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THE 20-YEAR STRATEGIC OUTLOOK FOR THE
U.S. LIFE AND HEALTH INSURANCE INDUSTRY

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Panelists: JOHN M. BRAGG
 JOHN T. CLARK
 MANOLETE V. GONZALEZ*
Recorder: ROBERT E. WILLIAMS

- o Review of above-named study by the Center for Futures Research (CFR) at the University of California
- o Possible users of CFR and similar studies in the strategic planning process

MR. BARRY S. HALPERN: Our first speaker is Mr. Manolete Gonzalez, one of the authors of the study "The 20-Year Strategic Outlook for the U.S. Life and Health Insurance Industry" while with the CFR at the University of Southern California. He is now at the College of Business at Oregon State University. Mr. John Clarke, is with the United of Omaha Life Insurance Company, one of the report's sponsoring companies. Mr. John Bragg of Bragg and Associates was a participant in the study during the research phase.

MR. MANOLETE V. GONZALEZ: People often search for what they want to know in the familiar where they are sure they will find some answers. Today I would like to present an alternative approach that might be difficult, but which leads to greater understanding of uncertain environments. In 1982 a Business Week article reported that the life and health insurance industry would experience more change in the next five years than it had in the previous two decades. This article prompted further investigation ultimately leading to the life and health insurance study we are discussing here today.

I will talk about the methods of futures research that were used in the study. Futures research is, in general, an orderly process of studying alternative futures or sequences of events. Alternative futures are not necessarily forecasts. A forecast is usually a claim about the future values of particular variables, based on past values and relationships which have some degree of stability. There is an assumption that the

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PANEL DISCUSSION

future is a function of the past, that the momentum of the past leads to these future values. In this context, a forecast is not the same as an alternative future. Now let me introduce you to a different way of thinking about forecasts that puts them into the proper context for futures research. A forecast is a PROBABLE future, based on observed relationships. We can construct other POSSIBLE futures by other methods, although they may be improbable. A third type of future we can construct is the PREFERABLE--what we would like to have happen. Futures analysis essentially says that we cannot predict the future, but we can describe what the future can be. We cannot predict the future because there is no one future.

While we cannot predict the future as such, we can predict certain elements of it. For example we can predict, with very close certainty, how many people there will be in the year 2000. Other elements are predictable because they are partly controllable. After identifying those we can begin to ascertain who the stakeholders are, those who have a say in the future in particular areas and who might be agents of change. Finally, we can speculate about completely unpredictable events--medical developments, the environment, natural calamities. So the method of futures research is to understand what we can predict, what is partly predictable and what is totally unpredictable.

In the life and health insurance study, it was important to keep two perspectives in mind: an adequate breadth of coverage because of the complexity of the industry; depth within that breadth of coverage. The simplest task was to research into the general areas contributing to changes. Then came the development of a problem structure to classify these areas of change: societal changes, regulatory changes, economic changes, changes within the life and health marketplace and operations. To flush this structure out comprehensively, we culled Best's Review, the CLU Journal and different trade publications to identify what industry experts were predicting. I cannot underestimate the importance of doing this. Who in the watch industry could have foreseen the upheaval caused by electronic technology?

The next step was forecasting. To define a base line, we at the CFR commissioned a study to provide forecasts of the life and health insurance industries separately. From this we identified over 100 events and trends that became the basis for the CFR study. Various measures provide an indication of the possible health of the industry: GNP, personal disposable income, the industry's return on assets, competitive intensity, and so on. About 80 or 90 such measures were chosen for use in the study. With that the preparation for the next stage, the delphi process, was set.

A delphi is an inquiry process. It is a process of questioning people on their opinions about certain sets of developments. Each participant provides his opinion on particular issues, then is given feedback on the opinions of others. Once he is given feedback he has a chance to rethink his position, and then resubmit either a new position or his original one. We did get consensus on a number of points, but the more interesting ones are those for which there is no consensus. Why is there a wider distribution of opinions? Are there really two or more

THE 20-YEAR STRATEGIC OUTLOOK

ways of looking at these? Those events about which there are disagreements might be the more important ones in shaping the future.

In Exhibit 1 is an example of one page of the delphi questionnaire. The first question asks for an estimate of the likelihood of an occurrence. The answers give us a distribution of probabilities. In other words, the likelihoods within five years, within ten years and within twenty years gives us an idea of the cumulative probability distribution of the likelihood of an event occurring. The second question asks: If this occurs, what is the impact of the event? I will show you summaries of responses a little later, each of the 100 or so basis events was subjected to this kind of questioning.

Part of the delphi process is to determine the relationships between events. Thus we undertook a cross impact analysis. We counted 3,000 causal relationships among the 100 events. Another feature of the cross impact relationship is that it allows us to order relationships; that is, causal relationships can be arranged as a chain of events.

The cross impact questions were structured in this manner:

If the events listed below occurred before the target event or the event that was being studied, the occurrence of the target event would become: virtually impossible, much less likely, slightly less likely and so on.

Exhibit 2 contains a summary of the distribution of responses to a cross impact question. As you can see, we had some difficulty in some areas. In response to the second question, 40 percent said slightly less likely and 40 percent said slightly more likely. That's where we had some thinking to do. People were not sure how different events would affect each other. All they were sure of was that they were related.

A simple way of looking at the cross impact relationship is as a series of steps. For example, one of the events in the study was the Smart Card coming into wide use. This Smart Card, for security purposes, would identify the user to an automated teller machine. The panel suggested that the probable occurrence of more business-to-business electronic mail, interstate banking being allowed by federal regulators, full-service financial institutions spreading and retailers selling via video would make the Smart Card more important. Thus we can expand the cross impact relationship by looking at the effects of an event.

When we studied these 100 or so events in the 3,000 cross impact relationships, we learned that there was large uncertainty about the industry's future. Most of the events--societal, technological, legal, regulatory and marketing-operational--were in the range of 34 to 67 percent. In other words, there was a good chance of occurrence. What made matters worse was that a lot of these events with mid-range probabilities had important impacts. For example, looking at Exhibit 3 we see that there were nine technological events in the 66 percent range, and seven of them had an impact greater than five. The respondents were asked to measure the impact on a scale of zero to

The target event
RM512. At least 50% of new L&I insurers' mortgage investments with a duration longer than five years are equity linked.

1. ESTIMATED PROBABILITY OF THE TARGET EVENT IN THE "MOST LIKELY" FUTURE, all things considered, including possible cross-impacting events:
 - YEAR in which its probability first exceeds zero: 1990
 - PROBABILITY between now and the year 1990: .03
 - PROBABILITY between now and the year 1995: .11
 - PROBABILITY between now and the year 2005: .39

2. If the event actually occurred in the "most likely" future, MAXIMUM OVERALL IMPACT ON THE L&I INSURANCE INDUSTRY (0 - 10):
 Positive: 3 Negative: 1

3. If the event actually occurred in the "most likely" future, LENGTH OF TIME BEFORE ITS IMPACTS WOULD FIRST BE FELT IN THE L&I INDUSTRY:
3 years

4. If the event actually occurred in the "most likely" future, ESTIMATE TO NET INDUSTRY WIDE IMPACT ON THE FOLLOWING INDICATORS, relative to their level in 1983:
 Significant decrease
 Moderate decrease
 DIRECTION UNCERTAIN
 Moderate increase
 Significant increase
 (Blank = No impact)

A. MARKET DEMAND FOR RISK-BEARING PRODUCTS:

1. Individual life insurance	100			
2. Group life insurance	100			
3. Individual health insurance	100			
4. Group health insurance	100			
5. All retirement plans	75			25

B. MARKET DEMAND FOR LOW OR NON-RISK-BEARING PRODUCTS:

1. Individual life insurance	75	25		
2. Group life insurance	100			
3. Group health insurance	100			
4. Individual asset management plans	50	50		
5. Corporate asset management plans	50	50		

C. MARKET OPPORTUNITY FOR L&I COMPANIES:

1. To undertake & negotiate price current products/services	80	20		
2. To expand into other financial products/services	80	20		
3. To expand into non-financial products/services	20	80		

4. Continued...
 Significant decrease
 Moderate decrease
 DIRECTION UNCERTAIN
 Moderate increase
 Significant increase
 (Blank = No impact)

D. GENERAL MARKETPLACE CONDITIONS:

1. Degree of segmentation of the individual market	70	30		
2. Degree of segmentation of the corporate market	80	20		
3. Rate of mergers/acquisitions among L&I companies	80	20		
4. Rate of L&I mergers/acquisitions by non-L&I firms	80	20		
5. Pace of deregulation of financial institutions	80	20		
6. Intensity of competition among L&I companies	80	20		

E. LIKELIHOOD OF MARKET ENTRY INTO L&I BUSINESS BY:

1. Government (any level)	80	20		
2. Property/casualty insurance companies	80	20		
3. Commercial banks	80	20		
4. S&I's or mutual savings banks	80	20		
5. Credit unions	80	20		
6. Stock brokerage firms	80	20		
7. Other financial institutions	80	20		
8. Non-financial institutions	80	20		

F. PERCENTAGE OF L&I PRODUCTS WHICH:

1. Are sold by branch office & general system	100			
2. Are sold by PPOA & branch system	100			
3. Are sold by Direct marketing system	100			
4. Carries agents place with primary insurer	53	47	33	

G. NEED TO CHANGE CURRENT POLICIES/PRACTICES regarding:

1. Reasoning & actuarial functions	80	20		
2. Underwriting	80	20		
3. Claims adjusting	80	20		
4. Investment & asset management	60	40		
5. Public/community relations	80	20		
6. Public affairs/government relations/lobbying	80	20		
7. Planning & resource allocation	80	20		
8. Market research & product development	75	25		
9. Employee training/education	80	20		
10. Compensation & promotion of new office personnel	80	20		
11. Construction of agents/sales personnel	80	20		
12. Home office automation	80	20		
13. Computer/telemark support of field/agent operations	80	20		
14. The corporate "culture" to general	80	20		

H. SIGNIFICANT FINANCIAL MEASURES:
 1. Rate of Return on L&I Company Assets: 18.2%

5. POTENTIAL IMPACTS of the target event occurs, as suggested in Round 1
 HIGHER PROBABLE AND IMPORTANT IMPACT IN "MOST LIKELY" FUTURE (✓)

Increased need to educate/train employees
 Increased expenditures on employee training programs
 Increased need for sophisticated investment and asset management analysis skills

6. ACTIONS suggested in Round 1 that innovative, well-managed L&I companies would take to prepare for the target event's potential impacts.
 A HIGHLY EFFICIENT ACTION (✓)

Increase employee training
 Recruit more trainable employees
 Restructure investment department

E5215. Organized consumer groups fade as an important factor in public policy-making.					
IF THE EVENTS LISTED BELOW OCCURRED BEFORE THE "FAVORABLE" EVENT LISTED ABOVE, THEN THE OCCURRENCE OF THE "FAVORABLE" EVENT WOULD BECOME...	Very unlikely				
	Almost less likely	Slightly less likely	NEUTRAL	Slightly more likely	
EVENTS THAT MIGHT INCREASE LIKELIHOOD OF E5215		Very unlikely	Almost less likely	Slightly less likely	NEUTRAL
E1112. The percentage of families in which only the husband works, there are two or more children, and the spouses have never married before increases to at least 25% (vs. about 15% in 1980).		20	40	40	
E1205. The percentage of high school graduates who are functionally illiterate exceeds twice the level of the early 1980's.	20		40	40	
E1613. The percentage of the adult population that has stopped smoking, reduced or eliminated use of alcoholic beverages, taken up a program of exercise, etc. is significantly greater than it was in the early 1980's.	20		40	20	20
E2105. At least 10% of households use data communications one or more times a week.		40	20	40	
E2440. Devices for self-administered, non-invasive routine medical examinations are in widespread use.					
E2505. Imported oil as a percentage of annual consumption falls below 20% (vs. about 25% in 1982 and 50% in 1979), and appears likely to stay there for at least two consecutive years.		25	75		
E2520. A highly efficient solar energy process for converting water directly into oxygen and hydrogen is commercialized, thus permitting the emergence of a "hydrogen economy."	20		60	20	
E2530. The commercial viability of fusion power is demonstrated, promising electricity at significantly lower costs than from other methods.	20		40	20	20
E2532. A safe means of handling and disposing of nuclear wastes is developed.	20		20	60	

E3015. The U.S. announces that it will henceforth follow a strict "policy of reciprocity" in trade with other countries, under which any nation that discriminates against U.S. goods, services, or capital will be treated similarly in its trade and investment in the U.S.	40	80		
E3907. The Dow Jones Industrial average exceeds 2000 and appears likely to remain there for at least one year.	20	40	40	
E5375. Federal legislation is enacted implementing a flat tax on personal income.		75	25	
E5385. Federal law is changed to provide such greater saving incentives than existed in tax law in the early 1980's (e.g., the maximum allowable IRA tax-deferred contribution per individual is at least quadrupled in real dollars).		75	25	
E5431. Federal legislation is enacted mandating private insurance coverage for all employee benefits.	60	20	20	
E5445. Federal legislation is enacted imposing a "cap and spin" rule on diversified financial institutions (i. e., these institutions may remain diversified, but when their assets reach a specified level, they must divest themselves of such subsidiaries as will bring them below the specified level).	40	40	20	
E5457. Federal legislation is enacted that nationalizes depository financial institutions.		40	40	20
E5635. The Financial Accounting Standards Board rules that all business micro software possess detailed audit trail capabilities, including a method to identify the data enterer.	20		60	20
E5925. A non-elected government of the far right takes control at the national level.	40	20	20	20
E5926. A non-elected government of the far left takes control at the national level.	20		60	20
E6505. At least two of the 10 RL states enact legislation requiring each product line offered by an LHM insurer to be self-supporting.	40	40	20	

Societal					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	7	1	2	2	2
.66	8	0	6	2	0
.99	0	0	0	0	0

Technological					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	3	0	3	0	0
.66	9	0	7	2	0
.99	2	0	1	1	0

Economic					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	4	0	1	1	2
.66	9	1	4	2	2
.99	0	0	0	0	0

Legal & Regulatory (National)					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	14	0	8	4	2
.66	14	0	7	3	4
.99	0	0	0	0	0

Legal & Regulatory (State & Local)					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	4	0	4	0	0
.66	3	0	1	2	0
.99	0	0	0	0	0

Totals (L&R)					
# of Events	Net Industry Impact				
	<3	2-3	<-3	2--3	
18	0	12	4	2	
17	0	8	5	4	
0	0	0	0	0	

L&H Marketplace					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	1	0	1	0	0
.66	11	0	8	2	1
.99	1	0	1	0	0

L&H Operations					
Likelihood up to	# of Events	Net Industry Impact			
		<3	2-3	<-3	2--3
.33	3	0	0	0	3
.66	7	0	6	0	1
.99	1	1	0	0	0

Totals (L&H)					
# of Events	Net Industry Impact				
	<3	2-3	<-3	2--3	
4	0	1	0	3	
18	0	14	2	2	
2	1	1	0	0	

THE 20-YEAR STRATEGIC OUTLOOK

nine, positive and negative. In the legal and regulatory area, there were seventeen events with mid-range probabilities, eight of these had impacts greater than or equal to five, five had impacts of less than minus five. This indicates that we don't know where to place these events, but we know that they have serious impacts on the industry. Because of this sort of confusion, we then had to use scenarios to learn about the possible sequences of events.

Scenarios are proposed pathways through the future. In an area of uncertainty, we carve out pathways to begin to understand the possibilities. What were the available alternatives? We came up with five initially. First, what happens if within the next three years, technological change comes faster than we ever thought it would come? Second, what happens if we go back to the high interest-rate environment? Third, what does muddling through as we have in the past few years look like? Fourth, what if the consumer movement really took hold and began to influence regulation of the industry? Fifth, what happens if the telecommunication revolution makes information a commodity and those having control being the only ones to prosper by it? The study sponsors suggested a further scenario. What happens if there is a deregulation, and about five or ten years later a reregulation? In other words, what happens if there is an about face? What we wanted to do at CFR was to develop a mechanism and a data base to allow the user to generate his own set of relationships or scenarios which would be more pertinent to his own particular needs. What we tried to do by developing the five or six scenarios was to present possibilities.

What insights did we gain from these scenarios? There were plenty, but let me show you a particular one I thought was interesting. In the cross impact relationships the panelists said that alternative distribution systems would become more common, technology changes would enable life and health insurance companies to take advantage of this leading to a productivity push in the industry. But, rather than the life and health industry taking the active part in such developments, what happens if someone else beats them to it? What happens if diversified financial institutions take advantage of these changes first? Then instead of a proactive approach, the industry will be reacting to a threat. It will be reacting not only to increased competition, but also to different ways of doing things. Thus agency relationships may change, salaries and bonuses may replace commissions. Banks are not in the habit of paying commissions to their people. You can see how various possible events are suggested by the scenarios and cross impact relationships.

Using the scenarios, we came up with six risks or opportunities for the industry. The first area was deregulation. Was it necessary? In other words, is it possible for competition to increase even without the benefit of formal deregulation? I think in some ways competition has already increased without deregulation. One example is Merrill Lynch, who has expanded what it does through the use of new technology. Second, the tax environment presents itself as a crucial, yet uncertain, environment. It's defined by the particular political administration in power and the economic conditions at that time. Third, interest rates and general economic conditions are major forces. Fourth, technology

PANEL DISCUSSION

presents an interesting set of risks and opportunities because it provides ways to improve the industry's productivity and, at the same time, it provides competitors with the same thing. It even provides competitors an avenue to get into the life and health industry.

Without completing the list of risks, the important conclusion we came to was that we cannot consider each of these areas separately. We have to consider them in totality, because in the end they interact with each other. Competition can increase, not necessarily just by deregulation but because technology might improve the chances of others coming into the business. Societal changes would be affected by technology developments. Technology might create more opportunities for early retirement.

In conclusion, let me suggest that once in awhile we have to get away from the familiar. We try to look for certainty, we try to look for order in this world and more often than not we are frustrated. I get frustrated when I try to figure out when I might sell my house in Los Angeles so that I can complete my move to Oregon. That in itself is a highly uncertain situation. Once in awhile we have to get out of the familiar, we have to accept the complexity of the industry and face the possibility that maybe we cannot predict it. When we begin to do that, and to explore alternative futures, complex interrelationships and developments, we broaden our understanding. From there we can begin to formulate comprehensive strategies.

MR. JOHN T. CLARKE: My role today is to provide a sponsoring company perspective on this study. Twelve companies sponsored the study and, interestingly enough, two were from outside the insurance industry. The study design did anticipate a significant amount of sponsor involvement, but the level of actual involvement was left up to each sponsor and it varied widely.

How did United of Omaha get involved in the study in the first place? In late 1981 United, along with probably everyone else in the industry, received a proposal for this study by the CFR. The stated purpose was to investigate the forces influencing the future of the industry using some new futures research techniques. As outlined in the prospectus of the study, sponsors were to receive:

- o reports on the results of the various activities undertaken throughout the study,
- o guidance on how to tailor the results and the techniques used so as to make better use of the study for their in-house specialized needs and
- o an opportunity to become acquainted with these new techniques through hands-on involvement.

As the study progressed, sponsors were to be given an opportunity to influence the issues under examination and shape the work itself through regular contact with the study team. Several company sponsor meetings were scheduled. Since this was multicompany sponsored we

THE 20-YEAR STRATEGIC OUTLOOK

felt there would be an additional bonus in being exposed to the perspectives of other organizations. The CFR had completed two studies of this kind previously, one on the property/casualty insurance industry, so we at United thought that the CFR had developed some expertise in these matters. Even if the results didn't prove to be as useful and practical as we had originally hoped, we still felt that we would learn a great deal from just being involved in the process. In any event, we would be playing the role of a good corporate citizen by funding research into techniques which were felt by many to offer the promise of helping companies manage in turbulent times. This study seemed to have a lot going for it, so we signed on.

It didn't take long for us to discover just how ambitious a study this was. The study was originally scheduled to be completed in two years; it ended up requiring three years. As mentioned earlier, the study used a combination of futures research techniques, some old and some new. It started with the simpler and more familiar techniques: literature search; individual, sometimes called genius, forecasting; mathematical trend projections. It then moved onto using more sophisticated and less familiar techniques: delphi process; cross impact analysis. The plan was to have the complex processes build on results of the earlier and simpler processes and, near the end, scenario writing was used to synthesize the results of the earlier steps. This simple overview, however, belies the tremendous, sometimes exhausting, amount of work necessary to accomplish these tasks.

I am now going to discuss some of the high points of the study from the company sponsor perspective. To oversimplify somewhat, the important output of the study was the scenarios, a fancy term for alternative futures. Of fundamental importance to this were the underlying trends and events, so it is not surprising that initially a large amount of time was spent on identifying the trends and events to be used.

Ideas for the trends came from a variety of sources: a screening of the trade and technical literature; two commissioned papers; prior work done for the property/casualty industry; the sponsors themselves. The objective of this phase of the study was to determine the smallest possible set of trends that could adequately portray the dynamics of the life and health insurance industry. This meant finding some 80 to 100 basic trends out of a set of 600 originally proposed. Several questionnaires were completed by the sponsors during this phase of the study in order to vote on which trends would survive. I counted the trends, 105 of which made it to the delphi process. There was an attempt to balance what were called subjective trends with objective trends. A subjective trend was something new to me. It has been defined as a trend where no objective data exists or probably ever will exist. An example would be a market opportunity to expand into other financial services. I am not aware of any objective data in existence on that. An example of an objective trend is that of the U.S. population.

Two groupings of trends were made for this study. The first consisted of social, technological and economic forces external to the industry. The second group consisted of internal industry forces. Some examples

PANEL DISCUSSION

of internal forces are general marketplace conditions, likelihood of major entry by various competitors, market demand for a particular product or service.

The same general process occurred with the identification and selection of the events. Events were stated specifically. One used in the study was: "At least 40 percent of life insurance sales to individuals are initiated by the buyer." So several questionnaires were written and discussed at sponsor meetings in order to identify events that would survive to the end. The study had 120 events.

With the events and the trends established, it remained to project the trends and estimate the timing and impact of the events. Mr. Gonzalez explained the delphi process, it was truly an exhausting exercise. There were two rounds. It took me eight hours to fill out the first questionnaire, by far the most complicated questionnaire I have ever filled out, and other sponsor participants felt the same way. At the end, the output of the second round was fed into a computer program which attempted to make sense out of the whole process; that is, perform cross impact analysis of the massive amount of data resulting from the delphi process. The program produced a list of events with dates of occurrences.

One of the computer runs, scenario 2, the high interest-rate scenario, produced 5 primary events from among about 50 choices in total. This scenario said that the prime rate would exceed 18 percent in 1986; in 1987 the U.S. would demand reciprocity in its trade agreements with foreign countries; in 1988 three events would occur. Group benefits would become taxable, there would be a growth of indexed products and alternative distribution systems would become more common.

To understand how these events might unfold into the future, I have made some modifications to the write-up of scenario 2. So here is a description of how things might occur. The market's fears of higher interest rates become a reality in 1986 as the prime rate grows to exceed 18 percent. High interest rates contribute to a continually strong dollar putting further pressure on the U.S. trade problem. In an attempt to protect American jobs from unfair foreign competition, a policy of strict reciprocity and trade dealings with other countries is instituted in 1987. With protectionism running high, the economy begins to stagnate and unemployment rises. To fund unemployment benefits and other economic programs, the tax base is expanded to include group health insurance premiums and other benefits by the following year. In anticipation of an extended period of high interest rates, and wishing to avoid a repeat of the 1970s, the life and health industry begins emphasizing indexed products and developing alternative distribution systems. And so on and so forth through the other 40 events in that scenario.

Now that's an extremely brief introduction to scenarios. Anyone wishing to learn more about scenario writing might wish to review The Record of the 1983 Annual Meeting of the Society of Actuaries. At that meeting there was a teaching session on scenario writing.

THE 20-YEAR STRATEGIC OUTLOOK

So much for the process of the study. What about the results? The study produced two public documents. One is called, appropriately, "The Final Report." It's about an inch thick. The first chapter outlines the methodology and scope of the study and cites the nominal future and six alternative futures produced. I have already given you an indication of one of those. The report also includes a chapter on the risks and opportunities facing the industry and a chapter on how the results of the study may be practically applied by anyone reaching the report. An appendix contains the two papers commissioned for the study, which are interesting reading in their own right. There is an extremely thick companion volume called "The Data Supplement" containing a massive amount of information which may or may not be of use to a casual user of the study. This volume contains the results of the literature search, a master list of all the trends and events used in the study and the detailed forecasts from the delphi process.

The sponsors' uses of "The Final Report" have been as varied as the sponsors themselves. The study didn't produce a revolution in current thinking about the future by any of the sponsoring companies, but it did help push the evolution of that thinking a little bit further forward. The most common use has been simply to circulate the entire report or a synopsis of it to selected individuals within the organizations. This usually got people to start thinking about the future, often in a manner challenging to conventional thinking. It also got people used to thinking in terms of alternative futures instead of one future. Now that may not sound like a lot, but it is. The idea of getting us to think in terms of multiple possibilities instead of one. Some sponsors structured more formal discussions among key employees to generate reaction to this study. In one case a group of key executives analyzed the company's strengths and weaknesses to determine its expected survivability and health under each of the scenarios. In another situation several issues raised by the study were identified for inclusion in an early planning session for top executives. One sponsor who had already been tracking a much smaller set of trends to build simpler scenarios used the results of the study to update its own set of trends. Another sponsor thought that an emerging issues management program might be developed as a result of the study. So none of these uses are earth shattering, more evolutionary than revolutionary. All the sponsors I talked with also felt that for this study to be made more practical, additional work would have to be done. They also agreed that such a process would be very time consuming, and may require the use of an outside consultant knowledgeable about futures research as well as policy formulation, testing and evaluation. But they all agreed that the study had been a worthwhile experience despite the short-term problems they were having integrating results into the organization.

I believe that some of you not involved in the study can make use of it. First of all it doesn't take a major investment to get a copy of "The Final Report." It sells for \$15. "The Data Supplement," the larger volume, sells for \$65. Now what would you get for your money? At a minimum you would get the very extensive environmental overview of the opportunities and threats facing the industry. There is no way you could produce such a scan for \$15 on your own. The report doesn't give you any answers about the future, nothing can, but it

PANEL DISCUSSION

should help you, at a minimum, generate some new ideas about what the future might be. In fact, for those of you who decide to purchase a copy of the report, I would suggest that you first simply scan it for new ideas.

Now that's not a very earth-shattering suggestion I will concede, but it probably has the greatest return for the time invested. You might want to dwell on the ideas you find interesting, challenging or maybe even more importantly, nonsensical. These ideas might lead you on to other ideas and you can start developing your own scenarios. The idea here is to start stripping away the biases we all have about our own particular views of the future.

Next you might want to share the report with others in your organization. Have them critique the report and share their thoughts with you. Based on the experiences of the sponsors this seems to be a very fruitful exercise. Or maybe you would like to select one of the scenarios in the study and play your company's long-term strategy against it. Estimate your company's future viability against one of those scenarios. Expand that to include all of the scenarios. If one scenario appears to be troublesome, identify particular threats which may be important for your organization to start monitoring at the present time. Share your thoughts with those responsible for issues management or those in your corporate planning department.

Chapter 5 of "The Final Report" cites a more demanding use. Many of these require that you have access to "The Data Supplement." I will share some of those with you briefly so that you can get an idea of just how much you can use this report should you choose to.

One idea might be to define a coarse set of environmental issues worth monitoring. Reading the scenarios will suggest opportunities and threats to your company, or just to the industry in general. These can then be used to help select and identify events and/or trends you should be monitoring.

The second idea, using "The Data Supplement," is to select what you consider to be one of the more important or interesting events in the delphi. Examine the cross impacting events, adding, deleting or changing as you desire. Reestimate the cross impacts or the probability of the event itself. Find the events that impact the impacting events so you can build a chain of causation similar to what was developed by the delphi panel. Now this exercise isn't going to give you a scenario, but it will help you get a much better understanding about how the chain of events might produce a future, much more so than just a simple reading of the report would do.

Another possibility is to develop a base case scenario for your organization. Be as simple or sophisticated as you desire, but I would encourage starting out with simplicity. The cross impact results presented in "The Data Supplement" should be helpful, but probably need to be tailored to your organization. You may want to write your first scenario based simply on impressions you have gathered after reading the report. As you get more sophisticated, you will probably need a

THE 20-YEAR STRATEGIC OUTLOOK

computer to help you sort out all the impacts. The CFR does have a cross impact program available for personal computers. It can handle some 40 events and trends (This is not meant to be a commercial or endorsement of the program.) Some of you may want to build your own scenarios, in any event, the scenarios built can then be used to critique your organization's objectives, goals and strategies. This last suggestion is a very demanding one and not one I would expect many in the audience to take me up on, but it will give you an idea of the open-ended possibilities for using this study.

Before I close I would like to editorialize a little bit. The second paragraph in the Society of Actuaries 1985 Examination Booklet begins: "Actuarial science is built on the evaluation of the financial, economic and other implications of future contingent events." The key word here is "future." If we are to be practitioners of actuarial science, then it would seem that we have little choice but to be continually searching for better ways to understand the future.

I attended a conference recently at which William Ouchi, Professor of Management at UCLA, spoke. You may know him better as the author of Theory Z and the M-Form Society. He said that the unprecedented era of industrial monopoly, which until recently the U.S. had been favored with, had bred a set of superstitious beliefs into American business not unlike those a primitive tribe might have in believing that their predawn rituals actually did make the sun rise. What he was saying was that we had such favorable conditions that just about anything we would have done over the past few decades would have turned out alright. He argued that the more competitive environment of the present necessitates a more open outlook on how to best manage and compete. The present requires us as actuaries to have an open outlook on how futures research techniques may help us practice our science. I personally and professionally feel very fortunate to have been a part, however small, of this study. It was a very eye-opening experience for me that helped broaden my outlook on the future and what appears to be some potentially useful techniques for us to use to help us better manage and understand the future. So, it's without hesitation that I would encourage you to beg, borrow, or even buy a copy of this report. Judge for yourself how useful it can be to your personal development or to your organization.

MR. JOHN M. BRAGG: I will provide a general overview of the CFR and similar studies. I will comment about the uses of these studies in the strategic planning process. I will also include other comments about the future of the life and health insurance industry to the year 2000.

I had the honor of being one of the many panelists for the CFR study. The methodology used, particularly the delphi process, was certainly intriguing. The results, in keeping with futurist theory, are presented in the form of a nominal future and several alternate futures.

The nominal future contains the following forecasts:

PANEL DISCUSSION

1. GNP growth will be high, inflation low; interest rates will not often be below 1984 levels.
2. The electronic cottage will become a reality; transactions of all kinds will be made from one's home; the Smart Card, guaranteeing account security, will enable all of this to occur.
3. Full-service financial institutions will emerge as legislation and regulation permit; these will offer all types of financial services, including insurance.
4. Individual products will stagnate; group products will remain healthy.
5. Increasingly, customers will want to assume insurance and investment risks.
6. Some 20 percent of companies will engage in some form of direct marketing, compared with 3 percent in the early 1980s.

The six alternative futures which are thought of as containing surprises may be briefly summarized as follows:

1. Technology leads the way, indexed insurance takes hold.
2. High interest rates return, interest-sensitive products have a field day.
3. A bleak scenario of uncertainty.
4. A stagnating industry.
5. Society divided, rioters in the streets.
6. Deregulation, the full-service giants really go to town.

In 1984 Arthur Andersen and Company and the Life Office Management Association (LOMA) produced a similar futurist study--"Changing Horizons for Insurance: Charting a Course for Success." That study forecasts a sharp decline, by 1990, in the number of small companies and growth for the large companies. Banks would capture as much as 8 percent of the life insurance market. Direct mail would also capture 8 percent yield-based products including universal life and variable life would continue to grow in popularity. The services of agents would continue to be very important in the marketing process.

The two studies have many points of similarity. For example, the full-service giant seems to loom up in both. Survival will require continuous innovation and revitalization of financial services products.

Studies such as the CFR and Andersen-LOMA ones can be of value in the strategic-planning process. Each company can play its own situation against the detailed findings of these studies to help it determine strategies and alternate strategies for the future. As a result the

THE 20-YEAR STRATEGIC OUTLOOK

company should be able to arrive at a nominal strategy and alternate strategies which can be pursued if the surprises in the alternate futures should happen to materialize.

Again, the dominant finding in the two studies is the emergence of the financial services giant. Very few life and health companies fit into such a mold. This fact should cause a lot of soul-searching when a company goes through its strategic planning process making use of the CFR and Andersen-LOMA studies.

MR. HALPERN: As actuaries I think we are all interested in what's going to happen in the future. I suspect a good number of you expected to hear a prediction of what our future would be and if you expected to hear that, then I think you were a little disappointed. The point of the CFR study was not to predict the future. It was to present alternatives. I do expect that some of you came here to learn about futures research, and I think we have accomplished that. What we hoped to present to you was the notion that in designing your products, your compensation systems, the marketing of your products, you can react to the environment or the market as you see it developing; that is, you can try to anticipate alternative futures. You can be proactive by designing your products and distribution systems to try to make what you feel is a more desirable future for your company. That is the point we have been trying to drive home.

MR. JAMES R. THOMPSON: I'm with Federal Kemper Life. I want to ask Mr. Bragg about his reference to the full-service financial institutions, first whether he meant that to include stock brokerage houses as well as life insurance companies. Will these giants also have to sell personal casualty lines? I would also like to know whether this full-service financial institution will be one corporation, perhaps with subsidiaries, for will there be joint ventures in some kind of alliance, for example, with stock brokerage houses.

MR. BRAGG: As far as I understand it, a full-service financial giant certainly would do everything in the insurance business (life, health, property), plus banking, plus everything to do with stock brokerage, mortgages, and mortgage lending. It would do everything the S&Ls do, plus everything the banks do, plus everything the insurance companies do. It would probably be retail oriented. One organization frequently mentioned as becoming this kind of giant is Sears. It's getting into all of these things, so that is what it would be like. You get the impression that you would deal with a financial giant in a retail mall or shopping center or something like that; that's certainly how it's with Sears.

Before I go on to the ownership question, I want to mention that in this book there is a suggestion to the effect that specialty companies would survive in a world of financial giants. The giants would not squeeze everybody out, but the special companies will have to be awfully good at what they do. I have the impression that ownership by stock or mutual companies would be the usual thing.

MR. MICHAEL LEVINE: I'm with Metropolitan Life. This is directed to Mr. Gonzalez. I was wondering if you could discuss any procedures

PANEL DISCUSSION

you have for following up on a study like this; that is, for recording actual events as they occur and analyzing how they tie into the anticipated scenarios and so forth.

MR. GONZALEZ: There are a couple of ways of going about it, and there are available methodologies that do not require you to undertake a two-year study to get up to speed. The Director of the CFR is credited with developing one approach, the Quick Environmental Scanning Technique. Essentially, this allows you to calculate performance measurements that are important to your company, then identify major events and wild cards. Those are subsequently assigned to individual people or groups of people who begin to track developments, and maybe in a couple of months are able to report on how to prepare for contingencies.

A second way is to relate the study to the company's strategic plan. At CFR, we got a company's actual business plan and worked through the scenarios one by one, linking them to some performance measurements of the company. We measured how the company fared under the different scenarios. Then we began to raise questions about the assumptions made in building the original corporate plan. The corporate plan and planning assumptions were subsequently redefined to reflect coping with those different scenarios.

One can perform this work by simply identifying and tracking risks and opportunities or by undertaking more complex exercises of building a linkage to the company plan.

MR. LEVINE: Five years from now, will a group study what actually happened? Will the techniques and data used in this study be revised and improved?

MR. GONZALEZ: You are asking whether or not there will be a continuation of this study. Ms. Norma Neilson, another one of the authors, and I are both out of the CFR, but we have been talking about updating the probability estimates, the list of events and the list of trends. Within a company you might in fact want to reanalyze or reestimate the probabilities yourselves and add particular developments as time goes on. Again, build on those particular concerns that are important to your company. All 100 events are not going to be important to your particular company. You might want to carve out a more manageable set. Then, as part of a planning process, review the progress of the events or perhaps add new events. One obvious thing that was alluded to, but never directly mentioned, was the current concern about AIDS; we had an incurable disease event in the CFR study, but we never thought that AIDS would be one of them. You need to update those things.

MR. LEVINE: And that was just two years ago. That is a wild card I guess. A similar study was done by the CFR, just prior to the life study, on the property/casualty industry. Would you know how that was used, if it has been used more extensively?

MR. GONZALEZ: I don't have the facts about that right now.

THE 20-YEAR STRATEGIC OUTLOOK

MR. JACOB POLEYEFF: I'm with Mutual of New York. Mr. Gonzalez, based on your experience, what would be a preferable course of action for a company after seeing the results of one of your studies? Would that be to choose the most likely, in the company's eyes, two or three scenarios and try to maximize the company's advantage under those, or to try to cover the company against a larger number of possible scenarios?

MR. GONZALEZ: I find it very difficult to respond to that just off the top of my head, because different companies have different capabilities. They are positioned differently within the industry. You have to estimate exactly what you can do. If you review all the risks and opportunities defined in the study, obviously there will be some that are not within the capabilities of the company to pursue; so you have to discard those. There are risks that you may not be able to do anything about if they do occur. We have to realize that there are some things a company can't do immediately. Right now I wouldn't be able to categorically state that you should pick three scenarios. What I think you could do as a starting point is to read the scenarios and identify the events in them that are most important to your company. Then analyze what you are doing right now and determine your preparedness if certain events become reality. Then you begin to work within a narrow set.

I will add a little bit to what Mr. Bragg mentioned about the full-service institutions and the specialty companies, from a book by Michael Porter. He suggested that there are two basic strategies: go for market share, for the full service, for being the big fish in the small pond; or focus on a particular niche and become very good at it. He said that those two extremes are the better payoff strategies. The problem is being in the middle and trying to go for market share when you cannot, or not having a targeted market. Companies begin to have problems when they are in the middle, not knowing whether they are going one way or the other. That might be useful to keep in mind as you begin to figure out what to do.

MR. HALPERN: When we actuaries price a product in our daily work, we generally assume a pretty static world. We don't assume that things vary too much and use basically, one future scenario which is a projection of the past. We do some sensitivity testing, hopefully, but we generally vary only one variable at a time and we don't look at it as being part of a coherent future. The scenarios in the CFR "The Final Report," or the scenarios developed by and for your company, can suggest a number of variations in the variables used in pricing. One can then analyze the effects of different futures on product design, and that might influence how certain features of the product are constructed. I think Mr. Bragg might have something to say about how, especially with an interest-sensitive product, we should think about economic futures.

MR. BRAGG: I believe that in the next five years a lot of work will be done on economic scenarios. An economic scenario would be a projection of inflation, interest rates, GNP growth and so on, on a fluctuating basis, a real-world basis. You all know that these elements

PANEL DISCUSSION

have fluctuated very dramatically from year to year in the last five years. An economic scenario would have those kinds of fluctuations in it, and would be the kind of a thing that could be played against a company's interest-sensitive products to see whether or not they stack up. Surprise events would be described. The economic scenario would make sense and would seem realistic. However, if you were going to test an interest-sensitive product against such an economic scenario, you would be crazy to do it against only one. You would need to use a whole family of economic scenarios, and I believe we will see the development of groups of economic scenarios which might indeed be ordered as a nominal one with alternates, such as produced in the CFR study. Those will be intended to project what we really need to have projected, namely, interest rates from the various kinds of investments: stocks, short-term instruments, long-term bonds and so on. That seems useful to me.

We have always used projections. I have used them all of my career. But how many times have you priced a product using simplistic assumptions? It is common to do that. It's done all the time. I am expecting to use a more futures-oriented way of writing scenarios, rather than continuing to use simplistic assumptions.