

**TRANSACTIONS OF SOCIETY OF ACTUARIES  
1973 REPORTS**

**II. GROUP LONG-TERM DISABILITY INSURANCE**

**T**ABLES 7 and 8 have been added to the "Analysis of Rates of Disablement" section of this report. Changes have also been made in Table 1B (experience of nonjumbo size groups is now included); Table 5 (the "employee class" has been completely revised); Table 5A, Part I (further subdivision of ratios); and Table 5A, Part II (experience has been recast into broader groupings). The only changes in the "Analysis of Rates of Termination" section is the addition of Table D-2C.

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 sub-standard 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 experience of Company VIII has been excluded from both sections of the study for all years. Company III made a very large initial contribution to both sections of the study for plans with a three-month elimination period and also increased its contribution substantially with respect to plans with a twelve-month elimination period. The Committee recommends that care be used in the interpretation of the results and in their application on other than a broad basis. Any comparisons of levels of either rates of disablement or rates of termination between this report and last year's report should recognize the impact thereon of the aforementioned changes in the respective proportions of the total volume attributable to Companies III and VIII. 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. The experience covers a period of favorable economic conditions and generally high employment, except that conditions were less favorable in the two most recent years, 1970 and 1971.

## CONTRIBUTING COMPANIES

Twelve 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 and Casualty Company  
 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  
 Prudential Life & Accident Insurance Company  
 Prudential Insurance Company of America  
 Sun Life Assurance Company of Canada

## ANALYSIS OF RATES OF DISABLEMENT

Many of the tables appearing in this section, specifically Tables 1B, 1C, 4, 5, 5A, 6, 7, and 8, include a column which shows the "number of experience units." A unit of experience represents the experience of a single group for one calendar year. For an experience cell which covers more than one calendar year of experience, a group would be included in the count of the number of experience units for the total number of separate calendar years for which experience was submitted. Where the number of experience units in a cell is relatively small and no distinction is made by size, the experience for that cell could be influenced by the experience of but a few groups and, as such, may not be representative of all units in that cell.

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 1967-71. 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. About 45 per cent of 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

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 1967-71  
 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 . . . . .	1,296,581	1,156	0.89
40-44 . . . . .	386,463	829	2.15
45-49 . . . . .	358,139	1,250	3.49
50-54 . . . . .	283,127	1,777	6.28
55-59 . . . . .	214,018	2,363	11.04
60-64 . . . . .	134,415	2,230	16.59
All ages . . . . .	2,672,743	9,605	3.59
Male Experience Only			
Under 40 . . . . .	530,819	416	0.78
40-44 . . . . .	159,873	314	1.96
45-49 . . . . .	145,564	487	3.35
50-54 . . . . .	116,070	743	6.40
55-59 . . . . .	90,655	1,019	11.24
60-64 . . . . .	56,644	969	17.11
All ages . . . . .	1,099,625	3,948	3.59
Female Experience Only			
Under 40 . . . . .	173,040	194	1.12
40-44 . . . . .	42,144	168	3.99
45-49 . . . . .	43,724	222	5.08
50-54 . . . . .	35,856	256	7.14
55-59 . . . . .	27,015	238	8.81
60-64 . . . . .	16,785	223	13.29
All ages . . . . .	338,564	1,301	3.84

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 1967-71  
 NONJUMBO EXPERIENCE UNITS ONLY

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.....	821,010	668	0.81
40-44.....	233,300	472	2.02
45-49.....	216,557	685	3.16
50-54.....	177,606	955	5.38
55-59.....	139,076	1,291	9.28
60-64.....	88,937	1,226	13.79
All ages.....	1,676,486	5,297	3.16
Male Experience Only			
Under 40.....	340,940	262	0.77
40-44.....	96,344	185	1.92
45-49.....	89,290	270	3.02
50-54.....	74,311	419	5.64
55-59.....	59,070	610	10.33
60-64.....	37,993	567	14.92
All ages.....	697,948	2,313	3.31
Female Experience Only			
Under 40.....	119,366	126	1.06
40-44.....	27,082	102	3.77
45-49.....	28,722	132	4.60
50-54.....	25,260	147	5.82
55-59.....	19,554	146	7.47
60-64.....	13,102	142	10.84
All ages.....	233,086	795	3.41

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 2 per cent of the experience is based on an "any occupation" definition for the full period of disability. For twelve-month plans, approximately 8 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 15 per cent and 7 per cent, respectively.

Table 1B analyzes by underlying calendar year of experience the crude rates of disablement from Tables 1 and 1A, respectively, 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 1971 may be understated by as much as 5 per cent. Some portion of the variation in 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 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 (about 70 per cent of the total) which experienced no claims. This table also includes a dispersion analysis of ratios of actual

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 1962-71

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	Sick- ness	Total (Incl. Unknown)		
All Experience Units Combined							
1962-66 . . . . .	1,244	624,892	130	1,409	1,790	2.86	100%
1967 . . . . .	787	411,829	96	990	1,274	3.09	106
1968 . . . . .	1,053	505,594	126	1,280	1,624	3.21	105
1969 . . . . .	1,227	565,174	153	1,438	1,863	3.30	105
1970 . . . . .	1,456	626,069	213	2,008	2,471	3.95	126
1971 . . . . .	1,533	564,077	214	2,110	2,373	4.21	130
1967-71 . . . . .	6,056	2,672,743	802	7,826	9,605	3.59	115%
Nonjumbo Experience Units Only							
1962-66 . . . . .	1,218	293,817	41	482	612	2.08	70%
1967 . . . . .	773	239,625	64	495	675	2.82	91
1968 . . . . .	1,035	289,784	72	631	820	2.83	92
1969 . . . . .	1,204	332,961	62	679	943	2.83	89
1970 . . . . .	1,431	390,398	112	962	1,288	3.30	104
1971 . . . . .	1,516	423,718	163	1,373	1,571	3.71	115
1967-71 . . . . .	5,959	1,676,486	473	4,140	5,297	3.16	100%

\* 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 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 1967-71  
 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.....	508	7,904	24	3.04	87%	490	0	0	0	0	0	0	18
25-49.....	1,163	42,776	125	2.92	82	1,052	0	0	0	0	0	12	99
50-99.....	1,560	109,321	310	2.84	83	1,309	0	0	0	0	1	148	102
100-249.....	1,405	218,872	661	3.02	93	977	0	0	8	65	93	211	51
250-499.....	588	206,107	595	2.89	86	281	7	47	55	68	43	75	12
500-999.....	350	251,014	866	3.45	109	85	47	47	28	49	35	48	11
1,000-2,499.....	271	445,880	1,385	3.11	103	31	45	36	27	62	30	37	3
2,500-4,999.....	114	394,612	1,331	3.37	111	2	18	21	15	27	17	13	1
Under 5,000.....	5,959	1,676,486	5,297	3.16	100%	4,227	117	151	133	271	219	544	297
5,000 or more.....	97	996,257	4,308	4.32	142%	1	8	7	15	21	27	16	2
Total.....	6,056	2,672,743	9,605	3.59	115%	4,228	125	158	148	292	246	560	299

\* Tabular claims were calculated by applying to 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 1967-71  
 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.....	429,810	634	1.48
40-44.....	120,538	361	2.99
45-49.....	112,231	563	5.02
50-54.....	93,760	691	7.37
55-59.....	72,450	849	11.72
60-64.....	45,765	729	15.93
All ages.....	874,554	3,827	4.38
Male Experience Only			
Under 40.....	176,286	275	1.56
40-44.....	50,619	167	3.30
45-49.....	46,584	227	4.87
50-54.....	38,135	304	7.97
55-59.....	30,059	350	11.64
60-64.....	18,737	316	16.87
All ages.....	360,420	1,639	4.55
Female Experience Only			
Under 40.....	57,294	116	2.02
40-44.....	13,716	68	4.96
45-49.....	14,131	83	5.87
50-54.....	12,449	98	7.87
55-59.....	9,645	102	10.58
60-64.....	6,051	89	14.71
All ages.....	113,286	556	4.91



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 1967-71  
 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.....	119,626	64	0.54
40-44.....	42,864	44	1.03
45-49.....	40,432	83	2.05
50-54.....	33,380	118	3.54
55-59.....	26,199	173	6.60
60-64.....	15,285	154	10.08
All ages.....	277,786	636	2.29
Male Experience Only			
Under 40.....	49,013	9	0.18
40-44.....	14,463	9	0.62
45-49.....	13,677	27	1.97
50-54.....	10,639	34	3.20
55-59.....	8,634	61	7.07
60-64.....	5,436	72	13.25
All ages.....	101,862	212	2.08
Female Experience Only			
Under 40.....	11,832	10	0.85
40-44.....	3,030	8	2.64
45-49.....	3,873	11	2.84
50-54.....	3,792	14	3.69
55-59.....	3,398	27	7.95
60-64.....	2,049	13	6.34
All ages.....	27,974	83	2.97

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 administration practices, the extent to which employers use the long-term disability plan as an early retirement vehicle, the proportions of salaried and hourly, 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.

The impact of the 1970 recession on disablement rates for 1970 and 1971 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. The ratios of actual to tabular for 1970-71 are significantly higher than the levels of earlier years. Table 1B also seems to say, at least with respect to nonjumbo size groups, that the effect of the recession was felt over two years.

The respective experiences underlying Tables 1 and 1A have been analyzed by employee class, industry, contributory status, and plan provision with respect to pre-existing conditions. The results are displayed in Tables 5, 6, 7, and 8, respectively.

The portion of the Table 5 experience under units with at least a 75 per cent salaried composition, the majority of whom were not executives, was further examined in order to determine the relationships among plan 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 between long-term disability benefit levels, salary, and integration. The analyses are shown in Table 5A, separately for nonjumbo 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.

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 1967-71  
 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 . . .	377	5,794	37	6.39	136%	29	363	4	11.02	373%
25-49 . . . . .	1,250	45,632	245	4.71	105	61	2,229	6	2.69	113
50-99 . . . . .	1,471	102,914	473	4.60	102	72	4,898	10	2.04	89
100-249 . . . . .	975	145,968	579	3.97	94	80	13,316	30	2.25	105
250-499 . . . . .	366	127,617	530	4.15	97	66	22,338	62	2.78	122
500-999 . . . . .	195	139,782	576	4.12	99	48	36,854	112	3.04	130
1,000-2,499 . . . . .	103	157,723	847	5.37	117	55	77,071	189	2.45	100
2,500-4,999 . . . . .	28	99,263	413	4.16	90	15	49,561	94	1.90	80
Under 5,000 . . . . .	4,765	824,693	3,670	4.45	101%	426	206,630	507	2.45	103%
5,000 or more . . . . .	8	49,861	157	3.15	75%	9	71,156	129	1.81	88%
Total . . . . .	4,773	874,554	3,827	4.38	100%	435	277,786	636	2.29	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 1967-71

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	At least 75% salaried, majority executive	292	112,937	319	101%	300	156,959	101%
2	At least 75% salaried, majority nonexecutive	2,813	728,019	1,989	84	2,862	1,187,028	95
3	50-75% salaried	32	11,654	56	140	34	28,172	214
4	50-75% hourly	100	22,739	125	157	100	22,739	157
5	At least 75% hourly	160	56,094	345	197	163	74,777	204
9	Indeterminate	2,562	745,043	2,463	107	2,597	1,203,068	128
	Total	5,959	1,676,486	5,297	100%	6,056	2,672,743	115%

\* 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  
 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 1967-71

	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*
<b>I. Relationship between Long-Term Disability Benefit and Salary</b>						
Ratio of gross benefit (before reduction for integration) to salary:						
Always less than 50%...	116	11,908	28	59%	11,908	59%
Generally less than 50%.	45	15,551	47	84	66,683	110
Subtotal (less than 50%)	161	27,459	75	73%	78,591	100%
50% (exactly or approximately)	933	311,518	748	73%	491,001	85%
Always more than 50%, exact % unknown..	93	39,247	203	129%	61,910	121%
Generally more than 50%, exact % unknown	80	8,381	19	73	16,993	150
More than 50% but less than or equal to 60%	1,266	254,127	705	89	389,782	97
More than 60% but less than or equal to 70%	154	34,503	117	119	54,735	108
More than 70%	9	13,205	17	49	42,549	124
Subtotal (greater than 50%)	1,602	349,463	1,061	95%	565,969	105%
Other, including not determinable	117	39,579	105	77%	51,467	71%
Total salaried, nonexecutive.	2,813	728,019	1,989	84%	1,187,028	95%

\* 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 . . . . .	613	144,203	462	102%	256,774	110%
Social security primary benefit only or in combination with income from other sources . . . . .	283	133,180	422	90	236,379	100
Social security primary and family benefit only or in combination with income from other sources . . . . .	1,754	429,766	1,048	76	673,005	87
Other integration bases . . . . .	163	20,870	57	81	20,870	81
Total salaried, nonexecutive . . . . .	2,813	728,019	1,989	84%	1,187,028	95%
III. Extent to Which a Disability Income is Provided during Elimination Period						
Disability income benefit provided during the elimination period:						
Full salary . . . . .	60	22,929	84	114%	34,086	130%
Less than full salary but generally more than 50% . . . . .	276	74,145	335	118	234,428	115
Generally less than 50% of salary . . . . .	114	18,403	57	78	67,330	106
None . . . . .	228	41,923	116	107	41,923	107
Noncodable or unknown . . . . .	2,135	570,619	194	76	809,261	85
Total salaried, nonexecutive . . . . .	2,813	728,019	1,989	84%	1,187,028	95%

\* 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 1967-71

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	54	10,563	11	44%	56	26,815	298%
10-14.....	Mining	118	45,804	166	129	118	45,804	129
15-17.....	Contract construction	189	44,894	158	111	189	44,894	111
19-39.....	Manufacturing	2,553	849,643	3,066	114	2,621	1,546,835	128
40-49.....	Transportation, communication, electric, gas, and sanitary services	360	104,449	381	123	371	194,291	123
50-59.....	Wholesale and retail trade	808	102,025	293	90	810	115,921	93
60-67.....	Finance, insurance, and real estate	798	217,535	458	70	804	265,783	72
70-89.....	Services	937	276,999	683	74	942	342,791	82
91-94.....	Government	88	15,323	53	84	91	80,358	109
	All other classifiable	11	2,988	11	125	11	2,988	125
99.....	Nonclassifiable	43	6,263	17	87	43	6,263	87
	Total.....	5,959	1,676,486	5,297	100%	6,056	2,672,743	115%

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

**TABLE 7**  
**GROUP LONG-TERM DISABILITY INSURANCE**  
**ANALYSIS OF TABLES 1 AND 1A EXPERIENCE BY CONTRIBUTORY STATUS**  
 (Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)  
 Calendar Years of Experience 1967-71

CONTRIBUTORY STATUS	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*
Employee-pay-all.....	327	128,207	454	108%	347	305,609	110%
Employer-pay-all.....	2,344	453,682	1,456	101	2,352	543,709	103
Contributory; employer and employee share cost.....	1,719	505,945	1,581	97	1,755	899,817	126
Unknown.....	1,569	588,652	1,806	100	1,602	923,608	114
Total.....	5,959	1,676,486	5,297	100%	6,056	2,672,743	115%

\* 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 8**  
**GROUP LONG-TERM DISABILITY INSURANCE**  
**ANALYSIS OF TABLES 1 AND 1A EXPERIENCE BY PRE-EXISTING CONDITION PROVISION**  
 (Six-Month Elimination Period; Calendar Year of Issue Excluded; All Ages; Males, Females, and Sex Unknown Combined)  
 Calendar Years of Experience 1967-71

	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*
Pre-existing condition provision included	3,151	480,224	1,400	88%	3,171	732,741	100%
Pre-existing condition provision not included.....	2,808	1,196,262	3,897	105	2,885	1,940,002	121
Total.....	5,959	1,676,486	5,297	100%	6,056	2,672,743	115%

\* 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.

Exhibit I is a dispersion analysis by contributing companies of the experience of Table 1A, Table 2, and Table 3, respectively.

#### 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 1962-71. 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 21,580 claims exposed to termination, 9,605 of which originated from the 1967-71 and 1,790 from the 1962-66 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 the values of a monthly benefit of \$1 payable for a maximum period of sixty months with the values of a similar benefit payable to age 65. The illustrations are done on two alternate bases, using a 3 per cent interest discount. 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 1964 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, D-2B, and D-2C 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 8,870, of which 3,827 and 494 were

EXHIBIT I

COMPANY	RE: TABLE 1A*		RE: TABLE 2*		RE: TABLE 3*	
	% of Total Exposure	Ratio A/T	% of Total Exposure	Ratio A/T	% of Total Exposure	Ratio A/T
I.....	1% (<0.5%)	80% (71%)	1% (1%)	140% (106%)	8% (12%)	108% (115%)
II.....	25 (25)	110 (108)	20 (32)	109 (97)	18 (28)	120 (96)
III.....	34 (35)	84 (93)	40 (0)	71	49 (26)	89 (108)
IV.....	3 (2)	135 (148)	5 (6)	133 (101)	<0.5 (<0.5)	155 (219)
V.....	5 (4)	111 (104)	8 (12)	136 (116)	7 (6)	96 (52)
VI.....	3 (3)	92 (94)	6 (10)	133 (103)	3 (3)	52 (35)
VII.....	2 (2)	78 (69)	5 (7)	125 (97)	1 (1)	54 (63)
VIII.....	0 (4)	(92)	0 (4)	(153)	0 (<0.5)	(0)
IX.....	10 (9)	123 (130)	4 (8)	69 (60)	5 (12)	117 (101)
X.....	1 (2)	57 (49)	6 (12)	127 (98)	2 (4)	39 (34)
XI.....	3 (2)	128 (112)	2 (3)	128 (88)	5 (5)	136 (159)
XII.....	13 (12)	97 (85)	3 (5)	133 (112)	2 (2)	171 (154)
All.....	100% (100%)	100% (100%)	100% (100%)	100% (100%)	100% (100%)	100% (100%)

\* The percentages corresponding to similar tables published in last year's report are shown in parentheses.

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 1962-71)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
	Male and Female Combined					
7th month.....	80.2	53.0	61.8	37.7	25.0	19.5
8th month.....	82.2	65.3	70.8	50.4	29.2	20.7
9th month.....	67.5	65.4	66.0	48.7	26.3	19.8
10th month.....	63.4	54.6	57.4	44.2	24.3	15.6
11th month.....	57.0	48.8	51.4	39.9	22.4	14.5
12th month.....	66.0	51.3	56.0	39.9	19.4	14.7
1st year (last 6 months).....	350.6	294.2	312.7	234.2	138.0	100.3
13th month.....	64.3	47.5	52.8	35.9	18.7	12.4
14th month.....	60.3	31.6	40.5	29.8	18.7	11.4
15th month.....	55.8	27.0	35.9	27.6	15.7	11.7
16th month.....	24.0*	30.5	28.6	23.8	13.9	12.5
17th month.....	32.6	30.9	31.4	22.0	13.8	11.5
18th month.....	42.1†	26.8	31.4	21.3	16.2	9.4
19th month.....	34.6	23.0	26.4	19.6	15.6	10.1
20th month.....	35.1†	16.9†	22.3	16.4	12.9	11.5
21st month.....	25.2*	18.3	20.3	16.9	14.0	11.0
22d month.....	22.9†	23.7	23.5	18.3	11.7	8.2
23d month.....	28.8†	24.3	25.6	15.3	8.8	7.6
24th month.....	36.1†	30.2	31.9	17.2	9.3	8.9
2d year.....	376.3	285.1	314.1	234.5	156.7	119.0
3d year.....	351.2	229.1	261.8	171.7	116.6	113.0
4th year.....	†	111.6	112.9	118.3	88.6	58.8
5th year.....	†	76.8	78.9	59.6	75.8	97.9
6th year.....	†	†	†	95.8	86.5	49.6
	Male Only					
1st year (last 6 months).....	376.9	314.2	335.3	214.8	132.8	100.3
2d year.....	391.1	298.6	328.2	214.1	150.5	119.6
3d year.....	389.4	233.1	275.0	161.7	109.6	105.6
4th year.....	†	75.9	76.8	117.0	89.2	64.0
5th year.....	†	†	†	61.5	80.2	104.9
6th year.....	†	†	†	96.1	93.1	†
	Female Only					
1st year (last 6 months).....	300.7	259.6	272.8	270.5	155.9	100.1
2d year.....	348.7	262.1	290.1	274.3	178.8	116.0
3d year.....	291.9	223.2	242.3	192.7	141.9	151.7
4th year.....	†	166.1	167.6	120.9	86.4	†
5th year.....	†	†	†	†	59.3	†
6th year.....	†	†	†	†	†	†

\* Involves fewer than five terminations.

† Involves fewer than ten terminations.

included in the 1967-71 and 1962-66 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 the effect of selection under the plans with the shorter three-month elimination period has not completely disappeared even after three years, although much of the effect has disappeared by the end of the second year.

TABLE D-1A  
GROUP LONG-TERM DISABILITY INSURANCE  
NUMBER OF CLAIMS TERMINATED BY DEATH OR RECOVERY  
(Six-Month Elimination Period; Calendar Years of Experience 1962-71)

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) . . .	272	462	734	941	1,101	420
2d year . . . . .	130	215	345	518	800	302
3d year . . . . .	49	86	135	208	361	148
4th year . . . . .	7	23	30	88	165	33
5th year . . . . .	3	11	14	25	85	22
6th year . . . . .	1	6	7	28	57	4
	Male Only					
1st year (last 6 months) . . .	187	310	497	564	824	354
2d year . . . . .	88	140	228	310	600	256
3d year . . . . .	32	51	83	135	267	117
4th year . . . . .	3	10	13	60	130	31
5th year . . . . .	2	7	9	20	72	20
6th year . . . . .	0	3	3	20	48	3
	Female Only					
1st year (last 6 months) . . .	85	152	237	377	277	66
2d year . . . . .	42	75	117	208	200	46
3d year . . . . .	17	35	52	73	94	31
4th year . . . . .	4	13	17	28	35	2
5th year . . . . .	1	4	5	5	13	2
6th year . . . . .	1	3	4	8	9	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 1962-71)

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) . . . . .	42%	65%	57%	60%	51%	36%	29%
2d year . . . . .	95	121	103	110	100	90	87
3d year . . . . .	98	152	116	128	104	87	94
4th year . . . . .	82	†	79	76	100	83	55
5th year . . . . .	81	†	72	70	66	84	99
6th year . . . . .	105	†	†	†	128	105	†
Male Only							
1st year (last 6 months) . . . . .	40%	70%	61%	63%	46%	35%	29%
2d year . . . . .	92	126	108	114	91	86	87
3d year . . . . .	92	169	119	134	98	82	88
4th year . . . . .	†	47	53	52	99	84	60
5th year . . . . .	†	†	†	70	68	89	106
6th year . . . . .	†	†	†	59	128	115	†
Female Only							
1st year (last 6 months) . . . . .	48%	56%	50%	52%	58%	41%	29%
2d year . . . . .	106	112	95	101	117	102	84
3d year . . . . .	115	127	113	118	117	106	126
4th year . . . . .	†	98	117	112	102	81	†
5th year . . . . .	†	†	†	†	60	66	†
6th year . . . . .	†	†	†	†	†	77	†

\* As published by the Health Insurance Association of America, Table B1, Vol. 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 the End of the Elimination Period						
25.5 .....	\$20.43	\$16.59	123%	\$24.47	\$28.46	86%
35.5 .....	26.04	18.44	141	30.25	30.86	98
45.5 .....	30.35	21.71	140	33.30	33.50	99
55.5 .....	37.84	26.85	141	38.06	36.68	104
62.5 .....	19.83	14.91	133	16.01	15.77	102
Benefit Payable to Age 65 with First Payment Due at the End of the Elimination Period						
25.5 .....	\$38.89	\$32.62	119%	\$53.32	\$63.86	83%
35.5 .....	55.18	38.72	143	72.15	73.54	98
45.5 .....	60.33	42.87	141	73.02	73.57	99
55.5 .....	54.92	38.40	143	58.17	55.60	104
62.5 .....	19.83	14.91	133	16.01	15.77	102

\* 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 1962-71)

DURATION OF DISABLEMENT	AGE AT DISABLEMENT					
	Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined						
4th month	98.8	79.9	86.1	73.8	55.0	39.7
5th month	128.2	109.8	115.7	86.9	64.1	51.1
6th month	132.1	115.9	121.1	79.5	61.5	47.5
7th month	108.1	97.3	100.8	80.4	53.7	41.6
8th month	95.7	75.5	81.9	79.3	42.4	34.9
9th month	97.0	57.7	70.0	68.1	33.3	20.6
10th month	84.3	56.2	64.9	57.7	28.6	21.9
11th month	82.3	71.9	75.1	51.9	27.3	19.0†
12th month	74.8†	67.7	70.0	45.5	28.3	9.4†
1st year (last 9 months)	613.9	534.9	561.3	476.2	332.5	252.6
13th month	72.6	61.4	64.8	38.7	26.7	12.0
14th month	58.2*	50.8	53.1	31.7	20.8	14.7
15th month	29.2*	37.9	35.3	26.8	19.1	17.4
16th month	26.3*	42.2	37.6	24.9	18.2	19.2
17th month	43.8†	43.7	43.8	29.3	15.5	16.2
18th month	34.7*	31.8*	32.7*	24.5†	13.6	12.1†
19th month	11.6*	20.8†	18.1†	20.7	13.8	8.2*
20th month	30.4*	29.3†	29.7	20.6†	12.4	10.4†
21st month	45.8*	25.7*	31.6†	14.0†	12.1	9.9*
22d month	56.4*	16.9*	28.2†	13.6†	12.2	10.8†
23d month	37.5*	27.2†	30.2†	12.3†	10.9	17.7
24th month	34.5*	48.3†	44.5	18.1	14.3	14.7†
2d year	389.0	359.3	368.3	243.2	174.0	151.7
3d year	290.8	232.6	248.7	194.7	132.2	129.5
4th year	†	175.5	167.3	87.4	92.0	155.6
Male Only						
1st year (last 9 months)	622.6	534.4	565.8	469.6	318.1	259.0
2d year	354.3	389.8	379.4	249.2	170.9	169.4
3d year	330.4	271.9	289.3	182.5	132.8	138.2
4th year	†	†	†	100.9	94.3	144.5
Female Only						
1st year (last 9 months)	594.7	535.1	553.4	488.7	373.0	229.1
2d year	451.8	309.8	348.3	231.9	183.2	88.1
3d year	†	183.1	188.9	215.8	130.4	†
4th year	†	†	†	†	84.9	†

\* 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 1962-71)

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) . . . . .	273	484	757	934	1,053	373
2d year . . . . .	46	104	150	181	255	113
3d year . . . . .	12	27	39	75	117	47
4th year . . . . .	2	10	12	18	51	21
Male Only						
1st year (last 9 months) . . . . .	182	293	475	604	744	298
2d year . . . . .	28	69	97	120	188	99
3d year . . . . .	10	16	26	43	90	38
4th year . . . . .	1	5	6	13	40	14
Female Only						
1st year (last 9 months) . . . . .	91	191	282	330	309	75
2d year . . . . .	18	35	53	61	67	14
3d year . . . . .	2	11	13	32	27	9
4th year . . . . .	1	5	6	5	11	7

For both the six- and the 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 and Table D-2C disabled life annuity values as of the end of the twelfth month of disablement seem to confirm this.

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 1962-71)

DURATION OF DISABLEMENT	ALL AGES OF DIS- ABLE- MENT COM- BINED	AGES AT DISABLEMENT					
		Under 30	30-39	Under 40	40-49	50-59	60-64
Male and Female Combined							
1st year (last 9 months) . . .	50%	69%	61%	64%	57%	44%	38%
2d year . . . . .	108	125	130	129	103	100	110
3d year . . . . .	108	126	118	122	118	99	108
4th year . . . . .	94	†	124	112	74	86	145
Male Only							
1st year (last 9 months) . . .	48%	70%	61%	64%	56%	42%	39%
2d year . . . . .	110	114	141	132	106	98	123
3d year . . . . .	109	143	138	140	111	99	115
4th year . . . . .	95	†	†	†	85	88	135
Female Only							
1st year (last 9 months) . . .	53%	67%	61%	63%	58%	50%	35%
2d year . . . . .	103	145	112	122	99	105	64
3d year . . . . .	106	†	93	94	131	97	†
4th year . . . . .	92	†	†	†	†	79	†

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

† Involves fewer than ten terminations.

The crude termination rates for the years 1962-71, especially for ages under 50, are generally higher than for the period 1962-70 for most durations under the six-month plans. The financial consequences of this change are apparent from a comparison of Table D-1C values between last year's and this year's report. For three-month plans a comparison between this year's and last year's report would not be meaningful because of the inclusion in this year's report of the sizable initial contribution by Company III.

TABLE D-2C  
GROUP LONG-TERM DISABILITY INSURANCE  
ILLUSTRATIVE VALUES OF A MONTHLY BENEFIT OF \$1 PAYABLE FOR  
VARIOUS BENEFIT PERIODS, DISCOUNTED AT 3 PER CENT INTEREST  
(Three-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-2 Rates of Termination*	Based on 1964 CDT	Ratio to 1964 CDT	Based on Table D-2 Rates of Termination*	Based on 1964 CDT	Ratio to 1964 CDT
<b>Benefit Payable for a Maximum of 60 Months but Not beyond Age 65 with First Payment Due at the End of the Elimination Period</b>						
25.5 .....	\$14.75	\$ 5.43	272%	\$24.40	\$27.50	89%
35.5 .....	17.79	5.95	299	25.91	29.72	87
45.5 .....	22.51	7.82	288	31.51	32.18	98
55.5 .....	30.20	12.25	247	35.40	35.19	101
62.5 .....	18.90	9.67	195	15.63	15.77	99
<b>Benefit Payable to Age 65 with First Payment Due at the End of the Elimination Period</b>						
25.5 .....	\$26.62	\$ 9.41	283%	\$55.83	\$63.86	87%
35.5 .....	33.98	11.09	306	61.52	73.54	84
45.5 .....	43.42	14.23	305	72.32	73.57	98
55.5 .....	43.77	17.24	254	56.19	55.60	101
62.5 .....	18.90	9.67	195	15.63	15.77	99

\* Annuity values are based on the crude, ungraduated termination rates from Table D-2 for the first four years and on the 1964 Commissioners Disability Table rates thereafter.

