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EFFECTIVE USE OF CAPITAL

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1. What is "capital?"
2. How much capital and surplus should a life insurance company maintain?
3. What alternatives exist for effectively deploying capital?
4. What return should a life company demand on invested capital?
5. How much should a company "charge" for use of its capital?

MR. ROBERT D. SHAPIRO: "Effective Use of Capital" is a critical subject for the life insurance industry of the 1980's. Our current operating environment contains many factors that require each life company to re-evaluate how much capital it must have, what return on capital it needs, and what risks it will accept in seeking such returns. Each company must ask how its current strategic objectives and performance standards fit an environment that includes:

- High and unpredictable inflation levels;
- Pressures on existing blocks of business and on traditional marketing approaches;
- Intensified competition, from both within and outside the industry;
- High grade bonds available with 10% - 15% returns, and the cost of capital pushing 20%, and
- Increasing life company mergers and acquisitions.

Although there are many harbingers of doom circulating among us, times such as these always include substantial opportunities for those with vision. There may not be much room in the future for traditional companies selling traditional products through traditional distribution systems at traditional price/profit levels. But there will always be room for companies with marketing foresight and management effectiveness. Effective capital management is a key piece of the overall character of a company; unless a company can provide its shareholders (or policyholders

*Mr. Sahn, not a member of the Society, is the Chairman of the Interstate Life Insurance Company.

in a mutual organization) with a return on capital consistent both with (1) returns available elsewhere and (2) risks inherent in its operations, it will not survive.

In evolving an approach to effectively manage capital, a company must determine (1) how much capital it needs relative to its particular operational character and its management's objectives with respect to security, opportunity, development flexibility, and public image, (2) how much return it needs on capital invested in various possible operations, and (3) how much risk it is willing to take in order to maximize its return. Theoretically, the greater the risk inherent in a particular investment, the greater the potential reward. Ultimately, each company must in some way balance its capital needs and return objectives by establishing its risk acceptance limitations.

Keep in mind that there is no one "right" set of answers. The proper answer set is determined uniquely by each company's own goals, perceptions, and operations. The important thing is that each company attempt to strive for and define its own consistent answer set.

What are the factors that each company must consider in establishing how much capital it should have?

1. Current and future lines of business: Each type of business involves a different degree of assumption uncertainty and potential future experience fluctuation. For example, excess major medical coverage involves high risk and requires more support capital than simple hospital indemnity coverage. Areas targeted for future development and growth must be more carefully evaluated because of the lack of an experience base.
2. Management perceptions: Each management group has its own perceptions regarding its future operating environment . . . including potential for high inflation levels, depression or catastrophe, increased competitive pressures, greater government intervention, and so on. These perceptions affect capital requirements.
3. Management policies: The approaches to pricing, line management growth, reserving and reinsurance all affect the amount of capital that a life company should have.
4. Statutory requirements: State laws contain minimum and maximum limits on capital that must be considered.

One of the most difficult problems to wrestle with today is how to establish appropriate capital goals in light of the current unstable inflationary economy. One interest rate theory states that an interest rate is the sum of three components:

1. A basic non-inflationary risk-free rate (often set at 3%)
2. A rate of expected inflation;
3. A rate reflecting the degree of risk inherent in the underlying investment.

If, for example, we have a risk-free investment in a 10% inflationary economy, we would develop a theoretical interest rate of 13% (i.e., 3% + 10% + 0% = 13%).

Now, let's look at this interest rate theory in terms of establishing return on capital goals. If an investment returns 13% in a 10% inflation environment, shouldn't it be expected to return 19% if the expected inflation rate is increased from 10% to 16%? Further, the underlying risk in the 19% investment should be no more than that underlying the old 13% investment (at least under this interest rate theory). If a higher risk investment is substituted for the old 13% investment to obtain the required 19% yield, then the company does not have a comparable capital effectiveness . . . It may expect a comparable inflation-adjusted return (i.e., 19% in a 16% inflation environment vs. 13% in a 10% inflation environment), but the risk levels and potential return volatility are greater in the new investment.

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Let's move on to our two panelists. Mike Mateja has, for the past three years, been immersed in a project designed to establish target capital levels for his organization. He will discuss the results of his research and analysis. Following Mike, Bill Sahm will give an example of how capital was effectively deployed in a specific life insurance organization that he developed and orchestrated.

MR. MICHAEL E. MATEJA: Aetna Life & Casualty is a large stock, multiple line insurer. My remarks, therefore, reflect a stock company perspective on the questions of the effective use of capital which are the subject of this session.

Many of the ideas I will present may be equally applicable to a mutual company, but it is important to understand that they were developed in a stock company setting.

Several years ago management of our company made a commitment to introduce an improved management planning and reporting process into the practical operation of the company. This commitment was expected to provide a discipline to manage the conflicting demands on our limited capital and, over time, improve the return that we realized on our capital.

The foundation of the management reporting and control process that we adopted was a return on investment profitability concept which was consistent with the process we knew was used by investment analysts and rating agencies such as A.M. Best to measure our performance as a company and compare it to the performance of our competitors. This profitability concept is simply defined by the following relationship.

$$\text{Return on Shareholder Equity} = \frac{\text{GAAP Earnings*} + \text{Interest on Statutory Surplus}}{\text{Shareholder Equity}}$$

$$\text{Shareholder Equity} = \text{GAAP Equity Adjustment} + \text{Statutory Surplus}$$

*Excludes interest on allocated surplus.

For the purposes of this presentation, I will ask that you simply accept the GAAP earnings and GAAP adjustment that appear in this formula so that we may focus our attention on the statutory surplus component of the formula.

If this formula truly represented the basis for an external assessment of the total company's performance, it seemed reasonable to attempt to internally apply the same formula to measure the contribution of each segment of the company to the total company result.

As plans were made to implement the new planning and reporting process, two key questions emerged.

1. What level of statutory surplus do we really need in the Life Company, and
2. How could we equitably allocate the surplus we decided to hold among the lines?

It is easy to understand the interest in the first question since it is plainly evident from the formula that profitability increases as statutory surplus decreases. Managers of our various lines were interested in the answer to the second question since results would influence management's perception of profitability of the lines and could thus affect future allocations of scarce capital resources.

The Aetna answer to these questions has been evolving over a period of eight or nine years. During the last three years, I have directed our company's efforts in this regard. We at Aetna have learned a great deal about the surplus requirements of a life insurance enterprise, and this knowledge has in turn made us aware of the fact that there is even more to learn. What follows, therefore, should be understood as representative of where we now stand. We believe our conceptual understanding of the surplus requirements of a life insurance enterprise will prove enduring, but we recognize that practical implementation will follow an evolutionary process.

The job of answering the two questions posed above eventually fell to the Corporate Actuarial staff within our company. If any of you have ever faced a similar job, you no doubt were as surprised as we were to find so little literature on the subject of surplus levels for a life insurance enterprise. Thus, it was necessary to develop from scratch the theory and principles that we could use to answer the question of what level of surplus was necessary to manage our life company.

In accordance with our current conceptual framework, we view the surplus of a life insurance enterprise as consisting of two components, an actuarial standards component and a management flexibility component.

The two-component view of surplus evolved slowly and reflected the somewhat unexpected finding that the actuarial surplus, developed based on mathematical theories of risk, produced a surplus level which was much less than anyone was prepared to recommend as a target surplus level in the practical management of our life company.

The actuarial standards component represents an amount of surplus designed to protect an insurance enterprise against risks arising out of insurance operations and investments made in support of those operations. Such an amount was calculated by using a combination of statistical and deterministic "models," which I'll describe later.

The focus of the actuarial standards component is statutory solvency. As a matter of company policy, we want to have a capital base sufficient to mature our obligations even under the most extreme adversity and at the same time maintain statutory solvency. Such ability is consistent in our view with a quality insurance product which we identified as one of the primary operating goals of management of an insurance enterprise.

If actual surplus is just at the actuarial standards level, management should be very concerned about the ability to fulfill its obligations and the operation of the enterprise accordingly should be very conservatively oriented. Appropriate management response to such a situation would be suspension of dividends to shareholders, restrained marketing plans, curtailment of product development activity, and similar efforts to reduce or control operating expense. No company management would voluntarily choose to operate under such conditions, and actuarial standards have thus been thought of as a theoretical minimum surplus level.

In time, we recognized that practical operation of an insurance enterprise necessitated several additional operating goals, in addition to the goal of providing a quality insurance product, which is the focus of the actuarial standards component of surplus. Such goals include the following.

1. To withstand "normal" business risks without retrenchment,
2. To pursue attractive business opportunities, and
3. To provide shareholders with a stable, competitive return on their investment.

In a practical business setting, these goals could only be achieved if additional surplus, beyond the amounts required to mature obligations, were held. This additional surplus, in our conceptual framework, is represented by the management flexibility component of surplus.

The combination of the actuarial standards and management flexibility components thus defines a surplus level which is "operations" oriented and represents the amount required for an insurance enterprise to thrive in a "real world" without jeopardizing the ability to mature obligations.

We eventually reduced the two components of surplus to the following relatively simple, practical ideas.

The Actuarial Standards Component is synonymous with statutory solvency or survival, and a method of operation consistent with survival.

The Management Flexibility Component is synonymous with practical management of business risks and opportunities, and a method of operation consistent with a thriving company.

Some explanations of business risks and opportunities would be appropriate so you can understand the difference between the kinds of risks reflected in the two components of surplus. Business risks may be defined as unfavorable changes that take place in the legal, social, and competitive environment within which an insurance enterprise operates. Loss of market to competition, additional taxation, obsolescence of products, and regulation are the types of real world problems or risks that threaten an insurance enterprise. Conceptually, business risks also encompass the effect of error or mistake within the practical operation of the insurance enterprise.

Business opportunities in a practical setting are almost limitless and represent potential new sources of earnings to the insurance enterprise.

With a little reflection you will see that management of an insurance enterprise will be motivated to hold as much surplus as possible, since the more surplus held, the more flexibility there will be to manage business risks and opportunities. Given this situation, how does management finally decide how much surplus to hold - how much flexibility is

enough? The answer is provided by management's desire to achieve the goal of providing a competitive return to shareholders on their investment. Achievement of this goal represents a real constraint on the level of surplus that can be held and provides a basis to introduce some objectivity into the determination of the management flexibility component of surplus and thus the total surplus held.

Surplus in excess of levels defined by actuarial standard requirements may be considered "non-productive" in that it does not directly support business activity which contributes earnings to the enterprise. Given that the earnings power of an insurance enterprise at any time is fixed, incremental additions to nonproductive surplus which provide increased management flexibility will tend to dilute profitability. This is evident from the graph in Exhibit I which shows a profitability-flexibility curve which clearly illustrates how profitability falls off as flexibility is increased.

The analysis implicit in the profitability-flexibility curve assumes that the increased surplus requirements which provide increased flexibility and reduced profitability can be funded. But where would the required capital come from? In most instances, the increased capital would be generated internally from retained earnings. Since the earnings power of an insurance enterprise at any time is fixed, funding the increased surplus requirements from earnings means that the rate of growth must be reduced as the margin for management flexibility is increased. The graph in Exhibit II additionally shows a growth-flexibility curve that illustrates how the self-supporting growth rate (expressed as a percentage of liabilities) drops off as the margin of flexibility in surplus increases.

The answer to the question of what surplus we should hold thus reduced itself to resolving the profitability-flexibility and growth-flexibility tradeoffs. Our work permitted us to suggest an appropriate range for the surplus level, but there was no unique answer apparent. In the final analysis, therefore, the amount of surplus held by an insurance enterprise is a matter of management judgment. In making this judgment, management can be expected to take into account the profitability and financial strength of competitors and the returns available to investors in different industries. We, in fact, invested a fair amount of effort in comparing ourselves to our major competitors before the target surplus level was established.

Now we can turn our attention to the problem of allocating surplus within an insurance enterprise. As originally conceived, the actuarial standards which were determined at a line of business level were expected to accomplish this purpose, but as noted previously, the surplus defined by actuarial standards seemed too low. We thus needed some discipline to allocate among the lines the difference between surplus that we

wanted to hold and surplus defined by actuarial standards. After considering many options, we finally decided to allocate this difference, the management flexibility component, in proportion to the actuarial standards component. This approach produced reasonable results and it had the enormous advantage of simplicity in administration.

The determination of line actuarial standards required a substantial commitment of resources to produce the kinds of data required for a disciplined analysis of insurance and investment risks. Time will not permit me to share with you the details of this development, but I can tell you briefly how we structured our analysis. At a conceptual level, actuarial surplus is defined by the following formula.

$$\begin{aligned} \text{Actuarial Surplus} &= \text{Statistical Component} \\ &+ \text{Catastrophe Component} \\ &- \text{Reinsurance Credit Component} \\ &- \text{Experience Rating Credit Component} \end{aligned}$$

The statistical component protects against predictably random fluctuations from expected experience.

The catastrophe component protects against sudden and unpredictable discontinuities in experience.

The reinsurance credit component reflects protection provided by other insurers with respect to statistical and catastrophic risks.

The experience rating credit component, which is applicable to par business and the group lines, reflects the extent to which policyholders would share in losses with respect to statistical or catastrophic risks.

Actuarial surplus may be determined at a management line of business or total company level. When determined at the total company level, the catastrophe component and the reinsurance credit and experience rating credit components are normally the same as when a determination is made at the management line level. The statistical and catastrophic components, however, are likely to be lower reflecting a more favorable relationship of total expected earnings to the total loss potential associated with predictably random fluctuations and catastrophic deviations from expected experience. In effect, the determination at the total company level recognizes the risk-spreading and resulting greater financial strength of a multiple line insurance operation.

Most of our work to date has focused on the statistical component of the actuarial standards. We are currently at work refining the catastrophe and experience rating credit components, and we expect to present appropriate recommendations to our management later this year.

Within the statistical component we have specifically recognized the following risks which are considered to have random characteristics.

1. Asset Default (loss of principal and interest)
2. Mortality and Morbidity
3. Interest Rate Decline
4. Cash Withdrawal

The first two risks seem fairly clear, and we were able to analyze our own historical data and data from other sources to develop appropriate statistical characteristics of our general account default experience by type of investment and the mortality/morbidity experience of our various lines.

The interest rate decline risk represents an assessment of losses arising from a precipitous decline in interest rates. Under such circumstances interest realized on invested assets could be less than required to meet interest guaranteed on liabilities. The magnitude of the potential losses from this source indicated that this risk should be recognized to achieve our goal of assuring statutory solvency.

The cash withdrawal risk represents an assessment of losses arising from heavy withdrawals in an increasing interest rate environment. No doubt the nature of this risk is clear to many of you after the experience of 1980. We were patting ourselves on the back for having recognized this risk, but needless to say we grossly underestimated its magnitude. Nobody was clever enough to recognize that the Federal Reserve could overnight rewrite the book on how interest rates move. Part of our work this year will be aimed at refining the provision for this risk to reflect a current assessment of the volatility of interest rates.

This one lesson with the cash withdrawal risk has served to convince us that we need surplus for undefined or unrecognized risks within our capital structure. Simple probability theory tells us sooner or later the worst possible set of circumstances is bound to occur. Based on a time-tested law attributed to that famous Irishman, Murphy, you can be assured that when this finally occurs, those circumstances will be worse than expected.

It is worthy to note that the interest rate decline risk and cash withdrawal risk are mutually exclusive - the former anticipates declining interest rates while the latter anticipates increasing interest rates. In combining risks, we took the larger of the amounts required to manage these two risks into account.

We have defined a relatively sophisticated statistical model to emulate the interaction of these four risks. Our goal has been to define a level of surplus which, when combined with our expected future earnings, would enable us to survive a 1 in 10,000 variation from expected experience. On a normal curve assumption, we are therefore theoretically

prepared for a deviation from expected experience equal to 3.72 standard deviations.

The catastrophe component of surplus is considered independent of risks reflected in the statistical component and is thus additive. Our basic approach has been to quantify the effects of the worst kind of catastrophe that we can imagine within each line based on simple deterministic models. For instance, in the individual and group life lines, we have provided for a 50% increase in mortality which is the kind of increase we experienced in the 1918 flu epidemic. For the earthquake risk, we have added a .2% of assets for all lines based on a study several years ago of our potential loss from a major earthquake. The tough part is to figure out how much of the resulting total for all lines considered separately we should hold. We have used some very simple expedients to get us through this problem.

The reinsurance credit component is perhaps the simplest to quantify. We simply applied the terms of the various reinsurance contracts in force to the worst case anticipated in the statistical and catastrophic models to see what credit was appropriate.

The experience rating credit is currently the subject of considerable study. We don't have much in the way of experience to guide us so the debate is centered on the rather practical problem of deciding what part of a major statistical or catastrophic loss could be passed on to policyholders in the experience rating process. This, as you may expect, will not be an easy question to answer.

In order to practically apply actuarial surplus requirements within the management reporting process, we have expressed the requirements as a function of a readily available financial parameter for the line, such as premiums or liabilities, or a combination of both.

As you might expect, our analysis has revealed substantial variations in the risk characteristics of the lines of business which in turn has been reflected in materially different assessments of profitability as measured by the Return on Shareholder Equity formula. Today such assessments are influencing practical pricing decisions and our planning processes. Over time, such assessments will likely be a major determinant of how we use our available capital in formulating growth plans.

This represents a brief overview of several years work. I hope that you can appreciate that effective use of capital has been and is a matter of major concern in our company, a concern based on the conviction that effective use of our capital will permit us to better serve the interests of policyholders, shareholders and the general public.

EXHIBIT I

RELATIONSHIP OF PROFITABILITY AND GROWTH TO SURPLUS

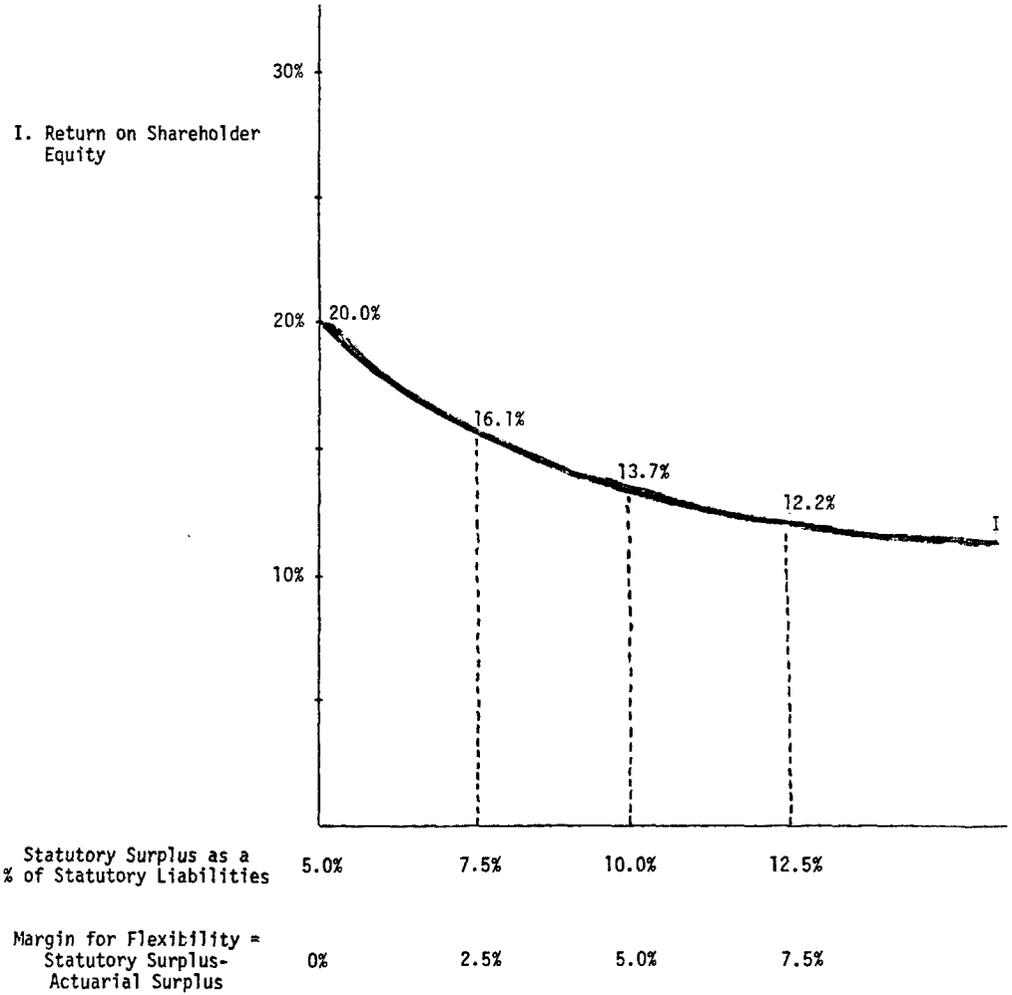
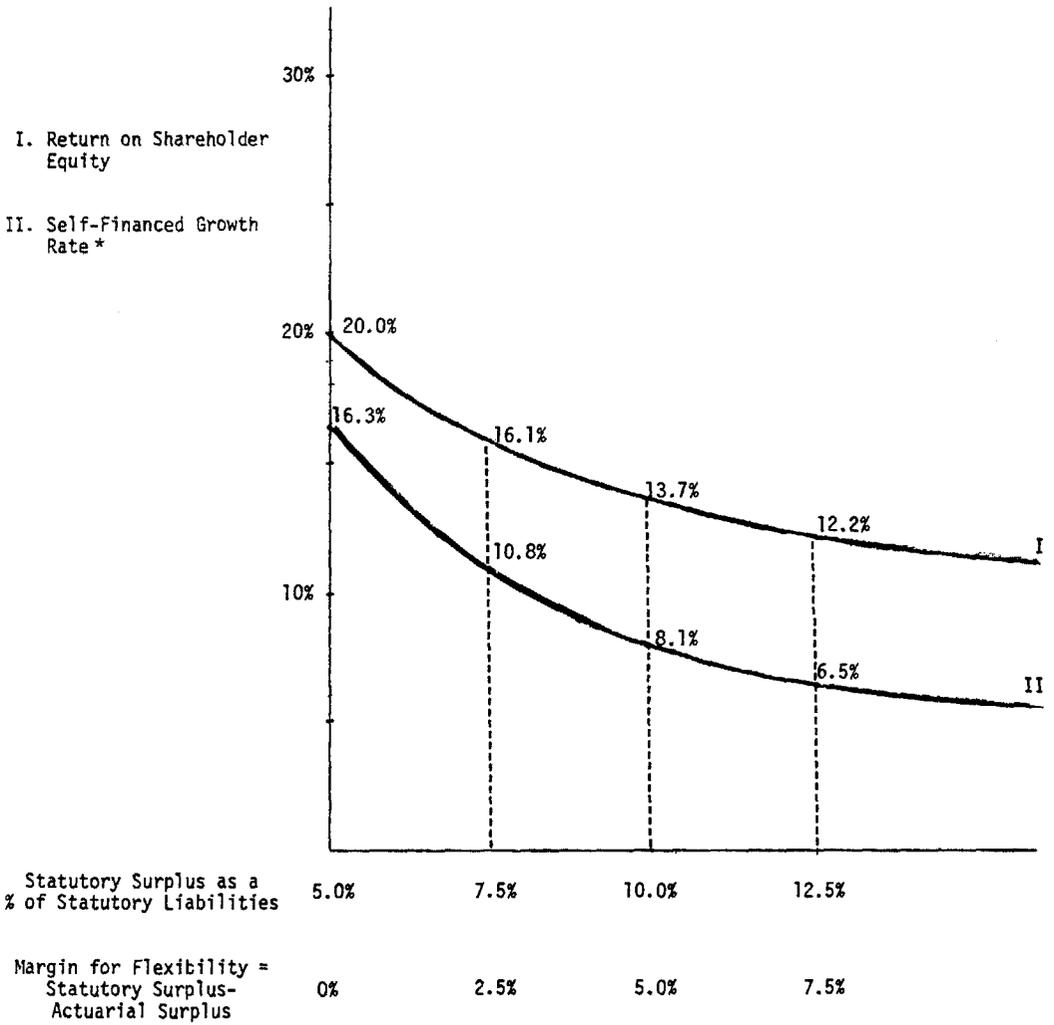


EXHIBIT II

RELATIONSHIP OF PROFITABILITY AND GROWTH TO SURPLUS



MR. WILLIAM H. SAHM: In the early 1960s I was asked to speak before a group of life insurance executives and I started off with what I thought was a classy and catchy statement, "In 1849 gold was discovered in the west and 100 years later in 1949, gold was again discovered in the east on Wall Street in the guise of the common stock of young life insurance companies." This new phenomenon which was to invade the investment world probably came about when some lawyer who was bored got into his car, drove to the state capitol and walked up the creaking stairs which lead to the old dusty library. He went up a wooden ladder, blew the dust and cobwebs away, extracted from the shelves the insurance code for that state and the statutes, and started to read about the formation of life insurance companies. He promptly discovered that they were not the church-like structures that people had thought them to be. They were not holier than thou -- they were nothing more than instruments of profit not unlike banks, savings and loans and other corporate entities. They were very easy to start, they required very little money and they were very profitable.

Profitable they were -- for the investment bankers, for the promoters, for the reinsurance companies, for the lawyers, and yes for the consulting actuaries. Unfortunately there were very few profits for the company, in fact none. Lots of money poured into the investment of young life insurance companies but very little money poured out from them. There were no earnings but no one really cared about earnings -- not the investor, not the investment banker, not Wall Street in general. The Board of Directors was a Board developed on the basis of the blue ribbon type of mentality -- big names, firm in the community but not knowing anything about the life insurance industry. The only people who knew anything about what was going on were the consulting actuaries themselves and they wanted to keep their clients so they usually told management what management wanted to hear.

Management was not judged on the basis of earnings but on what the stock was doing in the Wall Street Journal. That was the daily ritual that management performed -- reading what the stock had done in the marketplace. There were a lot of new companies created but there was no manpower to staff these companies and they were soon to become a joke to the knowledgeable people in the life insurance industry. Our industry has always rewarded mediocrity beyond belief. Well this time it really got out of hand. The only way that these young companies could raise manpower was to proselyte it from the large eastern mutuals. There was no new manpower being created at all. The existing manpower was shuffled and reshuffled. Every known device was used to build organizations: stock options, financing of agents and Arizona corporations. Nothing was sacred and the industry continued to grow in only one direction and that was on the basis of the stock market analysis. In 1950 there were 600 companies. In 1980 there were 1900 life insurance companies. Ninety percent of the business written today is written by 10% of these 1900 companies. Now obviously that means that 1700 companies are not doing very much. In fact the presence of these 1700 companies is

almost an embarrassment to the industry and to themselves. They are not writing the business -- there is no market for their stock -- they are all under-capitalized and they are a constant worry and concern for the insurance departments in the states in which they have a license. Their past is bleak -- their future even bleaker.

Now we are speaking today in terms of creating capital and the effective use of capital. After speaking about the young life insurance companies such as I have, can I rhetorically ask the question, "Is it possible in today's marketplace for a new life insurance company to be started with minimum capitalization and for it to succeed?" If the answer assumes that the traditional manner of creating and establishing a life insurance company is going to be in effect, then the answer is a resounding no. You cannot build today on the basis of personal producing general agents -- you cannot finance agents and compete in product or in service with the established and ever expanding giants. But you can succeed if you adjust your thinking to three elements that have permeated our life insurance executive education.

The oldest and one of the ones most talked about over the years was that life insurance solves the problem of dying too soon or living too long. It is my firm belief that the life insurance industry and especially the young life insurance company must turn its back on trying to solve the problem of living too long. I believe our industry is one of protection of the human life value which implies the problem of dying too soon. There is no way in my thinking that the life industry can compete with Wall Street and the ever expanding financial services of the large corporations entering the life insurance industry directly and indirectly -- there is no way that we can compete with this savings dollar and be successful.

Secondly, the young life insurance corporate structure must make certain that its expenses are variable and not fixed. And we will speak to this point a little later on.

The third point is that your company must be specialized in one particular marketplace. It must concentrate on one particular product for one particular market. You cannot be all things to all people and survive today. You must reverse the traditional concept of how life insurance has been sold. This means that you cannot recruit a good looking young person, smiling, gracious, warm, with a mouth full of teeth and give him a little education and a rate book and then send him out with the admonition, "you get the customer, you get the client and you bring this client to us." In other words you are telling him that he must find his marketplace and bring it to your company. To be successful today you must reverse the traditional approach. The company must find the marketplace and bring that marketplace to the agent. Now I have been the executive head of life insurance companies since 1955 and I have tried the traditional way and I failed. I turned grey and ultimately white from 1955 through 1962 trying to do it the traditional way and the one

which everyone was accepting as the right way. I sat down one day and thought, "My God there must be another way and if there is not then perhaps you'd better get out of the industry because it is just impossible to do it on the basis of the method used in the 1950s and the 1960s." I tried to find a marketplace that was what I called "institutionalized." A marketplace that by its daily activity, by its normal way of doing business automatically created a need for life insurance. And I looked and looked and found that the savings and loan industry was the perfect example. I would ask the people in the audience this question, "Would you invest in a young life insurance company today with these characteristics: an average size policy of \$55,000, the only premium payment mode is annual, first year persistency is 93%, agents require no financing, individual underwriting is performed on the insureds, there is a built in anti-twisting atmosphere, there is only one commission schedule, there are only three or four product plans in the rate book, and the customers are preferred risks of average age 33 and working?" I think you would and I would like to explain to you a little bit about how this can be done.

The attractive atmosphere about savings and loans and banks and financial institutions is that the buyer comes to you. He may not want to come to you but he must come to you. He must come to the office located in the financial institution. You control the interview. He must be there to sign the papers if he wants to have a mortgage loan commitment. Once he is in your office you dominate and control the presentation of life insurance, casualty insurance and accident and health insurance. This is a selling method that requires no individual billing. You will sell approximately 43% of all the people you talk to. The agent has no prospecting to do at all. The agent knows and understands and really believes that he needs the company more than the company needs him.

The average life insurance will stay on the books 9 years and will develop a profit margin of close to 20%. In the mortgage life insurance field the method of creating a problem for the client and then solving it is easy. The client creates his own problem by borrowing \$55,000, \$60,000 or \$70,000. This is a debt that should be covered by life insurance. In the ordinary or traditional life insurance sale the agent must go out and create the problem in the home of the potential buyer by showing the buyer that his human life value to his family is in jeopardy unless it is insured. Under the present method which we are discussing the problem is created only by the application for a mortgage loan and nothing else. The only coverage we are trying to sell is the coverage that will pay the indebtedness off in the case of a premature death. There is one basic concept to remember and this is that the best time is when the need for that insurance is created. The farther you get from that moment the lower will be your percentage of sales. Presenting the life insurance mortgage product in the home after the loan has been made is not the best time. To present the life insurance mortgage product in the home away from the financial institution is not the best place to present the life insurance product. The best and most effective time

to sell insurance is at the moment the husband and wife come in to sign the papers after their loan has been approved. This is usually three or four weeks before the husband and wife must come in and close that loan. They are never more psychologically prepared to buy insurance than during that emotional moment when their loan application has been approved and they are asked to come in and sign the documents.

You must remember that property insurance is a requirement when granting a mortgage loan. The husband and wife realize this and they are prepared to speak and talk to the point of acquiring property insurance for their new home. Six out of ten people to whom the property insurance is discussed will buy from the agent. As we said earlier, 43% will buy life insurance at that moment also.

Another big advantage of starting a life insurance company today is that inflation helps build the company. When we first started our company in 1964 the average size policy was \$16,000 to \$18,000. Today it is approaching \$55,000. The United States government has long had a policy of subsidizing the housing of our nation. They do it by allowing deductions in income for taxes and interest. They have subsidized by making funds available by regulations governing the savings and loans and banks. Even in today's atmosphere of deregulation, and as the savings and loans go through a very difficult period, eventually the savings and loans, through commercial banks perhaps and with commercial banks perhaps, will again establish themselves as the basic lender or funds for the housing industry in the United States. It is still a valid marketplace and will continue to be so. It is going through a vast evolutionary process at the moment but the Reagan Administration and Congress will ultimately address themselves to this problem and it will be solved.

Branch banking has been a boon to the concept of which we are speaking and addressing ourselves today. Before branch banking all the insurance operation was in one building. The necessity for having a sophisticated operation was not as apparent as it is now. All clients could be reached. With branch banking, loan applications were made in the branches and signed in the branches and closed in the branches. In the Chicago area, savings and loans that had one basic home office building now have 47 branches. Their insurance operation is wide spread and very decentralized. A marketing method conducive to this type of branch banking was created and has proven to be enormously effective. A particular advantage to the savings and loan marketplace is that it gives the average agent a chance to be compensated not for just a life insurance sale -- but a property and accident sale as well. We all know that the term marketplace or the selling of term life insurance is here to stay. I do not believe anyone honestly feels that whole life insurance or ordinary life insurance will ever have the place in the American buying habit as it has in the past. Term insurance rates have come down, and it is very difficult for agents to make a living selling term insurance,

even with increased commissions. But if you combined the term life insurance with a casualty sale and an accident and health sale, it is possible and yes, it has been proven to be very rewarding.

Marketing through financial institutions allows the agent to individualize his presentation. The computer, technology and the urban development have made it very difficult to address the insurance buying public on an individual basis. They are just too difficult to get at -- living in highrises and condominiums -- people are being unitized to the extent that they are very, very difficult to reach and this will become even more so in the future. Bringing the insurance client to the financial institution to sign important papers gives the life insurance company and the agent a unique selling opportunity.

Even with a valid and profitable marketplace, the chances of building a young life insurance company today are still small if you do not control expenses. A company operating on the basis of variable expenses can make it -- a company operating on the basis of fixed expenses will find it very difficult. In this difficult period for the savings and loan industry we find great comfort in being able to survive during a period of diminished sales because we have variable expenses. There are large reinsurance companies who will cooperate with a concept such as we are describing, who would be happy to issue contracts for a set fee, perhaps \$10 to \$12 per policy. They will be happy to underwrite the application and they will issue the contract. By cooperating with a large reinsurance company you do not have the expense of an in-house actuary or attorney. You do not have to indulge yourself with vast fixed capital expenditures or large computer operations. The reinsurance company will be pleased to cooperate in return for a portion of each risk that you write in this dynamic marketplace. Most reinsurance companies realize that it is a marketplace they cannot reach by themselves and the only way they can reach it is indirectly through the concept such as we are describing.

Our company has three employees. We are the largest reinsurance client of the reinsurer with whom we have this arrangement. We have a very close relationship with a source for the casualty product which is so necessary to our sales. We realize that the casualty sale is the most important sale because it is the one sale that is necessary. The life insurance sale is made in conjunction with the sale of casualty products. The agent is elated with this arrangement. We have a waiting list of agents to become part of this concept. The most difficult part of the life insurance industry today is prospecting. Under our arrangements the agents do not have to prospect.

To summarize, yes, you can have a successful life insurance company today with a minimum capitalization if you; (1) have a marketplace where the need for insurance is created by the client himself, namely by making an application for a mortgage loan, and (2) keep your unit costs down. You can do this by working in close cooperation with a large

reinsurer. You can pay high commissions and still be profitable if you; (1) have annual premiums, (2) have no direct billing to the client but only to the savings and loan association, and (3) have good persistency, which this approach guarantees. You can make good profits and the writing agent can make a good living by selling life insurance and property insurance.

The savings and loan industry likes this method because it is in an earnings squeeze. It is willing to cooperate with your company in developing a more expansive insurance operation because doing it the right way will insure greater profits both for the savings and loan association and their service corporation and at the same time provide a very necessary service to their clients. The concept of one stop financial service is finally, after much talk about it, coming into existence. We heard about it and talked about it in the 1950s and the 1960s and the 1970s. It is now happening in the 1980s.

MR. BARRY L. SHEMIN: In the process of developing the actuarial standards component of surplus was the work done as a corporate actuarial function or was it done by the operating divisions? What interaction was there between the corporate actuary and the lines in going through that process?

MR. MATEJA: That's a very good question. The first cut at developing the actuarial standards goes back seven or eight years. At that time it fell to the corporate actuarial department to do the job and I guess they did it pretty much on their own without the close involvement of the lines. Our corporate planning department was pushing the actuarial standards concept because they wanted to develop a process to control the use of capital. That approach as you might expect was less than successful because it was not well understood, and therefore not supported by the lines.

My job three years ago was to review the current methodology with the lines to make sure everybody was on board. We formed a task force with representatives from all interested areas and I had the responsibility to drive it. We had a very successful experience on this basis. The lines were prepared to support what they understood. Today I would say there are still some skeptics in our organization but any reservations are on details and not on the basic concepts. Does that respond to your question?

MR. SHEMIN: Yes, it does. But let me ask another one which is a little bit related. How do you deal with the trade off between growth and the level of surplus. If you grow faster you will be using more of your capital and if you used it all you wouldn't have any left. Have you gotten to the point where you must challenge growth plans, and how do you stop people from growing, to the extent that you have to stop somebody?

MR. MATEJA: That issue is debated in the planning process in our company. For instance, if you study our financial statement you will find that we've been growing our pension business at something like 25% compounded for the last four years. The kind of returns that we've been getting from the pension line relative to the surplus required to drive that business makes it a consumer of surplus. We need to take capital from some other source to support the pension business growth. Basically, management reconciles the conflicting demands for surplus during the planning process.

The object of that process is to make the best use of our surplus in terms of return. In actual practice, the process is not an easy one -- many other factors are considered.

Growth limitations have also forced us to be a little more careful in the product development area. In retrospect we were very naive as to how we went about product development. We just assumed that we had the capital to back whatever we wanted to do. Today that isn't the case. We try to understand more about what it means to get into a market like long term guarantees both as to the risks and the surplus requirements.

MR. DAVID A. WEBSTER: Mike, when you allocate your capital to the various product classes, do you then have a required yield on that capital? Is that yield company wide or is it different by product class or by product line?

MR. MATEJA: We do not have a required yield per se. We have about 9 or 10 segments of our life operations for which we try to make a determination of profitability on a somewhat formal basis as part of what we call a management reporting process. As you might expect, returns differ materially from line to line. Actual returns will influence growth decisions made as a part of this process. I am not aware of specific target levels used in this context although 15% to 20% numbers are often used as references. I know for a fact that 15% plus is used as a target level for evaluations of new products. A 15% return is marginal in today's market.

MR. WEBSTER: Just one side issue on that. You do not then have product line managers whose responsibility is related to the return on capital that their product line would produce for the company. The person in charge of your group pension operation, for example, does not have his compensation altered by whatever return on capital is realized in the group pension line.

MR. MATEJA: Compensation could be influenced by returns. The process I have described has been in place in our company on a formal basis for maybe about five years, and it has been taken real seriously for the last three years. I think the most valuable aspect of this process has been trend information. If five years ago you were managing a 15% line and today you are a 20% line measured on a consistent basis, I would say

that is good. I think that the compensation system at Aetna would favorably recognize the manager who is doing that job accordingly. If on the other hand, the return went from 15% to 10% I would say that is bad. In between you have the whole spectrum of performance possibilities and compensation would be influenced accordingly. Other factors would of course be considered.

MR. SHAPIRO: If inflation increases by 10% shouldn't the target yield objectives go up by a comparable amount?

MR. MATEJA: That kind of thinking influences the decision making processes within our company. We have tried to emphasize those lines of business that indicate higher than average returns. I have not calculated it yet for this last year but I think if you check our company's statement you would find that we were generating a return somewhere in the 18 to 20% range. There are lines that are outperforming that average and there is a natural tendency if you want to increase profitability for the group as a whole to grow such lines at a higher rate. That kind of thinking has been influencing the use of capital.

MR. ALLAN D. AFFLECK: You mentioned that you looked at some other industries. I would be interested in your comments on what you found in this regard. For instance, was the return on invested capital greater in the life insurance industry than in the banking and savings and loan business? Secondly, in view of the different risks should the return be more or less than other related industries?

MR. MATEJA: Most of our competitive comparisons have been with other life insurers. We compare ourselves to companies like the Travelers, Connecticut General, John Hancock, Metropolitan, Prudential and Equitable. Comparisons with the mutual companies are difficult, but we have come up with a very clever way to use the actuarial standards component in this regard. Basically, we try to take a look at the inherent risks within these companies based on their different business configurations. We are very comparable to our major competitors on what I call the actuarial standards basis.

We did look at a range of industries just to try to get a handle on different surplus levels. It is very clear that the industry that is most like insurance is banking; banks have a large liability base relative to their surplus. As I recall, the typical surplus to liabilities ratio range for a large banking operation was 2 1/2% to 3%. If you take a look at the large insurance companies you will find surplus to liabilities ratios in the 5 to 6 1/2% range.

MR. AFFLECK: Are the liabilities conservatively valued?

MR. MATEJA: In both cases the liabilities are as reported in published financial statements. The conclusion one can draw from this is that if you were a pure financial institution with no insurance risks you could

be competitively capitalized with 2 1/2 to 3% of liabilities. That in turn tells you that you need another 2% or so to manage the insurance risk for a company our size.

To get back to the second part of your original question. The investing community effectively determines return for different industries. Our returns are competitive.

MR. STEVEN A. EISENBERG: In your formula to calculate return on shareholder equity, you used in the numerator GAAP earnings as opposed to statutory earnings. Why was GAAP chosen since you can only pay dividends on statutory?

MR. MATEJA: GAAP earnings was used simply because this is the basis for the external perception of the company's performance. For a mature company GAAP and statutory earnings would be fairly close so it would not make much difference.

MR. EISENBERG: What is an appropriate measurement of return for a life insurance company.

MR. SHAPIRO: One effective way to evaluate life insurance company performance would be to step back and take a look at what someone might be willing to pay for the company. More specifically, attempt to evaluate the company's current "value", and also the possible changes in value over the next five or ten years. If a company cannot develop a reasonable plan that increases its value at an "acceptable" rate over the next five or ten years, one must question whether or not it has sufficient reason to exist.

MR. JOHN F. HOOK: I wondered if you would mind to speak a little more to the question of growth versus smaller capital and the relationship between the two? Bill Sahm told us about his example where rapid growth produced a statutory profit quickly. He wanted all the growth he could possibly get because growth was a producer of capital. There have been other comments that growth has to be curtailed if you do not have capital. Could you speak to that a little bit?

MR. SAHM: We got into a statutory profit position on a minimum capitalization basically because of our coinsurance agreement. We wanted to keep our capital intact. If it wasn't for the coinsurance agreement that we worked out, which paid 135% the first year, we would not have been in the statutory profit position. You never want to turn your back on any premium bond. You want to adjust your corporate structure so that you can take everything.

You can raise new capital if you want. I do not think that we want to bring in new capital at the current level of production, because I do not think we could get what we think it is worth. We are budgeted for a 21.7% return on our premium dollar and it is persistent. It stays on

the books and we will make money. But we need the protection of the coinsurance. When you have minimal capitalization you are not allowed any mistakes. Big companies can hide their mistakes for years and they can hide them easily. I cannot hide mistake number one. I am standing out there very naked. So you place yourself in the large reinsurance company bosom, take advantage of their expertise, their guardian angel type of philosophy, and they look after you a little bit and it does work out. But you are right that you can put yourself in a terrible position if you out-produce your need for capital. There is no venture capital out there for a young life insurance company in the public marketplace. Maybe in controlled private placements there is but otherwise there is nothing out there now.

MR. MATEJA: I have another perspective on this question of growth. It is a little philosophical but it is a response to one of the questions in the program. What is capital?

I equate the capital of a life insurance enterprise to the plant and equipment of a manufacturer. You cannot produce a widget unless you have a plant and machinery. You cannot write life insurance unless you have capital. Capital or surplus in effect represents your ability to fulfill the promise implicit in your life insurance policies. You need it to the same extent that the manufacturer needs plant and equipment. You should set the surplus level of an insurance enterprise to assure beyond a reasonable shadow of a doubt that you can mature your obligations.

Once such a level has been defined, you set limits on growth. Let us just say for the sake of argument that I want 5% as my surplus to liability ratio. If I am earning \$100 a year on my insurance enterprise and I want to pay out a dividend of \$30, that leaves \$70 available for growth. To the extent that liability growth exceeds \$1,400 you start diluting the financial strength of the insurance enterprise. The surplus to liability ratio would fall below 5% and you may not be able to mature your obligations. If liability growth was less, you could strengthen your capital.

When you start tracking the earnings, surplus requirements and growth of the lines out over time, making reasonable assumptions as to what is possible, it can tell you what surplus position you could be in at some future date. If you don't like the answer, you must start by doing something about your business mix and profitability. The process I have described is designed to start influencing decisions at line management levels in this regard.

MR. HOWARD H. KAYTON: You have all used the numbers of 10, 15 or 20% return on investment and I just want to get one basic thing clear. Is that after tax?

PANEL: Yes, that is true for the purposes of this discussion.

MR. KAYTON: There are some articles in the transactions which are very clear on whether the rate is 10% or 15% but nowhere does it say whether it is before or after tax. I know on one similar panel I asked the members after the panel and I got differing answers and I just wanted to clarify this.

MR. SHAPIRO: The federal income tax question is one that must be considered from a broader perspective. For example, an actuary can evaluate a life company or a new ratebook under a number of different tax allocation assumptions. New products and the company's "future business capacity" often look more attractive if future production is credited with its full existing block tax-savings potential.

There are particular products and particular corporate organizations that can provide tax benefits to a life company. How should the resulting potential tax savings be allocated between different pieces of business? How should any tax uncertainties be reflected in the allocation approach?

MR. MATEJA: We've thought of "selling" blocks of business under conditions of extreme adversity to release some of the surplus invested in that business. I am not certain I understand what you are trying to say about such sales on a more routine basis.

MR. SHAPIRO: An effective, profitable marketing operation is a difficult thing to develop. If a company has a capacity to produce solid profitable business, it would not want to slow down momentum because of surplus constraints. There may be alternatives available to it, including joint venture or coinsurance arrangements.

I have a question for the other panelists. Have you thought about the potential for a depression? What would a 1980's depression look like, and how might it impact the market place and required surplus levels?

MR. MATEJA: Well, a depression largely represents a financial risk. Our assumptions reflect about a 6% erosion in asset values for a bond portfolio under depression conditions. Nobody really knows the likelihood of depressions. The economic cycle has been oscillating up and down throughout this century so another depression cannot be considered impossible. I believe that there is a definite risk. It might be small, maybe 1 in a 1,000 or 1 in 10,000, but those are the kinds of probabilities that I think we are dealing with in many instances.

For example, a few years ago we were looking at the various interest rate risks. We were specifically concerned with what we called the "cash out" risk. To evaluate this risk, we had to make some assumption about the volatility of interest rates. As I recall, we used something like a 1% standard deviation. I think that if we computed that standard

deviation based on last year's experience it would come out 5 or 6%. I would say that such a dramatic change qualifies in my mind as something like a catastrophe within the definition that I have postulated as something "sudden and unpredictable." It certainly caught us unaware. I think it caught many people in our industry unaware. If you would have asked me last year what was the probability of such a movement in interest rates, I would have said 1 in 1,000, or even less. It would have taken one year to prove me wrong. This example illustrates how vulnerable we could be if we relied solely on a mathematical analysis of surplus requirements. I personally vote for the strongest surplus structure that our company can sustain. We will never have too much in my opinion. In the final analysis, I think the profitability-flexibility tradeoff is really the thing that controls the level of surplus.

I would rather have more surplus in our company today, because we are in or entering what I would call unprecedented financial times. Over the last thirty years, things have been very stable. I now see things going on in the marketplace which give me a sense of unease. I feel that this is the kind of environment that surplus is all about. If you have ever had a notion to strengthen your surplus, I would suggest that this would be the time to do it.

MR. SAHM: The savings and loan industry is in a depression. They just do not know what to do. They have to go to the Federal government. Most of them would be technically insolvent if they valued their 6% loans at market value. There are many life insurance and casualty companies, especially young life companies, that are technically insolvent because of the depreciation in their bond portfolios.

It is a situation that is frustrating because I think, in our case, we made sound intellectual judgments. This is a situation beyond our control. Our weakness is that we are dependent on a housing market. Here you have done everything right, you have done all your homework, the market's intact, the field force is ready, but a force out there of which you have no control is hovering over you. In our case it will not hurt our surplus, but we will not be writing as much business.

You will see a trend toward mergers in the savings and loan industry. This is bad, and yet it is good if you are dealing with the right savings and loans. We have picked up, in 1980, an exposure of almost three billion dollars of savings and loan base upon which to draw, just from mergers. The companies that we are doing business with have picked up some smaller companies and now have many more branches. If the situation ever gets under control, and they can start lending money again, we will have a larger base than before.

I can see the banking system being allowed to purchase savings and loans. The savings and loans would just end up as the real estate departments of large commercial banks. A large savings and loan in the Chicago area is about \$3 billion. How big is that compared to \$52 billion in assets of

some commercial banks? The Treasury and the regulatory bodies would probably like to see some savings and loans put under the wing of the more highly capitalized commercial banks.

MR. MATEJA: I have learned a unique lesson from the experience of working in our corporate actuarial department. I believe I really understand some of the risk characteristics of the business that we are in. When you come back to fundamentals the insurance business does deal with risk and risk management. I would suggest to you that a worthy thing to think about as you go about doing your business is to look closely at the risks you are really taking with each product that you sell. What can go wrong? One benefit that I think we have derived from such analysis is that it has helped us to establish a price in markets that has not been circumscribed by the forces of competition.

As I look at some of the things that are going on in our individual markets, single premium deferred annuity, for instance, I feel we may be giving that product away. We are just not getting the satisfactory return relevant to the kinds of risks that we are assuming and if that is the case then we just cannot endure. It's food for thought!

