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FUTURE TRENDS AND CURRENT DEVELOPMENTS IN INDIVIDUAL LIFE PRODUCTS

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SPENCER KOPPEL, ALLAN W. SIBIGTROTH

1. Adjustable Life
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MR. SPENCER KOPPEL: In 1965, when Combined Insurance Company determined that the time was right for it to enter the life insurance market, Walter Chapin was hired as a consultant. Walter suggested a product concept from which was designed that first "prototype" adjustable policy. It was adjustable in that it permitted the policyholder to, at his option, adjust his face amount. There were limitations, however, as to the length of time following policy issue and as to the increase in the face amount that could be made.

In 1978, Combined determined that it had a large base of policyholders who could not, as a result of the limitations placed on the original policy, buy any additional coverage from us. We frequently received requests for increased coverage, since our policyholders were accustomed to the "adjustability" concept. However, a review of the details of Walter Chapin's approach as detailed in his paper, indicated to us that, while it was appropriate for newly issued participating policies, there were several characteristics of non-participating policies which required a special approach.

More specifically, the product which he describes in his paper assumed the valuation basis and gross premium loading basis remained constant for the life of the policy, regardless of any subsequent changes in the future economic conditions and regardless of the amount of insurance purchased. While this is feasible for a participating product wherein the dividends can be raised or lowered in the future to adjust for the relationship between the premium and current conditions, such a device is not directly available to a non-participating company.

The non-par product could be set at an artificially high premium in order to provide those guarantees, but it would be uncompetitive. Conversely, it could be set at a competitive rate, but then the policy's adjustability feature would have to be more limited.

In studying the Chapin paper it occurred to me that one need not totally integrate each purchase of additional amounts of insurance into the previous amounts. This was the concept which underlies the approach to non-participating adjustable policies described in the paper. The concept has been referred to as a "building block" approach by some. Correspondingly, the approach outlined by Mr. Chapin might be called an "integrated" approach.

In fact, as I will mention later, the building block approach permits added flexibility to the types of coverage which can be offered beyond merely permitting the guarantees of adjustability.

The building block approach solved several problems posed by the integrated approach which we faced in designing our non-participating policy.

1. Gross premium scales

If gross premiums are required to be increased for new issues in the future due to unfavorable mortality or expense levels, we would not want to be required to guarantee the old basis on existing policies for purchases of increased face amounts.

Conversely, where prevailing gross premiums offered by other companies are reduced, we would want to be competitive as regards increased face amount purchases when compared with premium rates available to the prospect on new issues of a separate policy.

The building block approach permits the policy's premium loading formula to change when such conditions change, just as would be done on a conventional policy. The changed loading formula would apply to amounts of insurance purchased following the date of its adoption; previous loading formulas could continue to apply to amounts purchased before that date.

2. Nonforfeiture basis

This is somewhat akin to the gross premium scale problem, since the cash value scale offered affects the premium. Again, we would want to be in line with the scale of values a policyholder could obtain from purchase of a new policy. If the trend is toward lowering the per thousand cost of insurance by lowering the cash value scale, then we wanted to be able to provide the same availability.

Again, this approach permits the policy's nonforfeiture basis to change for amounts purchased subsequent to the date of adoption of a new basis and remain the same for prior amounts purchased.

3. Record Keeping

While at first blush the building block approach may seem to create administrative problems, current data-base concepts to data processing systems seem to fit this approach very well.

A problem which we felt with the integrated approach was the calculation and verification of commissions payable where a policy originally written by one agent and subsequently orphaned was adjusted by a second agent. If a policyholder were to increase coverage and shortly thereafter return to the previous face amount the company would probably want to remove the second agent from the commission record. The building block approach permits maintaining sufficient information for this to be done easily.

Other simplifications which result from the building block approach are maintaining lapse and mortality data by duration since purchase of each segment, maintaining incontestability and suicide dates, and amounts and duration of deferred acquisition cost assets and benefit reserves for GAAP purposes.

By keeping records of dates of adjustment and therefore the date of purchase of any added face amount, a separate record for each segment permits easier checking of statement values.

4. Substandard Insureds

If a policyholder purchases an adjustable policy while a standard insured and subsequently becomes impaired (but still insurable), companies using the integrated approach are faced with a similar problem as the problem of changed valuation bases. The building block approach also resolves this problem by permitting the company to issue only the increased face amount at the substandard rate. The policyholder is, in effect, guaranteed all prior face amounts in the classes to which he belonged at the time of their purchases.

5. Cost Disclosures

It is as yet unclear as to exactly how cost disclosure formulas apply to adjustable policies. Do they apply to the total change or merely to the increase in face amount? If a policyholder changed plan without changing face amount (by changing his premium), current formulas would render meaningless results on a "per thousand" basis. I believe that to be consistent, it is most logical to apply these formulas to increases in face amounts only. The company can do this readily, without reference to prior face amounts using the building block method. This can also be seen to be administratively simpler.

The adjustable life concept applied to meet specific situations, may well resolve the non-par actuary's challenge to develop a product which can be adopted to the changes in socio-economic conditions. Even though the formulas in the paper I presented do not provide a change in the premium,

interest rate or mortality basis on previously purchased face amounts, there is nothing which would prevent the company, with the policyholder's agreement, if necessary, from changing the basis to a more generous one. Replacement problems could perhaps be avoided as a result.

Of course, the adjustable concept already meets the needs of a policyholder to change from an investment type plan, to one with less of an investment element.

Once one gets over the initial shock of the adjustable life policy, and more specifically the building block approach, it becomes relatively easy to conceive of having an adjustable policy which can take the form of decreasing term, renewable term, and even annuities all in the same policy document. The policy segment approach permits the combination of benefits such as this into a single policy document.

For example, a policyholder may have a policy which provides:

\$50,000 Whole Life
 \$100,000 Decreasing Term to 65 and,
 \$1,000 per month deferred annuity at age 65.

Each might have its own valuation-nonforfeiture basis and its own premium basis, and each may also be adjustable.

The above illustrates I believe, the level of total flexibility which can result from the building block approach to the adjustable policy.

MR. ALAN W. SIBIGTROTH: Spencer, I have a number of questions about this approach. First of all, I would like to discuss briefly the statutory requirements that relate to your contract after issue. Your paper says: "The system is based upon the principle that when the policyowner increases his face amount, the reserve basis and non-forfeiture law in effect at the time of such increase, including the mortality and interest rate and the maximum expense allowance, control the values associated with that increased face amount." My understanding of the valuation and non-forfeiture law is that the valuation standard in effect at the time the policy was issued controls for the life of the contract. Have you received any reaction from the states as to whether or not you do have the ability to change your pricing basis and reserve basis on face amount adjustments after issue? After all, you are issuing a single contract and the face amount, premiums and cash values are all combined into a single unit.

MR. KOPPEL: This is a situation where the old valuation basis and gross premium structure are no longer competitive or justifiable under current conditions. We have to recognize the only alternative to permitting separate valuation bases is to not issue additional amounts and instead require the issue of a new policy. We have submitted in the policy filings a description of this in detail and the reaction to our concept has been quite favorable.

MR. SIBIGTROTH: If you have a contract that provides for a continuum of premium rates and cash values, what do you foresee in the way of new products that might come into the market place at a later time and, how might you add them to Adjustable Life? For example, suppose you wanted to have a contract with a higher scale of cash values or a different scale of premiums or suppose that stiff term competition required that you introduce a lower premium

10 year level term plan? How do you deal with many of the constraints imposed on the pricing basis for this plan because of the premium continuum?

MR. KOPPEL: I am not sure you cannot. I think it is possible, for example, to have in your portfolio two separate adjustable life policies; one which contains minimum cash values and a particular gross premium structure, and another, which was marketed to a different group of prospects, that has a different set of cash value scales and a different gross premium structure.

MR. SIBIGTROTH: Cash values for your Adjustable Life approach reflect new surrender charges when the face amount is increased but surrender charges are not imposed when the plan changes to a higher premium plan without a corresponding face amount increase. We find that the distribution costs, commissions and field overhead are about five to six times as important as the cost of underwriting and issue. This suggests that changes in premium are more important than the changes in face amount in setting cash values. Do you think that is the right way to go on cash values?

MR. KOPPEL: What I found in the development of my paper and in the development of the product which Combined writes, is that there is no perfect scheme for developing the right expense allowance formula, as to what it should be applied towards. Particularly, if one is going to develop different valuation and cash values bases for each segment, that is the logical basis on which to adopt an expense allowance formula. I thought about the questions as to the effects of specific changes on the expense allowance amount. A problem could occur in the extreme case when a policyholder wanted to change from a term insurance plan to an endowment plan. The added premium associated with the endowment plan would have to have sufficient loading to cover the fact that there would not be any additional surrender charge associated with that change.

MR. DAVID R. CARPENTER: I have a question Spence. Are you saying that you think that because of its extreme flexibility, this type of adjustable life product might be the only basic form a company might need in the future?

MR. KOPPEL: Virtually the only basic form. Alan and I had talked a bit, and I have some doubts as to whether, perhaps, it could be sold as a straight decreasing term plan because the loading formulas for adjustable policies might not permit the ability to have that kind of plan. A company might want to address several markets and might have several adjustable policies, but it could use only adjustable policies for those purposes.

MR. CARPENTER: Very good. The only other remark I have is that I think there is still a feeling on the part of some of us that even as flexible as your design makes adjustable life sound, it is still extremely complex. The reason is because you have done an excellent job of playing the game, so to speak, within the constraints of the current regulatory climate and those constraints are many and they are varied. It is quite a challenge. I compliment you for that. The next topic we are going to talk about is Universal Life concepts, which concepts seem to challenge certain regulatory constraints.

The concept of Universal Life has been the subject of speculation and discussion by many people over many years. To my knowledge, the first detailed written presentation of the concept appeared in a paper presented by James C. H. Anderson at the 1975 Pacific Insurance Conference. The foundation for that conceptual description was a flexible premium annuity, with monthly

renewable term rider or riders attached. There was complete flexibility regarding premium payments, so long as there was enough in the annuity fund to charge for the monthly term insurance costs. The basic concept was that premiums, less fairly modest front-end charges, would be accumulated in the annuity from which the monthly costs of insurance would be deducted. Unfortunately for this particular design, the Tax Reform Act of 1976 introduced the concept of taxing annuity proceeds upon death in excess of the cost basis (premiums). As a result, current development efforts utilize a life insurance policy design, as opposed to an annuity design. The policy currently being marketed by Life Insurance Company of California called "Total Life" is a good example of the type of design currently being considered by several companies, according to my information. Under Total Life, gross premiums less premium-related charges are credited to the cash value; interest is credited and costs of insurance are deducted. This process is substantially the same as that inherent in the cash value development of any permanent life insurance plan.

What are the major reasons for the current, swelling interest in this type of contract?

First of all, if the life insurance industry wishes to stay in the battle for savings dollars, it appears to need a product other than conventional fixed premium, fixed dollar whole life or term insurance. From the consumer's standpoint, the interest earnings element in a typical permanent life insurance contract is not at all visible or easy to understand. It is normal for him to believe that the return on his money is equal to the interest rate guaranteed in the cash value calculation. How do you explain that the actuary uses interest earnings in excess of that guaranteed, to offset other costs of carrying the contract?

To continue this argument, the consumer also does not understand why his permanent life insurance policy has to have such a high front-end charge. That is, why does he have to wait for his cash value to begin building up?

The flexibility provided by plans of the universal variety is quite attractive to the current-day consumer. High mobility and changing life styles dictate a degree of flexibility not found in our typical permanent products.

For those of you who are not too familiar with the emerging product patterns in this area, a more detailed description might be helpful. I will use Total Life as my model, although some of what I am about to say may be based more on concepts than the actual detail of the Total Life contract:

The contract is a lot like the Adjustable Life concepts of The Bankers and Minnesota Mutual, with the significant, additional flexibility that a plan change is not required each time there is a change in premium payments.

Within a wide range of choice, the applicant selects the amount of periodic premium he desires to start out with, the amount of any additional premium he wishes to pay at the beginning of the contract, and the amount of initial death benefit he desires. From each premium

payment that is received, a percentage charge in the neighborhood of 5-10% of the premium is deducted for the purpose of paying premium taxes, partial commissions, and issue costs.

On a monthly basis, costs of insurance are calculated and reflected in the determination of cash values. These costs are based on the net amount at risk and current cost of insurance rates determined by the company, although rates based on '58 CSO are guaranteed on the policy form. It is possible, by the way, to include a spouse and children under the policy, so that comparable deductions for costs of insurance would be made for them also.

During the first 12 policy months, an additional charge is deducted at the beginning of each month equal to about \$20 per policy plus 10¢ per thousand of insurance in force.

After all of these deductions are made at the beginning of each month, the net amount is accumulated for the month at a current rate of interest as declared by the company.

The commissions on the policy are expressed as the sum of three factors:

- X percent of each premium dollar received (probably less than 10%);
- Y dollars per policy at time of sale (Y being a few hundred dollars); and
- Z dollars per \$1,000 of face amount at time of sale, with Z varying by issue age.

So, depending upon the relationship between amount of premium, age, and face amount, the total commissions as a percentage of the premium received can vary substantially.

One can see why this type of design would be attractive to the more sophisticated buyer. There can, of course, be give and take on some of the numbers I have spewed out, but the annual premium level probably has to be in the neighborhood of \$1,000 or more, before the attractiveness of the early cash values and the attractiveness of the field compensation in dollar amount are large enough to have chemistry take over.

Because of the high level of flexibility provided in a "Universal Life" style Adjustable Life product, the actuary may have a challenge illustrating that the minimum nonforfeiture requirements are met. This challenge is fairly easy to meet using a retrospective approach. It is not so easy to meet using a prospective approach. This situation is not dissimilar to challenges which exist in demonstrating compliance on The Bankers and Minnesota Mutual versions of Adjustable Life.

The federal income tax consequences of such a new product are, not surprisingly, still a little hazy. In my own opinion, it appears that there are no unusual problems from the policyholder's perspective, with the possible exception of losing the policy loan interest deduction by inadvertently violating the four out of seven rule.

From a company tax standpoint, it seems likely that a company paying tax on taxable investment income would not be able to take a full deduction for the total amount of interest credited to the policy. Rather, the required interest deduction would likely be calculated as for any other life insurance policy. There is also some question as to the appropriate reserve adjustment -- is it zero, or \$21.00 per \$1,000, or \$5.00 per \$1,000?

In the calculation of the gain from operations, it seems likely that where excess interest is fully discretionary and based on experience, interest credited in excess of the guaranteed amount would be treated as a deduction under section 809 (d) (3), as amounts in the nature of dividends and, therefore, subject to a limitation on the amount of deduction which could be taken. If, however, such excess interest were, for example, guaranteed for some reasonable period (whatever that means), it is possible that a full deduction for excess interest could be taken under section 809 (d) (1), as benefits.

The Universal Life style of Adjustable Life product carries its own set of unknowns and potential problems, as would any new and innovative product. However, relative to other adjustable life forms, it is my personal opinion that it is less complex to the buyer and the agent -- and therefore more salable -- and administratively less complex -- and therefore less costly -- to the company. And finally, based on what I have seen, it is a more competitive product.

MR. SIBIGTROTH: I have a number of comments. I see that there are two basic issues with the Total Life design. The first is: Is this contract life insurance? If so, then death proceeds would be exempt from income tax. Today we are marketing many plans with different levels of risks, ranging from YRT to single premium insurance. Total Life permits lump sum contributions without a change in coverage. But the premium flexibility alone should not be enough to change the tax status of this contract.

The other key issue is whether the insured has an unfettered right to the cash values. If so, then it seems that interest income would be taxable as it accrues and not deferred. Here we have a somewhat more cloudy question because the owner of this contract has the right to make partial surrenders. Is that right to make partial surrenders subject to the same kind of penalties as someone who surrenders their cash value and loses all of their prospective coverage?

The other question I have, coming from the standpoint of a mutual company, is that with our agency system it would be hard for us to replace whole life insurance with a commission rate that is around the level of a YRT commission plus 3% of premium. That is about 10% of what we are now paying in the first year on a permanent insurance plan..

The other comment I have is that some of the companies, as Dave has mentioned, are in a Phase 0 tax position -- that is, they are taxed on their gain from operations. As such, they do not have to pay tax on the interest that is credited to policyholders. We, on the other hand, would pay some tax on excess interest over the valuation rate. This permits them to illustrate very high interest earnings over long periods of time. However, the concern I have is that within 10 or 12 years, if they do sell a lot of this business, their tax position may change to one based on taxable investment income and significantly affect the interest that they would be able to credit.

Lastly, this seems to be like a bank account plus some kind of term insurance rider. If that is the case, how does an agent program somebody? How does he tell a person what he needs to pay to keep his premiums level or to have paid-up insurance at age 65? It seems to me that this is a way to preserve the livelihood of actuarial consultants.

MR. CARPENTER: Alan, those were all excellent questions! I do not know where to start. As I said, my own opinion is that there would be no unusual problems with regard to taxes from the standpoint of the policyholder. This is based on the assumption that the contract is carefully drafted and that some of the points that Alan has made are watched quite closely. Again, the tax situation with regard to some of these elements is still hazy. That is going to be true of any revolutionary new product. Those questions are being addressed right now and I guess I just have to say that there are not any definitive answers yet. The prognosis so far seems to be pretty good, especially with regard to the constructive receipt problem. That is probably one of the lesser problems and can be solved by careful construction of the contract.

You made an excellent point which I should have made: Where does this leave a company that already has quite an investment in a career agent distribution system? There are some problems. Those of you who are familiar with Anderson's paper on the subject of the Cannibal Life Syndrome know what some of those problems are. However, I was fairly careful not to define what commissions had to be. Obviously, you only have certain flexibility or else it starts affecting the consumer orientation of the product with regard to higher early values. From what I have seen so far, the agent selling the product can make "enough" money. We all know that it is very difficult, however, to convince a life insurance salesman that he can move over and take commissions on a completely different basis which look a lot smaller to him as a percentage of the premium that he is bringing in the first year. That is a very real, very practical problem for some companies.

One other comment on the taxes. This design itself does not lose its glamour if a company is in a taxable investment income tax phase -- Phase I or Situation B or whatever. The reason I say this is that one of the things that makes this contract kind of sexy is that it brings out in the open, and makes more visible to the consumer, the interest rate he is actually being credited. If that interest rate is only seven percent because you had to pay out in taxes three percent out of the ten you earned, it still looks a lot better to him than the traditional contract where he always thought he was only receiving four percent or less because that was the cash value interest rate. Although the situation is a lot better, as is pointed out, for a company in a tax loss carry forward position or G minus \$250,000, I do not believe that the plan concept goes completely down the drain with regard to a Situation B company.

MR. KOPPEL: I have a comment which you can respond to if you wish. Universal Life might well be a more appropriate product than Adjustable Life for the very sophisticated, very high premium, as you mentioned, product or sale. However, I think that there is a major segment out there where Universal Life just would not fit. Universal Life seems to be taking a giant step forward. Adjustable Life may be a reasonable middle ground which our agents and our potential policyholders can understand a little bit better than the Universal Life concept at the present time.

MR. CARPENTER: Just call it an honest difference of opinion. I sincerely believe that although your first point is well taken -- that it is a quantum leap forward -- I still feel conceptually that Universal Life is much easier to explain, it is much easier for the consumer to understand, and I believe it will prove to be much easier to administer if for no other reason than you do not have to reissue every time there is a premium change.

MR. SIBIGTROTH: A great deal has been said about term insurance and savings fund insurance plans. Many have recently appeared on the market and more will come. Rather than review the types of products sold, I will discuss our research on this product from the perspective of a large mutual company, and how term insurance and an investment fund can be used as a tool to better understand the price distinctions between these split plans and permanent insurance.

Some time ago, we considered an insurance plan coupled with a side fund. Our plan was comprised of three pieces: a permanent insurance base, a term rider, and a side fund that was applied to purchase paid up deferred life insurance. All three pieces would be sold as a package although the owner did not have to use all three but had to buy a basic layer of permanent insurance. We felt this plan would be an answer to the "buy the best and invest the rest" argument and offered a flexible selection of coverage and premium. We added permanent insurance to boost agent compensation. Deferred life insurance at age 70 was selected instead of an annuity or savings fund to avoid some tax consequences and to streamline the administration. Packaging an annuity or savings with a term death benefit posed several problems for us.

1. Interest earnings on a savings fund could be at a high rate but the earnings would be currently taxable to the owner.
2. If an annuity with purchase guarantees were used the interest return was mediocre, and interest earnings would be taxable at death or surrender. This contrasts with permanent insurance, for which the cash value gain is measured relative to full premiums paid.
3. With deferred life insurance we avoided current tax on interest and at death but had doubts the IRS would view this plan as a unit.

As you know, commissions on permanent insurance are front-end charges. We could not structure the contract to pay a commission corresponding to permanent plans and have a competitive price on the deferred life insurance additions. A market level commission rate of say 4% on the deferred life pays much less than the same premium on a permanent sale. Either agents or buyers would find this plan unattractive.

The deferred life insurance component is similar to an investment, and might require an investment-oriented sales approach. Commissioned agents might resist shifting to new sales tactics when they already have a successful formula. Security brokers have been able to sell insurance for a number of years, but sales have been disappointing. Actuaries create a wide array of product designs. In the computer age, administration can adapt to new ideas, for the right price. But the capacity of the marketing to adapt to new sales approaches is probably the least flexible.

The combination of the three pieces produced an odd death benefit pattern - the death benefit jumps at age 70. If the insured stops paying premiums, there may be a hole in the coverage until the deferred insurance becomes effective.

In our company, life insurance plans and annuities are processed in different EDP systems. A link between systems or adaptation of one proved to be expensive.

Financial Tool to Measure Relative Pricing of
Permanent and Term Insurance

Some term and investment products are very competitive next to permanent insurance. Total Life is one example, with a cash equity far ahead of our whole life plan from the first year for the same premium. Much has been said about the high distribution costs on permanent insurance which are not common to term products. But this is not the whole story. Our analysis indicates that over a 20 year period, federal income taxes, not excess field costs, are the primary reason permanent insurance is less competitive. Federal income taxes will grow in importance if interest rates remain at or above current levels. On the other hand, distribution costs will decline in importance if premium rates continue to fall. We find that for our Yearly Renewable Term plan and an investment fund issued today at a new money rate of 9.5%, the fund equals our cash values almost exactly in all years with deductions of:

1. 2.5% in the interest rate for federal income taxes, and
2. 150% of the excess whole life commissions, from the net amount invested.

More on these results later, but let us explore the method. We set up a term and investment fund that mimics the benefit of our whole life plan. The term benefit plus the beginning of the year investment fund equals the permanent plan face amount. Whole life outlays are reduced by the cost of one year term insurance. The net amount is added to the fund and accumulated at an assumed rate of interest for each year and the resulting fund compared to the permanent plan cash values. In our first run, we made no other charges against the net amount invested and assumed a 9.5% interest return corresponding to new money rates. Not surprisingly, the investment fund plowed way ahead of our cash values.

For a company that pays tax on investment income, application of the 10 for 1 rule for a 4% reserve interest rate reduced a 9.5% gross return to about 7%. The deduction for policy interest is $9.5\% (1.4 - .95) = 4.275\%$. The excess of 5.225% is taxed at the 46% rate, leaving a net rate of 7%. We reran the investment fund at a 7% interest rate.

We then made another deduction from the net amount invested for the excess distribution costs on the permanent plan. These distribution costs were taken each year as 150% of the difference in AWL commissions over the term commissions. The 150% factor reflects direct commissions, first year manager overrides and marginal field expenses. The YRT premiums cover the issue, underwriting, and other fixed costs. Investment funds were compared on this based at 7% and 9.5% interest.

The 7% investment funds with the commission reduction were very close to whole life cash values in each of the first 25 years, generally differing by no more than $\frac{1}{2}\%$ of the face amount.

DISCUSSION—CONCURRENT SESSIONS

Relative Impact of Federal Income Taxes and Additional
Whole Life Commissions
\$50,000 Whole Life Plan - Male Age 35

10th Policy Year

Whole Life Cash Value \$ 7,850

Investment Fund

Tax Exempt, Full Commissions 8,918.80 Tax effect +1,149.54

Taxable, Term Commissions Only 10,281.72 Commission effect +2,512.48

Incl. Taxes and Commissions 7,769.24

20th Policy Year

Whole Life Cash Value \$17,800

Investment Fund

Tax Exempt, Full Commissions 25,870.02 Tax effect +\$7,728.85

Taxable, Term Commissions Only 23,738.59 Commission effect +5,597.42

Incl. Taxes and Commissions 18,141.17

Well, what does all this mean? As compared to term insurance, federal income taxes emerge as the most harmful element in the cost of permanent insurance. Of course, unlike acquisition costs, the tax bite grows beyond 20 years, and becomes worse as interest rates continue to soar.

A number of the term and investment fund products are sold by companies that pay tax on gain from operations. This tax position enables such companies to pay high interest when the increase is fully deductible from the tax base. In a sense, the tax law gives small companies a subsidy to get into the business until their gains build to the point that they move into an investment income tax position.

Much has been made of the tax deferral that permanent insurance enjoys. For new policies, we find our marginal tax bracket on investment income is 25%. According to the FTC report, 83% of tax returns filed in 1975 were at or below a 25% marginal tax rate. Many of our customers would get a better price if we let our customers pay the tax, and gave up tax deferral on policy interest. But that is not a practical reality.

The tax issue is probably the first one to address because it offers the greatest potential for price improvement and we are not likely to move away from our Agency system. Low cost products have been with us for some time. As other companies, we have improved the quality of service and financial counseling Agents supply. We do not feel we have to meet the price of low cost companies that fail to give the same service.

The term and investment fund tool was also employed to give annual year by year interest rates. The interest rate is calculated each year that equates the investment fund and the cash value.

The FTC report indicated that permanent insurance level (or Linton) annual yields were low. We find that permanent insurance yields are deferred and are competitive from the 4th year on. Interest returns on permanent insurance fall into three phases. The first phase is policy years 1 to 3. Yields during this period are negative. By the third year, the owner has borne most of the acquisition expense, through dividend and cash value charges. In years 4-10 when cash values reach reserves, after tax interest rates are between 6 and 8%. Rates are improved by the rapid growth in cash values. Beyond year 10, interest rates stabilize at about 6.5%.

This information is a powerful weapon against replacement, for once the policy survives the third year, the owner receives a favorable after tax return on investment. In contrast, a replacing Agent will point to the low guaranteed interest and suggest the low values over the first three years will continue into the future.

What do these pricing considerations mean? Inflation has played a key role. It widens the relative cost differences for permanent and term insurance. The industry has reacted to this trend in a number of ways.

1. Introduction of low premium term and deposit term products.

Small companies have garnered a comparatively large market share by selling low cost term. This business is highly price sensitive. Deposit term contracts show attractive returns on the policy equity if held to maturity.

2. A trend to low premium and low payment permanent plans. As cash values are viewed as a poor investment, low cash value whole life plans with corresponding low payments have become popular.
3. Enhanced Agency support. The difference that sells a moderate cost plan over a low cost plan is service. EDP support, improved issue, claim turnaround time, portfolio flexibility all place more powerful tools in an Agent's hands.
4. Policy Update program. Exchanging old contracts with low reserve interest rates for current 4% contracts cuts income taxes.
5. Attractive Investment products. Total Life will be followed by other contracts designed to shield investment income from taxes. As yet, these plans are at best on the drawing board but the future may see money market funds and high guaranteed interest contracts.
6. Mass Marketing of small policies. Agents can afford to give tailored service only on large policies, and the lowest face amount deserving these services moves up with inflation. For small policies which are a very important part of our business, streamlined policies with few options and a marketing approach that economizes on an Agent's time help control distribution costs.
7. Yearly Renewable Term to 100. Recently, we introduced an extension of the renewal and conversion privilege for our YRT plan. Long range renewal and conversion features have become important for some sales situations. The steep rates at high ages also make this extension an interesting tool for demonstrating the value of permanent insurance.

MR. CARPENTER: As a general comment, I noticed that there is going to be a federal study on life insurance company income tax. I was thinking about that because the nature of your remarks reflects the frustration of all of us as to how we can compete, not only with each other but more importantly, with the other forms of savings, especially if you are connected with a company that is paying tax on taxable investment income. In the longer run maybe all things will balance out, one way or the other. In the short run, taking a more practical approach, I do not know what we should do. The Universal Life concept is a trend in and of itself. I do not quite agree with the comment you made toward the end that it is a way to shield investment earnings from taxes.

MR. SIBIGTROTH: Total Life really does not shield investment income from taxes. That is due to the phase the company is in. My concern was that I did not understand why Total Life and these other contracts are so competitive.

MR. KOPPEL: Alan, I would like to ask a question that you asked me. If a company has a Total Life insurance plan in its portfolio, can it eliminate its other products or can it sell other products in its portfolio in competition, and how does it avoid the problems in comparison between Total Life and other more conventional policies in its portfolio?

MR. SIBIGTROTH: That is definitely an important consideration. Many companies are selling these plans side by side with permanent insurance plans.

There is a different compensation pattern to reward agents for doing the servicing. I think many general agents are proposing Total Life when they know that the case is being competitively bid and they cannot place the permanent insurance plan that they had hoped to. I think this is happening with some frequency within the general agency force now. The problem is that an agent cannot support his standard of living selling just Total Life by itself. (He does not get the kind of compensation that he needs to support himself.) So he has to try to sell something that pays more, if he possibly can. In those cases where he does not want to walk away with nothing he will propose Total Life. It is an interesting point that Life of California has found that general agents, in contrast with brokers, are doing most of the selling. Total Life has not been sold that heavily by security brokers. Another interesting point is that Total Life is being sold with an average of about a \$100,000 face amount and about a \$1,500 premium. We do not know how much is coming in as a lump sum after that, but it appears as though it is being sold like life insurance and not like single premium annuities or a capital withdrawal scheme which may draw concern from the IRS.

MR. JOHN E. TILLER: The next topic on our agenda is Level Premium Term to 100. I am sure some of you have been wondering what this is. After all, we have been taught that level premium insurance to 100 is whole life, complete with cash values. One of the major benefits in a meeting such as this is the opportunity to explore the future and consider possible changes in our legal and regulatory environment. I do not want to start a long, philosophical discussion on the values of permanent insurance versus term insurance, nor have I a wish to become immersed in the controversies surrounding the FTC reports or benefits which actually accrue to policyholders. Instead, I would like us to open our minds to a different environment than that of today.

Those of you from Canada may already be aware of the product to which I refer; the rest of us should look north for some new ideas. Canada does not have a minimum cash value requirement. Our Canadian affiliate, Occidental Life of Canada, recently developed a Level Premium Term to 100 plan. This plan is just what it sounds like: term insurance with a level premium from issue until age 100. There are no non-forfeiture values and no endowment at age 100. Removing these corollary benefits, results in a substantial reduction in premium. Overall, the premiums are 30% lower than our most popular Canadian Whole Life plan. Since commissions are basically the same on both plans, it is safe to say the difference in rates arises from the difference in benefits.

To get some additional idea of the impact of removing the cash values and endowment benefits, we did some analysis using just a few basic assumptions. Taking our normal annual renewable term mortality and persistency assumptions, we developed GAAP natural benefit premiums for a level premium to 100 policy with and without cash values. These GAAP premiums include only policyholder benefits, with no provision for expenses, commissions, taxes, dividends, or profit. We developed ratios of premiums without cash surrender and endowment benefits to those with such benefits. The resulting ratio was greater at higher issue ages and less at lower issue ages, ranging from 68% at age 55 to 37% at age 25. Assuming a fairly standard distribution of business by issue age the overall result was 53%.

The product approach is relatively conservative in some ways: issue ages range from 16 - 65, normal underwriting applies, reserves are based on 1958 CSO at 4% with the Canadian valuation method and all normal options, supplementary

benefits and riders are available. Unlike most term plans within the Occidental portfolio, however, conversions to a "permanent" plan are not allowed. As stated, compensation is fairly good, following the pattern of most of our longer period term and permanent products. The minimum policy size is \$10,000, with a second band at \$50,000.

On the experimental side, one additional option is available. At each 10th policy anniversary, the insured is eligible for a premium discount. The discount is based upon proper evidence of insurability and applies over the next 10 year period or until age 65. (Above age 65 the original issue premium applies.) If a policyholder foregoes an option or does not provide satisfactory evidence, all future options are forfeited.

I know of no other companies that have adopted this product. In talking with our Canadian Actuary, we found the product has attained good field acceptance. The plan was first introduced in August with modest results. September sales were about double those of August and in the first two weeks of October, sales exceeded those of all of September.

This product cannot be developed in the U.S. under the current legal environment. Perhaps it should not be, or perhaps it would not gain market acceptance. However, given the problems in the life insurance industry today, the high inflation rates we face and the growing use of term insurance with side funds or annuities, this could be an extremely viable product. For many buyers, Level Premium term to 100 could be a better way to provide long term protection than either whole life or increasing premium term.

MR. KOPPEL: John, you compared the premiums under the Level Premium Term to Age 100 with a whole life product. I wonder if the comparison should also be made with a renewable term product with a going-in premium since this is what is generally sold, at least in the United States. Have you any figures as to the comparative premiums in that regard?

MR. TILLER: The purpose of my exercise was to compare the present value of benefits. The incidence of premiums should make no difference in this.

MR. SIBIGTROTH: When I was doing work on asset shares I seem to recall that when someone lapsed a policy we had a gain of the excess of the reserve over the cash value in early years. You mentioned that you used the same persistency assumption that you use for an annual renewable term plan. Would not persistency improve if the policyholder has to pay a higher premium and receives no cash values in the contract?

MR. TILLER: That is a very good point. We tried to keep this comparison simple and probably overdid it. If improved persistency is taken into account you should see a substantial increase in the benefit cost. The mortality level should also improve, but the net impact on benefits is probably an increase. Remember, my illustration is concerned only with net benefit costs. Actual gross premiums are affected to a large degree by such things as expenses and commissions and interrelated with persistency.

MR. CARPENTER: During a similar panel discussion at the Society Meeting in Portland in the Spring of 1978, I discussed the potential marketability and product design features of a plan I referred to as "Inflatable Term". In reviewing that presentation, I notice that I made the claim that I had been waving the flag for this kind of coverage for at least four or five years.

Actuarially, that means that it has now been $5\frac{1}{2}$ or $6\frac{1}{2}$ years.

Although I see no need to repeat the particulars of the type of product or products I discussed at that meeting, I believe it might be helpful to repeat some of the reasons given for the potential marketability of such products in this era.

I believe we are going to continue to see inflation of at least 5% a year, possibly indefinitely. I also believe that most consumers have resigned themselves to a similar conclusion. The consumer is now used to routine, periodic price increases on most products and services he buys, and I think he is ready for it in his life insurance program.

I also believe that the consumer likes options. He does not wish to have to make a decision of the importance of a life insurance policy purchase partly because he feels he is making an irreversible decision. A properly designed indexed policy with the availability of several attractive options could be quite attractive, yet not as complex to administer as, say, Adjustable Life. By the way, I believe that is equally as important that Agents like policies that have a lot of Pizzazz; and, typically, the home office marketing challenge is the agency force, not the consumer.

Since the Spring of 1978, we are aware of at least three companies that have made an attempt to go to some form of indexed coverage along the lines I described in Portland. Unfortunately, it would be rather farfetched for me to attempt to take credit for these developments, since I believe the record covering the Portland Meeting was not distributed until about six months ago. We delayed its publication so that we could get the '79 year book out sooner. The three companies I have chosen to discuss today must have either completed or at least begun their work prior to that date. The three companies I have chosen to highlight present us with a fairly good array of choice:

Mutual of New York began offering their consumer price index whole life insurance policy at the end of 1978 and it is, of course, a participating variety.

Sun Life Insurance Company of America introduced its non-participating variety in the form of life paid-up at age 96 earlier this year.

Federal Kemper Life Assurance Company offers us another product perspective: A revertible, renewable term to 95 that is indexed.

As I mentioned earlier, Mutual of New York's plan is a participating whole life insurance policy. It offers the purchaser the automatic right to increase the face amount on each policy anniversary, beginning with the second. In calculating the CPI increase, the year is defined as beginning and ending five months prior to the policy anniversary month. This allows the company adequate time to perform all the necessary calculations and include the pertinent information in the premium notice applicable to the anniversary date. The index is defined as that for all urban consumers, U.S. city average, all items.

All the policyholder has to do to acquire the increase in coverage is to pay the higher, billed premium. The premium rates utilized for the increased amounts are the base rates applicable to the plan issued for the attained age on the policy anniversary that the increase becomes effective.

Minimum issue amount for the base plan is \$10,000; the maximum is \$200,000.

There are, of course, some limitations. First of all, the minimum size of any annual index addition is \$500. Secondly, the maximum size of an annual index addition, at the company's option, is limited to the lesser of 15% of the total face amount of insurance in force and \$30,000. In addition, the index addition terminates under the following conditions:

- . Attainment of age 60
- . At the end of the grace period if the initial premium for the current addition is unpaid
- . If the base policy ceases to be in force on a premium paying basis.

The typical riders can be added to the policy. And you will be interested in knowing that the waiver benefit does waive the premiums for all future index additions, as long as the disabled policyholder continues to supply a written request that the addition be added.

The Sun Life concept is quite similar. Of course, the program is non-participating and the base policy is a life paid-up at 96. The CPI measurement period begins and ends four months prior to the policy anniversary month.

One interesting liberalization is that the policyholder, if he does not wish to add the entire index addition, may choose to add only one-half of that amount. Once he makes that decision, however, all future index additions will be at one-half of the full index addition applicable to his policy.

The cost of the additions is, again, at the attained age rates per \$1,000 for the initial face amount issued. Note that this saves the policyholder the policy fee. In addition, he gets the advantage of a basic per \$1,000 premium rate applicable to the size of his original purchase, which typically should be much favorable than if he were forced to buy an additional policy for, say, \$5,000.

Sun Life also allows the addition of the typical riders and their waiver provision is similar to the Mutual of New York design.

Sun Life reserves the right to limit the cost of living increase to 15% of the amount then in force, or \$50,000, if less. In addition, they also reserve the right to limit total CPI increases in force to three times the initial face amount of the policy.

Sun Life is a little bit more liberal concerning termination of the cost of living benefit:

- . The benefit terminates if the policyholder declines two consecutive annual increases.
- . It terminates if the policyholder declines the increase on three different occasions.
- . It also terminates at age 65.
- . It terminates if the base policy ceases to be in force on a premium-paying basis.

In the latter part of 1978, Federal Kemper introduced Maxi/term, a large amount ART plan with several evolutionary (and possibly revolutionary) features.

Minimum amount is \$250,000 or \$1,000 of annual premium, whichever is less. Surprisingly, the cost of living option it carries is probably not its most outstanding feature. Maxi/term is exchangeable on each fourth policy anniversary for essentially an identical policy with new, select rates, provided the policyholder provides evidence of insurability, which is paid for by the company.

The premium rates for this plan start out quite low, as one would expect, but by the fifth policy year they are quite high (often significantly above '58 CSO net premiums), designed of course to cover the extra mortality to be anticipated from the continuing group of policyholders who apparently were not able to requalify for select rates. If you want a real challenge, try to come up with a mortality assumption for this plan. But that is not why I am here today: I am here to discuss indexed coverages.

Maxi/term will increase the face amount on each policy anniversary to reflect a CPI adjustment, if the policyholder so requests in writing in the application, or at some later date. The option to increase terminates upon written request or upon the disability of the insured.

The premium rate for the increased face amount would be the rate per \$1,000 applicable for the policy year in question. And, all such cost of living increases are eligible for the exchange option on each fourth anniversary.

In case you were wondering, it appears that the consumer price index is the same one used by the other two companies discussed. One minor difference is that the index year runs from three months prior to the anniversary month. Possibly of more interest is the fact that the CPI benefit terminates if the consumer price index for urban wage earners and clerical workers at some point becomes unavailable or altered in such a way as to become unusable in the opinion of the company.

MR. KOPPEL: I hate to sound like a walking commercial for Adjustable Life, but as far as I know the three products that are currently issued, that is the Bankers of Iowa, the Minnesota Mutual and now Combined, all have the cost of living increase option in them.

MR. TILLER: The final topic for today is Revertible Term. This plan is known under many different names -- Exchangeable Term, Select Term, Maxi/term. Basically, it is an annual renewable term product with select rates for four or five years and higher, ultimate rates thereafter. The insured may requalify, with evidence, for new select rates at the end of each select period.

About six months ago one of the nationally circulated actuarial recruiting brochures contained a comment by a fictitious chief executive that his actuary was a person who looked both ways before crossing a one-way street. Most actuaries see the humor in this comment, but I am not sure enough of us are looking both ways before crossing the street to Revertible Term. It is very easy and natural to look at increasing sales potential and then find a scenario where this plan will be justifiable. However, this plan, to me suggests more problems for our industry than any other I have ever seen. I have heard several responsible executives and actuaries remark that there was probably

more reason for industry and regulatory groups to consider banning this product than there was for deposit term, for example. This remark evolves from the type of and in some cases, lack of, guarantees to the insured after the select period.

This attitude will disturb many of you, but let me try to explain it. Incidentally, my comments are mine alone and do not necessarily reflect the opinions of my company. Revertible may be sold in some instances in a profitable and responsible manner. My purpose is to spotlight some potential pitfalls.

Current thinking appears to be that the low select rates, combined with the reentry provision, will improve persistency. I first saw such a select and ultimate ART about six years ago when one of our reinsurance clients developed a seven year select ART plan. This plan had extremely low gross premiums in the first year, but by the fifth year -- still in the select period -- rates were well above the market. Ultimate rates were probably twice "normal" aggregate ART rates. One of our actuaries pointed out that this would probably result in very poor persistency; he was exceedingly correct.

A few years later, the question of deficiency reserves on annual renewable term was of great concern. To get around this, some companies developed a plan where the rates were not guaranteed after the fifth year or were guaranteed not to exceed a certain maximum. That maximum, of course, was not deficient. The plan was to renew at the lower scale every five years, thereby requiring deficiency reserves for only the five year period. There was room for abuse with this concept, but it seemed to be a sensible solution to a technical regulatory problem.

About two years ago, a company introduced Revertible Term as a marketing tool with an emphasis on rewriting the plan every five years at a relatively low select rate. Soon the concept began to spread as many companies felt a need for such a product to protect their market share and sales growth and to tie the agents to them.

Something else has happened in the evolution of this product. The earliest version sold did not have the reentry provision. The first plans with that feature were five year select; many are now four year select. I think the direction we are headed is relatively obvious and I believe a one year select plan with annual reentry has now been introduced. Perhaps this is just the first step in moving the life industry toward the casualty insurance concept where the business belongs to the agent, commissions are basically level and risks are reunderwritten every one to three years. One colleague has suggested we should design a product with no renewal guarantees and reunderwrite every year. The first reaction, of course, is that expenses would be prohibitive, but if new underwriting techniques and compensation systems are evolved, the idea might not be unreasonable, at least for some segment of the market.

Well, I have strayed away from revertible term. Perhaps I should discuss some of my concerns about this plan. To me, it seems impossible to make reasonable assumptions. During the select period, there is no particular problem, but when the reentry provision becomes available, a Ouija Board is needed.

The first question concerns who pays for the new evidence -- the insurer or the insured? If the insured is asked to submit evidence at his own expense,

as some companies do, it is to his advantage to apply to another company which will give him a new policy at its expense. The only valid possibility is for the company to pay for any evidence required. But, what evidence should be submitted? Should a very high non-medical limit apply or should we ask for a medical everytime? The latter involves much more effort on the part of the insurer and some problems for the agent. A non-medical creates additional work for the agent as he is required to get much detail.

Next comes the problem of commissions. The first year commissions alone are quite a problem. Some companies have tried a reduced commission approach; others are going with full commissions. If you do not pay relatively normal commissions, the product will probably not be sold by your field force. It should be remembered this product is not sold in the "Mom and Pop" market across the kitchen table. These are high minimum policies and are mostly sold in the true brokerage market where there is little loyalty of agents.

The major commission problem occurs in the reentry years. Assume for a moment that reduced commissions, say one-half of the first year rate, are paid. The agent is doing some work, perhaps as much as a new sale except for the initial prospecting, but he is receiving only half as much compensation. Why should not he take the client to the nearest competitor and offer him a new policy, complete with a new physical at the company's expense, and get a full commission?

The relationship of the reentry commission to the regular renewal rate is important. With a large difference in select and renewal premium rates, it may be to the agent's advantage not to rewrite the plan, especially when several years are considered.

Persistency is perhaps easier to predict. During the select period, persistency should be similar to that of any other ART product and will probably be a little better than a new issue during the select period following each reentry point. At each point where reentry is available, there will be additional lapses, just as there are with every 5 C&R and 10 C&R product in the market. Persistency of the ultimate group is a function of the underwriting, marketing and premiums at point of reentry. If very strict underwriting standards apply, then persistency among those going into the ultimate category will probably be low since the better lives can find cheaper insurance with the competition. If reentry underwriting standards are fairly relaxed, persistency should be extremely good on those who reach the ultimate category. I base this on the belief that the only people who will then accept the high ultimate rates are those who are highly impaired or uninsurable. To this group, anything close to a standard rate is attractive. Unfortunately, it is probably impossible to charge enough to cover the mortality -- the higher the ultimate premiums, the greater the likelihood of the better lives lapsing.

Now we come to the real cruncher in setting assumptions -- mortality. Some actuaries have said few insureds will take advantage of the reentry provision. If so, there will be little additional mortality in the ultimate group. However, considering that these policies are sold in a high average size market and can be rewritten for full commissions elsewhere, which is to both the policyholder and agent's benefit, I think the reentry option will be exercised quite frequently. This implies extremely bad mortality for those on the ultimate route.

This additional mortality assumption is the most difficult part of the plan.

If the assumption on the original issue block is 100% of 1965-70, the combined mortality of the select and ultimate sub-groups should always be about 100% of the appropriate duration rate. If only 30% of the lives qualify for the reentry provision (at 100% of the new issue age first year select rate), the extra mortality on the ultimate block ranges from 7% for attained age 30 to 23% at 60. These results are reasonable and probably justify this product. However, if 60% reenter, the additional mortality ranges from 25% at age 30 to 80% at age 60. For a 90% reentry rate, the range is 148% extra to 481% and all this without assuming intelligent selection on the part of the policyholder, additional lapses caused by rate discontinuities or agent's compensation.

Another point to be considered regarding mortality is intelligent selection by policyholders. This product is an excellent purchase for a policyholder who will be healthy all his life. If a buyer can select for this and a marginal substandard risk select against it, we could get a superior group of risks. At least this is a positive possibility.

Yet another major problem in setting mortality assumptions is in determining the reentry rate by age and duration. In most of my work I assumed the percentages who would reenter to be roughly the same by age. Dave Carpenter recently pointed out that this probably is not true. The percentage of people who develop underwriting impairments in a given year increases with age; therefore, the percentage of people who qualify for reentry -- whether elected or not, would be higher at the lower ages. On the other hand, more premium can be saved by reentry at the higher ages.

In short, I do not think it is possible to set ultimate rates with which everybody will feel comfortable. The disparity in pricing of products in the market already reflects this. Occidental Life and its affiliate, Transamerica Life and Annuity, introduced the ART-100 policy about four years ago. This was the first, at least that I was aware of, annual renewable term policy which could be renewed to age 100. This was a relatively solid product, but it had certain points where 1965-70 ultimate mortality exceeded the premiums. Using this as a guidepost, if there is any adverse mortality in the ultimate block of Revertible Term then these rates are inadequate. I have seen ultimate rates varying somewhat less than this level to approximately twice its level -- quite a difference.

Finally, there is a regulatory problem. Just today I learned that there is concern whether deficiency reserves should be based on the select or ultimate scales. Also, it seems impossible to believe that risk classification issues would not be raised at reentry, especially for those plans where the reentry conditions are not specified in the policy form. It is conceivable that in such circumstances, a company would be forced to accept reentry on all lives at standard rates.

MR. SIBIGTROT: I wonder if Revertible Term, when you look at the five year period in which you have to recover all your costs, is more expensive in the long run than YRT. With YRT, acquisition costs do not recur, whereas you periodically pay first year compensation on Revertible Term plans. We find that in many of our larger sales the people who buy the products look at the longer cost implications. Have you found this to be true in your clients?

MR. TILLER: Frankly, most high amount ART plans are sold for about a three to five year period. When we amortize annual renewable term acquisition expenses over 20 years we must consider this fact. My concern with

Revertible Term is really more that we are guaranteeing something which can blow up on us.

MR. CARPENTER: The more I play around with Revertible Term type coverages, the more I realize that it is not just the mortality that bothers me. John brought that point home to rest very well in discussing the need to massage persistency assumptions and everything else. The more I look at the plan the less sure of myself I become. It reminds me of a saying that "Fools rush in where actuaries fear to trend". But seriously, there has been a lot of worry over proper mortality assumptions, and I still am not really convinced that anybody has a procedure that makes me feel comfortable.

