

TRANSACTIONS OF SOCIETY OF ACTUARIES 1972 REPORTS

II. GROUP LONG-TERM DISABILITY INSURANCE

THE experience included in this report is predominantly that of employer-employee groups located in the United States and is largely for plans which appear not to have been the result of bargaining. Groups which a contributing company considers atypical or classifies as substandard because of industry hazards are excluded. Plans selected for the study provide occupational as well as nonoccupational coverage, but with benefits integrated with workmen's compensation. Virtually all the cases contributed also provide that gross monthly benefits be integrated with some or all of any social security benefits and frequently with other benefits payable as a result of the disability. Benefits are payable only on claims incurred prior to age 65 and generally cease at age 65.

The Committee recommends that care be used in the interpretation of the results and in their application on other than a broad basis. Since a considerable volume of exposure could not be coded with respect to certain characteristics which may influence the level of rate of disablement or termination, the experience may not be representative of any particular group or plan. With the exception of 1970, the experience covers a period of favorable economic conditions and generally high employment.

CONTRIBUTING COMPANIES

Thirteen companies have contributed experience for the investigation covered in this report. The results are the composite experience of variations in company practices and in the underlying administration and claim procedures, as well as of variations in experience among groups.

Aetna Life & Casualty
Bankers Life & Casualty
Bankers Life Company
Connecticut General Life Insurance Company
Continental Assurance Company
Continental Casualty Company
Equitable Life Assurance Society
John Hancock Mutual Life Insurance Company
Metropolitan Life Insurance Company
New York Life Insurance Company
Provident Life & Accident Insurance Company
Prudential Insurance Company of America
Sun Life Assurance Company of Canada

ANALYSIS OF RATES OF DISABLEMENT

Table 1 is based on the experience of all size groups for plans with a six-month elimination period. Crude rates of disablement based on number of lives are shown by sex and age group for the period 1966-70. Table 1A shows the experience of nonjumbo size units only, defined as groups insuring less than 5,000 lives. Experience of the calendar year of issue is excluded from both tables. Somewhat over one-half the exposure contributed could not be separated by sex. The first part of each of these two tables summarizes the experience for male, female, and sex-unknown exposure combined. The experience for which exposure was sex-coded is presented in the bottom two sections of each table. There was considerable variation in experience among contributing companies, even after adjustment for differences in distributions of exposure by age group.

Tables 2 and 3 are similar to Table 1 but are based on the experience of plans with a three-month and a twelve-month elimination period, respectively.

Attention is called to the small number of claims underlying the disablement rate for some of the sex-age cells, especially for the three- and twelve-month plans.

The experience is based largely on a "his own occupation" definition of disability generally during the first two or three years following disablement. For plans with either a three- or a six-month elimination period, however, about 4 per cent of the experience is based on an "any occupation" definition for the full period of disability. For twelve-month plans, approximately 22 per cent of the experience uses the "any occupation" definition.

Claims were reported and included in rates of disablement, even though, because of the existence of social security or other disability income under plans with an offset provision, no benefit may have been payable.

For the six-month plans, accidents accounted for approximately 9 per cent of the claims coded for a known cause of disablement. The corresponding figures for the three- and twelve-month plans were 13 per cent and 5 per cent, respectively.

Table 1B analyzes by underlying calendar year of experience the Table 1 crude rates of disablement for all ages and for males, females, and sex-unknown exposures combined. If past reporting lag is any indication of the extent of claim underreporting, at least for the most recent calendar year's incurrals, then the claims reported as incurred in 1970 may be understated by as much as 5 per cent. Some portion of the variation in

TABLE 1
 GROUP LONG-TERM DISABILITY INSURANCE
 CRUDE RATES OF DISABLEMENT
 PER 1,000 LIVES EXPOSED
 (Six-Month Elimination Period; Calendar
 Year of Issue Excluded)
 Calendar Years of Experience 1966-70
 ALL EXPERIENCE UNITS COMBINED

Attained Age	Life Years Exposed	Number of Claims	Rate of Dis- ablement per 1,000 Lives
All Experience: Males, Females, and Sex Unknown			
Under 40	1,191,725	1,023	0.86
40-44	357,017	766	2.15
45-49	321,737	1,102	3.43
50-54	253,441	1,572	6.20
55-59	190,084	2,025	10.65
60-64	117,937	2,002	16.98
All ages	2,431,941	8,490	3.49
Male Experience Only			
Under 40	402,764	281	0.70
40-44	125,862	224	1.78
45-49	111,328	347	3.12
50-54	87,384	532	6.09
55-59	68,071	672	9.87
60-64	41,121	710	17.27
All ages	836,530	2,766	3.31
Female Experience Only			
Under 40	119,851	108	0.90
40-44	30,758	126	4.10
45-49	30,460	153	5.02
50-54	24,553	173	7.05
55-59	18,503	150	8.11
60-64	10,428	151	14.48
All ages	234,553	861	3.67

TABLE 1A
 GROUP LONG-TERM DISABILITY INSURANCE
 CRUDE RATES OF DISABLEMENT
 PER 1,000 LIVES EXPOSED
 (Six-Month Elimination Period; Calendar
 Year of Issue Excluded)
 Calendar Years of Experience 1966-70
 NONJUMBO EXPERIENCE UNITS ONLY

Attained Age	Life Years Exposed	Number of Claims	Rate of Disablement per 1,000 Lives
All Experience: Males, Females, and Sex Unknown			
Under 40	691,445	545	0.79
40-44	205,226	379	1.85
45-49	186,664	551	2.95
50-54	152,842	795	5.20
55-59	119,539	1,031	8.62
60-64	75,023	1,041	13.88
All ages	1,430,739	4,342	3.03
Male Experience Only			
Under 40	240,584	171	0.71
40-44	70,783	122	1.72
45-49	63,662	179	2.81
50-54	52,740	293	5.56
55-59	42,231	363	8.60
60-64	25,948	384	14.80
All ages	495,948	1,512	3.05
Female Experience Only			
Under 40	76,838	65	0.85
40-44	17,948	63	3.51
45-49	18,184	85	4.67
50-54	16,122	90	5.58
55-59	12,581	83	6.60
60-64	7,715	86	11.15
All ages	149,388	472	3.16

the over-all disablement rate from year to year is the result of changes in the distributions of exposed to risk by age groups.

Table 1B also shows ratios of actual claims to tabular claims. Tabular claims for each year were derived by applying to the actual exposures for each age group the corresponding age-disablement rates based on the experience of nonjumbo size groups for males, females, and sex unknown

TABLE 1B
GROUP LONG-TERM DISABILITY INSURANCE
ANALYSIS OF RATES OF DISABLEMENT
BY CALENDAR YEAR OF INCURRAL
 (Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages;
 Males, Females, and Sex Unknown Combined)
 Calendar Years of Experience 1962-70
 ALL EXPERIENCE UNITS COMBINED

CALENDAR YEAR OF INCURRAL	NUMBER OF EX- PERIENCE UNITS	LIFE YEARS EXPOSED	NUMBER OF CLAIMS			RATE OF DISABLE- MENT PER 1,000 LIVES	RATIO OF ACTUAL CLAIMS TO TABU- LAR CLAIMS*
			Acci- dent	Sickness	Total (Incl. Unknown)		
1962-65	646	361,813	81	857	1,095	3.03	109%
1966	555	262,037	57	696	777	2.97	111%
1967	772	412,408	110	1,128	1,307	3.17	113
1968	1,038	529,877	151	1,535	1,766	3.33	113
1969	1,196	568,123	195	1,686	1,920	3.38	111
1970	1,373	659,496	270	2,405	2,720	4.12	137
1966-70	4,934	2,431,941	783	7,450	8,490	3.49	119%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

combined from Table 1A. The tabulars adjust for age only. No adjustment is made for the different proportions of males and females, if any, or for any other factors which might influence disablement rates.

Table 1C subdivides the Table 1 experience for all ages and for males, females, and sex-unknown exposures combined, by size of experience unit. Note that experience units of less than 100 lives accounted for over 50 per cent of the total number of units. This explains the large number of units (over 65 per cent of the total) which experienced no claims. This table also includes a dispersion analysis of ratios of actual claims to tabular claims. As in Table 1B, the tabulars adjust only for age. Because the experience is not adjusted for sex or for other characteristics which might have a measurable impact on the rate of disablement, such as differences among contributing companies in underwriting and claims

TABLE 1C

GROUP LONG-TERM DISABILITY INSURANCE
 RATES OF DISABLEMENT AND RATIOS OF ACTUAL CLAIMS TO TABULAR CLAIMS BY SIZE OF EXPERIENCE UNIT EXPOSED
 (Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)
 Calendar Years of Experience 1966-70
 ALL EXPERIENCE UNITS COMBINED

SIZE OF UNIT	NUMBER OF EXPERIENCE UNITS	LIFE YEARS EXPOSED	NUMBER OF CLAIMS	RATE OF DISABLEMENT PER 1,000 LIVES	AVERAGE A/T RATIO*	NUMBER OF EXPERIENCE UNITS BY RATIO OF ACTUAL TO TABULAR CLAIMS*							
						0%	1-50%	50-75%	75-100%	100-150%	150-200%	200-500%	500% or More
Under 25 lives . . .	343	5,449	15	2.75	81%	334	0	0	0	0	0	0	9
25-49	936	34,164	100	2.93	85	850	0	0	0	0	0	2	84
50-99	1,269	88,558	242	2.73	84	1,062	0	0	0	0	0	119	88
100-249	1,156	181,701	492	2.71	88	798	0	0	9	40	77	184	48
250-499	506	177,745	521	2.93	89	251	6	35	37	47	45	78	7
500-999	291	210,796	670	3.18	102	81	32	30	29	44	30	38	7
1,000-2,499	248	398,015	1,229	3.09	106	22	38	33	31	58	28	34	4
2,500-4,999	96	334,311	1,073	3.21	112	5	13	16	13	25	10	12	2
Under 5,000	4,845	1,430,739	4,342	3.03	100%	3,403	89	114	119	214	190	467	249
5,000 or more	89	1,001,202	4,148	4.14	148%	1	8	7	9	22	21	19	2
Total	4,934	2,431,941	8,490	3.49	119%	3,404	97	121	128	236	211	486	251

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

TABLE 2
 GROUP LONG-TERM DISABILITY INSURANCE
 CRUDE RATES OF DISABLEMENT
 PER 1,000 LIVES EXPOSED
 (Three-Month Elimination Period; Calendar
 Year of Issue Excluded)
 Calendar Years of Experience 1966-70
 ALL EXPERIENCE UNITS COMBINED

Attained Age	Life Years Exposed	Number of Claims	Rate of Disablement per 1,000 Lives
All Experience: Males, Females, and Sex Unknown			
Under 40	209,991	425	2.02
40-44	60,993	219	3.59
45-49	55,508	322	5.80
50-54	45,891	409	8.91
55-59	36,336	511	14.06
60-64	22,858	439	19.21
All ages	431,577	2,325	5.39
Male Experience Only			
Under 40	98,809	210	2.13
40-44	31,092	109	3.51
45-49	27,669	155	5.60
50-54	22,047	201	9.12
55-59	17,380	247	14.21
60-64	10,720	196	18.28
All ages	207,717	1,118	5.38
Female Experience Only			
Under 40	28,420	77	2.71
40-44	6,518	31	4.76
45-49	6,711	45	6.71
50-54	5,740	55	9.58
55-59	4,856	46	9.47
60-64	2,808	38	13.53
All ages	55,053	292	5.30

TABLE 3
 GROUP LONG-TERM DISABILITY INSURANCE
 CRUDE RATES OF DISABLEMENT
 PER 1,000 LIVES EXPOSED
 (Twelve-Month Elimination Period; Calendar
 Year of Issue Excluded)
 Calendar Years of Experience 1966-70
 ALL EXPERIENCE UNITS COMBINED

Attained Age	Life Years Exposed	Number of Claims	Rate of Disablement per 1,000 Lives
All Experience: Males, Females, and Sex Unknown			
Under 40.....	67,798	38	0.56
40-44.....	27,854	32	1.15
45-49.....	26,031	56	2.15
50-54.....	24,035	91	3.79
55-59.....	19,688	141	7.16
60-64.....	11,938	115	9.63
All ages.....	177,344	473	2.67
Male Experience Only			
Under 40.....	31,567	8	0.25
40-44.....	12,137	8	0.66
45-49.....	10,892	15	1.38
50-54.....	9,529	25	2.62
55-59.....	7,611	60	7.88
60-64.....	4,976	55	11.05
All ages.....	76,712	171	2.23
Female Experience Only			
Under 40.....	8,910	8	0.90
40-44.....	2,398	7	2.92
45-49.....	3,065	8	2.61
50-54.....	3,221	12	3.73
55-59.....	3,290	21	6.38
60-64.....	1,848	11	5.95
All ages.....	22,732	67	2.95

administration practices, the extent to which employers use the long-term disability plan as an early retirement vehicle, the proportions of salary, hourly, and bargained wages, the extent of employer financial participation, the type of industry, the relationship to take-home pay of the amount of benefit payable under the plan, and so on, the results should be interpreted with some caution.

Table 4 shows exposures, claims, and rates of disablement by size group for plans with either a three- or a twelve-month elimination period. Tabulars used in this table are based on the combined experience of all size groups. However, since no jumbo groups are included in the experience of the three-month plans, the tabulars for plans with a three-month elimination period are in fact those for nonjumbo groups.

The impact of the 1970 recession on disablement rates is quite evident. It appears that the effect was general, affecting all segments of the experience—all plan elimination periods, all size groups, and both sexes. Table 1B gives some indication of the magnitude of the impact. It shows a rate of disablement in 1970 about 25 per cent higher than for the years immediately preceding.

Table 1A experience was analyzed by contributing company to determine what type of dispersion pattern would evolve. The results are summarized in the accompanying tabulation. The separate experiences

Company	Per Cent of Total Exposure	Ratio of Actual to Expected
I.....	<0.5%	71%
II.....	25	108
III.....	35	93
IV.....	2	148
V.....	4	104
VI.....	3	94
VII.....	2	69
VIII.....	4	92
IX.....	9	130
X.....	2	49
XI.....	2	112
XII.....	12	85
All.....	100%	100%

underlying Tables 1 and 1A, respectively, have been analyzed by employee class and by industry. The results are displayed in Tables 5 and 6.

The portion of the experience in Table 5 pertaining to nonbargained plans covering salaried employees who are essentially not executives was further examined in order to determine the relationships among plan

TABLE 4
 GROUP LONG-TERM DISABILITY INSURANCE
 ANALYSIS OF RATES OF DISABLEMENT BY SIZE OF EXPERIENCE UNIT EXPOSED
 (Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)
 Calendar Years of Experience 1966-70
 ALL EXPERIENCE UNITS COMBINED

SIZE OF UNIT	THREE-MONTH ELIMINATION PERIOD PLANS					TWELVE-MONTH ELIMINATION PERIOD PLANS				
	Number of Experience Units	Life Years Exposed	Number of Claims	Rate of Disablement per 1,000 Lives	Ratio of Actual Claims to Tabular Claims*	Number of Experience Units	Life Years Exposed	Number of Claims	Rate of Disablement per 1,000 Lives	Ratio of Actual Claims to Tabular Claims†
Under 25 lives..	234	3,458	32	9.25	164%	16	213	2	9.39	303%
25-49.....	784	27,992	133	4.75	88	46	1,576	6	3.81	140
50-99.....	680	46,884	222	4.74	89	59	4,066	13	3.20	130
100-249.....	418	61,108	273	4.47	88	56	9,055	18	1.99	86
250-499.....	203	69,963	351	5.02	98	42	14,489	38	2.62	119
500-999.....	92	65,456	291	4.45	89	31	25,507	80	3.14	129
1,000-2,499.....	59	94,825	680	7.17	126	35	50,067	105	2.10	73
2,500-4,999.....	19	61,891	343	5.54	94	11	34,712	76	2.19	78
Under 5,000..	2,489	431,577	2,325	5.39	100%	296	139,685	338	2.42	91%
5,000 or more..						6	37,659	135	3.58	134%
Total.....	2,489	431,577	2,325	5.39	100%	302	177,344	473	2.67	100%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 2 for males, females, and sex unknown combined.

† Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 3 for males, females, and sex unknown combined.

TABLE 5
 GROUP LONG-TERM DISABILITY INSURANCE
 ANALYSIS OF TABLES 1 AND 1A EXPERIENCE BY EMPLOYEE CLASS
 (Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)
 Calendar Years of Experience 1966-70

EMPLOYEE CODE	EMPLOYEE CLASS	TABLE 1A EXPERIENCE--NONJUMBO UNITS ONLY				TABLE 1 EXPERIENCE--ALL UNITS		
		Number of Experience Units	Life Years Exposed	Number of Claims	Ratio of Actual Claims to Tabular Claims*	Number of Experience Units	Life Years Exposed	Ratio of Actual Claims to Tabular Claims*
1.....	Nonbargained—essentially executives only	169	38,947	135	121%	174	67,512	112%
2.....	Nonbargained—salaried other than essentially executives only	2,011	657,284	1,726	87	2,046	956,174	93
3.....	Bargained—hourly	55	34,545	231	199	55	34,545	199
4.....	Nonbargained—hourly	105	30,763	167	176	110	72,675	149
9.....	Other or combinations of the above	2,505	669,200	2,083	102	2,549	1,301,035	135
	Total.....	4,845	1,430,739	4,342	100%	4,934	2,431,941	119%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

long-term disability benefit schedules before integration with other income sources, salary at time of disablement, income provided under employer-sponsored plans prior to qualification for long-term disability benefits, and the presence and nature of the integration provisions of the long-term disability plan. The several classifications are somewhat broad. The various parameters may not be mutually exclusive, especially the interrelationships among long-term disability benefit levels, salary, and integration. The analyses are shown in Table 5A, separately for non-

TABLE 5A

GROUP LONG-TERM DISABILITY INSURANCE

SUPPLEMENTAL ANALYSIS OF TABLE 5 EXPERIENCE FOR EMPLOYEE CLASS CODE 2

(Six-Month Elimination Period; Calendar Year of Issue Excluded;

All Ages; Males, Females, and Sex Unknown Combined)

Calendar Years of Experience 1966-70)

	NONJUMBO EXPERIENCE UNITS ONLY				ALL EXPERIENCE UNITS	
	Number of Experience Units	Life Years Exposed	Number of Claims	Ratio of A/T Claims*	Life Years Exposed	Ratio of A/T Claims*
I. Relationship between Long-Term Disability Benefit and Salary						
Ratio of gross benefit (before reduction for integration) to salary:						
Always less than 50%.....	142	15,886	39	67%	27,395	58%
Generally less than 50%.....	32	14,645	29	73	14,645	73
Subtotal (less than 50%)..	174	30,531	68	69%	42,040	62%
50% (exactly or approximately).....	691	277,104	694	84%	373,724	98%
Always more than 50%.....	760	234,453	603	88	294,362	90%
Generally more than 50%.....	301	92,224	253	94	211,570	95
Subtotal (greater than 50%).....	1,061	326,677	856	90%	505,932	92%
Other, including not determinable.....	85	22,972	108	101%	34,478	91%
Total salaried.....	2,011	657,284	1,726	87%	956,174	93%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

TABLE 5A—Continued

	NONJUMBO EXPERIENCE UNITS ONLY				ALL EXPERIENCE UNITS	
	Number of Experience Units	Life Years Exposed	Number of Claims	Ratio of A/T Claims*	Life Years Exposed	Ratio of A/T Claims*
II. Analysis by Plan Integration Provision						
Other income sources included in plan integration provision:						
Nonintegrated.....	284	67,474	182	90%	67,474	90%
Social security primary benefit.....	106	70,961	175	90	70,961	90
Social security primary benefit plus income from other sources.....	506	129,658	395	90	209,776	84
Social security primary and family benefits.....	627	172,563	401	81	241,817	91
Social security primary and family benefits, plus income from other sources.....	439	208,974	546	88	358,492	101
Income sources other than social security.....	23	1,284	3	59	1,284	59
Other integration bases.....	26	6,370	24	92	6,370	92
Total salaried.....	2,011	657,284	1,726	87%	956,174	93%
III. Extent to Which a Disability Income Is Provided during Elimination Period						
Disability income benefit provided during the elimination period:						
Full salary.....	44	7,935	44	174%	13,513	174%
Less than full salary but generally more than 50%.....	247	53,189	169	101	110,253	109
Generally less than 50% of salary.....	79	11,604	38	134	11,604	134
None.....	221	69,309	151	89	69,309	89
Noncodable.....	1,317	450,179	1,127	83	637,050	92
Unknown.....	103	65,068	197	82	114,445	75
Total salaried.....	2,011	657,284	1,726	87%	956,174	93%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

TABLE 6

GROUP LONG-TERM DISABILITY INSURANCE
ANALYSIS OF TABLES 1 AND 1A EXPERIENCE BY INDUSTRY

(Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)
Calendar Years of Experience 1966-70

INDUSTRY CODE(S)	INDUSTRY	TABLE 1A EXPERIENCE—NONJUMBO UNITS ONLY				TABLE 1 EXPERIENCE—ALL UNITS		
		Number of Experience Units	Life Years Exposed	Number of Claims	Ratio of Actual Claims to Tabular Claims*	Number of Experience Units	Life Years Exposed	Ratio of Actual Claims to Tabular Claims*
01-09.....	Agriculture, forestry, and fisheries	42	15,537	42	86%	43	23,663	212%
10-14.....	Mining	85	33,148	125	124	85	33,148	124
15-17.....	Contract construction	152	33,626	107	110	152	33,626	110
19-39.....	Manufacturing	2,082	754,777	2,564	112	2,148	1,508,113	132
40-49.....	Transportation, communication, electric, gas, and sanitary services	286	76,593	295	139	296	160,853	136
50-59.....	Wholesale and retail trade	690	98,427	275	95	693	163,462	104
60-67.....	Finance, insurance, and real estate	667	167,048	322	65	672	205,687	67
70-89.....	Services	731	230,771	532	71	735	282,577	80
91-94.....	Government	76	11,768	45	99	76	11,768	99
.....	All other classifiable	8	7,525	30	151	8	7,525	151
99.....	Nonclassifiable	26	1,519	5	134	26	1,519	134
	Total.....	4,845	1,430,739	4,342	100%	4,934	2,431,941	119%

* Tabular claims were calculated by applying to the actual age group exposures the crude rates of disablement shown in Table 1A for males, females, and sex unknown combined.

jumbo and for all experience units, respectively. Please note that the tabulars and the actual-to-tabular ratios are consistent with those in Table 5 for Employee Code 2.

ANALYSIS OF RATES OF TERMINATION

Table D-1 shows, for plans with a six-month elimination period, crude rates of termination from death or recovery based on number of lives, by sex and age groups, for the period 1962-70. Annual rates of termination were not calculated for any experience cell for which there were fewer than ten terminations. Because of the small number of terminations at the later durations, the experience has been truncated at the end of six years of disablement. It should be noted that the termination rates for the first year of disablement relate to the six-month period following the end of the elimination period. There were 18,219 claims exposed to termination, 8,490 of which originated from the 1966-70 and 1,095 from the 1962-65 active lives experience (all experience units combined), with the balance from experience units which were not included in the study of rates of disablement. The actual number of claims which terminated by death or recovery is shown in Table D-1A. Ratios of the actual terminations to the number of terminations that would have been produced by application of termination rates from the 1964 Commissioners Disability Table to the Table D-1 exposures are presented in Table D-1B. Table D-1C compares illustrative values of a monthly benefit of \$1 payable for maximum periods of sixty months with such values payable to age 65, calculated on two alternate bases, each discounted at 3 per cent interest. One basis was Table D-1 crude termination rates for the first four years, regardless of the actual number of terminations in each duration-age cell, and 1964 Commissioners Disability Table rates thereafter. Reference to Table D-1A indicates that there was only one cell, namely, the fourth year of disablement for ages under 30, which had fewer than ten terminations. The other basis uses termination rates from the Commissioners Disability Table throughout.

For plans with a six-month elimination period, the Committee separately analyzed the termination rates for only those claims which were included in the rates of disablement study and found no significant difference from the results shown in Table D-1.

Tables D-2, D-2A, and D-2B analyze the experience of terminations from plans with a three month elimination period and are similar in form and content to the corresponding tables of the D-1 series, except that experience has been truncated at four years. The number of claims exposed to termination was 6,218, of which 2,325 and 94 were included

TABLE D-1
GROUP LONG-TERM DISABILITY INSURANCE
CRUDE TERMINATION RATES PER 1,000 CLAIMS EXPOSED
TO DEATH OR RECOVERY
(Six-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined						
7th month	77.6	53.9	61.5	36.7	24.4	18.3
8th month	79.3	68.1	71.7	49.7	27.7	20.4
9th month	66.7	64.3	65.1	46.4	25.2	18.5
10th month	60.8	49.9	53.4	41.2	23.9	14.8
11th month	54.0	46.5	48.9	38.0	21.3	14.7
12th month	61.1	48.3	52.4	38.9	17.5	15.9
1st year (last 6 months)	338.7	288.8	305.1	226.1	132.2	98.2
13th month	56.0	45.8	49.1	35.5	18.1	13.4
14th month	51.5	33.6	39.2	30.7	18.6	11.3
15th month	48.7	27.3	33.9	28.0	16.3	12.0
16th month	26.4*	26.8	26.7	23.4	14.1	12.5
17th month	28.9	25.1	26.3	21.6	12.9	11.0
18th month	44.7	19.8	27.2	19.3	15.6	9.5
19th month	44.0	16.2	24.3	16.8	15.7	11.2
20th month	36.2	10.2*	17.5	16.6	12.6	11.6
21st month	23.6*	13.9	16.5	18.3	13.6	10.2
22d month	25.4	19.4	21.1	16.8	12.7	8.6
23d month	29.2*	16.2	19.7	11.4	8.1	8.7
24th month	24.9*	25.1	25.0	14.4	11.5	12.7
2d year	361.5	246.7	282.1	225.7	157.1	124.9
3d year	267.9	226.6	237.6	167.0	123.1	116.2
4th year	†	124.7	116.6	112.3	77.8	54.2
5th year	†	†	69.1	56.3	66.4	95.1
6th year	†	†	†	116.2	96.1	†
Male Only						
1st year (last 6 months)	360.4	308.8	325.8	217.0	127.7	99.0
2d year	351.4	248.5	280.2	212.7	159.1	122.4
3d year	256.7	214.7	225.6	153.0	121.5	108.6
4th year	†	86.3	66.7	117.6	81.2	58.1
5th year	†	†	†	57.7	70.9	99.2
6th year	†	†	†	119.4	102.5	†
Female Only						
1st year (last 6 months)	296.9	252.0	266.7	242.7	147.7	93.5
2d year	377.5	243.6	285.7	250.3	150.4	138.4
3d year	284.6	243.5	254.8	193.7	127.9	160.7
4th year	†	186.2	196.0	100.6	65.6	†
5th year	†	†	†	†	51.4	†
6th year	†	†	†	†	†	†

* Involves fewer than five terminations.

† Involves fewer than ten terminations.

TABLE D-1A
GROUP LONG-TERM DISABILITY INSURANCE
NUMBER OF CLAIMS TERMINATED BY DEATH OR RECOVERY
(Six-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined						
1st year (last 6 months)	218	382	600	780	875	345
2d year	103	160	263	428	675	254
3d year	34	78	112	169	301	112
4th year	5	24	29	70	112	24
5th year	2	8	10	18	54	17
6th year	1	3	4	25	41	3
Male Only						
1st year (last 6 months)	149	262	411	488	654	294
2d year	63	100	163	260	536	211
3d year	19	42	61	102	228	89
4th year	0	11	11	49	90	22
5th year	0	5	5	14	44	15
6th year	0	1	1	17	34	2
Female Only						
1st year (last 6 months)	69	120	189	292	221	51
2d year	40	60	100	168	139	43
3d year	15	36	51	67	73	23
4th year	5	13	18	21	22	2
5th year	2	3	5	4	10	2
6th year	1	2	3	8	7	1

TABLE D-1B
 GROUP LONG-TERM DISABILITY INSURANCE
 RATIOS OF ACTUAL CLAIMS TERMINATED BY DEATH OR
 RECOVERY TO NUMBER OF TERMINATIONS EXPECTED FROM THE
 1964 COMMISSIONERS DISABILITY TABLE*
 (Six-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	ALL AGES OF DIS- ABLE- MENT COM- BINED	AGE AT DISABLEMENT					
		Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined							
1st year (last 6 months) ..	41%	63%	56%	58%	49%	35%	29%
2d year	93	116	89	99	96	90	91
3d year	99	116	115	116	102	92	97
4th year	76	†	88	78	95	73	51
5th year	72	†	†	61	62	74	96
6th year	115	†	†	†	155	119	†
Male Only							
1st year (last 6 months) ..	39%	67%	60%	62%	47%	34%	29%
2d year	92	113	90	98	91	91	89
3d year	93	111	109	110	93	91	90
4th year	75	†	61	45	99	76	54
5th year	75	†	†	†	64	79	100
6th year	116	†	†	†	160	126	†
Female Only							
1st year (last 6 months) ..	45%	55%	49%	51%	52%	39%	27%
2d year	98	121	88	100	107	86	101
3d year	113	123	124	124	118	96	133
4th year	79	†	131	131	85	61	†
5th year	62	†	†	†	†	57	†
6th year	114	†	†	†	†	†	†

* As published by the Health Insurance Association of America, Table B1, Volume III.
 † Involves fewer than ten terminations.

TABLE D-1C
GROUP LONG-TERM DISABILITY INSURANCE
ILLUSTRATIVE VALUES OF A MONTHLY BENEFIT OF \$1 PAYABLE FOR
VARIOUS BENEFIT PERIODS, DISCOUNTED AT 3 PER CENT INTEREST
(Six-Month Elimination Period; Males and Females Combined)

AGE AT DISABLEMENT	VALUE AS OF END OF ELIMINATION PERIOD			VALUE AS OF END OF TWELFTH MONTH OF DISABLEMENT		
	Based on Table D-1 Rates of Termination*	Based on 1964 CDT	Ratio to 1964 CDT	Based on Table D-1 Rates of Termination*	Based on 1964 CDT	Ratio to 1964 CDT
Benefit Payable for a Maximum of 60 Months but Not beyond Age 65 with First Payment Due at End of Elimination Period						
25.5	\$22.25	\$16.59	134%	\$26.77	\$28.46	94%
35.5	27.03	18.44	147	31.43	30.86	102
45.5	31.00	21.71	143	33.78	33.50	101
55.5	38.07	26.85	142	38.06	36.68	104
62.5	19.82	14.91	133	15.96	15.77	101
Benefit Payable to Age 65 with First Payment Due at End of Elimination Period						
25.5	\$44.61	\$32.62	137%	\$61.09	\$63.86	96%
35.5	57.62	38.72	149	75.07	73.54	102
45.5	62.02	42.87	145	74.46	73.57	101
55.5	55.34	38.40	114	58.24	55.60	105
62.5	19.82	14.91	133	15.96	15.77	101

* Annuity values are based on the crude, ungraduated termination rates from Table D-1 for the first four years and on the 1964 Commissioners Disability Table rates thereafter.

TABLE D-2
 GROUP LONG-TERM DISABILITY INSURANCE
 CRUDE TERMINATION RATES PER 1,000 CLAIMS EXPOSED
 TO DEATH OR RECOVERY

(Three-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined						
4th month.....	114.2	98.8	104.1	99.0	81.2	51.4
5th month.....	153.8	134.7	141.3	112.5	86.6	68.0
6th month.....	153.9	145.0	148.0	100.0	79.6	61.2
7th month.....	126.1	108.2	114.2	96.5	69.2	53.1
8th month.....	102.3	69.6	80.3	91.8	50.0	42.0
9th month.....	94.8	60.4	71.3	68.2	37.1	22.3
10th month.....	87.8	62.8	70.6	54.0	31.6	20.0
11th month.....	80.8	71.2	74.2	48.6	30.5	19.3
12th month.....	71.1	65.5	67.3	42.5	27.4	12.6
1st year (last 9 months)...	649.2	577.2	602.0	525.8	399.5	301.5
13th month.....	77.2	67.4	70.3	41.0	24.7	12.5
14th month.....	64.3*	60.3	61.5	32.4	21.8	12.9
15th month.....	34.9*	41.0	39.3	28.4	19.8	14.8
16th month.....	21.7*	43.8	37.8	34.4	18.7	14.7
17th month.....	33.3*	37.2	36.3	32.6	16.0	9.6*
18th month.....	33.3*	26.5*	28.5*	22.3	12.0	10.2
19th month.....	10.2*	17.8*	15.8*	21.7	9.9	9.4*
20th month.....	32.9*	18.8*	22.5	22.4	8.4	8.8*
21st month.....	61.2*	19.5*	29.6	16.3	12.1	6.5*
22d month.....	67.0*	20.9*	31.8	15.4*	14.6	8.6
23d month.....	46.4*	36.3	38.8	8.0*	9.3*	17.7
24th month.....	56.3*	43.6*	46.2	6.9*	5.3*	13.8*
2d year.....	425.3	357.7	374.1	248.6	159.7	131.0
3d year.....	†	206.4	205.1	185.9	109.9	141.7
4th year.....	†	†	†	97.3	92.7	131.1
Male Only						
1st year (last 9 months)...	674.1	564.4	603.8	523.3	388.0	309.9
2d year.....	415.1	383.6	391.1	251.8	152.2	149.1
3d year.....	†	†	216.6	193.9	113.9	161.8
4th year.....	†	†	†	†	94.8	†
Female Only						
1st year (last 9 months)...	601.1	594.8	597.8	529.6	432.1	267.7
2d year.....	429.6	312.2	344.5	242.3	182.1	†
3d year.....	†	†	†	171.4	95.8	†
4th year.....	†	†	†	†	†	†

* Involves fewer than five terminations.

† Involves fewer than ten terminations.

TABLE D-2A
GROUP LONG-TERM DISABILITY INSURANCE
NUMBER OF CLAIMS TERMINATED BY DEATH OR RECOVERY
(Three-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined						
1st year (last 9 months)	221	378	599	768	856	316
2d year	29	67	96	115	139	61
3d year	4	15	19	45	61	31
4th year	2	3	5	12	33	12
Male Only						
1st year (last 9 months)	148	228	376	498	617	259
2d year	18	44	62	77	101	55
3d year	4	7	11	30	48	27
4th year	1	2	3	9	26	7
Female Only						
1st year (last 9 months)	73	150	223	270	239	57
2d year	11	23	34	38	38	6
3d year	0	8	8	15	13	4
4th year	1	1	2	3	7	5

TABLE D-2B

GROUP LONG-TERM DISABILITY INSURANCE
RATIOS OF ACTUAL CLAIMS TERMINATED BY DEATH OR
RECOVERY TO NUMBERS OF TERMINATIONS EXPECTED FROM THE
1964 COMMISSIONERS DISABILITY TABLE*
(Three-Month Elimination Period; Calendar Years of Experience 1962-70)

DURATION OF DISABLEMENT	ALL AGES OF DIS- ABLE- MENT COM- BINED	AGE AT DISABLEMENT					
		Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined							
1st year (last 9 months)	57%	73%	66%	68%	63%	53%	46%
2d year	104	137	130	131	106	91	95
3d year	98	†	105	101	113	82	118
4th year	90	†	†	†	82	87	123
Male Only							
1st year (last 9 months)	56%	76%	64%	68%	62%	52%	47%
2d year	104	134	139	137	108	87	109
3d year	104	†	†	106	118	85	134
4th year	95	†	†	†	†	89	†
Female Only							
1st year (last 9 months)	60%	68%	68%	68%	63%	58%	40%
2d year	102	138	113	121	103	104	†
3d year	85	†	†	†	104	72	†
4th year	79	†	†	†	†	†	†

* As published by the Health Insurance Association of America, Table B1, Volume III.

† Involves fewer than ten terminations.

in 1966-70 and 1962-65 portions of the active lives study, respectively. Termination rates for the first year of disablement cover the nine months immediately following the elimination period. Although the volume of claims completing two years of disability is rather limited, there appears to be some indication that much of the effect of selection under the plans with the shorter three-month elimination period has largely disappeared after the second year.

For both the six- and three-month elimination period plans, the low first-year ratios in Tables D-1B and D-2B, respectively, would appear to be due to the shorter elimination periods of the individual health insurance experience underlying the first-year termination rates of the 1964 Commissioners Disability Table. Ratios of Table D-1C disabled life annuity values as of the end of the twelfth month of disablement seem to confirm this, at least for plans with a six-month elimination period.

Compared with those in last year's report, which included experience for the period 1962-69, the crude termination rates for the years 1962-70 for both males and females are generally lower for all durations under both the three- and the six-month plans, respectively. The financial consequences of this change are apparent from a comparison of Table D-1C between last year's and this year's reports. As noted under the active lives experience, the 1970 recession may also be impacting in this area.