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**ORDINARY PRICING, PRODUCT, AND MARKETING
ADAPTATIONS TO AN INFLATIONARY ECONOMY**

1. What effect does continued inflation have upon the pricing process?
 - a) Expense assumptions
 - b) Interest assumptions
 - c) Return on investment in new business
 - d) Policy loan utilization
 - e) Policy fees/band differentials
 - f) Lapse rates
2. Should "current" dividend scales be hedged for future inflationary impacts?
3. Is there a change in product demand/sales as a result of inflation? What products are appropriate?

CHAIRMAN CLEMENT B. PENROSE: With our panel including actuaries actively working on product development and pricing within a stock company, a mutual company and a consulting firm, we can view the subject of Ordinary pricing in an inflationary environment from several different perspectives. Our approach will be to start with a discussion of the pricing process itself and then to proceed to each of the three major questions.

MR. ROBERT D. SHAPIRO: The development of ordinary products is necessarily a dynamic process. Experience must continually be monitored to assure that the company's goals are being achieved. Where objectives are not being met, appropriate changes or controls must be considered. The purpose of this brief description of the pricing process is to provide a general base from which our later, more specific discussion of inflation's impact can be developed.

Although the particular procedural details of pricing may vary from company to company, the general pricing process might be described as follows:

1. Define company objectives
2. Analyze experience
3. Set assumptions
4. Determine products and prices
5. Operate and manage results (recycle back to #1)

Initially a company will review its current position and define (or re-define) its objectives. The review will include analysis of surplus and growth objectives, the marketing system, the capability of the home office and field support organizations, and external trends (such as inflation!).

Next, past experience will be analyzed with respect to production, mortality, expenses, persistency, surplus development and other factors for which standards had to be established during the previous pricing cycle. This experience is tempered by the expected impact of changes in future goals and procedures and the actual pricing assumptions are established.

At this point the products and premium rates can be finalized and the company will begin to operate according to plan. As experience under the new rate structure unfolds, it will again be interpreted in light of the present

goals and standards, and when deviations from the operating plan are deemed to be significant, appropriate modifications will be made and the process will recycle.

The remainder of this overview will focus on this question: How might the anticipation of continued inflation impact a company as it reviews its corporate objectives?

Before considering the impact of inflation, we have to agree upon a forecast of the level and incidence of future inflation. This is a difficult task at best. There is really no economic or other model that can be expected to forecast the long-run level of inflation or interest rates. But before we can deal with the inflation problem, we must arrive at corporate agreement as to what level of inflation to project in our goal and price setting.

Assuming that agreement is reached, and that management foresees persistent future inflation at perhaps a 5% to 6% annual rate, how might our previous objectives be changed?

1. Profit Objectives: The expectation of continued inflation should theoretically require additional profit if the company is planning to assume these risks in its future ordinary products. This additional profit margin may be a combination of explicit allowance (through specific additional determined margins) and implicit allowance (through conservative projected assumptions).

2. Marketing Objectives: Continued persistent inflation will have dramatic effects on our marketing environment. For example, we might anticipate:

- a) Less willingness to purchase life insurance. The degree to which people are willing to purchase a product that provides future security is probably related to the degree of confidence that they have in that future. People will be reluctant to invest their today dollars in a product that will provide deferred benefits, payable in a highly uncertain future.
- b) Increasing reliance on the government and the employer to provide life insurance (and other personal security programs). Expanded social security programs and group life programs (both indexed directly or indirectly to increases in the cost of living) seem like a likely result of persistent high levels of inflation.
- c) Increasing emphasis on term insurance forms of coverage (i.e., more "pure protection") and indexed products (where benefits correspond more closely to future needs). These trends will create problems in building and maintaining traditional agency systems, which in turn could lead to greater mass marketing and other new forms of life insurance distribution systems.

These and other possible future events could lead a company to a new corporate plan, including a modified perception of one's desired markets, most efficient distribution techniques, major competition, and products.

3. Investment Objectives: My knowledge of the investment function within an insurance company is superficial. It is clear, however, that the nature of the investment function will change with the expectation of continuous long-term inflation. For example, a long-term investment in fixed income securities will not be as attractive without either indexing of the security or some other kind of "kicker".

4. Administrative Objectives: Continued inflation will adversely affect the costs of normal life insurance company administration. A large part of our company expenses is in wages and salaries, which can be expected to increase along with inflation. What are some of the changes in administration that we might anticipate as inflation continues? Two which have already been observed in a number of life insurance companies are:

- a) Improved budgeting and cost control techniques, including more rapid terminations of unproductive employees, support systems, and lines of business.
- b) Unbundling of services, charging separately for some of the services provided in special markets (e.g., the individual policy pension trust business).

MRS. DAPHNE D. BARTLETT: In the last few years, it has become increasingly apparent to Occidental that our traditional methods of pricing are not providing us with very good results. Therefore, we have recently undertaken a full-scale revision of the pricing process. Although this project is not yet completed, we have made some substantial changes from our past approaches in the pricing which we plan to incorporate in our new life ratebook to be effective in January of 1976.

The most dramatic change is in our approach to overhead expenses. In the past, these were allocated in an arbitrary manner (although consistently); a certain percentage of the overhead was allocated per policy, percent of premium and per \$1000, all to first year. Our current approach will not allocate this overhead at all. Therefore, our asset share calculations used for pricing are prepared without any reflection of overhead expenses. These expenses are "covered", only in aggregate, at the end of the pricing process, by means of model office testing. At that point we determine whether aggregate profitability, after overhead is deducted, meets the company objectives.

Some of the items which are included in this "overhead" item are those which we do not consider to be directly allocable, such as Executive Overhead, Agency Development Expense, and Branch Office Expenses other than bonuses.

Our reasons for making this change were that, in today's marketplace, with our old method of allocation, we were finding that our low premium plans at low issue ages were showing a negative asset share at the end of 20 years. We attributed these results to the fact that too much expense was being allocated in these particular cells. Once it was determined that reallocation could occur and "increase" the profitability of a particular cell (with, of course, corresponding decreases in other cells), we recognized that, when overhead expenses are allocated, any resulting present value of profit figures resulting from asset share calculations should be qualified by some statement such as "these results apply only under this particular method of allocation of overhead". Now we believe that a better measure of the relative profitability of various products can be achieved by a method which does not include such an arbitrary allocation.

MR. RONALD E. TIMPE: In my role as an actuary for a mutual company, the development of adequate surplus is of paramount importance in the pricing process. In the past, we have not been overly concerned with the "surplus investment" in new business nor deficiency reserves. We have been concerned about early development of assets equal to the cash values in order to avoid loss on early terminations and have been concerned about developing reasonable surplus by the 20th policy year.

Twentieth year surplus objectives vary by issue age, being lower at the younger issue ages because of the expected long-term contribution to surplus and, candidly, because of the need to be competitive at these ages. We have also required an above average surplus contribution for unusual products: those having very high cash values or very low cash values, nonparticipating plans, etc.

Our pricing process involves long-term asset share modeling for the purpose of illustrating a continuing contribution to surplus if the current assumptions and dividend scale should persist over a long period of time.

Competition is a very significant item in our pricing process, although not

to the extent that surplus development is compromised. The calculation of the interest-adjusted cost index is an automatic part of the pricing calculation and we use that index to compare our pricing with that of other companies.

MR. SHAPIRO: Smaller companies should theoretically price their products along the same process followed by larger companies. There are often special features within a small company's operations that make scientific recognition of the persistent inflation problem a secondary goal. For example:

1. A small company often does not have clearly defined corporate and pricing objectives. Where these objectives are defined, they are more likely to change in a small operation than in an established larger life company.
2. There is usually limited available reliable experience. It is difficult enough to get a handle on expected persistency, mortality, and expenses without also having to include specific provisions for the long-term impact of inflation on all of these pricing factors.
3. Expenses are normally the critical element in managing a small life company. When operating costs are running far in excess of the standards built into the rate structure, finding ways to achieve reasonable marketing and administrative efficiency becomes much more important than dealing with projected persistent inflation.

One technique often used in pricing products for a small life company is to price initially without specifically reflecting inflation in any of the basic assumptions. Then the expected profit margins are modified as needed in order to be sufficient to weather anticipated future inflation levels. In other words, the objective for "profit and contingencies" includes inflation as one of the contingencies to be covered by the theoretical profit margin. Careful analysis is necessary under this procedure to assure management that profit margins have been included for the risk of high inflation levels.

CHAIRMAN PENROSE: All of us who have responsibility in the area of pricing products must have concern for the future, as well as present, experience on the various factors that enter into our pricing decisions and can affect the future financial results of the companies that employ or retain us. In addition to the specifics of pricing products currently under development, many of us have also been asked to project the financial results for our companies under various levels of inflation. While inflationary forces have their primary and seemingly obvious impact on expenses, those forces also affect other factors in the pricing equation. This brings us to the first question on the program.

MRS. BARTLETT: Occidental's new ratebook is planned to cover a three year period, from 1976 through 1978. Therefore, our first year unit expense assumptions have been designed to cover the unit costs we expect will be achieved in 1977. Our current plans are to use a constant set of unit renewal expense assumptions, rather than sets which vary duration by duration. Therefore, we projected our current experience on renewal expenses to the estimated average duration of our ratebook era, and will use these for each renewal year of business issued from our new ratebook. It is probably obvious that we did not devote a great deal of attention, over and above what has been done in the past, to the matter of reflecting inflation in these assumptions. There are several reasons for this:

1. We have just converted to a new policy accounting system, which we believe will realize substantial savings over past unit costs.

2. Our "inflation factor" for projecting the 1974 unit costs was based on trends in unit costs in past years. Because we have had a very rapidly growing base of units, the unit costs themselves have not been increasing nearly as quickly as has the inflation rate. Therefore, we are optimistic that our units will increase at a rate somewhat in line with the inflation rate, thus resulting in only relatively small increases in the unit costs themselves.

3. Our company, as others, has initiated unusually stringent cost control measures, in order to keep costs in line with budgeted expenses.

4. The overhead expense I referred to earlier represents a fairly large percentage of our total annual expenses. It is considered to be entirely a first year expense. Therefore, it is not necessary, in the pricing process, to project the trend of these expenses beyond the middle of our ratebook era. This tends to reduce the impact of inflation on our renewal expense assumptions since they represent only a small part of the total.

Next I would like to discuss interest assumptions and policy loan utilization since, for our new ratebook, they are closely related. Traditionally, our method of setting interest assumptions for a ratebook has been to adjust our expected interest rates for the expected percentage of assets resulting from that ratebook which will incur policy loans. Because of the existing low limitation on policy loan interest rates, this has resulted in quite a substantial reduction in the interest rates which we would otherwise have been able to use in our pricing. There is currently considerable activity in the industry to obtain permission for the use of a flexible policy loan interest rate of up to 8% in new policies. We hope that, by the time our new ratebook goes into effect, the majority of states will permit such a provision, and we plan to include it in our forms wherever we can. Therefore, our interest assumptions have been set at a level considerably closer to that which could be obtained on other investments. Our current plan is to "declare" a policy loan rate which will be about 1% below the "market" rate for loans, and our adjustments to the interest assumption were made accordingly.

As a result of this change in approach to policy loans, we have been able to improve our first year pricing interest assumption quite substantially over what it has been in recent years. In renewal years, where we formerly used a fairly sharply decreasing scale, we have recognized that, in an inflationary situation, interest rates will probably remain relatively stable. Therefore, we will grade our rates down much less sharply than in the past.

On the subject of return on investment in new business, as it relates to inflation, we have not yet been able to devise a method of pricing which uses this approach and produces reasonable results. From a corporate point of view, as interest rates remain at a high level, and high quality investments in media other than life insurance provide fairly substantial rates of return, it appears that a company should examine its "return on equity" objectives to see whether they should be increased. We have not increased our objectives but I am somewhat concerned that perhaps we should have.

We have not attempted to revise our policy fee structure for our new ratebook. Theoretically, a policy fee which covers per policy expenses should be adjusted as those per policy expenses increase. In practice, however, it is impossible to have both a simple structure and one which is theoretically accurate for all plans at all ages. We have chosen to ignore this particular subject. Similarly, although we have decided to attempt to band more extensively than we have in the past for our new ratebook, the reason is unrelated to the subject of inflation, and is purely one of product design.

Our lapse assumptions for the ratebook are generally based on past experience, modified by actuarial judgment. Many of our lapses of term insurance in recent years have been because of rewrites to other carriers with lower

premium rates. We feel fairly confident that, in general, the trend in life insurance premium rates will be upward in the future, mainly as a result of increased costs. Therefore, we have assumed that some improvement in our lapse assumptions on term plans can be anticipated, since the competitive replacement situation will not be as prevalent. On the other hand, we have not anticipated any such improvement on permanent insurance, where the decreasing real value of the death benefit and the cash values could possibly result in a somewhat higher lapse rate than that experienced in the past, particularly at later durations.

MR. TIMPE: In the pricing process, inflation creates uncertainties with respect to expense only in renewal years. Acquisition expenses can be determined and should, of course, be recognized fully in the pricing process. If the acquisition expenses change as a result of inflation, then premiums or dividends can be changed on subsequent issues to recognize the new expenses. Renewal expenses which are defined as a percentage of premium (commissions, fringe benefits, etc.), will not change with inflation. Hopefully, federal income tax rates will not change and the current method of recognizing federal income tax will be adequate.

For a given block of business, this leaves a relatively small portion of the total company expenses which are subject to inflation after the pricing process. These generally are the expenses associated with policyowner service and valuation.

A conversation with our policyowner service people regarding increased cost under inflation developed the following items:

1. A substantial part, perhaps one-half, of policyowner service cost is associated with the development and maintenance of computer programs and the cost of the computer and related equipment. These costs could be controlled somewhat independently of the effects of inflation and this could dampen total increase in policyowner service cost.
2. Efficiency improvements are anticipated in the area of policyowner service and this will moderate increases in personnel cost.
3. If inflation is fully recognized by the insurance buying public as a continuing thing, companies should see a significant growth in the rate of new business and this would result in total insurance in force increasing dramatically. This should aid substantially in holding the line on unit renewal costs. As explanation of the expected growth of new business, if inflation persists at a 5% rate, it must be recognized that insurance benefits must be increased 5% annually in order to maintain the desired purchasing power of the insurance benefits. If this is added to the production levels attained in relatively noninflationary times it is quite reasonable to expect new business to be as much as 20% to 25% of the total amount of coverage in force.

The effect of inflation after issuance of a policy should not alter the expenses in a manner which will significantly diminish profitability. In fact, the rate of investment income is more important and tends to offset the effect of increased expenses.

I did some profit testing to determine the effect of increased renewal expenses. Good management can control renewal expenses during a long period of inflation, and incidentally, the profit testing showed it would be wise to make sure renewal expenses do not get out of hand. An annual deterioration of 1% or 2% in the renewal expense costs encroached on profitability but not markedly so. This level of expense increase is likely during a long period of inflation and it can be lived with. A deterioration to the extent of a 5% compounded annual increase in the expense rates is disastrous, taking nearly all of the profit or contribution to surplus and requiring a premium adjustment of approximately 40¢ per thousand of face for the particular plans studied.

I believe in the theory of natural interest which states that in the long run there is a value of money of 3% to 4% per year plus any anticipated loss in purchasing power. There is likely to be some moderation of this formula when inflation is running at a very high rate, and probably some modification when there is no inflation or deflation. A long-term inflation rate of 10%, for example, would likely result in investment yields in the 12% range and inflation at a 5% rate would be coupled with investment yields of 8% to 9%. Naturally, policy loans will serve to diminish a company's opportunity of investing all of its assets at such an attractive yield, but most state legislatures and insurance departments, including New York, are seriously considering an 8% policy loan rate. Thus, a long-term high rate of inflation should result in continued increases in the yield on insurance company portfolios and, at least on permanent insurance, serve to more than offset the increased expenses.

My guess is that lapse rates will increase but this is not supported by my review of 21 other companies which make up a "competitive model" for Standard nor is it compatible with my belief that inflation will result in a need for significantly increased coverage rather than a casting off of coverage already in force.

I did some profit testing assuming the early policy lapse rates could be correctly anticipated at the time of the pricing process but that 6th and subsequent policy years' voluntary termination rates increased markedly - a 25% increase in years 6 through 10 and a 50% increase in years 11 and subsequent. The increased lapse rates had a significant impact on the dollar amount of surplus generated but actually a relatively small increase in the premium would compensate and develop the desired profitability. On the other hand, if lapse rates are assumed to be 25% higher than anticipated in all renewal policy years, the effect on the dollar amount of surplus generated is more significant, but our tests indicate there would still be a profit or a contribution to surplus rather than a loss.

It is interesting to note that Standard's measurement of profitability, the ratio of surplus to reserves, can be misleading when alternative lapse assumptions are utilized. The case in point -- increased termination rates have a significant impact on the total amount of surplus generated, but also a significant impact on the total reserves required. The net result is little change in the ratio of surplus to reserves.

MR. SHAPIRO: We have used the return on investment (ROI) type of profit objective with a number of our client companies. However, we often find that ROI is only helpful if used along with several other standards in the pricing process.

The biggest problem with ROI lies in defining the investment. The invested surplus can be changed by changing the reserve assumption (net level, CRVM, GAAP, etc.), the handling of the federal income tax assumption, the assumed allocation of expenses between first year and renewal (especially overhead), etc. Because these variables primarily affect the incidence of profit emergence, we can often arbitrarily make the product look better by minimizing the first year investment figures.

The second problem we encounter in using ROI is in relating the risk assumed with the ROI to be required. If a 9% return is satisfactory on a AAA bond, what is an adequate return for a whole life coverage? For a high limit major medical policy?

Assuming that we do want to use ROI as one of our profit criteria, how would expected inflation influence our existing ROI goals? The level of the desired ROI will reflect both the nature of the risk of the "investment" and the conservativeness of the other assumptions underlying the pricing procedure. Anticipation of inflation certainly would seem to increase the nature

of the life insurance risk, as long as the company continues to take this risk in its coverages. If the various assumptions as to investment earnings, expenses, and persistency are set reasonably considering inflation, then the increase in the target ROI necessary to protect against the inflation contingency may not be large.

In short, ROI is often a helpful guide in evaluating the profitability of a life insurance product, but it rarely can be used as the sole profit standard in the pricing process. Where ROI is used, and the long-term risk is expected to be higher because of persistent inflation, the level of the ROI goal should generally be increased.

CHAIRMAN PENROSE: Daphne, you indicated that you thought the subtopics should have included a more specific reference to a question such as, "Is it desirable to revise profit objectives as a result of the inflationary environment?" How would you answer that question?

MRS. BARTLETT: It is somewhat tied in to a previous question on whether or not corporate "return on equity" objectives should be increased as a result of the current inflationary environment. It is certainly true that, in terms of real dollars, life insurance companies' earnings have not increased as rapidly as might appear on the surface. As an illustration of this, I adjusted Occidental's ordinary GAAP earnings for the last several years to "real earnings" based on the Consumer Price Index (CPI). From 1970 to 1974, actual earnings increased by 46.6%. During the inflationary period of 1972 to 1974, the increase was 21.0%. When adjusted by the CPI to a 1970 base, the "real" increase from 1970 to 1974 was 12.4%. Between 1972 and 1974, there was a "decrease" of .8%!

An existing life insurance company stockholder is presumably expecting to receive not only his originally-anticipated rate of return, but also some additional return to offset the loss of purchasing power of his dividends. A new investor, on the other hand, is presumably satisfied with the current earnings position (or he wouldn't be buying), and is also making his stock purchase with "deflated" dollars. This very superficial analysis would indicate, therefore, that, on average, some reflection of inflationary trends should be made in corporate profit objectives, but possibly at a rate lower than that of inflation itself.

From a practical point of view, however, with current economic conditions and generally reducing profit margins, it seems as if it will be very difficult for such a course of action to be followed.

MR. RALPH H. GOEBEL: Would you cite some examples of expense cutbacks now being carried out in the insurance industry?

MR. SHAPIRO: The general trend in attempting to cut expenses is toward lengthening working hours, allowing lower salary increases and a reduction in the hiring rate.

CHAIRMAN PENROSE: One recent example would be the Profit Improvement Program at Pacific Mutual in 1971 when staff was reduced at all levels, vice presidents through clerks.

MR. WILFRED A. KRAEGEL: In her initial remarks, Daphne Bartlett mentioned that beginning in 1976 the Occidental expects to issue policies which include a variable policy loan interest rate with 8% maximum, where permissible. Northwestern Mutual and a number of other companies also have been moving in that direction. We have received approval for such a provision in 24 states so far, but generally these are states which do not specify a maximum interest

rate by statute. If we are to receive approval in the remaining states, the currently specified 6% maximum (in most of them) must be increased at least to 8%. Our preliminary experience in a number of hearings on the subject indicates that state legislators are very much concerned about granting this increase if it appears that the life insurance company will benefit at the expense of the individual policyowner. For that reason it is important to follow through on what is a logical pricing approach in any event, namely, to recognize the different policy loan interest rate levels in the premiums for non-participating policies and in the dividends for participating policies. Unless the legislators can anticipate that this recognition will take place, it may be extremely difficult to persuade them to permit the higher interest rate.

MR. TIMPE: The Society of Actuaries recently published an 85-page report entitled "Philosophies in the Computation and Dissemination of Dividend Illustrations". Daphne Bartlett was a member of the Society committee which produced this report. It is an excellent report and has a significant bearing on the second question on the program.

I feel the future inflationary impact on dividend scales is mixed, thus allowing me to hedge my answer. Basically, there seems to be no need to hedge dividend illustrations simply because of inflation.

The dividing point on whether or not to hedge future dividend scales would seem to hinge on whether a dividend scale is regarded as merely a scale which is currently in force and which would be continued only so long as there is no change in the financial operations of the company, or, alternatively, in spite of all disclaimers to the contrary, is considered as some type of projection or illustration of future results.

As a matter of practice, my company has strived to highlight the dividend disclaimer and to use this with a dividend illustration during the first 20 policy years based on the current scale without hedging or alteration. However, the long-term effects of assumed high investment yields and the feeling that undue prominence might be given to long-term results using unprecedented favorable assumptions, has led us to more conservative projections involving the 21st and subsequent policy years - such as might be used to illustrate benefits at age 65. For example, in no event will an interest accumulation rate in excess of 5% be utilized beyond the 20th policy year. Thus, the current 6% accumulation rate for dividends is decreased to 5% in illustrations after the 20th policy year. This same practice would hold true in illustrating the accumulation of funds under a retirement annuity which is currently being credited 7-3/4% - the illustrated accumulation rate after the 20th policy year cannot exceed 5%. Also, in this case an illustration based on current interest rates must be accompanied by an illustration based on the guaranteed interest rates. Similarly, we have introduced moderating factors in the current dividend scale involving the 21st and subsequent durations.

Thus, there is a need to hedge dividend illustrations and the need increases as we move away from what might be considered historical norms for the assumptions used.

MRS. BARTLETT: The dividend scales for the participating plans offered in our new ratebook will generally be based on the assumptions I mentioned earlier for non-participating policies. However, for participating policies, we use a level interest rate throughout all years in our asset share calculations, slightly lower than the first year non-participating rate. Therefore, to the extent the other non-participating assumptions reflect inflation, the dividend scales will also include a "hedge". This procedure will tend to produce a lower illustrated dividend scale for new business than one which is based on a continuation of current experience (rather than those

of the middle of our ratebook era, which are more conservative). It highlights one of the many remaining problems concerning the entire cost comparison question, since, all other things being equal, such a set of assumptions will produce less favorable comparative results.

CHAIRMAN PENROSE: Every company sees changes in the sales of products in its portfolio over a period of time. Some of those changes in sales patterns may result from revisions which the company has made in products or pricing or perhaps even some changes made in the pattern of sales compensation. What changes in sales patterns or products do you see resulting from continued inflation?

MRS. BARTLETT: From a corporate point of view, an inflationary environment tends to encourage the sale of permanent plans of insurance. These will prove to be generally less risky to the company if inflation continues unchecked, since under these circumstances, it can be anticipated that interest rates will remain at a high level. Permanent plans, therefore, have the potential of earning excess interest, which serves to offset any increased costs resulting from inflation. On the other hand, in such an environment, persistency of permanent plans will tend to worsen as the real dollar value of the benefits in the plan decreases.

It can certainly be argued that demand for fixed dollar coverage of any type will decline in a period of serious inflation. Assuming it doesn't, it would appear that a consumer would be best served in these circumstances by the purchase of term insurance, since only his "insurance" dollars will be declining in real value, and not his "investment" dollars. An additional advantage will exist in the purchase of non-participating coverage, where the "inflation risk" will be borne by the company.

The time is right for new approaches to policy design. Inflation creates a need for increased fixed-dollar coverage; it also provides increased ability to pay for this increased coverage. The traditional public aversion to increasing premium rates by duration might have softened as the prices of everything else go up and individuals' incomes get larger. This would indicate that more elaborate and more flexible guaranteed insurability options might be designed.

There will be an increasing trend toward permanent plans with minimum cash values as a reaction to the fact that their "real" value will diminish as the cost of living increases. New approaches to "getting around" the non-forfeiture laws will probably be developed along the lines of the "side fund plus term insurance" approaches currently being used by several companies.

This is a challenging time for creative product actuaries; it is a time to take a serious look at our traditional products and to try to adapt them to a new and exciting environment.

MR. TIMPE: The financial uncertainty generated by inflation will have a favorable impact on the desire for "security" types of products. If there is a long-term high rate of inflation, it is likely that there will be substantial demand for employers to provide an increasing proportion of the security needed and certainly the federal government will also be subject to pressure to provide security products.

However, there would be substantially increased demand for individually issued products. There will be an attempt by the insurance industry to educate the insuring public to spend a stated portion of their income for insurance protection, with the idea that the dollar amount will increase in proportion to the salary increases related to inflation. The emphasis will be on protection, with low-premium whole life type products and term insurance continuing to increase in popularity, probably with term insurance

leading the way. However, long-term inflation should result in an escalation of the need for permanent insurance to provide estate liquidity because the general level of estates should climb and it is not likely that the tax burdens would be eased in recognition of a general increase in the level of estates.

The life cycle concept might become more realistic because of a more firm recognition of increasing need for insurance protection as incomes increase. Also, there probably should be pressure to avoid the issuance of multiple policies and the resulting high cost associated with administering several policies. Perhaps a policyowner account with a relatively high fixed charge of \$25 or \$50 would be used rather than having 10 or more individual and unrelated policies in force.

The repeat sale will be increasingly important and companies will be rewarded if they create an appropriate attitude towards a repeat sale and increased protection, and market products which encourage future purchases to be made from the same company.

I'm curious to see if others speak in favor of index-linked products. I tend to have the feeling the initial premium rates are discouragingly high, with one exception. A product which provides a monthly income until the end of a term period, say \$10 per month to run from the date of death until 20 years after the original date of issue, can be index related because of the decreasing nature of the benefit without an undue increase in the premium rates.

MR. SHAPIRO: One pattern that has already developed to some extent is the shift to term insurance coverages. Term prices and term agency compensation have become much more competitive over the past several years.

Since 1969, a considerable amount of research has gone into variable life insurance (VLI). In the typical forms of variable life, the savings element of the coverage is invested in equities, with most of the investment risk being assumed by the policyholder. Stock market experience of the past five years has seriously impaired the credibility of the argument that VLI with common stock investments will help the policyholder better keep up with increases in the cost of living.

The life insurance company is unique in its risk-taking capabilities. We would expect to see many of the future new products designed with the inflation risk assumed by the insurance company and not the policyholder. For example, there are several level premium index-linked policies currently sold in the U.S. One is a whole life contract with face amounts reflecting changes in the Consumer Price Index (CPI). Another involves a 20 year family income coverage where the monthly benefit both before and after death are indexed by the CPI.

Guaranteed Insurability options can also be utilized in providing flexibility and the potential for increasing death benefits as purchasing power erodes because of inflation. For example, the policyholder could be guaranteed annually the right to purchase one year term insurance for the increase in the CPI.

A number of other specific products that may appear in response to an expected inflationary economy have been described. One package that we may see more and more is a "savings + term" combination. For example, a number of companies who are offering flexible premium annuities in their Individual Retirement Annuity (IRA) marketing programs plan to sell a term coverage at the time of the annuity sale (but outside of the IRA). This procedure would keep the IRA deductions at a maximum and provide low cost insurance coverage simultaneously.

MR. KRAEGEL: There is a problem of potential loss of confidence in life insurance products if double digit inflation continues. In this event the problem could become, not a question of which product, but one of preventing complete collapse.