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**IMPACT OF GLOBAL DYNAMICS**

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Panelists: PAUL A. CAMPBELL  
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- o A practical and futuristic introduction to educational needs and actuarial roles in three areas:
  - Participation in international activity
    - Proactive strategic, tactical planning
    - Support in broad management and marketing roles
    - Defense of corporate financial stability
  - Understanding and communication
    - General management/financial support
    - Strategic defensive planning from foreign competition
    - Full financial service integration
  - Forecasting and futurism
    - Eastern Europe and the Third World
    - The educational mandate
    - Specific futurism examples

MR. CHARLES BARRY H. WATSON: I'm an actuary with The Wyatt Company in Washington, District of Columbia, working in the international employee benefits area. Thus, I spend my time worrying about benefits for the employees of multinational employers, working outside the United States.

We are talking here about the impact of global dynamics upon our particular profession and the businesses for which we work. We have two well-qualified speakers to talk on the topic.

First, we have Paul Campbell, the Assistant Director of Actuarial Studies at the University of Hartford, who is responsible for the undergraduate program in actuarial studies at that university. He has been much involved in activities of the Society of Actuaries, having served on a number of committees and task forces. He is also the newly elected chairperson of the Society's Futurism Section. In the international arena, Paul has been involved in strategic-management consulting for the Life Insurance Marketing and Research Association and in international employee benefits consulting for Coopers & Lybrand, and he has had international actuarial responsibilities for ITT. He is the author of a text, *The Variable Annuity*, written in 1968, and more significantly, he is the father of an actuary in training. He will talk on what global dynamics are and how actuaries have responded to them.

\* Ms. Casey, not a member of the Society, is a Public Relations Specialist for the American Academy of Actuaries in Washington, District of Columbia.

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Our second speaker will be Linda Emory. She is Senior Vice President for Strategic Development at the Life Insurance Company of Georgia. Life of Georgia is owned by a Dutch insurance company, the Nationale Nederlanden. Linda has just returned from two years of service with the parent company, where she was a manager and international actuary, advising the Executive Board with regard to the acquisition and management of life insurance companies in North America, the United Kingdom, Australia, and the Far East. She is the editor of *The Actuary*, and she has been a Vice President and Board Member of the Society and Chairperson of the Society's Program Committee and Research Policy Committee. Linda is going to talk about the response of insurers to global dynamics and make particular reference to the experience of the Nationale Nederlanden.

**MR. PAUL A. CAMPBELL:** I am pleased to be here with you to share what I call the thoughts of a bystander about the topic of global dynamics. My comments are based on the many challenges and opportunities that I faced before moving to the academic community, plus my continuing study and dialogue with former associates and university colleagues. My objective is to assist you in developing practical responses to global challenges.

### **GLOBAL DYNAMICS AND RELATED TERMS**

"Global dynamics" refers to a host of macro- and microenvironmental trends and events, many of them difficult to predict with the use of traditional scientific techniques. In my opinion, the term also refers to the internal generation and implementation of strategies, under an established corporate mission, to internationalize operations on a successful and lasting basis. The interplay between external forces, anticipated and unforeseen, and tactical programs is the daily challenge of an actuary involved in world activity.

Here are a few examples of global dynamics reported in periodicals or journals in recent months: a burst of hyperinflation in Argentina; a government order in Brazil that banks write off certain loans; increased competition for insurers from banks in Japan; new delays by Korea in opening specific markets to outsiders; a program to cut inflation unveiled by Portugal, which is expected to widen that country's net of indirect taxation; the disappointing rate of progress made by leaders of the European Community (EC) in deciding how long it should take before member nations cede control of economic and monetary policy; statements by many European union leaders that they can make demands because so many concessions have been offered in preparation for 1992 harmonization; and a "valentine" from the Financial Accounting Standards Board: "Employers' Accounting for Postretirement Benefits Other Than Pensions." While the events I note may have been overshadowed somewhat by the crisis in the Middle East, they indicate graphically the range of environmental forces that international companies and their actuaries may encounter, often without comfortable warning.

### **EXTERNAL MACRO- AND MICROENVIRONMENTAL EVENTS AND TRENDS**

The varying, sometimes dramatic, circumstances mentioned are examples of one category of global dynamics: the external events and trends that you and your company will observe, try to anticipate, and respond to in the most effective manner. Macroenvironmental forces in this category include economic and political developments, taxation and

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other broad governmental policies, cultural patterns, and varying levels of economic productivity. For an international firm, macroenvironmental factors include developments, here as well as abroad, which create complicated patterns to understand and control.

Microenvironmental forces include specific competitive structures and challenges, regulation of operations here and abroad, market readiness for and response to a company's products and services, and requirements in human resource management and compensation. Competitive challenge on a global basis occurs at home, and is doing so with increasing frequency and power; for insurers, it is important to appreciate the international component of what are basically domestic financial services operations.

### STRATEGIES AND THEIR IMPLEMENTATION

Another category of global dynamics includes the strategies, tactics, and implementation programs that you and your company develop, market, administer, and manage as a player in one or more foreign markets. What you do may be relatively simple because of limited foreign exposure or your company's relatively uncomplicated corporate structure. On the other hand, it can be quite complicated because of varying multiple-line involvement in many locations, with differing structural patterns and affiliations that reflect local regulatory, competitive, or cultural forces. One example of such variation is the distinction between direct marketing of products, the use of mutually supporting networks of local insurers to provide group coverages to multinationals, and the marketing of different forms of reinsurance coverage.

### BENEFIT PLANS -- PLANNING AND FUNDING

A third category of global dynamics includes the provision and financial management of employee benefits that respond to local cultural patterns, economic environments and regulatory constraints. Our responsibilities are occasionally so focused on one type of international activity that we forget the existence and complexity of another. The patterns of events and emerging requirements in compensation and employee benefits pose an incredibly dynamic challenge to actuaries in insurance employment or in consulting.

### INTRODUCTION TO AN INTERNATIONAL SURVEY

Many of our actuarial colleagues have filled a number of roles in managing, supporting senior management with diverse actuarial skills, or providing counsel to multinationals on a wide range of topics. In preparation for this session, I approached a number of actuaries with a series of questions about global dynamics. Their responses were instructive, and I want to share some of them with you.

Among the contributors to the following summary were senior executives of major international insurance and financial service organizations, including chief financial officers, chief executive officers, and chairmen of the board; responses came from both American and Canadian companies.

Other contributors included senior officers of international reinsurance organizations and partners of consulting firms that offer actuarial and related services throughout the world.

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### DESCRIPTIONS OF INTERNATIONAL ROLES

Survey participants were asked to distinguish the roles they have played as a corporate actuary, a consultant, or a corporate executive. With respect to the first category, corporate actuary, their most significant activities have included: creating actuarial units in foreign subsidiaries; negotiating for entry into a foreign nation; negotiating the sale of a subsidiary; reviewing and approving product design and pricing; and developing reinsurance transactions and treaties. Survey participants viewed communications with foreign actuaries and regulatory authorities as critically important. Some noted that making our profession less insular was an important objective.

The second category, consulting activities, included technical and managerial assistance both to U.S. multinational companies and to foreign organizations developing operations here in the United States. Specific consulting applications involved the design and funding of benefit programs and the appraisal of prospective partners or acquisitions. In these roles, actuaries have seen themselves as filling the need for translation and interpretation between a company headquarters and its units abroad. Not all actuarial terms are universal, and confusion as to what certain terms mean can be a problem.

Finally, the roles for corporate executives included overall responsibility for international operations and as managing directors of foreign subsidiaries (many with differing distribution and product strategies). Oversight of the achievement of corporate goals through local objectives and tactical programs and support of managerial development were also possible roles. As managers, actuaries have contributed momentum to foreign expansion and have helped to develop foreign-product strategies. As "financial services" have emerged to transcend "insurance" as a major actuarial field, the assessment of opportunities for bank retailing and other distribution strategies has become an important role. The development of candidates for an acquisition or merger, whether of a corporation or a consulting firm, has been overseen by international actuaries responding to our survey.

In summary, the range of global responsibilities filled by actuaries is huge.

### TRENDS AND EVENTS INTERNATIONAL ACTUARIES FACE

The crisis in the Middle East has taken on such significance that we might lose sight of many other events and trends and their impact on actuarial management. Removal of national marketing barriers, energetic expansion of the world's financial services resources, economic uncertainty and its impact on performance-oriented products -- these have all been part of a changing macroenvironment. The displacement of the United States as a world financial power is also a fact that actuaries have had to accept. Social issues, referendums and regulatory changes are other forces that survey respondents think have been difficult to analyze and respond to.

Ability to anticipate many environmental events and trends was reported as less than satisfactory, with the result that actuaries think that they have responded to trends, rather than prepared for them. Actuaries surveyed believe that they have not adequately predicted the extent or pace of change.

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### RECOMMENDED EDUCATION AND EXPERIENCE DEVELOPMENT

Participants in the survey were asked what types of education and experience have been most helpful in meeting the challenges of global dynamics. Many indicated that on-site experience, with exposure to cultures, practices, and attitudes, was most valuable; meeting with clients, colleagues, and other actuaries in their own environments was a tremendous help in understanding the global issues.

Broad financial experience and involvement in strategic thinking and planning were also seen as very important. Development of negotiation and debating skills was also mentioned. Under the general category of learning experiences, participants valued mathematics as a continuing source of discipline, exposure to both life and property/casualty issues, and staying abreast through extensive reading.

Proficiency in language skills was mentioned by most as the factor that would have better prepared them for their international roles. Others indicated that better understanding of the following would have been helpful: insurance regulation; insurance marketing and pricing; and the EC and harmonization. A better understanding of the differences between foreign accounting systems and ours was mentioned as highly desirable. A number of other comments pointed to more reading, more dialogue about international issues, and more experience in management.

### THE ROLE OF INTERNATIONAL FORUMS

When asked which forums have been most effective in supporting respondents' global activities, nearly all indicated personal contact, direct communication, and interaction with counterparts in other countries. One chose to characterize these activities as "being thrown into the deep end."

Regional planning meetings were mentioned several times as good forums for either corporate or consulting groups. International meetings received mixed reviews: one must select them according to one's personal objectives, and the meetings were thought to be valuable primarily for networking.

### NETWORKING – TYPES AND RESULTS

Networking and global activity can be viewed from two perspectives: what type of individual you network with, and what type of information you get. International actuaries surveyed said that the nonactuarial professionals they most frequently contacted were accountants and financial comptrollers; lawyers and investment officers were contacted somewhat less frequently. Underwriting specialists were mentioned by several participants as important contacts. Few indicated information technologists or marketing professionals as contacts.

I think that there is a lack of appreciation for the value of these last two types of professionals by actuaries facing the challenge of global dynamics. In his newly published book, *The Competitive Advantage of Nations*, Michael Porter emphasizes technology and marketing competitiveness as key factors for national leadership.

The most important information obtained from nonactuarial professionals pertained to market characteristics and local business practices. Competitive information such as

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marketing approaches and product emphasis can also be acquired. Finally, assistance on practical compliance with regulatory requirements and insights into accounting and administrative procedures are thought to be helpful.

Global actuaries networking with actuaries from other countries have found the following types of information to be most helpful: understanding of technical details and methods; understanding of professional attitudes; information about products and pricing assumptions; information about reserving methods; insight into marketing structures and development; and information on industry strategies and leading competitors.

In networking with actuaries from other multinationals, survey respondents saw the ability to identify trends and opportunities as extremely helpful. They may also find different ways to approach the same problem, which could include practical ways for regulatory compliance. All respondents thought it would be very helpful to use such networks to understand different perspectives on common problems.

### DIFFERENCES IN INTERNATIONAL PERCEPTIONS

Discussions among actuaries from other countries reveal that they face issues and challenges in different ways than U.S. actuaries do. Foreign actuaries typically operate within longer time frames, and the goals they seek for return on investment may be lower. They may have a somewhat broader role and may also understandably have a more instinctive global outlook.

The difference in how actuaries from various countries look at a variety of problems will relate to what parameters they and their employers see as most important. That is a function of corporate culture and commitment, as well as the employer's organization. An important corollary is this: if we take the time to understand the corporate and cultural influences on these actuaries, we should be able to understand their position more readily and communicate better with them.

### THE ROLE OF FUTURISM IN GLOBAL DYNAMICS

When asked whether they used futurism techniques for anticipating or dealing with events or trends, a surprisingly large percentage of those surveyed indicated either "no" or "not knowingly." One respondent added, "International decisions tend to be more emotional, political, or practical, than scientific." A significant number said that they do not foresee situations on the horizon where futurism would be a valuable tool. One said their client companies' vision "is limited to five years at most."

This response to the question is disappointing, but realistic for today's level of understanding about futurism and operations research. Such a response is also a good reason for accelerated development of futurist techniques by the Society's Futurism Section.

A few actuaries reported they use scenario-planning techniques for long-term strategic planning and the assessment of potential partners for overseas ventures, and one referred to the use of Delphi techniques in operational planning, as well as for evaluating future environmental changes. Others have indicated that as the rate of change increases, companies may find scenario testing a critical tool for contingency planning.

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Another variable in the spread of futurism techniques will be the possibility of growing comfort with futuristic concepts at the senior management level, with an increase in the use of these techniques for asset/liability modeling and for forecasting in support of strategic and operational international planning. Cross-impact analysis is one example of the many techniques that will become more useful over time.

### **PREDICTED DYNAMICS OF SIGNIFICANCE**

In the absence of a Delphi study or scenario, and in the interest of collecting a joint impression from a large number of experts, I asked survey participants what they thought would be the most dramatic events or trends facing actuaries during the coming decade. (The survey was conducted before the onset of the Middle East crisis.) Their predictions included:

- o increasing ownership of American companies by foreign organizations with deep pockets and considerable patience;
- o increased dominance of world market share by non-U.S. companies;
- o expansion and economic growth in the Pacific Rim;
- o increased difficulties in evaluating financial institutions, because of increased investment complexity (the valuations may prove to be quite frightening);
- o unification of the European market under directives including those mandating removal of national barriers for marketing life and property/casualty products;
- o a panoply of strategic responses to harmonization -- investment in Europe, investment in America, joint ventures, and a rush for Michael Porter's book;
- o blurring of differences between financial institutions, with other countries taking the lead;
- o intensified marketing competition under a variety of strategic approaches -- such as cost containment, productivity growth, and innovation;
- o a growing number of bank and insurer insolvencies (errors have become far more costly, and some may prove to be embarrassing);
- o changes in social security systems and private employee benefits, as costs skyrocket and demographic trends lead to a shift in the burden of care;
- o opening of new markets in nations where insurance as a concept is relatively new, and where ratemaking data and management foundations do not exist; and
- o the impact of AIDS on the workplace and on total costs worldwide.

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These developments are sobering, aren't they? Few of them inspire excitement or joy. Perhaps that is one reality of global dynamics: you must plan to avert major problems but buy into the opportunities when they appear.

### **TOMORROW'S ISSUE FOR INTERNATIONAL ACTUARIES**

When asked which international marketing and management issues and challenges will require the most professional involvement, actuaries had various responses: (1) evaluating profit potential and strategies among different foreign units, and relating that profitability to stated goals for growth in each country; (2) defining and supporting financial standards when nonactuarial senior managers promote investment and ambitious sales objectives (as a corollary, monitoring relationships between sales and acquisition expenses; both relate to a process of reducing complex actuarial issues to manageable business issues); (3) understanding why specific product types and distribution systems will be more effective in some countries than in others, and convincing other managers of the management team to adapt expertise to local settings; (4) coordinating overseas operations with insurance affiliates or consulting partners, using effective communication and listening skills; and (5) in capsule, finding the techniques to reach the profitable market niches in country after country (this is seen as one of the major challenges of an international actuary).

### **GETTING READY FOR GLOBAL DYNAMICS**

The following guides to effective preparation were mentioned by sophisticated, successful actuaries; so, although they may sound simplistic, they offer significant advice:

- o Know your limitations -- you can't be an expert everywhere.
- o Listen to and learn from actuaries here and abroad.
- o Seek experience in management, organization, and planning.
- o Follow shifting international environments and practices.
- o Read, read, and read!

Finally, a few independent comments were offered: (1) our major opportunity lies in keeping our industry strong; (2) we help ourselves by helping other countries to modernize; and (3) insist on the use of local management abroad, not just Americans.

### **CONCLUSION**

For all in attendance -- whether sophisticated in international management or just crossing its threshold -- recent history and the opinions of experts underscore the importance of understanding global dynamics and preparing for them. The observations and suggestions I've presented can be seen as an early chapter in a challenging and rewarding education.

**MS. LINDA B. EMORY:** In my only trip to the Magic Kingdom since I've been here, I couldn't help hearing a familiar song called "It's A Small World After All." When I first came to the Magic Kingdom with my children some years ago, "It's A Small World" seemed to mean that children all over the world were a lot alike. They wear different things. They look a little bit different, but they're all alike. That's certainly been true in my experience. Children on the trams in Holland act like children on the buses here in the United States.



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However, as I heard "It's A Small World" this time, it meant something different to me. After two years of living in The Netherlands, two years in which I watched my colleagues jump on planes and head all over the world and in which I communicated all over the world by fax, it means to me now that the world is getting smaller. You'll probably notice this trend soon, if you haven't already.

Since my company, the Nationale Nederlanden, operates internationally in 22 countries, I thought it would be interesting to look back at the global dynamics that affected its international expansion. Keep in mind that, for a company that does property and casualty business, the need to diversify risk calls for international expansion. But I'm going to talk mostly about the reasons for the company's life insurance expansion.

### GLOBAL DYNAMICS AND ONE COMPANY'S EXPANSION

Prior to World War II, colonialism was the global dynamic force that caused Dutch companies to follow their citizens to the colonies and to begin international operations.

The Dutch colonized in the Caribbean, South America, and the Far East, and Nationale Nederlanden still has operations in some of these areas.

After World War II, the colonies were lost. The Dutch, like the British, retreated to their home market and consolidated their positions. Then came the Cold War and bipolarization. By the 1960s, the global trend was toward merger and consolidation. Interestingly enough, that's when two companies, the Nationale and the Nederlanden, merged to form a very strong Dutch insurance company with a significant market share. Additions to its strength in the home market have occurred over the years to bring total life market share to 25-30%. That left little room for internal expansion. Dutch insurers, unlike their American counterparts, have not fought it out in the domestic marketplace in terms of premium rates. They looked to other countries to expand, and that international expansion came at a time when they were very strong domestically and making good profits.

The 1970s were characterized by massive disruption of the global economy as a result of the oil crises of 1974 and 1979. Gas was discovered in Holland's North Sea. The Dutch economy generated cash that couldn't be absorbed locally. Interest rates at home were low, and foreign exchange was available. That was when international expansion reemerged on a larger scale. The European market was heavily regulated, and entry into it was difficult. North America looked like a good place to invest because of the open economy and because acquisition candidates were available.

The international division of my company was created during this period. When my colleagues in the international division tell how they operated 25 years ago as compared to how they operate today, as far as communication and transportation is concerned, you realize how much things have really changed and how the world has shrunk!

The 1980s brought an explosion in global communication. Interest rates in America were high, and investment from abroad became fairly common. Also, the 1980s brought the emergence of the Pacific Rim, and my company began life operations in Japan, Taiwan, and Korea. Additional investments became necessary or seemed important in

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North America, because critical mass became an issue. The middle-sized companies that Nationale Nederlanden had purchased here needed strengthening as competition increased. In the late 1980s, the emergence of the idea of a single European market by 1992 caused my company to turn its attention back to Europe and invest in operations in Spain, Greece, and the United Kingdom.

### **GLOBAL DYNAMICS AND THE LONG-TERM VIEW**

The Dutch look at their international investments and at the world in a long-term way. They've had some successes and some failures, but it's clear that they are in the game for the long term. They don't sell a company based on short-term performance as so many American corporations would. As a part of the planning process of the international division, a periodic assessment is made by the different geographic teams of the expected business environment in the various countries where Nationale Nederlanden operates or where it may wish to consider operating. This includes determining if several factors appear positive or negative: the political environment; the economic environment; the stability of the currency; the ability to transfer currency; the ability to enter the market; the growth of the market; the profitability of the market; and whether additional strengthening is needed in the operations already in place in those particular countries. Finally, based on this assessment, a decision is made as to whether it seems wise to invest or divest in the particular country.

When conditions seem favorable for developing a market or for entering a new country, a team from the international division of Nationale Nederlanden does a market study, usually carried out on site. This study develops the in-depth information needed to evaluate the factors previously listed. In this way, developing opportunities can be addressed in a timely manner. When you want to invest in a particular area, and especially if you want to make an acquisition, it helps to be in a position to take fast action when the opportunity arises.

If Nationale Nederlanden does scenario testing, it is as part of well-developed strategic-planning analyses of the external and internal environment, threats, and opportunities, and in contingency planning.

### **HOW MAY GLOBAL DYNAMICS AFFECT FUTURE BUSINESS?**

What are the forces of global dynamics that may affect the insurance business in the future? First, we all know that the economy has already gone international. If something happens in the stock market in Japan, it's probably going to affect the stock market in London and then the stock market in New York. If you have losses in one stock market, you're probably going to have them all over the world. If you're issuing products that are related to these equity values, this will affect your business all over the world.

The big event of the 1990s so far has been the fall of the Berlin Wall and the emergence of Eastern European countries from communism. It will be difficult to acquire companies in Europe because the demand has pushed prices so high. However, for companies with long-term objectives and patience, there may be opportunities to develop business in some of these emerging markets and in other similar Third World markets.

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As the European community opens up, it's going to be hard for the smaller companies to survive. This may encourage more mergers of strong local insurers to improve their position to be a major player in the pan-European market. In 1988, for example, the Axa merger with Compagnie du Midi to become Axa-Midi made it France's second largest company and better positioned it to compete when the market opens up across Europe.

Another trend that's affecting insurance companies is the increasing participation by banks in the insurance market. In France, the banks sold 38% of the life and savings premiums in 1988. Earlier this year, Holland lifted its ban against joint ownership of banks and insurance companies, and that's bound to affect my company. As far as the whole European community is concerned, the Second Banking Coordination Directive allows banks to sell insurance throughout the EC effective in 1992. Something different is happening in the United Kingdom -- really as the result of the Financial Services Act -- where insurance companies are signing up building societies to sell their product. All but two of the top ten building societies in Britain have been signed up as exclusive distributors for insurance companies.

As Europe becomes a larger market with more insurers, it will look more and more like the American market. It will have about 340 million customers, and there will be about 1,000 insurance companies. In America there are about 240 million customers and 2,000 (or maybe 1,000 viable) companies. You would expect this to lead to the same sort of competition that we've seen in the United States. We certainly all have common distribution problems and EDP system problems. We'll probably have some of the same pressures on profits and the resulting expense concerns.

### **GLOBAL DYNAMICS: AN ONGOING DIALOGUE**

So, there's going to be even more opportunity for exchange of information in groups like this. Maybe some of the current international meetings aren't the best place to exchange information, but there will be opportunities to learn from each other. That's why the Life Insurance Marketing and Research Association, the Life Office Management Association, and similar organizations are going international; there's a market for their services.

Obviously, legislation and taxation in each country greatly affect the insurance business. Recent trends in the United States, where politicians promised to lower insurance rates by legislation and where the industry has just been saddled with a big tax increase, have caused our country not to seem as stable for foreign investment as it was in the past. Investors are also taking note of the faster growth of the insurance business in the Pacific Rim and in Europe as compared to the United States.

Yet, because of the high prices for insurance companies in Europe and the difficulty to gain entry into some countries, America still offers attractive investment opportunities. The trend of changing demographics and an aging population, with the resulting strains on the social insurance systems that Paul mentioned, might bring an opportunity for our industry. We don't have to be totally frightened. If we can compete effectively with the other financial institutions, we have an opportunity for future growth while helping to meet the financial security needs of important segments of the population.

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Finally, since I've been watching our educational TV channel in Atlanta, I have begun to wonder about the trend toward global warming. It may not be really significant, but when you consider the storm losses that the property and casualty companies have suffered over the last two years, multiline companies should at least ponder the possible consequences of global warming. It is a global trend that we should at least consider in our worst-case scenarios.

**MR. WATSON:** There's a lot there to think about, and the example you've given us of Nationale Nederlanden is very valuable.

I'm going to talk about consulting firms and about futurism and planning. I, too, will speak from my own experience, which is rooted in life, health, and pension insurance. I will talk mainly from the perspective of the Society of Actuaries, but what I will say has equally as much to do with the property/casualty fields of activity of the Casualty Actuarial Society.

Second, if I sometimes slip and say the United States, I really mean to say "North America," and that certainly includes Canada.

Third, I'm going to be critical. I don't think the financial security industry has done very well in planning for global dynamics, and I think that a large part of the responsibility can be placed on actuaries. After all, solving financial security problems is the particular province of actuaries. We know best, or should know best, how to mitigate and absorb the risks that affect financial security programs. The problems for financial security systems are worldwide. They certainly exist in all industrialized countries, and we find them increasingly in Third World countries. Now we are even finding them in the communist world.

Actuaries have three roles in the search for solutions to these problems: they have a role as practicing professionals, a role as educators, and most definitely, a role as planners.

### **OUR ROLE AS PRACTICING PROFESSIONALS**

As practicing professionals, we have to give advice to our employers, or to our clients if we're consultants.

Linda spoke about what was happening in the case of insurance companies. She particularly focused on a foreign company coming to the United States, but what she said can be applied equally well to North American companies going overseas. The same sort of problems concerning how to allow for global dynamics affect consultants as well, including consultants to insurers, consultants to employers in the benefit compensation area, and consultants to governments on social security.

There's a tendency to let the problems and the experiences of insurance companies dominate discussion of the actuary's role, and you can certainly see it in the emphasis given in the program to this meeting. This concentration on insurance companies as compared to consulting is marked and inescapable, but it is not surprising. After all, the insurance companies do have the big bucks, and they have the big battalions of actuaries,

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too. Nevertheless, consulting firms have also been developing overseas ties: by purchase, by joint ventures, by finding correspondents -- loosely termed, "pen pals" -- and even by some indescribable relationships, which include calling yourself one name here and another name there and not knowing whether you've got any financial relationship between the two names.

Consulting firms have made the same mistakes as insurance companies, just as they've had some of the same successes in going overseas. Consulting firms have sometimes gone into the wrong countries. Or, if they went into the right countries, they chose the wrong partners. If they got the right country and the right partner, they sent the wrong people overseas to represent them. It's a multinational waltz -- two steps forward, one back -- and you can trace it to bad planning and even to a failure of the plan. I will say more about this later.

### OUR ROLE AS EDUCATORS

The second role for actuaries is as educators. Although, as Paul Campbell said, actuarial terms are not always universal, still the concepts and the scope of actuarial science are the same worldwide. One of our problems as actuaries is that we're few in number and relatively unknown. As a result, respect for actuaries has varied considerably from country to country, ranging from the heights of respect we get in the United Kingdom, to the somewhat middle-ground regard we receive in Canada, down to the naivety within the United States about what we do. In the United States, after all, economists are always preferred for serious advice.

The scale of respect I've just drawn up reflects our varying level of prestige within the English-speaking world; between the English-speaking world (including, for this purpose, Japan) and other countries, there is a dramatic dichotomy with respect to how the actuarial profession is organized. In English-speaking countries, control over entrance into the profession is exercised by the actuarial profession itself. This is in contrast to the continent of Europe, where control over entrance is exercised by the universities. Then, there are countries (such as Mexico) where actuaries are awarded credentials by either their professional organization or the universities. There are other countries where there are no formal credential-granting procedures for actuaries, as is true for many countries in Africa and Asia.

Historically, where there was no strong local profession and no strong university role, the U.K. Institute of Actuaries used to carry the flag of empire. It did the educating. It set and administered the examinations. It decided what would be taught and who would be accepted as an actuary. The Society of Actuaries, through its educational system, is trying to assume the burden of actuarial empire. For example, we now have direct involvement with mainland China. The Society is providing teachers and giving other assistance to a program at a university in mainland China that is training prospective actuaries. We will see similar programs in the countries of eastern Europe, which may also need financial support to get off the ground. The Society has set up a Committee on International Relations to deal with these requests and offer assistance where feasible.

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I should point out that such an offer of assistance is not made just in order to gain prestige for the Society. There are economic implications involved for U.S. actuaries, because whoever sets the agenda shapes the direction of the program. If new educational programs in other parts of the world mirror the North American outlook, then North American insurance products, North American regulatory style, and it is hoped, North American companies may prevail in foreign markets.

The first draft of what could be described as "a statement of foreign policy goals" for the Society of Actuaries referred to spreading the North American system throughout the world. It's true that a less chauvinistic outlook finally prevailed, but nevertheless the thrust was clear: education is meant to serve as a means of spreading our system elsewhere. This raises a delicate issue, because help is always welcomed but domination is resisted. Unfortunately, the lines of demarcation between the two are often faint.

### OUR ROLE AS PLANNERS

Now let us look at the actuary's role as planner. Here I would claim that, unfortunately, actuaries have not been much help in planning international expansion -- Linda to the contrary -- either for insurers or for consulting firms. I think it's largely because North American companies look too much at the bottom line and not enough at potential market share. In any event, the North American insurers missed a golden opportunity to build an impregnable base in foreign countries at a time when the U.S. dollar was supreme and U.S. prestige at its highest. That isn't true today, but it was true 10-15 years ago. I think we could have built such a base. After all, the markets are quite similar, even though there was often local protective regulation against North American involvement. (For example, I can recall that, when I worked in Canada in the late 1950s, there was a genuine ferment to mutualize Canadian insurance companies, just to guarantee that U.S. investors kept their hands off those companies.) Moreover, the products did need certain adaptation to the local needs -- the whole cultural question -- but these problems were faced by other types of North American business, and yet they did go overseas and did expand. We were content to plow our local fields, and we just didn't look over the hedgerows that divided us from the fields next door until, of course, we began to hear about 1992 and the harmonization of Europe, and comparable developments elsewhere. Now, those developments have made us fear that we're going to miss the bandwagon altogether.

The consulting firms weren't much better, and perhaps worse in some respects. In fact, there are some major consulting firms that have not yet begun to expand. Consulting firms did, in some countries, have the additional problem that no one even knew what a consultant was. Take Japan. Japanese companies believed that insurance companies and banks did all the actuarial work for nothing, so why on earth pay for it? Well, the only problem was that the work done by insurers and banks never included consulting. It just produced a mass of undigested figures. There was not as much regulation against the entry of foreign consultants. We were just too timid, and we really didn't plan.

In any event, we here in North America may actually be too late -- maybe not, but maybe so. In regard to the 1992 harmonization, there isn't a single insurance company on the continent of Europe that worries about competition from a U.S. insurer. The European insurance companies are worried about the British. They're worried about the

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Germans. And, although it was not admitted quite so openly, they're worried about the Japanese. But they're not worried about the Americans -- we just don't have the financial power to really bother them.

### FUTURISM LEADS TO INTELLIGENT PLANNING

That brings us back to planning, or to the lack thereof. This reminds me of a story about the night a friend of mine was driving in New England and got caught in a real pea-soup fog. He couldn't see anything, but he was trying to drive. He decided to apply an intelligent planning technique. He saw the taillights of a car ahead, and he thought, "Okay, I'll follow that car because, if he goes off the road, I'll probably know about it before I do the same, and so even if I can't see anything, I'll be okay." He followed the car ahead for a long time. Then suddenly the car ahead stopped dead. My friend rammed right into the back of the car. (He had been following pretty close to make sure he could see the taillights.) He got out of his car, and he walked up to the car ahead and said, "Gosh, I'm awfully sorry. I certainly didn't mean to hit you, but why on earth did you stop?" The guy said, "Well, why not? After all, I am in my garage."

That's one approach to planning. My friend wasn't an actuary, but I have a sneaking suspicion that there are many actuaries who approach planning the same way. But we should be experts in planning. We are futurists, or we should be, and futurism is, after all, intelligent planning. Our trouble is that we are often forced in applying futurism to restrict it to the lowest level -- planning for short-term profits. As Paul said, we do understand and use modeling to some degree, e.g., in asset/liability cash flows and stochastic modeling. We know about, and we occasionally use, scenarios in order to look at the best and the worst of all possible worlds. If we allow ourselves to daydream, we go to the Delphic Oracle, and we end up with a consensus result, but always and inevitably we are obsessed with ruin. Yes, ruin is a significant hazard for a financial security system, and we must seek to avoid it. But if we think about ruin all the time, we keep our mind fixed on the likelihood of the pain of failure and never on the possible pleasure of success.

In any event, how do we factor into our reasoned provisions against ruin things like an explosive power grab for oil fields by a tin-pot dictator, or a president's obsessive infatuation with cutting capital gains taxes?

### THE ACTUARY'S CONTRIBUTION

It's not enough for actuaries to play with planning, to try to use the tools of futurism as if they're a child's building blocks that you pile one on one to reach a simplistic solution. Rather, as actuaries we must demonstrate again that we're the painters of the larger picture, that we can still be the steersmen of the insurance industry, since we know best how that industry responds to the buffeting of uncertain, but surely inclement, weather.

We can guide our clients best to the tranquillity of a satisfied, productive work force. For example, consider a multinational company that is trying to decide which of two countries will be the location of its new manufacturing plant. There are many factors bearing on this decision. In fact, there's almost an endless number of them: cost of the material inputs, cost of transportation, prevailing patterns of benefits and compensation, availability of work force and how easily it can be trained, availability and cost of capital,

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level of inflation both now and in the future, likely selling price in the countries under consideration and elsewhere, regulatory trends, cost and future development of social programs, and on and on and on. We may have made some assessment of these factors as they exist today, but they will change in unknowable ways in the future.

The question is a commonplace one. How do you quantify your future profits and decide which of the two countries you're going to put your plant in? Companies make decisions like this every day, and it is a problem that actuaries are best equipped to help solve. Actuaries are skilled at disentangling the factors of the future that are subject to uncertainty from those factors that are subject to imprecision (uncertainty and imprecision are not at all the same thing) and can provide the means of mathematical manipulation that will enable the employer to obtain an overall pattern and to reach an intelligent decision.

### UNCERTAINTY, IMPRECISION, AND FUTURISM

Yet, at the moment, actuaries are perhaps not as fully equipped to solve such problems as we should be. As I said, uncertainty and imprecision are not the same. We can deal with uncertainty through stochastic analysis. We tend to treat imprecision as if it is the same thing, and it isn't. Imprecision needs its own techniques of analysis. It can be argued that if you're going to have a mathematical method of handling imprecision, you need to make use of something that is irreverently called "fuzzy logic." Allan Affleck talked about this in his presidential address at the General Session. The Society and its Futurism Section have begun to sponsor research into fuzzy logic and fuzzy sets, fuzzy numbers, etc. Personally, I see fuzzy logic as one of the most exciting developments for actuarial science to come along in many years, because I see it as a potential means of reinforcing the interests and claims of actuaries in what should be our chosen means of prediction and planning -- futurism.

### CONCLUSION

To conclude, we've explored the current interrelationships between global dynamics and the actuarial profession, how these dynamics affect us, how we've responded to them, and how we may and should respond to them in the future. Not surprisingly, we haven't given any descriptive prescriptions as to the role of actuaries or our employers in this chaotic, fuzzy world; but we have, I hope, set out for pondering a map of the route that actuaries have been taking and should take if we're going to ensure the future prosperity of our profession, our employers, and those beneficiaries of financial security programs that depend so heavily upon us.

**MR. WILLIAM K. CRISE:** Linda, I wanted to ask about the on-site planning a company does when it is looking at a new market. What is the appropriate length of time to give to an on-site model? Is it weeks, months, years?

**MS. EMORY:** When a market study is done, it normally takes several months. An evaluation is updated every year, so every year a reevaluation of the particular market is done. That's a way of allocating the resources and getting an idea of what resources are contemplated for investment in each market. When you might make the investment, then a lot will depend on what the opportunities are and when something is available.



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Priorities will be made related to how aggressive you want to be in pursuing that particular investment.

**MR. CRISE:** My question really is, Are you fooling yourself if you think it's going to take a short period of time? What would be your advice to management in saying you need to allocate at least X amount of time to get a real feel for whether you're going to enter a country? What's too short to give a realistic view?

**MS. EMORY:** Europeans are better than Americans are at understanding the difference in cultures and at already having some ideas of the different systems. In Nationale Nederlanden's case, there's a long history of operating in many different countries, and the company uses that experience. For a U.S. company, which is just beginning to think about going into another country, there is really a lot to learn and a lot to appreciate in terms of different cultures, different regulatory environments, and so on. So yes, it's going to take a while. I don't know how long, but several years, I would think.

**MR. ROBERT J. MYERS:** In my naivety, I would like to ask a question of the panel. I can understand the very good reasons in this shrinking globe of ours for participation in international activities. I'd like to raise the question of why should a mutual life insurance company, which is presumably owned and operated in the interest of its policyholders, expand internationally rather than just stay national?

**MR. CAMPBELL:** I'd like to focus the answer on the short-term history of what has happened here in the United States. Our American financial services industry has become multinational in spite of us. One reason for a mutual company to consider the international environment is simply to be able to compete better with companies from other countries as they take their strong and growing positions in the United States. The other is that, to my mind, it is a truism that the world is going to be global whether or not we want it to be and that we must be a part of it. There will certainly be individual companies that are unable, for one reason or another, to be a part of the global market, and we must be realistic about that; but I think that mutual companies have found ways of structuring themselves that don't necessarily keep them out of that game.

**MR. WATSON:** Bob, I think that your question is a good one, but mutual companies have been making investments in a number of areas that are not directly related to their business. They have invested in property/casualty subsidiaries and so forth. It's a question of whether one believes that these are plausible investments for the surplus of the company, investments that presumably make more money for the policyholders.

**MR. STEPHEN D. DIAMOND:** Barry, do you see the benefit practices in other countries beginning to have an impact on the U.S., or vice versa, as this globalization continues to take place? Where do you see the advantage currently lying in that regard? Do the differences redound to our benefit or foreign countries benefit? Particularly of such things as socialized medical practices, and indexation and portability of pensions, which have become major issues in Canada and the United Kingdom in recent years.

**MR. WATSON:** I think it depends very much on the type of benefit. Health insurance, of course, is the area in which the United States is out of step with everyone else in the

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industrialized world. When you consider the debate that is going on about the success of the health system in this country, you can't help but think that at some time down the road there's going to be a move towards what the other countries have done, probably towards the Canadian model. At least it's talked about a lot. I don't know, but I think that's one area in which, in a sense, we are vulnerable. This vulnerability is increased when you look at the spread of international unionism, particularly if you're looking at a union with members at a company for which the parent is located in The Netherlands or the United Kingdom, or another country with a strong union tradition. Unions will begin to insist on benefits for their members worldwide which are more familiar to them.

On the other hand, I think that we are still largely calling the shots in the area of pension benefits. You're now beginning to see, and whether it's because of us or not is debatable, a tremendous spread of defined contribution plans outside the United States. This has been largely spearheaded by U.S. multinationals, which have now come to the conclusion that they want defined contribution plans regardless of the local culture. They're beginning to succeed in putting them into effect, partly because such plans do appeal to the employees in that they've got their piece of the money which they can and do take with them from employer to employer.

Portability is something that is spreading into this country from outside countries. As far as indexing goes, we still tend to resist that with a lot of fervor.

**MR. DIAMOND:** It seems to me that indexation and the defined contribution plans are connected with each other. It certainly must be a disincentive to a U.S. multinational to find itself in a situation where it's required to index benefits by local law. A defined contribution plan is an obvious answer to that. I wonder how many defined benefit plans are going to be left in some of those countries where indexation is now required.

**MR. WATSON:** We should be able to predict that, shouldn't we, Steve?

**MR. CAMPBELL:** None of the three of us had the benefit of hearing the other two speak before we prepared our remarks, and I must say that Barry's talk on a number of the challenges actuaries are facing in the future raise some continuing concerns that I have, and I just want to mention one point in parting.

We must not, in our actuarial profession, sit complacently by and think that we have some kind of a monopoly on the whole area of financial prediction and planning for the future. We must be appreciative that other professions, such as the mathematical statistics profession and the finance profession, are all investing a great deal of money and effort into education and development of increasingly sophisticated techniques.

As actuaries, are dealing with global dynamics, part of what we must do is continue to support the concepts that both Allan Affleck and Daphne Bartlett mentioned in their speeches at the General Session. We must have increasing education, first at the collegiate level and, perhaps even more importantly, on a continuing education basis. It's not only futurism techniques that must be taught, but also a number of other educational techniques to go along with the knowledge we've already assembled in support of our profession.