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ACTUARIAL CONSIDERATIONS IN THE DESIGN OF TERM PRODUCTS

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1. What are the special design features included in renewable and decreasing term plans presently being offered?

2. What special factors need to be considered in the pricing of term products?

3. What are typical term profit objectives, and how do they relate to the special risks associated with various types of term products?

MR. ROBERT D. SHAPIRO: My comments will touch on the following three aspects of term product design: profit objectives, renewal and conversion features, and inflation recognition.

Profit Objectives

Profit objectives should mirror the corporate plans, particularly with respect to the relationship between future marketing expectations and aggregate company earnings objectives. In addition, the profit objectives should adequately compensate the company for the specific risks it will take. Unless there is consistency between these three items--marketing expectations, aggregate earnings objectives, and risk reward--there are likely to be future performance and/or performance measurement problems.

Assuming that this required consistency will ultimately be maintained, how might the profit objectives for term insurance relate to profit objectives for other types of coverage? Assuming profit analyses are developed on realistic assumptions, the following table provides an example of how the pricing objectives might vary from product to product:

	Illustrative Pricing Objectives For:		
Statutory Profit Criterion	Whole Life	Decreasing Term	Renewable & Convertible Term
1. Average % of Premium	5-8%	7-10%	12-15%
2. Yield on Invested Surplus	10-15%	12-17%	15-20%
3. Breakeven Year	8-12 yrs.	7-10 yrs.	6-8 yrs.

Why do renewable and convertible term coverages require larger expected profit margins than other types of coverage? It is because such contracts involve considerably greater uncertainty and risk. Consider, for example, the following areas of potentially greater risk:

--renewal features,
--conversion features,
--"go-back" features, and
--replacement potential.

Renewal and Conversion Features

Actuaries have long struggled with the problem of pricing renewable and convertible term insurance. This problem has become more acute in recent years as more and more companies have marketed such term coverages, and sales have boomed.

Mortality antiselection can generally be expected to occur at renewal dates (particularly premium increase dates) and also upon conversion. The particular level of extra mortality is difficult to estimate; it will depend on each particular case, reflecting such items as:

--market and distribution system characteristics
--underwriting approach
--sales approach
--rate scale competitiveness and slope
--commission levels
--nature of available product alternatives
--age at issue, and
--the inherent persistency of the business.

We would expect "the worst," for example, where an annual renewable term (ART) plan is being marketed with characteristics such as renewability to age 100 and convertibility to age 70 or 75, 5% flat renewal commissions, and distribution by large city brokers.

The mortality risks involved in this type of an ART plan might in some ways be likened to those of an annuity. As population mortality improves, the profitability of an existing block of ordinary life business will improve, but the profitability of an existing ART block of business may well deteriorate. The reason for this is that current ART gross premiums are likely to decrease with general population mortality improvements. There will then be an increasing probability that healthy lives will switch their coverage (or be switched by their broker) to a lower cost company. The mortality of the remaining block of ART business will simultaneously increase.

A number of us have done and are doing research analyzing the potential extra mortality associated with renewal options. Our studies show, for example, that under select and ultimate mortality theory (i.e., where excess renewal lapses are assumed to be fully select lives), expected mortality under a 5 year R&C term issued at age 35 would increase roughly 10% at each premium increase date if we assume excess lapses of 20% after 5 years and 10% at each premium increase date thereafter. Hopefully our later discussion will yield some actual company experience against which the results of some of this research can be evaluated.

Inflation Recognition

Inflation will have a profound impact on the nature of our life insurance business. Although there is not universal agreement on what inflation is and what its basic causes are, all of us must consider inflation in our design and pricing activities.

Clearly inflation can be expected to increase both unit costs and investment earnings. There is more risk of inflation eroding future expected profits in a term product than in a whole life product, since (a) the relative premium (and relative profit) per $1000 is smaller in term, and

(b) the excess interest hedge is small or nonexistent in most term plans. In other words, the ability to withstand the adverse impact of inflating maintenance costs is less in most term plans than in most higher reserve, permanent products.

Perhaps an even more important consideration is the possibility that persistent inflation will significantly alter the underlying character of the business that we are selling. For example, a scenario including increasing proportions of term coverage and substantial sales of highly competitive - low margin annuities is not an unrealistic possibility. Such a happening would require a complete rethinking of the financial chassis of our companies.

In summary, each company's attitude toward the design and pricing of its term products is intimately related to its unique perception of our future economic environment, particularly the long term inflation picture.

MR. DAVID M. MORDORSKI: There are two general topics in the area of term product design which I would like to address in this session. The first of these is the subject of "go-back" and related guaranteed insurability options. In regard to these, I suspect that term insurance, utilizing some type of built-in guaranteed insurability feature, is going to play an increasingly significant role in the insurance marketplace. I say that because these options provide the flexibility and marketing appeal which many consumers want, while providing the company and its agency force with a built-in source of easily processed new business and earnings.

There are a large number of ways in which term insurance and guaranteed insurability options can be combined to form marketable products. While wanting to avoid detailing these, I would like to offer a couple of general comments on guaranteed insurability packages. The first is in the area of sales compensation. Commissions on the product package should be designed such that whenever an option for increased insurance is exercised, the agent and general agent receive something approximating new business compensation on the increase in premium without providing a second round of new business compensation on the premium which would have been paid had the option never been exercised. I believe industry practice on options typically referred to as "go-back" or "move-over" has generally been to provide first year compensation on the total new premium. When the profits are analyzed on a group of policies containing "move-over" and "go-back" with that type of compensation, it becomes evident that the agent's compensation is substantial while the company's return is quite deferred and smaller than on most products.

The last comment I want to make on guaranteed insurability options is that they should, as much as possible, be tied to traditional sales follow-up dates and combined with a programmed follow-up procedure. This will significantly cut down on the antiselection which might otherwise be experienced.

The other subject I would like to address falls under the heading of replacement activity on annual renewable term policies. Over the past several years, annual renewable term has become increasingly popular to the point where it is now the most popular and competitively priced product in the term marketplace. Any company which seeks to come out with the most competitive ART rates in the industry today should plan on enjoying that distinction for a relatively short period of time. Plans which were competitive two or three years ago are now noticeably out of the market in terms of benefits and/or premiums.

This competitive situation, in combination with sales compensation heavily weighted to first year premium has, I believe, led to a situation where business is systematically moved from one company to another. Any field representative with the capacity to broker term business also has the capacity to establish a program of periodic rewrites for many of his clients. This involves a broker contacting his client every two or three years to update the amount of his coverage. The broker can then fairly easily sell a replacement on the basis of lower per thousand ART premiums and a free physical examination. This produces a new first year commission for the agent and the potential for mortality antiselection on lapse for the original writing company.

Based on persistency data I have seen (e.g., my company has seen second year lapse rates on brokerage term business higher than first) and conversations I have had with brokerage representatives, I believe this practice is being followed to some extent. The exact magnitude of this activity and the effect it will have on those companies writing a significant amount of this business will only be known through time. I do feel, however, that actuaries in those companies should be checking their persistency and mortality carefully, recognizing that replacement activity is probably having a noticeable effect on them.

Unfortunately, I do not see any readily available solution to this problem. I do not believe that companies are about to quit paying front ended compensation or quit writing replacement term business. Ultimately, it will take a leveling out of term rates before this problem will begin to correct itself. That may take a year or two of bad experience on the part of several companies or it may, in fact, be an inadvertent side effect of the new proposed deficiency reserve directive for annual renewable term insurance. Personally, I have a concern that the model directive will, through time, tend to operate almost as a fair trade law.

The current proposal is for deficiency reserves to be required on annual renewable term according to the "1958 CSO Basic Mortality Table." While that table does not cause most of today's competitive term plans to generate unbearable deficiency reserves, it could effectively block future rate decreases. If the model directive ultimately adopted does not have a provision for automatic revision of the mortality standard in accordance with future mortality changes, term rates will not be able to parallel underlying mortality costs. While some people might look forward to an externally imposed halt in the decline of term prices, I feel that would be a benefit to companies only in the short run. Ultimately, we must meet the consumers' needs and let competition dictate premium levels or run the risk of forfeiting our business to some branch of the Government.

MR. BURNETT A. HALSTEAD, JR.: I have been asked to discuss pricing of Term Insurance from the standpoint of a portfolio a company might offer.

My comments on the subject are colored by what we have done at Kemper. To review briefly: Four years ago, the two Kemper Life Companies we manage had a relatively conventional portfolio of life, endowment and term plans and were writing about 200 million of volume per year. This was changed at that time to include a highly competitive term oriented group of products. Sales results have been dramatic. The two companies are now writing over 2 billion per year. This, a ten-fold increase, is to a large degree a result of these term products. The term products include basic-

ally three policy types. One - renewable term (both Annual Renewable Term and 5 Year Renewable Term). Two - straight line decreasing term. Three - Deposit Term.

The most popular policy type we offer has been and is Renewable Term. Although we offer both Annual Renewable Term and 5 Year Renewable Term as companion policies with essentially the same rate structure, the ART consistently outsells the 5 Year Term by about 5 times. Because ART is more saleable and because 5 Year Term requires substantially greater deficiency reserves, 5 Year Renewable Term probably is not a reasonable product to offer.

Originally we offered ART on a modified select and ultimate basis. Although we preferred this approach, we switched for competitive reasons a year or so ago to an aggregate approach. We found select and ultimate difficult to sell in large volumes when competitive aggregate products were readily available elsewhere. Some companies seem to be continuing to promote select and ultimate products with reasonable success, but in some cases they would seem to be vulnerable to unduly high lapse rates.

Policy size ranges rather widely on renewable term. We offer policy sizes from $5,000 up. We band rates into 7 different size levels. Our highest band size is for $1,000,000 and more. Our average size policy is over $100,000. Because our average size policy is high and our retention is relatively low, reinsurance has been a significant factor. In this regard we have not been able to utilize traditional YRT reinsurance treaties and have required special coinsurance treaties to obtain desired results.

Lapse experience has been remarkably good on our renewable term merchandise-50-60% of expected. A potential danger would appear to be a rash of lapses as competitors lower rates. It would seem to be easy for agents to move business from one company to another to earn a new first year commission. Although this occurs, we have so far not noticed it on any kind of mass basis. To help conserve business all renewable term policies have a provision which allows premiums to be frozen on any policy anniversary which in effect changes the product from a level benefit increasing premium policy to a decreasing benefit level premium policy.

Our underwriting is conservative and mortality results so far seem to confirm this. Because of this and because of our higher average size policy, we have recently substantially increased non-medical and other underwriting limits to speed up and simplify our underwriting process.

Our policies are renewable to age 100. Rates at older ages are high and we do not expect a significant number of policyholders to renew into older ages except on a decreasing benefit basis.

We currently allow conversion to age 80. However, we do not offer attractive ordinary life or other permanent merchandise for conversion purposes. Our lack of encouragement and the large average size of the Term policies so far have discouraged conversions on any scale. As a result it has at this point been an insignificant factor for us.

We have used an asset share approach to pricing these policies. Based on our analysis the policy is reasonably profitable on what we consider a

variety of realistic assumptions. Changing (or perhaps capricious) deficiency reserve requirements are becoming an important pricing factor and have made it difficult to continue to offer competitive renewable term products. Already these requirements really make competitive 5 Year, 10 Year and longer yerm period products unjustified if a decent return on equity is required. Even in the case of ART recent proposals in the deficiency reserve area may make competitively priced ART financially unattractive for the company.

The second major type of term policy we offer is straight line decreasing term. This is offered for 10, 15, 20, 25 or 30 years and to age 65. Our basic goal on this policy has been to avoid deficiency reserves and still have a reasonably saleable product. We thus use 1958 CSO net rates as gross rates for all but the smaller size policies - those under $100,000.

As a result of the deficiency reserve restriction, we are somewhat overpriced on larger size policies and our average size has consequently suffered. Our average size is $75,000 on Decreasing Term compared to over $100,000 on Renewable Term.

One method we use to keep rates down and still avoid deficiencies is to use a straight line monthly decrease in benefits instead of the more usual annual decrease. Another feature which enhances saleability and yet avoids deficiencies has been the inclusion of a go-back option and a move-over option. In addition, we also enhance saleability and avoid deficiencies by paying higher commissions on decreasing term than we pay on renewable term.

These and other tactics are not used because we like them. We would prefer to sell a better product at a lower price, but deficiency reserve laws force what we consider somewhat questionable practices. Ironically, deficiency reserves which presumably protect company solvency seem to force practices which carry greater risk of insolvency than low rates caused by pure price competition.

The third and last major type term policy we offer is deposit term. Technically it is not a term policy but a modified whole life policy. Practically it is a sort of hybrid policy with both term and permanent characteristics.

Although we offer three types of deposit term policies, we primarily sell a product that is a normal ten year level premium term policy except that an additional premium deposit is charged in the first year. This extra premium is returned doubled as a cash value at the end of the tenth year, if the policy stays in force and is surrendered at that time. After the 10th year the policy automatically converts to whole life unless one of several other term type options is elected. The modified whole life approach is used in lieu of a term approach for a number of technical and sales reasons.

This policy type has generated a good deal of controversy within the industry, in some cases with good grounds, in most cases more emotional than rational. It seems to have an almost religious appeal for those who believe in it and sell it. The primary problem with the policy seems to be a lack of understanding of what the policy is and how it compares with more traditional type permanent and term products. Its use in replacement

situations, even though justified in many cases, has created a good deal of ill will from those agents and companies having their policies replaced. Marketing practices, in some cases, have unhappily been less than honest and have taken advantage of some of these misunderstandings and created confusion. Misunderstandings, however, in my opinion, have also led to some poor proposals on Deposit Term by the Society's own special committee on Valuation and Non-forfeiture laws.

The product is a marketable approach to term, although we find it is often sold as an alternate to whole life or other permanent plans. It is popular with New York Stock Exchange firms and generally with agents dually licensed for securities and insurance. Often times it is sold with a companion annuity policy or rider and sometimes with mutual funds or other savings vehicles. Although dollar commissions typically paid on the policy are lower per $1000 than those paid on ordinary life, they are substantially higher than those paid on normal term policies and offer agents an opportunity to earn a living selling term exclusively, a luxury term does not normally allow.

We use a normal asset share approach to pricing the policy. Average size policies tend to be lower than for other term type policies. Our average size runs a little over $50,000. The sales approach used on the policy, which emphasizes the forfeiture of the deposit in the event of lapse, tends to generate good persistency. Our first year lapse rates run around 6 or 7%. The major difference in this policy, though, compared to conventional term is in the area of first year commission compensation. This was touched on earlier. Dollar commissions paid for new sales run 2 to 3 times and maybe higher than commissions paid on our conventional Renewable Term or Decreasing Term Policies. This tends to keep the price higher than that charged for our conventional term products. Surprisingly, though, the price is generally lower than most companies in the industry charge for conventional ten year level premium term. This undoubtedly at least partly relates to deficiency reserve requirements which keep most companies from charging competitive rates on conventional 10 year term policies. Probably higher average size and better persistency on deposit term also help keep the price down.

To summarize, we have essentially reduced our term portfolio to three types of term policies. Our basic approach is to provide highly competitive consumer oriented term insurance. To do this we rely on conservative underwriting and commission practices. We emphasize good persistency and efficient operations. We seem to spend an inordinate amount of time trying to cope with capricious regulations in a number of areas, especially those relating to deficiency reserves and cash values. We have so far been able to sell a lot of business and make a satisfactory return for our companies.

MR. JAMES W. PILGRIM: Mr. Halstead and Mr. Mordorski have given you their observations from a direct point of view. My comments are relative to the types of products and provisions we see as a professional reinsurer.

The preponderance of products we are seeing these days involve any one of four types of term products. The most popular product is annual renewable term insurance, using either aggregate attained age rates or select and ultimate rates. We also see quite a few deposit term products, decreasing term products and some split life products, although their popularity is not as great as it was a couple of years ago.

In the annual renewable term area, most of the plans we see involve aggregate attained age premium rates (not select and ultimate rates) utilizing a combination of policy fees and policy size bands. Most of the plans we are asked to reinsure are renewable and convertible with both of these provisions being available at least until attained age 65 or 70, with many plans having a renewability feature that extends to attained ages much higher than that.

Price levels of annual renewable term business have been steadily decreasing over the past few years. As the annual renewable term product became increasingly more popular, plans that started out with price levels equal to the net valuation one-year term premium have since been decreased dramatically. In addition, companies that limited renewability of an annual renewable term plan to only a short period (e.g., ten or fifteen years) have now extended the renewability feature such that it almost has no terminal age. Since many non-New York companies have been paying fairly high first-year commissions for this business with lower renewal commissions, we have seen the competition in the annual renewable term business be centered around systematic reductions in premiums with corresponding increases in commission rates.

One thing that tends to slow down the downward pressure on premium rates is the necessity to establish deficiency reserves for this business where the gross premiums are less than the net valuation premiums. For those companies operating in the states where such deficiency reserves are required over the entire potential renewable period for the term plan, the presence of deficiency reserves serves to act as a minimum price buffer. Otherwise the company is faced with substantially increasing statutory surplus drains as sales increase -- a situation not unlike that which occurs in the single premium credit business. The net result could be that the company could virtually go broke while making their bonanza.

We have not seen the same kind of popularity attached to decreasing term plans as we have annual renewable term plans. Where we are asked to reinsure decreasing term plans, most of these have monthly decreases (as opposed to annual decreases) and they may be straight-line decreasing term or follow a mortgage schedule, depending upon the market in which the ceding company operates. Only recently has the downward pressure on prices been such that deficiency reserves for these plans may be required.

Many of these decreasing term plans do include guaranteed insurability options so that the initial amount of insurance may be restored at some future date subject to no evidence of insurability. In addition, most of the plans we have seen have a provision included which permits the insured to stop the decrease and convert the plan to level plan term also without submitting any current evidence of insurability.

In the area of deposit term products, we have seen a trend away from level deposit term products to deposit annual renewable term products. Most of these plans have substantial first-year commissions with the lapse protection being provided by the amount of the deposit relative to the annual renewable term premium. We have observed that when companies selling deposit term products start to accept modal deposits the leveraging of the deposit itself relative to the premium becomes less and they experience much higher lapse rates than originally anticipated. The same is true for deposit term plans sold in substandard situations where the same rate of

first-year commission is applied to the substandard extra portion of the premium without any corresponding increase in the amount of the deposit. We have found both for situations where modal deposits are accepted and where a substantial portion of deposit term business is sold in special class situations, the lapse rates for these policies are quite a bit higher than originally anticipated in the initial pricing work.

While we still see requests for reinsurance of split life term products (with the ceding company fully retaining the annual premium retirement annuity), the frequency of these requests has dropped dramatically over the past couple of years. Here again, unless the split life term product is sold on a participating basis with gross premium rates equal to the net valuation premiums, any really competitively priced split life term product would require substantial deficiency reserves and have a tremendous impact on the statutory surplus of the writing company.

For any of the term products we are asked to coinsure, the key factors we use in establishing pricing assumptions are usually based on either our specific experience with business reinsured from that particular company or, if we do not have any prior experience, our overall experience for the type of plan the ceding company is requesting a coinsurance proposal. We have found, based on our studies, that mortality experience and lapse experience varies widely by company and thus it is more important to know the company writing the business as opposed to the type of plan being written. We do find, however, that lapse rates and mortality rates are higher for term insurance than they are for permanent insurance, but the variation in lapse rates and mortality rates is much greater by company than it is by plan.

Perhaps one of the reasons why experience varies more widely by company than by plan is the fact that different companies have different distribution and administrative systems and these differences impact directly on the experience of the business they sell. Where we reinsure business from companies who have good control of their agency force, we find that we experience much better persistency and mortality than where such control is not present.

With regard to the subject of profit objectives, it has been my experience that no two companies have the same form or level of profit objectives. When we analyze a plan from a company for the purposes of making a reinsurance proposal, we generally look at the present value of statutory book profits over a period of time, discounted at various rates of interest, internal rates of return, and traditional average annual margins. We also are interested in the payback period for any proposal, both on a cash basis and a surplus basis.

With regard to the future of the term insurance market, I think we will see increasing amounts of term insurance sold by companies who have not traditionally been in the term insurance market. I think we will also see a decrease in the rate of reduction of term insurance premium rates as inflation impacts on increasing expense levels.

MR. MELVIN L. GOLD: Are many companies using marginal theory to allocate expenses in pricing term products?

MR. MORDORSKI: We do look at profits on a marginal basis when pricing new products. However, we tie into a corporate model that makes sure we are covering our overhead expenses in aggregate. So we are pricing on a

marginal basis but balancing back to our projected sales to make certain that we cover all our overhead. We have projections of both sales and overhead.

MR. JOHN S. MOYSE: Is there a demand in the field for products renewable to age 100? How can you predict the deterioration in mortality and persistency experience that may occur at such advanced ages?

MR. HALSTEAD: We sell a product to age 100 primarily because of field demand. We charge rates above age 70 or 75 which are higher than ordinary life rates. We do not attempt to be very competitive at the older ages, but we do offer the age 100 renewability for marketing purposes.

MR. MORDORSKI: Yes, there definitely is field demand for products which have the extended renewal feature. I do not know what mortality is going to be 25 years after issue, but it is a risk we are willing to take and one for which we are being compensated.

MR. PAUL H. LE FEVRE, JR.: On renewable term policies most reinsurer's regular non-refund YRT rates are just too high to use so that you have to go to a coinsurance arrangement. The coinsurance arrangement on YRT is nothing more than specially designed YRT reinsurance. When reinsurers get into this very competitive field they charge, in essence, YRT rates that are substantially lower than what they are charging on ordinary life business. What is there about this business that makes even the reinsurers charge less for it?

MR. PILGRIM: When you coinsure a term plan it is nothing more than a reshaped YRT, except if you are talking about deficiency reserves. Then, in effect, the reinsurer is loaning some surplus and that is a different ballgame.

With regard to your question as to how a reinsurer can make a coinsurance proposal on a term plan when their regular non-refund YRT rates appear to be higher, I think one very important consideration is the mortality and persistency experience of the ceding company. When we publish a YRT rate scale it has to be good for all companies. Even if you looked at the 19 contributors to the annual inter-company mortality study, I think you will find a 30 or 40 point variation in mortality experience. But if you give us the opportunity to coinsure, we can reflect the mortality characteristics that we have seen in the particular ceding company. If we do not have prior experience with that company, then we use our overall experience. It could turn out that we come up with a proposal that, from the ceding company's viewpoint, appears to be lower cost than our normal YRT. But in terms of a unit profit, we design our proposals for a certain profit in return for the risk that is being assumed. We do not vary that profit absolutely, just relatively, to the risks we assume.

MR. WILLIAM F. SUTTON, III: I would like to get a little more information on mortality assumptions.

MR. HALSTEAD: We test different mortality assumptions to get some idea of the sensitivity of profits to changes in mortality levels. We tested full 1965-70 select and ultimate mortality. We also tested 85% for five years, 90% for five years, 95% for five more years, and 100% thereafter. We are

profitable on both bases. Our actual results are a lot less than either of these. Our latest mortality study shows an aggregate actual to expected mortality ratio of about 46%. We get medical underwriting on almost all of our business and are very conservative in our underwriting approach.

MR. SHAPRIO: The key to the ultimate mortality level is the source of the business. Where a company can control what it is doing and has the loyalty of its agents, there would seem to be a lesser problem. However, in a small or medium size company, where there is not much control and not much agent loyalty, we have sometimes used a mortality assumption that increases 1%-3% per year on ART to reflect anticipated antiselection.

MR. LEE H. KEMPER: I would like to know if either Occidental or Kemper has a program for attempting to convert ART to permanent insurance.

MR. MORDORSKI: We have always very actively solicited conversions from our annual renewable term business. We have a sophisticated system to contact the policyholder and follow up with the agent.

MR. HALSTEAD: In our case we do not encourage conversions at all. We do not like the idea of paying two commissions, one commission on the term and another on the permanent. We do not like the profit margins on conversions; we just do not encourage them.