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INDIVIDUAL LIFE PRODUCT DEVELOPMENT

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1. Major revisions, reasons for change, innovative techniques, and problems.
 - a. Policy loan rate considerations
 - b. Federal Income Tax considerations
 - c. Inflation recognition
 - d. Considerations in determining interest rate for nonforfeiture values and reserves
 - e. Reserve valuation method impact
 - f. Innovation in asset share techniques, or in other rate-value-dividend justification methods
 - g. State approvals (and disapprovals)
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2. New products and special considerations
 - a. Term insurance plus deposit funds or annuities
 - b. Contingent life
 - c. Joint life
 - d. Pension trust
 - e. Other

MR. DAVID R. CARPENTER: I do not know that there is a lot new that could be said on this subject. I am sure that the best advice I could give anyone is to make sure he reads the recent Society of Actuaries paper on this subject which was written by Jim Reiskytl and Will Kraegel. The discussions of the paper will be almost as valuable as the paper itself--and the paper is a very good one.

I suspect that for a normal stock company, the differential in premium rate for a 6% loan provision versus an 8% loan provision will only be in the area of 1% of premium or less. Any policy being used strongly for Minimum Deposit business might need as much as 4% premium differential. If your markets will allow you to sell a less competitive premium, and you have not yet made a switch to 8%, you might be better off to wait a couple more years. By then, I should hope that virtually all States will permit some form of 8% provision.

Companies who have made the switch in the last couple of years have certainly experienced significant increase in cost and confusion with regard to multiple rate books, sales proposals, etc.

If you are considering switching at this time, consideration should be given to at least the following items:

- . Participating versus Guaranteed Cost business
- . High Early Cash Value plans
- . Varying your assumptions by policy size
- . Varying your assumption for Qualified versus Non-Qualified business.

And a hint for actuaries of mutual companies or companies with participating business, make sure your ratebook is designed to have dividends as a separate section, for it will be much easier to update those ratebook pages as you make dividend scale changes in the future.

There are a couple of phenomena being discussed, mainly promoted by the Northwestern Mutual, which do deserve our attention. One of these is the proposal that the dividend formula be utilized to assess the cost burden of policy loans to those policies that are actually utilizing the loan privilege. As far as I know, no company has taken this step as of now, but the Northwestern Mutual has been suggesting that it may do so some time in the future. Much of this is discussed in the Reiskytl-Kraegel paper so I will not bore you with all of the pros and cons, but I would like to suggest that stock company actuaries should be potentially concerned about this phenomenon. If such a practice were to become prevalent, theoretically at least there could be a movement to the mutual companies of consumers who have no intention of borrowing. This would be because a stock company has no way of assigning the cost to only those who borrow, i.e., any additional cost caused by the policy loan provision is spread across all policyholders.

The other phenomenon is the offer to current 5% and 6% loan provision policyholders to exchange their policies for one with an 8% provision and a higher dividend class. At least one company has pursued this. It seems to me that this approach is another way of assessing loan costs to those who borrow, because there will be a great tendency for non-borrowers to switch to the 8% class. Therefore, through time, the old 5% and 6% classes will gravitate toward a very high degree of borrowing, which, in turn, will cause the investment results for the class to deteriorate, thus, causing a reduction in the dividend scale for that class.

A New Product Idea: Inflatable Term

For at least four or five years now, I personally have been waving the flag for a new kind of term insurance policy, which I like to call Inflatable Term (even though the state insurance departments probably would not let the plan be called that). Most of the actuaries I have discussed this with say that it will not fly, which I have interpreted to mean that it will not sell, since the word inflatable does not mean to imply anything similar to a hot air balloon.

(Story: Inflation vs. Prices) I believe we are going 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 accustomed 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--granted, we may have to coax him a little.

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. The Inflation Term products I envision would have lots of options built in, but they would not be as complex to administer as Adjustable Life. By the way, I believe that the great success that the Bankers Life is having with Adjustable Life helps to illustrate that the consumer likes options. Equally as important, by the way, is the fact that agents like policies that have a lot of pizzazz; and, typically, the home office sales challenge is the agency force, not the customer.

Now I do not know that any company has what I am referring to as an Inflation Term policy, at least not of the generation of policies I am thinking of. Maybe someone in the audience can help us out with that later, but I do envision that the simplest, although possibly not most successful, design would be an ART policy form. Here is an example of a design for, say, an ART to 100:

1. The base plan would be an ART to 100 with automatic increases annually (unless refused) equal to the increase in the CPI.
 - . Full CPI--Under this option, the policy would increase automatically on the policy anniversary by the full amount of the CPI increase over some 12-month period prior to the anniversary date. The policy would probably carry a very high maximum on the amount of such annual increase, say, 25%.
 - . Half CPI--If the policyholder feels that he does not wish to pay for this full increase, especially since his premium rate is also increasing on the base amount of coverage, he would have an option to choose only one-half of the CPI increase (with a maximum of 12½%).
 - . Level--If the policyholder has enough of increases for awhile, he would have the option to leave his coverage level for the ensuing year, or "permanently."
 - . Decreasing--Another option for the policyholder would be to maintain his current year's premium at the previous year's premium level, thereby experiencing a reduction in coverage on a premium-ratio basis.
 - . Limitations--For antiselection and administrative cost reasons, we cannot allow our policyholders to hop from option to option at will, so we would build in certain constraints or limitations. For instance, we might say that the insured has the right to pass up the CPI increase at any policy

- anniversary and has the option to return to increasing coverage one year later, but that this option to return to the increasing version may be exercised only once. Also, though he can elect the decreasing coverage option on any policy anniversary, he cannot subsequently go back to the increase option. We would let him, however, move over to level coverage on some subsequent policy anniversary, assuming he has not reached some limiting age, such as 65. Similarly with the half CPI option, once a policyholder has elected the half CPI option two years in a row, he can never go back to the full CPI option. Also, the CPI options themselves would need to be terminated at some reasonable age, such as 65.
2. As I mentioned earlier, we would have to specify that the CPI calculation is performed as of 'X' months prior to the policy anniversary in order to give us time to get the CPI data and make the appropriate changes in our billing routines.
 3. Conversion Option--We can have a fairly routine conversion option up to, say, age 65 or 70.
 4. Commissions--Although the commission level would be debatable and vary according to many different factors, I would propose a soliciting agent commission of 50% first year, 8% renewals in years two through ten, and acceptable service fees thereafter. There would not, however, be any first year commission paid under the contract after the first year.
 5. Computerized Servicing System--Obviously, we would have to crank up our computers to handle such a program, and I think it would be extremely important that the system be fancy enough to carry on fairly constant, periodic communication with the policyholder. In other words, changes at the anniversary date would hopefully be handled by the home office without the necessity of the agent getting into the act. (Would it be feasible to make certain service charges for some or all changes?)
 6. Riders--We can make this program look even fancier since we could allow a family rider to be attached in addition to the typical supplemental benefits.

The potential problem with the ART design is at least three-fold. First of all, attained age ART rates are very sensitive to the mix of exposures by duration. We would be aggravating that relationship. Second of all, the policyholder is subjected to a double premium increase in any given year: the regular increase in his ART rate and the increase caused by the additional amount of coverage that has been added. Thirdly, it is also felt by some that the low going-in premium does not allow enough first year commission to enter the agent's pocketbook.

Initial work indicates that a more attractive alternative would be to utilize, say, a five-year convertible and renewable term policy with rider-level ART rates built into the policy form to handle the CPI increases.

I believe that the ART rates could be select and ultimate. Of course, using the 5 C&R as the base would call for reworking of some of the options I mentioned earlier. The 5 C&R approach should allow for premium increases over the five-year period that make sense to the policyholder in comparison with the percentage increases he is experiencing in his coverage.

I think the key to this approach is that I am not suggesting that we attempt to build an initial premium that will handle certain increases in coverage cost caused by increases in the CPI; rather, I am suggesting that the policyholder is now ready to pay increases in premium to obtain that benefit as he goes along.

Federal Income Tax Considerations and Reserve Valuation Method Impacts

I begin my comments here by declaring once again that I do not profess to be a federal income tax expert. Maybe, however, I can say enough to get some discussion flowing so that those in the room who know more than I (please do not all stand up at once) can carry the ball. Also, please remember that efficient tax planning is a very complex business involving many interrelated considerations in any given company, so generalization should be considered with caution.

Although I am sure all of you know what I am about to say, let me warm up the topic by reminding everyone that life insurance companies are taxed differently than general corporations. The two major items that come into play are referred to as Taxable Investment Income and Taxable Gain from Operations. As a generalization, we can think of Taxable Investment Income as including all of the interest earnings on surplus and that portion of the interest earnings on reserves that is not needed to support those reserves.

Taxable Gain from Operations is not quite the same as the statutory gain from operations, the significant differences being caused by the special deductions allowed for guaranteed cost contracts, health insurance, and group insurance; and by the limitation placed on such deductions in combination with dividends to policyholders.

A life insurance company typically finds itself in one of three basic tax situations:

- (1) Situation A: Generally for younger companies, Taxable Investment Income far exceeds its Gain from Operations, so that its tax base becomes Gain from Operations less \$250,000.
- (2) Situation B: This is the situation where Gain from Operations is in excess of Taxable Investment Income, but using all of its special deductions, its Gain falls below Taxable Investment Income minus \$250,000, which is a "no-no" so the tax base becomes Taxable Investment Income minus \$250,000.
- (3) Situation D: This is the situation where Gain from Operations after all allowable special deductions still exceeds Taxable Investment Income, so that the tax base becomes Taxable Investment Income plus one-half the excess of the Gain over Taxable Investment Income.

Of course, we are hearing more and more now about that forgotten Phase III. Companies are beginning to face Phase III tax problems either because they are exceeding the maximum limitation on Phase III or are paying shareholder dividends out of Phase III. It is usually the former, I believe.

Companies paying all or a portion of their Federal Income Taxes on the basis of Taxable Investment Income are becoming more and more concerned with the phenomenon first illustrated (to my knowledge) by John Fraser in the November 1972 issue of "The Actuary." In a nutshell, the parabolic phenomenon is a consequence of the 10 for 1 adjustment in life reserves; that is, for each 1% change in the reserve interest rate, reserves will change by 10% in the opposite direction. Assuming that the drafters of the life insurance company tax law were aiming for an investment income deduction equal to the assumed valuation rate times the life mean reserves, the 10 for 1 rule has provided us with a tax benefit...up until now. In other words, it gives us more interest deduction than would tabular interest. This tax benefit increases (up the curve of the parabola) until your earnings rate for tax purposes equals 5% plus one-half your valuation interest rate for tax purposes. As the earnings rate continues to climb beyond that, the benefit decreases, the slope of the decrease following the backside of the parabolic curve. The benefit for your entire book of business is wiped out at the interest earnings rate level of 10%. In other words, for your entire block of business at that point, you will get approximately the same required interest deduction whether you multiplied your actual mean reserves by the valuation rate or multiplied the adjusted mean reserves by the adjusted earnings rate.

Now, this does not sound too bad, except for the fact that I forgot to mention that the marginal effect on after-tax investment income at this point is severe. With a reserve valuation rate of 3% and an earnings rate of 10%, Fraser indicates that the increase in taxable interest equals 159% of the increase in total interest. So, if the company is paying tax on Taxable Investment Income only it would be netting only \$.24 out of each dollar of additional investment income. If the earnings rate could climb to the neighborhood of 13%, the tax on a dollar of additional investment income would be greater than the dollar itself.

That finally brings me to a tax planning point. Although there are some other considerations that I do not have time to mention here, the phenomena that I have discussed indicate that if a company is paying tax on Taxable Investment Income minus \$250,000, it probably wants to have as high a valuation interest rate for tax purposes as it can get on nonqualified business. Qualified business is, of course, a different story, since the interest deduction is equal to the current earnings rate times the pension reserves. Therefore, the same company would want their pension reserves to be as high as possible.

If a company is in tax situation 'A' (Gain), it may desire to strengthen reserves, although the strengthening does have to be spread over 10 years. Apparently, some feel that a company interested in return on investment would not wish to make such a move. Also, in order to utilize some of its unused special deductions, such a company might consider converting some dividends into annual pure endowments by guaranteeing the amount of some portion of the dividend. The acceptability of such an approach to the IRS is in question.

There is a limitation on the amount that can be retained in the Policyholder's Surplus Account at the end of each taxable year. The PSA might not exceed the greatest of the following amounts:

- (1) 50% of the net premiums and other considerations for the year included in income
- (2) 15% of life insurance reserves at the end of the year
- (3) 25% of the excess of the life insurance reserves at the end of the year over such reserves at the end of 1958.

Fairly obviously, then, if a company is bumping the ceiling on its PSA account, it should consider strengthening reserves wherever possible.

It is my understanding that quite a few companies have decided to utilize a split-interest assumption on their reserves as a means of boosting the reserve valuation rate...at least for the time being (As we all know, there are other reasons to use such an assumption). An example would be 4% CRVM grading into 2½% Net Level at the end of 20 years. Apparently in some districts the IRS is questioning what the appropriate valuation interest rate assumption is on such business. I have been told that there have been attempts to somehow average the interest assumption from day one. Also, even if you get by with using the 4% assumption during the first 20 years, get ready for a shocker in the 21st year when that still-large block of reserves drops to an interest rate assumption of 2½%.

If you are required by a state to set up additional reserves on a contract for some reason, those reserves not being deficiency reserves, I suggest that you create a method that is based as much as possible on a recognized mortality table and rate of interest, even though there may be other factors in your model, such as termination rates. It is my opinion that such a reserve, if treated properly in its construction and its presentation in the annual statement, can be defended as a life reserve. I will let the more knowledgeable quote the tax cases in recent years that have had a bearing on this.

MR. DOUGLAS G. DRAESEKE: I have been asked to comment on topic 2(a) of our program, term insurance plus deposit funds or annuities. I will discuss two basic products, the so called "Split Life" product and Modified Premium Whole Life (developed as "Deposit Term" by some companies).

I. Split Life - Description

I find it difficult to refer to this as a "new" product in that I was involved in the development of this product for my former company more than five years ago. The "product" consists of two separate policy forms, an Annual Premium Deferred Annuity (APDA) and an Annual Convertible Term insurance policy (ACT). The APDA is typically a standard non-participating 3½ or 4 percent savings contract with the following features:

A. Loading

- A high first year loading (85 to 100%)
- A moderate loading in years two through ten (5 to 10%)
- Usually no loading in years 11+

- B. A contractual right to apply for the company's ACT policy, in an amount up to 100 times the APDA annual premium.

The ACT is a fairly standard one year term insurance policy, with the following special features:

- A. Premium rates are usually select and ultimate.
- B. Renewability (usually extended to the age 100) of the ACT is subject to the continued existence of the APDA. Should the policy not be renewable, it is usually convertible to other forms of insurance.

The combination of the two, if placed on one life, can be thought of as increasing whole life (where the death benefit is \$1,000 plus the APDA cash value) with increasing premiums (where the gross premiums are \$10 plus the ACT select and ultimate premiums). Note, however, that the two policies can be split, and placed on different lives. In fact, the insurance can be "sprinkled" on to any number of lives, subject to policy minima and a maximum total of 100 times the APDA premium.

Special Considerations

1. ACT Premiums and Deficiency Reserves

In order that the ACT premiums be attractive, they must be less than valuation c_x 's, at least in the early years. Certainly recent mortality results support the reasonableness of doing so. However, this creates a problem in that deficiency reserves of significant proportion arise. At least three approaches have been taken:

- (i) Deny their existence - Each policy year on a one year term policy stands alone, and there are no deficiency reserves. This approach failed when tried in various states.
- (ii) Make the ACT a participating policy, where gross premiums equal c_x , and dividends are set to the difference between the rates you wanted to charge and c_x .
- (iii) Make the ACT a nonpar policy, with non guaranteed experience premiums. The premiums are guaranteed to be not greater than c_x .

2. Entire Contract Provision

Some states have taken the position that two separate policy forms for the ACT and the APDA is in violation of the mandatory "Entire Contract" provision, which states that the policy form and any attached application constitute the entire contract between the parties. One company rewrote the plan in a single policy form, but the flexibility of splitting the policies onto two different lives was lost, as was "sprinkling." Another company simply stapled the two contracts together - a rather more direct approach.

3. The New Nonforfeiture Laws for Annuities

A minimum of 50 to 65% of first year gross premiums must now be applied as a net premium for annual premium annuities. This cuts the loading available about in half, which will require an approximate halving of commissions.

One of the attractions of Split Life to the buyer was that he was receiving more value for money. The combination of annuity and term insurance was cheaper than a comparable whole life policy, and had higher than minimum cash values when considering the combination as whole life with increasing death benefits and increasing premiums. Many agents refused to write Split Life, because their commission income would be approximately halved. But the very successful Split Life agent sold more than twice as much, from higher average size of policy and from higher closing rates. But with the new NFO law, commissions will have to be halved again! Whether this is the death knell of Split Life, I do not yet know. I do know that my former company sold very little Split Life in the state of Washington, where a 50% first year cash value requirement has existed for years.

II. Deposit Term Insurance

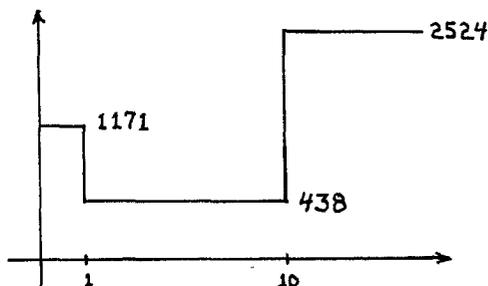
Some companies have developed a "Deposit" term product, wherein an insured is offered a term insurance product with extremely attractive rates, but those rates only being possible if persistency is excellent. As a guarantee of good persistency, the insured must put up a deposit with this insurance company. Often it is forfeited completely on early lapse. If the policy remains in force until maturity, typically ten years, the deposit will be returned to the premium payor, often with interest. Many states objected to the product, resulting in many disapprovals. So then came:

III. Modified Premium Whole Life (MPWL) - Description

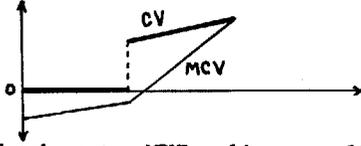
I have been involved with the development of three different MPWL policies. Each with their own little twists. I will describe just one of them, and briefly mention some features of the others later.

Basically, the product is a whole life policy, with modified premiums; a large first year premium, a low premium in years two through ten, and a high premium in years eleven plus. For instance, at age 35, a \$100,000 policy would have premiums something like this:

\$1,171	1st year
438	2-10
2,524	11+



The cash values on the policy are substantially above the minimum cash values, with the 10th cash value in our example being \$1,900.



Now, if you should take out a MPWL policy, pay 10 years premiums, then lapse the policy, you will have paid \$438 a year except in the first year, when you paid \$733 more (referred to as an excess first year premium). Upon lapse, you would collect \$1,900 (should you lapse the policy before the 10th year, you would get nothing).

This is quite similar to Deposit Term, where your "deposit" earns 10% interest, compounded annually. Of course, you could start paying the \$2,524 premium in the 11th year and carry on with the whole life policy.

Other Features

1. Often there is an extra death benefit during the first ten policy years, which is set equal to the 10th year cash value. Thus, should the insured die before reaching the 10th year (something usually beyond his control) the "deposit" would not be forfeited; and in fact, the prospective 10th cash value would be paid. There is often no extra premium for this benefit, rather it is a basic part of the contract.
2. An "Exchange Provision" is often available, for an extra premium, which allows the insured to do the following:
 1. Be insurable for another policy or
 2. Not bother with another physical and another application.

The exchange provision allows the insured to take out another MPWL policy, without evidence of insurability, at his attained age rates. Thus, he can start the 10 year program over again. A second exchange provision is available on this next policy, at a higher premium than for new issues.

Other Variations

1. Some products have cash values which begin before the 10th year, chiefly to satisfy the strenuous objections of a few states, even though the cash values are above the statutory minimum cash values.
2. One product has a return of premium provision instead of the extra death benefit during the first 10 years.
3. Another product has YRT-like premiums in the first 10 years, rather than a level premium.

2. Special Considerations

1. CRVM Reserves - A direct application of the Standard Valuation Law yields a reserve which jumps dramatically in the 10th year to cover the cash value. As might be expected, the resultant incidence of profits is absolutely inappropriate. I believe quite sincerely that a company must set up an extra reserve in the first ten years in order to obtain a more appropriate incidence of earnings. Now, this additional reserve may not be a tax qualified reserve, although I think it ought to be since its calculation would be based on recognized mortality tables and interest rates.
2. Exchange Provision - This provision is a form of guaranteed insurability option which has a reserve which, of course, must be valued. I just caution that care should be taken in setting up the reserve, particularly if you want to carry it as a tax qualified reserve.
3. Regulatory Viewpoint - Just as split life has had its opponents so too has modified life. The attacks have been through various insurance departments and are often inspired by local life underwriters associations. The attacks revolve around the following:

- A. The mod life policy can easily be misrepresented. The first year excess premium might be described as a deposit, which an insured could think of as being non-forfeitable, whereas it is in fact a premium which is forfeitable. My answer to that is adequate disclosure at the point of sale. Make sure that the buyer is fully aware of the forfeitability of the first year excess premium in return for which he is granted a very real economic benefit: low premiums for 10 years.

The experience of one company I know shows that the lapse rates on modified life insurance are substantially less than half of those for normal whole life insurance, which is an indication of the awareness of the buyer.

- B. Another attack on mod life centers around the belief that the standard non-forfeiture law did not anticipate mod life policies and that the minimum cash values calculated for these policies are not within the spirit of the law. My response is change the law if you must, but educated buyers of insurance see the benefits of the product, and insurance commissioners should be aware of the consumer before making any changes.

Today mod life can be written in almost all states, but not without unbelievable problems. I wrote down a list of the eight or ten states here and some of the problems we run across. For instance, the state of Maryland one day arbitrarily withdrew all of its prior approvals of mod life policies. Texas tried by rule to enact an ACLI non-forfeiture model law and had to back down when it was challenged.

South Carolina and Washington have a disclosure requirement, namely that that premium is forfeitable. Florida introduced a bill to ban the product. When the sponsor of the bill was suddenly challenged from all sides, he began to understand what was going on, became absolutely infuriated with the person that talked him into proposing the bill, and dropped it. In Georgia, you must call it deposit term, whereas in Michigan you are forbidden use of the phrase deposit term. The state of Vermont sat on its approvals for a long, long time, but now they are being approved. In New Hampshire, they are still waiting for some disclosure requirements and are holding up their approvals. In Pennsylvania they will not approve it period.

So in conclusion, I believe that the product of the type I have just described are good products of real value to the consuming public with adequate disclosure, and they should not be regulated out of existence. Consumerist pressures must be recognized by insurance departments in their decision making processes.

MR. STEVEN A. SMITH: During the next few minutes I hope to describe for you what Contingent Life is, why First Colony Life developed the product, and how it works.

The usual approach to covering a multiple life situation (such as a cross purchase under a buy-sell agreement) is to insure each life using either whole life or term insurance. You might call this "every death" coverage. We insure to cover "every death" (even though it is the "next death" that creates an immediate financial need) because it is not known in advance who will be the next to die. While who will die next cannot be known in advance, the cost of "next death" coverage can be calculated, and by covering only the "next death," substantial premiums can be saved.

A new generic type of life insurance has been created to deal with the "next death" crisis. This plan is called Contingent Life. It has been marketed successfully in Canada for a number of years, and now is being marketed in the U.S. by a few companies.

Markets

Contingent Life can be used to cover almost any multiple life situation: corporate stock redemptions, key executive coverage, cross purchase under buy-sell agreements, non-qualified deferred compensation plans, family financial and/or estate planning, and combinations of business and personal insurance under one plan. Over the years, these market applications have represented a significant portion of my company's total sales.

What is Contingent Life?

Contingent Life is a permanent cash value plan which covers two or more lives on an individual policy basis utilizing what I shall call the "next death" concept. It offers the premium advantages of joint life, without many of the policy form disadvantages. It utilizes an individual policy approach similar to whole life.

Automatic continuation of coverage is provided for the survivors after the "next death" (subject to certain age limitations).

There are many similarities between Contingent Life and whole life. Both have separate ownership of policies, beneficiary designations and assignment provisions. Both offer coverage on survivors, have the usual settlement options, pay the full face amount on death and accumulate cash values. Contingent Life has flexible conversion options and offers reduced premiums (as compared with multiple whole life policies).

The "Next Death" Principle is the Key to Lower Costs

The "next death" principle is the key to Contingent Life's lower initial premiums. With traditional coverages such as whole life and most term policies, the insurer collects premiums to cover lifetime mortality costs for each insured. Initial premiums under Contingent Life can be 25% to 55% lower than for traditional whole life since the insurer needs to charge only for the mortality cost for each life until the "next" death, with subsequent mortality costs for survivors funded through increased premiums after each "next" death. (In this respect Contingent Life represents a different schedule of premium payments. With whole life, the aggregate amount of premium for the group decreases after each death since one less policy is then in existence. Under Contingent Life, the aggregate premium for the survivors will change upward or downward depending on which life died and at what duration. The Contingent Life premium for each individual insured, however, will increase.) The more lives in the plan, the more the initial premium savings. Note that for 10 lives with joint equal age 45 at issue, the average premium per 1,000 per life has dropped from \$23.70 (for whole life) to \$10.46.

Contingent Life Premium Savings
Age 45 at Issue

Number of Lives	Contingent Life Gross Premium Per 1,000	Equivalent Whole Life	% Reduction From Whole Life	Contingent Life Avg. Prem. Per 1,000 Per Life
1 (Whole Life)	-	\$ 23.70	-	-
2	\$ 34.12	47.40	28.0%	\$ 17.06
3	44.05	71.10	38.0	14.68
4	53.33	94.80	43.7	13.33
5	62.46	118.50	47.3	12.49
6	71.02	142.20	50.1	11.84
7	79.51	165.90	52.1	11.36
8	87.97	189.60	53.6	11.00
9	96.45	213.30	54.8	10.72
10	104.57	237.00	55.9	10.46

As a specific example, consider the annual premium payments for \$100,000 of coverage on five lives aged 30, 35, 40, 45 and 50 using (1) whole life, (2) Contingent Life, and (3) 5 year renewable term. Contingent Life offers a considerable immediate premium savings of almost \$5,000 as compared with whole life. In the eleventh policy year, Contingent Life's premium is less than the 5 year renewable term insurance premium - even without considering Contingent Life's cash value accumulation.

Annual Premiums for \$100,000 of coverage on 5 lives aged 30, 35, 40, 45 and 50

<u>Policy Years</u>	<u>Whole Life</u>	<u>Contingent Life</u>	<u>5 R & C Term</u>
1-5	\$ 10,065	\$ 5,337	\$ 2,554
6-10	10,065	5,337	3,817
11-15	10,065	5,337	5,916
16-20	10,065	5,337	9,287
21-25	10,065	5,337	14,698

These premium savings can be used to purchase insurance for less, to increase the coverage or to include additional lives in the coverage. Since commission rates are close to those of whole life, to the extent that Contingent Life is sold on a "premium equivalency basis" the agent receives "whole life commissions."

It is true that "next death" coverage actually covers only the first death within the group (and subsequent survivor groups). But to distinguish it from joint life or first-death coverage, we chose a term to emphasize that Contingent Life covers not simply the first contingency, but is automatically continued to cover the "next," and the "next," etc.

How Contingent Life Differs From Joint Life

"First death" coverage, or joint life, is well known. It usually provides payment of death benefits on the first insured to die.

Joint life and Contingent Life should not be confused, however. Both policies offer lower premiums based on the smaller "next death" risk.

But here the similarities end. Joint life is issued on a shared-policy basis. Contingent Life, on the other hand, uses individual policies for each insured. Each Contingent Life policy contains its own separately stated premiums and cash values, and each, as noted previously, has its own ownership, beneficiary, and assignment provisions. Under Contingent Life, reduced paid up and extended term insurance are based on single life (as opposed to joint life) commutation functions since each policy has its own loan values and joint extended term insurance is therefore not appropriate. Joint life typically covers only two lives whereas Contingent Life's individual policy approach facilitates the inclusion of additional lives. (For ease of administration, when more than 10 lives are covered, more than one Contingent Life plan is issued.) With joint life, the survivor(s) must typically apply for continuation of insurance, whereas new Contingent Life policies are automatically issued to the survivors (subject to certain age limitations.)

Contingent Life eliminates joint life's ownership inequities. Under joint life, there is no allocation of total premium or cash value. Under Contingent Life the total premium and cash value is allocated to the individual Contingent Life policies in proportion to the standard basic Contingent Life gross premium for that number of lives at the individual age of each insured.

Allocation of Premium & Cash Value

Life	Age	Contingent (3) Life		Allocated	
		Gross Premium Per 1,000	Percent of Total (allocation factor)	Individual Policy Prem. Per 1,000	Allocated 20th Year Cash Value
X	39	\$ 32.04	25.197%	\$ 11.10	\$ 129.85
Y	44	41.67	32.770	14.44	168.88
Z	49	<u>53.45</u>	<u>42.033</u>	<u>18.51</u>	<u>216.62</u>
Total		\$ 127.16	100.000%	\$ 44.05	\$ 515.35

Joint equal age

45 \$ 44.05

The flexibility of the "next death" approach can be seen in the provisions for payment of death benefits and the exercise of conversion options.

How Death Benefits Are Paid

Simultaneously with the "next death," the following steps are taken:

1. The cash surrender value of each policy is paid to the owner(s) of each. (After death under joint life, the owner(s) of the coverage on both the deceased and the survivor "lose" their cash value to the beneficiary. Under Contingent Life, the cash value of each policy is paid to its respective owner.)
2. All policies on the survivors terminate.
3. Subject to certain age limitations, new individual Contingent Life policies are automatically issued to the survivors. Premiums for these new policies are based on the survivor's then attained joint equal age. (This automatic issue feature covers simultaneous and consecutive deaths.) Should only one survivor remain, coverage will be issued as whole life.
4. The quarterly premiums for the new policies on the survivors (to the end of the quarter following proceeds payment) are paid from the proceeds.
5. The balance of the proceeds (face amount minus cash values of all policies and requisite quarterly premiums for the new survivor policies) is paid to the beneficiary. (ART riders are available to minimize "loss of beneficiary proceeds.")

Exercise of Conversion Options

Insurance needs are not static. Our Contingent Life product design enables the financial planner to deal with changing business and personal needs. Should an owner for any reason decide to leave a Contingent Life plan, conversion of his or her policy is guaranteed under the following options whereby the insurer will (subject to age limitations):

1. Issue an individual whole life or Contingent Life policy for the full face amount as of the original age subject to payment of such costs as the company may determine. (For example, the new policy may have a higher cash value than the existing one, so it might be required that the increase in cash value be paid to the company.)
2. Issue an individual whole life or Contingent Life policy for the full face amount based on an "intermediate age" (between the original and present ages.) The "intermediate age" is the issue age from which a policy of the type chosen would have accumulated cash values equivalent to the present cash values.
3. Issue an individual whole life or Contingent Life policy for the net amount at risk (face amount minus the cash value) at the then attained age.
4. Issue a new Contingent Life policy for the then net amount at risk, with new individuals participating (subject to evidence of insurability for the new insureds only.)

A few other items of interest that might be mentioned are:

1. It is essential that the issue and proposal systems be computerized. There is a very large number of combinations of individual ages that will produce a particular joint equal age, and since premiums and cash values are allocated to the individual policies in proportion to the premiums (from the appropriate gross premium scale) at those ages, and since reduced paid up and extended term insurance are then based on the allocated cash values, computerization is necessary.
2. Contingent Life involves more administrative expense than an equal number of whole life policies due to the operation of the many conversion options. For example, when one policy lapses or surrenders, the remaining "Companion Policies" need to be reissued.
3. Contingent Life is currently approved in all states except Georgia, Illinois, Kansas, Montana, Pennsylvania, Texas and the District of Columbia. New York has approved Contingent Life for our New York subsidiary company.
4. Joint (multiple) life reserves are held in the aggregate for each Contingent Life plan.
5. Substandard extra premiums are added to the appropriate individual policy and do not affect basic plan premium and cash value allocations.
6. Where different amounts of insurance are required on different lives, more than one Contingent Life plan is issued for the case. We refer to this approach as "layer stacking."

<u>Insured</u>	<u>Insurance Needed</u>	<u>Accomplished By Purchasing</u>
A	150,000	50,000 Contingent Life on ADE
B	100,000	and
C	100,000	100,000 Contingent Life on ABC
D	50,000	
E	50,000	

7. Our current emphasis in sales promotion is on the legal and accounting professions. Significant sales results have been obtained where attorneys and accountants have advised their clients or companies to "get a Contingent Life quote" based on articles in publications aimed at these professionals.
8. In 1977 the average total annualized Contingent premium per case was about \$4,500.

In summary, for a multiple life sales situation, Contingent Life represents perhaps an ideal premium and commission compromise between whole life and term which the marketplace appears to be willing to accept.

MR. DAVID M. MORDORSKI: Item 1F on the agenda is "Innovations in Asset Share Techniques." I would like to take a few minutes to briefly run through an explanation of the profit analysis techniques we are in the process of implementing at Occidental, since I believe they do contain some innovations in the pricing area. By way of preface, let me say that credit for any ideas which strike you as original and worthwhile should go to Claude Thau, the actuary at Occidental who has done the development work on our pricing project.

For some time now, we have done our profit testing using marginal expense factors. I find this statement usually causes a number of eyebrows to raise in actuarial circles, but in fact our ultimate profit objectives are based on after overhead results. We use a projection model to translate individual cell profit objectives, which are calculated before deduction of overhead, to line of business profit objectives which are based on profits after the deduction of overhead.

It currently looks as though we will adopt expected yield on investment as our primary pricing criteria. The string of losses and gains which we use to measure yield on a particular product include provision for an item we call required surplus. Required surplus is defined to be that surplus which we feel is necessary to keep us statutorily solvent in the event of a catastrophe of a certain pre-established magnitude. With the exception of treatment in the income tax calculation, our profit test treats required surplus similar to statutory reserve.

I have always felt that one of the big drawbacks inherent in any of the traditional profit measures, including return on investment, is the difficulty of reflecting different degrees of risk in products which produce similar results under expected assumptions. We are addressing that problem by establishing criteria which vary by type of plan, depending upon the results we get when testing each plan group under several scenarios. For example, we have run typical annual renewable term and whole life plans across most likely, optimistic, and pessimistic scenarios to determine the variability of profits. Profit objectives are then established as a function of mean results and variability. I might also add that inflation is an important

element of our most likely, optimistic, and pessimistic scenarios, so we calculate profits in terms of real dollars; that is, future profits are discounted for inflation since the time of issue according to the inflation assumption inherent in the test. Required profits for a particular type of plan are then based on a desired "real dollar" return on investment under most likely assumptions recognizing that the desired return reflects the sensitivity of results to variations in assumptions.

I should add that return on investment is not the only criterion we examine at the pricing cell level. We examine the present value of profits as a percentage of premium and per thousand. We also use our projection model to look at both GAAP and statutory earnings for the Ordinary Life of business in total based on our estimate of future sales and overhead.

Of necessity, I have been rather brief in this description of what I believe are several valuable modifications to traditional asset share analysis. I hope this will spur discussion from some of you who may be incorporating similar techniques in your pricing work.