

VALUATION OF LIFE INSURANCE COMPANY ASSETS

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THE manner in which the assets of life insurance companies are valued varies a good deal between countries. In Great Britain this is left very largely in the hands of company managements who use their own judgment in the matter, frequently changing the basis on which assets are valued as circumstances seem to warrant. They have the same latitude in valuing liabilities. In Canada, also, managements have considerable flexibility in asset valuation, particularly with respect to common stocks. However, in the United States the basis of valuation of life insurance assets is quite rigidly defined, and this situation seems likely to continue.

Valuing the assets of a life insurance company is not an exact science. No system devised to do this is likely to approach perfection or, in fact, to be free from substantial basis for criticism. However, it is possible to specify certain general objectives toward which one should aim in establishing such a system. It should first of all be easy to explain not only to people within the industry but to the general informed public, including policyholders and stockholders. A system which requires complicated footnotes should be avoided. It should conform as largely as is practical to generally accepted accounting principles. It should be reasonably simple and should certainly not be made more complicated than past factual investment experience seems to warrant. Intricate rules and valuation processes based on highly hypothetical and unproved assumptions should not be allowed to creep in. Most important of all, it should attempt to value assets as realistically as is practical on the assumption that the company involved is a going concern, its assets are being held on a long-term basis, and any forced liquidation of these assets is unlikely. An analogy may be drawn between amortization of bonds by a life insurance company and depreciation of fixed assets by another type of company. The kernel of this analogy is that the difference between initial value and terminal value is allowed to flow through to operations on a stabilized basis, with no regard to interim fluctuations in the market value of the asset.

The solvency of a life insurance company in a time of economic stress is not likely to be importantly determined by the technical details of any system for valuing assets. This is much more likely to depend on

such things as liquidity and cash flow. No valuation system, however expertly devised, can possibly exert more than the very roughest check on the quality of assets and should not be counted upon to do more. Such a system should not be regarded as even a partial substitute for adequate management. In the Great Depression of the 1930's quite a few life insurance companies became highly insolvent in spite of the actual pledge of assets with state insurance departments supposedly to back in full the reserves on their policies and in spite of the rules then in existence for stabilizing the value of those assets.

The present system of valuing life insurance assets in the United States has developed through a process of evolution. Such reserve liabilities are rigidly defined and not subject to change in their basis of valuation as in Great Britain, and company surpluses are equal to only a small fraction of total assets—in New York they are limited by law to not over 10 per cent of a company's liabilities and therefore a lower proportion of assets. It follows that any substantial or sudden change in the value of assets would affect surplus by an equal dollar amount. Since surplus is generally equal to only a small proportion of assets, any proportionate change in asset values would result in a vastly greater proportionate change in surplus. This makes the stabilization of asset values, as a necessary step toward the stabilization of surplus, not only highly desirable but practically essential. However, such stabilization of asset values should not be confused with the preservation of asset quality. Responsibility for the latter must of necessity rest almost entirely on management.

AMORTIZATION OF BONDS

The arguments for and against valuing bonds at amortized values have long been debated. The principal argument in favor of amortization is that it produces stable values which are almost a must in connection with the system of insurance accounting used in the United States. Amortization of bonds is based on the assumption that a life insurance company is a going concern and that it will probably hold most of its bonds to maturity and in any case will not be forced to liquidate them prior to that time. It also assumes that interest and principal will be paid on schedule. Also under the American system of valuing insurance company liabilities, in contrast to the British system, interest assumptions tend to be frozen, and therefore it would seem only appropriate to stabilize interest income to the extent possible.

The principal argument against amortization of bonds is the possibility of overstating values in the event market values drop as a result

of credit deterioration on the part of the obligor or as a result of rising interest rates. Also the carrying of bonds at amortized values might tend to discourage otherwise advantageous and desirable sales if this would result in book losses which would reduce the company's surplus. However, today most of the bonds owned by life insurance companies represent direct placements which have no market values, so that the above arguments have become rather academic and amortization is the generally accepted method of valuing bonds in good standing owned by life insurance companies in the United States. This is certainly consistent with the method of valuing mortgage loans.

The first and major step toward stabilization of asset values of life insurance companies in the United States occurred in the early years of this century when it was agreed that adequately secured bonds would be carried at amortized values. Taking into account the fact that mortgages not in default have always been carried at face value, this assured that 80 per cent or more of the assets of most life insurance companies would be carried at values which were stable. The practice of using bond ratings assigned by recognized rating agencies to determine which bonds could be considered amply secured came into use during the Great Depression, at which time many bonds were falling from grace. In 1932 the New York Insurance Department ruled that bonds of companies doing business in that state, to be considered amply secured, must fall within one of the first five rating grades of the then four existing rating agencies.

In 1940 the National Association of Insurance Commissioners (NAIC) adopted a modification of the New York requirement for amortization. It required that bonds to be amortizable must fall within the top four grades of two of the agencies, within the first five grades of three of the agencies, or in the first five grades of two of the agencies, provided that in addition they were priced at 55 or better in each of the months of September, October, and November preceding valuation. Soon thereafter this price test was abandoned and a yield test substituted. The requirement was that bonds to be amortizable must sell to yield not more than a specific amount above the yield on taxable United States Treasury bonds of equal maturity.

Thus a cumbersome and increasingly laborious system of rules for valuing bonds tended to evolve which was soon made obsolete by the march of events, as is frequently the case with such systems. The rapid development in the years following World War II of directly placed bond issues, which had neither agency ratings nor market values, rendered the rules for amortizability based on these two factors increasingly

useless. It was therefore considered necessary to devise a new set of qualifying tests for amortization and to supplement these by requiring the setting-up of reserves to absorb possible losses. The theory behind the establishment of such reserves, where none had heretofore existed, was probably that on the new basis bonds of indifferent quality and not heretofore amortizable might qualify for amortization. Therefore a compensating reserve should be set up to offset the possible overvaluation of amortized bonds.

The tests used to determine amortizability are almost of necessity based on certain statistical ratios, the most important of which have to do with the number of times fixed charges are earned and the ratio of debt to the total capitalization of the company involved. These tests are somewhat complicated, and only some of their more important requirements will be briefly outlined here. In order to pass Test 1, which makes a bond amortizable and also assures for it the minimum loss-reserve requirement, the corporation must have earned the fixed charges on the bonds involved, and on all bonds equal or prior thereto, one and one-half times on the average in the preceding five years. It also must have earned these charges at least one and one-half times in one of the two preceding years. In addition, its long-term debt, which is senior or equal to the bonds under consideration, must not exceed a stated percentage of its total capitalization. In the case of industrial companies this limitation is 50 per cent, and in the case of public utility companies it is somewhat higher. Bonds meeting Test 1—which is, incidentally, very easy to meet—accrue under present rules a loss reserve at the minimum rate, which is currently $\frac{1}{20}$ of 1 per cent per annum until a total reserve equal to 1 per cent of their asset value is established on behalf of such bonds.

Bonds meeting Test 2, which is still easier to meet than Test 1, are still amortizable but require a higher loss reserve. Test 2 specifies coverage of fixed charges of only one time, where Test 1 specifies one and one-half times. Test 2 also specifies certain working-capital and cash-flow requirements which become pretty complicated. Bonds meeting Test 2 but not Test 1 must currently accumulate a loss reserve twenty times as great as those meeting Test 1, namely, at the rate of 1 per cent per year until a reserve equal to 20 per cent of the asset value of such bonds is established.

Income bonds, perpetual bonds, bonds in default, or bonds meeting neither Test 1 nor Test 2 are not amortizable, except at the discretion of the staff of the NAIC. Currently these must usually be carried at market value, if they have market values, or otherwise at values decided upon by the staff of the NAIC.

AVAILABLE EXPERIENCE DATA ON CORPORATE BONDS

The available data on corporate-bond experience encourage only the broadest assumptions regarding future loss experience. The principal body of information on this subject is that contained in an exhaustive and somewhat exhausting study made under the auspices of the National Bureau of Economic Research. It covered the experience of some \$56 billion of corporate bonds outstanding in the United States from 1900 to the end of 1943. This study did indicate that there was considerable correlation between the rating of bonds by the various rating agencies and their subsequent default records. It did therefore provide mild justification for basing amortizability on these ratings when they are avail-

TABLE 1
DEFAULT RATES FROM CORPORATE BOND STUDY OF
THE NATIONAL BUREAU OF ECONOMIC RESEARCH

Agency Rating	Default Rate (Per Cent)	Times Charges Earned	Default Rate (Per Cent)
I.....	5.9	3.0 and over	2.1
II.....	6.0	2.0-2.9	4.0
III.....	13.4	1.5-1.9	17.9
IV.....	19.1	1.0-1.4	34.1
V-IX.....	42.2	Under 1.0	35.0
No rating....	28.6		

able. This study also showed substantial correlation between coverage of fixed charges by earnings at the time of issuance of such bonds and their later default record. For example, it revealed that corporate bonds which showed coverage of fixed charges at the time of issuance between 1.5 and 1.9 times later had close to an 18 per cent default rate over their subsequent history. This scarcely indicates that coverage of such charges of $1\frac{1}{2}$ times, as required in Test 1 described above, is sufficient to establish a bond as anywhere near default proof. The study also revealed that bond issues which showed fixed charges covered between 1 and 1.4 times at the time of issuance later had a default rate of 34 per cent. This indicates how utterly meaningless in determining bond quality is the earnings test used in Test 2 described above (Table 1).

This study of the behavior of corporate bonds revealed other things as well. Take the case of railroad bonds, which composed 59 per cent of the corporate bond holdings of life insurance companies as recently as the end of 1931. The record of these was quite good during the first three

decades of this century, and there were only about \$60 million of such bonds in default at the end of 1931. However, by the end of 1939 about \$3 billion of such bonds, comprising about one-fourth of the total debt of the railroad industry, had achieved default status. On the other hand, the record of public utility bonds from 1900 to 1943, excluding those of street and interurban railroads and holding companies, had been almost perfect. The record of street and interurban railroad bonds was very bad. This almost-perfect record of the bonds of operating public utility companies, other than street railways, has continued up to the present.

With respect to industrial bonds, which have contributed the great increase in corporation debt in recent years, as well as the great increase in life insurance company bond holdings, it is difficult to generalize. In 1931 the volume of these outstanding was less than half the volume of either railroad or public utility bonds, so that the depression experience of industrial bonds is rather limited and possibly not very applicable to the huge volume of such bonds outstanding today. With such factors in the background the futility of attempting, through some statistical process, to build a basis for estimating future losses on bonds becomes rather obvious.

Similar difficulty attends any attempt to judge the basic soundness of a bond entirely by the use of a few statistical ratios. Defaults and losses on bonds seem in the past to have depended more upon the industry involved than on the particular company within an industry. The record of railroad and public utility bonds in the Great Depression is an excellent example of this. Also, such losses have not been evenly spaced but have tended to come in waves whose height and violence have been quite unpredictable in advance. Therefore the adequacy of any reserve accumulated to absorb future losses cannot be determined in advance, and any great refinement as to the method of its calculation seems difficult to justify. Certainly the assumption made in recent years that the bonds of a company, without regard to the industry involved, that earns its fixed charges less than one and a half times require a loss reserve twenty times as high as the bonds of another company, again without regard to industry, that earns its fixed charges over one and a half times seems to be an unrealistic approach.

Using the number of times that fixed charges may be earned as a principal criterion of bond quality is itself open to considerable question. For example, an amount of earnings sufficient to cover a 3 per cent rate of interest two and one-half times will cover a 6 per cent rate only one and one-fourth times. It is true that interest rates tend to vary with bond quality, but they vary a good deal more with money-market con-

ditions. During the late 1940's railroad bonds, which have since lost all pretense of quality, were sold to yield as little as $3\frac{1}{8}$ per cent, while in the years 1959 and 1960 some public utility companies had to pay 6 per cent for bond money. Also, stated earnings of a given company may be made to vary a good deal by the use of varying accounting methods. More liberal depreciation charges will lower earnings, as will also the expensing rather than the capitalizing of property improvements. Likewise the bonds of a company with a heavy cash flow resulting from heavy depreciation or depletion accruals will normally be better secured than those of a company which lacks such cash flow from these sources. This writer does not favor a system for determining bond amortizability and the setting-up of loss reserves which may discriminate against the obligations of a borrower just because he is paying relatively high interest rates due to a high money market only or because his accounting methods are on the conservative side.

Past experience has proved that the incidence of investment loss was largely unpredictable, and it is likely to remain so in future. Back in the 1920's railroad bonds were rather widely considered to be the cream of corporate bonds, and most investors preferred them to public utility bonds, which at that time were considered in some conservative circles to be new-fangled and unproved investments. That is probably why in 1929 the life insurance companies owned about twice as many railroad bonds as public utility bonds in spite of the fact that the total amount then outstanding in each category was about equal. Railroad bonds carrying quite high ratings went into default a few years later, while public utility bonds with mediocre ratings weathered the storm. But how many were able to predict that in advance and will be better able to predict such things in the future?

NONAMORTIZABLE BONDS

Bonds owned by life insurance companies which are nonamortizable usually represent only a small fraction, say 1 to 3 per cent, of total bond holdings. They fall into this category for a number of reasons. A few are bonds in default. Some failed to meet the requirement of Test 2, either because they are obligations of new enterprises with very little record of performance or because of a decline in earnings. Then there are income bonds, some of which are railroad bonds of quite high quality but currently classed as nonamortizable. These bonds must be carried at market values, where such a market value exists, or otherwise at values based on the judgment of the staff of the NAIC.

From reviewing a list of such nonamortizable bonds it would seem

that a substantial proportion of them is of a quality equal to some bonds which are amortizable. In this category are a number of income bonds of railroads, a notable example of which is a bond issue of the Santa Fe Railroad, obviously a high quality issue. Such nonamortizable bonds also include issues of relatively new utility operating companies which have not had enough time to hit their earnings stride.

It would greatly simplify the valuation process if all bonds not in default as to interest or principal could be made amortizable. This would be consistent with the present practice regarding real estate mortgages. As a compensating factor in the direction of conservatism, the rate of accumulation of the reserve against losses might be increased modestly for all bonds. The volume of bonds to be affected by such a change would be very small in proportion to the total, but the entire valuation process would be greatly simplified. It would enable the statistical tests of bond quality now in use, which in the opinion of this writer are rather devoid of meaning anyway, to be eliminated. It is not the purpose of this writer to suggest that better statistical tests might have been devised to do the job which is intended but merely to express grave doubt that it is possible to devise any set of tests based only on statistical factors to do this job. Quite possibly the suggestion that such tests be eliminated entirely is too radical a proposal in the direction of simplification in an era when the trend is entirely the other way. It should, however, be given serious consideration as one way of reducing the cost of running the life insurance business.

PREFERRED STOCKS

Preferred stocks have hitherto represented only a tiny fraction of life insurance company assets, but due to the current tax advantage of dividend income, particularly to some companies, their relative importance to these companies has greatly increased. Preferred stocks are fixed income securities, and as long as they remain of good quality their market prices fluctuate largely with money market conditions. Recently, due to heavy demand from some life insurance companies in the face of a quite limited supply of new issues, the yields on preferred stocks have declined and the market prices of outstanding issues have risen. As in the case of bonds, a substantial proportion of new preferred stock issues is direct placements which have no quoted market values.

Until 1957 preferred stocks were valued by life insurance companies at market values where such values were available, and, as a practical matter, directly placed issues have been carried largely at cost. Since that time preferred stocks defined as being in good standing have been

valued by the so-called one-fifth rule, being written up or down at the year end by one-fifth the difference between their asset value at the beginning of the year and their market value at the end of the year, where a market value existed. Directly placed issues in good standing have continued to be carried largely at cost. In order that the preferred stock of a company be considered in good standing, it must not be in arrears as to dividends. Also its earnings taken before fixed charges but after all taxes for the last three completed years must have covered fixed charges, full contingent interest, and preferred dividends for that period at least one and one-fourth times. Preferred stocks not in good standing as it is defined are currently carried at market values if available or otherwise at values assigned by the staff of the NAIC.

The writer feels that there is an excellent case for carrying preferred stocks which are in good standing at cost which can be correlated to amortized value in the case of bonds. A large and increasing proportion of preferred stocks owned by some life insurance companies is direct placements for which cost appears to be the only available basis for valuation and is so used. Even in the case of preferred stock issues sold publicly in recent years a large proportion of these has usually gone to a small number of institutional buyers who tend to be rather permanent holders, so that the market quotations on the small amount of such stocks traded are not very meaningful. Therefore with market value entirely ruled out for a large proportion of preferred stock owned by life insurance companies, and of rather dubious merit for many more, it would seem inconsistent to use it in connection with valuing these securities at all, as long as they are in good standing.

As a matter of fact, if preferred stock holdings are purchased over a period of time under varying money market conditions, some holdings are likely to have a cost below what would be their market value, if they have one, and others a cost above such value. Therefore to value them all at cost would seem to be a solution as closely in line with reality as any and also a highly simplified one.

Loss reserves on preferred stocks must be rather arbitrarily established since there is no adequate statistical basis on which to base them. This is even more true of preferred stocks than of bonds. Such information as exists on the subject indicates that the over-all experience with preferred stocks has been quite favorable, probably about as good as that with bonds. It is an important consideration that most of the preferred stocks owned by life insurance companies are securities of operating public utilities—electric, gas, telephone, and water—which have had quite stable and reliable earnings and whose bonds have had an almost perfect

record. The preferred stocks of such companies are probably as secure investments as a large proportion of the industrial bonds outstanding. With this in mind the current requirement that loss reserves be set up on preferred stocks at the rate of 1 per cent per annum to reach a maximum of 20 per cent seems very much out of line on the high side compared with the reserve requirement for bonds. A loss-reserve basis equal to that on bonds would seem entirely reasonable.

MUNICIPAL BONDS

In the United States state and municipal bonds have not for a long time been an important field for investment for life insurance companies as a whole. However, because of tax considerations some companies have shown a rapidly increasing interest in them during the last few years.

The present rules for determining the amortizability of state, provincial, and municipal bonds not in default are so liberal as to be rather meaningless. Under these rules all direct, full faith, and credit obligations of the United States and Canada and all political subdivisions thereof are amortizable; so are municipal revenue bonds which carry one of the first four ratings from any of the rating agencies. Unrated revenue bonds are amortizable provided they sell to yield not over $1\frac{1}{2}$ per cent more than taxable United States Treasury bonds of the same maturity. Since such municipal bonds are tax exempt and sell at much lower yields than other bonds to compensate for this, quality considered, it would be extremely hard to locate more than a few bonds not in default or on the verge of it which would fail to qualify for amortization under the present rules. This being the case, why bother with the rules at all?

SOME CRITICISMS AND SUGGESTIONS REGARDING LOSS RESERVES

In the opinion of the writer the present system of valuing bonds and other securities and setting up loss reserves on their behalf is open to criticism on a number of grounds. This system might be likened to a quite intricate bridge structure built on inadequate and unstable piers, half-way across a river. First of all, the system is far too complicated. The mere statement of the valuation rules in a recent year required thirty-four closely printed pages.

These rules are doubtless much more complicated than the underlying factual data on which they are based would seem to warrant. The adequacy or inadequacy of the loss reserve setup is subject to only conjecture and no possible proof. Who is to say that bonds meeting Test 2 but not Test 1 have twenty times or even four times the risk of loss as those meeting Test 1? There are doubtless cases where some Test 2 bonds carry far less risk than some Test 1 bonds. Also the proportion of Test 2

bonds to total amortizable bonds is very small, sometimes not over 1 or 2 per cent of the total. Therefore, it would seem the merest common sense to do away with the two tests and the two levels of reserving and to establish at most a single test, if one we must have, and a single level of reserves.

Under the present system for setting up investment loss reserves, when a bond falls from grace by failing to meet certain statistical tests which it was previously able to meet, the ultimate loss reserve which must be set up on its behalf is greatly increased from 1 to 20 per cent of its amount. This appears to be unsound actuarial practice. It is analogous to sharply increasing the life insurance premium payable by a hitherto standard life insurance risk after he has had a heart attack. It means that in a period of economic stress, when a number of investments failing to meet the test required for minimum reserve accumulation would tend to multiply and investment losses tend to snowball, the strain on the company to build up required loss reserves would also be sharply increased.

The present level of reserving against bond losses is probably quite inadequate if this reserve is supposed to really take care of possible losses over the longer term and not to act only as a modest buffer to surplus. Dr. Harold Fraine, in his recent exhaustive study *Valuation of Securities Holdings of Life Insurance Companies*, expressed the opinion that both the annual reserve accumulation and the maximum reserve requirement are only one-quarter to one-half of a level which might be required in future depressions. By setting such wide limits of variation, "one-quarter to one-half," he tacitly admitted the extreme degree of approximation with which one must deal in this area. Dr. Fraine also expressed the opinion that, except for market fluctuations due to change in interest rates, the loss experience on preferred stocks has been as good as on bonds. The present one-twentieth of 1 per cent annual contribution to the reserve by Test 1 bonds and the 1 per cent contribution of Test 2 bonds produce a total contribution of very little more than the former and accumulate a maximum reserve of very little more than 1 per cent of the amount of the bonds involved. This is probably inadequate.

The yield spread between United States Treasury bonds and highest grade corporate bonds varies between one-fourth and one-half of 1 per cent. This reflects, among other things, the opinion of the market place as to the extra risk in the latter. Moreover, life insurance companies in recent years, in their quest for yield, have purchased a large volume of bonds which probably contain substantially higher risks than do highest grade corporate bonds. This is particularly true of their rapidly growing

holdings of industrial and miscellaneous bonds, largely acquired through the direct placement route. These bonds have yet to be tested by a severe business recession. Under present conditions a bond-loss reserve applying to all corporate bonds, accumulated at the rate of one-tenth or even one-eighth per cent per year on all such bonds up to a maximum reserve of 2 or 2½ per cent of such bonds owned, would seem reasonable and by no means excessive.

It is highly inconsistent to take a hair-splitting attitude toward the appraisal of risk in bonds and preferred stocks and the establishment of loss reserves against these while at the same time providing no reserve at all against mortgage loans. Mortgage loans are carried at face value until they default regardless of any credit deterioration. The solvency of a life insurance company is not divisible. Many pieces of financing may ultimately take the form of a bond issue or real estate mortgage and be so classified. In the testing time of the Great Depression the loss experience on mortgages was probably more severe than on bonds, although there is no basis for reliable statistical comparison on this point. Even in the case of bonds there exists no basis of experience for constructing a mortality table showing losses comparable to such tables used in insuring lives.

VALUATION OF COMMON STOCKS

Common stocks are by their very nature far different from fixed income securities, such as bonds, nonconvertible preferred stocks, or mortgage loans. A bond is a promise to pay a fixed number of dollars at specific times in the future. A common stock is nothing of the sort. It is merely a share in an enterprise. The market price of a bond, assuming it remains well secured, is in ordinary circumstances affected mainly by only one thing, and that is the prevailing level of interest rates. The closer a bond gets to maturity, the smaller the swings in its market value tend to become. In any case, these swings are of quite limited amplitude compared with the variations in common stock prices.

There is one other very important difference between the nature of fixed income securities, such as bonds and nonconvertible preferred stocks, and common stocks. In the case of the former, the holder receives his return entirely in the form of interest or preferred dividends. However, in the case of common stock, the holder may normally hope to receive part of his return, and very often a substantial part, through increase in value, because in the case of American corporations only a part of earnings is normally paid out in dividends. This part usually varies from one-half to three-quarters but can be much less. Public utilities pay out on average about 70 per cent of their earnings, and in-

dustrial companies about 50 per cent. Some types of companies, of which life insurance companies are a good example, usually pay out much less than 50 per cent. The earnings retained in the business can be expected to form a basis for an increase in future earnings, just as an influx of capital from outside might be expected to do. In fact, throughout the history of American business such retained earnings have formed by far the most important source of investment capital. Largely as a result of such reinvestment of earnings, both earnings and dividends on common stocks since the turn of the century have increased at an annual compounded rate of a little under 4 per cent per year. This increase has been by no means steady, but it has been persistent over a long period of years.

The variations in the market value, or in the intrinsic value, of common stocks can be almost infinite, and such values do not converge toward a predetermined maturity value, such as the value of a bond does to its par value, as it approaches maturity. In fact, the mere passage of time is likely to increase the swings in the market value of a stock away from any preconceived norm, depending to a large extent upon the fortunes of the enterprise, the ownership of which the stock represents a share. That is why any attempt to value stocks at cost, on the theory that this is analogous to valuing bonds at amortized values, seems unrealistic, and the unrealism would tend to increase with the passage of time. Years after their purchase, one stock might have an intrinsic value of a mere fraction of its cost and another one at several times its cost. The two taken together might conceivably have a total value approximating their cost, but if this were true it would be entirely fortuitous.

The balance sheet of a financial institution, if it is to serve a useful purpose, must value both assets and liabilities on some basis which bears a reasonable relationship to reality. Such an objective may be very imperfectly accomplished, but at least it should be attempted. It can, I believe, be argued that the valuing of well-secured bonds at amortized values reasonably fulfills this requirement. The same cannot be said of valuing common stocks at cost over any extended period of time, during which their real value will no doubt be greatly affected by subsequent events. In fact, the listing of a long schedule of such stocks and valuing them at cost would seem to be chiefly of historic interest.

Nevertheless, there is a considerable body of opinion to the effect that the most practical basis for valuing common stocks by life insurance companies would be to carry these at cost. This would certainly have the effect of stabilizing their values. It is argued in support of this view that increases in the value of these stocks will be reflected to policy-

holders and stockholders through higher dividends and that this should be sufficient. It is also argued that capital gains resulting from the appreciation of stock values should only be taken into the accounts of a company when these are realized, that is, when the stock is sold.

The valuation of common stocks at cost would, of course, mean that different life insurance companies owning the same stock would be carrying these same assets at widely differing values, depending upon when the stock was purchased. This objection can also be raised in connection with carrying bonds at amortized values, but here the percentage variation in carrying values tends to be relatively small on the whole. If stocks were carried at cost, a company, in order to increase the stated value of its assets and its surplus, would only have to sell the stocks and repurchase them. This would, of course, involve paying commissions and also capital gains taxes if the gains so realized could not be offset by losses.

A problem would also arise if the total market value of the common stocks owned fell below their cost. A company could not for long avoid reflecting this fact in its surplus either by setting up reserves or writing down the stock to market. It has been proposed that any such deficiency in total market value over cost be written off over a period of time, say in three years. At this point, however, the concept of carrying common stocks at cost would have broken down.

The great problem presented by market values as a basis for valuing common stocks is, of course, their great lack of stability with the resulting impact on company surplus. Market-value fluctuations tend to be a great deal wider than changes in basic intrinsic value. Because of this, much thought has been given to devising some smoothing formula for common stock valuation. One such formula plan for valuing common stocks, which has a good deal of support within the life insurance industry, is the plan currently applied to preferred stock valuation. This plan might be applied to common stocks as follows:

1. Stocks owned throughout the year would be written up or down at the end of the year by one-fifth the difference between their asset or carrying value at the beginning of the year and their market value at the end of the year.
2. Stocks purchased during the year would be written up or down by one-fifth the difference between their cost and their market value at the end of the year.

Such a plan would have even greater usefulness when applied to common stocks than when applied to preferred stocks, because, while many preferred issues, particularly those issued in recent years, are direct placements with no market value, practically all common stocks have market values. Moreover, market fluctuations in common stock values

are much greater than they are in the case of preferred stocks, and the need for a smoothing formula is correspondingly greater.

The advantages of this plan as applied to common stocks are that it would give substantial weight to market value, which in the long run is the only meaningful criterion of value in such securities, and it points the asset or carrying value continuously in the direction of market. Also it would iron out to a very large extent the fluctuation in value, which is the major disadvantage in carrying common stocks at market.

Objections raised to this formula plan for valuing common stocks, however, may very well preclude its use. These include the fact that the values produced thereby are arbitrary, being neither market value nor cost, which are the two time-honored bases for valuing assets of any sort. Such arbitrary values would be difficult to explain to policyholders, stockholders, accountants, investment analysts, and the general public. Also, the use of such a formula would produce different values for the same stocks owned by different companies, depending on when they were purchased.

Thus we are forced to the conclusion that market price is probably the only practical basis for valuing common stocks on the asset side of the balance sheet of a life insurance company. As previously stated, the problem presented by market values is that they fluctuate too much. A single stock may have a market value twice as high or one-half as high as it had a year ago. Its real intrinsic value, if this could be exactly established by some penetrating analytical process, which of course is impossible, would no doubt have varied somewhat in the interim, but only by a small fraction of the probable variation in market price. However, while we realize the problems inherent in valuing common stocks at market value, we know of no practical way to escape from them and, therefore, had best bend our efforts toward mitigating them to the best of our ability.

COMMON STOCK FLUCTUATION RESERVES

The most obvious approach would be to carry common stocks as assets at market value but to set up a stock fluctuation reserve on the liability side of the balance sheet to absorb the swings in stock prices, to the extent deemed practicable, and so, to a large extent, insulate surplus from the effect of such swings. This method of stabilizing values would not, of course, permit common stocks to enter surplus at a net value above market, because it is not possible to contemplate a negative reserve.

Before going further, it is well to study the extent of the problem. In the first quarter of this century there were four periods during which

the Dow-Jones Industrial Average declined between 40 per cent and 49 per cent, measured from its high to its low point. If measurement had been taken between year-ends, the decline would no doubt have been very considerably less, probably in no case over 35 per cent. There has been no decline in stock prices, before or since, which is in any way comparable to that which took place between October, 1929, and July, 1932, during which common stocks lost about 90 per cent of their market value on the average. Measured between the end of 1929 and the end of 1932, this decline was considerably less but still of such a magnitude as scarcely any contingency reserve which is in the realm of practicability could hope to absorb. The declines since World War II have been on a substantially lesser scale and, if measured from year end to year end, are

TABLE 2

From End of Years	Decline in Moody's 200 Stock Average (Per Cent)
1929-32.....	75
1937-38.....	25
1939-42.....	25
1946-47.....	10
1959-60.....	5
1961-62.....	4

fairly minor. However, the almost continuously upward trend in the stock market, which began about 1949, suggests the possibility of a much more severe shake-out than has occurred during the last fifteen years (Table 2).

If one is willing as a practical matter to rule out the future recurrence of a catastrophe of the 1929-32 type, then it is possible to establish rules for the establishment of a stock fluctuation reserve such as most people might consider reasonable. I suggest that an institutional owner of common stocks should probably feel rather uneasy unless it is able to absorb a decline in the market value of its holdings, measured from year end to year end, of 20 per cent. It should proceed, therefore, to build up a reserve of this size not only from realized capital gains and market appreciation but also by some contribution from earnings. I also suggest that a company with an established reserve equal to 30 per cent or more of the market value of its stock holdings would probably feel able to weather any likely storm without any substantial drain on its surplus. However, a company should not be precluded from carrying over into free surplus, excluded from the limitation imposed thereon by the New

York surplus limitation, any common stock appreciation beyond that required to establish the 30 per cent reserve.

No doubt the need for a stock fluctuation reserve is less when stocks are selling at a low level than when they are selling at a high level. However, after the experience of the last fifteen years who is to say what is low or high, and I know of no practical way to tie this element into the size of the reserve. I merely suggest that, if the reserve declines because of a decline in stock prices, it need not be built up out of earnings until it has reached the critical level which I have defined as 20 per cent of the market value of stock.

What about the company the total market value of whose stocks dips below their cost? Presumably, by this time its stock fluctuation reserve would have been wiped out. One can only suggest that no company should build up its common stock account to a point where any decline in market price cannot be absorbed out of either its stock fluctuation reserve or out of its surplus, and without undue strain on the latter. Large common stock accounts are not for companies with weak reserves or thin surpluses; and any system of stock valuation and reserving which encouraged them unduly in this direction would seem both inappropriate and unfortunate. Any company which tried to let its common stocks enter surplus at net values above their market values for any length of time would probably be the object of invidious comparisons. The idea of setting up a negative reserve on the liability side would have little appeal to accountants.

With the above thoughts in mind, a suggested method for valuing common stocks is the following. On the asset side they would be carried at their market values, and on the liability side a stock fluctuation reserve would be built up as follows:

1. As long as this reserve is less than 20 per cent of the market value of common stock, there would be contributed to it annually out of earnings 1 per cent of such year-end market value.
2. In addition to such annual contributions thereto there would be added to this reserve, until it reaches 30 per cent of the market value of stocks, all capital gains realized on the sale of stocks less any capital gains taxes paid, plus an amount equal to the appreciation over the previous statement value, of the stocks owned.
3. Capital losses realized on the sale of stocks would be deducted from the reserve. Also any amount by which the total market value of common stocks fell below their previous statement value would be deducted from the reserve up to the point where the reserve would be totally depleted.
4. Toward the accumulation of such a reserve, the company would contribute that part of the Mandatory Securities Valuation Reserve which it has built

up from its common stock account to the point where this reserve is equal to 30 per cent of the market value of stocks.

SOME CONCLUSIONS

It would seem reasonable that a company with a liberal investment policy should reserve for investment losses on a more liberal basis than one with a conservative investment policy. However, the problem is how to put such a precept into effect. Most security analysts would refuse to admit that application of a few statistical ratios is an adequate or even a very meaningful basis for differentiating between bonds and preferred stocks as to their quality. To do so would be to encourage serious unemployment in their profession. Also, as has been previously stressed, no adequate basis exists for determining the sufficiency of any loss reserve which may be accumulated.

It seems reasonable to suggest that the present system of asset valuation should be greatly simplified and that much of the dense growth of underbrush which has grown up around it should be cut away. One approach would be to value all bonds not in default as to principal or interest at cost or amortized values, which is substantially the way mortgage loans are valued. Preferred stocks not in arrears as to dividends or sinking funds would be valued at cost. However, management would be permitted, in the event of credit deterioration of the obligor, to write down such assets below cost or amortized value to the extent considered appropriate and to write them up again on recovery of their credit standing. Common stocks would be valued at market prices.

A loss reserve would be set up against all fixed income securities, including bonds, preferred stocks, and mortgages, other than bonds of the United States and Canadian governments and mortgages guaranteed by these governments. This reserve would be built up at the rate of one-eighth of 1 per cent per annum (or some moderate variation therefrom) of the amount of the assets against which it was established. Such contributions to the reserve would continue as long as it was less than $2\frac{1}{2}$ per cent of the amount of assets against which it was established. Losses resulting from the sale, liquidation, or write-down of assets of the kinds against which the reserve was established would be deducted from this reserve. Realized profits on the sale of such assets, or from the write-up in the event of credit recovery of assets previously written down, would be added to the reserve. Initially this reserve would be established from that part of the Mandatory Securities Valuation Reserve built up on behalf of securities other than common stocks. A common stock fluctuation reserve would be set up for common stocks as described above in the section dealing with these.

If such an approach seems to represent too radical a change from the present system of bond and preferred stock valuation and to involve too great a responsibility on company managements, then as a minimum measure of simplification the number of statistical tests used to determine bond amortization should be reduced to only one. Complicating the system beyond this point is clearly unjustified by the basic experience available. For the same reason, a single rate of reserve for losses on bonds and preferred stocks should be used, and this should be extended in the interest of consistency to real estate mortgages not guaranteed by governments.

DISCUSSION OF PRECEDING PAPER

W. HAROLD BITTEL:

While Mr. McDiarmid has selected a subject for this paper which is most timely, the material he has presented and his discussion, unfortunately, do not contribute to a better understanding of the valuation question. It is most important that everyone reading his paper realize from the outset that Mr. McDiarmid and his company have views on this subject—especially with regard to the valuation of common stocks—which are *not* shared by the Joint ALC-LIAA Committee on Securities and Valuation of Assets, as well as by a majority of life insurance companies, and they are certainly not shared by many members of the NAIC Committee on Valuation of Securities. Accordingly, I hope that my comments will serve to assure a more balanced presentation of all aspects of the valuation problem, including the proposals under current consideration for adoption for the year 1964.

My first observation about Mr. McDiarmid's paper is that it completely ignores the fact that during the past two years both the NAIC authorities and the industry committee have been giving careful and exhaustive study to constructive revision of the present rules for valuation of assets and the mandatory securities valuation reserves. This year, in particular, several ALC-LIAA bulletins (see *Joint Investment Bulletins Nos. 499, 502, 508, 513, and 517*) have been circulated to the industry reporting on deliberations of the industry committee, as well as joint deliberations of representatives of the industry committee and the NAIC committee. As early as June 1 of this year there was circulated a plan (see *Joint Investment Bulletin No. 513*) for revision of the rules which incorporated virtually all the recommendations which Mr. McDiarmid makes in the first portion of his paper with respect to bonds and preferred stocks. This would include acceptance of the idea that, accompanied by appropriate reserves, all bonds should be carried on an amortized cost basis and that preferred stocks should be carried at cost. There is no recognition of this in Mr. McDiarmid's paper. It would have been much simpler and briefer if Mr. McDiarmid had merely stated that he agreed with the current NAIC proposals with respect to bonds and preferred stocks. Certainly, he has been well informed about these proposals, inasmuch as he is a member of the industry committee. Moreover, much of the history of the valuation rules included in the first portion of his paper could have

been adequately covered by a simple reference to Chapter 1 of the Fraine Report,¹ which, I feel, is a much more authoritative and accurate account of the rules changes over the years.

I feel very strongly that Mr. McDiarmid's treatment of the subject of the valuation of common stocks does not give a fair presentation of this matter. He seems much too eager to dismiss the arguments for cost as a basis for common-stock statement value. There are several facts which need to be brought out. The heart of the industry committee's thinking, as well as my own, about the valuation of life insurance company assets is that such assets should be valued on a "going concern" and *not* on a "liquidating" basis. Mr. McDiarmid emphasized this himself at the beginning of his paper. The industry committee, accepting the going-concern value principle, reasoned from this that *all* assets of life companies should be carried on a stabilized asset basis. This idea also seems to be accepted by Mr. McDiarmid because in his paper he indicates support for the "one-fifth rule" as a means of stabilizing the asset value of common stocks. (Under the one-fifth rule, the statement value of a common stock would be adjusted upward or downward, as the case may be, by one-fifth of the extent to which year-end market value rose above, or fell below, the prior year-end statement value.) The industry committee also believed that the one-fifth rule would be the most desirable way to stabilize the value of common stocks. Mr. McDiarmid concludes that, inasmuch as the NAIC authorities rejected the one-fifth rule, the only alternatives are cost or market, and, faced with this choice, he recommends market.

Mr. McDiarmid's paper does not do justice to the strong arguments that can be made for cost as a basis of valuation for common stocks. Since cost is purchase price, it in the nature of things has to be the starting point from which both yield and profit are computed. I shall have more to say about the nature of profit as income a little later, but, at this point, I want to concentrate on the virtues of asset stabilization and the use of cost for this purpose.

The vast majority of the industry committee has supported cost in spite of the fact that it would prefer the one-fifth rule or some other averaging device. The reasons for this support were admirably stated by Walter S. Henrion, chairman of the Joint ALC-LIAA Committee on Securities and Valuation of Assets, in behalf of the committee at the hearing held in Chicago on October 16 before the NAIC Committee on Valuation of Securities. The appropriate passage from his statement, which I quote at length because it so ably rebuts Mr. McDiarmid's arguments, is as follows:

¹ Harold G. Fraine, *Valuation of Securities Holdings of Life Insurance Companies* (Homewood, Ill.: Richard D. Irwin, Inc., 1962).

In resolving these differences [between companies favoring market versus those favoring cost], I believe it essential that both Commissioners and industry representatives understand our Committee's reasons for supporting cost as a fundamental basis for the valuation of common stocks. First of all, we must emphasize that fundamental to the problem is the acceptance of the "going concern value" concept in the making of financial statements as opposed to the "liquidating value" concept. This "going concern" concept in the valuation of life insurance company assets has long been accepted by both NAIC authorities and our industry. It is based on the long term nature of our liabilities, the strong inherent growth factor of our business and the lack of any real need for liquidity so well demonstrated in the Great Depression. This concept now applies to bonds, preferred stocks, mortgage loans and equity investments in real estate and equipment. Our Committee is firmly convinced that this concept should be applied, also, to common stocks. With the stabilization of statement values, they can be attractive and rewarding long term investments in increasing amounts. Without stabilization, the market risks of substantial common stock portfolios could well be too great for our industry to assume, considering the relatively small average margin of assets over liabilities which is so characteristic of the majority of our companies.

It is being argued that cost represents market value at an isolated point of time . . . the time of purchase . . . and that it would produce inconsistent values among various companies buying the same stock at different prices and on different dates. This is an argument against the "going concern value" concept because the same *so-called* inconsistency now exists among companies with respect to all other investments. A simple and notable example would be two companies having bought a U.S. Treasury 2½% bond, one at par and the other at a much later date at 75. No one has advanced the idea that the statement values for this obligation should be the same for both companies.

And it should further be pointed out that market quotations on common stocks at an isolated point of time are not a good measure of sound value. It is a rather well recognized fact that common stock prices are very much subject to market psychology . . . either excessive pessimism or excessive optimism. Such being true, it follows that common stocks often sell at average prices above intrinsic value based on either present earnings or realistic prospective earnings. To permit companies to reflect in their surplus accounts substantial amounts of unrealized capital gains based on excessive optimism in the market place invites the unsound practice of using such gains for agency expansion and development and the payment of dividends to policyholders and possibly stockholders, and the subsequent financial embarrassment when the market declines even possibly below a sound level supported by current earnings and dividend payments.

Under the present rules, after the first 30% of appreciation, in terms of aggregates, all unrealized capital gains are forced into surplus. Many companies object to such forced additions to surplus being the basis for the declaration of policyholder dividends. A cost basis or some stabilized basis of valuation

would avoid this situation, and Professor Fraire concluded that no inequity would result among various generations of policyholders because earnings and dividends follow market appreciation if such appreciation is soundly based. In other words, life insurance industry policy has long been directed to maximizing income without assuming undue principal risk or incurring instability of asset values. Accordingly, if market appreciation is sound, the increases in earnings and dividend payments provide additional income for the benefit of both current and future generations of policyholders. At this point, I would like to depart from my prepared text to report a conversation held only this week between two of the most knowledgeable financial officers of our industry, one now the president of a very large life insurance company and the other the financial vice president of a very large company. They agreed that with price earnings ratios at their present level further appreciation in market values of common stocks would be due almost entirely to further growth in earnings and increases in dividend payments, the point being that future appreciation will have a more definite relationship to income and, accordingly, will redound to the benefit of policyholders through the payment of additional dividends. Also, Fraire held the opinion that normal trading activity and regular additions to the common stock account would result over long periods of time in differences between the aggregates of cost and market being much smaller than is now generally thought because of the unusual appreciation which has been experienced in recent years. Despite these judgments, the NAIC proposed rules go part way in permitting unrealized capital gains to go into surplus since they eliminate the common stock reserve when the aggregate of market equals 150% of the statement value which is based on cost or adjusted cost. When the reserve released is the maximum of 20%, this permits 40% of the first 50% of appreciation to flow into surplus. And now this modification or amendment of the NAIC proposal which has been presented this morning in written form permits two-thirds of further appreciation to flow into the surplus account.

Advocates of market value have asserted that in some instances the valuation of common stocks at market would be more conservative than at cost. As a case in point, they mention that for stocks bought in 1929 cost would not have been a conservative basis of valuation for many years thereafter. This seems to ignore the fact that the NAIC proposal would have required valuation at market by the end of the ensuing three-year period. It seems to take issue again with the principles of stabilized value and the "going concern value" concept of making a financial statement. It is the opinion of our Joint Committee that too much attention has been focused on the possibilities of further wide capital gains and not enough attention on the possibilities of sharp declines in market values. There are still some old-fashioned investment officers who believe that bear markets in common stocks may sometime recur. In fact, it might be well to contemplate what might have been if the sharp market break of 1962 had occurred in December of that year and a number of companies had previously and rather recently acquired significant amounts of common stocks without having established, as yet, any sizable reserves.

This market action, as recent as 1962, and still fresh in the minds of most of us, sharply points up the desirability of stabilizing common stock values. How much better it is to establish at this time the rules which will stabilize common stock values and protect the solvency of our companies than to improvise some new rules to meet financial crises as has happened in the past!

Furthermore, our Joint Committee has recognized that the basic concept of "cost or market value, whichever is lower" is one which is regarded by many as the most conservative and proper for a financial institution. It is this approach that is the essence of the NAIC proposal despite the stabilization modifications which have been added.

The above statement spells out the reasons why a large majority of the industry committee supports stabilization in the value of common stocks and endorses cost as the basis for accomplishing this, even though the one-fifth rule was their preference. These are the reasons which I also would advance and which, I believe, are not given sufficient attention in Mr. McDiarmid's paper.

Mr. McDiarmid stresses the argument that, in the case of common stocks, "the holder may normally hope to receive part of his return, and very often a substantial part, through increase in value." This is recognized in principle in the NAIC proposals which are supported by the industry committee, but it is obvious to me and, I think, to the industry committee that we must go slowly in this area. As Mr. Henrion points out, the NAIC proposals provide that, as the aggregate market value of common-stock holdings rises to 130 per cent of statement value of such holdings, the reserves against such stocks can begin to be released to surplus with the release being complete when aggregate market rises to 150 per cent of statement. Under a supplementary step agreed to between the NAIC committee and the industry committee on October 14, two-thirds of any further rise of aggregate market over statement would be reflected in surplus.

This, in my opinion, is as far as we should go until the industry and the Commissioners have addressed themselves to an important question, namely, how much market appreciation is really income and how much is a meaningless change in values, that is, a change that either is not going to endure or that is going to be required to maintain income? Our confidence in the continued growth of common-stock values these days contrasts strangely with the concern almost all investment people have felt throughout the years that a precipitous decline in stock prices might wipe out company surpluses. Mr. McDiarmid himself was once concerned about such things, as evidenced by the following, in a paper he presented in 1941:

Even in those states whose laws permit rather extensive preferred and common stock investments, life insurance companies are considerably restrained from thus investing their funds by the necessity of having to value such securities at market. Some idea of the hazard to surplus thus presented by a badly depressed year-end stock market is given in the following Table 7. [Here Mr. McDiarmid includes a table showing short-term market declines during the thirty-eight years of the nineteenth century, ranging from 23 per cent to 86 per cent.]

It would seem from these figures that a life company having an investment in common stocks equal to its surplus, would run the risk of a greater shrinkage in that surplus than it could comfortably contemplate, providing the stock had to be carried at market. . . .²

What has happened since this was written in 1941? Has the stock market become inherently more stable? I know quite a few investors who would have challenged such a notion in 1962, when the market declined 25 per cent in a matter of six months. Are we not concerning ourselves too much with the disposal of unrealized profits, forgetting that such profits are notoriously unstable and need to be viewed very cautiously as a source of return on investment, as far as life insurance companies are concerned?

Equally important, as Mr. McDiarmid points out, a common-stock investment usually provides growth in the way of a rising dividend return, and, since this rising dividend return is part of our investment income, most of it will be paid out to policyholders in dividends. Companies must be sure that, when they add unrealized capital gains to surplus, they are not in effect counting the increased dividend payments twice. Certainly, a company that pays out both the increased dividend return and the resulting capital gain to its policyholders will have impaired its earning power to the detriment of future generations of policyholders.

Consider, for example, a \$100 investment in a common stock which in the ensuing ten years enjoys a rise in dividend payments from \$3 to \$4½, and a rise in market value from \$100 to \$150. Presumably, the rise in dividend return is reflected in investment income, and most of it will be paid out to policyholders, other things being equal. But suppose the company reasons that the \$50 of capital appreciation also is income and pays this out too to its policyholders. If it sells the stock and realizes the gain, it will have to face the fact that reinvestment of the \$100 may yield only \$3 of income. If it does not sell the stock, it will have to use other funds for the dividend payment, and the results will be the same. Under these circumstances, the company can pay out the additional dividend income, but it cannot pay out the capital gain without impairing its earning power.

In the NAIC proposals a considerable amount of care has been taken to

² *TASA*, XLII, 11.

avoid a complete flow of capital gains into surplus. We have not thought through all the ramifications of capital gains, and we wanted to be sure that we were not encouraging the use of capital gains to pay policyholders' dividends before these relationships had been more thoroughly analyzed by the companies and the Commissioners.

I am troubled by a paragraph in Mr. McDiarmid's paper reading as follows:

A problem would also arise if the total market value of the common stocks owned fell below their cost. A company could not for long avoid reflecting this fact in its surplus either by setting up reserves or writing down the stock to market. It has been proposed that any such deficiency in total market value over cost be written off over a period of time, say in three years. At this point, however, the concept of carrying common stocks at cost would have broken down.

Mr. McDiarmid is apparently making a general reference here to a provision in the NAIC proposals. Under these proposals, if the aggregate market value of common-stock holdings of a company falls below statement value (cost) by a large enough amount to more than absorb the common-stock reserve component, then a minimum reserve requirement comes into play. This minimum reserve would have to be large enough to make up the difference between market value and statement value, in cases in which market falls below statement. In order to cushion the impact on surplus, we have provided that the minimum reserve requirement may be met over a three-year period. Through this requirement for a minimum, we are in fact, then, establishing a value for common stocks that is cost or market, whichever is the lesser, which we believe is the best way to value common stocks. Of course, the three-year period allowed for building the minimum delays the speed with which the aggregate value of common stocks moves from cost to market in a downswing, but we felt that spreading the impact on surplus over a period of time would be desirable. It is inconceivable to me that many companies or Commissioners would be critical of this effort to strengthen the financial condition of the companies at a time when I would assume that a considerable amount of financial pressure might exist.

The final section of Mr. McDiarmid's paper, entitled "Common-Stock Fluctuation Reserves," presents his recommendations for the valuation of common stocks and the reserve provisions. What he suggests is that common stocks be carried at year-end market value and that fluctuation reserves be established to insulate surplus from the shock of swings in market values. What his proposal amounts to is accepting the idea of a reserve for common stocks separate from that for bonds and preferred stocks and

using such a reserve to absorb stock fluctuations. Except for the separate reserve, his proposal about the value of the stocks and the reserve is almost exactly the same as the existing rules. There is one modification of the existing rules which he advances, however, which should be noted. He argues that "a company should not be precluded from carrying over into free surplus, excluded from the limitation imposed thereon by the New York surplus limitation, any common-stock appreciation beyond that required to establish the 30 per cent reserve," the figure which he selected as the required maximum. In other words, he would permit the companies, at their discretion, to go beyond the 30 per cent required reserve for common stocks. This is something that the NAIC could not and would not permit in the interest of fairness to different generations of policyholders.

Mr. McDiarmid's recommendations with regard to common stocks will have appeal both to some life insurance companies and to some members of the NAIC. I do not believe that they provide the best solution because, in my opinion, they violate his foremost objective, namely, that all assets of life companies should be valued on a going-concern basis and thus on a stabilized basis. Also, it is easy for a company that has held a substantial portfolio of common stocks for a period of years to accept Mr. McDiarmid's proposal. Owing to the great appreciation in common-stock values which has gone into their existing Mandatory Securities Valuation Reserve (MSVR) under the present rules, such companies would already have the maximum reserve called for by Mr. McDiarmid's proposal. As a matter of fact, such companies would have an existing MSVR large enough to put up the maximum reserve provided for bonds and preferred stocks under the NAIC proposals (supported in Mr. McDiarmid's paper), as well as the maximum reserve for common stocks. Such companies would also in most instances have an excess reserve component out of which reserve requirements for new purchases of common stocks could be met. On the other hand, there are many more companies which have not in the past acquired sizable holdings of common stocks but which may desire to become active or more active in this area of investment. These companies have an existing MSVR not much greater than would be required to meet the bond and preferred-stock reserve. The result would be that such companies would face a long period of sizable regular contributions to the common-stock reserve to reach the maximum. Thus there is an important question of equity here as between companies with different investment policies in the past. I believe the use of a stabilized asset value for common stocks would serve all life insurance companies much better.

The early part of Mr. McDiarmid's paper dwells at length on the

financial tests that are currently being used to determine the eligibility of bonds for amortizability as well as the reserve rates. He seems to ridicule this procedure by pointing out how easy these tests are to meet, but then, hastily, he concludes that the solution is not to strengthen them but to abandon them completely. Mr. McDiarmid's concern about these tests is based on a faulty understanding of their purpose. The tests were deliberately made rather easy to meet because the NAIC felt that in the over all the system of reserves which was being built was large enough to provide a substantial cushion against securities losses, so that the great bulk of bonds could be carried on an amortized cost basis. The tests were designed only to screen off the bonds showing definite signs of running into possible default. Moreover, under the proposed changes in the rules now being considered by the NAIC, all bonds and preferred stocks would be carried on an amortized cost or cost basis, so that the only function of the tests would be to delineate the different reserve rates. However, if there is no change in the existing rules, the NAIC Committee will be required to give careful attention to a revision of the tests because it is clear that in many areas of bond financing, especially in the case of sales finance company issues, they are not satisfactory.

Although there are many items of lesser importance in Mr. McDiarmid's paper which could also be criticized, I believe that the main points have been covered. May I repeat in summary that I think that the paper does not contribute to a better understanding of the valuation question. Rather, in going over old ground without recognizing the constructive discussions this year between the NAIC authorities and the industry committee, it is confusing to the average reader. I regret, exceedingly, that the paper is being published in the *Transactions* without being revised to take account of these discussions, as reported in the bulletins which I cited earlier. Indeed, I would strongly urge that the NAIC proposals, which appear in the *Proceedings* of that Association for the year 1964, be given equal prominence and consideration in any reference to this paper as recommended reading on this subject or when it is referred to in any other manner.

EDWIN B. LANCASTER:

In the conclusion to his paper, Mr. McDiarmid suggests that the loss reserve would not apply to United States and Canadian government bonds, and thus losses resulting from the sale or liquidation of such bonds would not be deducted from the reserve.

It is our feeling at Metropolitan that government bonds should definitely be included in the loss reserve contribution and that losses from the sale of governments should be chargeable against the loss reserve. While it

may very well be argued that chances of loss because of default of government bonds are nil, it certainly cannot be argued on the basis of history over the past twenty years that there could be no losses resulting from the sale of governments. The substantial changes in going interest rates are reflected in the market price of governments just the same as for bonds of a private corporation. The plain fact that low-coupon government bonds are now selling near 90 seems to us to be rather a compelling argument as to why it is unsound to exclude governments from the operation of any Mandatory Securities Valuation Reserve.

In this connection it is interesting to observe that the most recent proposal of the NAIC Subcommittee on Valuation of Securities provides that realized losses on United States government securities may be charged against the proposed Mandatory Securities Valuation Reserve up to the difference between the minimum reserve at the end of 1963 and the actual reserve at that date.

PAUL T. HARKNESS, JR.:

Mr. McDiarmid is to be congratulated for this excellent paper. It seems very timely, too, as the actuaries and accountants are exchanging ideas as to how an insurance company's Annual Statement should be prepared. At the same time, there is great pressure to change the rules for the Securities Valuation Reserve, with corresponding changes in the Annual Statement.

This discussion will concern itself primarily with that portion of the paper relating to values for common stocks. It seems to me, however, that Mr. McDiarmid has presented very excellent suggestions for the valuing of bonds and preferred stocks. Indeed, it is difficult to find points upon which to disagree. The amount of the reserve to carry for bonds, for example, and the manner of its accumulation may cause differences of opinion; it is less obvious how you can differ with the principles he has advanced.

For many years the Connecticut Mutual has been more active in common stocks than many of the other life companies. Having put many of them on our books quite a few years ago, naturally our rate of return would look much more favorable on an original-cost basis. It is conceded, however, that some companies could ill afford to follow such a procedure, and a subcommittee of the NAIC suggested the approach of pegging stocks owned on December 31, 1963, at their statement (i.e., market) values and future purchases at cost, assuming a new kind of valuation and securities valuation reserve for 1964. Had this been adopted, existing stock values would have been "frozen-in" at relatively high levels, al-

though it was evident that a prolonged upward (or even downward) trend might militate for a new pegging date, with the necessity for changing the amount of the Securities Valuation Reserve to keep surplus from being drastically upset. The timing of any such changes would be extremely arbitrary and would make comparison of financial statements difficult before and after such changes. Further, the companies would be required, in addition, to work with current as well as December 31, 1958, market values for federal income-tax purposes.

Although for these reasons we were not enthused about the "cost" valuation basis for common stocks proposed by the subcommittee, we were willing to go along with it as part of a total program which seemed to represent an "over-all" improvement. However, we would prefer the "one-fifth the difference" approach, notwithstanding the arguments put forth by Mr. McDiarmid against it. To take the market values on one date a year—December 31—could distort results from year to year. For example, had the drop in market values occurred in December, 1962, rather than June, or had Mr. Kennedy's assassination occurred a month later, our statements for those two years would have been somewhat different. To minimize the effect of such chance fluctuations could be advantageous.

As for the amount of the reserve to be held for common stocks, we certainly agree that a goal of 30 per cent of the market value is a worthy one. For many years we have had a reserve for market fluctuations and other contingencies, a good portion of which could be available, together with the Securities Valuation Reserve, to keep a substantial drop in market values of stocks from wiping out our unassigned surplus. We have worked this reserve in conjunction with the Securities Valuation Reserve—which in recent years we have usually carried at its maximum—so as to keep our unassigned surplus fairly constant in relation to admitted assets. In other words, each year realized and unrealized capital gains are added to this reserve, but it is decreased by any increase in the Securities Valuation Reserve and vice versa.

In addition, we have gradually accumulated in our investment contingency reserve an amount equal to 2 per cent of our mortgages—none of which is FHA—and our investment real estate. We believe that it would be beneficial to have such a reserve combined with that for securities and carried above the line.

B. FRANKLIN BLAIR:

We are indebted to Mr. McDiarmid for an excellent and timely presentation on a most important subject—the valuation of life insurance com-

pany assets. This subject has not been as widely discussed recently in the life insurance industry as it should have been in view of the nature of the major changes proposed in the rules governing the valuation of assets and the calculation of the Mandatory Securities Valuation Reserve.

Although I agree with most of Mr. McDiarmid's paper, there are a few points on which I would like to comment. These comments are those of an actuary whose work deals with the Annual Statement but not with investments as such; they are not necessarily the opinion of the investment officers of the company with which I am associated.

After discussing the fact that "surplus is generally equal to only a small proportion of assets," Mr. McDiarmid says that "this makes the stabilization of asset values, as a necessary step toward the stabilization of surplus, not only highly desirable but practically essential." Because of the existence of the Mandatory Securities Valuation Reserve, I do not feel that stabilization of asset values is "a necessary step" toward the stabilization of surplus. Public relations problems are created by trying to stabilize asset values; these problems can be largely avoided by permitting asset values to fluctuate and adopting MSVR rules which would operate to stabilize surplus to the extent desired. That stabilization of assets is not "a necessary step" seems to be realized by the author later in his paper when he proposes valuing common stocks at market and setting up a stock fluctuation reserve on the liability side of the balance sheet and thus insulating, to the extent deemed practicable, surplus from the effect of market-value fluctuations.

Mr. McDiarmid suggests that the valuation process be simplified by eliminating Tests 1 and 2 and permitting the amortization of all bonds not in default (other than income and perpetual bonds). He points out that the volume of bonds which would be affected by such a change would be very small in proportion to the total. This is undoubtedly true in the aggregate and also true for the medium-sized and larger companies with diversified portfolios. However, a small company might, either by chance or by deliberate investment in high-risk securities, have a comparatively high proportion of bonds which did not pass Test 1 or Test 2. I feel that some quantitative measure of the quality of bonds is desirable, although, of course, I do not feel that the present Tests 1 and 2 are necessarily the ideal tests. Coverage of fixed charges may well not be the ideal criterion, but no other criterion has been used longer or more widely.

Mr. McDiarmid feels there is an excellent case for carrying preferred stocks in good standing at cost. I must disagree with him on this point; many of the arguments against carrying common stocks at cost also apply (though in lesser degree) to the question of carrying preferred stocks at

cost. Convertible preferreds and preferreds with sinking funds both represent special situations where cost seems particularly inappropriate for use as the asset value. Either the present one-fifth rule or a five-year running average seems preferable to cost as a basis for valuing preferred stocks. However, I certainly agree with the author that the current requirement for a 20 per cent maximum loss reserve on preferreds seems "way out of line on the high side" compared with the current requirement for Test 1 bonds.

I would like to emphasize a point which is alluded to by Mr. McDiarmid. I feel strongly that we should not set up a MSVR system adequate "to really take care of possible losses over the longer term"; the MSVR should act as "a modest buffer to surplus" and should not be a reserve large enough to absorb fully any likely depreciation on securities.

My last point is in regard to the valuation of common stocks. Mr. McDiarmid has pointed out well the objections to using cost for their valuation. In addition to the objections he has mentioned, valuing common stocks at cost will handicap the life insurance industry in presenting its investment results if the anticipated appreciation in the values of common stocks actually occurs. Our principal competitors for savings dollars—such as pension funds, mutual funds, and common-trust funds of banks—do not handicap themselves by valuing their common stocks at cost when they publicize their investment results.

Moreover, the over-all results on common stocks, including net capital gains, can be more accurately and more readily reflected in the dividends to each generation of policyholders or stockholders if common stocks are valued at market than if they are valued at cost.

I certainly agree with Mr. McDiarmid that market is the most practical method of valuing common stocks, although I would be willing to accept as slightly less desirable alternatives either (1) a three- or five-year running average or (2) the lower of market and a three- or five-year running average. The second basis would tend to have a greater dampening effect on fluctuations on the up side than on fluctuations on the down side.

Perhaps it will be impossible to find a completely satisfactory solution to the question of common-stock values unless some changes are made in the state laws limiting surplus. One possibility might be to amend the laws so that they limit surplus excluding unrealized capital gains rather than limiting total surplus as at present.

VICTOR E. HENNINGSEN:

In some respects I regret that Mr. McDiarmid's paper will result in the *Transactions* of the Society restating the pro-and-con arguments pre-

sented last month at the hearing in Chicago conducted by the NAIC Committee on Valuation of Securities. But this is more or less an inevitable outcome, inasmuch as a representative of Mr. McDiarmid's company supported his arguments in opposing the NAIC Committee recommendations by referring to the paper to be presented to the Society of Actuaries. There was the implied thought that any paper accepted by the Society, *ipso facto*, represented the "final word" on the subject. In that situation, it can be appreciated that I find myself in an awkward position in not sharing Mr. McDiarmid's views.

Despite the forceful and sweeping manner in which Mr. McDiarmid presents his opinions and conclusions, it seems to me that some of his arguments are lacking in depth. It is as if the author has viewed the question of the valuation of life insurance assets as an intellectual exercise leading up to what is suggested as a new, unique, and simple solution to this long-standing problem. In this process, he bypasses the strong interest which the regulatory authorities have in this question and their positions over the years.

Particularly since much of his paper is given over to outlining the points which the ALC-LIAA Joint Committee on Securities and Valuation of Assets, of which both he and I are members, have been considering for some years, it rather surprised me that he did not refer to the discussions of this committee or to the various bulletins issued by this committee.

The author, in discussing the valuation of bonds, suggests the elimination of tests but then says that that may be "too radical a proposal." For the record, it might be stated that industry reports and recommendations, dating back to the Ecker and Hubbell Committees, contemplated no tests such as we have now had for some years. But the regulatory authorities made the point that there should be some screening-off of bonds which had deteriorated. Viewed in that light, industry representatives recognized that tests could be an aid in a more effective job of supervision. Moreover, they were mindful that the tests provided a more acceptable answer than the possible alternative of having the NAIC prescribe specific values for bonds purchased under private placement.

It was rather surprising, too, that the author made only the slightest passing reference to Dr. Harold Fraine's significant study entitled *Valuation of Security Holdings of Life Insurance Companies*.

No doubt the most controversial aspect of Mr. McDiarmid's paper is the section on valuation of common stocks. All of us emphasize the desirability, if indeed not the necessity, for stability in valuing the assets and, of course, the "going-concern" aspect of the life insurance business.

It is remarkable that, starting from the same position, we can then support our reasons for striking out in such different directions. The author refers to the extent of the support for a smoothing formula for common-stock valuation similar to the plan currently applied to preferred-stock valuation. He then proceeds to dismiss that answer, stating it is "arbitrary," would be difficult "to explain to policyholders, accountants, investment analysts, and the general public," and would have "different values for the same stocks owned by different companies." Undoubtedly, all these objections were made when the amortization of bonds was adopted years ago. But we hear little of them nowadays. For my own part, I still would prefer the smoothing formula for common stocks. Mr. McDiarmid did not mention the most serious obstacle to the adoption of this method. It was the fact that the NAIC Subcommittee on Valuation of Securities would not accept this solution. In that situation, many of us found a value in terms of cost of common stock as making for greater stability in asset values over both the short and the long pull than market value for reasons brought out more completely in both Dr. Fraine's study as well as the reports of the Joint ALC-LIAA Committee on Securities and Valuation of Assets.

Inasmuch as the tabulation of the decline in stock averages, which the author includes, is related to year-ends, one might have expected, for the sake of completeness, a reference to the dramatic decline in common-stock prices which occurred in the second quarter of 1962. This was of the order of 27 per cent in a three-month period. Thereafter substantial recovery set in, so that the year-end market prices were not substantially below those of the preceding year-end.

JOHN C. MAYNARD:

In his forthright paper, Mr. McDiarmid has brought the welcome quality of plain talk to a timely and important topic which has not always been treated in this way.

The paper discusses asset valuation from the point of view of the United States Annual Statement. It is hoped that a discussion of the Canadian statement for a life insurance company may add to an understanding of the subject. The Canadian statement differs from the United States in a number of respects:

1. For ordinary insurance reserves, a wider choice of mortality tables and rates of interest is permitted. There is also no minimum scale of nonforfeiture values. As a result, there is greater freedom in the choice of bases for cash values and reserves for new policies. However, in practice the requirement that reserves cover cash values makes it difficult to change the bases of reserves for business in force.

2. There is no statutory limitation on surplus.
3. Securities are brought into the statement at their values on the company's books. No rules are laid down for these book values. However, if the aggregate of these values exceeds the aggregate of "authorized values," a portion of surplus must be earmarked to cover the deficiency. For many years preceding 1964 authorized values were amortized values for federal and Canadian provincial bonds and market values for all other securities. Some protection against fluctuations in market values is afforded by permitting the Minister of Finance to authorize higher values if market values are unusually depressed.
4. There is no compulsory loss reserve.

It will be apparent that the problems of management are very different under the two forms of statement. Under the United States form, assets, liabilities, and compulsory loss reserve are all rigidly defined, and there are important statutory limitations on surplus. The Canadian form requires rigid liabilities but permits wide latitude in asset valuation and surplus, subject to the aggregate test of security values against authorized values. This system rests on the principle that any effective process of asset valuation must stand up under depressed conditions and that market values are likely to be the best indicators of real value under these conditions. To this end, it is worthwhile to face the attendant difficulties of determination and fluctuation.

The combination of rigid liabilities and the aggregate test of flexibly determined security values has presented a challenging statement problem to Canadian companies. Some may regard the challenge as unfairly severe and quote the dropping market prices of bonds in the 1950's as an example. However, in one way or another, the problem has proved to be soluble. In the course of living with it, companies have become sensitive to market changes and have undertaken a number of programs which have included writing down assets, building surplus, active trading of securities to increase yield, balancing market losses in bonds by market profits in stocks, and increasing the cash flow toward mortgages.

As in the United States, the procedure for determining year-end market values has been tedious and to some extent arbitrary, particularly for municipal government bonds. However, private placements are relatively much less important in Canada and the system has been made to work.

A very significant change affecting the investments and valuation of securities of life companies in Canada took place in September, 1964, when Bill C123 was introduced into the Canadian parliament. Its main purpose was to encourage companies to invest in Canadian equities as part of a national policy to retain the ownership of businesses in Canada and also

to liberalize the rules relating to permissible investments so that Canadian companies would be in a position to compete more vigorously with other types of investor both in Canada and abroad. The changes included three important ones:

1. The limit on common-stock investments was increased from 15 per cent of assets to 25 per cent.
2. The system of asset valuation was retained, but the aggregate test of security values was softened. If the aggregate of market values of nonamortizable securities falls below the aggregate of their book values, the amount of earmarked surplus need not be increased in any year by more than one-third of the excess of book values over market values.
3. The Superintendent of Insurance was authorized to allow higher rates of interest in the reserve liabilities for special classes of policies if in his opinion this is justified.

These changes will partially relieve the statement problem of life companies in Canada by bringing some protection against temporary reductions in market values and greater flexibility in liabilities. It is the hope of the government that in the course of time this will encourage the companies to invest more heavily in Canadian equities.

I should like to comment on two objectives which Mr. McDiarmid lays down for a system of valuing assets and the emphasis which he gives them. The system should (1) be easy to explain and should (2) value assets as realistically as is practical. Mr. McDiarmid stresses heavily the need for simplicity but seems to touch somewhat lightly on the need for realism, no doubt considering this to be fundamental. These two objectives are in conflict to some extent because realism may require hard work, judgment, and complication. Realism is the more important of the two.

In the paper it is pointed out that, in the United States, liabilities and surplus are quite rigidly defined, and it is then concluded that asset values should be stabilized as far as and as simply and consistently as possible. It is shown that it is very difficult or impossible to determine an effective set of rules for distinguishing between amortizable and nonamortizable bonds or for the proper amount of loss reserve. This seems to be another way of saying that conditions can arise under which the excess of amortized values of bonds over loss reserve would not be regarded as realistic. If this does happen, will there not be a lot of pressure to change the rules no matter how simple they are?

The need for realism in valuing private placement bonds can hardly be denied by the argument that market values are not available or by the comparison that mortgages are valued at their principal amount. The need would obviously exist for mortgages as well. Also, although it is indeed

difficult to generalize on collateral, the nature of the mortgage transaction is such that the relation of collateral to principal is likely to be stronger than for the class of bonds, debentures, and notes for a number of reasons:

1. At the outset the collateral to a mortgage exceeds the principal by a percentage depending on state law, whereas there may be no minimum percentage for bonds, and for unsecured debentures there may be no specific collateral.
2. Continuous repayments of mortgage principal should increase the collateral ratio. This will not hold for types of bonds without sinking funds.
3. Collateral in the form of residential real estate should always be valuable and even in poor times should command a rental income. The collateral for bonds may have a specialized use and so may be subject to obsolescence and fluctuations in value.

A study of the balance sheet of the United States statement might proceed from a different point of view. Liabilities, of course, are rigidly defined. While it is desirable for asset values less loss reserves to be as stable and as simply and consistently derived as possible, realism prevents this concept from applying at all times to all assets. Any system should provide for asset values outside the stable-and-simple method if this is not producing reasonable results. No system of this kind can guarantee that fluctuations will not occur. Under these circumstances, it seems unreasonable that there should be a limitation on surplus. This reasoning leads to the suggestion that a modern revision of the system of asset valuation should be linked with a removal of, or at least a reduction in, limitations on surplus.

It is believed that these limitations have their origin in the conditions at the beginning of the century and in the Armstrong investigation. It is obvious that conditions are now different, and there seems to be no reason to expect that a relaxation would lead to the growth of unnecessary surplus. Indeed, there is a new factor in the federal income-tax law which should act as a powerful deterrent to unnecessary surplus.

JOHN S. MOYSE:

This paper is a most timely addition to actuarial literature; it is also a refreshing change to examine the asset side of the balance sheet instead of the liability side.

Mr. McDiarmaid clearly points out the incongruous situation existing presently whereby bonds must meet certain tests to be amortizable and, if amortizable, must contribute to the Mandatory Securities Valuation Reserve, whereas mortgages not in default are always amortizable and do not contribute to the Mandatory Securities Valuation Reserve.

In my opinion the author should have explained why he included

mortgages in his proposed valuation system while excluding other life insurance company assets such as real estate, an area of increasing significance.

The paper deals primarily with the valuation of life insurance company assets for regulatory purposes. The valuation of life insurance company assets for investment purposes, from the point of view of the stockholder, is becoming of increasing importance. Rules for valuation of life insurance company assets should serve both purposes, as a test of net worth as well as of solvency.

The net worth of a life insurance company can be considerably influenced by any wholly owned or controlled insurance subsidiaries. Many life insurance and casualty insurance subsidiaries have been added in recent years. The tremendous rise in market values of life insurance company stocks has increased the value of many life insurance subsidiaries to far over book value or acquisition cost. A market-value system of common-stock valuation, such as the present regulations and the author's proposed regulations, would be more consistent if it provided for some basis of valuing these insurance subsidiaries which would reflect their current value.

The author states that security analysts would encourage serious unemployment in their profession by admitting that a few statistical ratios can determine the quality of bonds and preferred stocks. It is interesting to note that the relative simplicity of this valuation system could encourage serious unemployment in the author's own adopted profession!

Additions to the author's recommended stock fluctuation reserve are to consist, in part, of capital gains realized on the sale of common stocks less any capital gains taxes paid. These taxes are often small due to the common practice of offsetting any such capital gains by the sale of bonds at a loss. Thus it is difficult to separate common-stock investments from fixed-income investments, and this leads to the possible desirability of taking the necessary steps to combine the common-stock fluctuation reserve and the fixed-income securities reserve into one reserve, as is the present Mandatory Securities Valuation Reserve. One combined reserve is also preferable, since, in my opinion, there should be no more than one reserve for investments.

ARTHUR PEDOE:

The Society is fortunate in having among its members one with Mr. McDiarmid's knowledge and experience of investments to give us a paper on this important and topical subject. In the equation, "Surplus equals Assets less Liabilities," actuaries have paid considerable attention to the

value of liabilities but little to the valuation of assets. We could say that the valuation of liabilities represents the "science" of the actuaries' work and the valuation of assets the "art."

Mr. McDiarmid's paper should be of great value to our students, but I fear they may misunderstand the first paragraph of the paper. No responsible parties would place any value they pleased to their assets summarized in the balance sheet, and this is far less likely in Britain and Canada than in other countries. Mr. McDiarmid must have in mind the problem of excessive margins of surplus and investment reserves. In the United States, as stated in the paper, such margins are specifically limited by law.

In Britain, when a valuation of the liabilities is published, it must be stated how the values of the stock-exchange securities are arrived at in the balance sheet, and it must be certified that the assets set forth are in the aggregate fully of the value stated therein. It should be noted that there is no limit to how much the book values of the assets can be written down below cost or are below market value and hence the true surplus magnified. The excess of market over book value is treated as a confidential matter which the company need not disclose and as a rule does not do so.

In Canada the amount of detail of a life insurance company's operations given in the annual statement made to the Superintendent of Insurance at Ottawa is second only to the United States Convention Blank. In it the company must give the market value of every stock-exchange security held. A summary shows the excess of assets over liabilities on a market-value basis, and thus the surplus on a market-value basis is indicated in the published government statement. Again, there is no legal restriction to the amount of surplus or investment reserves which may be held. However, any situation where this amount would be considered excessive would be dealt with by the Superintendent of Insurance before it became a subject for comment by policyholders or others. Where amortization of bonds is permitted, and the permissive field is quite limited, the amortized value replaces the market value.

Mr. McDiarmid's comments on common stocks as investments by life insurance companies are of considerable interest. For over thirty years I have been a strong advocate for common-stock investments. Yet, when recently covering the matter in a textbook and dealing with the particular problems of United States life insurance companies, I almost justify the present position where United States life insurance companies invest in common stocks only 3.4 per cent of their total assets of \$141 billion. For Canadian life insurance companies the situation is similar: 4.0 per cent of their assets. In Britain the life insurance companies invest as a group over

20 per cent of their assets in common stocks, and for the largest British company with the equivalent of over \$4 billion in assets the proportion at the end of 1963 was 24 per cent. The particular problems referred to regarding the situation in the United States are: (1) the wide fluctuations in market values; (2) the low yields on common stocks in recent years (less than government bonds); (3) the situation where, of the fifteen hundred life insurance companies in the United States, over one-half are less than ten years old.

In the paper the importance of effective state supervision is not referred to, and the paper infers more detailed legislation. Yet Mr. McDiarmid deplors "intricate rules and valuation processes based on highly hypothetical and unproven assumptions." His plea for simplicity should not be passed over lightly.

I regret that, after referring to the method of writing up or down by one-fifth of the difference between their carrying value at the beginning of the year (or cost if purchased during the year) and market value at the end of the year, Mr. McDiarmid dismisses it in favor of market values at the valuation date. His reasons for doing so do not appear to me to be too significant.

Mr. McDiarmid states that the market value "in the long run is the only meaningful criterion of value" in common stocks. Does market value in itself really signify so much? In a time of crisis, and this is what we are concerned with, could one realize a large block of common stocks at anything near the so-called market price before the block was offered? An important aspect of "averaging" is that when the market pushes up rapidly the value of a stock, presumably based on the expectation of increased earnings, the averaging delays the accretion of capital value on which surplus earnings will be based until some of the increased dividends are received. The point at issue is the avoidance of wide fluctuations in asset values and all should not be dependent on the value according to the market on a specific date apart from every other consideration.

I appreciate the historic objection to excessive margins; it is a salutary attitude. This is, I presume, the objection to a smoothing formula *plus* a special investment reserve. However, if policyholders are to share in the increasing economic development of their country through their life insurance savings, investment in equities should be encouraged, and barriers to doing so should be removed.

REGINALD C. BARNESLEY:

Investments securing orthodox contracts of a life insurance company must not only guarantee amounts payable in the future but also make it

possible to discount such amounts at rates that will provide equitable earnings from year to year to current policyholders. Common stocks do not meet either of these requirements; future amounts are not guaranteed, and it is doubtful if anybody would suggest that an appropriate book value of common stocks is, regardless of market values, such as will release current earnings at a rate deemed equitable to current policyholders.

It is presumed that most companies may invest a small proportion of their assets (say, not over 5 per cent) in common stocks without much fear of an embarrassing impact on surplus in the future or on yearly earnings to current policyholders. The possibility of embarrassment would seem to become very real, however, if that proportion be raised significantly. Any company that takes or proposes to take advantage of the privilege of investing a high proportion of its assets in common stocks probably should therefore not only give consideration to the guarantees under its contracts but also be required to do so. This would seem to suggest that any recommendation to increase the proportion of assets that may be invested in common stocks should be accompanied by a recommendation or requirement with respect to bringing contract guarantees into harmony with the investment policy. A system of investment reserves or special reserves one result of which would be to transfer earnings from one generation of policyholders to another would hardly seem to be the solution. Unless both assets and liabilities are valued realistically, "protection" of book surplus would not necessarily protect solvency.

Perhaps more attention might profitably be given to the purpose of the rules for valuing assets and to the impact of the rules. What seems to be the sense of building up a book reserve of 2 or 3 or 4 per cent of assets when "free" or realistic surplus may vary anywhere from 2 or 3 per cent to perhaps 15 per cent or more, depending upon the degree of conservatism governing adoption of the values of the assets and liabilities for balance sheet purposes. Furthermore, is not a big distinction to be made between participating and nonparticipating business and between high-premium and low-premium participating business and whether the company allows surrender and/or maturity dividends and the basis and relative significance of such dividends. In the past, the terms of a company's contracts have governed its investment policy. Liberalization of investment regulations to permit a significant proportion of assets to be invested in common stocks would seem to require that contract provisions be subject to investment policy, including the method used to value assets. Under the circumstances, perhaps it would not be inappropriate to ask whether a change in investment policy is so necessary as to warrant the impact a change in the form of policy guarantees would have on the business. As regards funds

derived from orthodox contracts, it would seem prudent for the terms of the contracts to continue to govern investment of such funds.

HENRY F. ROOD:

I think we owe a great debt of gratitude to the members of the NAIC subcommittee who have been working on this problem and also to the Joint Committee of ALC and the LIAA. All these people are dedicated servants of our business.

In looking over the list of members of the latter committee, I could not help but note that quite a few of them work for companies that do not have stockholders and are not so subject to the comments of the analysts as some of us are. Also, some of them are members of the investment fraternity and, I think, are quite conservative in the handling of assets.

Actually, I do not believe that there is much difference in the feeling of those who would like to see the report adopted completely and those who would like to see some modification of it. We all agree on Parts I and II, namely, the methods recommended for the valuation of bonds and preferred stocks. The only difference of opinion lies in the question of common stocks. There I think we reach about the same net result, but some of us believe that we should use realistic market values on the asset side and make up the difference in the Mandatory Security Valuation Reserve, while others feel that cost should be used.

The reasons why I oppose the use of cost for valuing common stocks are as follows:

1. Cost represents market at an isolated moment of time and, therefore, becomes less meaningful as time passes.
2. The use of cost produces different values for the same stock issue owned by different companies or even different values for the same stock issue owned by a particular company but purchased at different times.
3. The use of cost does not properly recognize the general corporate dividend procedure of plowing back large amounts of earnings into the company.
4. The artificiality of using cost is illustrated by the fact that a company could sell its stocks and then repurchase its existing portfolio, thereby changing the cost basis involved. (Of course, capital gains taxes and commissions would be involved.)
5. The use of cost is not necessarily conservative. For example, 1929 purchases, if carried at cost, would have been too high for many years.

In connection with the NAIC proposals, I believe that there is unanimity on the valuation of bonds and preferred stocks. The only disagreement is in connection with the valuation of common stocks. I have already dis-

cussed why I think the cost basis is not a good one. The freezing of stocks purchased prior to 1964 at December 31, 1963, market values is arbitrary and will be hard for policyholders, CPA's, federal agencies, and stockholders to understand in the years ahead.

I suggest that the NAIC adopt the recommendations for bond and preferred-stock procedures, keep the common-stock procedures the same as the present basis for the time being, and continue to study the problem. I believe we can find a procedure that will satisfy all of us. But, until that is done, it seems advisable to keep what we have rather than to change it.

(AUTHOR'S REVIEW OF DISCUSSION)

FERGUS J. MCDIARMID:

Some critics of this paper appear to hold the view that it should never have been written in the first place, or, if written, not published in its present form. It has been stated that the paper does not contribute to a better understanding of the valuation question and that it is confusing to the average reader. It is very difficult to answer this type of criticism except to let the readers of the paper decide as to its merits.

This paper did attempt to present certain basic ideas dealing with asset valuation and the establishment of loss and valuation reserves, which it was hoped would be considered on their merits. Central to it were two trains of thought, one relating to fixed-income securities and the other to common stocks. With respect to the former, it was contended that there is no basis for estimating the incidence of future losses on fixed-income securities except within very broad limits, so that any substantial refinement in the method of setting up reserves against future losses is largely a waste of time and effort. However, some over-all strengthening of the present loss reserve basis was proposed.

With respect to common stocks, it was pointed out that the real intrinsic value of these, as reflected by earnings and dividends, is in a constant state of fluctuation. The long-term trend has been upward at an uneven pace; but, in the case of some stocks, it has been downward. Therefore, the freezing of the asset values of individual stocks at some predetermined level does not seem realistic.

These basic ideas which were the main stream of the paper were not refuted or even seriously attacked. The writer is a firm believer in stabilizing, as differentiated from freezing, the asset values of common stocks, insofar as the impact on surplus of swings in market values is concerned. It was his failure to go along with an alleged but unproved majority opinion as to the best method of doing this that seemed to arouse the ire of some critics. As a matter of fact, the proposals of the writer for stabilizing

the impact of common stocks on surplus produce results which do not differ materially from those produced by the current NAIC proposals, but do this in a relatively simplified manner.

Under the circumstances, a brief review of the current NAIC proposals seems to be in order. These proposals embody the idea that common stocks be carried as an asset at an adjusted or synthetic cost figure, based on market value on December 31, 1963, for stocks purchased prior to that time, with actual cost being used in the case of subsequent purchases. As a cushion against a decline in stock prices, there would be set up a Mandatory Securities Valuation Reserve in the maximum amount of 20 per cent of the adjusted cost. Toward the establishment of this reserve, that part of the present reserve derived from common-stock operations would be contributed, which in the case of quite a few companies would be sufficient to bring it up to the required 20 per cent maximum immediately. Otherwise, there would be added to the reserve annually 1 per cent of asset value until the required maximum was reached.

What would happen if market value declined enough below adjusted cost to wipe out the reserve? Then it is proposed to give companies three years to adjust the net asset value of their stocks to market. The mechanical process by which this would be done has not been explained and might present some difficulty, as they would be moving toward a constantly shifting target due to the changing market value of stocks. This is the first tacit admission that market value cannot be ignored in connection with the valuation of common stocks.

If the market value rises above adjusted cost, what, then, is suggested? It is proposed to do nothing until market reaches 130 per cent of asset value. If the market rises still further, it is conceded that the need for the reserve will have diminished, at least on a relative basis, and it is proposed to release this reserve progressively to surplus. This would be done under the provision that the maximum reserve need not exceed 50 per cent of asset value minus the excess of market over asset value. Reduced to algebra, the expression for the reserve would be 150 per cent of asset value minus market value. It is obvious that, if the market would reach 150 per cent of asset value, the reserve would be entirely released. However, if market then declined below 150 per cent of asset value, the reserve would be built up again by the 1 per cent annual contributions. In these provisions also there is an admission of the overriding importance of market value.

What if market value appreciates above 150 per cent of adjusted cost? Then, as a belated concession, it has been suggested that two-thirds of market appreciation in excess of 150 per cent of asset value be allowed to

flow into surplus. This would be done by setting up a nonledger asset item entirely separate from the common-stock account equal to two-thirds of the appreciation above 150 per cent of adjusted cost or asset value. Thus, the fiction that common stocks are to be carried at such adjusted cost would be preserved, while the influence of market would be again tacitly recognized.

If the reader finds all this somewhat hard to follow, he has my sympathy. What would happen in the event of varying degrees of market depreciation below or appreciation above adjusted cost is perhaps best clarified in Table 1. In the event one starts out with a Mandatory Se-

TABLE 1
NET ASSET VALUES AND CUSHION FOR SURPLUS ASSUMING MAXIMUM
REQUIRED SECURITIES VALUATION RESERVES ESTABLISHED
(PER \$100 ADJUSTED COST OF COMMON STOCKS)

Market as Percentage of Adjusted Cost	Maximum Security Value Reserve (1)	Common-Stock Appreciation Fund* (2)	Net Asset Value 100—(1)+ (2) (3)	Net Asset Value to Market Value	Cushion for Surplus as Percentage of Market Value
80.....	20	.....	80	100.0	0
90.....	20	.....	80	88.9	11.1
100.....	20	.....	80	80.0	20.0
110.....	20	.....	80	72.7	27.3
120.....	20	.....	80	66.7	33.3
130.....	20	.....	80	61.5	38.5
140.....	10	.....	90	64.3	35.7
150.....	0	0	100	66.7	33.3
160.....	0	6.67	106.67	66.7	33.3
170.....	0	13.33	113.33	66.7	33.3
180.....	0	20.00	120.00	66.7	33.3

* Two-thirds of the excess of market value over 150 per cent of adjusted cost.

curities Valuation Reserve for common stocks below the maximum or with none at all, the cushion would then build up from a lower base, but the basic comparisons between my suggestions and those of the NAIC would remain the same. In both cases contributions from earnings and net capital gains, realized and unrealized, are the only sources from which this cushion can be established.

The important thing, of course, is to build up a cushion in some form so that a decline in market values will not have a direct impact on surplus. The stabilization of surplus and not the stabilization of assets is the meaningful goal. The method proposed by the NAIC is complicated, difficult for ordinary people to understand, and involves the use of asset values which would have little meaning to policyholders, stockholders, invest-

ment analysts, and the general public. The cushion which they propose tends to reach a maximum which is very little different from the one proposed in my paper. I propose an ultimate maximum cushion of 30 per cent of market, while their proposal calls for one of $33\frac{1}{3}$ per cent. If it would add substantially to the sum total of human happiness, I would be willing to adopt their $33\frac{1}{3}$ per cent figure.

It is true that their system results in a maximum cushion of $38\frac{1}{2}$ per cent, which is reached when market value reaches 130 per cent of adjusted cost, and thereafter declines to $33\frac{1}{3}$ per cent. This aberration makes no sense at all, since the higher market values go, the greater would be the need of a cushion against their decline.

If the same degree of stabilization of surplus can be attained by carrying common stocks at market value, which is a figure very clearly understood and would be the same for all companies, by setting up a stock fluctuation reserve to absorb the market swings, I feel that this is greatly to be preferred over the complicated system to reach about the same goal proposed by the NAIC.

I have been criticized for not including in my paper any reference to the Fraine report. A review of this report prepared by the writer of this paper will be found in the "Book Reviews and Notices" section of this number of the *Transactions*.

A number of those discussing my paper have added valuable ideas, some of which were overlooked by the writer, and some of which were not included for fear of running the paper to too great length. The comments of Mr. Maynard and Mr. Pedoe regarding practices in Canada and Great Britain represented a real contribution to the subject.