

UNASSIGNED SURPLUS AND CONTINGENCY RESERVES

Surplus

- A. What is an appropriate level of unassigned surplus for a stock life insurance company? For a mutual life insurance company?
- B. What adjustments in the statement surplus are proposed by some security analysts in their evaluation of a company's net worth? What are the arguments for and against these proposals?

MR. THOMAS P. BOWLES, JR.: What is an appropriate level of unassigned surplus for a stock life insurance company?

Let us assume that the purpose of surplus, when considered from the theoretical viewpoint, is to provide an amount which, when combined with capital and contingency funds of whatever nature, will assure that the company can meet its maturing policy obligations based on reasonable assumptions as to future experience. Furthermore, the question "How much?" cannot be answered without defining "unassigned surplus." For purposes of discussion, let us define "unassigned surplus" as the excess of admitted assets over the sum of the "above the line" liabilities plus capital. Let this be called "statutory surplus."

For any given set of circumstances for a particular company, the statutory surplus can be any of many numbers depending upon (a) basis of asset valuation; (b) basis of liability valuation, including interest rate, method, and mortality used to compute policy reserves (including deficiency reserves); (c) extent of and basis of determining certain above-the-line liabilities, such as group contingency reserves and mandatory security valuation reserve; and (d) capital.

If, under a given set of circumstances, it is determined (by whatever method) that the appropriate level of statutory surplus is \$X, a decrease in policy reserves—resulting from a change in interest, mortality, or method used to compute policy reserves—will permit a corresponding increase in statutory surplus. Likewise, under the given set of circumstances, an increase in capital would permit a corresponding decrease in statutory surplus. One may easily conclude, then, that the appropriate level of statutory surplus is of necessity a "balancing item." But how and against what shall the balance be struck? This leads to the basic questions of how, considered solely from the theoretical viewpoint, the appropriate level can be determined. Such a determination becomes a point of departure for recognizing the purely practical considerations involved in order to finally establish the appropriate level.

The Theory

The assets of a company (excluding such items as deferred premiums) should be sufficient when added to the discounted value of premiums and other income to be collected in the future (other than investment earnings, which presumably are appropriately recognized in the discount rate) to provide the discounted value of all due and unpaid claims, obligations, and expenses and all future claims, obligations, and expenses. Such a computation should make allowance for (a) random fluctuations in those assumptions used to obtain discounted values and (b) sustained new plateaus in levels of less favorable experience differing from the assumptions used to obtain discounted values. This produces the generalized gross premium valuation equation, such as $A + P = (B + E)$, where A equals assets; P equals discounted value of premiums, etc.; B equals discounted value of claims; and E equals discounted value of obligations and expenses.

To illustrate the point to be discussed, let us assume that all the business of a company is individual ordinary and is on an annual-premium basis and that all matured or due claims and expenses have been paid and all premium and amounts due it have been collected. Its balance sheet would show that its admitted assets equal the sum of policy reserves, contingency reserves, capital, and statutory surplus. Combining this with the above indicates that statutory surplus equals the excess of the sum of (discounted value of benefits and expenses, etc.) over the sum of (discounted value of future premiums plus policy reserves, contingency reserves, and capital), where discounted values recognize both random adverse fluctuations in experience and sustained less favorable experience than indicated by those assumptions which, as of the date of determination of statutory surplus, are considered realistic in the light of then-current conditions. The same formula rearranged provides that

$$\left. \begin{array}{l} \text{Statutory surplus} \\ + \text{Policy reserves} \\ + \text{Contingency reserves} \\ + \text{Capital} \end{array} \right\} = \begin{array}{l} \text{Excess of discounted value of} \\ \text{future benefits and expense,} \\ \text{etc., over future premiums} \\ = (\text{GPVR}) \end{array}$$

The right-hand side is the traditional gross premium valuation reserve, computed on a basis to produce desired margins for contingencies.

To illustrate a theoretical point involved, a calculation of a gross premium reserve was made for a whole life policy issued at age 30. The results of the calculation are shown in Table 1, and the assumptions used in the calculations are shown in Table 2. Values in Table 1 are shown at the end of each fifth year for Year 5 through Year 45. For purposes of this illus-

TABLE 1
 COMPARISON OF GROSS PREMIUM VALUATION RESERVES ON VARIOUS BASES
 WITH 1958 CSO 3 PER CENT CRVM AND NL RESERVES
 WHOLE LIFE, MALE AGED 30, PER \$1,000

END OF POLICY YEAR	GROSS PREMIUM VALUATION RESERVE				1958 CSO 3% RESERVE		STATUTORY SURPLUS PLUS CAPITAL		STATUTORY SURPLUS AND CAPITAL PROFIT 7½% PREMIUM		
	Standard	Contingency	Random Mortality Reserve	Total Contingency Reserve (3)+(4) (5)	CRVM	NL	CRVM (5)-(6)	NL (5)-(7)	Addition	Total CRVM (8)+(10)	Total NL (9)+(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
5.....	-\$ 54	\$ 53	\$ 1	\$ 54	\$ 51	\$ 62	\$ 3	-\$ 8	\$27	\$30	\$19
10.....	7	124	2	126	122	132	4	- 6	25	29	19
15.....	78	202	2	204	199	209	5	- 5	23	28	18
20.....	155	285	3	288	282	290	6	- 2	20	26	18
25.....	240	372	4	376	368	376	8	0	17	25	17
30.....	329	459	6	465	455	462	10	3	15	25	18
35.....	419	546	7	553	541	546	12	7	13	25	20
40.....	509	626	10	636	621	625	15	11	11	26	22
45.....	597	697	12	709	692	696	17	13	8	25	21

tration, no provision was made for capital losses except to the extent that an interest rate of 3 per cent may be presumed to reflect this. The Mandatory Security Valuation Reserve (as used today) would be added to both the contingency reserve and the computed gross premium valuation reserve for random fluctuation in asset value beyond that inherent in the computation of the theoretical statutory surplus. The random fluctuation in mortality is assumed to require a reserve of 100 per cent of the expected mortality on the net amount at risk, an amount which in all cases adequately provides for three times the standard deviation in mortality cost

TABLE 2
ASSUMPTIONS USED IN COMPUTING ILLUSTRATIVE
STANDARD AND CONTINGENCY GROSS
PREMIUM VALUATION RESERVES
WHOLE LIFE, MALE AGED 30

	Standard	Contingency
Mortality.....	1955-60 Basic Table (B&T modification)	58 CSO
Interest.....	4½%	3%
Renewal expense:		
Administration:		
Per M.....	\$ 0.25	\$ 0.50
Per policy.....	\$ 3.50	\$ 5.25
Claim:		
Per M.....	\$ 2.00	\$ 4.00
Per policy.....	\$25.00	\$37.50
Per cent premium:		
Policy Year 6.....	11%	11%
Policy Year 7 on...	6%	6%

NOTE.—Gross annual premium per M is \$16; average size, \$10,000.

with respect to which the normal distribution is applicable. There is no provision for random fluctuation in expense. The assumption of sustained levels produces change as follows:

- Mortality = from 1955-60 Basic Table (B&T modification) to 1958 CSO;
- Interest = from 4½ to 3 per cent;
- Expense = 100 per cent increase in per M expenses,
50 per cent increase in per policy expenses.

Table 1 indicates that the gross premium valuation reserve without margins (col. 2) is always less than the statutory NL or CRVM reserves, so neither capital nor surplus is required. But the gross premium valuation with margins for both random fluctuations in experience and sus-

tained levels of unfavorable experience indicates the need for funds in excess of the CRVM policy reserve, that is, the need for capital and statutory surplus.

Assuming that the Mandatory Security Valuation Reserve appropriately reflects the contingency fund required for random asset value fluctuations (in addition to margins inherently in the conservative interest assumption in gross premium valuation), the sum of capital and statutory surplus theoretically should equal the amount shown in column 8 or 9. Any additional statutory surplus (or capital) reflects the practical considerations involved in determining the appropriate level of statutory surplus.

Therefore, theoretical considerations point the way to the minimum amount of statutory surplus (and capital) and include recognition of (1) the basis of valuation of assets and liabilities; (2) gross premium levels; (3) current mortality, expenses, and interest; and (4) margins for random fluctuation in mortality and sustained new levels of adverse experience for mortality, expense, and interest.

For purposes of illustrating the theory, the computation ignores persistency, random fluctuation in asset values (except to extent mentioned above), and so on.

The Practice

The minimum amount of capital and statutory surplus for stock life insurance companies is usually established by state insurance laws or regulations pertaining thereto. Since both capital and surplus must equal prescribed minimums, one may conclude that the minimum statutory surplus is that amount which, when added to capital, will produce the theoretical surplus but not less than the required minimum surplus.

Beyond this, the level is based almost totally on practical considerations. Some of these considerations are:

1. *Incidence of profit flow.*—If statutory surplus were determined on the assumption that future benefits include a profit for stockholders, on assumptions consistent with the computation of the gross premium rate, it may be argued that the theoretical surplus should be increased to reflect that profit. For example, if, in the illustration shown in Table 1, the gross premium reserve were increased by the discounted value of a future profit of, say, $7\frac{1}{2}$ per cent of premium, statutory surplus would be increased by the amount shown in column 10 of Table 1, resulting in a statutory surplus (plus capital) of the amount shown in columns 11 and 12. On the other hand, it may be argued that sustained new levels of less favorable experience and random fluctuations should appropriately reduce profit. If this reasoning is accepted, the addition to statutory surplus of all or part of the discounted value of future profit need not be made.

2. *Appearance of solvency.*—Even though a negative statutory surplus (based on theoretical considerations) would not necessarily indicate inability to meet maturing obligations, it is essential that the proper psychological level be maintained, whatever that may be.

3. *Appearance of strength.*—Even though a large statutory surplus may be less than that computed as the theoretical minimum, and thus deceptively dangerous, its size alone may convey the appearance of strength and be psychologically satisfactory, even though theoretically inadequate. Contrariwise, a statutory surplus larger than the theoretical minimum may be designed to suggest rugged strength.

4. *Appearance of earnings.*—The various contingency reserves and surplus items may be arranged flexibly to provide the appearance of earnings, either plus or minus, unless management is careful to show in the surplus account those changes in such reserves. One particularly unrealistic reserve, as measured by its effect on earnings, is the deficiency reserve. Some analysts actually adjust earnings for any change in this item, since they consider it unassigned surplus.

5. *Working capital.*—In the early years of the life of an insurance company, statutory surplus of a stated amount may be needed to provide for a cash-flow incident to growth and expansion, even though it be higher than that computed as the theoretical minimum.

Conclusion

The appropriate level of statutory surplus for a stock life company should be at least equal to that amount computed theoretically, or, if larger, that amount required by the state insurance laws. This is the objective or theoretical level.

The subjective level is such higher amount which, in the judgment of management, satisfies the needs for (a) incidence of profit flow under adverse conditions, (b) appearance of solvency, (c) appearance of strength, (d) appearance of earnings, and (e) working capital. The retention of a statutory surplus greater than that at the objective level (which may or may not recognize incidence of profit flow) may be shown to be grossly unfair to stockholders, since the excess, which is not required to be invested in the company's insurance operations, cannot achieve the investment return it could if invested elsewhere. This leads to the conclusion that the state insurance laws should provide less restrictions on the investments of the amount of statutory surplus in excess of the theoretical minimum quite apart from the existing right to invest a limited percentage of assets in common stocks. The insurance commissioners might well recognize this situation and strive to develop a realistic structure for investment of excess statutory surplus funds.

The theoretical statutory surplus may change significantly from time

to time because of significant changes in assumptions involved in computing the policy reserve. A blend of the objective and subjective may have the tendency to smooth out what might otherwise be a resulting uncomfortable situation.

MR. EUGENE F. PORTER: Like many other insurance organizations, Aid Association for Lutherans has been quite concerned about its corporate surplus level for several reasons.

We are very conscious of equity to our various generations of policyholders; therefore, we feel it inappropriate to retain surplus if it will not be needed in future years. In addition, we recently expanded our market. This caused us to wonder what sort of expansion in sales we could reasonably finance without disturbing our basic financial position.

We have routinely compared the ratio of our assets to liabilities with those of other organizations, recognizing at the same time the limitations in the value of such comparisons. As we became more concerned about our surplus position, we made a more refined analysis. We attempted to define all the contingencies which might call for surplus and to associate numerical values with these surplus requirements. Some items on the list would be common to all organizations, and others may be unique to our organization. We wanted to formulate these surplus requirements in order to charge for them in our asset-share calculations. This approach, in combination with realistic interest, expense, and decrement assumptions, seemed better to us than the use of conservative assumptions in the hope that this would produce enough margins. I would like to note some of the items that we considered and to comment on them briefly.

All organizations would want to consider a reserve for asset fluctuation or depreciation. If a company had the great bulk of its assets in bonds and stocks, then the Mandatory Securities Valuation Reserve might well be all the surplus required. A basic question that must be answered in determining the level of this reserve is the kind of economic situation that one is going to make provision for—a recession, a major depression, and so forth. One possible practical answer is a contingency reserve adequate to absorb losses up to the point that regulatory authorities would freeze asset values. In our asset-share calculations we accumulate this surplus item as a percentage of assets charge.

Another reserve that all organizations would probably want to consider is one to absorb fluctuations in mortality and morbidity experience. Since practically all our business is ordinary life insurance, we were most concerned with fluctuations in mortality experience. We attempted to find the limits of chance fluctuation in our mortality by simulating the ex-

perience of our entire volume of insurance in force, utilizing the Monte Carlo technique. We subjected our one million policies to two hundred trials. Incidentally, the resulting distribution turned out to be almost normal. To this requirement for a random fluctuation we added an amount to take care of catastrophic and cyclical variations in mortality. Certainly an organization would want to keep in mind possible benefits under catastrophe or stop-loss coverages that it might have in establishing this reserve. Our asset-share charge for this reserve is related to expected mortality.

An organization might want to support its dividend scale in the event of a decline in the interest rate. If interest rates were to merely dip for a couple of years, it might be better to maintain the scale than to decrease it and shortly thereafter to increase it as interest rates again climbed. The level of this surplus item could be developed by assuming certain reductions in the new-money rate and by determining what effect this would have on earnings. The amount of surplus required would depend on how fast the interest rate dropped and over how long a period one might want to support a scale. Incidentally, a drop in the new-money rate might have little effect on the earned rate for some years if call premiums were treated as investment income. A charge in asset shares for this item might be related to a percentage of assets, a percentage of reserves, and so on.

Another surplus requirement might arise from liquidation losses because of increased demand for cash in times of financial crisis. An organization will have to determine whether or not its cash flow at such times would be adequate.

The surplus required for new business depends, of course, on the future growth rate of the organization. A starting place for estimating this surplus requirement might well be a corporate forecast of new business over a rather extended period. The surplus drain resulting from these issues can then be estimated. With the estimate of this drain and an estimate of the surplus emerging on previous issues currently in a deficit position, one can then determine the amount of additional charge required to support the anticipated growth. And one might also take account of current surplus not needed for other contingencies. Theoretically, the charge could vary with each plan and age, but a simpler formula is very likely required in practice. A decrease in interest rate and/or charges related to insurance in force might be appropriate.

Like other business concerns, life insurance organizations are subject to commercial risks, including but not limited to fire, natural disaster, dishonesty of employees, workmen's compensation, loss of key men, land-

lords' liability, sprinkler discharge, elevator liability, and business interruption. Many are probably covered by some type of insurance. A specific example of a large loss is the destruction of all or part of a home-office building. The largest amount of potential loss, of course, would be the actual damage to the physical plant, the bulk of which is very likely covered by insurance. However, associated with it is the increased expense which would undoubtedly result. My organization is located in a fairly small city. It would be impossible for us to rent a building which would take care of our needs. Hence, some type of temporary structure might have to be erected, and the expense of doing business would be increased for an extended period.

Amounts might be required for future revaluation of reserves, such as future elections of settlement options.

As Mr. Trowbridge has noted in his paper, it would be redundant to hold the sum of the reserves for all the contingencies. We reduced the total amount to be held by application of the Monte Carlo technique, associating probabilities with the various events and assuming certain levels of loss. I certainly agree with Mr. Trowbridge, though, that it is questionable whether one should reduce total surplus by a fairly sophisticated approach when so much guesstimating was involved in the development of the original amounts and assumptions.

MR. CHARLES W. McMAHON: In considering this question of what is an appropriate level of surplus for a mutual company, there is the danger that we will regard surplus in the way the squirrel regards the nuts he has tucked away in the hole of some tree—something that he can dip into and take out whenever he wants to—and will fail to realize that a life insurance company has only assets and obligations.

In considering how much surplus a company should have—this problem in my own instance came up particularly in the question of setting up reserves to improve the income tax situation—the important thing is what will bring more money in and what will stop money from going out.

Another consideration that we encounter very often is this matter of appearances. This is especially important to those who remember well the depression of the thirties. How much surplus should a company have for appearances? Here again, I submit that the problem of surplus and how much you should have is that, when you need it, you do not have enough of it and at any other time it really does not make too much difference.

MR. HARRY WALKER: There is one good reason for a mutual life insurance company's accumulating surplus, a reason that has not been

mentioned heretofore and that may affect the competitive position of the company. Consider the status of a mutual company that for many years has engaged in a line of business that clearly will not be self-supporting, even though no dividends are paid under that line. Instances are the old disability income line in connection with life insurance policies and individual annuities sold on the basis of the old combined annuitants' table of mortality. If a company that had engaged in such a line of business, at rates that have proved to be inadequate, did not have unassigned surplus to draw upon to strengthen reserves, it would have to meet losses on these lines from future premium income from other lines. What, then, will be the attitude of a prospective new policyholder of that company? He would have to face the bleak prospect of future earnings on his line of business being drawn upon to pay for losses under existing business in another line.

Reference has been made to the impact of a large-scale war on mortality. The statement has been made that enough surplus cannot be built up to provide for such a contingency. No one company can possibly safeguard itself against this, but, in the event of a large-scale war, there may be an effort on the part of the industry to pool the surplus resources of all companies to bail out those companies that suffer losses that are more than proportionate to the losses of the industry.

Such an effort was made approximately fifteen or twenty years ago by an industry committee working with the Life Insurance Association on the project of developing a war-risk pool. For many reasons the effort was tabled. If such an effort should be made again, and successfully, the surplus funds of all companies combined would be drawn upon.

MR. JOHN M. BRAGG: It seems to me that the methods that are advocated by some security analysts to adjust both surplus and earnings are neither logical nor desirable.

The value of a life insurance company stock has something to do with the funds that are available, either now or in the future, out of which cash dividends can be paid to the stockholders. If the statement earnings are \$3 per share, presumably this is an amount that could be used to pay cash dividends (although we know that a large part of it is likely to go for surplus increase). But these security analysts will suddenly turn the \$3 into \$5 and call it adjusted earnings. This seems to me to be entirely illogical. The extra \$2 is not available for cash dividends, and, if you buy the theory that the future cash dividends are the only determinant of the value of stock, that extra \$2 is just so much nonsense.

The logical thing for these security analysts to do, I think, would be for them to project earnings for, say, ten or twenty years, perhaps in the

form of a compound annual growth rate, such as is done by analysts of utility stocks.

MR. DWIGHT K. BARTLETT, III: Most of our discussion has concerned itself with investment and mortality elements. I wonder whether the worst danger that we face is not the matter of runaway inflation? I wonder also whether a higher expense level was anticipated in the figures that Mr. Bowles showed us?

MR. BOWLES: Yes, it was. We assumed in the sustained, less favorable experience that per policy expense would be increased 50 per cent and that per thousand expenses would be doubled.

The problem with us actuaries is that for so many years we have not realized that, regardless of what we think, the investment analysts are going to adjust. We have to decide whether we are going to give them guidance or say, "You can't do it."

A number of actuaries have felt for a long time that it is not right for actuaries to stay in their ivory towers and talk about what the investment analysts should or should not do but that we should get in and mix punches with them. The Conference of Actuaries in Public Practice last month appointed a committee on adjusted earnings. The purpose of the committee is to take vigorous leadership in this area, working on techniques for adjusting earnings properly. The committee was also authorized to establish liaison with the American Institute of Certified Public Accountants.

The official name of the analysts is the Association of Insurance and Investment Analysts in New York City, and that group was represented at a meeting of the Conference Committee, as was the American Institute of Certified Public Accountants, through that person on the Insurance Auditing and Accounting Committee of AICPA who will be heading the committee's work on life insurance accounting.

The important thing now is that actuaries are going to be in a position to influence the judgment of the analysts in techniques of adjusting earnings.

MR. DALE R. GUSTAFSON: There seems to me to be a tacit assumption abroad in the land, perhaps even rife in this room, that the earnings shown in the Convention Blank are conservative, and conservative is a euphemism for criminally understated. No one has ever demonstrated that this conservatism is truly there.

AICPA has a committee called the Insurance Accounting and Auditing

Committee, which is working on an audit guide for life insurance companies. This is the body that produced a year ago, after nine years of effort, an audit guide for fire and casualty companies that is widely accepted among accountants but not yet by the fire and casualty insurance industry. In response to an invitation by this Committee, an industry committee was appointed by ALC-LIAA, the Joint Committee on Financial Reporting Principles, to deal with this matter for the insurance industry. The industry committee met informally with the accountants' committee in June in a get-acquainted session. The accountants promised to put together a list of all differences between generally accepted accounting principles and the principles of life insurance accounting for consideration by the industry committee. The list has not yet been received.

Financial analysts are limiting themselves to a very narrow approach. They merely want to produce supplemental or additional data for the information of investors and prospective investors. Accountants, on the other hand, if they follow what they have done with the fire and casualty industry, would be, in effect, attacking the validity of life insurance accounting under the guise, perhaps, of adjusted earnings. That may be what the accountants are interested in, but that is not the mechanism that they can use. The mechanism that they can use is the application of generally accepted accounting principles to the life insurance industry, and there is no other way to interpret this than as an attack on the validity of the Convention Blank.

MR. WILL R. MULLENS: The investment analysts with whom I have talked seem primarily interested in arriving at an adjusted earnings figure on a basis which will permit meaningful comparisons of one company with another. If they could get one earnings figure acceptable to all analysts and reasonably acceptable to the companies as a starting point, then from that point on their job would be to decide for each particular company the multiple to be applied as a measure of price.

MR. BRUCE W. BATHO: I think that most of us, perhaps all of us, already recognize that, if we ever do agree on a proper basis of adjusting earnings, we may no longer have a Phase I or a Phase III federal income tax but only a Phase II federal income tax based on adjusted earnings.

MR. WILLIAM M. ANDERSON: In Canada the report of the Royal Commission on Taxation, the so-called Carter report, has, among other things, endeavored to state how the life insurance industry and its policy-

holders should be taxed. Their recommendation that the life insurance business should be taxed on its business income in the same way that other businesses are taxed has led me to try to rationalize what business income is. This process leads to a rationalization of what surplus position is, since it is the historical record of past business income less such dispositions as taxes, shareholders' dividends, and so forth.

With most nonfinancial corporations, income for tax purposes is a considerably different thing from the earnings that shareholders presumably take into consideration in determining the market value of the company's stock. It is not uncommon to find corporations, particularly younger and growing ones, with negative income for tax purposes, and, if this is reflected in the balance sheet, they are for tax purposes continually insolvent. This happens in the extractive industries and in rapidly growing businesses which can charge off immediately research and development expense. The share prices, however, indicate that the public attaches some kind of positive value to their prospective earnings power. The shareholder does not buy the company's balance sheet but its future earning power.

The problem of determining business income of a life insurance company for tax purposes revolves largely around the kind of label attached to policy obligations.

If the business of a life insurance company is split into two parts, using as a criterion for the split whether the gross premium charged for the contract is above or below the net level zero premium (the net level premium at 0 per cent interest and the mortality table appropriate for valuation), the great bulk of the term business is in the first category, where the premiums charged are higher than the net level zero premium. I feel that for this type of business we should be allowed a comparable method of valuation to the fire and casualty company, where the full unearned premium is the admitted liability. This would give us higher reserves for tax purposes than we have at present, and in a growing company this would give us higher increases.

For permanent business, where we generally charge premiums below the net level zero premium, we are essentially in the same position as a savings institution that issues debentures or a nonfinancial institution that borrows money on bonds or mortgages. Such a taxpayer values its liability using an implicit rate of interest which connects properly its intake and output and does not, as in the life insurance business, remove part of the intake as a loading for expenses and then accumulate at a higher rate of interest to provide for the output.

Applying this method to the life insurance business (excluding annui-

ties) would produce valuation interest rates which I estimate to be about $1\frac{1}{4}$ per cent less than those we have been using in United States and Canada; therefore the reserves for tax purposes and the reserve increases would be about one-seventh greater than the present statement amounts. This approach would, of course, abolish business income for many companies; in fact, on a net basis it would abolish it approximately for the entire industry, and make aggregate assets and liabilities about equal.

I feel that we should study this approach, because life insurance is not taxed in the same manner as other businesses. We believe that it is taxed more heavily, but so far we have not been able to demonstrate this. The Carter report may have given us the lead. We should take the view that we are a strong enough industry not to need tax favoritism but also that we are not deserving of tax discrimination. However, it is up to us to prove this.

If we could divorce the shareholder's view of surplus from that of the tax collector, as other corporations seem to have done, we might find that not only would we be in a more satisfactory position under the tax laws but in the process the shareholders of our stock life insurance companies might be able to form a little more intelligent view about the value of life insurance shares, since they would be discounting future earning power rather than paying misdirected attention to published or adjusted surplus positions.

Contingency Reserves

- A. What are the reasons for establishing contingency reserves?
- B. What factors indicate whether a contingency reserve should be shown above the line as a liability or below the line as a part of special surplus funds?
- C. What formulas are used to determine the amount of the allocation to group contingency reserves and the maximum size of such reserves for (1) group term, (2) group health insurance, and (3) group annuities and group permanent?

MR. WILL R. MULLENS: May I start with the definition of the surplus of a stock company given on line 30 of page 3 of the Annual Statement? In adopting this definition, we include all special surplus funds and contingency reserves that a company puts below the line, as well as capital funds. For the present, at least, we will regard capital as a contingency reserve which, if invaded, automatically produces an involuntary change in management.

Having defined surplus, how big should it be? In one sense this is a very easy question. It should simply be so large that the company never becomes insolvent. Recognizing that there will be various opinions on this, I checked on the size of the surpluses of the ten largest stock and mutual life insurance companies measured by assets. I determined the ratio of assets to liabilities for each of these twenty companies and noted the pattern which emerged. For the ten mutual companies the range was 104.6–109.0 per cent, with an aggregate ratio of 106.6 per cent. For the ten stock companies the range was 107.3–123.4 per cent, with an aggregate ratio of 112.5 per cent. Since the ten mutual companies are substantially larger than the ten stock companies, and since the amount of assets might have some bearing on the ratios, I then paired each of these ten stock companies with a mutual company of roughly the same assets. This change produced relatively little change for the mutual companies, which then ranged from 105.2 to 109.9 per cent, with an aggregate of 106.5 per cent. The bigger companies did not necessarily have lower ratios or vice versa.

No consideration was taken of the fact that some of these companies may have had substantial contingency reserves above the line which might change the picture as well as other factors which a more detailed study might have revealed. Even though this comparison is rather crude, I rather suspect it is generally true that stock companies' surpluses are relatively larger than those of comparable mutual companies. Several reasons could be advanced:

1. Stock companies have capital funds which mutual companies do not have which would be reflected in the ratio of assets to liabilities. I am inclined to

think that this is not a very good reason, since capital funds may be used by companies to protect their policyholders in case of catastrophe, just as surplus funds are.

2. Since stock companies generally have smaller margins in their premium rates than mutual companies do, they should hold more surplus funds. This is a fairly good reason. Mr. Trowbridge points out in his paper that a satisfactory measure of adequacy of surplus would seem to involve insurance risk as well as investment risk.

3. One might suggest that stock companies tend to reserve at higher interest rates and on modified reserve bases, thereby producing larger ratios of assets to liabilities. I am not sure that this is a very good reason over the long haul, either.

It is interesting to note that, if the ten largest stock companies had the same average of assets to liabilities as the mutual companies of approximately equal size in total, they would be holding about \$1.1 billion less capital and surplus. You may draw your own conclusions as to whether this is related to the fact that a number of stock companies have formed or are now forming holding companies with, in many cases, the announced intention of diversifying their operations and utilizing their capital funds more effectively.

In my comments so far, I have assumed that surplus is statutory surplus, as reported in the Annual Statement. Mr. Trowbridge and others have pointed out that almost an infinite number of other definitions are possible, including the variety of adjustments made in statutory surplus by security analysts and others. The analyst usually tries to determine to what extent this surplus falls short of reflecting stockholders' equity and to adjust it accordingly. Naturally, for a stock company writing both par and nonpar, only that portion of surplus and contingency reserves allocable to stockholders should be considered in stockholders' equity. Most analysts have less concern with adjusting surplus than with adjusting earnings. An acceptable approach to adjusted surplus might be much easier to come by once the question of adjusted earnings is resolved.

Most analysts would appear to add back immediately into statutory surplus the following reserves:

1. Mandatory Securities Valuation Reserves
2. All deficiency reserves
3. All contingency reserves below the line
4. Any reserve which is a product of regulatory authority, which most companies do not set up
5. Some of the contingency reserves above the line, based on the company's explanation for and justification of each, according to the analyst's judgment

As a final item of adjustment, the analyst may then adjust for the value of business in force, presumably based upon the present value of future profits. I imagine that all analysts agree that this last adjustment is pretty arbitrary. In my opinion, the maximum that the analysts can hope to achieve is a method for adjusting the surplus which will put the companies that he is studying on a reasonably comparable basis.

As an alternative to the adjustment for the value of business in force, recent suggestions have involved (1) valuing policy reserves on the basis of the average rate of interest earned, (2) amortizing acquisition expenses, and (3) adjusting policy reserves to a common reserve method.

I hope that analysts avoid a gross premium valuation or other quantitative approach to the estimated value of business on the books. Actuaries' estimates of such things have been far off the mark on many occasions. I hope that either earnings or surplus adjustments would be tied so far as possible to retrospective facts rather than prospective conjectures.

I agree with Mr. McLean's comment¹ that any earmarking of surplus as contingency funds has no significance and cannot change what is really surplus into a liability. Nevertheless, such earmarking may have the virtue of reminding us of certain weak spots where lightning appears most likely to strike. On the other hand, the use of this device to stabilize earnings appears rather pointless now since the sophisticated analyst is going to spot this quickly and make adjustments for it.

I thought that it would be rather interesting to see just what kind of voluntary reserves could be easily spotted in the annual statements of some of the stock companies with which we exchange statements. The results are based on the statements of twenty-four stock companies, all with over \$100 million in assets. The following were found above the line in statements of one or more companies:

	No. Companies
Contingency reserve for prior years	1
Federal income taxes	3
Deferred-benefit funds	1
Special reserve	1
Investment-fluctuation reserve	6
Reserve for future revaluation of policies	2
Reserve for stabilization of reinsurance experience	1
Reserve for stabilization of health insurance experience	1
Mortality-fluctuation reserve	1
Provision for employment contracts	1
Amounts held for group policyholders	4

¹ TSA, XI, 808.

UNASSIGNED SURPLUS AND CONTINGENCY RESERVES D511

	No. Companies
Self-insurance reserve—property and casualty.....	1
Reserve for equalization of interest, mortality, and expenses..	1
Miscellaneous.....	1
Reserve for contingencies.....	1

The following items were shown below the line in one or more companies:

	No. Companies
Group contingency reserve.....	7
Special contingent reserve fund for separate accounts.....	1
Special reserve.....	1
Reserve for contingencies.....	5
Additional reserve for fluctuation in value of securities.....	4
Reserve for proposed changes in policy-valuation standards...	1
Special epidemic and catastrophe reserve.....	1

Of the seven different categories of special reserves shown below the line, five had what appeared to be reasonably close counterparts above the line in some other company. Of the twenty-four companies, five carried no apparent earmarked contingency reserves or special surplus funds either above or below the line.

I have rather mixed emotions about the effect of earmarked funds on the various publics that we serve, but I do fear that some critics could say, "Whom are they trying to fool?" Neither policyholders nor stockholders are hurt by such earmarking of funds. They might even be helped to the extent that such earmarking could discourage the inappropriate use of surplus funds. Nevertheless, it should probably be emphasized again that all contingency reserves and all surplus funds are still available for all contingencies, whether specifically earmarked for such contingencies or not.

MR. DALE R. GUSTAFSON: One definition of contingency reserves is "An amount of surplus identified as not being available for distribution as dividends to stockholders."

In spite of what Mr. Mullens has just said about the contingency reserves of the various companies that he listed, I think that contingency reserves, by whatever name, are generally thought of as being below-the-line items. I quote from Section VIII of the *Examiner's Handbook* of the NAIC: "No reserve reported 'above the line' should be labeled contingency reserve." Presumably, the companies that Mr. Mullens referred

to will be encouraged to move those items from above the line to below the line on their next examinations.

When my attention was brought to Section VIII of the *Examiner's Handbook*, I considered it a reasonable guide to placing items above the line or below the line. The *Examiner's Handbook* identifies, among the permissible above-the-line items, investment reserves related to individual properties and specific investments. Obviously they made an exception to that themselves in putting the MSVR up there.

Reserve strengthening, to be above the line, should be in response to an instruction from and commitment by the board of directors and in accordance with a specific plan moving toward a specific goal. Other items that may be above the line must relate to a specific event or contingency that can be identified and must have a measurable probability that can be computed.

The *Examiner's Handbook* for below-the-line items includes everything else, with this final statement: "The earmarking of any part of surplus as a Special Surplus Fund is a prerogative of management. Therefore, examiners should not change a special surplus item." That is in conformity with what has been said here—that surplus is surplus, whatever you call it, and that identifying amounts of surplus has no bearing on solvency. It may have an informative value, and I think that is where it does have some real value, for management, for stockholders, and even for policyholders.

A cursory analysis of the items set up by a large number of companies, including their reasons for setting them up and the formulas for them, comes down very simply to the Missouri and New York bases for group life and accident and health, that is, 2 per cent of premiums each year with a goal of 50 per cent of premium income as the ultimate, sometimes with the caveat that the amount added per year shall not be greater than the gain from operations in that line of business. There was no other formula in more than isolated cases.

For group annuities there was a wide variety of formulas, most of them a percentage of the gain from operations or a small percentage of the funds of group annuities, with a wide variety of goals. The most common formula stated by the companies is "judgment of management."

MR. EDWARD A. GREEN: I recently worked up a three-way table showing the relationship between current operating gain, current growth rate, and surplus or contingency reserve level, all expressed as a percentage of net premium.

This base seems a reasonable one to measure the risks against which a

UNASSIGNED SURPLUS AND CONTINGENCY RESERVES D513

surplus or contingency reserve is needed for group term coverages. Obviously, the movement in the ratio of surplus or contingency reserves to net premium is a function of the rate of growth of the latter and the level of operating gains. The math of the accompanying tabulation is relatively simple.

MAXIMUM PERCENTAGE GROWTH PERMITTING MAINTENANCE OF:			
	20 Per Cent Surplus	35 Per Cent Surplus	50 Per Cent Surplus
Operating gain (per cent):			
1.0	5.3%	2.9%	2.0%
1.2	6.4	3.6	2.5
1.4	7.5	4.2	2.9
1.6	8.7	4.8	3.3
1.8	9.9	5.4	3.7
2.0	11.1	6.1	4.2
2.5	14.3	7.7	5.3
3.0	17.6	9.4	6.4
OPERATING GAIN REQUIRED TO MAINTAIN:			
	20 Per Cent Surplus	35 Per Cent Surplus	50 Per Cent Surplus
Growth (per cent):			
2.5	0.5%	0.9%	1.2%
5.0	1.0	1.7	2.4
7.5	1.4	2.4	3.5
10.0	1.8	3.2	4.5
12.5	2.2	3.9	5.6
15.0	2.6	4.6	6.5

From the accompanying tabulation and from an examination of the current operating-gain and growth records as set forth in the published annual statements of a number of companies, I have come to the conclusion that the combined surplus or contingency reserve for combined group term life and health insurance, while increasing absolutely, must be decreasing as a percentage of net premium for many companies.

This is due, of course, to both the relatively rapid rate at which group term premiums have been growing in recent years and the low operating-gain margin on which the business is being operated. The recent tendency of the costs of doing business to rise faster than productivity can be increased over any short-range period has put even further pressure on operating gains.

How long the downward trend in ratio of surplus or contingency reserves to risk, as measured by net premium, should be allowed to continue is, of course, a matter of judgment. While details of surplus by line are not shown in the Annual Statement, it may well be that for the group term lines they would be at a questionable level now if it were not for the availability of interline surplus as a protection against insolvency, on a temporary basis at least, in event of serious adverse fluctuation in experience.

If growth continues unabated, the need for higher current operating-gain margins may become apparent.

MR. WILLIAM M. ANDERSON: Reference has been made to the 2 per cent contingency reserve that most companies are required to hold in relation to group life and accident and health premiums. In the federal income tax law there is a somewhat similar type of allowance in relation to nonpar premiums; under Phase II, 3 per cent of nonpar premiums can be taken as a deduction from income.

If things change so that the federal income tax law provides a tax at corporate rates on so-called business income, something of the character of the present combined Phase I and Phase II income, one of the problems that we will still face is the problem of the state premium taxes, approximately 2 per cent of insurance premiums less dividends across the country and, of course, deductible from income for Phase II purposes. In the opinion of many people, these taxes, since they are not levied in comparable fashion on any other class of financial business except the nonlife insurance business, are discriminatory income taxes. Many people believe that they ought to be deductible from federal income tax rather than from the federal income tax base. There are difficulties in the way of deducting one tax from another. Most countries have encountered this problem in the field of foreign tax credits and have found it awkward.

But suppose that we look at these 2 per cent group reserves in a slightly different fashion and say that, if we can get deductibility from income of a 2 per cent premium tax and also a 2 per cent premium contingency reserve, the effect is about the same as being allowed to deduct the premium tax from the income tax. This might be a way of getting rid of the double-tax burden created by the state premium taxes, but it would be better from the point of view of the industry than direct deduction from tax, because it would enable us to retain on a mandatory basis this group contingency reserve of 2 per cent of premiums even though they would be above the line. Under those conditions we would get federal tax relief and at the same time establish something compatible with the type of future

hazards that we face. Not only could companies be required to accumulate reserves of 2 per cent of premium but those reserves would be available for the pooling among companies of awkward losses, such as war losses that might occur at some future times.

DR. LOUIS GARFIN: It is my view that, if you set aside 2 per cent a year and make no provision for the use of the contingency reserve, it is pointless to establish the reserve.

CHAIRMAN MENO T. LAKE: Looking now at Question A in particular, we have quite a variety of contingency reserves being held above the line, and yet the NAIC handbook says that no general contingency reserves are supposed to be held there. Yet, if we put them below the line, they are exactly the same as unassigned surplus. This almost boils down to saying that there are no good reasons for real contingency reserves.

MR. HENRY S. BEERS: Possibly in some cases contingency reserves are set up in order to either clarify or simplify an argument between a division head and management. A line of business has been running very well, and the division head is boasting about it. Management's view is that the earnings may be temporary and a period of losses lies ahead, so that credit for the earnings would be premature. The disagreement is resolved by putting these earnings in a contingency reserve until it is evident that the pessimism is unwarranted.

This sounds silly, perhaps, but sometimes these management relationships need something like this to keep them straight.

Reserve for Phase III Tax

Should a liability or contingency reserve be set up for the Phase III tax on policyholders' surplus as defined in the Life Insurance Companies' Income Tax Act?

MR. DALE R. GUSTAFSON: The question of making provision for a future Phase III federal tax is one that accountants have become interested in. One of their committees has just sent out an exposure draft on the proper allocation between years and lines of business to income tax, including in the draft a reference to the Phase III problem but with no recommendation for handling it.

Judging by this draft accountants are coming close to establishing a flat condemnation of what they call discounting. If a liability is recognized for an amount due ten years hence, in auditing that statement, that amount is set up as a liability today.

MR. ROBERT G. ESPIE: I think that it is entirely proper for us to measure the probability of having to pay something in the future and then to discount it, and, if the present value on a reasonable basis is negligible, we should not put up any reserve for it. Many companies may be in the position where the expectation of paying any Phase III tax in the foreseeable future is very small indeed. In such a case, I see no reason for a reserve.

I suggest that, if we set up a liability for the deferred Phase III taxes, we are saying to the government that we have the cash to pay all this tax now without going insolvent. This would be much too tempting to the Treasury.

MR. WILLIAM M. ANDERSON: There is the problem of the capital gains tax when it applies in predictable form, such as the deep discount municipal bonds many of us buy. Under the current tax rules the profit at maturity or at sale will be subject to capital gains tax.

Our company, North American Life Assurance Company, has adopted the practice of accruing that tax while we are holding the bonds. We think that it is improper to pay this particular tax at maturity and not to provide for it as we accrue the discount. We decided to carry this accrual in the tax reserve, not through an artificial type of accumulation of the bond.

I suggest that, from the general point of view, if there is any case for providing in advance for future taxes, the case is a sound one only if provision for it can be held in tax reserves. As many of you know, a number of the nonfinancial corporations do this when they take accelerated de-

UNASSIGNED SURPLUS AND CONTINGENCY RESERVES D517

preciation for tax purposes and accumulate the difference in resulting taxes in their tax reserves.

MR. JOSEPH R. PICKERING: I have heard that the same reasoning behind carrying a deferred-tax reserve for accelerated depreciation is leading accountants to say that life insurance companies should set up a deferred-tax reserve after making the 818-C election.