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ALLOCATION OF ASSETS AND INVESTMENT INCOME

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3. The principal allocation methods - how they accomplish objectives.

MR. RICHARD K. KISCHUK: This is a panel discussion on allocation of assets and investment income. The fact that we are having this panel discussion today is evidence that this is a subject receiving increasing attention. Until recently, companies basically had a choice between two approaches to allocating investment income. There was the portfolio average approach and the investment year method. Recent developments have opened up a whole spectrum of additional approaches that are possible. For example, there is the modified investment year method with equity investments excluded from certain product lines. There are separate investment accounts, with or without interest guarantees. There is the use of separate companies for different product lines. There is segmentation of the general account and proportionate segmentation. Many companies are using combinations of several of these. Many of these are more than just different allocation methods. Some of these may involve fairly extensive changes in company structure, for instance. Some can also involve some fairly extensive changes in the jobs of the pricing and valuation actuaries, and how these actuaries interact with the Investment Department, Treasurer's Department, and other functional areas of an insurance company. Stan Tulin is going to start us out this morning by giving us an overview of some of the possible methods. Then Carl Ohman will tell us about Equitable's new approach to allocating investment income. Garreth Evans will describe Crown's allocation method.

MR. STANLEY B. TULIN: Allocating investment income is a lot like running a dating game, in that it can be a lot of fun, and it can be amusing. You can get many different answers which may all be right. But there is one requirement. There has to be enough to go around. I think it is important for everybody to understand that no matter what answers you get using

an allocation method, that does not change your bottom line or change the success of the going entity. Although allocation is important, it is only the beginning.

The reason that there is so much interest in allocation today is that we have witnessed over the past ten years a dramatic change in the types of products and the marketplace of the life insurance industry. We have seen a definite movement in the investment philosophies of companies and in the products that they offer to compete with banks and other financial institutions. There are three reasons why we need to have allocations of investment income, although there are subsets of each of these. The three reasons are:

1. Financial statements (both statutory and GAAP).
2. Internal analysis of profitability by line of business or by product line.
3. Policyholder equity.

(This is not just equity in the traditional mutual company sense, but also includes allocating investment income to interest sensitive products, such as single premium deferred annuities or flexible annuities or even Universal Life.)

Over the past ten years, companies have had many changes, but basically, there are seven or eight general methods that are still being used to allocate investment income. The first of these is mean liabilities, which is what most of us grew up with or at least saw prior to the investment year method. In this method, companies allocated their investment income in proportion to mean liabilities. Implicit in this was a portfolio average rate for every line of business and a proportionate share of surplus for every line of business in relation to its liabilities. Any realism that was reflected in allocations based on this basis was accidental. The next approach that I saw used was mean liabilities with an adjustment for policy loans. The only difference between this approach and the first one was that from a yield point of view there was an adjustment for the fact that policy loans earned a different rate than the rest of the investments of the company. Again, investment income allocation and the underlying asset allocation was not at all precise nor very realistic. The next approach that I have seen companies go to is what I call mean funds, in which there is a fairly good tracking of cash flow and the generation of cash flow which causes investment in assets. Investment income is still credited on a portfolio basis, and there may be a policy loan adjustment. This approach led to the investment year method in which cash flows were tracked by year of investment. Policy loans were directly accounted for by line of business and assets were tracked, and investments in assets were credited in direct proportion to the generation of the assets. The investment year method served the industry well as a major allocation basis for group annuities and other interest sensitive lines for about fifteen years. In recent years, we have seen movement to modify the investment generation where, for example, a company concludes that it does not want to have its group annuity line participate in common stocks or real estate investments because of the need for extremely competitive interest credits. It excludes those investments from the pro rata share of each year's generation.

More recently, we have seen companies move to segmentation which is the ultimate, or one step away from the ultimate, in investment allocation by line of business. Essentially, segmentation calls for different investment philosophies and different investment assets for each business segment or line of business.

The only step beyond segmentation is separate legal entities or companies for each line of business or for each business segment.

More recently, generated in large part by the fact that companies are starting to use segmentation, several smaller companies are starting to use a thing which I have called proportionate segmentation. Proportionate segmentation is really just a modification of segmentation which takes account of the fact that smaller companies do not have adequate cash flow to establish separate entities or separate segments. The way proportionate segmentation works is that you set an investment strategy for each line of business. For example, you could assume that one line of business has a strategy that calls for one third equities, one third short-term debt and one third long-term debt. A second line of business has a strategy which calls for one tenth equity, one tenth short-term debt and eight tenths long-term debt. The third line of business requires nine tenths short-term debt and one tenth long-term debt. With this proportionate approach, you then have the strategic philosophies fixed for each line of business, and you have to track your cash flow in such a way that your Investment Department has a good feel in its daily investment practice for following these strategies. It requires important coordination between the Investment Department and the Cashiers Department or the place where the money is coming. If you take this example and assume that all of the money is evenly distributed between line one, line two and line three, then the Investment Department would put 14.4% of the investment in equity, 44.4% of the investment in short-term debt, and 41.2% in long-term debt, which is just an algebraic weighting.

In addition, each line of business would have to have hedging rules based on the contractual and investment characteristics of the line of business being strategized. This assumes that hedging is legal in the state in which you are operating.

The advantages of a proportionate segmentation system include that the investment personnel are not burdened with keeping assets separate for separate lines of business or sublines. They need only invest or hedge, based on an underlying company philosophy for each line. To the extent that each line gets a broad share of all the new money placed in a particular asset class, concentration of risk problems are eliminated. These can occur in a small company that can only acquire one or two investments for a particular segment at a particular duration. This can lead to all kinds of questions as to how to allocate defaults and what you do in terms of a particular asset risk.

Both proportionate segmentation and pure segmentation, which is really a special condition of proportionate segmentation, require a flexibility in the investment area, which I believe is going to have an impact on invest-

ment philosophy for the life insurance industry in general over the next few years. I particularly see forward commitments changing regardless of what happens with interest rates. Real estate and equities will become tough investment areas for the life insurance company, because I do not think any line manager is going to want them in his strategy.

There are several mechanical questions involved when you construct either a proportionate segmentation or segmentation type system. The first is interline borrowing rates. By this I mean, what do you do (this really goes back to an investment year method system too) if you have a negative generation in the current year? At what rate of interest does that line of business borrow and what capital repayment structure should be associated with that line? There are several ways to do this, including the approach that falls naturally out of the investment year method, which is to have the loan made at the current year new money rate and paid back using the basis of the current year maturities, whether there is adequate cash flow or not. Another way might be to have a separate yield that is required by the lender of the money which, in most cases, would be a surplus line of a company, and a certain repayment associated with that.

The second area is, what you do with differences between strategic investment philosophy and actual investments. In proportionate segmentation, you are going to have a difference between the investments that you would have wanted to obtain on a proportionate basis and the investments that are in fact made. Some place the difference between the actual and expected has to be allocated. Some companies that we are working with believe that they are going to allocate this to a corporate pot. The one concern that I have is that, if the investment people are not closely brought into this, the corporate pot could end up being almost the entire company and the strategic philosophies could end up being fairly meaningless.

Another question is Federal Income Tax allocation. In many companies, where investment income allocation is new, the Federal Income Tax allocation has not been thought through very carefully. In many other companies where Federal Income Tax allocation was thought through carefully ten years ago, recent developments have knocked it out of the water. The question becomes, first of all, what do you do with a system in terms of allocating investment income? Secondly, how do you set your strategic philosophies, taking account of the Federal Income Tax impact on different lines of business in different ways? I have no answer for the following question. What do you do under current tax law without modified coinsurance if you have a group annuity line and an individual life line, that in effect, get to a point where they cannot coexist in the same company on an after tax basis?

Another question that you have to deal with in establishing those methods is the initial allocation of assets, and there are really two questions. One is the allocation of surplus by line of business, and the other is the allocation of assets or the distribution of assets by year of investment. I think that there are a lot of solutions to this question, including a fund accounting approach to establishing the initial surplus levels, and a historical implementation, where it is legal, of the investment year method.

The last issue is, "profit released" versus "profit retained". In setting up these methods, some companies are using corporate buckets or corporate surplus lines where either all or part of the surplus of a company is held. Other companies are allocating the surplus to lines of business and letting it accumulate in the lines of business as time passes. And there are some approaches between the two. The "profits released" approach, in its purer sense, would hold assets in a line of business equal to some suggested level of reserves plus contingency reserves, and each year would have transfers from a corporate line of business moving either from the corporate line into the line of business if there was a loss, or from the line of business into the corporate line if there was a gain over and above the required reserve liabilities. The "profits retained" approach would just keep all of the money in the line of business. If you use the "profits released" approach, you have a system that will enable you to calculate internal rate of return by line of business. If you use a "profit retained" approach, you get to measure the ultimate contribution to surplus from a company's line of business. Some companies are trying to do both by using one system, namely "profits retained" for allocating investment income in statutory statements, which require you to allocate all of your investment income to some line of business. They use "profits released" or something approaching "profits released" for internal management statements that do not encumber lines of business which lose money with negative investment income and charges for the past, which, in effect encumber your ability to look at the current performance of the line.

MR. CARL R. OHMAN: I would like to describe the method, recently adopted by the Equitable, of allocating investment income among lines of business. We call this method segmentation. I will also discuss some of the implications of segmentation for company management and for the actuary responsible for valuing liabilities.

Equitable adopted the investment year method (IYM) for allocating investment income and capital gains among lines of business and to contract-holder funds within certain lines in 1962, shortly after New York's Regulation 33 was modified to permit use of such methods. Under the traditional form of IYM, each general account investment is shared by each line of business, with shares based on the distribution by line of business of funds made available for investment in the year the investment was acquired. Included in the determination of funds made available for investment in a year are the funds arising (a) from insurance income less disbursements, (b) from allocated investment income, and (c) from proceeds of sales and repayments of investments.

This traditional form of investment year method did provide a fair recognition of investment earnings actually generated by assets derived from each of the company's different lines of business. The allocation percentages were determined automatically by formula from the emerging cash flow patterns of the respective lines, and this eliminated the need for discretion of management in the allocation of investment income. It also imposed the necessity of adopting one investment strategy for the entire general account with only limited opportunity to recognize the particular investment needs of particular parts of the business.

Increasingly, in recent years, our company's senior management had come to realize the very different investment needs of the different product lines included in the general account. Pension guaranteed interest business requires a very high degree of matching of assets and liabilities. Other pension business, without interest guarantees and permitting withdrawals subject to market value adjustment, requires dependable high rates of return with only limited concern over duration of assets. Individual life insurance and individual annuities, with guaranteed cash values, require an appropriate degree of asset liquidity. Group life and health insurance, with its highly seasonal and volatile patterns of cash flow, has its own special investment needs. After reviewing the liability structures of each of our general account businesses, management concluded that some way must be found to tailor the general account investments made, held, and sold to the needs of the respective lines of business.

There were various possible alternatives. We could have restructured the company so as to operate the different classes of business in separate companies. We could have moved certain lines of business to subsidiaries. We could have made more extensive use of separate accounts—Equitable was already operating a portion of its pension guaranteed interest business in a separate account. We could have taken the route of developing a separate portfolio of investments within the general account for the pension business, as a number of companies are doing. Or we could have simply modified the investment year method to exclude certain types of investment (e.g., stocks, deep discount bonds, equity real estate) from certain lines of business as some other companies are doing. We settled upon a major modification to the investment year method, which we described as segmentation, as the approach which we believed to be best for the Equitable given its particular financial management structure and mix of business. This method may or may not be appropriate for another company differently situated.

Briefly, Equitable's segmentation entails a structuring of our general account into five business segments, each with its own portfolio of investments. New investments are acquired for the five segment portfolios from the actual cash flow of that business segment in accordance with an investment strategy tailored to the specific investment needs of that segment's business. A particular investment may be acquired for a single segment, or may be shared by two or more segments. Initially, existing investments are shared among business segments, with percentage shares derived from current investment year method allocations. The larger direct placement, mortgage and real estate investments generally are shared. Certain classes of smaller or publicly traded investments have been actually distributed or subdivided among the respective segment portfolios.

Insurance income is allocated directly to the respective segments when received; benefit payments charged to the segments when disbursed. Investment results, including capital gains and losses, proceeds of sales and repayments are allocated by segment when received (rather than once a year as was done previously under the traditional IYM procedures). Note that capital gains and losses are allocated directly by segment--i.e., no

averaging among segments--to assure that any variation among segments in the balance of yield vs. quality of investments will be recognized appropriately in the allocation of capital gains and losses. Segmentation need not involve any change in methods of allocation of expenses or taxes among lines, although allocations are made at least monthly on an estimated basis to assure proper distribution of cash flow available for investment in the respective segments.

In addition to the five business segments, we also established a corporate segment to accommodate those investments that are held within the general account in accordance with over-all corporate objectives, which may not comport with the specific investment needs of any individual business segment. Examples of such investments are: home office properties, certain subsidiaries, certain long term growth investments, or investments acquired for social purposes. For statutory accounting, the investment results of the corporate segment are allocated among the five business segments to fund the investments in that segment.

It must be emphasized that segmentation of Equitable's general account does not constitute a segregation of assets. All assets of the general account continue to be owned by the general account as a whole and to stand behind all obligations of the general account. Segmentation affects only the allocation of investment results; it does not allocate assets.

Segmentation has had important implications for the management of Equitable's general account operations. First, segmentation has required major and costly changes in Equitable's accounting systems to assure timely and accurate monitoring of cash flow for each of the business segments, including prompt allocation of investment results, and to permit effective forecasting of future cash flow by segment. As extensive and costly as these changes proved to be, however, a major portion of the changes would have been needed in any case, segmentation or no, simply to enable us to cope with the needs of today's volatile financial markets and high interest rates.

More important, perhaps, segmentation has required a complete reorganization of our general account investment portfolio management to permit close coordination with the product managers of the respective business segments in identifying the liability characteristics and investment needs of each class of business and in developing an investment strategy most appropriate to the needs of the businesses. While the separate portfolios are tailored to the needs of the respective segments, there still remains an overriding need for overall coordination at the Chief Investment Officer level to assure that consistent policies are adopted for all general account segments as to capital gains, statutory investment limitations, and overall structure of general account assets.

An important consideration in the development of our segmentation plan was the need for detailed rules and procedures for allocating specific investments to specific segments, or for sharing investments among two or more segments to assure fair treatment of all lines of business and all classes of policyholders. This was of particular concern to the New York Insurance Department in their review of Equitable's proposed segmentation plan.

Another important consideration was the need for rules and procedures to accommodate negative cash flow in one or more business segments. Such negatives could be covered by selling existing investments in the segment, by borrowing from other segments or by borrowing from outside the Equitable. Of particular concern is the choice of interest rate for inter-segment borrowing to assure equity among the classes of customers included in the segments involved.

Still another consideration is the management of short term investments—whether to acquire and maintain short term investments separately for each segment or maintain one cash management pool for the entire general account with each segment sharing in the investment results in proportion to its average contribution to the cash management pool.

Equitable's general account segmentation became effective January 1, 1981, and we have now completed a full year of experience with it. Implementation has presented its share of headaches, however, we have every reason to be satisfied with its operation. Product managers are gaining a better understanding of the investments supporting their products and are better able to anticipate the characteristics of new investments acquired for their respective businesses. Investment managers are gaining a better understanding of liability characteristics and investment needs of the respective lines of business and are better equipped to serve the client's needs. From a corporate financial standpoint, segmentation offers the opportunity for tighter monitoring and control of cash flow, and a better matching of general account assets and liabilities, thereby improving the company's overall risk posture. In summary, we are very pleased with results so far.

Now I would like to comment briefly on the implications of segmentation for valuing a company's liabilities and for the actuary responsible for the reserve valuation.

Traditionally, in this country, state laws have prescribed separate and unrelated minimum standards for the annual statement valuation of assets and liabilities. With bonds and mortgages generally valued at book and with liabilities valued using conservatively low interest rates, the resulting valuations of assets and liabilities have remained more or less consistent. It has generally been reasonable to assume that compliance with statutory reserve requirements would make adequate provision for a company's annual statement liabilities.

Today, in the current environment of high and rapidly changing interest rates, the presumption that compliance with statutory reserve requirements is sufficient may no longer be valid. For a company with a reasonable matching of assets and liabilities, with reasonable call provisions in the assets to protect against early repayment of investments when interest rates fall, and with reasonable withdrawal provisions to protect against disintermediation when interest rates rise, present statutory reserve requirements are adequate, given the current standard for valuation of assets. For a company not so well situated, compliance with statutory reserve requirements may not be sufficient. It falls to the actuary responsible for signing the actuarial opinion that accompanies a company's

annual statement to make a judgment as to whether the company's reserves and the supporting assets are adequate to fund the liabilities, given the valuation basis, expected yield and maturity structure of the assets supporting the liabilities, and the extent to which asset and liability cash flows may vary from expected when interest rates change.

The Society of Actuaries' Task Force to Study Risk of Loss Due to Changes in Interest Rates (C-3 Risk Task Force) has been very active during the past year in developing and testing methodology for measuring the adequacy of reserves for various insurance products under conditions of changing interest rates. The New York Insurance Department now requires, optionally, specific tests of reserve adequacy for guaranteed interest contracts, along lines developed by the C-3 Risk Task Force, and various groups will be working with industry and regulators in the coming months to determine what guidelines and standards of practice might be appropriate for actuaries performing such tests. I believe it only a matter of time before such requirements will be mandatory, not optional, and extended to reserves for other than interest guarantee business.

The important element in all of this is the need to be able to identify the assets supporting each of a company's classes of business. Although such identification is certainly possible, at least implicitly, under traditional investment year methods, even under the portfolio average method, segmentation does lend itself to a direct identification of the assets supporting each business segment. Of course, for purposes of testing the adequacy of reserves for blocks of business within a segment, traditional investment year methods may be needed to identify the maturity structures of the respective sub-blocks of assets.

Once again, let me stress that while segmentation seemed to be the right approach for the Equitable at this time, it will not necessarily be the best approach for other companies. A company should first examine its corporate structure, management objectives, financial information systems, mix of business and liability structures before deciding on such a move.

MR. GARRETH EVANS: Before getting into the specifics of the investment income allocation, I would like to give you some background information about our methods of management and reporting at Crown Life.

Crown Life is a Canadian life insurance company operating internationally in North America, the Caribbean, the U.K. and various other jurisdictions, either directly or through subsidiary companies (i.e., lots of currencies). Crown is a stock company as opposed to mutual company; we do, however, write a significant amount of participating life insurance business.

Given that Crown has two sets of owners (i.e., shareholders and par policyholders), we are required to continually justify to ourselves and to the regulators that our actions are equitable to both sets of owners.

Our Board of Directors has specific board members known as policyholder directors (as opposed to shareholder directors). These directors look after the interests of the participating policyholders at a board level.

As a Canadian company, we are regulated by the Department of Insurance in Ottawa, and we produce financial returns as required by the Canadian and British Insurance Companies Act. We are, of course, regulated in all the other jurisdictions in which we operate; however, we manage our company primarily with the Canadian government's regulations in mind.

There are a number of pertinent elements to the Canadian Department of Insurance's regulations that I would like to touch on.

1. The valuation of liabilities process under the direction of the valuation actuary of a company must produce liabilities that are "appropriate". This is significant in that we can consider Canadian statutory requirements with respect to liabilities closer to G.A.A.P. than, say, U.S. NAIC requirements.

For purposes of this session, we could consider Canadian liabilities equivalent to G.A.A.P. liabilities and note that this puts a lot of pressure on the valuation actuary to worry about the proper matching of assets and liabilities.

2. The Canadian Department of Insurance, by law and regulation, controls the allocation of investment income and thus far has not, I believe, approved any form of segregated asset approach. I will come back to this a little later.
3. Generally speaking, all of the assets of the company are available to cover all of the liabilities. By law, then, one cannot argue that a specific asset is only available to cover a specific liability.

Still by way of background material, let me tell you in general terms how we manage our company.

We have segmented the company's affairs into what we call operating lines and corporate lines.

Operating lines are the traditional lines of insurance business (individual non-par life, par life, group annuity, etc). Keep in mind that there must always be a par/non-par split, so for example, the individual life insurance operations must be split into two operating lines of business - one par and one non-par.

Corporate lines are profit centers through which flow items that have little to do with and, in fact, distort the results of the traditional operating lines. Subsidiary companies, bulk reinsurance, investment income on surplus are examples of items that would flow through corporate lines of business.

I should say that this segmentation is for internal management purposes only. Ultimately the results of the corporate lines have to be reallocated to the operating lines for purposes of preparing statutory returns.

We have specific people responsible for the results of the various corporate and operating lines.

The one element of this management approach which is pertinent to today's session is the allocation of assets and investment income. We felt that, given that a specific individual was responsible for the results of a line of business, the same individual should have some input into the investment results of the line. Rather than rely on a formula allocation of total company investment results, we felt that the line manager (that is, the one responsible for operating line results) should have direct input as to the specific assets that are to be purchased on behalf of his line of business.

We were also very conscious of the responsibility of the actuary valuing the liabilities of the company to take proper account of the matching of assets and liabilities. This is a very difficult problem with formula allocation of investment income but a relatively simple one with assets notionally split to line of business.

Let Me Summarize

1. Crown is a Canadian company with two sets of owners.

- par policyholders and shareholders.

It follows that equity between the par and non-par accounts is of continual concern to us in our allocation of investment income.

2. The valuation actuary of the company must take proper account of the matching of assets and liabilities and must report on such to the Canadian Department of Insurance. The job of the valuation actuary would appear to be much easier in this regard if specific assets are allocated to each line of business.
3. The company is managed by line of business with specific individuals responsible for the bottom line results of each line of business. The job of the line managers would appear to be much easier if specific assets are allocated to each line of business and if the line manager has some input as to which assets are allocated to his line.

Now let me explain in general terms how we notionally split our assets to line of business and how we allocate our investment income.

All of the assets of the company are allocated to one of the lines of business, that is, to one of the operating or corporate lines. Our internal records, therefore, have earmarked every asset. As new assets are purchased, they are allocated to one of the lines of business (let us call these notional funds).

Investment income is allocated with direct reference to the investment income of each notional fund.

You can see that for purposes of managing the company we have essentially created a series of separate companies equivalent to each line of business.

For example, the group annuity line of business has its own cash flow statements, its own investment policy and its own assets. It can, therefore, operate like a separate company without having to worry about the imposition of some formula approach.

While this works well in managing the company, unfortunately we are still not at the stage yet where the regulations will let us use the approach. This means that we have had to continue using a formula approach for purposes of preparing statutory reports. This formula approach is actually a modification of the investment generation allocation method. To avoid having two completely different sets of books, one for statutory purposes and one for management purposes, we have accommodated the difference between the statutory requirement and management's requirements within the corporate lines of business. Thus, the sum of the results of the corporate and operating lines of business is the same for both management and statutory purposes.

I will touch on a couple of practical matters. Until 1980, we used a formula approach to the allocations of investment income. In 1980 we ran parallel, and in 1981 we switched to the notional asset approach.

1. How were the existing assets split at the time that this new method was implemented?

We used a formula approach that ensured that the total investment income for each line of business was the same as would have been allocated under the then current formula approach to splitting investment income. This guaranteed no discontinuity at the point in time at which we switched methods.

2. How do we split new assets?

We have, as I indicated, specific investment policies for each line of business. If it happens that on a specific day we have cash flow from two or more lines of business that is to be applied to purchase a similar class of securities, we have objective rules that pro-rate the purchase.

Moving to the questions posed in the outline for the session.

Consistency between pricing and investment practices

We are in a position to ensure consistency. Our line managers are in frequent contact with the investment department - sometimes on a daily basis with respect to annuities for example. Through internal reporting, the line managers know which assets are being bought for their lines of business.

Par/non-par equity

This is the big regulatory issue. We think that we have objective procedures in place to cover the potential allegation that we have some form of bias one way or the other. Unfortunately, we have not convinced the regulators in the Department of Insurance yet.

Equity between classes of policyowners

Again, the mechanics are in place for even better equity. Some would argue that there may be too much equity - in other words, some sacrifice of the pooling arrangement.

Competitive Position

Certainly in the annuity market and perhaps in the Universal Life market, one cannot price properly or competitively unless you know which assets are to be bought to match the liabilities. Once bought, it would be difficult to judge the results properly without some form of asset allocation.

Regulatory Constraints

Essentially the Canadian authorities will not let you use a notional asset allocation method. I should add that I have discussed the matter on several occasions with the Department of Insurance, and they are actively studying revisions to the laws and regulations covering investment income allocation.

Preview by regulatory authorities

We are constrained by law in Canada. Effectively, we need prior approval before any change is made to investment allocation methods.

Prospective or Retrospective

We chose a prospective introduction mainly because we felt it to be the most equitable. We felt that the regulatory authorities would never buy a retroactive change.

Valuation

At the very least, the valuation actuary's job is easier if he knows the nature of the assets matching the liabilities. In Canada, he is forced by the regulators to take due account of asset-liability matching.

Experience Monitoring

With our internal management reporting we can keep track of experience accurately as if each line of business was a separate company.

Internal and External Reporting

Unfortunately, as I have said, the regulatory environment has forced us into slightly different external reporting.

MR. KISCHUK: Do any of you have comments on the difficulties involved in determining investment strategy by line of business?

MR. TULIN: What I have found is that as you get to the point that you realize you need an investment strategy by line of business, your client or your company or your management says right, and then looks at you with a blank stare. Everybody acknowledges that they need it, but nobody knows what to do next. It is a lot like what Mark Twain used to say about the weather. After that you realize that setting investment strategy has to involve a coordinated effort of at least actuarial, investment and senior management. And inevitably, the marketing end of a company becomes a very important part. You need more groups in a room than you are probably used to seeing in order to develop a decent strategy. I think this is one of the really exciting parts about this, because I think it is important to the industry. On the other hand, I have not heard of any company that has been able to do it in a routine fashion. I think that the initial reaction is we need it, but how we do it is everybody's best guess.

MR. EVANS: We felt at Crown that we could not get past the Department of Insurance without specific investment strategies by line of business, and certainly back at the end of 1979, we did produce such. They were not terribly sophisticated, but they started the ball rolling, and since then, we have been doing it annually. Annually, the line managers do sit down with the Investment Department and pick specific strategies for each line of business.

MR. OHMAN: In order to have an effective investment strategy for a given segment, you have to fully understand the liability, the liability structure, and the investment needs of that segment. In actual experience, we thought it easiest to get to the needs of the non-par interest guarantee business, and it did not take us long before we got an effective working relationship and an effective statement of investment strategy there. For the individual annuity and group insurance lines, it came somewhat more slowly, but still, since the liability structure is better understood there, and the investment needs are better understood, we developed an investment strategy fairly quickly. For the traditional business, it has taken us somewhat longer. Individual life will probably be the most difficult for the obvious reason that the C-3 risk characteristics of the individual life business, with its guaranteed cash values, are probably the most difficult of all lines. I think it is going to be longest before we have a really effective understanding of the business needs of this line.

MR. TULIN: It is conceivable that the individual life line will have to have different investment philosophies, maybe as many as four different segments. Consider the 1980 amendments to the Standard Nonforfeiture Law. Consider a variable policy loan interest rate versus the fixed, and Universal Life versus more traditional life. Each one of those might have a very different investment strategy.

MR. CHARLES C. MCLEOD: As segmentation develops, do any of you see a move toward an increased number of funds for different product lines, or do you feel you are operating at about the right number of funds at present?

MR. OHMAN: I mentioned that we have five business segments and one corporate segment. One concern was to make sure that all of the funds were large enough. We wanted to make sure that we did not have any very small funds. We included individual health with individual life for that reason, not because the liability characteristics are the same as individual life. But, as Stan was mentioning, it is very likely that we will need additional segments. If Universal Life is introduced in our general account, I would assume that we would need a separate segment for it. I would expect from time to time there will be additional segments.

MR. TULIN: I think the question is good. In the cases I have seen with relatively smaller companies, there are more segments and that is the reason that proportionate segmentation with a pro rata share of varying investment philosophies seems to make more sense. You have small numbers and can have concentration of risk problems. I believe that ultimately there will be more and more segments for everybody.

MR. EVANS: I tend to agree. Right now, we have more segments than we need, because we have a separate segment for each territory. We are talking in excess of 20 funds and many of those funds tend to be relatively small and heavy in cash. I think we will probably stay with the same number but perhaps consolidate a couple of funds and add new ones.

MR. ALBERT K. CHRISTIANS: Mr. Ohman, I think I sense an inconsistency in what you said. You said that assets were available for solvency purposes to all lines, and at the end of your presentation, you said the actuary should consider the allocation of assets by line in determining whether or not there is provision for future obligations.

How does one qualify an actuarial opinion to indicate that even though the company is solvent, a particular line of business is insolvent? This would happen whenever you started on a new line of business. I presume if you had normal startup expenses, you would have to indicate that a line was insolvent for several years until it got going.

MR. OHMAN: The key to this is that one actuary or a group of actuaries is making a statement about the solvency of the whole company. And to do that, they have to look at each of the separate lines of business and examine some group of assets with regard to each of the lines of business. They have to decide what group of assets is going to go to the guaranteed interest contract line of business for that purpose, and then that tells them what they have left to cover the other lines of business. You are right, you cannot make a statement simply about one line of business without worrying what assets you have left to cover the other lines of business. This is why it is necessary to decide what assets for this purpose go to what particular line. The fact that a particular line may be in the hole is not in itself a problem as long as there is surplus somewhere else in the company to cover it. The actuary's opinion is going to be about whether the whole company is solvent. For that purpose, you can use assets anywhere. But to get to that, he has to have made an analysis of dividing up assets among the lines.

MR. WILLIAM J. SCHREINER: Mr. Evans suggested that, for management purposes specifically, there is, if you will, a surplus account with surplus assets that enjoys its own earnings. Is that a correct interpretation?

MR. EVANS: That is true.

MR. SCHREINER: Is that the case at the Equitable?

MR. OHMAN: We are doing something that is roughly equivalent to that for management accounting purposes. For management accounting purposes, you in effect allocate the total surplus or capital of the company by line of business in proportion to the risk needs of that particular line of business and then require that line of business to produce a return on equity related to the risk needs or the risk characteristics of that particular line. And this is roughly equivalent, although it does not involve a segmentation of surplus as such.

MR. SCHREINER: Am I to understand you correctly that in effect a portion of surplus is assigned to each operating line of business?

MR. OHMAN: For the purpose of determining the earnings target for each of the lines of business, yes, this is done.

MR. SCHREINER: Apparently that is not the case at the Crown?

MR. EVANS: Actually, it is. It is very similar. For purposes of investment policy we took all our surplus assets and put them in what we call a surplus pile. The reason that we did that is we have a lot of assets that none of the line managers wanted. Real estate, stocks, home office building, subsidiary companies, and things of that nature. So all that went into a surplus pot, and the investment on that flows into the corporate line of business. At the same time, we notionally capitalized each line of business with a given amount of surplus and that is probably equivalent to what we considered the minimum amount of surplus that that line should have. So at the start of any year, the line of business is deemed to have a piece of surplus. Let me give you an example. The group health line of business may have surplus equal to 10% of last year's premium income. That is its capitalization. It is required to produce a return on that surplus. That is the capital we have given to it, and we require, over a period of time, a return on it. However, it does not have assets backing that 10%. All those assets are in the surplus pile invested in equities and real estate, and if we actually did give it assets, it probably would want them in cash. I would not want a home office building. We credit a portfolio rate of return on that surplus that is negotiated each year between the operating line manager and the manager of the surplus line, the corporate line. That particular line of business gets that interest, regardless of what the actual earnings are of the surplus pot. They may be close to zero if they are on the home office building on a statutory basis.

MR. KISCHUK: When we did our segmentation, I think policy loans fell into the category of assets that no one wanted, but we kept those in the individual products line anyway.

MR. EVANS: Yes, I do not think there is any excuse for that one. One of the assets that we are still fighting about is advances to agents. Putting a corporate hat on, I think that those are clearly operating line assets, and they should be part of the assets of the line. They argue that this is the way you get into business, and therefore, they are part of the surplus line. We still have not resolved it.

MR. TULIN: I have been looking at this question of surplus recently. I think it gets into "profits released" versus "profits retained". You can really look at it both ways and allocate investment income both ways for different purposes. The Equitable's approach, I believe, is keeping the profits that have been generated over the years associated with the lines of business that generated those profits for purposes of allocating statutory investment income. For internal purposes, I suspect that they are making some kind of a split, and ultimately might make more of a split, between what I will call "required surplus" or surplus that they think they require for purposes of keeping the lines of business in business and growth, or vitality, surplus which the company has for its own discretion or use.

MR. OHMAN: Yes, that is certainly true. For statutory purposes, we wanted to retain the earnings within a particular line of business. We have always done that in the past and that is what we are doing currently. That does not say that we might not change sometime in the future and establish a separate capital or surplus line to include some portion of the total surplus, the vitality surplus. For management purposes, we do not bother doing that. In effect, for management purposes, we operate a given business, crediting to that business only the return on its particular segment. We do not worry about the fact that the total assets assigned to that business segment are not equal to its total assets from the past. Then what we do is adjust the total earnings by some overall interest rate applied to the difference between the equity that we have assigned that business and the amount of assets that are in that particular segment.

