892	0	0
All Ages.....	4,928	\$ 2,809,846	206	\$103,367	175.07	\$102,657	118%	101%
<i>Durations 1-5</i>								
Under 50.....	74	\$ 9,573	0	\$ 0	.33	\$ 45	0%	0%
50-59.....	973	311,175	27	3,286	11.48	3,720	235	88
60-69.....	36,001	19,009,207	961	494,970	926.32	495,208	104	100
70-79.....	7,641	4,849,726	312	176,814	317.30	204,862	98	86
80 and over.....	30	42,863	3	1,526	2.82	4,053	106	38
All Ages.....	44,719	\$24,222,544	1,303	\$676,596	1,258.25	\$707,888	104%	96%
<i>Durations 6 and over</i>								
Under 50.....	14	\$ 1,022	0	\$ 0	.04	\$ 3	0%	0%
50-59.....	46	11,841	0	0	.58	162	0	0
60-69.....	1,086	495,210	45	16,216	27.97	13,028	161	124
70-79.....	7,004	4,128,329	335	183,124	317.04	187,276	106	98
80 and over.....	114	112,741	12	10,384	10.79	11,176	111	93
All Ages.....	8,264	\$ 4,749,143	392	\$209,724	356.42	\$211,645	110%	99%
<i>All Durations</i>								
Under 50.....	88	\$ 10,595	0	\$ 0	.37	\$ 48	0%	0%
50-59.....	1,019	323,016	27	3,286	12.06	3,882	224	85
60-69.....	37,087	19,504,417	1,006	511,186	954.29	508,236	105	101
70-79.....	14,645	8,978,055	647	359,938	634.34	392,138	102	92
80 and over.....	144	155,604	15	11,910	13.61	15,229	110	78
All Ages.....	52,983	\$28,971,687	1,695	\$886,320	1,614.67	\$919,533	105%	96%

TABLE D—Continued

LIFE INCOME SETTLEMENTS ARISING FROM
MATURITIES AND SURRENDERS—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
PENSION TRUST ISSUES
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50	3	\$ 1,503	0	\$ 0	.00	\$ 3	0%	0%
50-59	107	32,683	0	54	.54	180	0	0
60-69	1,487	464,212	26	9,361	18.17	5,687	143	165
70-79	87	31,242	0	0	2.07	746	0	0
80 and over	2	538	0	0	.14	37	0	0
All Ages	1,686	\$ 530,178	26	\$ 9,361	20.92	\$ 6,653	124%	141%
<i>Duration 2</i>								
Under 50	4	\$ 1,632	0	\$ 0	.00	\$ 3	0%	0%
50-59	83	23,144	1	54	.43	120	233	45
60-69	1,230	415,022	12	4,302	16.55	5,528	73	78
70-79	126	41,653	3	235	3.08	1,011	97	22
80 and over	0	0	0	0	.00	0	0	0
All Ages	1,443	\$ 480,852	16	\$ 4,592	20.06	\$ 6,662	90%	60%
<i>Duration 3</i>								
Under 50	4	\$ 1,632	0	\$ 0	.00	\$ 3	0%	0%
50-59	58	17,056	1	455	.30	92	333	495
60-69	900	313,316	20	7,224	13.17	4,565	152	158
70-79	150	52,285	3	801	3.81	1,358	79	59
80 and over	0	0	0	0	.00	0	0	0
All Ages	1,112	\$ 384,289	24	\$ 8,480	17.28	\$ 6,018	139%	141%
<i>Duration 4</i>								
Under 50	5	\$ 1,245	0	\$ 0	.00	\$ 2	0%	0%
50-59	40	10,431	0	0	.22	57	0	0
60-69	583	202,197	11	3,258	9.05	3,150	122	103
70-79	181	65,161	2	1,102	4.79	1,784	42	62
80 and over	0	0	0	0	.00	0	0	0
All Ages	809	\$ 279,034	13	\$ 4,360	14.06	\$ 4,993	92%	87%
<i>Duration 5</i>								
Under 50	3	\$ 202	0	\$ 0	.00	\$ 0	0%	0%
50-59	22	6,199	0	0	.12	34	0	0
60-69	395	143,988	6	2,229	6.44	2,388	93	93
70-79	202	75,297	8	3,414	5.53	2,144	145	159
80 and over	2	1,083	0	0	.24	164	0	0
All Ages	624	\$ 226,769	14	\$ 5,643	12.35	\$ 4,730	114%	119%
<i>Durations 1-5</i>								
Under 50	19	\$ 6,214	0	\$ 0	.00	\$ 11	0%	0%
50-59	310	89,513	2	509	1.61	483	124	105
60-69	4,605	1,538,735	75	26,374	63.38	21,318	118	124
70-79	746	265,039	16	5,553	19.28	7,044	83	79
80 and over	4	1,621	0	0	.38	201	0	0
All Ages	5,684	\$1,901,122	93	\$32,436	84.65	\$29,057	110%	112%
<i>Durations 6 and over</i>								
Under 50	5	\$ 277	0	\$ 0	.02	\$ 0	0%	0%
50-59	22	3,246	0	0	.12	14	0	0
60-69	291	87,060	2	955	4.13	1,262	48	76
70-79	714	263,103	26	5,693	20.50	7,422	127	77
80 and over	18	8,995	2	442	1.21	616	165	72
All Ages	1,050	\$ 362,681	30	\$ 7,090	25.98	\$ 9,314	115%	76%
<i>All Durations</i>								
Under 50	24	\$ 6,491	0	\$ 0	.02	\$ 11	0%	0%
50-59	332	92,759	2	509	1.73	497	116	102
60-69	4,896	1,625,795	77	27,329	67.51	22,580	114	121
70-79	1,460	528,142	42	11,246	39.78	14,466	106	78
80 and over	22	10,616	2	442	1.59	817	126	54
All Ages	6,734	\$2,263,803	123	\$39,526	110.63	\$38,371	111%	103%

TABLE E
MATURED DEFERRED ANNUITIES WITH A GUARANTEED
PERIOD OR REFUND PROVISION—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
OTHER THAN PENSION TRUST ISSUES
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	44	\$ 27,194	0	\$ 0	.14	\$ 92	0%	0%
50-59.....	1,230	696,651	17	6,340	12.79	7,210	133	88
60-69.....	8,010	5,546,769	208	133,853	175.46	123,434	119	108
70-79.....	1,514	1,917,064	55	100,337	57.79	72,463	95	138
80 and over.....	41	34,491	2	1,591	3.65	3,100	55	51
All Ages.....	10,839	\$ 8,222,169	282	\$ 242,121	249.83	\$ 206,299	113%	117%
<i>Duration 2</i>								
Under 50.....	45	\$ 24,113	0	\$ 0	.13	\$ 73	0%	0%
50-59.....	1,289	735,077	15	9,742	14.22	8,014	105	122
60-69.....	8,158	5,637,405	242	141,402	189.97	133,158	127	106
70-79.....	1,704	2,092,919	45	55,112	68.05	82,767	66	67
80 and over.....	83	69,827	9	14,946	7.56	6,344	119	236
All Ages.....	11,279	\$ 8,579,341	311	\$ 221,202	279.93	\$ 230,356	111%	96%
<i>Duration 3</i>								
Under 50.....	43	\$ 28,310	0	\$ 0	.11	\$ 79	0%	0%
50-59.....	1,310	778,203	26	12,214	15.30	9,082	170	134
60-69.....	7,948	5,538,522	223	188,017	197.89	139,177	113	135
70-79.....	1,840	2,299,810	57	68,155	78.41	97,938	73	70
80 and over.....	78	52,630	9	3,255	7.66	5,197	117	63
All Ages.....	11,219	\$ 8,697,475	315	\$ 271,641	299.37	\$ 251,473	105%	108%
<i>Duration 4</i>								
Under 50.....	42	\$ 24,649	0	\$ 0	.13	\$ 80	0%	0%
50-59.....	1,336	798,752	11	5,458	16.70	9,968	66	55
60-69.....	7,608	5,178,544	220	128,944	202.85	138,507	108	93
70-79.....	1,967	2,345,077	76	68,276	88.37	105,885	86	64
80 and over.....	66	39,759	8	4,560	6.99	4,253	114	107
All Ages.....	11,019	\$ 8,386,781	315	\$ 207,238	315.04	\$ 258,693	100%	80%
<i>Duration 5</i>								
Under 50.....	36	\$ 23,345	1	\$ 1,346	.13	\$ 78	769%	1726%
50-59.....	1,213	728,717	39	13,886	15.85	9,645	246	144
60-69.....	7,123	4,733,221	234	152,606	200.37	134,035	117	114
70-79.....	2,426	2,487,929	112	109,882	111.38	117,141	101	94
80 and over.....	48	30,633	5	5,359	5.39	3,456	93	155
All Ages.....	10,846	\$ 8,003,845	391	\$ 283,079	333.12	\$ 264,355	117%	107%
<i>Durations 1-5</i>								
Under 50.....	210	\$ 127,611	1	\$ 1,346	.64	\$ 402	156%	335%
50-59.....	6,378	3,737,400	108	47,640	74.86	43,919	144	108
60-69.....	38,847	26,654,461	1,127	744,822	966.54	668,311	117	111
70-79.....	9,451	11,142,799	345	401,762	404.00	476,194	85	84
80 and over.....	316	227,340	33	29,711	31.25	22,350	106	133
All Ages.....	55,202	\$41,889,611	1,614	\$1,225,281	1,477.29	\$1,211,176	109%	101%
<i>Durations 6 and over</i>								
Under 50.....	297	\$ 144,409	0	\$ 0	.77	\$ 359	0%	0%
50-59.....	2,346	1,236,629	29	19,033	29.03	15,334	100	124
60-69.....	20,699	12,804,844	552	338,546	499.38	310,668	111	109
70-79.....	51,460	33,045,367	2,809	1,876,298	2,639.02	1,693,389	106	111
80 and over.....	11,378	6,422,440	1,282	718,892	1,264.50	706,168	101	102
All Ages.....	86,180	\$53,653,689	4,672	\$2,952,769	4,432.70	\$2,725,918	105%	108%
<i>All Durations</i>								
Under 50.....	507	\$ 272,020	1	\$ 1,346	1.41	\$ 761	71%	177%
50-59.....	8,724	4,974,029	137	60,673	103.89	59,253	132	113
60-69.....	59,546	39,459,305	1,679	1,083,368	1,465.92	978,979	115	111
70-79.....	60,911	44,188,166	3,154	2,278,060	3,043.02	2,169,583	104	105
80 and over.....	11,694	6,649,780	1,315	748,603	1,295.75	728,518	101	103
All Ages.....	141,382	\$95,543,300	6,286	\$4,178,050	5,909.99	\$3,937,094	106%	106%

TABLE E—Continued

MATURED DEFERRED ANNUITIES WITH A
GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
OTHER THAN PENSION TRUST ISSUES
Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50	84	\$ 49,485	0	\$ 0	11	\$ 66	0%	0%
50-59	2,490	888,828	21	7,538	11 92	4,306	176	175
60-69	14,522	5,920,994	119	43,525	147 71	62,165	81	70
70-79	1,702	940,705	40	20,660	39 16	21,151	102	98
80 and over	80	38,220	6	1,729	5 42	2,528	111	68
All Ages	18,878	\$ 7,838,232	186	\$ 73,452	204 32	\$ 90,216	91%	81%
<i>Duration 2</i>								
Under 50	76	\$ 49,878	0	\$ 0	09	\$ 69	0%	0%
50-59	2,475	849,805	15	3,514	12 37	4,277	121	82
60-69	13,552	6,102,499	166	53,088	171 15	68,464	97	78
70-79	1,914	1,026,394	33	25,592	47 17	24,999	70	102
80 and over	82	38,985	5	663	6 05	2,843	83	23
All Ages	20,099	\$ 8,067,561	219	\$ 82,857	236 83	\$ 100,632	92%	82%
<i>Duration 3</i>								
Under 50	69	\$ 38,199	1	\$ 1,672	11	\$ 63	909%	2654%
50-59	2,466	834,336	17	6,992	13 23	4,477	128	156
60-69	15,778	5,947,470	184	66,583	189 06	72,289	97	92
70-79	2,075	1,062,328	36	23,068	54 61	27,848	66	83
80 and over	74	34,832	3	1,341	5 76	2,760	52	49
All Ages	20,462	\$ 7,917,165	241	\$ 99,656	262 77	\$ 107,437	92%	93%
<i>Duration 4</i>								
Under 50	72	\$ 36,464	0	\$ 0	09	\$ 62	0%	0%
50-59	2,369	803,662	14	5,058	13 70	4,633	102	109
60-69	15,766	5,729,219	210	70,451	204 99	75,465	102	93
70-79	2,319	1,048,663	46	15,864	64 12	29,353	72	54
80 and over	81	44,247	3	2,049	6 32	3,618	47	57
All Ages	20,607	\$ 7,662,255	273	\$ 93,422	289 22	\$ 113,131	94%	83%
<i>Duration 5</i>								
Under 50	66	\$ 35,603	0	\$ 0	11	\$ 66	0%	0%
50-59	2,232	767,727	13	5,061	13 86	4,770	94	106
60-69	15,117	5,224,957	217	74,958	209 05	72,694	104	103
70-79	3,138	1,326,512	57	30,344	88 14	37,680	65	81
80 and over	83	39,907	8	3,572	6 92	3,600	116	99
All Ages	20,636	\$ 7,394,706	295	\$ 113,935	318 08	\$ 118,810	93%	96%
<i>Durations 1-5</i>								
Under 50	367	\$ 209,629	1	\$ 1,672	51	\$ 326	196%	513%
50-59	12,032	4,144,358	80	28,163	65 08	22,463	123	125
60-69	76,735	28,925,139	896	308,605	921 96	351,077	97	88
70-79	11,148	5,404,602	212	115,528	293 20	141,031	72	82
80 and over	400	196,191	25	9,354	30 47	15,349	82	61
All Ages	100,682	\$ 38,879,919	1,214	\$ 463,322	1,311 22	\$ 530,246	93%	87%
<i>Durations 6 and over</i>								
Under 50	548	\$ 291,560	1	\$ 480	78	\$ 470	128%	102%
50-59	3,541	1,277,299	22	7,131	20 07	7,130	110	100
60-69	66,569	20,931,791	954	321,261	950 37	296,373	100	108
70-79	122,941	34,923,799	3,967	1,111,713	4,138 54	1,162,740	96	96
80 and over	30,303	7,848,447	2,582	613,406	2,576 18	668,434	100	92
All Ages	223,902	\$ 65,272,896	7,526	\$ 2,053,991	7,685 94	\$ 2,135,147	98%	96%
<i>All Durations</i>								
Under 50	915	\$ 501,189	2	\$ 2,152	1 29	\$ 796	155%	270%
50-59	15,733	5,421,657	102	35,294	85 15	29,593	120	119
60-69	143,304	49,856,930	1,850	629,866	1,872 33	647,450	99	97
70-79	134,089	40,328,401	4,179	1,227,241	4,431 74	1,303,771	94	94
80 and over	30,703	8,044,638	2,607	622,760	2,606 65	683,783	100	91
All Ages	324,584	\$104,152,815	8,740	\$2,517,313	8,997 16	\$2,665,393	97%	94%

TABLE E—Continued
MATURED DEFERRED ANNUITIES WITHOUT A
GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
OTHER THAN PENSION TRUST ISSUES
Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	2	\$ 1,952	0	\$ 0	.00	\$ 5	0%	0%
50-59.....	147	69,717	0	0	1.62	788	0	0
60-69.....	1,396	864,888	11	6,604	31.40	19,617	35	34
70-79.....	131	188,502	0	0	4.64	6,668	0	0
80 and over..	0	0	0	0	.00	0		
All Ages.....	1,676	\$ 1,125,059	11	\$ 6,604	37.66	\$ 27,078	29%	24%
<i>Duration 2</i>								
Under 50.....	2	\$ 1,952	0	\$ 0	.00	\$ 6	0%	0%
50-59.....	158	72,646	1	228	1.75	845	57	27
60-69.....	1,384	794,741	19	11,746	33.15	19,194	57	61
70-79.....	192	199,716	5	6,781	7.35	7,648	68	89
80 and over..	0	0	0	0	.00	0		
All Ages.....	1,736	\$ 1,069,055	25	\$ 18,755	42.25	\$ 27,693	59%	68%
<i>Duration 3</i>								
Under 50.....	1	\$ 824	0	\$ 0	.01	\$ 4	0%	0%
50-59.....	162	74,412	3	7,192	1.87	881	160	816
60-69.....	1,354	745,528	25	13,596	34.99	19,242	71	71
70-79.....	214	182,426	4	4,981	8.76	7,487	46	67
80 and over..	0	0	0	0	.00	0		
All Ages.....	1,731	\$ 1,003,190	32	\$ 25,769	45.63	\$ 27,614	70%	93%
<i>Duration 4</i>								
Under 50.....	1	\$ 824	0	\$ 0	.01	\$ 5	0%	0%
50-59.....	134	62,281	1	337	1.59	775	63	43
60-69.....	1,380	722,808	53	19,063	38.10	19,768	139	96
70-79.....	239	176,760	24	18,215	10.41	7,763	231	235
80 and over..	1	463	0	0	.09	40	0	0
All Ages.....	1,755	\$ 963,136	78	\$ 37,615	50.20	\$ 28,351	155%	133%
<i>Duration 5</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	126	59,712	4	1,725	1.56	769	256%	224%
60-69.....	1,180	673,876	25	14,090	34.67	19,542	72	72
70-79.....	354	219,025	12	5,412	15.34	9,690	78	56
80 and over..	1	463	0	0	.09	43	0	0
All Ages.....	1,661	\$ 953,076	41	\$ 21,227	51.66	\$ 30,044	79%	71%
<i>Durations 1-5</i>								
Under 50.....	6	\$ 5,552	0	\$ 0	.02	\$ 20	0%	0%
50-59.....	727	338,768	9	9,482	8.39	4,058	107	234
60-69.....	6,694	3,801,841	133	65,099	172.31	97,363	77	67
70-79.....	1,130	966,429	45	35,389	46.50	39,256	97	90
80 and over..	2	926	0	0	.18	83	0	0
All Ages.....	8,559	\$ 5,113,516	187	\$109,970	227.40	\$140,780	82%	78%
<i>Durations 6 and over</i>								
Under 50.....	27	\$ 2,806	0	\$ 0	.06	\$ 6	0%	0%
50-59.....	394	137,531	2	528	4.80	1,703	42	31
60-69.....	2,375	1,480,959	56	35,946	59.14	38,121	95	94
70-79.....	9,470	5,017,271	446	231,608	481.79	252,778	93	92
80 and over..	1,917	991,021	202	101,836	215.23	110,086	94	93
All Ages.....	14,183	\$ 7,629,588	706	\$369,918	761.02	\$402,694	93%	92%
<i>All Durations</i>								
Under 50.....	33	\$ 8,358	0	\$ 0	.08	\$ 26	0%	0%
50-59.....	1,121	476,299	11	10,010	13.19	5,761	83	174
60-69.....	9,069	5,282,800	189	101,045	231.45	135,484	82	75
70-79.....	10,600	5,983,700	491	266,997	528.29	292,034	93	91
80 and over..	1,919	991,947	202	101,836	215.41	110,169	94	92
All Ages.....	27,742	\$12,743,104	893	\$479,888	988.42	\$543,474	90%	88%

TABLE E—Continued

MATURED DEFERRED ANNUITIES WITHOUT A
 GUARANTEED PERIOD OR REFUND PROVISION—FEMALES LIVES
 EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
 OTHER THAN PENSION TRUST ISSUES
 Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	7	\$ 1,912	0	\$ 0	01	\$ 4	0%	0%
50-59.....	471	169,409	3	1,040	2 42	874	124	119
60-69.....	5,287	1,969,784	35	11,667	50 82	19,540	69	60
70-79.....	423	195,638	5	1,941	9 08	4,168	55	47
80 and over.....	1	82	0	0	12	10	0	0
All Ages	6,189	\$ 2,336,825	43	\$ 14,648	62 45	\$ 24,596	69%	60%
<i>Duration 2</i>								
Under 50.....	7	\$ 2,414	0	\$ 0	.00	\$ 4	0%	0%
50-59.....	428	160,848	4	903	2 23	845	179	107
60-69.....	5,806	2,108,660	50	14,836	60 40	22,703	83	65
70-79.....	491	214,058	5	2,730	11 51	5,007	43	55
80 and over.....	1	70	0	0	.06	4	0	0
All Ages	6,733	\$ 2,486,950	59	\$ 18,469	71 29	\$ 28,563	80%	65%
<i>Duration 3</i>								
Under 50.....	9	\$ 4,177	0	\$ 0	.01	\$ 9	0%	0%
50-59.....	416	137,613	2	672	2 28	761	88	88
60-69.....	5,952	2,078,219	40	15,142	67 57	24,213	59	63
70-79.....	594	249,664	12	4,489	15 01	6,266	80	72
80 and over.....	2	317	0	0	.13	20	0	0
All Ages	6,973	\$ 2,469,990	54	\$ 20,303	85 00	\$ 31,269	64%	65%
<i>Duration 4</i>								
Under 50.....	6	\$ 2,605	0	\$ 0	.00	\$ 4	0%	0%
50-59.....	386	128,341	2	408	2 24	752	89	54
60-69.....	6,169	2,063,329	55	12,314	76 06	26,053	72	47
70-79.....	760	308,274	12	6,099	20 34	8,129	59	75
80 and over.....	3	395	1	70	.21	27	476	259
All Ages	7,324	\$ 2,502,944	70	\$ 18,891	98 85	\$ 34,965	71%	54%
<i>Duration 5</i>								
Under 50.....	3	\$ 796	0	\$ 0	.00	\$ 1	0%	0%
50-59.....	334	121,475	2	885	2 02	747	99	118
60-69.....	5,946	1,952,238	51	16,487	78 70	26,398	65	62
70-79.....	1,036	402,642	21	8,648	28 49	10,996	74	79
80 and over.....	3	446	0	0	.21	31	0	0
All Ages	7,322	\$ 2,477,597	74	\$ 26,020	109 42	\$ 38,173	68%	68%
<i>Durations 1-5</i>								
Under 50.....	32	\$ 11,904	0	\$ 0	.02	\$ 22	0%	0%
50-59.....	2,035	717,686	13	3,908	11 19	3,979	116	98
60-69.....	29,160	10,172,230	231	70,446	333 55	118,907	69	59
70-79.....	3,304	1,370,276	55	23,907	84 43	34,566	65	69
80 and over.....	10	1,310	1	70	.73	92	137	76
All Ages	34,541	\$12,273,406	300	\$ 98,331	429 92	\$157,566	70%	62%
<i>Durations 6 and over</i>								
Under 50.....	46	\$ 19,727	0	\$ 0	.03	\$ 18	0%	0%
50-59.....	621	171,619	12	2,464	3 61	997	332	247
60-69.....	24,860	7,236,477	292	82,530	369 89	106,655	79	77
70-79.....	47,438	12,771,172	1,351	361,032	1,599 93	421,993	84	86
80 and over.....	12,320	2,970,350	1,047	237,598	1,055 30	252,792	99	94
All Ages	85,285	\$23,169,345	2,702	\$683,624	3,028 76	\$782,455	89%	87%
<i>All Durations</i>								
Under 50.....	78	\$ 31,631	0	\$ 0	.05	\$ 40	0%	0%
50-59.....	2,656	889,305	25	6,372	14 80	4,976	169	128
60-69.....	54,020	17,408,707	523	152,976	703 44	225,562	74	68
70-79.....	50,742	14,141,448	1,406	384,939	1,684 36	456,559	83	84
80 and over.....	12,330	2,971,660	1,048	237,668	1,056 03	252,884	99	94
All Ages	119,826	\$35,442,751	3,002	\$781,955	3,458 68	\$940,021	87%	83%

TABLE E—Continued

MATURED DEFERRED ANNUITIES WITH A
 GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES
 EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
 PENSION TRUST ISSUES

Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	407	45,469	52	4,089	5.03	561	1034%	729%
60-69.....	9,092	3,013,501	253	101,420	211.10	71,152	120	143
70-79.....	693	441,116	39	19,979	27.87	18,156	140	110
80 and over.....	9	10,419	0	0	.83	994	0	0
All Ages.....	10,201	\$ 3,510,505	344	\$ 125,488	244.83	\$ 90,863	141%	138%
<i>Duration 2</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	253	27,292	6	413	3.26	349	184%	118%
60-69.....	8,141	2,623,386	257	84,677	204.77	66,639	126	127
70-79.....	1,068	634,077	50	24,598	44.87	26,885	111	91
80 and over.....	13	13,744	0	0	1.20	1,272	0	0
All Ages.....	9,475	\$ 3,298,499	313	\$ 109,688	254.10	\$ 95,145	123%	115%
<i>Duration 3</i>								
Under 50.....	2	\$ 41	0	\$ 0	.01	\$ 0	0%	0%
50-59.....	142	14,449	7	398	1.86	188	376	212
60-69.....	6,693	2,243,383	284	109,471	180.75	61,357	157	178
70-79.....	1,598	843,915	75	32,691	68.28	37,372	110	87
80 and over.....	29	28,940	1	1,894	2.75	2,777	36	68
All Ages.....	8,464	\$ 3,130,728	367	\$ 144,454	253.65	\$ 101,694	145%	142%
<i>Duration 4</i>								
Under 50.....	2	\$ 41	0	\$ 0	.01	\$ 0	0%	0%
50-59.....	106	10,679	14	1,578	1.40	141	1000	1119
60-69.....	5,101	1,757,705	204	57,591	147.67	51,537	138	112
70-79.....	1,939	951,611	121	57,637	85.78	43,909	141	131
80 and over.....	42	37,623	1	1,233	4.23	3,901	24	32
All Ages.....	7,190	\$ 2,757,659	340	\$ 118,039	239.09	\$ 99,488	142%	119%
<i>Duration 5</i>								
Under 50.....	3	\$ 2,044	0	\$ 0	.02	\$ 11	0%	0%
50-59.....	57	5,731	9	567	.75	78	1200	727
60-69.....	3,551	1,310,732	166	57,389	110.35	41,384	150	139
70-79.....	2,132	963,344	117	45,746	96.54	45,580	121	100
80 and over.....	53	44,034	4	8,431	5.27	4,464	76	189
All Ages.....	5,796	\$ 2,325,885	296	\$ 112,133	212.93	\$ 91,517	139%	123%
<i>Durations 1-5</i>								
Under 50.....	7	\$ 2,126	0	\$ 0	.04	\$ 11	0%	0%
50-59.....	965	103,620	88	7,045	12.30	1,317	715	535
60-69.....	32,578	10,948,707	1,164	410,548	854.64	292,069	136	141
70-79.....	7,430	3,834,063	402	180,651	323.34	171,902	124	105
80 and over.....	146	134,760	6	11,558	14.28	13,408	42	86
All Ages.....	41,126	\$ 15,023,276	1,660	\$ 609,802	1,204.60	\$ 478,707	138%	127%
<i>Durations 6 and over</i>								
Under 50.....	1	\$ 2,003	0	\$ 0	.01	\$ 12	0%	0%
50-59.....	50	8,484	5	119	.60	77	833	155
60-69.....	750	183,592	54	12,088	18.71	4,693	289	258
70-79.....	13,067	5,965,590	726	340,228	608.92	285,122	119	119
80 and over.....	562	441,180	54	54,577	59.60	49,579	91	110
All Ages.....	14,430	\$ 6,600,849	839	\$ 407,012	687.84	\$ 339,483	122%	120%
<i>All Durations</i>								
Under 50.....	8	\$ 4,129	0	\$ 0	.05	\$ 23	0%	0%
50-59.....	1,015	112,104	93	7,164	12.90	1,394	721	514
60-69.....	33,328	11,132,299	1,218	422,636	873.35	296,762	139	142
70-79.....	20,497	9,799,653	1,128	520,879	932.26	457,024	121	114
80 and over.....	708	575,940	60	66,135	73.88	62,987	81	105
All Ages.....	55,556	\$ 21,624,125	2,499	\$ 1,016,814	1,892.44	\$ 818,190	132%	124%

TABLE E—Continued

MATURED DEFERRED ANNUITIES WITH A
GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
PENSION TRUST ISSUES
Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50	2	\$ 88	0	\$ 0	.00	\$ 0	0%	0%
50-59	88	16,334	2	71	.45	80	444	89
60-69	923	219,982	9	3,177	11.41	2,767	79	115
70-79	83	31,646	4	1,374	2.09	791	191	174
80 and over	0	0	0	0	.00	0		
All Ages	1,096	\$ 268,050	15	\$ 4,622	13.95	\$ 3,638	108%	127%
<i>Duration 2</i>								
Under 50	3	\$ 212	0	\$ 0	.00	\$ 0	0%	0%
50-59	99	18,040	5	499	.53	96	943	520
60-69	863	207,286	19	5,343	11.58	2,811	164	190
70-79	123	38,381	2	644	3.21	989	62	65
80 and over	0	0	0	0	.00	0		
All Ages	1,088	\$ 263,919	26	\$ 6,486	15.32	\$ 3,896	170%	166%
<i>Duration 3</i>								
Under 50	3	\$ 212	0	\$ 0	.00	\$ 0	0%	0%
50-59	71	13,618	0	0	.41	79	0	0
60-69	710	176,436	15	3,142	10.37	2,565	145	122
70-79	181	60,453	3	1,991	4.88	1,628	61	122
80 and over	2	109	0	0	.12	7	0	0
All Ages	967	\$ 250,828	18	\$ 5,133	15.78	\$ 4,279	114%	120%
<i>Duration 4</i>								
Under 50	3	\$ 212	0	\$ 0	.00	\$ 0	0%	0%
50-59	45	5,757	0	0	.27	34	0	0
60-69	543	136,586	7	1,793	8.42	2,086	83	86
70-79	221	70,844	6	5,621	6.23	2,056	96	273
80 and over	2	109	0	0	.14	7	0	0
All Ages	814	\$ 213,508	13	\$ 7,414	15.06	\$ 4,183	86%	177%
<i>Duration 5</i>								
Under 50	2	\$ 1,800	0	\$ 0	.00	\$ 2	0%	0%
50-59	15	1,930	0	0	.08	10	0	0
60-69	417	108,229	3	891	6.71	1,718	45	52
70-79	254	69,494	13	2,836	7.35	2,162	177	131
80 and over	2	109	0	0	.15	8	0	0
All Ages	690	\$ 181,562	16	\$ 3,727	14.29	\$ 3,900	112%	96%
<i>Durations 1-5</i>								
Under 50	13	\$ 2,524	0	\$ 0	.00	\$ 2	0%	0%
50-59	318	55,679	7	570	1.74	299	402	191
60-69	3,456	848,519	53	14,346	48.49	11,947	109	120
70-79	862	270,818	28	12,466	23.76	7,626	118	163
80 and over	6	327	0	0	.41	22	0	0
All Ages	4,655	\$1,177,867	88	\$27,382	74.40	\$19,896	118%	138%
<i>Durations 6 and over</i>								
Under 50	5	\$ 6,828	0	\$ 0	.00	\$ 8	0%	0%
50-59	12	1,088	0	0	.06	5	0	0
60-69	398	105,502	12	1,756	5.59	1,431	215	123
70-79	1,106	298,508	37	10,794	32.61	9,283	113	116
80 and over	58	30,664	3	3,403	5.34	3,174	56	107
All Ages	1,579	\$ 442,590	52	\$15,953	43.60	\$13,901	119%	115%
<i>All Durations</i>								
Under 50	18	\$ 9,352	0	\$ 0	.00	\$ 10	0%	0%
50-59	330	56,767	7	570	1.80	304	389	188
60-69	3,854	954,021	65	16,102	54.08	13,378	120	120
70-79	1,968	569,326	65	23,260	56.37	16,909	115	138
80 and over	64	30,991	3	3,403	5.75	3,196	52	106
All Ages	6,234	\$1,620,457	140	\$43,335	118.00	\$33,797	119%	128%

TABLE E—Continued

ATURED DEFERRED ANNUITIES WITHOUT A
 GUARANTEED PERIOD OR REFUND PROVISION—MALE LIVES
 EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
 PENSION TRUST ISSUES
 Expected Deaths on *a*-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	3	\$ 153	0	\$ 0	.01	\$ 0	0%	0%
50-59.....	29	1,762	0	0	.34	20	0	0
60-69.....	234	65,039	0	0	5.29	1,519	0	0
70-79.....	17	8,128	0	0	.62	296	0	0
80 and over.....	1	374	0	0	.09	35	0	0
All Ages.....	284	\$ 75,456	0	\$ 0	6.35	\$ 1,870	0%	0%
<i>Duration 2</i>								
Under 50.....	3	\$ 153	0	\$ 0	.01	\$ 0	0%	0%
50-59.....	14	1,218	0	0	.18	15	0	0
60-69.....	230	61,630	11	8,211	5.65	1,567	195	524
70-79.....	31	10,178	3	1,257	1.22	400	246	314
80 and over.....	0	0	0	0	.00	0	0	0
All Ages.....	278	\$ 73,179	14	\$ 9,468	7.06	\$ 1,982	198%	478%
<i>Duration 3</i>								
Under 50.....	3	\$ 153	0	\$ 0	.01	\$ 0	0%	0%
50-59.....	14	1,218	0	0	.19	16	0	0
60-69.....	195	52,810	6	2,107	5.24	1,482	115	142
70-79.....	43	16,894	3	920	1.80	711	167	129
80 and over.....	0	0	0	0	.00	0	0	0
All Ages.....	255	\$ 71,075	9	\$ 3,027	7.24	\$ 2,209	124%	137%
<i>Duration 4</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0	0%	0%
50-59.....	2	257	0	0	.02	2	0	0
60-69.....	170	43,192	4	974	4.87	1,270	82	77
70-79.....	57	31,007	6	3,034	2.45	1,287	245	236
80 and over.....	1	347	0	0	.10	36	0	0
All Ages.....	230	\$ 74,803	10	\$ 4,008	7.44	\$ 2,595	134%	154%
<i>Duration 5</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0	0%	0%
50-59.....	5	354	3	97	.06	4	5000%	2425%
60-69.....	120	29,819	8	1,405	3.67	935	218	150
70-79.....	67	34,151	5	4,299	3.10	1,564	161	275
80 and over.....	1	347	0	0	.11	39	0	0
All Ages.....	193	\$ 64,671	16	\$ 5,801	6.94	\$ 2,542	231%	228%
<i>Durations 1-5</i>								
Under 50.....	9	\$ 459	0	\$ 0	.03	\$ 0	0%	0%
50-59.....	64	4,809	3	97	.79	57	380	170
60-69.....	949	252,490	29	12,697	24.72	6,773	117	187
70-79.....	215	100,358	17	9,510	9.19	4,258	185	223
80 and over.....	3	1,068	0	0	.30	110	0	0
All Ages.....	1,240	\$359,184	49	\$22,304	35.03	\$11,198	140%	199%
<i>Durations 6 and over</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0	0%	0%
50-59.....	0	0	0	0	.00	0	0	0
60-69.....	45	11,341	0	0	1.17	284	0%	0%
70-79.....	491	192,971	25	8,491	23.24	9,248	108	92
80 and over.....	18	5,131	0	0	2.24	621	0	0
All Ages.....	554	\$209,443	25	\$ 8,491	26.65	\$10,153	94%	84%
<i>All Durations</i>								
Under 50.....	9	\$ 459	0	\$ 0	.03	\$ 0	0%	0%
50-59.....	64	4,809	3	97	.79	57	380	170
60-69.....	994	263,831	29	12,697	25.89	7,057	112	180
70-79.....	706	293,329	42	18,001	32.43	13,506	130	133
80 and over.....	21	6,199	0	0	2.54	731	0	0
All Ages.....	1,794	\$568,627	74	\$30,795	61.68	\$21,351	120%	144%

TABLE E—Continued

MATURED DEFERRED ANNUITIES WITHOUT A
GUARANTEED PERIOD OR REFUND PROVISION—FEMALE LIVES
EXPERIENCE BETWEEN 1955 AND 1960 ANNIVERSARIES—
PENSION TRUST ISSUES

Expected Deaths on a-1949 Ultimate Table

ATTAINED AGES	EXPOSURES		ACTUAL DEATHS		EXPECTED DEATHS		MORTALITY RATIO	
	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income	Number of Contracts	Amount of Annual Income
<i>Duration 1</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	21	1,099	0	0	.12	7	0%	0%
60-69.....	135	26,260	3	1,739	1.74	346	172%	503%
70-79.....	22	4,729	0	0	.50	112	0	0
80 and over..	0	0	0	0	.00	0		
All Ages	178	\$ 32,088	3	\$1,739	2.36	\$ 465	127%	374%
<i>Duration 2</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	17	947	0	0	.11	6	0%	0%
60-69.....	102	20,098	0	0	1.36	289	0	0
70-79.....	35	6,946	0	0	.83	171	0	0
80 and over..	0	0	0	0	.00	0		
All Ages	154	\$ 27,991	0	\$ 0	2.30	\$ 466	0%	0%
<i>Duration 3</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	17	947	0	0	.11	6	0%	0%
60-69.....	88	14,711	2	509	1.31	226	153%	225%
70-79.....	44	9,928	0	0	1.15	268	0	0
80 and over..	0	0	0	0	.00	0		
All Ages	149	\$ 25,586	2	\$ 509	2.57	\$ 500	78%	102%
<i>Duration 4</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	0	0	0	0	.00	0		
60-69.....	79	12,465	0	0	1.18	208	0%	0%
70-79.....	37	9,391	0	0	.97	257	0	0
80 and over..	0	0	0	0	.00	0		
All Ages	116	\$ 21,856	0	\$ 0	2.15	\$ 465	0%	0%
<i>Duration 5</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	3	39	0	0	.02	0	0%	0%
60-69.....	61	9,912	0	0	.98	176	0	0
70-79.....	30	9,082	0	0	.83	264	0	0
80 and over..	1	121	0	0	.06	7	0	0
All Ages	95	\$ 19,154	0	\$ 0	1.89	\$ 447	0%	0%
<i>Durations 1-5</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	58	3,032	0	0	.36	19	0%	0%
60-69.....	465	83,446	5	2,248	6.57	1,245	76%	181%
70-79.....	168	40,076	0	0	4.28	1,072	0	0
80 and over..	1	121	0	0	.06	7	0	0
All Ages	692	\$126,675	5	\$2,248	11.27	\$2,343	44%	96%
<i>Durations 6 and over</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	0	0	0	0	.00	0		
60-69.....	142	13,640	1	279	1.94	205	52%	136%
70-79.....	164	51,502	2	468	5.14	1,653	39	28
80 and over..	19	8,122	1	183	1.42	620	70	30
All Ages	325	\$ 73,264	4	\$ 930	8.50	\$2,478	47%	38%
<i>All Durations</i>								
Under 50.....	0	\$ 0	0	\$ 0	.00	\$ 0		
50-59.....	58	3,032	0	0	.36	19	0%	0%
60-69.....	607	97,086	6	2,527	8.51	1,450	71	174
70-79.....	332	91,578	2	468	9.42	2,725	21	17
80 and over..	20	8,243	1	183	1.48	627	68	29
All Ages	1,017	\$199,939	9	\$3,178	19.77	\$4,821	46%	66%