

**TRANSACTIONS OF SOCIETY OF ACTUARIES
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UNDERWRITING

- A. What elements are being taken into consideration in current underwriting of risks in or subject to military service?
- B. What changes have occurred recently in the amount limits for the double indemnity benefit? Is accident insurance considered in applying such limits?
- C. What underwriting problems have arisen in connection with the income disability benefit which matures the policy at an age such as 65? In what respect is this benefit underwritten differently from the \$5 per \$1,000 life-time income disability clause?
- D. What are the advantages and disadvantages of issuing ordinary insurance at ages over 65?

MR. E. A. LEW stated that during the Korean War the Metropolitan was able to control antiselection by persons in or about to enter military service without the use of war clauses, primarily by limiting the amounts of insurance issued to such risks. This proved possible chiefly because canvassing was confined to persons residing in the agent's debit territory. All special amount limitations were rescinded on conclusion of the truce and the Metropolitan's current underwriting is not oriented towards the possibility of an outbreak of war in the near future.

Metropolitan's main concern has been with the peacetime aviation hazards in the armed forces and Mr. Lew mentioned the following recent developments on which they had taken underwriting action.

First, as a result of lower ceilings imposed on the personnel of the Air Force, virtually all students in the Air Force R.O.T.C. will be asked to take up flying as pilots or observers. As a result, the Metropolitan now includes aviation exclusion riders in all policies issued to students in the Air Force R.O.T.C.

Second, the program to equip the Air National Guard with jet planes is practically completed and for this reason the extra premiums for pilots in the Air National Guard have been raised.

Third, on the broad subject of jet fighter pilots, Mr. Lew had been given to understand that the greatest hazard was in the first two years. In view of this and as a result of the trend towards lower fatality rates among jet fighter pilots, they are now accepting those with at least 500 hours of experience at an extra premium of \$23 per thousand. This extra premium rate applies irrespective of the age of the pilot.

Referring to West Point Cadets, Mr. Lew pointed out that it is usually possible in February of the year of graduation to find out whether or not the Cadet is likely to take up flying. That is because there have been only

limited quotas given for training as pilots in the Air Force and these quotas have been oversubscribed in recent years. Consequently, if a Cadet has not applied for training in the Air Force, the chances are overwhelmingly in favor of his not becoming a pilot. The one exception to this arises from the light aviation program of the Army. Under this program about 100 men per month are being trained to become pilots in the Army; such pilots are assigned to fly light aircraft for observation purposes in the artillery, for the transportation of senior officers, and for a variety of other purposes. This is something that should be watched out for.

MR. A. P. MORTON pointed out the large military market created by the current high state of preparedness involving three million or more under arms. He felt a company could adopt one of two possible underwriting policies towards this market: either to have the underwriting actuary recommend a practical basis and then develop the market fully, or to limit the facilities offered to people facing military service. This latter may be achieved by limiting the amounts or by limiting the activities of agents by preventing access to sources of such business. Effective control involves enthusiastic and willing cooperation of the agency officials and the individual field managers. Steps of this nature will avoid specialization and prevent extensive selection against a company in the event of another war.

MR. E. M. MACRAE said the current general practice of the New York Life with respect to persons in military service is to grant \$10,000 of insurance free of war restrictions, and larger amounts under certain circumstances. The limitation applies to insurance issued in any twelve month period.

Aviation risks are generally eligible for the \$10,000 limit free of war restrictions, either subject to payment of an extra premium to provide worldwide coverage or subject to aviation restrictions. Additional amounts are granted to fully qualified military pilots with aviation coverage restricted to the Home Areas.

The following elements are taken into consideration in determining what amount in excess of the basic \$10,000 will be granted: duties—non-combat administrative duties, and assignments which will not be likely to expose the applicant to combat conditions, qualify for larger amounts; age—progressively larger amounts are generally available at ages 30 and over; branch of service—somewhat larger amounts are granted at certain ages to naval personnel; type of aviation hazard—larger amounts are issued to officers at the higher ages with the rank of captain or higher engaged in administrative positions who fly only to qualify for flight pay; and restrictions as to plan of insurance—level term insurance is not generally issued, but reducing term insurance is granted freely, with the limitation as to amount applying to the initial amount at risk.

Males whose induction into the armed forces is imminent are restricted to \$10,000. Males, 18–26, who are single, or married without children, are granted \$20,000 if they have not received notice of induction and do not plan to enlist. Veterans in this group who are not in the reserve are eligible for \$35,000.

Members of the ready reserve are granted from \$15,000 to \$30,000 depending on age, participation in aviation training, and prior military service. Members of the standby reserve are granted \$30,000 at ages under 30, and \$45,000 at ages 30 and over.

Referring to section B, he stated that the Company's double indemnity retention had been increased from \$50,000 to \$100,000 in March 1948. The New York Life does not have a fixed limit of total coverage, but a survey of the issues of 1932–1951 exposed to 1952 did not indicate an undue proportion of claims for large amounts.

The New York Life has recently adopted the practice of requesting, in the agent's report, information regarding double indemnity in force in other companies where the amount of life insurance being applied for is more than \$25,000. This is to facilitate reinsurance negotiations and also because of their entrance into the brokerage business, where it is felt they will receive more applications which are part of a large line of new insurance.

MR. G. F. KNIGHT, in discussing section C, gave an account of the Berkshire Life's practice and experience under the income disability benefit. They reintroduced the benefit in January 1948, and from then until June 30, 1951 such benefits, based on a six months waiting period, were issued on male lives only, at ages 20 through 45. Upon disability occurring prior to age 55, premiums were waived for the remainder of the premium paying period and a monthly income of \$7.50 per \$1,000 paid until age 65 or earlier maturity. No disability maturity benefit was granted. Disability premiums ceased at age 55, but if disability occurred thereafter and prior to age 60 the usual waiver only benefit applied.

Beginning July 1, 1951 the present benefit was introduced. The monthly income was increased to \$10.00 per \$1,000, and—except for term insurance (10 and 15 Year, and Term to Ages 65 and 70), endowments maturing at age 65 or earlier, all Retirement Income, and Income at 65 (maturity value at 65 of \$812.00)—a maturity benefit at 65 was added.

The underwriting of this benefit has been conservative. While the average issued amount is approximately \$13,750, the benefit is included with only 2% of issued business. Because it was suspected that the agents were reluctant to risk declination of this coverage, on two occasions of periods of several months they have underwritten all business as if the income benefit were included, and, if available but not applied for, referred the case back

for possible reconsideration by the applicant. Relatively little business has resulted from this approach.

The maximum issue has been limited to \$25,000 with the Berkshire, including outstanding previous issues of income benefits, with an individual maximum of 50% of earned income or \$500 if less, in all companies. In determining this limit, noncancelable A & H is counted as 100%, and cancelable as 66 $\frac{2}{3}$ %, of income thereunder.

They have yet to receive the first claim on issues of 1948 or later.

He felt that some may consider the maturity benefit as amounting to more than it really does. Since the upper issue age is 45 with disability beginning before age 55, there must be a minimum disability period of 10 years and a minimum period from issue of 20 years before the maturity benefit is paid. With conservative underwriting the possibility of anti-selection seems remote. But even without these safeguards, the additional value of the maturity benefit is limited to its excess over the present value of the waiver benefit which would continue beyond age 65 if the policy were not matured. For the Berkshire, the maximum excess value is equivalent to a \$2.97 monthly income for life, based on the 1926 Class (3) Disabled Life Table.

MR. H. F. PHILBRICK presented an outline of the practices of the Massachusetts Mutual, which was one of the few companies that stayed in the disability income field continuously and one of the earliest to switch back to a \$10.00 benefit.

The accompanying table indicates the four types of riders that have been issued since February 1, 1933.

DATE EFFECTIVE	MONTHLY DISABILITY INCOME	COVERAGE CEASES		PREMI- UMS CEASE	ISSUE AGES
		Income	Waiver		
February 1933	\$ 5.00	55	55	55	21-45
October 1947	5.00	55	60	55	21-45
March 1950	10.00	55	60	55	21-50
January 1954	10.00	60	60	60	21-55

These disability income provisions are available for males only, have a six months waiting period, and are nonretroactive. The \$5.00 monthly disability income riders provided income for life or until prior maturity. Under the \$10.00 riders the payments stop at age 65 (or prior maturity) at which time the face amount is paid if the insured is then disabled.

In January 1948 the maximum income was increased to \$250 monthly, the current maximum. The maximum permitted as an aggregate in all companies was increased in October 1951 to \$750 monthly but not

over 50% of the applicant's earned income excluding investment income.

In 1947 the riders were liberalized to provide full aviation coverage unless disability resulted from military, naval or air service in time of war.

Disability income has never been written on a nonmedical basis, and their underwriting practices have been quite conservative. To date, the volume written has been small, with no appreciable increase with the liberalization of extending the coverage to age 60. They have had some success from writing on favorable new cases indicating that disability income could be added.

MR. R. H. TALLMAN, speaking on section D, pointed out the increase during the last few years in the number of companies writing insurance over age 65. He felt the market at these ages has been increasing for the following reasons: high level of general business activity producing sole proprietorships and partnerships at advanced ages; pensions and profit sharing plans on small groups involving high ages; and an increasing proportion of the population continuing in employment beyond age 65.

One advantage of issuing at high ages is to provide a line of policies to meet this market both for the agents and for the brokerage field. There is little extra effort required to provide the necessary rates, especially if they are already available for group conversions.

Among disadvantages are a slightly higher than average declination rate, the likelihood of a rather small average size policy, and the possibility an agent will spend time in a relatively unproductive field. In underwriting, there may be more difficulty in determining an insurable interest, and in identifying a standard risk with normal old age disabilities as distinct from a substandard risk. On the other hand, certain disabilities are likely to have become evident at 65, making it easier to screen out these impairments.

In a few cases occupational ratings established for the normal working ages may not be applicable to the older ages and in fact may understate the actual risk. Yet it would be impractical to attempt to set up separate rates for the older age brackets.

In the Northwestern National the volume of business above age 65 has been small, the disadvantages have not been serious, and the basic advantages of offering a service to both agents and policyholders has been a real one.

MR. E. M. MACRAE stated that the New York Life, beginning in January, had issued insurance to applicants in the age group 66-70 with mortality ratings not exceeding 185%. During the first three months they received 138 applications; 37% were accepted standard, 12% were substandard and 51% were declined. Of the 71 declined cases, 22 were declined solely because of blood pressure, 28 involved high blood pressure

with other cardiovascular-renal impairments, 6 involved high blood pressure in combination with impairments other than cardiovascular-renal, and the remaining 15 were declined for various other reasons.

Because of the aging process, they found at these ages a high proportion of cases involving hypertension and arteriosclerosis. Therefore, the field for acceptance within the mortality range in which risks are accepted is quite narrow. On the other hand, it is probably not practical to grant insurance at mortality ratings higher than 185%, since the cost of such insurance at these high ages would usually be prohibitive.

The high rate of declination is a disadvantage in considering applications at these ages. He felt, however, that if the field force is informed as to the increasing frequency of medical impairments at the older ages, offering insurance to this age group should create no serious problems, particularly in view of the fact that there is a negligible volume of insurance written in this group.

MR. C. H. TOOKEY mentioned one further advantage of writing insurance at ages over 65, namely, service to the public in providing cash for inheritance taxes, etc. He felt that the problem of eliminating the element of speculation required a definite knowledge of why the insurance is being purchased.

He raised the question as to whether it is possible that the underwriting is too severe at the higher ages and pointed out that the mortality table employed makes allowance for many impairments which are normally a cause for a substandard rating. Most of the underwriters use the same measures of insurability at 65 that they use at 40. This can result in an abnormal number of substandard ratings with consequent difficulty of placing the policies, which might lead to more antiselection than normal.

Another source of antiselection may be the failure of agents to aggressively solicit men above age 65. Possibly the strict underwriting rules of most of our companies contribute to this situation since agents find it difficult to get such cases through without an abnormal number of declinations or ratings.

MR. G. P. ARCHER stated that it has been the practice of the Southland Life to quote rates over age 65 which are not included in their present rate book. The volume and average size of the policies issued has been small, while the not-taken rate has been about 50%. Consequently, they recently decided to publish rates to age 70 on three plans, restricting the minimum policy to \$2,500. A statement will appear in the rate book that these rates are published only as a service to the agent, and should not be used unless the case appears to have an excellent chance of being accepted as a standard risk. They will not issue insurance over 65 on a substandard basis.