TRANSACTIONS OF SOCIETY OF ACTUARIES
1961 VOL. 13 PT. 2

LONG-TERM DISABILITY BENEFITS

A. What forms of insurance protection against long-term disability are being provided under:
   (i) Individual policies?
   (ii) Various types of group policies?
B. What appropriate experience is available for determination of premium rates and reserves under such policies?
C. What unique policy provisions and underwriting and experience rating practices are appropriate with respect to long-term disability benefits provided under group policies?

Toronto Regional Meeting

MR. LOWELL M. DORN: In discussing section A(i) I would like to fix 5 years as the dividing point between short-term and long-term benefits. For a number of years the New York Life has provided its long-term disability coverage in separate policies rather than as riders to life insurance contracts. The reasons for this practice may be presented under two main headings:

1. *Flexibility.* The varying ranges of amounts and of elimination, coverage and benefit periods necessary to fill the varying needs for comprehensive disability protection cannot be met under a life insurance rider. Income disability is, after all, in itself, a major benefit and the needs for it are not usually in direct proportion to the needs for life insurance.
2. *Processing of new business.* Different classifications are often given to life and disability applications in the underwriting process, so that the "packaging" of these benefits in one policy can lead to delivery problems for the agent. In order not to jeopardize their life insurance sales by an underwriting rejection of such a "package" policy, many agents will ask for alternate policies to be issued, with increased not-taken rates and higher expense as a direct result.

My Company's aim has been to provide a complete and flexible line of coverage to meet a wide variety of needs and to this end we offer two main series of policies. The first series provides principal sum benefits in the case of accidental death or dismemberment as well as monthly income benefits for sickness or accident. These latter benefits may be limited to 5 years only or can be continued from disability to age 65, either with full income or with a reduced payment after 5 years. For sickness benefits the lowest available elimination period is 7 days, while for accidents the benefits can start at once. For either sickness or accident, a full year's elimination period is available and this is often chosen so as to tie in with the shorter benefit periods available under the usual forms of group coverage.

New York Life's second series of policies has a monthly income during total and permanent disability as the sole benefit. One unique feature of this series is that periods of coverage (and coterminous benefits) run to ages 50, 55, 60 or 65, as elected in the application. This series is designed for the younger men who are unable to afford the broader benefits offered under the first series of policies, and the varying periods of coverage provide disability protection for mortgage payments and household expenses and can also be considered as supplementary to OASDI.

In 1960 we issued almost 2,000 long-term disability policies, of which about 800 were of the first series described and 1,200 of the second. For the first series the age 65 benefit period has been more popular than the 5 year period while under the second series about 800 policies were issued providing coverage to age 50.

MR. EDWARD RUSE: I shall confine myself to section B and would like to call attention to a number of factors which should be kept in mind by the actuary who determines his company's disability premiums.

That economic conditions can have a decided effect on the claim rate is seen by a study of the 1952 Report of the Disability Committee in which the experience of four monthly income clauses was presented. During Period 1 the economic conditions were extremely poor and claim rates varied from 120% to 135% of those in Period 2 whereas in Period 4, when job and business opportunities were plentiful, the claim rates were only 60% to 70% of those in Period 2. The possibility of the claim rates in difficult times being double those experienced during a buoyant period in the economy should make the premium actuary wary in his choice of data.

Larger or more generous benefits can also have a strong effect. One aspect of this is shown by the same Report, which gives claim rates 30% to 40% higher for retroactive than for nonretroactive benefits under 3 months waiver and monthly income clauses. Other evidence was obtained by using 100% of the Class 3 rates as the expected in a study of the Confederation Life Association's own experience under 3 months and 6 months waiver and monthly income clauses. For the quinquennial periods commencing in 1935, 1940, 1945 and 1950 it was found that the claims rates for the 3 months clauses were 1.9, 1.8, 1.7 and 2.3, respectively, times those for the 6 months clauses. The following table shows the wide difference in claim rates between basically similar Waiver Only and Waiver and Income 6 months clauses. Since most companies dropped out of the income disability field in the early thirties, basic data for such a comparison were not available to the 1952 Committee on Morbidity. If, however, you are interested in such figures, discussions by Miss J. C. McKibbon of the London Life and Mr. B. T. Holmes of the Confederation Life appearing in *TSA* V, pp. 346–354, give additional data and the excellent paper delivered to the XVIth International Congress of Actuaries in 1960 by Mr. J. A. Campbell gives further statistics.

These examples would seem to suggest that the premium actuary should assume a significantly higher rate of disablement for monthly income benefits than for waiver only and perhaps that some differentiation should be made between the claims rates for retroactive and nonretroactive benefits.

Other considerations which may affect the claim rate in an individual company include such factors as severity of underwriting, exclusions, claim practices, type of market, the attitudes of the courts and even those of the provinces or states in which the company operates.

CONFEDERATION LIFE DISABILITY EXPERIENCE—
6 MONTHS CLAUSES

BETWEEN POLICY ANNIVERSARIES IN	RATIOS OF ACTUAL TO EXPECTED		RATIO OF COL. (2) TO COL. (1)
	Waiver Only	Waiver and Monthly Income	
	(1)	(2)	(3)
1945–1952........	70%	116%	1.7
1945–1956........	57	96	1.7
1953–1956........	47	78	1.7
1958–1959........	66	132	2.0

NOTE.—Each of the clauses was nonretroactive until 1957 at which time the Waiver of Premium was made retroactive under both. Because of this no reference has been made in the table to the 1957 experience. The expected claims have been calculated on Benefit 5 Period 2 graduated rates of disablement.

The final main influence I wish to mention is that of the rates of termination. The 1952 Report, previously mentioned, indicated that in times of full employment, the rate of termination is somewhat higher than when employment opportunities are limited.

I find it difficult to generalize about a suitable basis for gross premiums. The actuary must certainly decide on four things: suitable rates of disablement and of termination, a suitable allowance for future contingencies and, of course, his expense factors, making an adjustment, if he sees fit, for profits on lapse since nonforfeiture values are not affected by the addition of disability benefits.

MR. RICHARD H. LOEBER: Under section A(ii), I might state that the Aetna Life offers long-term disability coverage to our own group policyholders of 50 or more lives with either a 3 months or a 6 months waiting period. Normal benefit periods are for 5 years, or for a period equal to the employee's length of service. Half-a-dozen plans have been underwritten with benefits extending to age 65.

The benefit amount we use is normally a flat 50% of earnings or, alternatively, a higher percentage reduced by OASDI benefits received. For approximate integration with *current* Social Security disability payments, our benefit is an amount equal to 25% of the first $400 of monthly earnings plus 50% of the excess salary over this figure.

As for section C, we generally use a pre-existing exclusion clause which excludes disabilities incurred during the first year of an employee's coverage if treatment for such disability was received during the three-month period prior to such coverage. Overinsurance is controlled by reducing group benefits where the total disability income payable under plans sponsored directly or indirectly by the employer exceeds 80% of the first $400 of monthly earnings plus 60% of the excess. The Aetna Life extends benefit payments for up to one year for employees who are totally disabled when the master policy is canceled.

Although we have 35 group policies in force with coverage on more than 20,000 lives, the experience is not yet sufficiently mature to give results that are statistically reliable.

MR. KENNETH T. CLARK: I approve of the word "unique" in section C to describe the treatment of this benefit, since the majority of the problems connected with it are unique.

Assuming that the misfortunes of the past may be taken as a guide, the level of long-term disability claims may be expected to vary quite sharply according to the ups and downs in the economy. To protect itself against such a situation, the Prudential of America does not intend to pay dividends on such policies until substantial reserve cushions have been built up. With the very high amounts at risk there is also a great deal of pooling necessary.

We not only try to control overinsurance, we also hit at the malingerers by imposing the so-called "any occupation" test after the first twelve months, during which the more liberal "his occupation" test is used. Our underwriting practices and policy provisions are rather selective, particularly as to stability of employment. Prudential also requires a low proportion of female lives for the whole group and long waiting periods and stringent eligibility requirements for the individual employees.

Los Angeles Regional Meeting

MR. JAMES J. OLSEN: I will describe the individual policies offered by the Prudential. For the best two occupational classes, we offer benefit periods ranging from one year to age 65. For the two lowest occupational classes benefits are limited to one or two years.

In establishing our individual Sickness and Accident rates, we had to take into account the usual variations by age, sex, occupational class, maximum duration of benefits, and elimination periods, and then subdivided the costs for the total disability into the costs for sickness benefit, cost for accident benefit, cost of travel accident benefit, and the cost of partial disability benefit.

The following published data were used in constructing tables from which premium rates were determined:

1. Experience under Individual Accident and Sickness Policies 1955–1957 is published in the Society's 1959 *Reports of Mortality and Morbidity Experience.* This study, however, is limited to a maximum benefit period of one year.
2. The Society's 1952 *Reports of Mortality and Morbidity Experience* has a study of Ordinary Disability Benefits which we have found useful in obtaining data for longer durations.
3. "The Basis and Technique of Personal Accident and Sickness Insurance," by Horace Bassford, *TICA* XII, 1940, Vol. II.
4. Conference Modification of Class 3 Disability Table for Calculation of Reserves on Non-Cancellable Accident and Health Insurance, prepared by Non-Cancellable Reserves Committee, Health and Accident Underwriters Conference.

Most of the available published data were either unusable or unreliable, but using the meager data available we used our best judgment to obtain a set of appropriate factors which were consistent for all combinations of coverage. As experience emerges, we are bringing original assumptions up to date but have not had enough claims continue beyond one year of disablement to rely upon experience at the longer durations. However, the morbidity experience since the end of World War II has been very good, and even if all the actual experience was available in the desired form for this period, it would be dangerous to assume that this experience would continue into the future, especially where the coverage is sold on a noncancelable basis.

MR. VINCENT GRAINGER: The Prudential's group long-term disability plans have benefit periods ranging from five years to age 65 and are offered with waiting period of 13 to 52 weeks. Benefits are usually 60% of salary or less. The plans include a nonduplication clause which provides for integration with Social Security disability benefits, Workmen's Compensation benefits, Accident and Sickness benefits including Cash Sickness and Salary Continuance payments, Disability Retirement benefits, and benefits provided by individual Accident and Sickness policies.

We offer this coverage to employer-employee groups where not more than 20% of the lives are females earning less than $6,000 per year. We suggest a one or two year waiting period to eliminate employees with high turnover rates. It seems to me that the market for this coverage is limited to high-paid employees in view of the substantial Social Security disability benefits, in relation to salaries, provided for employees earning under $5,000.

For the definition of disability, we have the "his occupation" test for the first 12 months benefits are payable, and a more restrictive test thereafter that refers to "any and every gainful occupation."

Rates for this coverage are based on disability income and income protection experience adjusted for reasonableness in relation to other companies' rates. In view of the expected wide fluctuations in experience, substantial claim fluctuation reserves and a high degree of pooling will be used.

MR. ALDEN W. BROSSEAU: The following is an outline of the basis for New York Life's group long-term disability premiums. We offer income disability benefits after qualifying periods of 3 to 12 months running from two years up to age 65 and our definition of disability is related to the insured's "own occupation" during the qualifying period and is related to "any occupation for which he is reasonably fitted" during the period when benefits are payable.

The premium rates were obtained by differencing values at appropriate durations of disability from a basic group long-term disability table constructed as follows:

1. Net values for durations of disablement over 1 year at age 50 and under were taken as 80% of the values at 2½% interest in the 1952 Intercompany Disability Study (Benefit 2, Period 2 for disability rates and Benefit 2, all periods combined for termination rates). The 80% figure was arrived at from two directions. From one direction, group weekly indemnity experience for 1947–49 (*TSA* III) and for 1931–35 (*TASA* XXXVIII) was adjusted to take account of (1) the tighter definition of disability under long-term disability and (2) the effect of both the longer long-term disability benefit period and adverse economic conditions in increasing the frequency of claims and decreasing the termination rate of claims. From the other direction, the intercompany experience was adjusted for differences between individual insurance and group insurance in underwriting, class selection, control of claims, occupational coverage, rights to change premiums, and rights to cancel.

2. Net values for durations of disablement over 1 year for ages over 50 were obtained by applying percentage factors to the Conference Modification of the Class 3 Table, since the intercompany Benefit 2 experience, which was based on lifetime benefits, appeared too high.
3. Net values for durations of 1 year or less were obtained by applying a series of adjustments to the Conference Modification of the Class 3 Table, including an adjustment designed to achieve consistency compared to our group weekly indemnity premium rates (which do not vary by age and which also cover the first year of disablement). This last adjustment produced values that were flat, except above age 50 where increases were necessary to avoid internal anomalies.
4. The values for age 34 were used for all ages below age 35, since the lower premiums per head (due to lower premium rates and lower amounts per head) and the greater contingency margin requirements (due to the possibility of paying benefits for longer periods) produced higher expense ratios at these younger ages.
5. The loading is 50% of the net, with size discounts ranging from 1% for annual premiums of at least $12,000 to 12% for annual premiums of at least $60,000.

We feel that the above actuarial basis is reasonably conservative to produce satisfactory loss ratios during normal periods, as well as a reserve for poor experience during periods of economic distress. The premium scales produced by this method are very similar to those used for group long-term disability coverage by a number of other companies; but companies writing disability income benefits for professional associations typically use premium rates that are on the same order of magnitude as ours under age 35 but are much flatter by age than our rates, so consequently are much lower at the higher ages. These companies are, however, having generally good experience at these lower rates and, instead of a history of rate spirals, are frequently increasing benefits.

MR. HENRY K. KNOWLTON: The Occidental Life of California offers benefits with waiting periods of from 3 months to one year and benefit periods running from two years to age 65. The coverages are offered to only employer-employee groups with 25 employees earning at least $25,000 per year of whom less than 20% are females. Benefits are offered up to $1,000 per month but are limited to 50% of the first $1,000 of monthly salary plus 33⅓% of monthly salary over $1,000.

Our rates were based on the 1952 Society Study of Ordinary Disability Benefits using the Period 4 disability rates for policies having a presumption of disability after a 120-day waiting period.

This table was selected for the rate basis because the disability curve was much steeper than that under the Conference Modification of Class

3, and the curve followed the general pattern under recent group life policies and individual Accident and Sickness policies for which experience was available.

One problem we encountered on integrating Social Security benefits is that only the employees' disability benefits are payable to the employee. Disability benefits payable to the wife are payable to her and benefits for children are payable to the husband and wife for the use of the children. If benefits are to be integrated with the total Social Security benefits, the policy must provide for integration with "Social Security disability benefits payable to the employee and his dependents."

For the standard group, Occidental plans to use the following special policy and underwriting provisions:

1. Provide no coverage during the first year of employment—limit the coverage only to employees having a year or more of service.
2. A six-weeks continuous work provision, which requires that an employee must not be absent during the six weeks preceding the normal effective date of his insurance, if his insurance is to be effective on this date. If an employee is absent during this six-week period, his insurance becomes effective when he goes six weeks without absence.
3. For female employees, limit benefits to two years, except for key female employees. Key female employees are those with at least 5 years of service, who earn $500 per month or more and are not related by blood or marriage to any officers or directors of the employer.
4. Integrate benefits subject to an over-all maximum of 60% of salary with Social Security benefits, Workmen's Compensation benefits, and any other employer-provided disability benefits and benefits payable under individual A&S policies.
5. Employ a pre-existing clause similar to that used in major medical policies, where pre-existing conditions are not covered during the first year of coverage, unless the employee has 90 days free of treatment or expense if the pre-existing condition ended on or after the effective date.
6. Our strongest underwriting safeguard is that we plan to include a limitation on payment of benefits after the master policy terminates. For policies terminating on the first or second policy anniversary the extension of benefits after cancellation is limited to the number of years the policy was in force. After two years, the extension is based on the size of the group, and the period the policy has been in force, so that after 5 years we have an extension of 5 years for the smallest group, 11 years for the medium size group and 17 years for a large group. We feel this limitation is necessary to keep from being "sold" claims.

MR. CHRISTOPHER H. WAIN: I am impressed with the rather elaborate restrictions that are necessary to make group long-term disability a reasonable and sound type of business for the group departments. These restrictions that we need in group policies may have the effect of making the group long-term disability coverage as a practical matter not sufficiently responsive to the needs of the population to be attractive, saleswise. Many companies that have worked out these elaborate arrangements are also committed to the sale of individual insurance.

It seems to me that there might be a better method of providing this coverage for employers by a group program providing a floor of protection with a relatively low maximum individual risk plus supplementary individual policies that would provide the high benefits to key people. Such a program could work out well for the employer in terms of total cost, for the employees in terms of benefits, and for the agent in terms of commission income.

MR. EUGENE H. NEUSCHWANDER: The Fireman's Fund started writing group long-term disability coverage four or five years ago and we were restrictive in our underwriting, trying to select industries that had good steady employment and had high wage levels, and where the employer paid the entire cost.

The experience was good and everything went fine until the last recession hit. Then, within a matter of months we lost 80% of our business. In checking to see why, we found that employers had been using this coverage as a hiring tool and that when the recession came they no longer needed this hiring tool and dropped this coverage to save expenses, while they retained their life and medical coverages.

In writing association group cases I have come to the conclusion that a very important point in underwriting is the source of the business. There are a relatively small number of agents or brokers who know how to develop and handle this business on a proper and profitable basis, and if you do business with these agents, you will have good experience.