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GEARING UP TO BE APPOINTED ACTUARIES

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MR. WALTER S. RUGLAND: I was asked to moderate and put this panel together last spring, prior to the adoption by the NAIC in the U.S. of the final regulations regarding the appointed actuary's opinion and memorandum. It was also prior to the tabling of the new insurance legislation in Canada. But we could anticipate the actions that have taken place.

With this in mind, I thought a view of the activity in the U.K., where the appointed actuary concept has been in place for awhile, would be helpful. But even there, change is continuing to be discussed with respect to the responsibilities of actuaries in the European community.

As a result, our panel is made up of a British actuary, a Canadian actuary, and two U.S. actuaries, one from a large company and one from a small company.

Chris Daykin is the government actuary in the U.K. and, as such, is the lead person with respect to the issues surrounding the appointed actuary. He's active throughout Europe in actuarial matters, as the U.K. helps the eastern European countries and continues to try to maintain the position for the profession within the Economic Community.

Bob Dreyer is the chief actuary at Erie Life in Erie, Pennsylvania. He used to be a consultant. His actuarial staff totals two. His view will be that of a small company actuary.

Frank Irish is the corporate actuary at John Hancock in Boston. His actuarial staff is large. Frank has been active throughout his career and currently is much involved in

the development of the asset valuation reserve and the interest management reserve being considered by the NAIC for statutory accounting.

Paul McCrossan is the President of the CIA. He is a partner of Eckler Partners in Toronto. Paul has been much involved with the Canadian Institute in the development of the new legislation affecting actuaries in Canada.

Each one of these panelists will give prepared remarks; at their conclusion, we will entertain questions and comments.

MR. CHRISTOPHER DAVID DAYKIN: I hope that I can throw some light on the appointed actuary system as it has developed in the U.K., having been introduced by legislation in 1973.

Although the appointed actuary system was introduced only 18 years ago, the role of the actuary in the life insurance company has, of course, been established for much longer. One can trace the responsibilities given to the actuary within the company back to the 1870 Act and, indeed, perhaps earlier than that. But the 1870 Act was the first insurance supervisory legislation in the U.K. It applied only to life insurance companies and it gave a role to the actuary to determine the valuation assumptions and methods. There was no prescriptive valuation basis laid down, as was beginning to be the case in legislation being made, I believe, on this side of the Atlantic in New York and Massachusetts around that time; the actuary was deemed to be the professional person within the company who would determine the valuation methodology and assumptions.

The valuation at that time was required to be carried out only every five years. Companies that were already in existence were given an exemption even from this. They only had to have a valuation every 10 years, so one can imagine that perhaps things were not changing as rapidly then as they are now or else they hadn't realized that they were.

The 1973 idea of the appointed actuary was to move from being an occasional look at the company at a particular valuation date to the situation where a named professional individual was responsible for continually monitoring the financial status of the company.

The 1973 legislation said very little about what the appointed actuary was supposed to do. What it did say was that every company had to have one -- a named individual who was to be called the appointed actuary. That individual had to be a Fellow of the Institute of Actuaries or a Fellow of the Faculty of Actuaries and had to be over the age of 30. That was a proxy for an experience qualification, although as we shall see later, there were other safeguards in that respect. Although the legislation is quite specific, with only Fellows of the Institute and Fellows of the Faculty being permitted to perform this role, there are, in fact, some appointed actuaries who are neither of those. They are Fellows of the SOA, Fellows of the CIA, or Fellows of the Institute of Actuaries of Australia who have received a special dispensation from the supervisor, the Department of Trade and Industry (DTI), to allow them to be an appointed actuary. As a condition of allowing them to be an appointed actuary, they have to become an affiliate member of the Institute of Actuaries and thereby subject

themselves to the professional standards and to the disciplinary process of the Institute.

Although the legislation doesn't say a great deal about the appointed actuary, one of its features was to introduce a partnership between the supervisory authority and the profession. It was agreed that the profession would build on the legislative concept and introduce standards and guidance to take the concept further. So the whole idea was thoroughly undergirded by the profession and was a partnership that was encouraged by the DTI as the supervisory body, and the Government Actuary's Department acting as actuarial advisors to the DTI, being a bridge between the appointed actuary and the DTI.

The statutory requirements for the appointed actuary were that he or she should carry out a valuation of the liabilities, having regard also to the assets of the company, once every year and that a summary of that valuation should be submitted to the DTI and placed on the public record so that it could be looked at by anybody who wished to, be they policyholders, shareholders, or simply interested third parties. The appointed actuary has to sign in his or her own name a certificate with each return to the DTI giving the amounts of the mathematical reserves, the required solvency margin under the European community solvency directives, and a certificate, if necessary, on implicit items of profit that are to be taken into account in demonstrating the solvency margin.

On the professional side, the actuary is subject to a series of different requirements. First come the general requirements of the Memorandum on Professional Conduct and Practice. These are general professional behavior guidelines that apply to all actuaries, not just to appointed actuaries. Next comes GN1, which was the first of what has now become a series of guidance notes. (There are now 18 guidance notes issued by the Institute and the Faculty of Actuaries on specific topics.) GN1 was entirely geared toward appointed actuaries and was intended to set the framework for the role and responsibilities of the appointed actuary. GN8 is more specific and relates to the determination of liabilities, interlocking with the legislation in this regard. Temporary Practice Notes, as the name implies, are expected to come and go; there are a couple of Temporary Practice Notes that provide amplification of certain aspects of the guidance.

Looking briefly first at the memorandum, insofar as it applies to the appointed actuary, the obvious thing is that the actuary should act in all circumstances with integrity and honesty. Conflicts of interest that may arise must be disclosed, and the actuary must not be guilty of any deceit or fraud. Second, the appointed actuary owes a duty of care not only to the principal (an employer or client), but also to parties who might be relying on the advice, which includes all the policyholders. Third, the actuary takes personal, professional responsibility for the advice. Fourth, and important in this context, is that the actuary must have relevant experience, knowledge, skill, etc., for the particular post that is going to be fulfilled; clearly, for the post of appointed actuary, this is of particular significance. Lastly, in formulating advice, the actuary must make it clear to whom the advice is addressed; it must not be passed or amended by a third party during the course of transmission to the principal.

Guidance notes GN1 and GN8 become more specific because they relate directly to the appointed actuary arrangements. The basic principle of GN1 was to set out a threefold responsibility of the appointed actuary. First, the professional responsibility to the Institute or the Faculty. Second, a responsibility to the principal, the employer, or the person to whom the actuary is acting as consultant. And, third, and most important in this context, an obligation to the supervisory authority, the DTI.

In that context, paragraph 3.2 of GN1 is of particular interest. This is the fallback position for the appointed actuary that imposes a professional duty to go to the supervisor over the head of the company should the need arise. It states "It is also his duty, if the company persists in following such a course of action, to advise the DTI after so informing the company." Now it should be made clear that this is very much a last resort action and there is no sense in which the appointed actuary will regularly be going to the supervisor over the head of the company. It is simply the situation that the appointed actuary has a professional duty to advise the directors of the company on the financial management and the continuing soundness of the company. If, in so advising, the actuary finds that the directors are not listening, that they're not prepared to take the action that is required to rectify some adverse scenario that seems to be developing, then the actuary has this last resort capability, indeed duty, to go straight to the supervisor and say to the supervisor he or she believes there is a problem that the company is not addressing and that the supervisor should know about it.

Now to the duties of the appointed actuary as set out in the guidance note. First, they relate to the specific statutory duty to carry out a valuation of the assets and liabilities of the company on a regular basis -- normally an annual basis -- and to report to the directors of the company on the results of this valuation. The actuary is responsible for the determination of the surplus or deficit in the long-term fund. Within the U.K. environment, the long-term business, the life, pensions, annuity, and permanent health (i.e., long-term disability) business is held within a specific fund or funds. These long-term funds have to be segregated from the other business of the company, such as the shareholder's assets and any property/casualty business in the case of a composite multiline company. The actuary has overall responsibility for managing the long-term business fund and determining whether any money can be taken out of it or, indeed, whether money should be put in. The question of surplus distribution arises only when the actuary has certified that there is a surplus in the long-term fund and that money can be distributed. If a deficit should arise in the long-term fund at any time, not just at the end of the year, the company and any up-stream holding companies are banned from paying any dividends to shareholders. So it's important that the deficit, if it should ever arise, be dealt with promptly, including mid-year and not only end-of-year situations.

Last, and perhaps most important in the context of the appointed actuary, the responsibility is not just to look at the situation once a year, but it is the appointed actuary's responsibility to monitor continually. The guidance note talks about the actuary having to be satisfied at all times; that if an investigation were to be carried out, the situation would be satisfactory. That gets the appointed actuary into a whole area of monitoring the financial situation, including every aspect of the company that could impinge on the financial situation, to fulfill this requirement.

Although the appointed actuary quite clearly has a statutory role, the fact that he or she is the appointed actuary does not automatically entitle one to any executive authority within the company. That will depend on the appointed actuary's position. In some cases, he or she may be deputy chief executive, finance director, or general manager. There are all sorts of positions that the appointed actuary could hold, including simply the appointed actuary with some direct reporting line to the chief executive.

Fundamental to the role of the actuary is that he or she must have a right of direct access to the board of the company, and not just to the immediate board, but to any board higher up the line, which is critical in terms of making decisions regarding the financial status of the company.

The appointed actuary is answerable, in a sense, to the supervisor and to the Government Actuary's Department and there is a good deal of close liaison between the appointed actuary and the Government Actuary's Department acting on behalf of the supervisor. This starts from the very time that the appointed actuary is designated. As soon as someone takes over the post of appointed actuary, the DTI has to be notified of that fact. Immediately on receipt of such notification, I would issue an invitation to the individual to come and see me as the Government Actuary. We would have a conversation about the role and the responsibilities that the appointed actuary is about to take up – a conversation that usually lasts approaching an hour – going over the position of the actuary within the company, the relationship with other executives, the relationship to the board, including right of access, and the ability to monitor the financial position of the company in a number of areas.

Now, it's clear that under our system, the actuary may be an employed actuary. The actuary is not deemed to have to be independent in the sense of being outside the company. We regard either an employed actuary or a consulting actuary as being able to be independent to the degree that is required to fulfill these responsibilities. Indeed, the actuary has a professional duty to be so. Now, what particular aspects would the appointed actuary need to monitor on a regular basis? Well, there should be involvement in some way in the whole process of product design and marketing. The actuary should know what the company is up to in those areas. He or she should have a clear idea of what products are being produced, whether they are the sort of products that will create initial strain, and whether the company has adequate financial resources to write such business at the level which it is anticipated will be written. So the actuary needs to be in close liaison with the sales and marketing people.

The appointed actuary will not necessarily be the pricing actuary, although in a smaller company he or she could be. The appointed actuary must be closely involved in the pricing process and effectively sign off on any premium rates and pricing that may be going on within the company.

Similarly, on the investment side, the appointed actuary is not usually the investment manager, but he or she should be closely involved in the investment process. The appointed actuary should be involved in determining investment policy, ensuring that the investment policy is suitable given the nature and the term of the liabilities.

The appointed actuary should always be in touch with anything happening on the investment side. It should not be possible for a shift to take place in the investments of the company, in the type, security, or term structure of the investments, without the actuary knowing about it immediately, because it could have serious implications not only for the company's overall financial position, but also for the actuary's next valuation. By implication, because of the responsibility to be satisfied at all times, the appointed actuary would need to take a shift into account straightaway in determining whether the company's position was still satisfactory.

Then there is the whole question of expenses and the monitoring and control of expenses within the company, where the appointed actuary has to take a close interest and involvement. Again, this is usually without having executive responsibility for actual control of expenses. Likewise, the reinsurance arrangements will also generally be of great importance to the appointed actuary and will need to be closely monitored and approved at all times.

The statutory valuation takes place once a year and is under certain constraints because of the regulations. The valuation regulations in the U.K. are open in the sense that they don't prescribe particular bases and requirements, but they lay a fundamental responsibility on the appointed actuary to determine a proper provision on prudent assumptions. Although the responsibility rests with the appointed actuary, he or she has to be able to demonstrate that the valuation approach adopted is at least as prudent as certain minimum requirements that are laid down in the regulations. The regulations do not go into a lot of detail, but they specify certain things such as a net premium valuation with certain constraints on the valuation rate of interest and a requirement that the net premium valuation should be tested for its resilience to possible changes in the value of the assets. In particular, the company should be able to withstand significant shifts in interest rates and in the value of real estate and common stock, and still demonstrate that its financial position is sound.

GN8 gives more details to the appointed actuary of how to fulfil these responsibilities. The Government Actuary's Department, which is responsible for monitoring all of the appointed actuaries' valuations, also has a role in determining what practice is acceptable and what is not. These things are largely determined by consensus within the profession, but from time to time the Government Actuary's Department will issue information about the attitude it takes to particular things. This happened, for example, in relation to reserving for AIDS mortality and morbidity. It also happened in relation to resilience testing, where the Government Actuary's Department indicated that, as a working rule, it would be looking for the reserves to be tested against the possibility of interest rates rising or falling by 3 percentage points, and by a fall in the value of real estate and common stock of 25%. The actuary has to test, given such an instantaneous change, whether company resources would still be adequate to set up prudent reserves.

What sanctions are available if the appointed actuary doesn't fulfill these duties adequately? Well, clearly the first one is discipline through the profession. The profession is supposed to take care of its own problems in this regard, by ensuring that any unsatisfactory situation which arises is dealt with through a disciplinary tribunal. There are possibilities of court action in the case of an actuary being shown to have been negligent in some way. Also, there are the fit and proper

considerations; our insurance legislation requires that all directors and managers of insurance companies should be fit and proper people for the positions to which they are appointed. This does not apply to the appointed actuary as such because it has been left to the profession to determine that all actuaries must be fit and proper, and to exercise its own discipline. But any actuary who was also a director or manager would be subject to the DTI's control regarding fit and proper.

There is an indirect route of sanction because, should an actuary continue to be employed by a company when the DTI believes that the actuary is unsuitable, then the directors could be held to be not fit and proper people to be directors of the company and could be removed by the DTI -- unless they got rid of their appointed actuary.

Now, what are the possible weaknesses of the system? The first, and perhaps the most important, is that the appointed actuary is not just a technical position. It's very much a position where one is required to stand up to the board and to stand up to aggressive management within the company. The most likely shortcoming of an appointed actuary is lack of sufficient backbone to do just that. It may be that the going gets tough in some companies and it is vitally important that the appointed actuary should have the ability to stand up and be counted in such a situation. Incompetence and negligence can also be a weakness; fortunately, they arise extremely rarely and I trust that will continue to be the case.

Another weakness is that the role of the appointed actuary, although established now for some years, is not always understood by nonactuaries on the board and by non-actuaries in the management. So there is a continuing educational role to ensure that they understand the position.

A fourth potential problem is that it's not easy to get rid of the appointed actuary directly. The supervisor hasn't got any ability to do so. It's only the profession that can exercise that discipline. The profession does so through disciplinary proceedings and it is extremely difficult to secure a conviction. Obviously the standard of proof has to be at a high level. It's equivalent to court proceedings and therefore lawyers are involved. They will want to satisfy themselves that the situation is completely clear-cut. Unfortunately, however, the boundaries are often somewhat fuzzy and it's not always absolutely clear whether the appointed actuary has really failed to comply with the regulations, or the guidance notes, although it may be the view of the supervisor that the work has certainly been less than adequate.

So what are we doing to try and address some of these weaknesses? There has been a series of actions taken in recent months to further strengthen the position of the appointed actuary -- not because we've had any problems with it, but because we see the potential weaknesses in certain areas and want to address them before problems arise.

The first thing is that the actuaries, from the fairly near future, will have to certify in the returns to the supervisor that the guidance notes have been complied with -- and that doesn't just mean that they have complied with the guidance notes. It means also that the company has complied with the guidance notes in permitting them

access to the board, in receiving a report from them on the distribution of surplus and in other areas.

Second, the profession is expecting to introduce a practicing certificate for appointed actuaries, to try to narrow the qualification standards that are applicable. Instead of any Fellow of the Institute or Faculty being permitted to be an appointed actuary, as long as they're over the age of 30, it is likely that to obtain a practicing certificate, you will have to have certain relevant experience, that you will have to undergo and maintain a program of continuing professional development, and that you will have had a completely clean record as regard tribunal findings.

The third area is that the Government Actuary's Department, in conjunction with the DTI, has started to supervise on the basis of regularly visiting the companies. Under the old system, we were basically looking at valuation reports and returns submitted in arrears. We shall now be visiting the companies fairly regularly, talking with the management, making sure they understand the role of the appointed actuary, and taking a much more strategic look at what's going on in the company.

Fourth, the Institute and the Faculty have produced a brochure. It's available to give to all directors and management who are not in the actuarial profession. It explains the role of the appointed actuary. Last, the profession has begun to organize regular meetings for appointed actuaries so that they can share their experiences, so that they can be updated on things that are particularly relevant to their role and responsibilities, and so that they can draw strength from each other. That will be the basis of some of the continuing professional development for appointed actuaries. These are some of the developments at the moment.

MR. RUGLAND: I do want to mention that periodically the Institute of Actuaries votes to give one of its members the Silver Medal, which has been called the Finleyson Medal, and at the October 1991 Institute of Actuaries Meeting in London, Chris will be awarded a Silver Medal.

MR. ROBERT H. DREYER: I would like to start by telling you a little bit about my professional background, to give you some idea about the basis for my remarks. I spent the first six years of my career with a large, eastern mutual company. After this "basic training," I joined a national consulting firm, and concentrated my efforts on working with small- to medium-sized companies in the areas of product development, financial reporting, and general actuarial support.

After more than 18 years in what I think of as my first career, I opted for semi-retirement and took a full-time position with my favorite client. For the last eight years, I have been the chief (and only) actuary for the small life subsidiary of a major property/casualty exchange. During that time, I have handled all the company's actuarial duties, with no staff and very little consulting help -- a true "one-man shop." Now the advent of the appointed actuary requirements, particularly the need for asset/liability matching, has me hollering "uncle." As I look around the room, I think it is fair to assume that most of you (or at least the companies you represent) would fall into one of three categories. First, there are those who have extensive experience and knowledge of this subject. Many of you are capable of contributing to this panel,

and I hope you will share some of your knowledge with us during the discussion period.

Second, there are those whose company is in the early planning stages of their project. You have started your planning and implementation, but there is still work to be done. Also, there is probably some degree of uncertainty as to whether you are on the right track, and how things will ultimately turn out.

Finally, there are those who have not yet committed to an action plan. You are probably floundering around like a fish out of water, wondering what you are going to do. I can relate to how you feel because I was in that same position not too long ago and, and in several ways, I still am.

The primary target for my remarks will be those of you who fall into the second and third of those categories, particularly if you work for a smaller company. When I think of smaller companies in this instance, I don't define them in terms of assets or inforce, but rather in terms of the size of their actuarial staff. A typical example would be a company with one or two qualified actuaries, but not enough support staff to do any significant actuarial research beyond the company's day-to-day operational needs.

Now let's examine some of the problems.

The single biggest problem facing the smaller company actuary in this appointed actuary scenario is the requirement for the asset/liability testing. Without that requirement, any actuary who is presently signing the jurat for his or her company's annual statement should have very little difficulty complying with the appointed actuary regulations. However, the responsibility associated with being an appointed actuary is significantly different from that of one who signs the present jurat in an annual statement. Therefore, one should not accept such an appointment without a full understanding of its implications.

Few smaller companies are in a position right now to perform meaningful asset/liability testing. In addition to the problem of a small actuarial staff with limited available time, many companies lack any actuary who has any practical experience with asset/liability testing techniques. These companies are still at ground zero.

The cost of developing procedures to perform the necessary tests will be quite high, and, for the smaller companies, it may be hard to justify on a cost-benefit basis; you will do it because you have to. This can make it difficult to get the proper support from top management. Even with their support of the effort, the process has the potential for producing undesired results. Then you may have to choose between weakening your company's surplus or issuing a qualified opinion.

Finally, you may be faced with the likelihood of blowing your budget, because few companies can handle this situation without additional staff and/or outside assistance for both systems and technical support. Even with such help, it is likely that other projects of immediate importance to your daily operations will have to be delayed.

Having outlined some of the problems, let's turn our attention to ways of coping with the situation. The approach that I will discuss revolves around the development of a strategic plan and the points to be considered. As a basis for organizing my remarks, I have borrowed from the fourth estate that age-old list of who, what, where, when, and why. To start with, however, I have skipped to the end to consider first, the question, why are we doing this?

There are at least three reasons why the implementation of the appointed actuary regulations is important. While most of us are not subject to a statutory requirement for 1991, this will change dramatically next year. By 1993, if implementation proceeds at its expected pace, there will be very few companies that are not subject to the appointed actuary regulations and/or some form of statutory requirement involving asset/liability testing. So, like it or not, it is (or will be) required.

A major fringe benefit of the effort needed to meet testing requirements is the management information it can provide. The value of asset/liability testing to the investment selection process should be self-evident. In addition, the data developed to perform the testing will be of value in pricing, budgeting, and other planning activities.

Third, properly handled, asset/liability testing, and the entire appointed actuary program, in general, should go a long way toward overcoming the adverse publicity arising from the recent company failures and takeovers. Strengthening our reporting procedure will help restore public confidence in the life insurance industry. People should know that the problems are more related to liquidity than solvency, and that cash-flow testing might have prevented at least some of the problems. While some say that we are closing the barn door after the horses have run off, in reality, there is still time to save most of our herd.

Having set the stage, we should consider who should be involved. In a small company, the choice of the appointed actuary usually will be obvious, but not necessarily, as I noted earlier. Whoever is chosen, it is appropriate for the board to confirm the appointment at an early date. This will give the clear message that top management is squarely behind the actions being undertaken.

Our company has had considerable success in the team management approach to implementing new systems. A high-level steering committee of one or two representatives from each unit involved is set up to plan and oversee each new project. This group develops a plan and a timetable and meets periodically to report and review their progress.

In this instance, the units involved might be, for example, actuarial, data processing, and investments. Your own company's structure might suggest some other representatives, also. For example, our parent company has internal audit and internal documentation sections, one or both of which are represented on most such committees.

Even before this steering committee is formed, the chief actuary should be considering whether additional support staff is needed. I committed to such a move early this year and have spent the last six months looking for a student who has passed five to

seven examinations and who has asset/liability testing experience. I was fortunate enough to find several good candidates and have selected one who will be on board early next month.

With the personnel in place, the steering committee can begin to function. First, it must identify the sources of data that are available. This will include such things as investment records and pricing assumptions for calculating cash flows. In some instances, this investigation may lead to identifying the need for a subproject to develop some data that are readily available in useable form.

When you know what is available, you can turn your attention to finding a software package to perform the calculations. There are numerous products on the market, both for PCs and mainframes. These need to be investigated to determine which one best suits the specific needs of your company. During your investigation, don't forget to take into account the effort needed to interface new software with your existing data sources.

You may also consider developing your own system in house, but personally, I have an aversion to reinventing the wheel, particularly if we are working in new territory. It is too easy to overlook some little (or even major) consideration that subsequently can cause severe problems and delays.

When the software decision has been made, you need to plan the installation and testing of your programs. In addition, you must develop procedures that will be used on an ongoing basis, such as who provides what data, when it is due, who gets the output, and how it is reviewed and reported. Don't wait until the last minute and leave everybody guessing as to who is doing what.

Based on my experience with our approach to this implementation process, I would recommend that the documentation work be a continuing effort throughout the process. In addition to providing an ongoing record of the committee's work, it will save a lot of time and avoid misunderstandings at the end of the project.

The "where" question hinges on how much talent and computer capacity you have in house. If the resources are available, it is usually more efficient to do the work where you have direct control of it. However, in smaller companies, this is not always possible. If you decide to go outside for both software and consulting, it is important that you try to find a single source. Most vendors either have actuarial support staffs or contacts with the consultants who developed their software. Similarly, most consultants have software packages available, either directly or indirectly. By taking advantage of this, you should be able to minimize any problems of compatibility.

Finally, you may want to consider some combination of in-house and out-of-house help. This might involve seeking consulting assistance to develop the procedures to make use of programs purchased to be processed on your own computers, using a service bureau to process programs developed by your own staff, or using a vendor for both the software and the processing. In any event, whenever you decide to use outside help, you should include in your planning some provision for ultimately bringing the work back in house.

Many companies, small and large, want to hold off on implementation as long as possible, both for cost and other considerations. This usually means waiting until the home state adopts the model regulations, although in some instances other states with broad jurisdiction may supersede this with their own adoption date.

Despite the length of time this subject has been before us, there will still be many companies unable to meet their home state deadline, at least to the degree of compliance they hope to ultimately achieve. For them, some interim alternative must be developed.

Some will opt for using a qualified opinion, often on the grounds that their insurance department may not be sufficiently prepared to monitor the regulations. However, in some instances, it may be better to develop a method of estimating the results until the final system is installed. In any event, the appointed actuary will need to carefully document his or her options and the reasons for them.

Taking all these things into consideration, it is most important that a realistic time table be developed. If there is a significant chance that the statutory reporting date cannot be met, then planning for such a contingency should start now, not when it is too late to consider all alternatives. If you have a history of setting overly optimistic deadlines, this is the time to break yourself of the habit. Be sure you are well-advised as to what is involved and what problems may crop up.

In summary, while smaller companies have their own unique problems when it comes to complying with the appointed actuary requirements, the biggest problem for most companies is still the need for the asset/liability testing. While most large companies have completed much of the developmental work and are well along into their projects, many smaller companies are still grappling with the five "W's."

To them, I offer the following suggestions: first, practical solutions will sometimes have to override theoretical considerations, at least in the early years. Second, qualified opinions may be common among small companies until they can develop an adequate system for asset/liability testing. And finally, there is no substitute for having a strategic plan that is well-thought-out, well-monitored, and well-documented.

This concludes my remarks on the subject, but with the moderator's approval, I have one related observation to make. Years ago, the Society used to have a "Smaller Company Forum" included in the program at most meetings. There are numerous subjects today, such as this one, where smaller company actuaries could benefit from open discussions of their unique problems. Perhaps the Program Committee might consider trying this concept again. In addition, I would be interested in discussing with other smaller company actuaries the feasibility of establishing a "Smaller Company Section" within the Society.

MR. FRANK S. IRISH: The job of an appointed actuary is a responsibility that typically will be added to the functions of an already existing position. In a larger company, there is usually a natural candidate for the job, someone who already holds the title, such as corporate actuary or chief actuary. I want to talk briefly about requirements for that task.

KNOWLEDGE AND EXPERIENCE

The person who would take on the job of appointed actuary must have the knowledge and experience to deal with a wide variety of products, product designs, reserving methods, and sources of information. The complexity of a large company, in particular the recent tendency toward decentralization of technical functions, has a significant impact on the way the job is carried out.

I think in terms of the profit center organization that is so typical in larger companies. Originally, profit centers seemed desirable because they focused attention and responsibility on maximizing performance within very narrowly defined product areas. And indeed in many companies, including mine, they have proven to be quite effective. But they do have the effect of diluting and scattering the corporate ability to understand its own liability structure, risks, sources of profits, and solvency trends. To compensate, the reporting systems and sources of information must be highly developed.

The people in profit centers who have the knowledge about particular products are a tremendous resource for the appointed actuary. But the appointed actuary usually has no direct organizational authority or relationship to them in the decentralized situation. The wisdom and integrity of those who make technical decisions in the profit centers are as necessary to the quality of the work of the appointed actuary as are his or her own abilities.

So it is clear that in such a situation the corporate functionary needs to link technical knowledge and experience with an ability to mobilize effectively the efforts of all of these people. The technical knowledge is important, even though it will never be as profound about details as the knowledge of people in profit centers. And the organizational skills are important too.

The job requires breadth of knowledge perhaps more than depth, and the way one acquires this is to have worked with a lot of different products, to know a lot of people who have insights into particular products and are good at explaining themselves, and to be a quick learner. Saying this, I can't help but think of the several times in the past when I have publicly deplored the tendency of the actuarial profession to fragment itself into specialties, so I welcome new developments that seem to encourage at least some actuaries to develop a breadth of vision to carry out their function.

Amidst all this information, the crucial importance of documentation becomes evident. Unless blessed with total recall, the appointed actuary had better write down the chain of reasoning that led to a decision. If product actuaries are willing to do the documentation, well and good, but if not, appointed actuaries are going to have to do much documentation on their own.

Note also the requirements in the law and regulations pertaining to documentation. Section three of the new Standard Valuation Law requires an actuarial memorandum that lays out in some detail the reasoning that leads to the actuary's opinion of reserve adequacy. The accompanying regulations set forth some of the things that have to be in that memorandum, including product descriptions, significant risks, sources of data, reserve methodology, asset profile, investment policy, basis for

actuarial analysis, criteria for adequacy, effect of taxes, and so on. This very complete documentation should be retained on file for seven years after the fact. The presumed reason for all this is to help the examiners do their job, but behind it is the feeling that documentation is essential even without an external need for it.

The legal stimulus is good, in a way, because everybody hates to do documentation. It's the lowest priority in everybody's mind, and by the time the job is "done" (that is, the analysis and the decision making), the paper work gets put off until another day. But in this case, the documentation is the required end product. In other words, it is legally part of the job.

What of the person who is new to the job of appointed actuary and may not have the kind of experience that is necessary to do a really good job? Given the great mobility of actuaries between companies, it's likely that companies will frequently hire from outside to fill a job. The mobility is good for us and brings in new blood and new ideas, but it does mean that the incumbent is not very familiar with the company's products and operations.

One can say the same about mobility within the company. A common practice among large companies is to move executives frequently and expect them to be effective in their new jobs almost immediately. Company management will expect this to be as true of the job of appointed actuary as of any others, not realizing that there are special experience requirements on the job.

One can certainly observe that here is one more good reason for documentation. Think of what the new actuary, who may have the ability and education but not the experience, may need to help with the job. In other words, think of documentation as essential to orderly succession in the job.

Also important here are the professional guidelines on the experience necessary to do the job. The American Academy requires "relevant, recent experience involving significant responsibility in actuarial practice in, or related to, the subject area." It also defines minimum experience for statement signing as "three years under review by a qualified member." But this is perhaps not as onerous as it sounds; the review by a qualified member need not be recent and the relevance of one's experience may be broadly interpreted -- nevertheless, corporate practices of moving executives around may have to be modified.

THE SCHEDULING OF ANALYSIS

The old-time idea that statement work is something that's done in January and February probably never was true, and certainly isn't today. The appointed actuary's job will be spread over the year.

For one thing, the January/February period is too hectic to allow the kind of careful analysis that the job calls for. Everybody who does statement work is too busy at that time to do anything beyond functions that have already been planned out.

The work of the appointed actuary often requires special experience studies, and it requires documentation of methods, systems, and rationale for decisions, and there

needs to be consultation on investment policies and on pricing strategies. These things have to be scheduled during the year, when there is time to do them.

A function such as cash-flow testing, I admit, cannot be carried out in the abstract but needs to be based on real assets and liabilities as of a point in time. I would suggest that a solution here is to use September 30 data as a basis for cash-flow testing. Such a practice is allowable and it should be encouraged. How else can the appointed actuary get his or her work done in time to set the reserve standards at year-end?

I think the attitude has to be that the actuary is essentially setting reserve assumptions and methods, not deciding on a dollar amount of reserves. It is not necessary to have precise December 31 data to do this. The appointed actuary, after all, is not the auditor. One generally relies on others for the accuracy of listings. In a larger company, the auditing is done by people who are better at it than the actuary.

What the actuary has to do is focus in on a reasonably relevant set of data. Its relevance to the opinion that is being signed has to do with whether anything has happened subsequent to the test date that might make the reserves unsound. Changes in experience are what one first thinks of, but I think that the actuary is more likely to be faced with changes in investment policy, changes in product mix (such as distribution by age, duration or plan), or changes in crediting strategy, as events that may invalidate the test.

The actuary might prefer to avoid the "subsequent events" problem by doing the cash-flow testing as of the statement date, but aside from the sheer impossibility of doing this if the cash-flow testing is going to be any good, it must be realized that the actuary is responsible for "subsequent events" right up to the date of signing. In the words of the regulation, "material changes which occurred between the date of the statement . . . and the date of this opinion should be considered." So the actuary is always responsible for a certain period of time beyond the test date.

OVERVIEW OF ASSET ADEQUACY ANALYSIS

This phrase, "asset adequacy analysis," describes what the appointed actuary's job is all about. The actuarial memorandum that is the summary of all the work performed by the appointed actuary is actually defined in terms of asset adequacy analysis.

The phrase is intended to be a lot more inclusive than "cash-flow testing." It may include sensitivity testing and applications of risk theory. It almost certainly will include the reasoning and analysis leading to the conclusion that some blocks of business do not need full scale cash-flow testing.

Asset adequacy is a demonstration that the liabilities are supported by a block of assets (equal in book value to the liabilities) that is adequate to meet contractual obligations under a variety of conditions. The actuary has to take into account various things that may not have been part of the traditional valuation work, for example:

1. Maintenance expenses, which might be subject to inflation.

2. Lapses, which can affect the amount of gain and which may be a function of economic scenario.

3. Taxes, which greatly complicate any analysis. Complications arise from the need to do a second complete reserve projection in order to project taxes under the Applicable Federal Interest Rate provision adopted a few years ago in the U.S. and also from the more recently adopted Deferred Acquisition Cost tax which requires carrying past premiums for 10 years in the projections to assess the impact.

These tax items, however, may have a favorable aspect because, on a closed block of in-force business, the future taxes may be negative. These new tax provisions have the effect of charging much heavier taxes in the early durations, but not changing the total amount of tax over the policy lifetime. If future taxes are negative, then tax effects actually improve asset adequacy, which is an example of the need to notice things that would have seemed irrelevant a few years ago.

Finally, the appointed actuary has to be concerned with the future pattern of profit emergence on a closed block of business in addition to the current soundness of reserves. If he or she projects a series of book losses, followed by gains, then management should be aware of the problem and perhaps different reserves should be adopted. If he or she projects gains followed by losses, there is definitely something wrong with the reserve basis.

There is not enough time to discuss aggregation and asset allocation, two other "new" problems that face the appointed actuary. There are, in short, many such new problems, and the actuary is advised to use professional judgment to resolve them. Often the support for such judgment is perilously thin, so it is up to all of us to help develop the literature and the educational materials that will help make those judgments sound.

MR. RUGLAND: I would point out that the Actuarial Standards Board (ASB) is beginning to work on the standards of practice that address some of the issues Frank pointed out and, as those discussions go forward and as exposure drafts come out in the U.S., I would encourage your response.

MR. W. PAUL MCCROSSAN: The Finance Committee of the House of Commons is expected to approve a new Insurance Act soon. This act contains major changes in life insurance powers and regulation, particularly in the role of the actuary in Canada.

In this very brief overview, I will attempt to cover the following topics: the status of the legislation, the formal designation of the appointed actuary, the role of the appointed actuary in financial statements, the access to management information afforded the appointed actuary, the requirement to report on matters having material adverse effects on the financial position of the company requiring rectification, the requirement to make annual reports to the board, the legal immunity provided the actuary, the role of the appointed actuary in fairness of dividend distributions, the role

of the appointed actuary in certifying risk-related capital, and the role of the independent actuary on major corporate transfers, reinsurance, amalgamation, mergers, etc.

The Finance Committee of the House of Commons has engaged in extensive pre-study of the Bank Act, the Trust and Loan Act, and the Insurance Act. The Finance Committee will commence clause-by-clause consideration soon. At this time, members of the Finance Committee, the Superintendent of Financial Institutions, the Canadian Life & Health Insurance Association, and the Insurance Bureau of Canada support the expanded role of the appointed actuary. To the best of our knowledge, there is no significant opposition to any of the provisions in the legislation calling for enhanced role of the actuary.

Within the profession, we have negotiated a Joint Policy Statement (JPS) with the Canadian Institute of Chartered Accountants which is now in effect calling for explicit recognition of the roles of the auditor and the actuary. We are now, of course, rushing to expose standards for the appointed actuary and for financial reporting to our members. This year, detailed compliance questionnaires were sent to all valuation actuaries to ensure professional compliance with our standards. As of 1991, appointed actuaries will be required to do dynamic solvency testing, that is, to examine the ability of the company to remain solvent under a variety of scenarios concerning economic and business volatility. Finally, the profession is currently exposing a new rule of professional conduct that would require any actuary who observes a material departure from the rules of conduct or standards of the CIA by another actuary to report the matter to the CIA unless he or she is prohibited by law or unless the two actuaries are in an adversarial position such as giving evidence in court or negotiating an acquisition. It is recognized that in some situations such as labor/management negotiations, the adversarial position may be permanent.

The appointed actuary must be formally designated by the board of the company. This requirement applies to life and property and casualty companies as well as to foreign and domestic companies. The appointed actuary must be a Fellow of the CIA. If the appointed actuary is terminated, the board must report the termination, together with the reason for the termination, to the Office of the Superintendent of Financial Institutions and designate a replacement expeditiously. No actuary may accept an appointment as an appointed actuary without consulting his or her predecessor and determining whether there's a professional impediment toward accepting the appointment.

The new Insurance Act sets no prescribed methods or assumptions for the appointed actuary in preparing his report. Rather, it relies completely on CIA standards and valuation technique papers, with the provision that the superintendent may provide additional direction. The CIA standards provide that liabilities should be calculated according to the policy premium method which you might think of as GAAP basis. In all published financial statements of the company, a report from the appointed actuary on the fairness of the results is required. In addition, the respective roles of the actuary and the auditor should be described in any financial reports.

The appointed actuary has the right of access at all times to all persons and records necessary for the performance of his or her duties. This includes both the right to information and the right to any relevant explanations. At this time, the CIA does not

foresee requiring access to true outside directors, but rather only to people in management positions.

The act requires that if the appointed actuary becomes aware of any matters having material adverse effect on the financial position of the company, which, in the opinion of the appointed actuary require rectification, he or she must write a report immediately to both the chief executive officer and the chief financial officer of the company. A copy of that report must be sent to the board of directors. If, within a suitable time, the appointed actuary believes that no suitable action has taken place, he or she must advise the Superintendent of Financial Institutions of that fact.

The appointed actuary is required to report in person to the board or to the audit committee of the board at least annually on the current financial condition of the company. In addition, the appointed actuary is required to report on the expected future financial condition of the company as directed by the superintendent.

In the case of the CIA, we've negotiated with the property and casualty insurers and with the life insurance company associations the rules or the methodologies that will be used in looking at the expected future financial condition. For life companies, the horizon is obviously long term. For property and casualty companies, because of the ability to change premiums and renewal conditions quickly, the horizon is generally one year past the current premium renewal period. Materiality is an issue in deciding what work the appointed actuary must do. The profession has given direction that extensive testing is not to take place if the company clearly has adequate surplus and the business is not too volatile.

Obviously, the new act imposes considerable responsibility on the actuary. The act gives qualified privilege to the appointed actuary for any oral or written statement or report required to be made under the act. That is, if the appointed actuary's action was taken in good faith, protection is offered to the actuary against any suit or proceedings for damages against the appointed actuary.

The appointed actuary is required to give an opinion with respect to par policyholders' funds on the fair and equitable allocation of income and expenses. The company is also required to establish a written dividend policy. In my opinion, this will also require the appointed actuary to establish a formal, written surplus policy, both with respect to permanent and temporary surplus, which might need to be disseminated to policyholders at the time of issue of policy. There are restrictions in the legislation that shareholder dividends shall not be paid if the actuary believes that policyholder dividends could be materially adversely affected. In the Minister's notes introducing the legislation, there is reference in this respect to "reasonable policyholder dividend expectations." Similarly, there are restrictions against paying policyholder dividends if the required risk-related capital limits are breached.

The new legislation requires that risk-related capital be established. In Canada, this is called the minimum continuing capital and surplus requirement. The required capital is established reflecting the business risk taken on by the company. That is, the liabilities are looked at, including such contingencies as lapse, mortality, and exposure to guaranteed cash values. In addition, capital is required according to the volatility and quality of the asset portfolio. Under the new rules that are proposed, only the

most capitally adequate companies could afford to invest in noninvestment grade securities.

The required capital must be covered by a combination of tier one (or permanent) capital and tier two capital, which itself cannot exceed permanent capital. The rules for the tier one and tier two capital quite closely follow the rules established for deposit-taking institutions under the Basle Accord for the Bank of International Settlements, which is being implemented this year-end for deposit-taking institutions. The industry and the government have reached complete agreement as to what is "required capital." The industry wishes to have more items counted as tier two capital than the supervisors wish. The supervisory authorities at this time have the complete backing of the Finance Committee and the Finance Department. This means that financial subsidiaries must be consolidated to avoid double counting of capital. It is worth recording that, in my opinion, certain types of surplus notes that are fully acceptable as capital in the U.S. would not be acceptable as having any tier two capital value in Canada. The appointed actuary must produce an opinion annually concerning the amount of the risk-related capital of the enterprise and the adequacy of the capital available.

Certainly not least among our accomplishments in the last year, the CIA and the Canadian Institute of Chartered Accountants (CICA) have signed a JPS concerning the preparation of financial statements. This agreement covers reliance, communication, and disclosure between the appointed actuary and the auditor. In particular, it governs the auditor's use of the actuary's work and allows the auditor to accept liabilities prepared by the actuary if they are prepared according to CIA standards. The CICA explicitly accepts the CIA's liability determination standards. On accepting an appointment as an appointed actuary, the actuary must write to the auditor confirming that he or she is qualified to assume the role. The actuary must also establish and disclose to the auditor and to the Board materiality standards used in liability calculation.

Similarly, the actuary may use the work of the auditor in connection with data verification. The CIA explicitly accepts the CICA standards for data verification. The Superintendent of Financial Institutions has given his full support to this agreement and we currently have a CIA/CICA working party examining exactly how the JPS will be applied in practice.

Finally, reports of independent actuaries will continue to be required in the new act with respect to the protection of policyholders in any transfers by reinsurance of blocks of business. It is expected that a similar report will continue to be required in merger/acquisition situations.

As you can see, the legislative developments that are imminent in Canada are extremely wide ranging and probably involve the greatest degree of responsibilities requested of the actuarial profession anywhere in the world. We have closely followed the precedents established for the appointed actuary by the Institute of Actuaries in the U.K. I would like to personally acknowledge and thank Chris Daykin of the Government Actuaries Department of the U.K. for his invaluable help in answering questions posed by our legislators during their hearings. I hope the actuarial profession is up to the tasks given us by the Canadian legislation.

MR. CARROLL R. HUTCHINSON: Most corporate and chief actuaries are already heavily overworked and Mr. Irish indicated that corporate actuaries or chief actuaries would be apt to be the ones who would be appointed actuaries. I wonder whether that's a view that's generally shared, i.e., that in the U.S., the highest-ranking actuary in the company will be the appointed actuary.

MR. RUGLAND: Let's just take a straw poll of the sense of this group. How many of you think it looks like the appointed actuary in your company will be the highest-ranking corporate actuary in your company? I think we've got about two-thirds responding that way.

MR. JAMES W. PILGRIM: My company is totally in the life reinsurance business, on a strictly risk premium basis. When we look at the requirements for the actuarial opinion with the focus on C-3 risk and C-1 risk, we find it's not very relevant to our business. I should also add that we have an investment policy that says we will invest in U.S. government bonds of three- to five-year duration. We likely will go through a lot of time and expense to develop our asset liability matching model to comply with the appointed actuary regulations. I submit, the results of our analysis will indicate that, unless interest rates nosedive to a level below the valuation interest rate and stay there forever, we have no problem. I should also add that our surplus is equal to our reserves, so we don't have a leverage problem in that regard.

Having said all that, I guess I have a couple of pleas to the people who are developing guidelines and standards for the appointed actuary's opinion. First, can we see more work done on the C-2 risk? We've seen an awful lot of focus on C-3 risk, some on C-1, but we see little on the C-2 risk. Second, can we take a cue from the U.K. experience and try and develop a brochure for directors? I think that would be extremely helpful. Third, as a company that is licensed or authorized to do reinsurance in all 50 states, can we do something to help coordinate the enactment of the appointed actuary legislation in all the states? I had a time-consuming experience with a large eastern state in which they finally said I was appointed to the position prior to the enactment of their modified version, so they asked for another board resolution subsequent to the date of the act. I don't think it is productive to go through 50 separate board resolutions.

MR. IRISH: I have a response with a couple of points. First of all, you speak in terms of interest rates going down below the valuation rate and staying there forever as being an impossible thing that you don't want to guard against. I disagree. That's one of the conditions that we must test for. Most of us have large blocks of business or ordinary business on a 5.5% basis and we really must test how that business looks if interest rates go down to 4%. That's part of the appointed actuary's job.

Second, you mentioned that your business is largely involved with the C-2 risk and I agree that not enough has been written on that. I would point out, however, that the definition of asset adequacy analysis includes risk theory applications. It's not just cash-flow testing. As a matter of fact, cash-flow testing might be the most onerous task, but it's by no means the only application of the actuary's judgment. There are lots of others.

MR. PILGRIM: I guess I didn't make myself clear. In terms of testing the C-3 risk and all the scenarios I did with interest rate patterns, it was only the situations where the interest rates took a nosedive below the valuation interest rate where I would have a problem. All other patterns that I had for interest rate variations, and I went through 200 iterations, were fine; so that was the only situation. I agree with you. We must be cognizant of that situation.

MR. MCCROSSAN: I'm not sure what's happening with the ASB, but this concept of materiality is something that's embedded in our professional standards in Canada. I think it addresses the problems you're talking about; that is, you're expected to check whether your company is exposed to certain types of risk. But if they're not material risks given the liability and asset profile of your company, you're only required to demonstrate periodically that it continues to be an immaterial event. You're not required to go through all of the work to demonstrate continually that it has a trivial effect.