

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1975 VOL. 27**

GAAP ACCOUNTING FOR REINSURANCE CEDED

RICHARD S. ROBERTSON

ABSTRACT

On April 25, 1974, the Academy of Actuaries Committee on Financial Reporting Principles issued Recommendation 4, "Reinsurance Ceded by Life Insurance Companies." That Recommendation contains the general principles for accounting for reinsurance ceded under generally accepted accounting principles, as that term is applied to stock life insurance companies in the United States. This paper discusses those principles in more detail, proposes solutions to certain problems of implementation, and identifies items where there might be differences of opinion.

GENERAL PRINCIPLES

UNDER normal accounting practices for life insurance companies, premiums paid for reinsurance ceded are deducted from premiums received and the net amount reported as premium income. Similarly, claim payments from the reinsurer are offset against total claim payments, cash-value payments reimbursed by the reinsurer are offset against the cash-value account, and all other transactions are offset similarly against the appropriate transaction with the original policyowner. In addition, there is often provision for a retroactive reduction in premium or an "experience refund" determined according to a specified formula if experience is sufficiently favorable. That refund is used to reduce reinsurance premiums and, therefore, is credited to the premium account.

Recommendation 4 provides that, for GAAP accounting, all these items are considered cost items or offsets to other items which are considered cost items. These items are to be matched against revenue in a manner consistent with that used for other cost items.

Although other, equivalent techniques might be used, the most practical procedure normally will be to calculate for each year the "expected cost" of reinsurance according to the valuation assumptions. Recommendation 4 specifies that the expected cost should "take into consideration the expected value of all transactions between the reinsurer and the reinsured including reinsurance premiums, claim reimbursements, experience refunds, and any other benefits or expenses reimbursed

by the reinsurer." This expected cost would be discounted suitably for interest, mortality, and lapses, and the appropriate reserve would be calculated to apportion this cost uniformly over the premium-paying life of the original policy. This would produce a reserve item which would be combined with the reserve under the original policy and would normally represent a reduction in that reserve.

The process of calculating the reserve for the original policy without consideration of reinsurance, with separate determination of the reinsurance adjustment, may tend to create the impression that the reserves for accepted insurance and for ceded reinsurance are separate items. It is important to keep in mind that this is only a method of calculating the aggregate reserve for the company's insurance net of reinsurance and the separate pieces have no meaning on their own. The benefit reserve should be increased or decreased by the benefit reserve portion of the adjustment associated with the reinsurance, and the expense reserve should be increased or decreased by the portion of the reinsurance adjustment, if any, associated with the expense reserve.

According to Recommendation 4, "because the reinsurance reserve adjustment relates to the reserves for the basic policy, it is important that the assumptions for the reinsurance adjustment be consistent with the original assumptions." In most cases, the provision built into the basic assumptions for adverse deviation should be carried through to the assumptions used for reinsurance ceded, even though the effect of carrying through that provision is to reduce the aggregate provision for adverse deviation. This recognizes that, because of the existence of the reinsurance, the need for provision for adverse deviation is reduced. Unless the company has reason to expect experience substantially different from its overall average on the reinsurance it cedes, it should use the same assumptions for the reinsurance ceded as in the basic reserve calculation.

Recommendation 4 states that "there is no necessary relationship between the reinsurance reserve adjustment of the reinsured company and the reserve for the reinsurance accepted established by the reinsurer (except in the case of affiliated companies filing consolidated statements)." Each company is preparing financial statements which will measure realistically its own financial condition, and considerations which apply to one company may not apply to another. In many cases the actuarial assumptions will be different. Different provisions for adverse deviation will be appropriate, and the reinsurer may have acquisition expenses to amortize which should not be recognized by the reinsured company. As a corollary, the provision that the principles of the audit guide do not apply to mutual companies does not imply that the cession of reinsurance

to a mutual company should result in any different treatment for the reinsured company than if it were ceded to a stock company.

Although some jurisdictions provide for different treatment in statutory accounting for reinsurance ceded to an insurer that is not licensed in that jurisdiction as opposed to one that is licensed, the licensed status of the reinsurer does not affect the financial condition of the reinsured company and normally would not affect the reinsurance adjustment to reserves. However, if the reinsuring company is in a sufficiently weak financial condition that recoverability of reinsurance benefits may be in doubt, the principle of loss recognition would suggest that the reinsured company should limit its reinsurance adjustment to those items for which reimbursement by the reinsurer is reasonably certain.

Recommendation 4 provides that, "when testing for recoverability of acquisition expenses or when testing for the necessity for reserve strengthening to recognize future losses, the expected cost of the reinsurance must be taken into consideration."

Recommendation 4 also emphasizes the need to consider the materiality of reinsurance adjustments. Many of the theoretical implications discussed in this paper will not have substantial material effects on many companies. Such adjustments are discussed primarily to identify the unusual situation where recognition is appropriate.

YEARLY RENEWABLE TERM

Under yearly renewable term (also referred to as RPR, ART, and so on), the reinsured company pays the reinsurer each year an amount which nominally represents the mortality cost for the policy year. Reinsurance is purchased for the difference between the death benefit and the reserve on the reinsured portion of the policies. The reinsurance premium normally is paid at the beginning of the policy year, and at the end of the calendar year the statutory mean reserve normally is reduced by one-half year's mortality cost in recognition. Usually, this results in a fairly close matching of reinsurance cost with revenue, and most companies can conveniently use the statutory adjustment unchanged, the unearned reinsurance premium, or no adjustment at all without any material distortion of earnings.

Many companies are purchasing reinsurance on a basis where the reinsurance premium for the first policy year is zero and this is offset by higher premiums in subsequent years. Such companies will want to test whether an adjustment for the deferred-charge aspect of this type of reinsurance premium structure would be appropriate.

If reinsurance is ceded on an experience refunding basis, the expected

value of experience refunds should be taken into consideration in determining the reserve adjustment. Many yearly renewable term experience refund formulas provide for acceleration of refunds in early years either directly or through the use of paid premiums in the refund formula rather than earned premiums. In this case it may also be appropriate to adjust the reinsurance reserves for the deferred charge.

COINSURANCE

Under the coinsurance plan, the reinsured company pays the reinsurer the gross premium on the portion of the policy which is reinsured. The reinsurer reimburses the ceding company for its share of death claims and cash-value payments. Under statutory accounting, the reinsured company reduces its reserve proportionately for the amount of reinsurance ceded on the coinsurance basis.

The coinsurance agreement will provide for reimbursement of certain commissions and other expenses by the reinsurer. However, that reimbursement almost certainly will not be exactly equal to the amount of expenses which are amortizable in determining the expense reserve. It is appropriate to adjust the expense reserve for the actual expenses reimbursed by the reinsurer. This is appropriate even if the amount of expenses reimbursed exceeds the reinsured company's amortizable acquisition expenses. Generally, it will be appropriate to develop separate reserve factors for adjusting the expense reserve which recognize the expenses reimbursed by the reinsurer.

The benefit reserve factors normally would be the same for reinsurance ceded as on the original policy. In particular, it is the reinsured company's expected rate of investment return that is the basis for the interest assumption, not the reinsurer's. An alternative equivalent procedure would be for the reinsured company to compute its benefit reserve only on the retained portion of the policy.

MODIFIED COINSURANCE

Modified coinsurance is similar to coinsurance, except that the statutory reserve is returned to the reinsured company. Each year a reserve adjustment is made between the companies. If the total reserve of the reinsured policies increases, the reinsurer returns that increase to the reinsured. If the aggregate reserves decrease, the payment is made from the reinsured company to the reinsurer. In addition, the reinsured company pays the reinsurer interest on the total it is holding on the reinsured policies. The reinsured company therefore establishes full liability in the statutory statement for the reserve under reinsured policies. The

interest rate used in determining the mean reserve adjustment is a negotiated item and may be equal to the average rate earned by the reinsured company on its portfolio, the dividend rate, or a specified rate such as 5 per cent, or possibly may be determined by a formula involving one or more of these or other variables.

Calculation of the expense reserve for modified coinsurance would be the same as for coinsurance. That is to say, the expenses reimbursed by the reinsurer should be matched with revenue using assumptions consistent with those used to calculate the original reserve.

The reserve adjustment is a complication in the determination of the benefit reserve, and the method of handling will depend on the basis for calculating the interest adjustment. If the interest adjustment is based on the reinsured company's net earned rate, the reinsured company would be in essentially the same position as if the policies had been co-insured. Hence it would be appropriate to use the same assumptions for calculating the benefit reserve adjustment for reinsurance as were used for the original reserve calculation. The reinsurance adjustment, therefore, would be the same as for coinsurance, except that it would be necessary to increase the benefit reserve by the amount of the statutory reserve which the reinsured company is holding. The total benefit reserve established by the reinsured company, therefore, would equal the benefit reserve calculated without considering reinsurance, reduced by the portion reinsured, plus the statutory reserve held by the reinsured company.

If the mean reserve adjustment is based on a specified interest rate, it is necessary to calculate benefit reserves on the assumption that part of the benefit reserve which corresponds to the statutory reserve is earning interest at the specified rate. To the extent that the GAAP reserve is greater or less than the statutory reserve, that portion of the reserve should be assumed to earn interest at a rate consistent with the interest assumption in the original reserve calculation.

Similarly, if the interest rate adjustment is based on a formula interest rate, it is necessary to assume that the part of the GAAP reserve which corresponds to the statutory reserve is earning interest at a rate which is consistent with the formula when applied to the assumptions in the original reserve. Any remainder of the reserve (positive or negative) would earn interest at a rate consistent with the original interest assumption.

A satisfactory approximation in almost all cases would be to use the same approach as for coinsurance, substituting for the interest rate assumed in the original policy an interest rate consistent with the basis

for determining the mean reserve adjustment interest rate. The error introduced by this approximation is related to the product of (1) the difference between the assumed mean reserve adjustment interest rate and the original interest rate and (2) the difference between the GAAP and the statutory reserve. To the extent that this product is not large or does not vary substantially by duration, the error introduced by the approximation is relatively small.

Another approach which would generate the same result would be to calculate the expected value, according to the valuation assumptions, of the net payment each year to or from the reinsurer, including the mean reserve adjustment. The appropriate GAAP reserve would then be that which would match appropriately this net cost with the revenue of the original policy.

EXPERIENCE REFUNDS

Reinsurance arrangements often include provision for a retroactive reduction in premium, determined according to a specified formula, if experience is sufficiently favorable. Most commonly, the formula will prescribe a basis for calculating the "net profit" under the reinsurance arrangement and will specify a basis for sharing that net profit between the reinsurer and the reinsured company. Normally, the reinsurer retains the right to change the formula unilaterally.

Under GAAP, the test should be made to determine whether valuation assumptions will produce an experience refund. This test should be made in aggregate. If it appears that a refund will result, that refund should be matched with revenue in a manner consistent with other aspects of the reinsurance transaction. The most practical way of accomplishing this usually will be to include provision for experience refunds in determining the annual expected cost of the reinsurance.

If, in a given accounting period, the experience produces a negative net profit, the experience refund formula usually will provide that the loss be carried forward and offset against future years' profits. Particularly under yearly renewable term, there may be provision that any loss which is not offset against profits by the end of a specified number of years will be forgiven. If adverse experience in one accounting period results in a reduction in the expected amount of experience refunds payable in subsequent accounting periods, there may be differences of opinion as to how this should be recognized. Existing statutory practice normally would not recognize this adjustment, thereby reflecting in subsequent accounting periods the cost of refund changes attributable to losses of the earlier accounting period. It is the author's opinion that the financial results of the earlier accounting period are better measured

if those results include a charge for the expected reduction in future refunds attributable to the claims of that earlier accounting period. The adjustment would be the present value of future refund reductions under the assumption that valuation assumptions are experienced.

The author believes that the principle of charging losses attributable to future refund reductions to the accounting period in which the mortality loss occurs is consistent with the requirements of the Financial Accounting Standards Board (FASB) *Statement of Financial Accounting Standards No. 5; Accounting for Contingencies*.

When the experience refund agreement provides that the reinsurer may change the experience refund formula, and when there is reason to believe it might do so in such a manner as to affect adversely the refund the company might receive, the reinsured company should avoid anticipating future refunds by including them in current income.

RECAPTURE

Reinsurance arrangements frequently provide that the reinsured company may increase its limits of retention in the future and under some circumstances terminate existing reinsurance in order to increase its retention to the new schedule of limits. Most commonly, there is a requirement that the reinsurance be in force a specified number of years before it may be so terminated and also that those policies for which the reinsured company originally elected not to retain its maximum limit of retention not be included in the reinsurance which would be terminated.

Some actuaries may consider the appropriateness of including expected rates of termination of reinsurance through recapture in determining the reinsurance reserve adjustment. If expected recapture rates were assumed in determining the present value of reinsurance costs and if those costs were matched with revenue over the life of the original policy, this would have the effect of deferring part of the cost of reinsurance into years after the reinsurance terminated. Such a practice would not be conservative and would contain the potential for large future losses if the company did not increase its limit of retention as anticipated or if termination was not effective for other reasons, such as the issue of new policies on the same lives, which would absorb the company's retention capacity. The author believes that cost savings attributable to future retention increases are better apportioned to those future years and therefore recommends that, except under very unusual circumstances, this practice not be followed.

Another possibility which might be considered would be to recognize

the probability of recapture in determining both the cost of reinsurance and the number of years over which that cost might be apportioned. Although this would represent an appropriate method of accounting for reinsurance accepted, it would not appear to be appropriate for reinsurance ceded, except possibly as a method of approximating the theoretical reinsurance cost.

When a policy is reinsured under a coinsurance or modified coinsurance agreement and subsequently is terminated through recapture, the reinsurer usually pays the reinsured company the cash value as of the date of recapture. To the extent that this differs from the net GAAP reserve adjustment for the policy, this would result in a gain or a loss to the reinsured company equal to the difference between the cash value and the GAAP reserve. The author believes that it would be appropriate to amortize this gain or loss, if significant, over the remaining premium-paying life of the original policy. It is also possible, although unlikely, that a material gain or loss could result from the termination through recapture of a policy reinsured on a yearly renewable term basis. If so, it would be appropriate to amortize that gain or loss in a manner similar to the method used to amortize gain or loss for coinsured policies.

UNUSUAL REINSURANCE ARRANGEMENTS

Recommendation 4 requires that "special consideration must be given to those reinsurance arrangements where the conditions of the reinsurance do not parallel those of the original insurance." In such cases it probably will be necessary to consider first principles and project the net payment that would be expected each year between the reinsurer and the reinsured. Reserves should then be computed which would apportion the present value of those net payments in proportion to the revenue under the original policy. The author has no suggestions as to how this reserve should be apportioned between the expense reserve and the benefit reserve.

Pages 91 and 92 of the audit guide include a discussion of "special reinsurance agreements." Although the nature of the agreement under consideration is not completely clear, it concerns reinsurance agreements which "result in little, if any, shift in economic risk. Such agreements usually call for the ceding company to agree that the contract will not be canceled until such time as the assuming company has recovered all monies advanced, and may provide that in the event of cancellation, the ceding company must fund the amount of 'surplus relief' together with interest." For such agreements the audit guide provides that "net credits arising from financing type reinsurance agreements should be

treated as a deferred credit or liability by the ceding company.” If the principles of this paper are followed, that will be the practical result regardless of whether or not economic risk is transferred to the reinsurer. Consequently, except for a matter of presentation, it is not important that a determination be made whether or not a reinsurance agreement falls into this special category.

The FASB statement *Accounting for Contingencies* provides the following (paragraph 44): “To the extent that an insurance contract or reinsurance contract does not, despite its form, provide for indemnification of the insured or the ceding company by the insurer or reinsurer against loss or liability, the premium paid less the amount of the premium to be retained by the insurer or reinsurer shall be accounted for as a deposit by the insured or the ceding company. Those contracts will be structured in various ways, but if, regardless of form, their substance is that all or part of the premium paid by the insured or the ceding company is a deposit, it shall be accounted for as such.” This is essentially the reverse of the principle discussed in the audit guide. In this case the reinsured company is paying for the losses in advance of the occurrence of those losses. In this situation as well, the principles of this paper would result in accounting treatment consistent with that prescribed by the FASB statement.

This paper has not directly considered problems associated with reinsurance effective after the issue date of the original policy. The author believes that the principles can be generalized to cover this case without much difficulty, except that there may be a question as to the apportionment of the reinsurance adjustment between the benefit reserve and the expense reserve. The paper also has not covered the problem of accounting for assumption reinsurance.

DISCUSSION OF PRECEDING PAPER

FRANK W. KLINZMAN:

I would like to make the following comments on Mr. Robertson's paper on reinsurance ceded.

Reinsurance Costs and the GAAP Concept

The present value at issue of the total cost of nonrefund yearly renewable term (YRT) reinsurance is the present value of future reinsurance premiums to be paid less the present value of future reinsurance claim reimbursements. If the base policy reinsured had a level premium and level death benefit, then the total GAAP valuation premium for reinsurance ceded would be found by dividing the present value of the total reinsurance cost by an annuity running the duration of the premium-paying period. The total GAAP reserve would then be equal to the present value of future reinsurance premiums remaining to be paid less the present value of future reinsurance claim reimbursement less the present value of future GAAP valuation premiums for the reinsurance ceded.

In effect we are replacing the actual yearly reinsurance cost of reinsurance premiums paid for that year, less the reinsurance claims reimbursed for that year, by a level reinsurance cost that is a constant per \$1,000 of insurance in force. (This assumes a level premium, level benefit policy that was reinsured.) One might look at this total reinsurance cost (excess of reinsurance premiums paid over reinsurance claims reimbursed) as an expense and instead of showing this total reserve as a liability item show it as a deductive item from the GAAP deferred expense asset.

If one wished to do so, the benefit portion of the GAAP valuation premiums and reserves could be calculated. The benefit portion of the GAAP valuation premium would be the present value of future reinsurance claim reimbursement divided by the appropriate annuity. The benefit portion of the GAAP reserve on reinsurance ceded would be equal to the present value of future reinsurance claim reimbursement less the present value of the future benefit GAAP valuation premiums. This GAAP benefit reserve on reinsurance ceded would then be deducted from the GAAP benefit reserve on the direct business. The difference between the total GAAP reserve and the benefit portion of the GAAP reserve on reinsurance ceded would be equal to the expense portion of the GAAP

reserve on reinsurance ceded and would be deducted from the deferred expense asset set up on the direct business.

This same basic concept should also be used on coinsurance and modified coinsurance. That is, the reinsurance costs are equal to the excess of reinsurance premiums paid over the amounts received from the reinsurer, which could include not only claim and surrender value reimbursement but also commissions and allowances given by the reinsurer. These irregular yearly reinsurance costs are then replaced by reinsurance costs that are related to revenue through the device of reserving on a GAAP basis.

Modified Coinsurance

Following the line of reasoning used in my discussion of Mr. Robertson's paper on reinsurance accepted, one can look at the reserve transfers as funds that are invested by the reinsurer with the ceding company. With this approach, the GAAP earnings statement of the ceding company would be exactly equal to the GAAP earnings statement under a regular coinsurance arrangement. There would be no income credit for the reserve transfers and there would be the usual and normal charge for reserve increases. The GAAP balance sheet of the ceding company would be the same as under a regular coinsurance arrangement, except that cash or some other asset would be increased by the amount of the reserves held, with a corresponding increase in a liability item for the same amount which might be titled "statutory reserves held on deposit for reinsuring company."

This is the approach we have used on a small portion of our business that is ceded on a modified coinsurance basis.

Assumptions

I would also like to emphasize that the reserves established by the reinsurer have no necessary relationship to the reserve adjustment taken by the ceding company, since the accepting and ceding companies probably use different assumptions for mortality, lapse, and interest in their GAAP reserve calculations. Moreover, the ceding company would not be using unit administrative expenses in determining the GAAP reserve factors for reinsurance ceded.

Again, Mr. Robertson is to be congratulated for covering this aspect of reinsurance and GAAP accounting.

ERNIE FRANKOVICH:

I would like to commend Mr. Robertson for his excellent papers on GAAP accounting for reinsurance assumed and ceded.

Although Mr. Robertson did not do so, I would like to emphasize that a concept different from that stated in his paper on reinsurance accepted is required for reinsurance ceded. For reinsurance accepted, premiums and benefits were recognized "in proportion to the renewing amounts of original face amount of insurance." For reinsurance ceded, premiums, expense allowances, and benefits are matched to the premium being paid on the original policy that gave rise to the reinsurance. Only by coincidence will these two approaches yield the same answer.

Another major difference between the treatment of reinsurance accepted and reinsurance ceded would be the uses to which the results will be placed. For reinsurance accepted, the purpose is to match revenues, expenses, and benefits on some basis through an appropriate reserve adjustment and to determine whether the reinsurance premiums are adequate to cover benefits and expenses of the reinsurer. For reinsurance ceded, the formulas must match the reinsurance premium, expense allowances, and benefits to the premium income of the base policy that gave rise to the reinsurance and to allow the excess of the reinsurance premiums over the reinsured benefits and expense allowances to be added as a cost to the ceding company when testing the adequacy of the basic gross premium that the company is charging for the product. Consequently, many will prefer to calculate the reserve adjustments on a policy-year basis in a manner that generates a "net reinsurance premium" that can be added to the premium for benefits and for expenses.

Yearly Renewable Term

In his paper on reinsurance ceded, Mr. Robertson states that at the end of the calendar year the statutory mean reserve normally is reduced by one-half year's mortality cost. He continues by saying that this results in a fairly close matching of reinsurance cost with revenue and that most companies can without any material distortion of earnings conveniently use the statutory adjustment unchanged, the unearned reinsurance premium, or no adjustment at all.

Theoretically, RPR is composed of the premium paid to the reinsurer and the benefits received from the reinsurer. The difference is defined as the cost to the ceding company for the reinsurance. For ease we will treat the two elements separately and consider the premiums paid to the reinsurer as an expense and the benefits received from the reinsurer as a reduction in benefits.

Based on the typical GAAP formulas, I calculated the theoretical "net reinsurance premium" and the "reinsurance reserve adjustment" for an endowment at age 65 policy on the basis of the following assumptions:

1. Issue age: 45.
2. Reserve basis: 1958 CSO (Age Nearest Birthday) at 3 per cent interest; Commissioners Reserve Valuation Method.
3. Lapse rate: Linton A.
4. Mortality: 1955-60 intercompany table (select and ultimate).
5. Reinsurance premiums: Lincoln National's nonexperience refund.
6. Interest: 5 per cent.
7. Amount of initial reinsurance: \$20,000.

During our calculations we found that the GAAP premiums for the reinsurance premium and the reinsured death benefit were \$105.838 and \$68.133, respectively, for the initial cession of \$20,000. This means a net reinsurance cost of \$37.705 for the policy.

TABLE 1

	DURATION (YEARS)				
	2	5	10	15	20
1. Theoretical reserve credit					
a) Reinsurance premium.....	\$113.36	\$131.41	\$75.55	\$17.25	\$43.88
b) Reinsured death benefits..	76.00	96.81	64.70	21.66	28.25
c) Net credit.....	37.36	34.61	10.85	(4.41)	15.63
2. Reserve credit due to					
a) 1958 CSO at 3% interest..	53.82	60.95	68.85	59.33	0
b) 1955-60 intercompany mortality at 5% interest.....	24.42	36.34	47.02	48.41	0
c) One-half of reinsurance premium.....	38.13	57.65	71.63	63.74	0

Table 1 of this discussion compares the GAAP reserve credit based on the theoretical calculation, based on the statutory reserve credit assuming 1958 CSO mortality at 3 per cent interest, based on half the reinsurance premium in force, and based on a reserve credit assuming 1955-60 intercompany mortality at 5 per cent interest. From Table 1 we note that a substantial difference exists among the four approaches for determining the GAAP credit for RPR ceded. Basing the reserve adjustment on the experience mortality table and interest rate is the best of the three approaches used to approximate the GAAP credit for RPR ceded.

I believe that the apparently low theoretical reinsurance credit is due to the following:

1. The fact that the magnitude of the reinsurance premium increases less rapidly than the magnitude of the cost of the reinsured death benefits.

2. The existence of the "annual cession fee" that was equal to \$5.
3. The spreading of the effects of the reinsurance over twenty years (the number of years the premiums were payable on the base policy) rather than the nineteen years during which reinsurance was in existence.

The effect of using any of the approaches would be immaterial for most companies. However, for the small and rapidly growing company, we must be concerned with both the effect on earnings in the immediate future and the effect on earnings ten years hence when the company begins recapturing the bulk of the insurance. We must also be aware that the degree of materiality increases very rapidly as the profits or losses for the year approach zero.

The following is a list of items that the actuary may wish to consider when adjusting reinsurance on a YRT basis for a financial statement based on GAAP:

1. Reinsurance purchased on a basis where the reinsurance premium for the first year is zero. As Mr. Robertson stated, companies ceding insurance on this basis probably will wish to test to determine whether an adjustment for the deferred charge aspect of this type of reinsurance premium structure would be appropriate.
2. Reinsurance ceded on an experience refund basis. Again, as Mr. Robertson indicated, the value of the experience refunds should be taken into consideration in determining the reserve adjustment. Also, an additional adjustment may be necessary for the experience refund formulas that provide for an acceleration of refunds in the early policy years.
3. Reinsurance ceded on a program such that the ceding company will automatically recapture if the amount ceded falls below a certain arbitrary limit such as \$1,000. We must remember that the purpose of the GAAP adjustment for the ceding company is to match the excess of reinsurance premiums over reinsurance benefits to the premium income of the base policy from which the reinsurance arose and not to match reinsurance premiums and reinsurance benefits on some basis. This means that theoretically an adjustment could be made to the benefit reserve for a policy that is no longer reinsured although it is still in force.

Coinsurance and Modified Coinsurance

For coinsurance and modified coinsurance we have a situation entirely different from that existing for YRT reinsurance, wherein we are adjusting the excess of the reinsurance premium over the expected value of the death benefit; we adjust the incidence of the expense allowances, the value of the reinsured death benefits, and the value of the reinsured cash values. Currently, the "expense reserve" arising from the expense allowances is used to reduce the deferred acquisition cost asset. The "benefit

reserve" for reinsurance benefits is used to reduce the benefit reserve established by the ceding company.

Typically, insurance companies assume that the experience on policies ceded through coinsurance or modified coinsurance will follow the experience for the company as a whole. Since the reinsurance arises primarily on policies issued in particular markets, it is conceivable that these markets result in mortality and persistency experience substantially different from that under the other policies. Thus we should review the possibility that this will occur and determine its impact on the financial statement.

Again, I would like to commend Mr. Robertson for writing two excellent papers on GAAP accounting for reinsurance. Many of the small, rapidly growing companies require a close scrutiny of their adjustments for reinsurance ceded.

(AUTHOR'S REVIEW OF DISCUSSION)

RICHARD S. ROBERTSON:

Mr. Klinzman makes three points in his discussion. The first is an excellent approach to describing the true nature of the reinsurance reserve adjustment. He also considers the question of whether the reinsurance adjustment should be considered as part of the deferred expense asset or as an adjustment to the benefit reserve. I very much lean toward the latter, largely because I think of the expense asset as relating primarily to acquisition costs, which reinsurance does not.

Mr. Klinzman suggests that modified coinsurance can be accounted for in a relatively simple manner by treating the reserve transfer as funds invested by the reinsurer. This impresses me as a good practical approach, but one which should be examined carefully when the terms of the reinsurance are unusual or where the reinsurance is a particularly large item in the company's accounting.

Mr. Klinzman's third comment emphasizes the differences in accounting for reinsurance on the books of the reinsurer and on the books of the reinsured company. Mr. Frankovich, in his discussion, discusses these differences in further detail.

Mr. Frankovich also discusses the appropriateness of various approximations to the reinsurance reserve adjustment from YRT. His example illustrates that the various approximations suggested can introduce significant errors in relation to the size of the overall reinsurance adjustment. He points out, however, that any of these errors would be immaterial unless reinsurance is a particularly large portion of a company's

financial statement. He also suggests some practical aspects that an actuary may wish to consider in approximating the appropriate adjustment for reinsurance ceded.

Mr. Frankovich also suggests that consideration should be given to the possibility that experience under reinsurance ceded might be significantly different, to an extent that assumptions different from those used for the original insurance might be appropriate. I have found that experience under reinsurance is significantly different from that of directly written insurance but that the effect on GAAP accounting would not be material for most companies.

