PREMIUM DEFICIENCY RESERVES

The premium deficiency reserve is a subject which has not not received due attention in the literature of the Casualty Actuarial Society. This reserve is required of certain insurance companies reporting on a basis consistent with Generally Accepted Accounting Principles (GAAP). Specifically, the purpose of the premium deficiency reserve is to reflect a "probable loss" associated with unexpired portions of insurance policies in force as of the financial statement date. Current technology for the computation has been developed by the American Institute of Certified Public Accountants (AICPA) and is summarized in **Computation of Premium Deficiencies in Insurance Enterprises**[1] (the Issues Paper). While AICPA issues papers do not establish enforceable standards of financial accounting, they do include advisory conclusions which represent the majority opinion of the AICPA Accounting Standards Executive Committee. The purpose of this paper is to acquaint the actuary with the technology developed in the Issues Paper and to refine and improve upon that technology.

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1. PREMIUM DEFICIENCY RESERVES: A BRIEF HISTORY

This account of the development of the premium deficiency reserve begins with the issuance, by the Financial Accounting Standards Board (FASB), of Statement of Financial Accounting Standards No. 5, **Accounting for Contingencies**[2] (FAS 5) in March of 1975. FAS 5 requires an accrual for contingent losses under certain circumstances. Consider the definition set forth in FAS 5:

1.1 Accrual of Loss Contingencies

> An estimated loss from a loss contingency shall be accrued as a charge to income if both of the following conditions are met:
>
> a) Information available prior to the issuance of the financial statements indicates that an asset had been impaired or a liability had been incurred at the date of the financial statements. It is implicit in this condition that it must be probable that one or more future events will occur confirming the fact of the loss.
>
> b) The amount of loss can be reasonably estimated.

This general statement, when applied to property and casualty insurance companies, lead some to believe that there are circumstances in which it is probable that an insurance company will incur losses and other expenses in excess of premiums. In such circumstances, the assumption that the unearned premium liability, less the deferred acquisition cost asset, is a reasonable proxy for future claim payments does not hold. Concern for this issue was given expression in Statement of Position 78-6 on **Accounting for Property and Liability for Property and Liability Insurance** Companies[3] (SOP 78-6), issued in July of 1978. SOP 78-6 reached the conclusion that a liability for premium deficiency should be established in those cases where claim payments and other policy costs are expected to exceed premiums to be earned. In June of 1982 the substance of SOP 78-6 was given its final AICPA expression in Statement of Financial Accounting Standards No. 60 **Accounting for and Reporting by Insurance Enterprises**[4] (FAS 60). The definition of premium deficiency is given as follows:

1.2 Premium Deficiency

> A probable loss exists if there is a premium deficiency relating to short duration [*Note: e.g. property and liability*] or long duration contracts. Insurance contracts shall be grouped consistent with the enterprise's manner of acquiring, servicing, and measuring the profitability of its insurance contracts to determine if a premium deficiency exists.

For financial statement presentation, it was determined that if a premium deficiency exists, the DAC asset is to be reduced by the amount of the deficiency. If the premium deficiency exceeds the DAC asset, then an additional liability in the amount of the excess is to be established.

1.3 Present Value Considerations Apply

The Issues Paper that followed in March of 1984 reached the conclusion that the time value of money should be given consideration in the computation of premium deficiency. In short, the advisory conclusions are as follows[5]: 1) The amount of investment income to be used should be "earnings expected to be generated from the investment of the net cash available from in-force premiums." 2) The interest rate to be used for discounting is the expected "ratio of interest income, dividends and rents, net of investment expenses, to the total invested assets." 3) "The total amount of expected investment income used in the determination of a premium deficiency should be reduced proportionately if the enterprise's total recorded amount of invested assets plus expected investment income is less than its total liabilities." Two methods for the calculation of investment income are described:

1.3.1 Investment Income

This is the approach recommended in the Issues Paper[6]. The investment income methodology examines the cash flows and compares the nominal value of the investment income with the nominal value of the deferred costs to arrive at an estimated premium deficiency. The methodology, as implemented in the Issues Paper, is faulty, as will be seen in the discussion below.

1.3.2 Present Value of Future Losses

The present value methodology discounts future loss and maintenance payments to the financial statement date, and compares the unearned premium liability with the sum of these discounted losses and the DAC asset to arrive at the estimated premium deficiency. As will be seen later, the investment income approach, when properly implemented, is equivalent to this approach.

2. ISSUES PAPER CALCULATION OF PREMIUM DEFICIENCY RESERVES

2.1 Measurement of Deferred Costs

The purpose of the premium deficiency is to recognize that a liability in excess of the unearned premium reserve has been incurred. To assess the amount of this excess liability it is necessary to estimate the deferred costs which it is intended to cover. Four major costs are explicitly defined by the Issues Paper[7]:

2.1.1 Acquisition Costs

Costs that vary with and are primarily related to acquisition of insurance contracts (for example, agent and broker commissions, certain underwriting expenses and policy issue costs, and medical and inspection fees).

2.1.2 Maintenance Costs

Costs associated with maintaining records relating to insurance contracts and with the processing of premium collections and commissions.

2.1.3 Expected Claim and Claim Adjustment Expenses

Claims expected to occur subsequent to a particular date (ordinarily, the balance sheet date) until the expiration of the policies in force (unexpired portion of the policies).

Claim adjustment expenses to be incurred in the course of settling expected claims.

2.1.4 Policyholder Dividends

[Policyholder dividends traditionally reflect a share in the profit of an insurer's business returned to its policyholders. For marketing reasons, dividends may be declared even in unprofitable situations, and thus may enter into the premium deficiency calculation.]

2.2 Estimation of the Premium Deficiency Reserve

The calculation of the premium deficiency reserve presented in the Issues Paper focuses upon the two alternative techniques for the recognition of the time value of money: (1) the computation of expected investment income, and (2) the computation of the present value of future claims and maintenance costs. It is argued in this section that, properly implemented, there is no difference between calculations (1) and (2). This contradicts the advisory conclusions set forth in the Issues Paper which describe a technically flawed calculation of expected investment income.

The Issues Paper also compares recognition of investment income for all policies in-force as of the annual statement date (Method A) with recognition of the time value of money only for unearned exposures and losses as of the annual statement date (Method B). The Issues Paper recommends that investment income for all policies in-force be considered in the premium deficiency test[8]. This paper does not argue that the Method A approach is either right or wrong, but only that, in essence, it allows the insurer, in the case of a premium deficiency, to discount loss and loss adjustment expense reserves associated with the expired portion of in-force policies, as well as future loss and loss adjustment expenses associated with the unexpired portion of in-force policies.

For the examples which follow, anticipated claims experience for a collection of policies is set forth in Exhibit I. Presumably, these policies comprise a portfolio of risks characterized principally by the manner in which they are "acquired and serviced" by the insurance company. (These examples are borrowed directly from Appendix I of the Issues Paper. The loss ratio is adjusted to 88% in order to deal with the case in which a premium deficiency may exist.)

2.2.1 Expected Investment Income

The recognition of the time value of money through a computation of expected investment income in the Issues Paper is exemplified in Exhibits II and III. Exhibit II details the calculation of expected investment income arising out of in-force premiums and associated with future loss payments. The in-force premium is assumed to be collected at the mid-point of the 1981 and underwriting costs of 30.16% and first year claims are deducted immediately. In succeeding years, investment income is determined as 7% of the average balance of cash before and after payment of claims and maintenance costs. Maintenance costs are assumed to amount to 0.83% of premiums, and are paid in proportion to claim payments. (This method only approximates the effect of a mid-year claim payment assumption. Since that assumption is itself an approximation, the actual error is not material.)

The crux of the Issues Paper premium deficiency test is to compare the unearned premium liability with the sum of associated nominal loss, LAE and maintenance costs, as well as the deferred acquisition cost (DAC) asset. Any resulting deficiency is to be reduced by the nominal amount of investment income earned (or interest paid) over the period in which the claims are expected to be settled. Referring to Exhibit II, one sees that the cash flows associated with all in-force premiums are considered for the calculation of the total investment income to be utilized in the premium deficiency test. It is apparent that some of this investment income would be included in a calculation of the discount associated with loss reserves, since $192,000 of the premium and $168,960 of the losses are earned or incurred as of the statement date. Thus this premium deficiency calculation permits discounting of certain claim reserves when necessary to avoid recognition of the premium deficiency liability.

Exhibit III sets forth the expected investment income calculation of premium deficiency based solely upon cash flows associated with the unexpired portion of the in-force premium. In other respects it is similar to the Exhibit II calculation, the principal difference being that in the premium deficiency test, only maintenance costs associated with the unexpired in-force premiums are deducted from the established unearned premium liability. Exhibit III charges maintenance costs for all in-force premiums against the unearned premium. This would appear to be a flaw in the Issues Paper calculation.

Whether all in-force cash flows, or only those associated with unexpired portions of the in-force policies, are considered, the Issues Paper investment income calculation is flawed. Consider the following situation: An alternative set of circumstances to those shown in Exhibit I is to be assessed for premium deficiency. The anticipated experience is identical to that shown in Exhibit I, with the exception that $1 of additional loss is to be paid in the sixth year subsequent to the close of the accident year. (The experience of Exhibit I anticipates all claims settled in the fifth year subsequent to the close of the accident year.) Clearly the difference in the resultant premium deficiency due to this change should be negligible. Yet the Issues Paper premium deficiency calculation leads to an additional deficiency of either $3,123 under Method A, or $1,002 under Method B, due to the accrual of interest against the negative closing balances, $41,619 for Method A and $14,314 for Method B. For each additional period in which an arbitrarily small amount is expected to be paid in losses, the premium deficiency would increase by the amount of interest charged against the preceding negative balance. This scenario suggests a fundamental error in the Issues Paper calculation, which is that it does not properly account for the time value of money. Specifically, all cash flows are calculated in nominal dollars and compared as of the financial statement date with no adjustment for their timing. This is equivalent to assuming that a payment of $1 today is equally valuable as $1 to be paid one year from today, or that the time value of money is zero.

The time value of money is an economic question, and the following quote from Alfred Marshall's **Principles of Economics**[9] addresses the issue:

> The balance between efforts [*e.g. policy payments*] and the satisfactions [*e.g. premiums*] resulting from them may be made up to any day that is found convenient. But whatever day is chosen, one simple rule must be followed :-Every element whether an effort or a satisfaction, which dates from a time anterior to that day must have compound interest for the interval accumulated upon it: and every element, which dates from a time posterior to that day, must have compound interest for the interval discounted from it.

The Issues Paper considers cash flows from investment income, but fails to balance these and all other cash flows to a single day. The correct balance may be obtained directly from the present value calculation, or as will be shown below by adjusting the expected investment income approach to give proper recognition to the time value of money.

2.2.2 Present Value of Future Losses

Exhibits IV and V set forth the present value methodology for the determination of the premium deficiency reserve. Exhibit IV includes cash flows associated with in-force policies subsequent to the financial statement date, while Exhibit V includes only those cash flows associated with the unexpired portions of in-force policies.

Referring to Exhibit IV, one can readily see that inclusion of all in-force policy cash flows in essence recognizes a discount on incurred claim reserves. The claim and maintenance payments are identical to Exhibit II, and are discounted to 12/31/81 using the standard mid-year payment assumption. The difference between the nominal value of these payments, $259,654, and their discounted value, $229,551, is the discount associated both with claims yet to be incurred on unexpired portions of in-force policies and with claims which have been incurred on the expired portions of in-force policies. These latter claims are already reported as an outstanding liability in the balance sheet of the insurance company.

In the premium deficiency test, when the nominal value of the unpaid claims incurred prior to the financial statement date is deducted from the present value of all claims, whether expired or not, the resultant "present value of future payments" to be included in the premium deficiency test is equivalent to the present value of future payments associated with unexpired portions of in-force cash flows, less the discount on incurred claims associated with in-force policies. Thus the methodology would be equivalent to an accounting rule which stated that, if a premium deficiency is indicated on the unexpired portion of in-force policies, that deficiency should be reduced by the amount of discount associated with incurred claims on the expired portion of in-force policies before it is recognized in the insurance company's financial statements.

2.2.3 Reconciliation of Methodologies

To begin consider the results of the four premium deficiency tests over a range of loss and loss adjustment expense ratios, which are tabulated in Exhibit VI. Note that the present value Method B calculation always yields a greater premium deficiency indication than the present value Method A indication. This is expected since the A calculation, as discussed above, allows the insurer to utilize discount on the expired portion of the in-force policy loss and loss adjustment expense reserves to offset the inadequacy of the premium for the unexpired portion of the in-force policies. In the case of the expected investment income calculation, this consistent relationship between the A and the B calculations is lost: near the margin between premium deficiency and premium adequacy, the indications shift, with Method A yielding a greater profit than B on profitable policies, and also yielding a greater loss on loss producing policies. The reason for this inconsistency is that both methods, in the case of loss producing policies, fail to recognize the additional interest which would accrue to funds allocated to the policies between the financial statement date and the actual payments of losses and expenses. Similarly, in the case of profitable policies, both methods report a premium redundancy which includes interest accrued on profit. Because Method A deals with all in-force cash flows, while Method B deals with only unexpired in-force cash flows, Method A exaggerates this effect of the Issues Paper expected interest calculation.

This problem is clarified by considering an alternative definition:

A **premium deficiency** is said to exist for an unearned premium liability if expected future payments associated with the unexpired portion of in-force policies are such that the an initial balance of cash (and invested assets) equal to the unearned premium liability less prepaid expenses, after accrual of expected interest and deduction of future policy payments, yields a final balance less than zero. If a premium deficiency exists, then the amount of the premium deficiency is taken to be the amount of additional funds which are necessary, as of the financial statement date, to yield a final balance of zero [less the discount associated with the future payments due to in-force polices (Method A)].

Note that this definition seeks to answer the question of whether funds on hand today, together with interest accumulated against those funds will be adequate to meet policy obligations. Of course the amount of the premium deficiency under this definition is simply the present value of future obligations. For illustrative purposes, a corrected calculation of expected investment income is shown in Exhibit VI. The methodology is altered from the Issues Paper calculation in two areas: 1) The cash opening balance in 1982 is taken to be the unearned premium liability, less the deferred acquisition cost asset. 2) The premium deficiency is taken to be that amount shown in the first column of the calculation, which, when deducted from the cash opening balance, yields a final cash balance of zero. Note that this amount is the same as that obtained in the present value Method B, as expected.

It is apparent that the premium deficiency should be the amount which yields a final cash balance of zero. If either of the Issues Paper expected investment income calculations are used to arrive at the premium deficiency for loss producing contracts, and the resultant amount is deducted from surplus and used as a fund to meet obligations, this fund would have a significant positive balance after all obligations are met. It is inconsistent to argue that a premium deficiency exists when, after collection of premiums and settlement of obligations, the insurer retains a positive amount of money.

The alteration of the cash opening balance in Exhibit VI deserves further consideration: compare the 1982 opening cash balance in Exhibits III and VI, and it is seen that Exhibit VI credits \$126,000, rather than the \$121,438 credited in Exhibit III. The difference of \$4,562 is the paid underwriting costs which are not included in the DAC asset (5.16% of premium), less the investment income on the average cash balance in 1981. The opening balance in Exhibit VI is recognized as the unearned premium reserve, less the DAC asset, because that is the net liability which the balance sheet has allocated to meeting future claim payments. If the \$121,438 amount is used as the opening balance, then the "premium deficiency" would be \$9,463. This deficiency is the economic premium deficiency as described by Marshall: it is the shortfall of accumulated income to discounted outlay as of the financial statement date and represents the insurer's actual loss on the policies. Note, however, that the required opening balance to obtain a final balance of zero would still be \$130,901 (if the opening balance of \$121,438 is used) and that since a liability of \$126,000, after elimination of the DAC asset already exists, that the additional liability is required is still \$4,901. The question of interest is this additional liability needed to meet policy obligations, and thus the unearned premium liability less DAC asset is substituted for the cash balance determined in Exhibit III.

The corrected calculation of expected investment income, Method B, is also shown Exhibit VI. The premium deficiency determined in Method A is reduced by the amount of discount associated with future payments against the expired portion of in-force policies. In this case, the need for a premium deficiency reserve is eliminated.

3. ACTUARIAL PREMIUM DEFICIENCY RESERVES

3.1 Other Future Costs

In addition to the four future costs discussed in the Issues Paper, SOP 78-6 stated that "certain other costs... should also be considered, provided these costs can be attributed to maintaining policies in force." Two categories which should be considered are:

3.1.1 Contingent Commissions

As with policyholder dividends, contingent commissions were traditionally intended to represent a sharing of profit. In the case of contingent commissions, the profits are being shared with the insurance agent, rather than the policyholder. As in the case of policyholder dividends, these commissions may be paid on loss producing contracts for marketing reasons. In such cases they should be included in the determination of the premium deficiency reserve.

3.1.2 Federal Income Taxes

Because the tax law requires recognition of 20% of the change in the unearned premium liability as income, and prescribes a methodology for recognition of investment income which may overstate the true investment income, it is possible to pay federal income tax on loss producing contracts. These taxes should thus be given consideration in the determination of the premium deficiency reserve.

3.2 A Ratemaking Problem

The premium deficiency reserve is based upon the anticipated experience for the in-force business. In the example above, a constant loss ratio of 88% is assumed for the expired and unexpired portions of the in-force premium. The Issues Paper[10] states that: "The expected loss ratio is based upon experience and judgment." The tools developed by casualty actuaries for ratemaking are readily applicable to the problem of developing this key estimate, the loss ratio.

One can refer to the many articles in the Proceedings of the CAS for technical descriptions of methods applicable to specific kinds of insurance. This paper presents a general calculation which allows estimation of the the loss ratios for the expired and unexpired portions of the in-force premium. The results of this calculation are tabulated and may be used for preliminary estimates of premium deficiencies. The desired loss ratios are estimated using relativities to the last expired calendar accident year. Certain simplifying assumptions are made: 1) the level of exposure for policies written in the preceding two calendar years is level, 2) the expected loss ratio is not subject to seasonal variations, 3) all policies are annual term, 4) rates are adjusted annually.

Exhibit VII presents the traditional model of calendar/accident year experience. The horizontal axis represents time, while the vertical axis represents the level of expired portion of a policy whose inception date may be found by tracing a line of slope one from any point on the graph to the time axis. In this representation, the expired calendar accident year is represented by the square ABCF, the expired portion of the in-force experience is represented by the triangle ACF, and the unexpired portion by the triangle FCD. Losses and average rate levels are related to a base of 1.000 as of time 0. The loss ratio relativities to time 0 for ABCF, ACF, and FCD are determined as the ratio of the average loss level for each of these period to the average rate level for each of these periods. The loss ratio indices for ACF and FCD to ABCF are determined as the ratio of the ACF and FCD relativities to the ABCF relativity.

The following variables are used:

t = annual loss trend,

r_1 = 2nd previous rate change,

r_2 = 1st previous rate change,

x = effective date of rate change.

The trend and rate change variable are expressed as factors, e.g. $t = 1.1$ would indicate a 10% annual loss trend. Given these definitions, the loss and rate relativities for each of the three experience periods are determined according to the following:

$$\text{ABCF Loss Rel.} = \int_0^1 t^z dz = \left.\frac{t^z}{\ln t}\right|_0^1 = \frac{t-1}{\ln t} \tag{1}$$

$$\text{ABCF Rate Rel.} = \frac{x^2}{2} + r_1(x-x^2+\frac{1}{2}) + \frac{r_1 r_2}{2}(1-2x+x^2) \tag{2}$$

$$\text{ACF Loss Rel.} = \frac{\int_0^1 zt^z dz}{\int_0^1 z dz} = 2(\left.\frac{t^z}{\ln t}\right|_0^1) = 2(\frac{t}{\ln t} - \frac{t-1}{(\ln t)^2}) \tag{3}$$

$$\text{ACF Rate Rel.} = \frac{r_1}{2}(x-x^2) + \frac{r_1 r_2}{2}(1-2x+x^2) \tag{4}$$

$$\text{FCD Loss Rel.} = t(\frac{\int_0^1 (1-z)t^z dz}{\int_0^1 (1-z) dz}) = 2t(\left.\frac{zt^z}{\ln t}\right|_0^1 - \left.\frac{t^z}{(\ln t)^2}\right|_0^1)$$

$$= 2t(\frac{t-1}{(\ln t)^2} - \frac{1}{\ln t}) \tag{5}$$

$$\text{FCD Rate Rel.} = \frac{r_1}{2}(x^2) + \frac{r_1 r_2}{2}(1-x^2) \tag{6}$$

Given these loss and rate relativities, the loss ratio indices for the expired and unexpired portions of the in-force premium relative to the last calendar accident year are given by:

$$\text{Expired (ACF) Loss Ratio Index} = \frac{(3) * (2)}{(4) * (1)}$$

$$\text{Unexpired (FCD) Loss Ratio Index} = \frac{(5) * (2)}{(6) * (1)}$$

These indices have been tabulated in Exhibit VIII for effective dates of 1/1, 4/1, 7/1, and 10/1, loss trends of 5%, 10%, and 15%, and first and second prior rate changes of 10%, 20%, 30%, 40%, and 50%. Using this table, suppose that in the calculation of the premium deficiency reserve in the example developed based upon the anticipated experience of Exhibit I, it is now ascertained that the in-force loss ratio used was simply the expiring calendar accident year loss ratio, and that 1) a loss trend of 10% was operative, 2) first and second prior rate changes were 0% and 10%, respectively, and 3) effective dates for rate changes were July 1 of 1979 and 1980. Referring to Sheet 2 of Exhibit VII, one finds the loss ratio indices of 1.004 and 1.070 for the expired and unexpired portions of the in-force premium, respectively, which yields estimated loss ratios of 88.4% and 94.2% for these periods. As shown in Exhibit VIII, utilizing these loss ratios yields a premium deficiency amounting to $5,566 under Method B, and an increase of $131 in the adequacy indication under Method A. (The counter-intuitive result of an increase in the adequacy of the premium along with an increase in the estimated loss ratios is the result of the increased discount associated with increased losses for the unexpired portion of the in-force business.) Thus it can be seen that adjustments in the loss ratio for loss trends and rate changes can lead to material adjustments in the amount of the expected premium deficiency.

3.3 Special Considerations

In any particular circumstance of the calculation of a premium deficiency reserve, there are likely to be considerations less general in nature than those considered in the calculation above. In each case, it will be necessary to ascertain whether any special considerations apply, and to make adjustments to account for those considerations. Three such considerations of which the actuary should be aware are considered below.

3.3.1 Claims Made Coverage and Tail Options

Many companies are now offering, or have been offering, claims made coverage for liability exposures. In general pricing for this coverage is developed on a "pure" claims made basis, i.e. no provision is made for occurrences which are reported after the expiration of the policy. The actual coverage which is typically offered for professional liability, however, frequently includes a provision for free coverage for losses reported subsequent to expiration ("tail" coverage) in the event of death, disability, or retirement of the named insured. In such cases it is necessary to consider whether there is a premium deficiency associated with the free tail coverage. Typically this will include utilization of mortality and morbidity tables for estimation of the effects associated with the death and disability provisions, together with some tabulation of the withdrawal and retirement rates. Retirement coverage may not take effect without a vesting period or before a minimum age, and the effects of these provisions must also be considered.

3.3.2 Participation in Involuntary Business

One of the obligations associated with writing certain lines of business such as private passenger auto is that each company must share in the experience of the related involuntary market (e.g. Assigned Risk Plan, Joint Underwriting Association, Reinsurance Facility, or Fair Plan). The expectation of the insurance industry as a whole is that risks in the the involuntary pool will be loss producers and generally historical experience has confirmed this expectation. Typically, a company's participation in involuntary business is based on business written a few years earlier. If the expected loss from future involuntary business related to the current in force business is evaluated as probable, then consistent with the logic underlying the recognition of a premium deficiency reserve, this loss should be recognized as a cost in the premium deficiency reserve computation. Naturally the quantification of this loss amount is difficult; in effect the problem is to estimate what the size of the involuntary market will be several years hence, and what combined ratio that market will produce. Given the estimation problem, it may be argued that the loss is not "reasonably estimable" and that hence in accordance with FAS 5 it is not necessary to accrue a loss. FASB Interpretation No. 14, **Reasonable Estimation of the Amount of a Loss**[11], provides guidance in this area. In particular, this interpretation states that "When no amount [*of loss*] is a better estimate than any other amount, however, the minimum amount of the range shall be accrued." It would appear from this interpretation that if safe best case assumptions lead to a probable loss, than at least that much loss should be recognized. Furthermore, the interpretation may require disclosure of the exposure to additional loss if only the minimum amount of the loss is accrued.

Of course, in force business is not the only category that will generate a probable future loss from involuntary business. Any policy considered in the allocation formula of future involuntary business whether expired or unexpired will logically have a cost of involuntary business associated with it. Thus an additional liability for business other than that in-force should be considered. Such a liability would not be part of the premium deficiency reserve since it would not be related to the unearned exposures on the insurer's books as of the financial statement date.

3.3.3 Variations in Exposure During Policy Period

The model developed above considers the case of level exposures written during the preceding years. If there has been marked growth in the exposures, then the effect of rate changes upon the unexpired portion of the in-force premium will be more significant than in the case considered above. Treatment of these circumstances will require utilization of techniques of the kind developed in **A Refined Model for Premium Adjustments**[12].

NOTES

1. Insurance Companies Committee, Auditing Standards Division, American Institute of Certified Public Accountants, "Computation of Premium Deficiencies in Insurance Enterprises," Issues Paper, (March 26, 1984)

2. Financial Accounting Standards Board, "Accounting for Contingencies", Statement of Financial Accounting Standards No.5, (Stamford, CT: FASB, March 1975), paragraph 8.

3. Accounting Standards Division, American Institute of Certified Public Accountants, "Accounting for Property and Liability Insurance Companies," Statement of Position 78-6, (July 28, 1978), pp. 12-22.

4. Financial Accounting Standards Board, "Accounting and Reporting by Insurance Enterprises", Statement of Financial Accounting Standards No. 60, (Stamford, CT: FASB, June 1982), paragraph 32.

5. Issues Paper, paragraphs 51-53.

6. Issues Paper, paragraph 51.

7. Issues Paper, paragraph 50.

8. Issues Paper, paragraph 51.

9. Marshall, Alfred, Principles of Economics, 8th Ed., (Philadelphia, PA: The Porcupine Press, 1982), pp. 293-294

10. Issues Paper, page 31.

11. Financial Accounting Standards Board, "Reasonable Estimation of the Amount of a Loss", FASB Interpretation No. 14, (Stamford, CT: FASB, September 1976), paragraph 3.

12. Miller, D. L. and Davis, G. E., "A Refined Model for Premium Adjustment," Proceedings of the Casualty Actuarial Society, Vol. LXIII, (New York: Casualty Actuarial Society, 1976), p. 117

Anticipated Experience

Exhibit I

	Earned On Unexpired	Unearned	In-force
Premium	182,000	168,000	350,000
Exp. Loss & LAE Ratio	88%	88%	88%
Expected Loss and LAE	160,160	147,840	308,000

Anticipated Settlement Pattern

Payment Year	1981 % Paid	Claims to 1981 EP	Claims to 1982 EP
1981	32.0%	51,251	
1982	28.0%	44,845	47,309
1983	15.0%	24,024	41,395
1984	12.0%	19,219	22,176
1985	8.0%	12,813	17,741
1986	5.0%	8,008	11,827
1987			7,392

Exhibit II

Premium Deficiency Computation
Expected Investment Income Approach
Based On All In-Force Premiums

Computation Of Expected Investment Income (A)

Year	Cash Opening Balance	Premium Received	30.16% U/W Costs Paid	88.00% Claims Paid	0.83% Maintenance Cost	Cash Ending Balance	Cash Average Balance	7.00% Investment Income
1981		350,000	(105,560)	(51,251)		193,189	96,594	6,762
1982	199,950			(92,154)	(1,043)	106,754	153,352	10,735
1983	117,489			(65,419)	(740)	51,329	84,409	5,909
1984	57,238			(41,395)	(468)	15,374	36,306	2,541
1985	17,916			(30,554)	(346)	(12,983)	2,466	173
1986	(12,811)			(19,835)	(224)	(32,870)	(22,841)	(1,599)
1987	(34,469)			(7,392)	(84)	(41,945)	(38,207)	(2,674)
Tot.		350,000	(105,560)	(308,000)	(2,905)			21,846

Expected Investment Income (1982-1987) 15,084

Premium Deficiency Test

Unearned Premium as of 12/31/81			168,000
Less Expected Costs:			
Loss and LAE Costs		147,840	
Maintenance Costs		2,905	
Amort. of DAC at	25%	42,000	
			192,745
Gross Premium Deficiency			(24,745)
Expected Investment Income			15,084
Excess of Income over Costs			(9,661)

Exhibit III

Premium Deficiency Computation
Expected Investment Income Approach
Based On Unearned Premiums Only

Computation Of Expected Investment Income (B)

Year	Cash Opening Balance	Premium Received	30.16% U/W Costs Paid	88.00% Claims Paid	0.83% Maintenance Cost	Cash Ending Balance	Cash Average Balance	7.00% Investment Income
1981		168,000	(50,669)			117,331	58,666	4,107
1982	121,438			(47,309)	(446)	73,683	97,560	6,829
1983	80,512			(41,395)	(390)	38,726	59,619	4,173
1984	42,900			(22,176)	(209)	20,515	31,707	2,219
1985	22,734			(17,741)	(167)	4,826	13,780	965
1986	5,791			(11,827)	(112)	(6,148)	(179)	(13)
1987	(6,161)			(7,392)	(70)	(13,622)	(9,892)	(692)
Tot.		168,000	(50,669)	(147,840)	(1,394)			17,588

Expected Investment Income (1982-1987) 13,482

Premium Deficiency Test

Unearned Premium as of 12/31/81			168,000
Less Expected Costs:			
Loss and LAE Costs		147,840	
Maintenance Costs		1,394	
Amort. of DAC at	25%	42,000	
			191,234
Gross Premium Deficiency			(23,234)
Expected Investment Income			13,482
Excess of Income over Costs			(9,753)

Exhibit IV

Premium Deficiency Computation
Present Value of Future Payments Approach
Based On All In-Force Premiums

Present Value of Claims and Maintenance Costs (A)

Payment Year	88.00% Claims Paid	0.83% Mainten-ance Cost	Total Payments	7.00% PV Factors	PV of Payments
1982	92,154	1,043	93,196	0.9667	90,096
1983	65,419	740	66,159	0.9035	59,774
1984	41,395	468	41,864	0.8444	35,349
1985	30,554	346	30,899	0.7891	24,384
1986	19,835	224	20,060	0.7375	14,794
1987	7,392	84	7,476	0.6893	5,153
Total	256,749	2,905	259,654		229,551

Less: Unpaid Loss & LAE @ 12/31/86		
Payments Against 1981 EP	161,671	
less: Payments Made in 1981	51,251	
		110,419
		119,131

Premium Deficiency Test

Unearned Premium as of 12/31/81			168,000
Less Expected Costs:			
PV of Future Payments		119,131	
Amort. of DAC at	25%	42,000	
			161,131
Excess of Income over Costs			6,869

Exhibit V

Premium Deficiency Computation
Present Value of Future Payments Approach
Based On Unearned Premiums

Present Value of Claims and Maintenance Costs (B)

	88.00%	0.83%		7.00%	
Payment Year	Claims Paid	Mainten-ance Cost	Total Payments	PV Factors	PV of Payments
1982	47,309	446	47,755	0.9667	46,167
1983	41,395	390	41,786	0.9035	37,753
1984	22,176	209	22,385	0.8444	18,902
1985	17,741	167	17,908	0.7891	14,132
1986	11,827	112	11,939	0.7375	8,805
1987	7,392	70	7,462	0.6893	5,143
Total	147,840	1,394	149,234		130,901

Premium Deficiency Test

Unearned Premium as of 12/31/81			168,000
Less Expected Costs:			
PV of Future Payments		130,901	
Amort. of DAC at	25%	42,000	
			172,901
Excess of Income over Costs			(4,901)

Effect of Changes in Loss Ratio — Exhibit VI

Loss & LAE Ratio	Estimated Premium Deficiencies: Investment Income (A)	Investment Income (B)	Present Value (A)	Present Value (B)
68%	49,086	34,503	33,704	24,571
73%	34,399	23,439	26,995	17,203
78%	19,713	12,375	20,286	9,835
83%	5,026	1,311	13,577	2,467
88%	(9,661)	(9,753)	6,869	(4,901)
93%	(24,348)	(20,817)	160	(12,270)
98%	(39,034)	(31,880)	(6,549)	(19,638)

Corrected Computation Of Expected Investment Income (B)

Premium Deficiency	Year	Cash Opening Balance	Premium Received	30.16% U/W Costs Paid	0.00% Claims Paid	0.83% Maintenance Cost	Cash Ending Balance	Cash Average Balance	7.00% Investment Income
	1981		168,000	(50,669)			117,331	58,666	4,107
(4,901)	1982	126,000			(47,309)	(446)	83,146	107,023	7,492
	1983	90,638			(41,395)	(390)	48,852	69,745	4,882
	1984	53,734			(22,176)	(209)	31,349	42,542	2,978
	1985	34,327			(17,741)	(167)	16,419	25,373	1,776
	1986	18,195			(11,827)	(112)	6,256	12,225	856
	1987	7,112			(7,392)	(70)	(350)	3,381	237
	Tot.			(50,669)	(147,840)	(1,394)			22,327

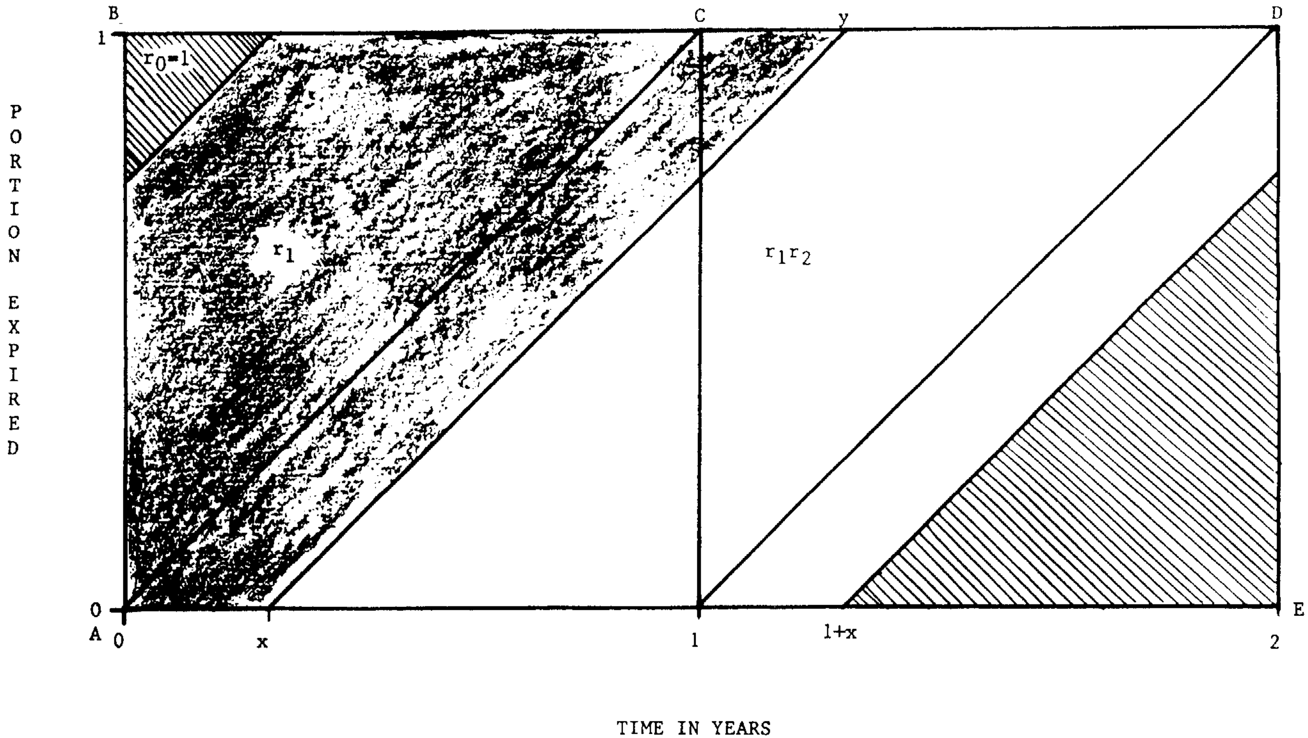
Final Cash Balance (113)

Corrected Computation Of Expected Investment Income (A)

Corrected Expected Investment Income Premium Deficiency (B)		(4,901)
Less: Discount on Expired In-Force Future Payments		
Discount on All In-Force Future Payments	30,103	
Less: Discount on Unexpired In-Force Future Payments	18,333	
		11,770
Corrected Expected Investment Income Premium Deficiency (A)		6,869

PREMIUM DEFICIENCY RESERVES

EXPIRED & UNEXPIRED LOSS RATIO INDICES



Loss Ratio Indices to First Previous Calendar Accident Year

Exhibit VII
Sheet 1

Assumptions: Loss Trend - 5%
Effective Date - 1/1

2nd Prior Rate Change	Indices for Expired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.008	0.962	0.924	0.892	0.864	0.840
1.1	1.008	0.962	0.924	0.892	0.864	0.840
1.2	1.008	0.962	0.924	0.892	0.864	0.840
1.3	1.008	0.962	0.924	0.892	0.864	0.840
1.4	1.008	0.962	0.924	0.892	0.864	0.840
1.5	1.008	0.962	0.924	0.892	0.864	0.840

2nd Prior Rate Change	Indices for Unexpired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.041	0.994	0.955	0.921	0.893	0.868
1.1	1.041	0.994	0.955	0.921	0.893	0.868
1.2	1.041	0.994	0.955	0.921	0.893	0.868
1.3	1.041	0.994	0.955	0.921	0.893	0.868
1.4	1.041	0.994	0.955	0.921	0.893	0.868
1.5	1.041	0.994	0.955	0.921	0.893	0.868

Assumptions: Loss Trend - 5%
Effective Date - 4/1

2nd Prior Rate Change	Indices for Expired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.008	0.981	0.957	0.935	0.916	0.897
1.1	1.005	0.979	0.955	0.933	0.913	0.895
1.2	1.003	0.976	0.952	0.931	0.911	0.893
1.3	1.001	0.974	0.951	0.929	0.910	0.892
1.4	0.999	0.973	0.949	0.928	0.908	0.890
1.5	0.998	0.971	0.948	0.926	0.907	0.889

2nd Prior Rate Change	Indices for Unexpired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.041	0.979	0.926	0.881	0.843	0.809
1.1	1.039	0.976	0.924	0.879	0.840	0.807
1.2	1.036	0.974	0.922	0.877	0.839	0.805
1.3	1.034	0.972	0.920	0.876	0.837	0.804
1.4	1.032	0.970	0.919	0.874	0.836	0.802
1.5	1.031	0.969	0.917	0.873	0.835	0.801

Assumptions: Loss Trend - 5%
Effective Date - 7/1

2nd Prior Rate Change	Indices for Expired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.008	0.996	0.984	0.973	0.962	0.952
1.1	0.997	0.985	0.973	0.962	0.952	0.942
1.2	0.987	0.975	0.964	0.953	0.943	0.933
1.3	0.979	0.967	0.956	0.946	0.936	0.926
1.4	0.972	0.961	0.950	0.939	0.930	0.920
1.5	0.966	0.955	0.944	0.934	0.924	0.915

2nd Prior Rate Change	Indices for Unexpired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.041	0.981	0.928	0.882	0.841	0.805
1.1	1.030	0.970	0.918	0.872	0.832	0.796
1.2	1.020	0.961	0.909	0.864	0.824	0.789
1.3	1.011	0.953	0.902	0.858	0.818	0.783
1.4	1.004	0.946	0.896	0.852	0.813	0.778
1.5	0.998	0.941	0.891	0.847	0.808	0.773

Assumptions: Loss Trend - 5%
Effective Date - 10/1

2nd Prior Rate Change	Indices for Expired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.008	1.005	1.002	0.999	0.996	0.993
1.1	0.982	0.979	0.976	0.974	0.971	0.968
1.2	0.961	0.958	0.955	0.952	0.950	0.947
1.3	0.943	0.940	0.937	0.935	0.932	0.929
1.4	0.927	0.924	0.922	0.919	0.917	0.914
1.5	0.914	0.911	0.909	0.906	0.904	0.901

2nd Prior Rate Change	Indices for Unexpired In-Force Loss Ratio — First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.041	1.001	0.964	0.929	0.897	0.868
1.1	1.015	0.975	0.939	0.906	0.875	0.846
1.2	0.993	0.954	0.919	0.886	0.856	0.828
1.3	0.974	0.936	0.901	0.870	0.840	0.812
1.4	0.958	0.921	0.887	0.855	0.826	0.799
1.5	0.944	0.907	0.874	0.843	0.814	0.788

Loss Ratio Indices to First Previous Calendar Accident Year

Assumptions: Loss Trend - 10%
Effective Date - 1/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.016	0.970	0.931	0.899	0.871	0.847
1.1	1.016	0.970	0.931	0.899	0.871	0.847
1.2	1.016	0.970	0.931	0.899	0.871	0.847
1.3	1.016	0.970	0.931	0.899	0.871	0.847
1.4	1.016	0.970	0.931	0.899	0.871	0.847
1.5	1.016	0.970	0.931	0.899	0.871	0.847

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.083	1.033	0.992	0.958	0.928	0.902
1.1	1.083	1.033	0.992	0.958	0.928	0.902
1.2	1.083	1.033	0.992	0.958	0.928	0.902
1.3	1.083	1.033	0.992	0.958	0.928	0.902
1.4	1.083	1.033	0.992	0.958	0.928	0.902
1.5	1.083	1.033	0.992	0.958	0.928	0.902

Assumptions: Loss Trend - 10%
Effective Date - 4/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.016	0.989	0.965	0.943	0.923	0.904
1.1	1.013	0.986	0.962	0.940	0.920	0.902
1.2	1.011	0.984	0.960	0.938	0.918	0.900
1.3	1.009	0.982	0.958	0.936	0.917	0.899
1.4	1.007	0.980	0.956	0.935	0.915	0.897
1.5	1.005	0.979	0.955	0.933	0.914	0.896

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.083	1.018	0.963	0.916	0.876	0.841
1.1	1.079	1.015	0.960	0.914	0.874	0.839
1.2	1.077	1.012	0.958	0.912	0.872	0.837
1.3	1.075	1.010	0.956	0.910	0.870	0.835
1.4	1.073	1.009	0.955	0.909	0.869	0.834
1.5	1.071	1.007	0.953	0.907	0.868	0.833

Assumptions: Loss Trend - 10%
Effective Date - 7/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.016	1.003	0.992	0.980	0.970	0.959
1.1	1.004	0.992	0.981	0.970	0.959	0.949
1.2	0.995	0.983	0.972	0.961	0.950	0.941
1.3	0.987	0.975	0.964	0.953	0.943	0.933
1.4	0.980	0.968	0.957	0.947	0.937	0.927
1.5	0.974	0.962	0.951	0.941	0.931	0.922

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.083	1.020	0.965	0.917	0.874	0.836
1.1	1.070	1.008	0.954	0.907	0.865	0.828
1.2	1.060	0.999	0.945	0.898	0.857	0.820
1.3	1.051	0.991	0.938	0.891	0.850	0.814
1.4	1.044	0.984	0.931	0.885	0.845	0.808
1.5	1.037	0.978	0.926	0.880	0.840	0.804

Assumptions: Loss Trend - 10%
Effective Date - 10/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.016	1.013	1.010	1.007	1.003	1.000
1.1	0.990	0.987	0.984	0.981	0.978	0.975
1.2	0.968	0.965	0.963	0.960	0.957	0.954
1.3	0.950	0.947	0.944	0.942	0.939	0.937
1.4	0.934	0.932	0.929	0.926	0.924	0.921
1.5	0.921	0.918	0.916	0.913	0.911	0.908

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.083	1.040	1.002	0.966	0.933	0.902
1.1	1.055	1.014	0.976	0.941	0.909	0.879
1.2	1.032	0.992	0.955	0.921	0.890	0.860
1.3	1.012	0.973	0.937	0.904	0.873	0.844
1.4	0.996	0.957	0.922	0.889	0.859	0.831
1.5	0.981	0.943	0.908	0.876	0.846	0.819

Loss Ratio Indices to First Previous Calendar Accident Year

Exhibit VII
Sheet 3

Assumptions: Loss Trend - 15%
Effective Date - 1/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.023	0.977	0.938	0.905	0.877	0.853
1.1	1.023	0.977	0.938	0.905	0.877	0.853
1.2	1.023	0.977	0.938	0.905	0.877	0.853
1.3	1.023	0.977	0.938	0.905	0.877	0.853
1.4	1.023	0.977	0.938	0.905	0.877	0.853
1.5	1.023	0.977	0.938	0.905	0.877	0.853

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.123	1.072	1.030	0.994	0.963	0.936
1.1	1.123	1.072	1.030	0.994	0.963	0.936
1.2	1.123	1.072	1.030	0.994	0.963	0.936
1.3	1.123	1.072	1.030	0.994	0.963	0.936
1.4	1.123	1.072	1.030	0.994	0.963	0.936
1.5	1.123	1.072	1.030	0.994	0.963	0.936

Assumptions: Loss Trend - 15%
Effective Date - 4/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.023	0.996	0.972	0.949	0.929	0.911
1.1	1.020	0.993	0.969	0.947	0.927	0.909
1.2	1.018	0.991	0.967	0.945	0.925	0.907
1.3	1.016	0.989	0.965	0.943	0.923	0.905
1.4	1.014	0.987	0.963	0.942	0.922	0.904
1.5	1.013	0.986	0.962	0.940	0.921	0.903

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.123	1.056	0.999	0.951	0.909	0.872
1.1	1.120	1.053	0.996	0.948	0.906	0.870
1.2	1.117	1.050	0.994	0.946	0.905	0.868
1.3	1.115	1.048	0.992	0.944	0.903	0.867
1.4	1.113	1.047	0.991	0.943	0.901	0.865
1.5	1.112	1.045	0.989	0.941	0.900	0.864

Assumptions: Loss Trend - 15%
Effective Date - 7/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.023	1.011	0.999	0.988	0.977	0.966
1.1	1.012	0.999	0.988	0.977	0.966	0.956
1.2	1.002	0.990	0.979	0.968	0.957	0.947
1.3	0.994	0.982	0.971	0.960	0.950	0.940
1.4	0.987	0.975	0.964	0.954	0.944	0.934
1.5	0.981	0.969	0.958	0.948	0.938	0.929

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.123	1.058	1.001	0.951	0.907	0.868
1.1	1.110	1.046	0.990	0.941	0.897	0.859
1.2	1.100	1.036	0.981	0.932	0.889	0.851
1.3	1.091	1.028	0.973	0.925	0.882	0.844
1.4	1.083	1.021	0.966	0.919	0.876	0.839
1.5	1.076	1.014	0.960	0.913	0.871	0.834

Assumptions: Loss Trend - 15%
Effective Date - 10/1

Indices for Expired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.023	1.020	1.017	1.014	1.011	1.008
1.1	0.997	0.994	0.991	0.988	0.985	0.982
1.2	0.975	0.972	0.970	0.967	0.964	0.961
1.3	0.957	0.954	0.951	0.949	0.946	0.943
1.4	0.941	0.938	0.936	0.933	0.931	0.928
1.5	0.927	0.925	0.922	0.920	0.917	0.915

Indices for Unexpired In-Force Loss Ratio

2nd Prior Rate Change	First Prior Rate Change 1.0	1.1	1.2	1.3	1.4	1.5
1.0	1.123	1.080	1.039	1.002	0.968	0.936
1.1	1.095	1.052	1.013	0.977	0.943	0.912
1.2	1.071	1.029	0.991	0.956	0.923	0.893
1.3	1.050	1.010	0.972	0.938	0.906	0.876
1.4	1.033	0.993	0.956	0.922	0.891	0.862
1.5	1.018	0.979	0.942	0.909	0.878	0.850

Corrected Computation Of Expected Investment Income (B)

Premium Deficiency	Year	Cash Opening Balance	Premium Received	30.16% U/W Costs Paid	0.00% Claims Paid	0.83% Mainten-ance Cost	Cash Ending Balance	Cash Average Balance	7.00% Investment Income
	1981		168,000	(50,669)			117,331	58,666	4,107
(5,566)	1982	126,000			(47,524)	(446)	83,596	107,581	7,531
	1983	91,127			(41,583)	(390)	49,153	70,140	4,910
	1984	54,063			(22,277)	(209)	31,577	42,820	2,997
	1985	34,574			(17,821)	(167)	16,585	25,580	1,791
	1986	18,376			(11,881)	(112)	6,383	12,380	867
	1987	7,250			(7,426)	(70)	(245)	3,502	245
	Tot.			(50,669)	(148,512)	(1,394)			22,447

Final Cash Balance (0)

Corrected Computation Of Expected Investment Income (A)

Corrected Expected Investment Income Premium Deficiency (B)		(5,566)
Less: Discount on Expired In-Force Future Payments		
Discount on All In-Force Future Payments	31,002	
Less: Discount on Unexpired In-Force Future Payments	18,415	
		12,587
Corrected Expected Investment Income Premium Deficiency (A)		7,021