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### ACTUARIAL STUDENT PROGRAMS -- NOW AND THE FUTURE

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- o This session will examine the evolution of actuarial student programs with particular attention to the effects of the Flexible Education System (FES) and Future Education Methods (FEM). Results of a survey on the current status of actuarial student programs will be presented, but the main thrust of the discussion will center around actuarial programs in the future; trends, needs, etc. Participants are encouraged to analyze their own company program and where they seem to be going.

MR. CECIL D. BYKERK: I conducted the Actuarial Student Program Survey for this open forum, as well as to get some information for my own company purposes. The study covered 59 companies and firms. Interestingly enough, I sent it out to about 85 people, including 12-15 consulting firms. Of the 59 respondents, 57 were insurance companies and two were consulting firms. I don't know whether that means consulting firms aren't interested or they're so diverse (because they're spread out all over the place) that their actuarial student programs are hard to capture. Thus essentially the study really only covers companies. [Note: Copies of the survey may be obtained from the SOA Library.]

Within the survey, the companies and firms that responded employed 1,516 FSAs for an average number of about 26 and 1,225 students or an average of 21 students. Of the students, 18% were ASAs with two FSA exams; 22% were ASAs plus 0-1 exam. The biggest single group, 45%, was students with 65-195 hours, while 15% had 60 or fewer hours. I was curious to see how many career Associates there were, so I asked how many ASAs had become ASAs sometime prior to and including 1983 and about 34% of the ASAs fell into that category. I may have cut it off too close to the current date. Five years is probably not a career ASA, but I was curious about that. Going back ten years, 32 in this group had become ASAS in 1978 or prior to that year.

I was also curious about what people are doing as far as running their programs. Ninety-seven percent of the actuarial programs have actuaries of some qualification level running the programs or who are involved in running them. It may be that there were several people running a program committee, and we counted this if there was at least one actuary on the committee. Of those, 86% included FSAs and 12% of them were full-time -- strictly running the actuarial student programs.

Of the ASAs, 89% received their ASA at the firm or company that was responding to the questionnaire. Of the FSAs, 69% had received their FSA

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designation while employed by that company. The average number of new FSAs was 24% for 1986 and 1987 combined for the firms and companies responding.

The survey results total 31 pages and I don't intend to go into a minute examination of the answers to all the questions. I can get into them more specifically if you have specific questions, but the intent of this program is to say where we are going, what's in the future, and what the trends are. So I just want to take an overview of the main statistical parts here and then move on to the other speakers.

In the program membership area, the survey covers entrance, maintenance, and reinstatement and as you all know, there are a tremendous number of rules that can be examined in these regards. Things are changing. Companies are shifting the way they handle things because of FES.

In the study time area, the survey covered the minimum passing requirements, the structure of the study time, the scheduling, and various other categories such as rotation, dues, and meetings.

Regarding salary structure, LOMA puts out a survey that a lot of you use but it is done without regard to FES. Hopefully, we can get that squared away in the next year or so. I think they've requested some information from the Society's office about how we are structuring our exams and what we're doing. I didn't go into great depth in the survey about the salary structure because you can run a whole survey on salaries, as you well know. But I was interested in whether companies are paying for full exams under FES. When I say full exams, I'm not speaking about equivalence to old exams, but I'm talking about a course -- a given single course.

Sixty percent are giving some kind of remuneration for passing a course. Thirty-two percent have some kind of a threshold built into their system which I would translate into being equivalent to the old structure. As you know, if you have Parts 1 and 2, you have 60 credits. The old Part 3 total gives you 40, which gets you up to 100. Thirty-two percent are structuring their salary administration such that you would have to go from 60 to 100 credits to get that next exam increment.

I was also curious about the basis used for making salary increases. Fifty-six percent base increases on both exam and ---performance with 24% exam only and 18% performance only.

Fifty-three percent of recruiting is done by actuaries. We don't seem to fit into our companies' hiring practices, as you probably all know. At Mutual and United of Omaha, I think we're the only area, other than personnel, that can extend an offer to a prospective employee. Eight percent of recruiting is done by personnel and 39% involves both actuarial and personnel in the recruiting process.

One of the areas that I was interested in was the perceptions of the programs. What's happening to our programs? How are we viewed by other people in the companies? The survey asked the question -- Is the program accepted and understood by senior management? A fairly high percentage felt that the senior management of the company understood (88%) and accepted (91%) the program. It's interesting to note that a couple of companies differentiated between being accepted and being understood. I guess that means that in a couple of cases,

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people are accepting them without understanding the program. But when we dropped down and asked the question about other professionals within the organization, we found that the acceptance and understanding rate dropped off dramatically. Only about half (59%) of the other professionals -- CPAs, lawyers, etc. -- accept and understand the actuarial program. More specifically, 31% say that the other professionals do not accept the actuarial programs, as opposed to being just neutral. I'd be interested in perceptions in the companies that you all represent, as to whether or not we're gaining or losing ground in that regard.

Another general question was not specifically addressed to senior management or other professionals. Are the programs gaining, losing, or holding ground? About 22% said they were gaining ground, 13% said they were losing ground, and about 2/3 said they were just holding their own. Then I asked whether or not there's any movement to reduce the program -- reduce the study time, etc. There's a little movement here, but not too much -- 13% to reduce. Of the seven companies saying there was a movement to reduce the student program, two said it was a modest reduction and five said it was a minor reduction. So there wasn't anything really significant there.

I also asked the question of how FES and FEM were going to impact the programs. With regard to the feeling about how FES and FEM will impact any of the answers that were given, one said, "Negatively, if it lengthens travel time -- management doesn't understand FES and doesn't care." I think this is an area that we might want to toss around a bit today. What are we doing to make sure that travel time is not increased? As we've worked on FES and FEM over the last several years, I think the one recurring area of concern has been have we done something that will increase travel time. We don't want to do that. So I'd be interested in some comments.

I also stated, "Describe any other general feelings about the status of the program." I wanted to read you some comments. (1) "Increasing cost is being questioned." (2) "FSAs feel that students' salaries are too high, requirements are too lax; it's hard to balance rotating and nonrotating positions." (3) "Actuaries are losing status in general, they're too expensive, they're too technical, they're too negative and they have no understanding of what they do." This person obviously is very negative and this is the same person that made the comment about the FES/FEM -- saying that management didn't understand and didn't care, discovered that the person is an FSA, probably a recent FSA by his own description. I'm not sure what that means, but he seems a little bitter.

Regarding FES and FEM, what are we trying to accomplish? One of the things is to expand the range of people that we get into the profession but that's a whole different topic. With FEM, we're really looking at alternatives to passing or giving credits and I was curious about what the various program directors felt about them.

The admissions course is not an alternative to getting credit by passing exams. The admissions course will be a new requirement that is added to getting your Fellowship and will take effect in 1990; and it will involve a seminar of sorts of 2-3 days' length. Fifty-four percent felt that the admissions course would be a positive thing. Only 32% felt positive about a research paper. Intensive seminars got very mixed responses. Receiving credit because of passing exams with other actuarial bodies received quite a bit of favorable response -- almost 2/3.

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For the nonactuarial designations, there was a lot of concern and results were mixed.

Around 55% were against both level 1 and level 2 college courses. Let's examine why that might be. If you look at minimum number of credits required to get into the program, 52% said 30 credits, which translates into Part 1 (or course 100). An additional 30% said that the minimum credits were 60, which translates into courses 100 and 110, or Parts 1 and 2. So I think what you're seeing here is a reaction to the impact that level 1 particularly would have on the hiring practices of the companies and firms.

I might throw it open now for questions about the survey. What are people doing with travel time? How serious is that? Is that a big concern with your programs? Is anybody trying to do some things to make sure people don't get their FSA at age 60 -- study their whole life away? Any comments?

MR. KENNETH BONVALLET: I have one related concern to FES. I'm concerned that our students will make unwise choices about which courses to take, especially going from ASA to FSA courses. I've been pushing for a requirement at my company that they at least discuss their course choices with their supervisors, who are usually FSAs -- not for approval, but just to sit down and talk about it to prevent mistakes. One problem we're facing is that our FSAs just don't care about FES. They don't want to take the time to learn about it so that they can advise their students, as a college advisor would. I'd like to hear comments about how to motivate FSAs to be interested in FES and to be interested in consulting students.

MR. BYKERK: I think that's an excellent question and concern. That came through loud and clear in some of the general comments that were in the survey -- that the FSAs didn't care about FES, didn't want to learn about it, didn't understand it, and that the whole process was confusing to everyone except the students. Students understood it. It wasn't a problem with the students understanding it, but everyone else was confused. I remember back in the days when I was a student and the old FSAs would come out and say, "Now how many exams are there again?" We've got a whole different ballgame now and we need to do something about that. I think that my own suggestion would be encouraging students to talk to their supervisors about their selection, their route, sort of treat the supervisors as advisors to their course choices. They may force the supervisors to learn about FES. I think that's one way of doing it. Perhaps some kind of a mandatory signoff (not approval per se that you take this course over that course), that you've sat down, you've discussed it with them, and you've met that obligation. Maybe something like that would force the supervisors to think about FES and deal with it, but I suspect that we will have similar problems in my company and probably others. Does anyone here have suggestions on dealing with that?

MS. HELEN GALT: One of the things that we have done is to organize a couple of meetings to talk about the new exam structure and to solicit feedback from our actuarial staff -- what they thought about the various issues related to FES and FEM. Interestingly, it generated a lot of heated discussion. I also think it's good to just raise the level of education of the whole actuarial staff about exactly what the new structure means and what the various issues associated with it are. As far as giving students advice about what courses they may take, as you know, Ken, we have a structure in our actuarial student program where each student responds to a specific Fellow who serves as an advisor. It

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would be those advisors' functions to talk to the students informally about their course selection.

MR. JAMES B. KELLER: I think it's along the same lines with what we do. Not every Fellow is totally up on FES and all the requirements. Our 5 or 6 administrators are all Fellows and there are about 3 or 4 other Fellows who have studied up on FES and help with the interviewing. The advising goes on with those individuals and they are spread throughout the company. So while the direct supervisor might not be up on FES, there's someone in the vicinity who is, who can do the advising. So basically what we've gone with is that every Fellow, while he has gone through an education course also to learn about FES, doesn't have to be up on all the rules. We realize that all the Fellows wouldn't do that, but we have enough that will.

MR. BYKERK: Doesn't anyone else have a comment in that regard? Are there other topics regarding the survey that you want to bring up now?

MR. MICHAEL B. BOESEN: Was there any question in the survey that dealt with what you might call compensatory study time for students that work overtime? Our company has different departments and some students, maybe in the financial reporting area, end up working a lot more overtime than students, maybe in the pricing area, and it tends to be inequitable. Does any company have a policy in that regard?

MR. BYKERK: I don't believe I had a specific question like that. I did ask about making up lost study time or study time that people were unable to take because of work, but I didn't really get into the issue of how to deal with overtime. I know as far as my own company is concerned, if someone works overtime, they get what normal study time they had coming. Assuming they can't take it the day they worked overtime or the week they worked overtime or whatever, they can make it up. They do not get additional study time over and above what they would have otherwise gotten, just because they worked overtime. We're trying to hold down overtime as much as possible, but obviously in some cases that's not possible and I don't think we're a whole lot different than a lot of companies. We're evolving over a period of time from less work obligations to more work obligations and that may become a greater problem as that evolution continues. But the days of thinking that the student's main job is just to get through the exams and then to start using him full-time are over, and I think that same evolution has gone on in a lot of companies. I think that issue will come up more and more as we get into loading more and more responsibility and burden onto the students in a normal day-to-day activity. Do either of you have rules about overtime compensation?

MR. KELLER: We have very specific rules. Our company decided to stress very heavily on rapid exam success. There's a student handbook and in the student handbook it even mentions overtime. It says that occasional overtime will be required; however the student is compensated one for one with additional study time to compensate for the overtime. So for instance, if they had five hours of overtime, the next week they'd put in an additional five hours of study time.

MS. GALT: We do not offer compensation for having worked overtime, but we haven't had any difficulty, I don't think, with students having to sacrifice study time in order to work overtime. One of the penalties of accepting an actuarial student in your area is a recognition that these people are going to be out

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studying for three weeks before each exam and that is pretty much understood, I think, by the management of the student. If overtime does become an issue for a student, he can go to his actuarial student committee advisor and certainly one of my functions is to beat up on local management about requiring excessive amounts of overtime.

MR. BYKERK: Does anyone else have a unique rule? Of the companies represented here, how many give some kind of compensation such as Lincoln National -- one for one or whatever it is? Maybe 7 or 8 of you -- obviously not too many are doing that.

I think I'm going to stop here. We can come back to the survey and try to get in some more discussion after Jim and Helen give their presentations. Jim is going to first talk about the Lincoln National and explain a little bit about their program and then give his thoughts about what things are happening and where we're going in the future.

MR. KELLER: Our program is designed to encourage rapid exam progress. Accordingly, the student program features generous study time and incentives to pass quickly. We try to provide meaningful and educational work experience for the students. A variety of rotating and nonrotating positions are available; most of these students in a rotating position have moved to a nonrotating position when they and their manager feel it is appropriate.

We recruit most of our students right out of school. Because of our exam emphasis, we try to recruit top students from actuarial schools -- those we might expect to complete their exams quickly. Actuarial students' salaries depend on exams, experience, and performance, with exams and experience currently weighted more heavily than job performance. We try to keep student salary levels competitive, but not substantially above the marketplace.

We've had some recent changes to the program. We increased the study time about five years ago in an effort to underscore our commitment to rapid exam success. In this area, we intentionally positioned ourselves on the high side.

At about the same time, we developed the student salary "grid," which is updated annually. The student salary grid approach has facilitated keeping actual salaries competitive and internally consistent. Before this grid, the rapid escalation in starting salaries occasionally caused starting salaries to rise above those for students already on the program at the same exam level. Needless to say, this did not go over well with the existing students. The grid has largely eliminated this anomaly.

Two to three years ago, we introduced one-time bonuses -- in addition to salary increases -- for students who pass exams on the first attempt. Obviously the bonuses were designed to provide an incentive for the students to pass exams even more quickly. To facilitate recruiting, we increased our emphasis on the summer program and on actuarial scholarships. These have become our primary source of new student recruits.

We have taken three steps with regard to FES and FEM.

1. We now express all study time in terms of hours per credit instead of hours per exam. This modification resulted in little, if any, change in study time for most of our exams.

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2. Exam increases and bonuses are also now expressed in dollars per credit instead of dollars per exam.
3. We now pay for books and study notes in advance. We used to reimburse the cost of these items upon successful completion of each exam. The change was made to avoid potential administration problems bound to occur when a student passes one part and fails another part, and he has common syllabus materials.

### POSSIBLE NEAR TERM CHANGES TO THE PROGRAM

Our company recently changed the work week for exempt staff from 37 to 40 hours. We're going to be examining over the next few weeks how all of this is going to affect study time. Students obviously would like to see an additional three hours of study time. Management doesn't like that.

A number of actuarial student managers have suggested we increase the relative importance of job performance in the student salaries and we'll be exploring ways to do that.

I mentioned earlier that we offer both rotating and nonrotating positions. We feel this is the strength of our program, since it offers the students the best of both worlds. However, the two types of positions coexist in somewhat delicate balance. Over the last few years, we sense that the pendulum has swung a little too far towards the nonrotating positions. Some students prefer nonrotating positions because they offer more responsibility, especially management responsibility. Managers obviously prefer the nonrotating positions because they don't have to retrain as often. In the next several months, we'll be exploring ways to move that pendulum back a little bit more towards the rotating positions. One option under consideration is a corporate subsidy of the rotating students' salaries within the divisions.

### POSSIBLE FUTURE TRENDS

Actuarial students' salaries have increased 5-10% per year in our company over the last few years. In the next few years, at least, it is probably reasonable to expect that trend to continue. Exam increases may get even larger if salaries continue to increase. In the long term, it is reasonable to expect the supply of students to expand and finally meet the demand which will cause salaries to stabilize.

The size of Lincoln National's program has remained fairly stable at around 30 students. However, the size of our FSA group has grown rather dramatically over the last few years without outside recruiting. We attribute this increase in Fellows, without a corresponding increase in the student program, to low turnover, partially due to local recruiting.

We have seen little change in study time in recent years. It's probably reasonable to expect little change in the future.

It's probably safe to predict that employers of actuarial students will continue to try and attract and develop actuaries with communication, management, and interpersonal skills in addition to the normal technical skills.

Based on Lincoln National's experience, we'd anticipate that the rotation programs will continue to be popular with students, especially those at the lower exam levels and those with limited experience.

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Insurance companies will probably look to utilize actuaries in areas where they've had limited exposure in the past, such as investments or data processing and possibilities in marketing. We've seen increased involvement of actuaries in the investment area in recent years and would expect the trend to continue.

The Society is considering giving exam credit for research papers. If this idea is adopted, employers of actuaries will have an opportunity to define research projects that can benefit both their own students, the industry and the company.

**MR. DAVID REMSTAD:** How are students' salaries kept in line with new hires? We're having the same problem.

**MR. KELLER:** Each March we update the grid. The grid is two-dimensional where one axis is exams and the other axis is years of experience. It's actually a little bit three dimensional in the fact that your recent performance appraisal can hit it with a multiplier. But for the most part we update that grid every March, when our human resources staff finishes a salary review of who we view our local competitors to be. After we review each March what we're going to use for the upcoming recruiting season, we also use that to update the salaries for all the students in the corporation. Instead of giving their annual review on January 1, it's slated for April 1, right after we upgrade the grid. This way we find that no student's salary is ever below what we would hire someone in at off the street.

**MR. KENTON L. SCHEIWE:** You talked about bonuses for passing exams on the first attempt. Is there a minimum requirement of how many exams you have to take in order to receive that bonus? Could you be more definitive on what you mean by that?

**MR. KELLER:** Before FES, a bonus was given when a full exam was passed on the first attempt. Now with FES, we do not feel that rapid exam success will be encouraged if the student only takes 10 credits and passes it on the first attempt. But since rapid exam process is the purpose of the bonuses, we decided that a student has to pass a minimum of 30-40 credits in order to be eligible for a bonus. All those credits don't have to be on the first attempt, but the bonus is paid only on those credits that were on the first attempt.

**MR. DAVID A. HILBRINK:** Cecil raised the question of travel time. We have a requirement that students sit for a minimum number of credits each exam. We have some problems today at the transition point -- ASA/FSA -- where somebody might have only a few left. How do you handle that?

**MR. KELLER:** The way we handle that is not with minimum requirements to sit, but requirements to stay in the program. We have requirements as to how many exams a person has to pass every two years in order to stay in the program. At first, we were concerned with requiring a minimum number of credits; for instance, 40 or 50 credits per exam sitting. We decided instead if a student was taking 25 credits and passing all 25 each time, and another student was taking 50 credits and passing 25 each time, we should not try to require the student just taking 25 and passing all 25 to be taking more credits, so we base it only upon requirements to stay in the program instead of how many they sit for. And we have looked at our travel time recently. We've been tracking our pass ratios for the past eight exam sittings. Since FES was instigated, the travel



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time on the lower exams compared to previous years has been rather consistent at around 60%.

**MR. BYKERK:** I might comment that in the survey, most of the companies responded that they do have minimum numbers of hours that students are required to sit for, but that minimum is waived if they're within that number of receiving their ASA and obviously waived if they're within that number of receiving their FSA. The feeling is that designation is so important that they're content even if it's only 10 credits, or if we ever have it some day, they will let them sit for 5 credits.

**MS. GALT:** Prudential has had a formal actuarial student program since the 1930s. Today we have 87 Fellows of the Society on our actuarial staff, and 16 Associates who are not part of our formal program. After this year's crop of new hires joins us this summer, we expect to have 56 students on our program, 13 of whom are already Associates of the Society.

The responsibility for running our program rests with the actuarial student committee. This committee consists of eight actuaries, plus an administrator who handles all of the day-to-day mechanics of the program. The chairman of the committee reports to our corporate actuary, who in turn reports to a member of our executive office. For all of these people, actuarial student committee responsibilities are a part-time, not a full-time job. In general, the student committee's job is to keep our programs as up-to-date as possible. More specifically the committee periodically reviews and updates the structure of the program (with respect to salary scales; exam standards, study time, etc.); monitors the progress and development of our students -- in terms of exam progress, job performance, and personal development; decides on appropriate job rotations to expose the students to different areas of the company and to increase the amount of responsibility; serves as advisors to individual students (this is a very informal role; the idea is to give each student a specific member of the committee to talk to); and wrestles with broad philosophical questions about the nature of our program and whether we're doing a good job of meeting our objectives. I've been a member of Prudential's actuarial student committee for six or seven years and I've really enjoyed being involved in the program.

What I would like to do first is comment on several different aspects of the program and discuss how we've modified it over the last couple of years. I'll also comment on some of the issues we're currently discussing. Here are the topics I'm going to cover: objectives of the program, recruiting and selection, exam standards, study time, salary structure, and job rotation and job performance. Then I would like to circle back around and look at some of these subjects from the perspective of FES and FEM.

### OBJECTIVES OF THE PROGRAM

Obviously one of the objectives of our actuarial student program is to produce actuaries. With an actuarial staff as large as Prudential's, we can't count on outside hiring of new FSAs as a major source of our actuarial resources. Over the years, we have probably produced one new FSA for every four students who enter our program. Therefore, we have needed to maintain a fairly large student population over the years. I should emphasize that our objective is to produce Fellows of the Society. We are not particularly interested in producing a lot of career ASAs, so we have tried to move our students through the exams fairly quickly.

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A second -- and equally important -- objective of our student program is to produce Prudential executives. The actuarial staff at Prudential has, for many years, been a major source for senior executive talent. The chairman of the board of Prudential, who is the highest executive in the company, is an actuary. One of nine executive vice presidents is an actuary, and five out of the 34 senior vice presidents are actuaries. Of the five actuaries at that level, two are in what you would call traditional actuarial jobs, but our two major systems departments -- and our human resources department -- are headed by actuaries. We also have high level actuarial executives in our comptrollers and investment operations. This is NOT just a recent phenomenon; this is really a company tradition. Therefore, our actuarial student program has widespread recognition and support throughout the company.

The fact that we are trying to grow senior executives and not just back office technicians is somewhat of a mixed blessing. On the one hand, we are trying to hire and train a person with sufficient mathematical skill, single-mindedness and determination to spend the next five or six years of his life dedicated to passing the exams. On the other hand, we want an individual with good interpersonal skills, strong leadership ability, and a broad range of interests who can function as a senior executive in virtually any department in the organization. In other words, we want it all. The challenge is to structure a student program that can deliver it all.

### RECRUITING AND SELECTION

A couple of years ago, we decided to beef up our recruiting efforts to improve both the quality and the quantity of the candidates that we see. This effort was motivated by a couple of bad recruiting years and by the fact that we simply weren't producing enough new FSAs. One member of our student committee was given the overall responsibility for developing a stronger recruiting program. As a result, we have reviewed our list of target schools, tried to establish better relationships with math college professors, developed new recruiting brochures, and brought in a larger number of candidates to interview.

In the past year, a lot of effort has gone into sharpening our interview process. For example, we have tried to define -- in writing -- what kind of person we are attempting to hire and what skills they should possess. Then we try to ask candidates questions that will determine if they have those characteristics and we fill out a standard evaluation form on each individual. This material is distributed to everybody involved in the formal interview process. I really think that this effort has helped us to focus on what we're looking for and to evaluate each candidate more objectively.

### EXAM STANDARDS

The description of our actuarial student program spells out very clearly what Prudential's expectations are for passing exams. Our current standards for remaining in the student program are: With less than 30 credits on date of employment, the maximum exam sessions to reach 200 credits is 7; with 30 but less than 60, the maximum number of sessions is 6; with 60 but less than 100, the number is 5; with 100 but less than 150 it is 3 and with 150 but less than 200, it is 2. The travel time from 200 credits to fellowship is 8 exam sessions. You can see that we have already made the first step toward accommodating FES. We also give our students a warning letter if failing the next exam will result in being dropped from the program.

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Over the past few years, we have adjusted our exam standards as the Society has changed the exam structure and you can see we have started to express things in terms of credits. Two years ago when we raised our salaries, we simultaneously tightened our exam standards.

Based on the limited amount of survey data that I have seen -- and on informal contacts with other actuaries -- I would say that our exam standards are pretty tough. In fact, right now we are in the middle of a major debate over whether or not we should loosen up a bit. Those who are in favor of retaining our stringent standards say we are paying our students a lot of money, they get adequate study time, classes and other support systems are available to help them master the material, the people we hire should be smart enough and committed enough to pass the exams, and we should be able to expect results which are better than the national average.

And then there are those who are in favor of liberalizing our standards and they argue we are tougher than other companies -- and that may be hurting our recruiting effort. We are trying to hire people with good math backgrounds, but we also want good interpersonal skills, leadership ability, and a broad range of interests. Is it reasonable to expect that these people are going to sit alone in a room for the next five years and do nothing but study? We are placing more and more emphasis on good job performance -- and our actuarial student jobs have become much more interesting and much more challenging. Even jobs for beginning students are quite demanding and they absorb a lot of energy -- which could be having an effect on studying. There are also other internal management development programs which move people very quickly to well-paying positions, but which are not anywhere near as demanding as the actuarial program. One example is a special program to develop investment analysts. And the debate goes on. My personal opinion is that we will end up liberalizing our standards.

### STUDY TIME

Basically, we give 1 1/2 days for each five exam credits, subject to a maximum of 15 days per exam session. We require that a student sit for at least 30 credits each exam period. For the purpose of computing study time, we consider the later exams to be worth 50 credits, so we give 15 days. We do not give study time for the February exam. We do give study time for an exam more than once. Students can take study time in whole or partial days, spread over several months, or all at one time just before an exam. The only restriction is that they touch base with their supervisors and try to accommodate the current work flow in their areas. In general, we have not had a big problem with students sacrificing study time due to job pressures, because the areas to which the students are assigned recognize how demanding the exams are. We do not require that students study on company premises and I think our students do not abuse this freedom. Right now, we are not having any major debates over study time.

### SALARY STRUCTURE

Our starting salaries for various credit levels are as follows: With 0-30 credits the salary is \$30,000. With 60 credits it is \$31,000, with 100 credits it is \$32,000, and with 150 credits it is \$33,900. In addition to a starting salary which we think is reasonably competitive, we offer a \$3,000 signing bonus to each new hire in lieu of a relocation allowance. Aside from making our salary offer more attractive, this bonus serves the very practical purpose of helping our students meet security deposits for their apartments, a down payment on a

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car, etc. The bonus is paid in a lump sum as soon as the student joins the company and so far we've only had two people pocket the money and walk out the door.

Our students get salary increases each time they pass an exam for Series 100 exams it is \$3 per week for 5 credits and for Fellowship exams it is \$1,700 per year. (Note that we have begun to translate those increases to an FES credit basis.) We've also introduced a special bonus (some people might call it a bribe) of \$2,000 if the student passes course 150 on the first time out.

Students also receive annual salary increases which vary depending upon job performance. They are eligible for a promotion to our first management level rank when they have accumulated 200 credits and this is subject to satisfactory job performance. At this point, we also start to integrate them into our companywide management salary plan. Counting each of the current Fellowship exams as being worth 50 credits, students are eligible for a second promotion, again subject to satisfactory job performance, and another raise when they have accumulated 350 credits. At this point, they're full participants in our management salary plan. That means a couple of things: First, the department to which they are assigned evaluates them compared to the rest of the management's staff and determines their total compensation. Our corporate actuary does, of course, review these recommendations, but local management has basic control. Second, the student becomes eligible for our company incentive compensation plan -- which means that a significant part of his annual compensation will be paid in a lump sum, based upon job performance. Last year these payments typically averaged 13% or more of base salary. Upon reaching Fellowship, our students are eligible for another salary increase and at that point, they officially graduate from our student program.

We review our salary structure constantly. In the highly competitive northeast market -- and particularly in view of the high cost of living in the northern New Jersey area -- it's critical for us to have competitive compensation in order to attract and retain students. This year, in addition to adjusting starting salaries again, we increased the salaries of our on-board students in order to avoid the "leapfrogging" problems which we've already talked about.

### **JOB ROTATION AND JOB PERFORMANCE**

One of the long-standing features of our actuarial student program is that each student is rotated through a series of assignments to give him a broad exposure to different areas of the company and to different types of jobs. These assignments typically last from 12 to 18 months. Some of the jobs are in traditional actuarial functions such as pricing, modeling, and valuation in different branches of our insurance operations. But we also place students in other kinds of assignments. For example: to give them some exposure to marketing, we have group underwriting jobs which involve significant client contact. In individual insurance, we expose them to sales illustration support and to compensation analysis. We place students in our investment areas and in our comptrollers department. Many of our students end up in our systems area, functioning as systems analysts. The person who does our day-to-day recruiting of new actuarial students is an advanced student who has this assignment for one year. We try to vary the technical content of these jobs, by offering assignments which emphasize written and verbal communication skills. And we try to give our more advanced students some supervisory experience. One of the criticisms of our program in the past has been that we haven't done a good job of preparing our actuaries for management responsibilities. That was certainly my

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experience -- I was told one day, "Guess what? You're now in charge of the division of 40 people in our systems area." It's really nice to be able to make your mistakes on a smaller scale. We've also made some attempt to send our students to management training classes, but I have to admit we've had limited success.

In general, the job assignments that we give our students have become more and more challenging over the past few years. Many of the jobs are quite unstructured so the student has a chance to exercise a lot of initiative and creativity. Our overall objective is not only to expose the student to specific technical work, but also to develop someone who has the flexibility and the self-confidence to work on different kinds of projects in many different environments.

In the past few years, the student committee has placed increasing emphasis on good job performance. We don't want our students to be just exam passing machines. We want them to make a meaningful contribution to the company. But more important, we want them to develop creative and practical problem solving skills, good business judgment, the ability to work with many different kinds of people, and the flexibility to be effective in many different kinds of jobs.

### CHANGES IN OUR PROGRAM TO ACCOMMODATE FES AND FEM

The FEM White Paper, in the section titled "Rationale," contains the following paragraph:

The profession needs an educational system that will prepare and attract people with both technical and nontechnical skills. The profession must remove excessive barriers so that these people will not choose other professions primarily because of their shorter, less risky roads to success. Otherwise the actuarial profession is threatened with replacement by such professionals as MBAs, statisticians, accountants, and compensation or management consultants.

The White Paper also says that the objectives of FEM are to: enhance the value of the FSA designation; provide for better and broader education consistent with the future direction and needs of the actuarial profession; and create a system that will attract, select, and train those people who can best fill the role of the actuary in the future.

I think that the objectives of FES and FEM proposals and the objectives of the actuarial student program at Prudential are very consistent. As I've said earlier, we have for a long time been trying to develop insurance executives rather than backroom technicians. I've been involved in a lot of discussions about how well the current examination process serves to produce the kinds of actuaries we want -- and in discussions about how well the structure of our student program serves to produce the kinds of actuaries we want.

I think that the student committee at Prudential affords the stated objectives of FES and FEM. And while there is certainly not universal agreement on whether the specific recommendations are the absolute best solutions, the consensus seems to be, "It's certainly worth a try."

### RECRUITING AND SELECTION

As I mentioned earlier, we have tried to refocus our recruiting efforts in the last year by defining more precisely the kind of candidate we're looking for and

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developing a written set of recruiting guidelines for everyone involved in the selection process.

We've also changed our policy with respect to hiring people with no exams. Today we are willing to accept high quality candidates who have not yet taken an exam and place them on our student program. I must admit that our results so far have been mixed, but we will continue to take the risk.

One reason we have changed our policy is that we recognize that we are competing for talent against other professions that are looking for exactly the same kinds of people. Think about the job opportunities in the investment field and in computer science. These jobs are just as lucrative as actuarial work -- they have a lot more sex appeal -- and they probably involve a lot less pain and suffering (or at least that was true until October 19th). While I don't have statistics to prove it, I suspect that these careers are drawing off a lot of potential actuarial candidates.

### EXAMINATION STANDARDS

We have already made some adjustments to our examination standards to reflect the new credit system. Right now, we are counting a Fellowship exam as 50 credits for the purposes of defining adequate exam progress, study time, eligibility for promotion, etc. And when the new Fellowship exam structure is introduced later this year, we will reflect the actual number of credits for each course.

I mentioned earlier that we are in the midst of a general discussion about whether our exam standards are too tough and I mentioned some of the arguments (pro and con) for moderating our demands. On a purely practical basis, the new structure of the Fellowship exams could have an effect on total travel time to Fellowship.

It may take a while for students to develop an appropriate strategy for dealing with all the flexibility inherent in the new course structure. For example: how many credits will they take each session? Will they be heroes and take 50 or 60 or 70 or will they play it safe and take 30 or 40? In what order will they take the courses? What kinds of course combinations will they assemble to balance parts of the exams that they view as relatively easier or harder?

As students gain experience with the new structure, they'll communicate with each other and things will settle down -- but that may take a couple of years. In the meantime, our student committee is trying to develop a set of criteria for satisfactory exam progress that will be simple, fair, stable, and exception proof.

We also want to guarantee "acceptable" travel time through the exams -- and we would prefer to look at the exams as a continuum, rather than having a different set of standards before and after Associateship. Our reasoning here goes like this. We will probably see a lot of situations where a pre-Associate decides to combine 100 series courses and 200 series courses. Therefore, the dividing line between Associateship and Fellowship exams may not be as clear cut as before. So what we're leaning toward right now, and this is not a final decision, is a credit ratio approach. Basically we would say that a student is in good standing if the student averages, 30 credits per exam session; but he or she gets two freebies.

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We have not specifically discussed the question of whether or not we will try to guide students in their choice of elective courses. In the past, we have not pushed our students in the selection of the group or individual or pension track.

### STUDY TIME

Our current rule is to give 1-1/2 days for every five credits with a maximum of 15 days. We will probably continue this practice when the new Fellowship structure is introduced.

### SALARIES AND PROMOTIONS

We have already adjusted our exam-related salary increases to a credit basis for the Associateship exams and we will make a simple similar rule for the new Fellowship courses.

Similarly, our current promotions to first and second level management positions are geared to a credit basis -- the first promotion at 200 credits, the second promotion at 350 credits. While these standards are subject to review, we probably won't drift too far from the current benchmarks.

There are several FES and FEM features that we have not addressed because they haven't been fully defined.

### INTENSIVE SEMINARS AT THE ASSOCIATESHIP LEVEL

We will need to consider the following questions: Will we actively encourage -- or even require -- attendance? Will we grant company time off for attendance? What expenses will be reimbursed? These are all unanswered questions.

### LEVEL TWO COLLEGE COURSES

Our understanding is that these courses won't be introduced until 1990. Until we see a concrete proposal, it's difficult to talk about how we might integrate this concept into our program.

### FELLOWSHIP ADMISSIONS COURSE

Since this will be a requirement of obtaining Fellowship, we think our students will expect us to pay all fees and other expenses for the course.

### RESEARCH PAPER

This will be introduced in the fall, 1988 catalogue. Again our student committee hasn't had a formal discussion about research papers, but we will have to consider these questions: Will we actively encourage our students to write papers? If the student wants to write a paper, will we encourage him to pick a topic that is of particular interest to the Prudential? How do we integrate the time required to write a paper into our exam standards? The current Society proposal is to allow a student eight months to write the paper after his initial outline is approved. It will take another two months for the review committee to judge it and then the student has another four months to modify it to meet the committee's standards. How will we calculate the equivalent of study time for writing a paper? The simplest approach is to grant 10 days which is what we would do now for a 30-credit exam, but we suspect that writing a paper may be a lot more demanding. Who will serve as sponsors?

### ACCEPTANCE OF EXAMS OF OTHER ORGANIZATIONS

Obviously, we haven't seen a concrete proposal on this issue. In some ways, this concept may be easy to deal with. For example, if the Society deems that a

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course is acceptable for credit, I think we would be hard pressed to disallow it for the purposes of our student program. Since our starting salaries are already based upon accumulated credits, that should be an easy transition. Similarly our exam standards would gear toward credits that the student has amassed while working at Prudential.

On the other hand, this proposal raises some sticky questions for us if the Society decides to accept CLU courses. For example: would we give study time for a CLU course? Would we grant a salary increase if the student passes? We have hundreds of Prudential employees who take CLU exams every year without being granted study time and without getting a salary increase when they pass.

I hope that my remarks have given you an idea of where we have been and where we are going and I would be happy to answer any questions.

MR. HILBRINK: Do you distinguish required credits from elective credits in your salary compensation now that there are finally true electives? It's possible that somebody could have more than 200 credits before they have an ASA.

MS. GALT: Our promotion to the first management level position is based upon 200 credits, not ASA. That may answer part of your question. We haven't had a deep discussion about how we're going to handle this whole elective credit course issue. I think that with the structure that we've already set up, it shouldn't really be any problem to just accept the elective course credits and integrate them into our whole process for determining study time and salary increases and that kind of thing. I guess one thing that could happen, though, is that students might take more elective credits than they have to, but we don't think that that's going to really be a serious problem. We haven't really wrestled with that one yet.

MR. BYKERK: I might make one comment about the exams of other organizations. I think it's the intention to not deal with exams specifically, but with entire designations. So, for example with the CLU, it wouldn't be a matter of writing 1 or 2 CLU exams. It would be a matter of getting an entire group of CLU exams passed. So I doubt that anyone would use that as a means of getting Society credit just to get Society credit. It's going to be a lot more arduous than just writing whatever a 20 or 30-credit course in the Society would be. I don't think it should be a major issue. Obviously, if it does come up, it's the kind of thing that creates a lot of problems within the organization where the actuaries are already considered to be getting special treatment. It would create a problem.

Where are we going to be in the year 2000? Are we still going to have actuarial student programs? I personally think that we will. I think as time goes along we will evolve to a greater dependency on university programs. We'll expect more exams coming out of the university, but I don't see in my crystal ball that actuarial student programs are going to go away. I think there's going to be increased pressure on the actuarial student programs within organizations. They are expensive. It's an expensive concept to run, but I don't see us eliminating them from the scene.