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TERM INSURANCE AND MINIMUM CASH VALUES

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THE primary purpose of this paper is to present some current company practices with respect to term insurance, and the respective cash value requirements exercised by the state insurance departments. This review includes the author's comments on the portions of the Standard Nonforfeiture Law pertaining to term insurance.

DECREASING TERM INSURANCE

1. Many companies issue decreasing term insurance policies and riders with a limited premium-paying period to offset the effect of heavy lapses in the later policy years, when the insurance benefits are small in proportion to the premium. A popular method sets the premium-paying period equal to 80 per cent of the benefit period. In the past these plans of insurance have been exempted from cash value requirements by qualifying under the following two provisions in the Standard Nonforfeiture Law:

1*a*) Cash values are not required for "any term policy of decreasing amount on which each adjusted premium . . . is less than the adjusted premium so calculated, on such fifteen year term policy issued at the same age and for the same initial amount of insurance."

1*b*) "benefits payable . . . as decreasing term insurance benefits provided by a rider or supplemental policy provision to which, if issued as a separate policy, this section would not apply . . . shall be disregarded in ascertaining cash surrender values and nonforfeiture benefits required by this section, and no such additional benefits shall be required to be included in any paid-up nonforfeiture benefits."

The following variations of (1*a*) and (1*b*) are found in some state statutes:

1*c*) In (1*a*), "twenty" may be substituted for "fifteen."

1*d*) (1*a*) is permitted only if the expiry age is less than 66.

1*e*) All but six of forty-two states (*ALC-LIAA Joint General Bulletin*, January 17, 1963, "Status of Approved Amendments: Standard Nonforfeiture and Valuation Laws") have omitted "decreasing" from (1*b*).

1*f*) Cash values must equal the valuation reserve less $2\frac{1}{2}$ per cent of the "amount of insurance."

1*g*) Cash values are not required for term insurance policies of twenty years or less duration.

2. In recent years, companies have been offering term insurance policies to the public with expiry ages as high as age 70 and over. Due to the steeper mortality curve of the 1958 CSO Mortality Table, limited premium-payment decreasing term benefits running for periods such as thirty years and expiring near age 70 can no longer qualify under (1*a*) as being exempt from cash value requirements. And, as mentioned in (1*d*), some states do not recognize (1*a*) if the expiry age exceeds 65.

3. Cash values in the situations described in paragraph (2) can often be avoided either by extending the premium-paying period or by charging premiums for the full duration of the contract. By extending the premium-paying period, it may be possible to create a situation where (1*a*) applies. If premiums are payable for the full duration of the contract, minimum cash values may be negative at every duration. Of course, a company should provide a margin in its gross premium calculations for any negative reserves. Companies may hesitate to do this lest their premium rates become uncompetitive, an unwarranted fear. In converting to the 1958 CSO Mortality Table, one company found that its premium rates payable for 80 per cent of the benefit period could be charged for the entire benefit period without becoming uncompetitive.

4. The Standard Nonforfeiture Law does not define decreasing term insurance, and therefore, in effect, its interpretation is left to the discretion of each state insurance department. Paragraphs (5) and (6) give examples of the confusion over the definition of decreasing term insurance. There is some merit in considering both coverages as decreasing term insurance, although the Standard Nonforfeiture Law does not deal with either specifically.

5. A family insurance rider, offered by one company, provides $3,500 level insurance on the wife from the date of issue to the policy anniversary occurring 30 years prior to the expiry date, decreasing by $125 per policy year for the next twenty policy years and remaining level during the ten years prior to the expiry date. Although the lack of cash values was approved when submitted to various state insurance departments on the 1941 CSO Mortality Table basis, it was disapproved by one of these same insurance departments when policies were filed on the 1958 CSO Mortality Table basis. The particular insurance department decided that benefits on the rider did not decrease uniformly to zero and therefore would not constitute decreasing term insurance; thus they did not meet the exemption requirements provided for in the Standard Nonforfeiture Law. From the company point of view, there was a constant decreasing element of insurance for a twenty-year period, leveling off during the final ten policy years only to provide a reasonable amount of insurance. From

the insurance department point of view, perhaps the Standard Nonforfeiture Law intended to exempt only "decreasing term" or "mortgage"-type policies. Technically speaking, however, "mortgage"-type policies do not decrease "uniformly" by level amounts of insurance but rather by the decrease in the mortgage balance.

6. Certain companies issue supplemental term riders for an insurance benefit decreasing only in the first policy year. This is in reality a level term insurance rider with an increased death benefit in the first policy year. Where such riders are accepted by the state insurance departments as decreasing term insurance, the increased death benefit in the first policy year is calculated so that no cash values will be required, as provided for in (1*a*) and (1*b*). The increased first-year benefit is designed to increase the adjusted premium on the similar level term policy issued at the same age for the same initial amount of insurance. The result is that

$$\frac{1{,}000A^{1}_{x:\overline{m}|}+Q\cdot A^{1}_{x:\overline{1}|}+.02L}{\ddot{a}_{x:\overline{m}|}-.65}<\frac{(1{,}000+Q)(A^{1}_{x:\overline{15}|}+.02)}{\ddot{a}_{x:\overline{15}|}-.65} \qquad (6a)$$

where m = duration of level term coverage, Q = additional first-year death benefit, and L = equivalent level amount of insurance.

7. Some insurance departments may consider the supplemental term insurance riders in paragraph (6) to be a distortion of the definition of decreasing term insurance. On the other hand, cash values calculated by the adjusted premium method will not differ greatly in absolute amount between term insurance benefits running for fifteen and twenty years respectively. Nor are cash values for a fifteen-year benefit greatly increased in absolute amount if the expiry age is increased from 65 to 70. The increased insurance benefit in the first policy year decreases the cash values under the corresponding values for an otherwise similar level term insurance benefit for the ultimate amount of insurance. Thus, there exists the legitimate question whether the lowering of cash values by increasing the first policy year death benefit can justify such practices as: (1) issue of a twenty-year one-step decreasing term insurance benefit without cash values, or (2) issue of a fifteen-year one-step decreasing term insurance benefit, expiring after age 65, without cash values.

8. Any benefit providing a truly decreasing element of insurance with level premiums payable for the full contract duration should produce either negative or negligible cash values. An unfortunate feature of the current Law may be the comparison between the adjusted premium for the benefits and that for a similar fifteen-year term policy, as opposed to a provision excluding any requirement for cash values found to be below

a specified percentage of the equivalent level amount of insurance. Such an exclusion would eliminate the need for defining decreasing term insurance.

9. The National Association of Insurance Commissioners' (NAIC) June, 1960, Amendment to the Standard Nonforfeiture Law provides that "the adjusted premiums for any policy providing term insurance benefits by rider or supplemental policy provision shall be equal to (*a*) the adjusted premiums for an otherwise similar policy issued at the same age without such term insurance benefits, increased, during the period for which premiums for such term insurance benefits are payable, by (*b*) the adjusted premiums for such term insurance, the foregoing items (*a*) and (*b*) being calculated separately . . . except that . . . the amount of insurance or equivalent amount of insurance used in the calculation of the adjusted premiums referred to in (*b*) shall be equal to the excess of the corresponding amount determined for the entire policy over the amount used in the calculation of the adjusted premiums in (*a*)." This amendment has been approved by all but eleven of forty-two states.

10. The author believes that the NAIC did not consider making any changes in (1*a*) and (1*b*) when the 1960 amendment was introduced. Because no changes were made, it appears to the author that the following method is called for in determining whether or not cash values are required for decreasing term insurance riders. The original adjusted premium method will be used as in (1*a*) and (1*b*). However, if the conditions of (1*a*) are not met, then cash values must be calculated by the 1960 amendment quoted in paragraph (9). One would hope that the various states and the NAIC will clarify this situation in the immediate future.

LEVEL TERM INSURANCE

11. For a thorough treatment of the "Application of the Standard Nonforfeiture Law to Supplemental Term Insurance," the reader should refer to the paper by James E. Hoskins in *RAIA*, Volume XXXV, and the discussion in Volume XXXVI. This writer's comments on level term insurance will be restricted to current company practices and the amendment in paragraph (9).

12. One development not anticipated when the Standard Nonforfeiture Law was drafted is that of level term insurance provided for children under family policies, family insurance riders, and children's insurance riders. The NAIC moved to correct this situation with another June, 1960, Amendment, stating, "Term insurance on the life of a child or on the lives of children provided in a policy on the life of a parent of the child, if such term insurance expires before the child's age is twenty-six, is uniform in amount after the child's age is one, and has not become

paid-up by reason of the death of a parent of the child . . . shall be disregarded in ascertaining cash surrender values and nonforfeiture benefits." (This amendment also has been adopted in all but eleven of forty-two states.) Prior to this amendment, companies often had to submit actuarial assumptions on the insured children in laborious, hypothetical detail to satisfy various insurance departments about the adequacy of cash values under such contracts. Many actuaries had felt that such coverage should be exempt from any cash value requirements. The number and age distribution of the children in any family was unknown. Also, the mortality rate on each individual child decreased from age 0 to the early adult ages. If the children's mortality rates are found to be either level or of a decreasing nature, terminal reserves would be zero or negative and cash values would be zero. One of the state insurance departments which required lengthy calculations to determine cash value requirements when family policies were first introduced, and which has not adopted the 1960 Amendment to the Standard Nonforfeiture Law, now presumes that the critical case—maximum cash value requirement—arises when no children are included in the actuarial assumptions. States which have enacted the 1960 amendment are applying the exclusion of cash value requirements to riders as well as policies, even though the amendment refers only to policies.

13. The Standard Nonforfeiture Law does not require cash values on "any term policy of uniform amount, or renewal thereof, of fifteen years or less expiring before age sixty-six, for which uniform premiums are payable during the entire term of the policy." All but six of forty-two states apply this same exemption to level term riders by eliminating the word "decreasing" from (1*b*). The Law is clearly stated, but the desire to eliminate cash values on term insurance benefits which do not quite meet this requirement has caused the practices mentioned in paragraph (6). In addition, some companies are avoiding the requirement that cash values be paid on twenty-year level term coverage by issuing such coverage as ten-year renewable term insurance, renewable once. Some states do not require cash values on "any term policy of uniform amount, or renewal thereof, of twenty years or less expiring before age sixty-six, for which uniform premiums are payable during the entire term of the policy."

14. The amendment in paragraph (9) eases the problems mentioned in Hoskins' paper by defining the manner in which adjusted premiums for any policy providing term insurance benefits by rider shall be calculated. This amendment almost makes the rider independent of the policy, which was the stumbling block in the past. The drawback is that the equivalent level amount of insurance is dependent upon the benefit period of each

policy to which the rider may be attached. The amendment requires calculating the equivalent level amount of a level term rider that is not equal to the level face amount of the rider. The equivalent level amount is equal to $1,000 only if the rider and policy benefit periods are identical. The theory behind the reduced expense allowance in the form of the equivalent level amount for term insurance riders is that the initial expenses are more than proportionately borne by the base policy. Contrary to this theory, companies are issuing term insurance riders in multiple amounts of the basic policy, suggesting that the calculation of the equivalent level amount should be independent of the base policy. Policies issued with a large proportionate amount of term insurance benefits incur additional underwriting, issue and administrative costs which are not dependent on the form of insurance in the basic policy. Possibly, the desired amortization of these increased first-year costs should call for higher expense allowances and lower cash values upon surrender than granted by equations (15*a*)–(15*c*).

15. Formulas for the adjusted premium and the equivalent level amount of a level term insurance rider are (as defined by the 1960 Amendment):

$$P^{1\ \text{Adj.}}_{x:\overline{m}|} = \frac{1{,}000A^{\ 1}_{x:\overline{m}|} + .02L}{\ddot{a}_{x:\overline{m}|} - .65} \qquad \text{if} \qquad \not> .04L \tag{15a}$$

$$P^{1\ \text{Adj.}}_{x:\overline{m}|} = \frac{1{,}000A^{\ 1}_{x:\overline{m}|} + .046L}{\ddot{a}_{x:\overline{m}|}} \qquad \text{if} \qquad > .04L \tag{15b}$$

$$= 1{,}000P^{1}_{x:\overline{m}|}\left(1 + \frac{.046}{A^{\ 1}_{x:\overline{n}|}}\right)$$

$$L = \frac{1{,}000A^{\ 1}_{x:\overline{m}|}}{A^{\ 1}_{x:\overline{n}|}} \tag{15c}$$

where m and n represent the benefit periods of the rider and policy respectively.

16. Because level term insurance riders are normally permitted to be added to several plans of permanent insurance, the smallest scale of minimum cash values applicable to all policies to which such riders may be attached is determined by the policy with the longest benefit period. Assuming that a company permits level term insurance benefits to be attached to a whole life policy, equation (15*c*) becomes

$$L = \frac{1{,}000A^{\ 1}_{x:\overline{m}|}}{A_x}. \tag{16a}$$

17. Equation (16*a*) will determine the table of minimum cash values for a level term insurance rider that may be attached to any base policy. However, if the equivalent level amounts were to be determined independently of the base policies, then (1) only a single table of values would be needed, (2) the base policy would be immaterial, and (3) uniformity of minimum values would exist between companies.

INCREASING TERM INSURANCE

18. Currently, the most popular use of increasing term insurance is in rider form for a return of premium benefit. The Standard Nonforfeiture Law does not exclude cash value requirements for any form of increasing term insurance. In those states where the Law has been amended as in paragraph (9), a single table of minimum cash values applicable to all base policies is developed for an increasing term rider in the same manner as the values for a level term insurance benefit are developed. The equations in paragraph (15) become:

$$P(IA)^{1\;\text{Adj.}}_{x:\overline{m}|} = \frac{G\cdot(IA)^{1}_{x:\overline{m}|} + .02L}{\ddot{a}_{x:\overline{m}|} - .65} \quad \text{if} \quad \not> .04L \qquad (18a)$$

$$P(IA)^{1\;\text{Adj.}}_{x:\overline{m}|} = \frac{G\cdot(IA)^{1}_{x:\overline{m}|} + .046L}{\ddot{a}_{x:\overline{m}|}} \quad \text{if} \quad > .04L \qquad (18b)$$

$$= G\cdot P(IA)^{1}_{x:\overline{m}|}\left(1 + \frac{.046}{A^{1}_{x:\overline{n}|}}\right)$$

$$L = \frac{G\cdot(IA)^{1}_{x:\overline{m}|}}{A^{1}_{x:\overline{\;}|}} \qquad (18c)$$

where G = annual death benefit increment.

19. In those states where the Law has not been amended as described in paragraph (9), the cash value of the rider must be sufficient so that the combined cash value of the rider and each policy to which it may be attached is greater than or equal to the minimum cash values required if both the policy and rider were issued as a single policy. To satisfy this requirement, a company must perform and provide an extensive set of calculations. The results show that no convenient method may be used to compute cash values for the rider separately, which, when combined with the policy cash values, are sufficient to meet the minimum cash value requirements. Furthermore, the adjusted premium has been defined as a constant percentage of the gross premium charged in each respective

policy year. Using this method to compute minimum cash values, the adjusted premium for the combined policy and rider benefits is

$$(1+r)P^{\text{Adj.}}_{(B,R)}\,, \tag{19a}$$

where

$$P^{\text{Adj.}}_{(B,R)}=\frac{B+R+.02L+(a')+(b')}{\ddot{a}_{x:\overline{n}|}+r\cdot\ddot{a}_{x:\overline{m}|}} \tag{19b}$$

= adjusted premium after m years,

B = present value per \$1,000 of level policy benefit,

R = present value of the rider per \$1,000 of level policy benefit,

r = ratio of the rider premium to the policy premium, and

(a') and (b') = expense allowances permitted in the Law.

The largest cash values are determined by the smallest possible adjusted premium during the first m policy years—equation (19a). In order that cash values will be sufficient after the additional insurance benefit has expired, the adjusted premium after m years must be greater than or equal to the adjusted premium for the policy:

$$P^{\text{Adj.}}_{(B,R)}\geq P^{\text{Adj.}}_{(B)} \tag{19c}$$

$$\frac{B+R+.02L+(a')+(b')}{\ddot{a}_{x:\overline{n}|}+r\cdot\ddot{a}_{x:\overline{m}|}}\geq\frac{B+20+(a'')+(b'')}{\ddot{a}_{x:\overline{n}|}}\,. \tag{19d}$$

The complexities involved (for either decreasing, level, or increasing term riders) are: (1) r and R both diminish or increase as the face amount or units of rider decreases or increases, respectively, per \$1,000 of level policy benefit; (2) a change in r adversely affects equation (19a); (3) determination of the smallest value of (19a) may make (19c) and (19d) invalid.

ADJUSTED PREMIUMS: RIDER COMPARED TO POLICY

20. After adoption of the 1960 amendment to the Standard Nonforfeiture Law, the adjusted premiums for a similar term insurance rider and policy respectively are calculated as:

$$P^{1\ \text{Adj.}}_{x:\overline{m}|\,(R)}=\frac{PV_R\left[1+\frac{.02}{A_x}\right]+(a)_R+(b)_R}{\ddot{a}_{x:\overline{n}|}} \tag{20a}$$

$$P^{1\ \text{Adj.}}_{x:\overline{m}|\,(P)}=\frac{PV_P\left[1+\frac{.02}{A^{1}_{x:\overline{m}|}}\right]+(a)_P+(b)_P}{\ddot{a}_{x:\overline{n}|}} \tag{20b}$$

where R = rider, P = policy, PV = present value of term insurance benefits, m = benefit duration, n = premium-paying period, (*a*) and (*b*) = expense allowance factors, and the rider in (20*a*) may be attached to a whole life policy.

A discussion of the expense allowances granted by the equivalent level amount in equations (20*a*) and (20*b*) is beyond the scope of this paper. It is sufficient to say that under current conditions a company can reduce the statutory minimum cash values for any term insurance benefit by providing such benefit in policy form rather than rider form.

AUTHOR'S VIEWS

21. In order to offer term insurance benefits to the public at minimum cost both premiumwise and administrationwise, a company may not wish to pay negligible cash values, nor to provide cash values in excess of those required by statute. Where cash values are required by statute, companies would like to have: (1) a clear knowledge that such values are required, and (2) a simple formula for computing such values. Since the writer has indicated that a discussion of the equivalent level amount defined by the new amendment to the Law is beyond the scope of this paper, the reader should apply the following views to term insurance policies.

22. Cash values are currently not required in "any term policy of uniform amount, or renewal thereof, of fifteen years or less expiring before age sixty-six, for which uniform premiums are payable during the entire term of the policy, nor for any term policy of decreasing amount on which each adjusted premium is less than the adjusted premium so calculated, on such fifteen year term policy issued at the same age and for the same initial amount of insurance."

The Standard Nonforfeiture Law excludes the requirement for cash values for level term insurance policies on the basis of a test as to the duration of the benefits and the expiry age of the insured. The requirements for cash values on decreasing term insurance are excluded by an adjusted premium comparison test. Also, decreasing term insurance is not defined.

23. The Standard Nonforfeiture Law prescribed the adjusted premium method to the life insurance industry. This method defines minimum cash values. However, the positive minimum cash values, occurring at certain durations, are excluded on some decreasing and level term insurance policies. Thus, on certain term insurance benefits the policyholder is sacrificing nominal cash values in return for the privilege of buying low-cost temporary insurance protection. These values calculated by the adjusted premium method were of a different dollar amount on the 1941

CSO Mortality Table from the 1958 CSO Mortality Table. It seems inconsistent that we have previously required policyholders to surrender their rights to one particular level of minimum cash values, yet now we require that a different level of minimum cash values be abandoned by the policyholder. If the purpose of the provision quoted in paragraph (22) is to ignore negligible cash values, why are such values not related to the amount of insurance?

24. If the Standard Nonforfeiture Law were to state that "no cash values are required on any term policy or rider, or renewal thereof, on which the adjusted premium does not produce a cash value greater than $K\%$ of the equivalent level amount of insurance thereon," then the requirement for excluding cash values would be based upon their size and a common statute for decreasing, level and increasing insurance. Thus, it

TABLE 1

MINIMUM K FOR WHICH K PER CENT EQUIVALENT LEVEL AMOUNT OF INSURANCE EXCEEDS MINIMUM CASH VALUES FOR $5\frac{1}{2}$ PER CENT MORTGAGE INSURANCE POLICY

(1958 CSO 3 Per Cent)

K	Expiry Age	Benefit Duration	Premiums Payable for
1.3........	$\leq$Age 65	$\leq$30 years	Full benefit period
2.8........	$\leq$Age 70	$\leq$30 years	Full benefit period

would be unnecessary to define either decreasing or level term insurance. These objectives can be attained by relating nonforfeiture exclusions to those amounts of nonforfeiture benefits considered negligible in proportion to the equivalent level amount of insurance. Issue ages, benefit durations, premium-paying periods, and expiry ages can be ignored. Only the size of the cash values produced by the adjusted premium method(s) must be considered.

25. On mortgage or similar decreasing term insurance, where the benefits are sufficient to cover the outstanding principal on a $5\frac{1}{2}$ per cent loan, the values of K necessary to eliminate cash values are shown in Table 1. Table 1 shows that as K increases, the maximum expiry age and maximum issue age may be increased by an equal number of years without incurring a liability for cash values. If the maximum expiry and issue ages were to remain unchanged as K increased, then either (1) the benefit duration could run beyond 30 years, or (2) the premium-paying period could be shortened. A combination of these policy terms could be changed as K increases over 1.3 or 2.8, respectively.

26. Table 2 shows the issue ages at which K per cent of the equivalent

level amount of insurance will exceed the minimum cash values for an annual premium m-year level term insurance policy. Included in Table 2 for comparative purposes are the issue ages at which no cash values are currently required, although the Standard Nonforfeiture Law does not dismiss cash value requirements due to the absolute amount of such cash values.

27. As mentioned in paragraph (25), the premium-paying period of any term insurance benefit could be shortened to a limited premium-paying period as K increases. Going one step further, where m-year term insurance benefits are issued on a n-year premium-paying basis, n being constant, m will increase as K increases. Table 3 shows, for various issue ages,

TABLE 2

ISSUE AGES FOR WHICH K PER CENT EQUIVALENT LEVEL AMOUNT EXCEEDS MINIMUM CASH VALUES FOR ANNUAL PREMIUM m-YEAR LEVEL TERM INSURANCE POLICY

(1958 CSO 3 Per Cent)

m	$K=2.0$	$K=2.5$	$K=3.0$	$K=3.6$	$K=4.0$	$K=4.6$	$K=5.0$	Current Law
10	0–61	0–63	0–65	0–67	0–68	0–70	0–70	0–55
15	0–47	0–49	0–51	0–53	0–53	0–55	0–56	0–50
20	0–37	0–39	0–41	0–43	0–44	0–45	0–46	0–22
To age 65	52–64	51–64	49–64	48–64	47–64	45–64	44–64	50–64
To age 70	60–69	59–69	58–69	57–69	56–69	55–69	55–69	64–69

TABLE 3

MAXIMUM m FOR WHICH K PER CENT EQUIVALENT LEVEL AMOUNT OF INSURANCE EXCEEDS MINIMUM CASH VALUES FOR m-YEAR SINGLE PREMIUM LEVEL TERM INSURANCE POLICY

(1958 CSO 3 Per Cent)

Issue Age	$K=2.0$ (Years)	$K=2.5$ (Years)	$K=3.0$ (Years)	$K=3.6$ (Years)	$K=4.0$ (Years)	$K=4.6$ (Years)	$K=5.0$ (Years)
0	12	18	24	31	36	42	46
5	18	23	28	34	38	42	44
10	16	20	25	30	33	36	38
15	14	17	21	25	28	31	33
20	12	15	18	22	24	26	28
25	11	13	16	18	20	22	23
30	9	11	13	15	16	18	19
35	7	8	10	11	12	14	15
40	5	6	7	8	9	10	11
45	3	4	5	6	6	7	7
50	2	2	3	4	4	5	5
55	1	1	2	2	3	3	3
60	1	1	1	1	1	2	2
63	1	1	1	1	1	1	1

maximum values of m, per \$1,000 of level term insurance benefits issued on a single-premium basis ($n = 1$), for which minimum cash values do not exceed K per cent of the equivalent level amount of insurance.

28. Table 4 shows the minimum values of K for which K per cent of the equivalent level amount of insurance, per \$100 of m-year increasing term insurance benefit, exceeds the corresponding minimum cash values.

29. Thus, if such a change were enacted in the Standard Nonforfeiture Law to eliminate cash values of a negligible amount, there would exist certain cases for each form of term insurance coverage where cash values would not be required, as in Tables 1–4.

TABLE 4

MINIMUM K FOR WHICH K PER CENT EQUIVALENT LEVEL AMOUNT OF INSURANCE EXCEEDS MINIMUM CASH VALUES PER \$100 OF m-YEAR INCREASING TERM INSURANCE POLICY

(1958 CSO 3 Per Cent)

Issue Age x	$m=10$	$m=20$	$m=65-x$
20.	$K=0.0$	$K=0.6$	$K=17.2$
25.	0.1	1.2	16.0
30.	0.1	2.2	14.7
35.	0.3	3.7	13.4
40.	0.7	6.1	11.9
45.	1.5	10.1	10.1
50.	2.8	....	7.8
55.	4.9	....	4.9

SUMMARY

This paper reviews the current minimum cash value requirements for various term insurance benefits. Paragraph (4) cites the need for a definition of decreasing term insurance. Paragraph (10) points out an inconsistency in the Law with respect to decreasing term riders.

The amendment in paragraph (9) cures some of the ills previously associated with level term insurance riders. However, this amendment, while an improvement, does not seem a full solution to the author. An analysis of the expense allowance granted by the amendment is an appropriate topic for another paper and another author.

Paragraph (19) uses an increasing term rider to illustrate the difficulties inherent in any rider—decreasing, level, increasing—prior to the enactment of the new amendment. This problem still exists in some states where the new amendment has not been adopted.

Paragraph (23) discusses the plight of the policyholder in forgoing adjusted premium method cash values. The author's main objection to the Standard Nonforfeiture Law is relinquishment by the policyholder of minimum cash values not dependent upon the relative size of such values.

The author believes in exclusion of minimum cash value requirements by relating such exclusions to absolute dollar amounts. Such an amount should be a negligible percentage of the equivalent level amount. Thus, exclusions would apply to all forms of term insurance. Definitions of term coverages would be unnecessary. The tests for decreasing and level term benefits could be dropped from the Law. The mortality basis would not dictate the dollar amount of such exclusions. Variations of the Standard Nonforfeiture Law, such as (1*c*)–(1*f*) would be uncalled for, and uniformity might be restored to the various state statutes. Current misinterpretations of the Law would be counteracted. A simple law would not be such a hindrance to the companies, and would permit the companies to serve the policyholder better. A clear and understandable law will protect the policyholders' interests. Paragraph (24) and Tables 1–4 illustrate the author's preference for a Standard Nonforfeiture Law pertaining to term insurance.

DISCUSSION OF PRECEDING PAPER

FRANK ZARET:

I was delighted to see a sorely neglected subject brought to light. The Standard Nonforfeiture Law has become the bugaboo of many actuaries. More papers of an informative nature on this topic, such as Mr. Townsend's, with new ideas, proposals, and conclusions presented for consideration, are very welcome. The few differences of opinion noted herein do not in any way detract from Mr. Townsend's valuable contribution.

Paragraphs (1*d*) and (2) state that the cash value exemption of paragraph (1*a*) is not permitted in certain states if the age at expiry exceeds 65. I disagree with Mr. Townsend, since the laws in the various states seem quite clear on this point and put no restrictions on the expiry age of the decreasing term benefits but only on that of the comparative fifteen-year term policy. While several states, by a more specific definition, have remedied the apparent ambiguity in the original Standard Nonforfeiture Law with respect to the definition of the fifteen-year term policy to be used in the comparison test at issue ages over 50, I can see no ambiguity as to the fact that no state limits the exemption because of the expiry age of the decreasing term insurance.

The proposal that Mr. Townsend sets forth of eliminating cash values on term insurance whenever such cash values fail to reach K per cent of the equivalent uniform amount has some drawbacks. Under the present law specified level-term benefits are exempted from cash values by definition. In the case of decreasing term, it is only necessary to calculate the adjusted premiums for the benefit in question and the comparative fifteen-year term policy to determine whether any cash values are necessary—nothing more need be done. Under Mr. Townsend's system, in order to determine whether cash values would be required, cash values would have to be calculated for those plans and at those durations where it is suspected a cash value might exceed the K per cent limit—a hit-or-miss approach. This, of course, makes for additional work and complications not in the policyholder's interest. I believe the current law is simpler.

I agree with Mr. Townsend that exempting cash values based on an absolute amount sounds less capricious than our current method, but this is so only when taken out of context. The fifteen-year term policy was no doubt chosen as the standard for comparison because it generated cash values of an amount which was considered impractical to pay. This was an empirical choice based on the knowledge of those on the original committee, agreed to by the NAIC, and accepted by the various states passing the law. Level or decreasing term insurance benefits with lower adjusted premiums normally produce lower cash values. Would the choice of a particular K per cent, an empirical amount too, be any more realistic? I doubt it. If it is found that the fifteen-year term policy is not a suitable criterion any more because it exempts cash values under a prescribed mortality table (1958 CSO or any other later table) of an amount no longer considered practical (paragraph 23), the comparative plan could be changed to, say, a ten-, twelve-, or twenty-year term in whichever direction the impracticality runs.

Mr. Townsend's summary refers to the relinquishment of minimum cash values not dependent upon the relative size of such values. According to the author's Table 2, cash values are required in a greater number of instances under the current law than would be the case if the proposed method were used. Certainly, this would indicate a greater relinquishment under the proposed method than under the current one. In addition, the use of a "minimum cash value less K per cent of equivalent uniform amount" rule could be unfavorably compared with the old "reserve less $2\frac{1}{2}$ per cent of face" rule for minimum cash values and looked upon as a return to the use of a surrender charge, something the industry tried to get away from with the introduction of the Standard Nonforfeiture Law. Though not intended as such, there is also the superficial appearance of a double-expense charge under Mr. Townsend's proposal—the first coming in the use of the adjusted premium to determine minimum values and the second being the K per cent limit. While the same could be said of the current law, it is certainly not as likely to be so misconstrued.

When the Standard Nonforfeiture Law was originally written, it did not contemplate many new developments which have since occurred. In a business such as ours one cannot anticipate all the new ideas, benefits, or other nuances which progress brings. To try to construct a law which encompasses all possible variations, past, present, and future, is obviously impossible. We must, therefore, be prepared continually to have necessary amendments incorporated into the law as conditions change. This becomes particularly difficult in our industry because of the many state legislatures that must be encountered.

Because of the important part the Standard Nonforfeiture Law plays in the thinking of almost every company in connection with its nonforfeiture benefits, changes such as corrections of inconsistencies, clarifications of ambiguities, technical modifications, etc., should be incorporated into the law as rapidly as possible. For example, where premiums vary by size of policy, a standard method should be prescribed for making minimum cash value tests. Under some policies more stringent nonforfeiture requirements result when a minimum policy is tested, while in other cases a maximum policy must be used. Time-consuming theoretical developments, calculations, and demonstrations are necessary in some cases which makes additional work necessary not only for the companies but also for state insurance departments which review the material. Considering that actual differences in minimum values required are almost invariably small or insignificant, it would be highly desirable to have one method prescribed regardless of size.

Temporary committees have been appointed in the past to handle current problems related to the Standard Nonforfeiture Law. What may be needed now is an industry committee of a more permanent nature appointed by either the Society of Actuaries or the trade associations whose function it would be to keep continual check on matters touching the Standard Nonforfeiture Law, make immediate amendment recommendations to the NAIC where necessary, and periodically review the law in its entirety for possible overhaul. Such overhaul may be needed simply because of the law's burgeoning physical size. Every time a new mortality table is specified, we get more than half a page of additional repetitious material. Consider the effect of a few more table changes in the future. Among other things, a Standard Nonforfeiture Committee could probably recommend some compact wording requiring only an additional few lines whenever new tables are specified.

THOMAS K. PENNINGTON:

Mr. Townsend is to be complimented on his paper, which sheds a great deal of light on the somewhat confused picture presented by cash values on term riders.

Since the computer program we use to generate reserves on decreasing term policies has built into it an automatic routine which generates the cash values under the Standard Nonforfeiture Law, ignoring the fifteen-year term premium test, I have had occasion quite frequently to note the magnitude of cash values thrown up on exempt decreasing term policies and riders. One cannot help but be struck by the apparent inconsistency of a law which allows you to ignore cash values which reach \$20 and \$30 per unit on family income to 65 policies with continuous premiums but which requires you to provide in the policy form for cash values as low as \$0.06 per thousand on a twenty-year level term policy.

The criteria Mr. Townsend has proposed in his paper would appear to provide a really consistent treatment for all term policies and riders and would eliminate such inconsistencies. I, for one, hope that his paper is read with attention and with an inclination to action by actuaries who are in a position to influence the change he has proposed in the Standard Nonforfeiture Law.

However, working with a number of level and increasing term riders, I have noted that the formulas Mr. Townsend gives in paragraphs 15 and 18 are slightly misleading in that they omit the case in which $P^{\text{Adj}}_{\overset{1}{x}:\overline{m}|}$ generated by formulas (15*a*) or (18*a*) is less than $0.04\,L$ but greater than $P^{\text{Adj.}}_x\,L$, which does occur fairly frequently.

For example, on a term to age 65 rider for age 35 based upon 1958 CSO age last birthday mortality and interest at 3 per cent, L equals 0.4363 and P^{Adj}_{35} equals \$18.07. $P^{\text{Adj.}}_{\overset{1}{35}:\overline{30}|}$ calculated using formula (15*a*) of Mr. Townsend's paper equals \$9.22. Since $P^{\text{Adj.}}_{35}\,L$ equals \$7.88, a third formula is required for $P^{\text{Adj.}}_{OL}L < P^{\text{Adj.}}_{\overset{1}{x}:\overline{m}|} < 0.04\,L$.

This additional formula is

$$P^{\text{Adj}}_{\overset{1}{x}:\overline{m}|} = \frac{1{,}000A^{\,1}_{x:\overline{m}|} + 0.02L + 0.25P^{\text{Adj.}}_x \cdot L}{\ddot{a}_{x:\overline{m}|} - 0.4}.$$

Under this formula, for the example quoted, $P^{\text{Adj}}_{\overset{1}{35}:\overline{30}|}$ is \$9.20.

A similar formula also arises in the case of increasing term insurance in paragraph 18.

I would like to again compliment Mr. Townsend on the excellent paper he has turned out and add my sincere indorsement to his recommendations for modification of the Standard Nonforfeiture Law.

HARWOOD ROSSER:

Mr. Townsend is to be most highly commended for a paper that is at once scholarly, imaginative, and practical—a not too common combination. It reminds me of a day when I was more conversant with this topic but never to the extent that he is. It is, perhaps, this very familiarity with his subject that has led to a minor flaw—one that I mention chiefly in the hope that he will remedy it in replying to discussion.

Harry Sarason told me that many a Fellowship student has failed an examination on a subject that was part of his daily work because he knew too much. Thus, he overlooked mentioning a fundamental point that seemed so obvious to him that it was unnecessary to refer to it. In like fashion, the titles of Mr. Townsend's four tables may not make entirely clear, to the casual reader, that he is comparing a single given percentage of the equivalent level amount against the minimum cash values at all durations, or, what is equivalent, against the "maximum" minimum value. For level term coverage, this maximum value generally occurs slightly beyond the middle duration; and for increasing term, or for limited payment decreasing term, at or near the end of the coverage period or the premium period, respectively. For co-terminous decreasing term, the value curve becomes more erratic but is usually concave upward throughout.

It is highly appropriate that, in presenting an excellent summary of the present status of required cash values for term coverage, the author has referred more than once to NAIC amendments to the original Guertin legislation. He may find that he is the architect for some such future amendment, whether or not his name be inscribed on the cornerstone. His simple but elegant proposal, which would replace several different tests, has my vote, if not the Metropolitan's. Presumably, this would eliminate or minimize such effects as the "broken staircase" pattern, found in the decreasing term portfolio of a number of companies. This results from the fact that the maximum expiry age that does not produce positive formula cash values drops one age for each increase of about ten in the issue age.

A practical note as to riders with cash values is worth sounding again here. This is that, where a loan exists at lapse, any cash value on the rider should be applied first toward the loan, before making any adjustments to the nonforfeiture values of the base policy. This avoids the awkward situation where a residual nonforfeiture benefit, arising from the rider, remains in force after the corresponding benefit on the underlying policy has disappeared. A number of states have approved term-rider forms including this provision.

HERBERT L. FEAY:

Mr. Townsend's paper is of much interest to me, as I am currently engaged in the task of developing level and decreasing term policies and riders for a company authorized to issue insurance in twenty-six states. The paper will be very useful, but the usefulness would be increased if it named the states that are the exceptions. The paper includes such terms as "some state statutes," "some state departments," and "all but six of forty-two states." I hope that Mr. Townsend can list the exceptions and missing states in his reply to discussions. Any list is subject to change with time, but Mr. Townsend can indicate that, according to his information, the exceptions as of a specified date are the states named.

Mr. Townsend asks for a "simple law" for cash values for term policies. I suggest that, if a simple law is satisfactory for term policies, a simple law is also satisfactory for other policy forms. The problems of Mr. Townsend come from the very nature of the Commissioners Nonforfeiture Method. He is too young to have been involved in the discussions that took place when this law was being proposed, but there were some (including myself) who questioned the philosophy behind and the complexity of this law. Instead of continually patching this law in an endeavor to correct its deficiencies and meet new situations, let us adopt a new simple law. I suggest that the new simple law require equitable cash values but include an arbitrary minimum basis.

This arbitrary basis could be the Commissioners Reserve Valuation Method reserves for the benefits, less some reasonable additional allowances for amortization of first-year expenses in excess of the allowances of the CRVM. The mortality and interest basis for the CRVM reserves for this purpose are to be determined on the same mortality and interest standards as used for the reserves. Other reasonable arbitrary bases are easy to suggest. One is to use net level premium reserves (or proper modifications thereof for variable premium benefits) on the same standards as used for reserves less reasonable allowances for all additional first-year expenses. I do not agree that cash values are completely divorced from reserves. In fact, I suggest that, if there is not a substantial correlation for cash values to reserves, the equity of the cash values is questionable.

The Standard Nonforfeiture Law is a complex law, based on arbitrary factors and assumptions that seem to produce satisfactory results for some of the less profitable nonparticipating companies under conditions of 1945. It was hardly on the books before special committees had to be appointed to interpret its provisions. One of these was the so-called Hooker Committee. The fact that practically all companies today grant higher cash values than the minimums of this law is surely an indication that the arbitrary factors of the law no longer fit.

The law on surplus distribution does not prescribe in great detail a so-called scientific method for policy dividends. It simply requires an equitable distribution on an annual basis. Why must the nonforfeiture law go into such great detail?

There is one type of insurance policy involving term insurance not covered in Mr. Townsend's paper. This is the policy which provides term insurance for a period of years that is automatically converted to a higher premium form at attained age. Such a policy is not directly covered by the law. The Hooker Committee (its official title was "The Working Committee on Standard Nonforfeiture and Valuation Laws to Life Committee of the National Association of Insurance Commissioners") provided a special interpretation of the law in order to cover this type of policy. This was done in the Hooker Committee's report published on page 257 of the *Proceedings of the National Association of Insurance Commissioners* for the seventy-eighth session, held in 1947. The following is quoted from that report:

> 3. The question was raised whether a policy providing term insurance for several years, automatically followed by permanent insurance, should be considered to be separate policies for the purpose of the Act. In the Committee's opinion the respective portions may be treated separately if the portion providing permanent insurance takes the Company's regular rate at the then attained age. The rated age provision of the law appears to cover this point. However, the Committee draws a distinction between policies providing purely term insurance followed by permanent insurance at the Company's published rate at the attained age of conversion and policies providing for an initial premium such that the increased premium at a subsequent duration differs from that for a new policy at the attained age. The latter case obviously constitutes a single policy to which the formula (which provides that renewal net premiums must be a constant percentage of renewal gross premiums) shall be applied at the outset.

I think it requires an expansion not originally considered in interpreting the rated age provision in this way. The committee did not give an absolute and binding justification of its position when it used the expression "appears to cover this point." Policy approvers of the 1960's can have a different opinion and may never have heard of this hard-to-find 1947 opinion. Furthermore, the stamp of insurance department approval does not mean the policy is sure to stand up in court. A good example of this is the "sane or insane" limitation included in the suicide clause approved for many years by the New York Insurance Department but which was ruled illegal by the courts. Cash values determine extended insurance periods, and the period of extended term insurance can be the difference between full liability and no liability in some cases.

I suggest that the Hooker Committee interpretation is deficient in that it does not directly provide that the gross premiums for the term insurance must in fact be true term insurance gross premiums. This should be as important as the gross premiums after conversion.

The rules provided by the Illinois Insurance Department, in my opinion, represent the correct minimum requirements for approval of a term insurance–permanent insurance policy as two plans of insurance for nonforfeiture values. These requirements can be outlined as follows:

1. Submission of proof that the annual permanent insurance premium is the company's current regular premium for the plan and insurance involved.
2. Submission of proof that the annual term insurance premium is not greater than the premium rate that would be charged for a regular term policy with a conversion feature.

3. A letter to the department agreeing to resubmit the policy for approval in event of any change in the premiums that would affect new policies as regards the proof submitted for 1 or 2.

To these three I would add the requirement of the use of a short descriptive title clearly stating that the policy provides two plans of insurance, namely, term insurance converting to a specified higher premium plan at the end of the term period.

If this plan were to be considered to be a modified gross premium policy, there would be considerable change in minimum cash values and in expense allowances. The expense allowances under Section 213 of the New York Insurance Law would also be reduced. The cash value problem is another example of the difficulties with the Standard Nonforfeiture Law.

I was particularly interested in a policy for college students. The purpose of the policy was to provide term insurance at a low rate for the college student to be followed by so-called permanent insurance with the company's regular premiums after the student graduated and was presumably earning a good income. The term insurance gross premiums for the college plan are between 15 and 20 per cent lower than for corresponding convertible term insurance premiums.

If the policy had been classified as a modified gross premium policy, there would have been substantial changes in the expense allowance for the higher premium insurance after conversion. The term insurance gross premiums would have had to be increased, so that classification as a modified gross premium policy would help defeat one basic feature of the policy, namely, low premium term insurance while in college.

(AUTHOR'S REVIEW OF DISCUSSION)

FREDERICK S. TOWNSEND:

I would like to thank Mr. Zaret, Mr. Pennington, Mr. Rosser, and Mr. Feay for the important material they have added to this subject.

This paper is intended to be critical of the Standard Nonforfeiture Law, which, under today's conditions, is not a clear, simple, and equitable law for all the various forms of term insurance benefits.

In the words of Robert C. Bailey, of the Equitable Life Insurance Company, "On the subject matter of your paper I have always felt that the original framers of the Standard Nonforfeiture Law, the Guertin Committee, had no idea that the procedures would become as complicated as they turned out to be. I am sure they were looking for some relatively simple basis for cash values which would apply universally. It would have been interesting to hear from someone who participated in the original drafting of this legislation."

It also would have been interesting to have heard discussions on the problems related to decreasing term insurance and to the new amendment for term insurance riders. Therefore, I shall take the liberty of first answering the discussion and then adding a few comments of my own.

Mr. Zaret points out that paragraph (1*d*) is misleading. There is no limit on the expiry age of the decreasing term benefit, but the decreasing term adjusted premium must be compared to a level term adjusted premium issued at the same age and for the same initial amount of insurance for a term defined as follows: For ages at issue fifty and under, the term shall be fifteen years; thereafter, the term shall decrease one year for each year of age beyond fifty.

Apparently, Mr. Zaret has mistaken the proposal in paragraph 24 to be a surrender charge rather than a test to determine whether or not cash values will be required for a given plan and issue age. As Mr. Rosser states, the proposal "is comparing a single given percentage of the equivalent level amount against the minimum cash values at all durations, or, what is equivalent, against the 'maximum' minimum value." Perhaps it would be clearer to say, "no cash values are required on any term policy or rider, or renewal thereof, on which K per cent of the equivalent uniform amount of insurance thereon exceeds, at every duration, the cash value calculated by the adjusted premium method." This is a test to determine, for a given plan and issue age, whether cash values are exempted for all durations, or whether cash values are required for all durations. In this respect, the proposal is similar to the current law. On the other hand, for a given plan and issue age, a surrender charge would eliminate cash values entirely at some durations, and merely reduce cash values at other durations.

Mr. Zaret states that "according to the author's Table 2, cash values are required in a greater number of instances under the current law than would be the case if the proposed method were used." This paper proposes a new law based on a percentage of the equivalent uniform amount of insurance, but the paper does not dictate what this percentage should be. Tables 1–4 are presented for illustrative purposes to show what effect the proposal would have for various choices of K.

As an alternative to the author's proposal, Mr. Zaret suggests that if the current law "exempts cash values . . . of an amount no longer considered practical," the term of fifteen years used in the current law can be changed to a shorter or longer term, as current conditions warrant. The author considered this same approach but felt that it did not solve the problem of defining decreasing term insurance or the problem of equity between the various types of term insurance benefits.

The use of a law based on the equivalent uniform amount of insurance would probably withstand the test of time and changing conditions better than a law based on issue ages, benefit duration, premium-paying periods, expiry age, adjusted premium, and incidence of death benefit. Mr. Zaret concludes by echoing the sentiments of Mr. Bailey and by calling for immediate amendments when necessary. I heartily agree.

Mr. Pennington points out that paragraphs 15 and 18 do not cover the case where the adjusted premium for a $1,000 level term rider exceeds the adjusted premium for a whole life policy, issued at the same age and for the equivalent uniform amount of the level term rider. The equivalent uniform amount of a $1,000 level term rider is usually but a small percentage of $1,000. Table 5, prepared by J. Alan Lauer of the Provident Mutual, shows the complexity of calculating adjusted premiums for level term riders.

Both Mr. Pennington and Mr. Rosser express their approval of the proposed change, apparently attracted by its consistency and simplicity. Mr. Rosser also mentions the practical problem of riders which have cash values when a policy loan exists at the time of lapse.

Mr. Feay presents an interesting discussion which goes beyond the subject matter of this paper. His comments on automatically convertible term insurance make valuable reading.

While the subject at hand is minimum cash values for term insurance, Mr. Feay seizes the opportunity to discuss minimum cash values for permanent insurance. The idea of discarding the adjusted premium method in favor of relating minimum cash values to the Commissioners Reserve less an additional allowance has some merit, at least on the surface, in that very few companies have an entire portfolio based on minimum cash values. Most participating companies grade cash values up to the full net level reserve, and most nonparticipating companies, particularly with the advent of the 1958 CSO Mortality Table, grade cash values up to the Commissioners Reserve. In practice, the use of minimum cash values is almost restricted to two areas: term insurance and the high-minimum amount, low-premium, nonparticipating ordinary life policy.

Mr. Feay suggests that "if there is not a substantial correlation for cash values to reserves, the equity of the cash values is questionable." It is true that nonparticipating asset-share studies will show that a given asset share may exceed the cash value in the second policy year and perhaps for one or two more years thereafter until the accumulation of the adjusted premiums exceeds the asset share. Then the cash value will

TABLE 5

ADJUSTED PREMIUMS FOR LEVEL TERM AGREEMENTS ATTACHED TO LIFE PLANS
(1958 CSO 2.5 Per Cent Curtate)

Age at Issue (x)	1,000 $A^{1}_{x:\overline{m}\rvert}$* (1)	A_x (2)	$\ddot{a}_{x:\overline{m}\rvert}$ (3)	$U =$ (1)+(2) (4)	$U\cdot APL$ (5)	.04U (6)	Formula† (7)	0.25$U\cdot APL$ (8)	0.02U (9)	0.036U (10)	0.046U (11)	AP (12)
						Term to Age 65						
15......	127.33111	.27573724	27.453491	461.78	4.70	18.47	①	1.18	9.24	....	....	5.09
25......	146.35252	.33964875	24.155174	430.89	5.86	17.24	①	1.47	8.62	....	....	6.59
35......	167.36424	.42012732	19.957463	398.37	7.58	15.93	①	1.90	7.97	....	....	9.06
45......	182.31411	.51748615	14.721183	352.31	9.90	14.09	①	2.48	7.05	....	....	13.40
50......	178.76261	.57038655	11.699709	313.41	10.91	12.54	②	2.73	6.27	11.28	....	16.48
55......	158.54647	.62455440	8.355454	253.86	11.06	10.15	③	2.77	....	....	11.68	20.37
60......	108.05230	.67862241	4.559532	159.22	8.76	6.37	③	2.19	....	....	7.32	25.30
						20-Year Term						
15......	29.06566	.27573724	15.735760	105.41	1.07	4.22	①	.27	2.11	....	....	2.05
25......	41.21061	.33964875	15.665357	121.33	1.65	4.85	①	.41	2.43	....	....	2.89
35......	81.36849	.42012732	15.425457	193.68	3.69	7.75	①	.92	3.87	....	....	5.73

* m = term period.

† Formulas:

① $AP = [(1) + (8) + (9)] + [(3) - .40]$ if $(5) < (12) < (6)$.

② $AP = [(1) + (8) + (10)] + (3)$ if $(5) < (6) < (12)$.

③ $AP = [(1) + (11)] + (3)$ if $(6) < (5)$ unless $(12) < (6)$.

TABLE 5—*Continued*

Age at Issue (x)	1,000 $A^{1}_{x:\overline{m}\mid}$* (1)	A_x (2)	$\ddot{a}_{x:\overline{m}\mid}$ (3)	$U=$ (1)+(2) (4)	$U\cdot APL$ (5)	.04U (6)	Formula† (7)	0.25$U\cdot APL$ (8)	0.02U (9)	0.036U (10)	0.046U (11)	AP (12)
						15-Year Term						
15......	22.05911	.27573724	12.550111	80.00	.81	3.20	1	.20	1.60	....	....	1.96
25......	28.37272	.33964875	12.515876	83.54	1.14	3.34	1	.29	1.67	....	....	2.50
35......	51.98673	.42012732	12.406202	123.74	2.35	4.95	1	.59	2.47	....	....	4.58
45......	118.84055	.51748615	12.042761	229.65	6.45	9.19	2	1.61	....	8.27	....	10.69
						10-Year Term						
15......	14.96672	.27573724	8.907988	54.28	.55	2.17	1	.14	1.09	....	....	1.90
25......	18.36361	.33964875	8.893047	54.07	.74	2.16	2	.19	1.08	1.95	....	2.31
35......	29.87581	.42012732	8.855786	71.11	1.35	2.84	2	.34	....	2.56	....	3.70
45......	68.28097	.51748615	8.711597	131.95	3.71	5.28	2	.93	....	4.75	....	8.49
50......	104.59843	.57038655	8.570170	183.38	6.38	7.34	2	1.60	....	6.60	....	13.16
						5-Year Term						
15......	7.44012	.27573724	4.747710	26.98	.27	1.08	2	.07	.54	.97	....	1.79
25......	9.23771	.33964875	4.743798	27.20	.37	1.09	2	.09	....	.98	....	2.17
35......	13.08839	.42012732	4.737378	31.15	.59	1.25	2	.15	....	1.12	....	3.03
45......	29.31980	.51748615	4.707966	56.66	1.59	2.27	2	.40	....	2.04	....	6.75
55......	70.29573	.62455440	4.631498	112.55	4.90	4.50	3	....	....	....	5.18	16.30

exceed the asset share for a number of years, sometimes until the grading of the cash values is completed. Where this situation exists, companies should not assume too high a lapse rate if computing nonparticipating gross premiums with the use of double decrement functions. If a company assumes too great a profit on surrender, the scale of gross premiums will fall below the desired level. Mr. Feay's proposal might control this situation if the additional allowance could be set to provide higher cash values initially than the adjusted premium method and thus provide a scale of cash values that is not as steep as current minimum cash values. Conversely, if the introduction of higher cash values in the early policy years would force nonparticipating companies to raise their premium rates, there is likely to be opposition to any proposal forcing nonparticipating rates higher toward the level of participating premiums.

The *ALC-LIAA Joint General Bulletin, No. 1064* (October 4, 1963), shows that forty-four states have adopted the Standard Nonforfeiture and Valuation Laws. Perhaps the most significant change in 1963 was the adoption of these laws by the state of Texas. A number of policy forms, particularly juvenile, on which cash values have been insufficient in Texas in the past, can now be used uniformly throughout the country. With respect to term insurance, Texas is more liberal than most other states, using twenty years wherever the term of fifteen years normally appears in the Standard Nonforfeiture Law.

Only four states (Kansas, Louisiana, New Jersey, and South Carolina) do not permit level term readers to be treated the same as decreasing term riders. The remaining states have omitted "decreasing" from (1*b*).

Only five states (Hawaii, Kansas, Louisiana, Pennsylvania, and South Carolina) have not enacted the amendment in paragraph 9. This amendment, defining the adjusted premium for a term insurance rider, is very interesting. It has several theoretical niceties, of which three are satisfactory to the author. In spite of the one particular shortcoming, which is noted below, the amendment is nearly uniformly adopted by all states and also does eliminate a perennial problem of the past. For the sake of uniformity and of making life easier, the introduction and enactment of this amendment is to be applauded.

Enactment of this new amendment has eliminated the horrors of paragraph 19. It is no longer necessary to be concerned with either (1) the ratio of the rider face amount to the policy face amount, or (2) the ratio of the rider gross premium to the policy gross premium, or (3) the effect of a quantity discount method upon (2). As soon as the above five states enact (or accept in practice) this amendment, paragraph 19 will belong to ancient history.

The one theoretical shortcoming to which I am opposed is that the equivalent uniform amount of insurance is dependent upon the benefit period of each policy to which the rider may be attached. Admittedly, this artificial cohesion of policy and rider puts such a combination on an equal footing with an otherwise similar policy containing the combination benefits. My argument is that the theory is inconsistent with current premium-pricing and administration cost of term insurance riders. It can also create a lack of uniformity between companies, and within a company. For instance, in a state which has adopted the new amendment but which does not omit "decreasing" from (1*b*), one company has instructed its field force that level term riders (without cash values) may be issued under the conditions shown in Table 6.

TABLE 6

AGES AT WHICH LEVEL-TERM RIDERS MAY BE ISSUED

Policy Premiums Payable	10-Year Term	15-Year Term	20-Year Term
Beyond age 65	Ages 15–27	Not available	Not available
Not beyond age 65	Ages 15–29	Ages 15–21	Not available
For 20 years or less	Ages 15–34	Ages 15–27	Ages 15–22

I am in favor of (1) granting higher expense allowances to term insurance riders than the amendment permits, (2) establishing uniform minimum cash values for such riders, and (3) making such riders independent of the policies to which they are attached. California and Colorado have already achieved these three objectives by cutting off the last half of the amendment, beginning with "except that." Thus, in these two states, the statutory minimum cash values for a term insurance rider are equal to the statutory minimum cash values for a similar term insurance policy.

The author's choice of a simple, comprehensive, and equitable law for all forms of term insurance would be as follows (leaving the determination of K to the proper NAIC Committee):

"No Cash Values are required on any term policy or rider, or renewal thereof, on which K per cent of the equivalent uniform amount of insurance thereon exceeds, at every duration, the cash value calculated by the adjusted premium method.

"The adjusted premiums for any policy providing term insurance benefits by rider or supplemental policy provision shall be equal to (*a*) the adjusted premiums for an otherwise similar policy issued at the same age without such term insurance benefits, increased, during the period for which premiums for such term insurance benefits are payable, by (*b*) the adjusted premiums for such term insurance, the foregoing items (*a*) and (*b*) being calculated separately.

"Term insurance on the life of a child or on the lives of children provided in a policy or rider on a life of a parent of the child, if such term insurance expires before the child's age is twenty-six, is uniform in amount after the child's age is one, and has not become paid-up by reason of the death of a parent of the child, shall be disregarded in ascertaining cash surrender values and nonforfeiture benefits."