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Session 11OF

The Future Role of the DB Actuary

Track: Pension, Actuary of the Future

Moderator: C. Ian Genno

Panelists: C. Ian Genno
Michael M. Croyle
Brian C. Ternoey

Summary: DB actuaries are finding themselves working in new and expanded roles in the new millennium. Working in this environment raises challenging questions:

- *What additional training is recommended?*
- *What are the unique challenges and rewards?*

MR. C. IAN GENNO: "It was the best of times; it was the worst of times; it was the age of wisdom; it was the age of foolishness; it was the epoch of belief; it was the epoch of incredulity; it was the season of light; it was the season of darkness; it was the spring of hope; it was the winter of despair; we had everything before us; we had nothing before us; we were all going direct to heaven; we were all going direct the other way."

I thought this would be an interesting way to start our discussion this morning. My name is Ian Genno. I'm a principal with Towers Perrin and co-chair of the Pension Section Council of the Society of Actuaries. Before I begin my comments, I'll introduce you briefly to my two co-panelists this morning. Mike Croyle is president of the Pension Resource Group in Atlanta, and Brian Ternoey is a practice leader with Curcio Webb in the Princeton area in New Jersey.

What we want to do today is facilitate a discussion on the future role of the defined benefit (DB) actuary. This morning's session is designated as an open forum. So we're hoping to get input from you, rather than simply have the three panelists lecture.

The passage I read to you a moment ago is the opening passage from Charles Dickens' *A Tale of Two Cities*. I see some nods of recognition in the audience. So, you ask, why is this presenter quoting Dickens at the beginning of an actuarial session? If you'll allow me a bit of license, I'll try to draw a parallel between Dickens' commentary on the social, political and economic milieus of England and France in 1775 and the exciting world of DB pensions that we all live and practice in today. Admittedly, it's a bit of a stretch to draw a parallel between the two, but you have to allow me some license as a presenter to get the session started this morning.

Looking at the words in this introductory passage, it talks about it being the best of times and the worst of times. I think that's true within the DB actuarial practice area today. It's the best of times in the sense that we've got exciting and challenging opportunities, but it's the worst of times in the sense that we face significant fee pressures, increased risks to our business from litigation and (arguably) diminished interest in DB plans, both on the part of plan sponsors as well as on the part of plan members. It's the best of times, and the worst of times.

It was, as Dickens says, the age of wisdom and the age of foolishness. It's the age of wisdom, I'd say, in the DB world in the sense that we're currently embracing some very interesting concepts. Stochastic modeling is being used much more widely to assist plan sponsors. And there is vibrant debate within the profession on issues like financial economics and its impact on funding, accounting and even plan design. (I'll let you identify your own examples of foolishness in today's DB environment.)

It was the spring of hope, it was the winter of despair: Think back on economic conditions over the last few years—it's the spring of hope right now with the market rebounding, but the winter of despair as low interest rates and poor investment returns over the last few years have triggered significant increases in pension costs for many of our clients.

We were all going direct to heaven, we were all going (as Dickens says) direct the other way. I think we're going to heaven in the sense that we're working in a world with a baby boom population that is aging. A fundamental principle of demographics is that every year we each get one year older, and the baby boom population that 10 to 15 years ago showed little interest in DB pensions (and was very interested in capital accumulation opportunities) is now getting closer to retirement. Some of them are retirement eligible now. We're beginning to see a shift in attitude that will become more pronounced over the next few years, toward greater appreciation of the security that DB delivery vehicles can offer plan members. At the same time we're also going "direct the other way." We're facing litigation in the United States over cash balance plans. We work with many employers that are averse to offering or extending DB coverage because of the associated costs and risks. It's a difficult time in which to practice.

All of which is to say that, as DB actuaries practicing today, we face a lot of exciting challenges and opportunities but also some real risks. On balance, though, I'm going to argue to you that the challenges are positive, and what we need to do as practitioners is figure out how we should work in the new world. How can we redefine our skill sets? How can we present ourselves differently to clients and prospects? What can we learn and do differently? That's what we'd like to focus on in the session today.

To get a sense of your perspectives as you start to offer (we hope) some comments and answers in the session: With a show of hands, how many people work as DB consultants? A significant majority. Anyone in a service provider role, such as working for a trustee, administrator, etc.? A few. Anyone working as an in-house actuary for a plan sponsor? As a regulator? Academics?

Let me ask you some questions. How optimistic are you about the prospects for DB plans? If I look back 20 years to when I joined the pension consulting field after university, I remember that within a few years several people were saying, "You know, there are limited career opportunities for you, Ian," because at the time the legislative environment and plan members' interests really weren't pointing to continued significant growth and expansion of the DB world the way we had seen it in the 1970s. And yet, anticipating the eventual effect of an aging baby boom population, I still felt optimistic in the long term for my personal career opportunities and for this business.

What's your sense? If you look forward five years at the DB environment, are you more optimistic? There was no show of hands! Less optimistic? About half of you. Essentially the same as today? About half of you have a stable perspective of the future DB environment.

If you look at your own career opportunities, how many of you think, if you look out five to 10 years, you'll still be working primarily as DB actuaries? Only a couple of you. So a lot of you are not sure that you'll still be working as a DB actuary in 10 years. How do you think your job's going to evolve? Where do you see yourself going in 10 years? Or is it hard to predict at all—is there simply too much uncertainty?

MR. PATRICK LANDRY: Well, ideally, I'd retire.

MR. GENNO: Fair enough, Patrick. I'll paraphrase the question, then: For those who won't be retired in 10 years, what's your sense of where things are going?

MR. LANDRY: In the last few months, one specific thing I've seen is that the large DB consulting companies seem to be contracting, and are being cautious, which is a little discouraging. The flip side is the insurance companies seem to be growing. So at least for the next five years—I'm not sure I can say where we're going to be in 10 years—that's one particular phenomenon that I see happening, and I wouldn't

be surprised if only the very small actuarial firms continued to do quite well as long as the legislation doesn't change and put them out of business.

MR. GENNO: So you're envisioning a world where large, traditional consulting firms will experience essentially flat or negative growth, an optimistic world for the insurance carriers that provide total retirement outsourcing services, and opportunities for niche players in the smaller consulting environment provided legislation doesn't unexpectedly turn against the types of services they provide.

Other perspectives? Marcus? You are an owner of one of the small consulting firms that Patrick may be referring to.

MR. MARCUS ROBERTSON: I think Patrick hit the nail on the head. What it points out to me is that the traditional DB actuary, if he or she is simply doing traditional work, is reducing himself to the role of a technician. You have to expand and become more of a business consultant than a pension consultant. And we're not operating in a vacuum anymore.

MR. GENNO: So we need to become business consultants, not technicians.

FROM THE FLOOR: The small firms will flourish, I think, because they can be more efficient than the big firms in delivering traditional actuarial services.

MR. GENNO: Can smaller firms also perhaps more easily present a consistent image to clients? If a firm presents itself as a trusted business advisor, it may be easier to control the delivery of that brand when it only involves you and a few partners who can present the same way to clients, and who all have the same skill sets. You perhaps have more control than you would in a firm with hundreds of actuaries where invariably some will be better communicators, some will be more technically focused, some will be more consulting focused, some will be more sales focused. Is it harder to achieve uniformity in how a firm presents itself as a business advisor, for a large firm? Other perspectives? Other reactions?

I think your comments about the risks for traditional DB actuarial work are good, Marcus. From a plan sponsor perspective, DB costs are currently perceived to be very high, particularly after the recent economic conditions we've experienced, and the risks are perceived to be significant. There's currently a lack of interest among employees, which is unfortunate because, arguably, DB is an excellent way to deliver retirement security to individuals. If we think back to when legislation was first enacted in the United States and Canada to offer tax advantage opportunities to employers that sponsor DB plans, the underlying reason for governments' willingness to offer those tax savings was a recognition of the fundamental benefit that accrues to society through delivery of DB vehicles as a means of providing security to individuals in their retirement years at a relatively low cost to the taxpayer. Arguably, no other retirement vehicle operates as effectively to achieve

that. So it's unfortunate that many individuals don't perceive the real value of DB plans, but that's the reality we're facing in the marketplace right now.

From a business perspective, Patrick alluded to the prospect of static or potentially declining revenue streams for large consulting firms. Even for those firms that are currently growing in revenue, like ours, the growth rate is slower than it was when I started out 20 years ago. At that time, it was quite common to see significant double-digit revenue growth year by year, which automatically fostered career growth opportunities for actuaries. It's a tougher environment today. Actuarial consulting firms are more exposed to litigation now than we were years ago. Litigation can have a damaging impact not just on the continued viability of firms but also on the types of work they're allowed to do depending on whether they can secure coverage or not. I saw one firm recently leave the DB actuarial business because they could no longer secure appropriate insurance coverage at a reasonable price. That's a very unfortunate circumstance to face for the actuaries in that firm who were focused primarily on DB work.

We also face the challenge of attracting new people into our profession. It's tough these days to recruit from universities the way we used to. We still find great people to bring into our firms, but there isn't the same plenitude and variety of people going into actuarial science today that there was 10 or 15 years ago. Ultimately that could diminish the vibrancy of our profession as well. So it's a more challenging world in which to operate.

Patrick, you referred to changes in legislation that could potentially impact smaller firms. What would you do if the government suddenly introduced new legislation that eliminates the reason for DB plans, or that perhaps mandated something else?

One might think that's a far-fetched question. Why would the government suddenly introduce legislation that would push DB plans out of existence? It's not necessarily as far-fetched as one might think. Australia went through this kind of transition in the early 1990s. DB plans themselves were not outlawed, but the government mandated that every employer would provide defined contribution (DC) coverage, with a mandated minimum contribution formula. What would you do in a world where your employment opportunities, that traditionally were tied in many ways to legislative compliance, suddenly disappeared?

MR. LANDRY: Become a health actuary.

MR. GENNO: Yes, you could very well transfer to a different practice area relating to the total rewards that employers provide to their workforce, saying, 'If I can't do DB work, can I do something else to provide a service to my existing clients?' Good answer. Other ideas?

MR. LANDRY: I've always wondered if actuaries have ever taken a role as a risk manager at a large corporation, managing property and casualty issues, workers

compensation and things like that. I don't know if anybody's ever found positions like that or know of an actuary in that sort of position.

MR. GENNO: Do any of us know someone who's taken a position as a risk manager within an organization—stepping away from a traditional benefits role and using more of the fundamental actuarial skills that are part of our training?

FROM THE FLOOR: I haven't seen it, but I think it would be a great thing for a company to do that. I'm not a traditional DB actuary; I work more in the group insurance field with larger customers, and one of the things I've seen is that in large companies, human resources staffs are shrinking. Their benefits finance staffs are shrinking. And they really have a dearth of expertise in benefits and risk issues. I think large and medium-sized corporations in the country would get a tremendous amount of value out of having actuaries in positions like what you're talking about. I've briefly thought about going into something like that myself some day, and I definitely think we, as a profession, could add a lot of value in positions like that.

And in response to your question right before about what you would do if, poof, DB plans were gone: I don't know what the exact answer is, but I would try to think of ways to add value on the DC side if—in the case we're talking about, Australia—Australia mandated that it was effectively going to be a DC environment as opposed to a DB environment. It would make sense to figure out how you could apply your skills in the DC environment. I don't know what the right answer is, but that would be my first reaction.

MR. GENNO: Let's address the two themes you identified, the latter one being: What would you do in a DC world? If the world has changed, how do you adapt to fit the world? And let's also talk about the idea of having in-house actuaries as risk managers, which you've reframed as a somewhat easier transition than Patrick envisioned in his question a moment ago—you've raised the idea of an in-house actuary who can offer valuable perspectives on benefits programs, as opposed to making a more radical career shift into something like an enterprise risk management role.

The Society of Actuaries has done some valuable work to poll a variety of business leaders on the value that actuaries are perceived bring to the table in different roles. The Society is trying to assess the degree to which we could expand the role of the actuary and expand employment opportunities for actuaries in the North American market.

The Society's researchers approached a number of different organizations in various industries—including investment banking, commercial banking and the broader business community—to looking at the opportunities actuaries might have to do enterprise risk management work, broader applications of actuarial science, etc. They asked detailed questions of people at senior management levels—CEOs, CFOs, etc.—asking, 'How do you think actuaries compare with other professionals in the

employment marketplace? If you had a role to fill, what would you think if an actuary were one of the candidates, and how would that compare with people from other backgrounds—MBAs, financial engineers, lawyers, economists, statisticians and so forth?

One of the responses that came through very clearly was that actuaries are very highly regarded for their technical competence and for their analytical skills. Actuaries are well regarded for having the skill set to define a problem appropriately and to build mathematical models to help address the problem and assess potential solutions. Prospective employers outside traditional actuarial fields acknowledge actuaries as having that skill set.

But the flip side was they didn't necessarily view actuaries as having the ability to communicate the results effectively to decision makers. They didn't necessarily feel that actuaries have the ability to see the bigger picture beyond their financial analysis. So much of the challenge we will face as we try to embark into new areas such as broader risk management will be to demonstrate that we've got business acumen, we've got communication ability, and we can see things in a broader perspective that will enhance our very highly regarded role as technical experts.

FROM THE FLOOR: I think that is a tremendous challenge because in my business I see a lack of expertise. I'm mainly involved in the health and welfare side, but one of the things I think that actuaries as a whole would have to get really much more comfortable with, which is extremely challenging for me, is that some of the positions we're talking about—risk management or head of health and welfare benefits within a corporation—those are extremely political positions, and sometimes actuaries have a difficult time with that sort of role. I know I struggle with this a lot, with the politics and sometimes what appears to be illogical decision making around benefits issues. It would be a tremendous challenge for an actuary to be in a role like that because you could just imagine your frustration wondering, "I don't understand why this takes so long; why these decisions are being made; why somebody looks at this situation that way. The numbers clearly say boom, boom, boom, this is the right way to go." But, as we all know, the numbers don't always dictate the decision making in corporate America, or at least logic doesn't always dictate the decision making in corporate America. This would be something that we as a profession would have to become much more comfortable with—the gray areas of life, as opposed to the black and white areas where I think we may be more comfortable on a day-to-day basis.

MR. GENNO: Other thoughts on the challenge of expanding into a broader business role, but using the risk management background?

FROM THE FLOOR: Well, I would go back to the earlier comment about the need not to operate in a silo anymore and be perceived as a DB actuary. If you're not already getting involved with health and welfare, DC or financial investment issues, if you're not already expanding your horizons, I think you're already at risk

regardless of future changes in legislation. If you look at any of the surveys on what plan sponsors are doing or what they're thinking about, they're already thinking about either terminating, freezing or making changes to DB plans. The change itself might provide us with some work for that brief moment, but the thought processes are already going down that DC path or toward the elimination of some sort of employer-provided retirement benefit. So I think we're already at risk, and, as you pointed out, a lot of surveys are already touching on that. The challenge of being more well rounded and expanding our horizons: I think that already exists.

MR. GENNO: Yes, and the difficulty is getting pension actuaries to seize those challenges—having the confidence to go outside your current comfort zone. Most of you indicated at the start of this morning's session that you are consulting actuaries. If you work in firms that have multiple practice areas, you already have opportunities to talk with clients and colleagues about issues in other practice areas and to expand beyond traditional DB pension consulting issues. And yet for many actuaries it's very difficult to feel comfortable doing that because—looking back to the basic education of actuaries—much of our training is structured to define the exact body of knowledge you must master in order to become an actuary. "Read these study notes and textbooks. Learn how to solve the following types of problems. By doing so, you will pass your exams, and that makes you an actuary." That, in a sense, ingrains a certain mind-set into each of us which says that in order to be competent to address issues in a particular area, we need to have demonstrated that we have mastered some body of knowledge that is discrete and defined; expanding into a broader, less defined knowledge area can feel very uncomfortable for an actuary. So the challenge for each of us, myself included, is: How do you do that?

FROM THE FLOOR: Well, at a former employer of mine 10 years ago, when I expressed interest in executive compensation, the first reaction was, "Well, you're an actuary. What do you want to do with executive comp? We have our practitioners. We have our MBAs. We have our experts in that area." And I think that thought process has now changed; I know that my employer, my partners, look for me to be more broad based and at least be able to identify where opportunities exist—not necessarily having to be the subject matter expert, but being able to have the dialogue and identify the opportunities to bring in the compensation experts.

MR. GENNO: I want to go back to the idea of DC career opportunities that you had raised. What would you do in a world where DC coverage is predominant? You mentioned that you would need to adapt so that you could provide valuable services in a DC environment. When I talk with other actuaries, some of them envision that as very difficult to do—they don't quite see where the actuarial opportunities are in the DC world. I'd argue that, in fact, there are significant opportunities and different perspectives to take.

One perspective is to look at the experience in other countries. For example, when I talk with colleagues in Australia, they're all gainfully employed, but they underwent a radical rethinking of the services they were providing to clients a little over a decade ago. In the United Kingdom, if you look at the companies listed in the *Financial Times 100*, the majority is not offering DB coverage to new entrants. DB coverage may be maintained on a grandfathered basis, but new entrants are not coming in. Other coverage is being provided instead, typically capital accumulation.

So what do you do as an actuary in a capital accumulation world, a DC world? You'll see some examples of this in a moment when I turn the presentation over to Mike. I argue that, in a DC world, all the same functions that are currently performed for DB plans have to be fulfilled. DC plans have to be designed appropriately to meet certain business objectives and income replacement objectives. DC plans have to be administered and communicated to plan members. Assets of DC plans have to be invested—so we have to decide what investment options are offered to plan members, and how we monitor the managers' ongoing performance.

DC plans may also need to be assessed from a financial perspective. For example, if there is an employee choice involved that could dictate whether the employer's matching contributions are higher or lower than expected, if there is any link between employer contributions and business results, if there is any tie-in between contribution rates and age/service points, etc., these are all variables that could change the cost of the DC plan over time; plan sponsors need to be aware of such potential cost implications.

So, arguably, the various areas in which we currently assist DB plan sponsors—relating to design, administration, communication, investment, and cost projection, as well as other aspects that I haven't yet mentioned such as employee education, fiduciary responsibilities, appropriate governance models—that create employment opportunities for actuaries with respect to DB plans, all have to be addressed for DC plans as well. DC plans have a need for the same (or similar) services. For actuaries, the challenge posed by DC plans is that there's nothing in the legislation in the United States, Canada or most other countries that says you must hire an actuary to do this work, and that the actuary must certify his or her work and file it with a regulatory authority by a specified date. That's the challenge. What you need to do is to ask, 'How can I take those familiar DB concepts, apply them in the context of a DC plan, and demonstrate to my clients that the services I'm proposing are necessary, will add business value, and warrant the fees?'

So there are ways to identify significant work opportunities with DC plans, but it can be challenging. It involves taking more initiative to sell new services to your clients rather than working in a compliance-focused, order-taking role. That can seem a difficult transition, because (as one actuary said to me) many of us went into the consulting business because we wanted to be consultants, not "conselltants." We're not necessarily comfortable going out and selling new

services. Often, we feel more comfortable hearing about problems, assessing the problems and developing solutions for those problems.

Any other reactions to the broad concept of how to redefine yourself in a changing world, before I turn the podium over to Mike Croyle?

FROM THE FLOOR: I work for the Internal Revenue Service, so I've looked at a lot of plan submissions, probably thousands of them, over the last four or five years. And my thoughts in listening to this discussion are, the one area where a lot of small plan actuaries are really getting involved is in DC plan design, especially in light of the fact that many of these plans are cross-tested plans, and, granted, there's no requirement legally that you have to demonstrate compliance with the nondiscrimination rules on a year-by-year basis, you don't have to file anything, but you still have to comply, and it has to be done each year. It has to be part of the plan records. And we've seen a lot of very creative types of plan design to address this.

We see a lot of plan actuaries that are getting into very complex DC plan designs. Sometimes they're permissively aggregated with a cash balance plan or another type of DB plan, and I think the area of DC plan design where you're going to cross-test the plan is an area in which actuaries can be very valuable. I think three or four years ago the American Society of Pension Actuaries (ASPA), had a proposal that would require someone who did these types of plan designs to sign off on them. It would create a category of professional called an enrolled administrator, which would be very similar to an enrolled actuary. In fact, enrolled actuaries would be grandfathered as enrolled administrators. That idea was discussed in Washington, but it never really went very far. But given the complexity and some of the types of problems we're seeing, that could be something that could occur down the road. So in my view the area of DC plan design, especially plans that are cross-tested, is an area where I think small plan actuaries can really take a much bigger role.

MR. GENNO: I agree, and, in fact, I would expand that to cover large plan actuaries as well; DC design offers so much fertile ground for tilling by actuaries.

FROM THE FLOOR: Right.

MR. GENNO: When I first started practicing, I remember someone commented to me that if you were setting up a DC plan, the basic question was, 'Is it going to be a five-plus-five contribution rate or six-plus-six?' In essence, that was how a senior colleague presented DC plan design to me at the time.

FROM THE FLOOR: The other area in which we're seeing a lot of involvement with actuaries is in new types of creative cash balance plan designs. Now, I realize that there is a lot of controversy with these plans, and you have to remember that the controversy that exists only really relates to cash balance conversions, plans where

you have a traditional DB plan that's being amended to a cash balance plan. The newer cash balance plans, assuming they comply with all the regulatory requirements, are receiving favorable determination letters, and so you can carry over the creative ideas that apply to DC plan designs and use those in cash balance plans as well, and we're seeing a lot of actuaries who are getting involved in these types of things.

MR. GENNO: There's also a need to look for creative applications and extensions of existing actuarial ideas and techniques, and to look at the designs you're developing from a different perspective.

For example, many actuaries, when they help plan sponsors develop DC designs, will perform projections on a deterministic basis: If you contribute at a certain level, here's what it will provide at retirement, based on projections under a number of different economic scenarios and retirement ages. However, these projections are each performed as a simple straight line that accumulates an account balance to retirement, and then divides by some magical annuity factor that supposedly produces the income stream for the rest of the retiree's lifetime.

In a DB world you would never practice that way. None of us today—with the knowledge and computer technology we currently have—would take a DB balance sheet and simply project it forward decades into the future on a purely deterministic basis. We'd do stochastic modeling. And yet I don't see a lot of stochastic modeling being done as part of the DC plan design process. If you try it, you'll be surprised at the tremendous dispersion of results you'll see among plan members' ultimate benefits at retirement. Even when you project the potential dispersion based on adopting a single investment policy and seeing how that plays out over the course of an individual's career, the dispersion of results is stunning.

If you then consider that plan members have varying risk tolerances and will pick different investment strategies for their own DC account balances, the dispersion of outcomes broadens even further. Then consider how people actually draw down income during their retirement years, and how they balance the competing interests of capital preservation versus income drawdown, and you reveal even greater dispersion of results. This is just one example of the many productive opportunities for actuaries to apply DB skills and thinking to DC plans in the future.

Let's turn the podium over now to Mike Croyle, and we'll continue the conversation with him. Mike has come from a traditional DB background, but then sought ways to expand that into other opportunities that are still within the pension field but are much more diverse than many traditional DB actuaries have enjoyed.

MR. MICHAEL M. CROYLE: I'm the president of Pension Resource Group. We have five actuaries on staff, all from traditional backgrounds. None of us are really doing any traditional work, the way you would define traditional work. I'm just going to go over an overview of traditional DB actuarial roles, what lies outside the traditional services, what I have done to become a nontraditional DB actuary, how

my skill sets evolved to performing those services, the competitive advantages and a quick conclusion.

We've all been traditional DB actuaries, done the Schedule B, valuations, data reconciliations, funding standing accounts, all those sorts of things. We feel like we're chained to our desk. That was not really a role that was a great role for me. I didn't have the sort of background where I was sitting around and doing those kinds of things. We started our firm in 1995, and the first thing we did was a major data cleanup. We approached it from the administrative side versus the actuarial side. You get your snapshot data once a year, and your client will send you a single row of data for each person, and it might show you their earnings for the year and their service date. And you'd never even look at their service date unless it disagrees with what was there last year. We went in for this one client that had 60,000 employees and found that 15 percent of their service dates were incorrect, which obviously had an impact on their pension valuations as well as an impact on communicating their DB plan. They couldn't really communicate it effectively. They couldn't get pension calculations out on time. They couldn't get annual benefit statements if they were going to do that. So that's where we started.

Then we went into doing pension administration system design and development, which is really where my background started. I was more of a systems-type actuary, technical guy, when I was working for the big firms, and we've moved into complete pension-DB pension administration outsourcing; a lot of clients who are small or midsized in nature and a lot who have multiple payroll systems cannot get meaningful management reports whenever they need them. So it's grown from, 'Here we've got this pension tool that we can build for you, but we've also got this wealth of data, and we can get all kinds of information for you out of this data pool that you could never get before, or you could get it, but it was very expensive because you had to go to each one of your payroll centers and tell them to generate this stuff for us.' We've done auditing of other firms and voluntary compliance resolution filings when we find problems. Some of that's sort of traditional, but those are some of the things we've done.

I'm sort of a technology guy, so we've done a lot of Web site development. Two years ago for a major Fortune 100 company, we developed a Web site that employees could get on and use. They were making changes in the postretirement medical, changes in their DB plan, changes in their postretirement life insurance and changes in their 401(k) plan. So we developed a tool that the employees could get online. They could project all their benefits, they could use their own assumptions. They could do their own modeling and figure out it was a plan where they were changing from a, 'We're going to take care of you the rest of your life on your postretirement medical' to This date it's changing over to an account balance, and if you retire after that date and when the account balance runs out, so does your medical insurance.' So it was something that was very highly visible within the HR organization, even more highly visible than I thought because on the first day the site went up, we were wondering if any of their employees worked because

they were all on the Web site. And it was very rewarding from our standpoint. That's one of my backgrounds, that I'm sort of a builder by nature.

We're also in the process of building a retirement modeling and education tool, and this is one of the things that Ian was talking about. We're taking two approaches for this tool. First, it will allow employees to get online, do their own modeling, include assets from prior employment, include their spouse's assets so they can do sort of a total retirement picture versus, 'Here's just my stuff from my current company.' But it's also a tool that we can use in conjunction with other actuaries and do sort of a valuation on a DC plan. Most clients put in a DC plan, and what's the purpose for putting in a DC plan? The employees want a tax deferral method. They have no idea whether this DC plan is going to allow employees to retire or not. We were at a health care organization six months ago, and the guy asked, 'Do you guys believe in DB plans?' And we said, 'Yes, we definitely believe in DB plans.' He said, 'So do I.' I had a nurse come in. She was 62, and she realized that with what she had in her DC plan, in conjunction with her DB plan, she wasn't going to be able to retire.

Well, the effective working lifetime of employees is probably between 35 and 60. Once they hit 60 it's going to start to go downhill. So from the employer's perspective, when you start looking at these 401(k) plans, if people aren't going to be able to retire till they're 68, 72, is that really what you want to get accomplished? So you can take that sort of model and apply it to the whole population, run your whole population through it and say, 'Okay, based on your population, if we want to look at people who have been there for more than three years, because they're probably going to be career employees, you can say, 20 percent of them are going to be able to retire by 60,' and take it as a consulting tool.

We have two actuaries, and all they do is total compensation statements where we collect all the data on the employee benefit programs. They produce high-end total compensation statements, and from that—again, the data drive our business—we've collected all these data from all these sources that generally are not very cohesive within an organization, and we can produce management reports, demographic reports that these guys otherwise never get to see. And if we had an in-house actuary at the client site, they could do some risk management. They would be a valuable tool for them.

One of the aspects of building these tools for these clients is a lot of them have actually used the tools as HR data repositories; they may have five or six different payroll centers. Instead of trying to go out and buy a PeopleSoft package or something else, they've actually used us once they realized, 'Hey, we've got this great amount of data that's all sitting in one site for a change.' So we don't need to go to five different payroll centers to say, 'Get us this report. We've sort of collected it and kept it.' And that was one of the things back on the data cleanup. That was

one of our positions, that we get it clean, and we keep it clean, which is fairly important.

For me, working in a traditional DB field was very important for my training. Some people say I've sort of bounced between systems and true DB consulting within my years of working for the traditional firms. I worked on clients that sponsored an awful lot of pension plans. I had one client that sponsored 150 pension plans, and another client that sponsored 100 plans. So from my perspective, if I didn't learn how to deal with systems, I was going to be there in the middle of the winter when the windows were frozen over on a Saturday and Sunday and trying to get work done.

So I learned a lot about systems and a lot about dealing with large sponsors, which required project management skills. I think a lot of us have those skills, the ability to really go out and see the big picture and keep it all in focus. For me, strong computer skills were a requirement, self-taught, a lot of them; a lot of us, as actuaries, are self-taught. So it was sort of a natural for me. I did an awful lot with special projects for my traditional firms, worked on stochastic forecasting back in the 1980s, building systems for these plans that had multiple vendors or multiple plans.

The skill set that helps us all out is just our knowledge of long-term rates of return, financial analysis. That's helped in the total compensation. A lot of times for the total compensation statements that our guys do, they also build in a retirement modeling tool, which is a communication tool that is another aspect that we need to be thinking about, but it gets out to the employees that they really need to start thinking about retirement, and it sort of gets in their face a little bit in the total compensation statement arena. We had a client that we just did one for, and as soon as their total comp statements went out, they had 80 people sign up, call and say, 'I need to get in the 401(k) plan, and I need to start contributing a lot more money.' And that was the first day.

I think we're all pretty strong analytically. For me, my analytical skills were spent on system design and development. Again, I'm sort of a builder, if you would; I like to build things. And the ability to see the big picture, which was alluded to before: we can't be just silo guys. We have to be able to look at everything and take risks, I guess, as far as what we do. The client might ask you, Hey, can you do that? And my answer's always yes, even if we haven't necessarily done it. The competitive advantages that we've seen within what we do is that basically our competitors, it's amazing in the DB outsourcing arena that there's a lot of people that do it without actuaries on the staff. Incredible to me, but they do, and I think that's a big advantage for actuaries.

We can all read a plan document. We know one of the things that we do is we produce the snapshot data. So we make sure that the actuary actually gets reconciled, clean data every year. We had a client that we were doing work for just

on a cleanup basis, and the year that we did it we did the extract, and the next year the vendor did it, and the actuary called back and said, 'Hey, can we have those guys do it again?' But that's a big advantage from my perspective. Clients pay an awful lot for their annual data reconciliation within a DB service, which gives them a bad taste for their DB plan to begin with. We've branched out to other benefit disciplines, which helps solve the problem that DB plans are disappearing. We did an open enrollment Web site for a client last year, which got us into all kinds of things, and, again, I think the broad knowledge base avoids the silo mentality.

Is there anything I'd rather be doing? Potentially. Variety is the spice of life. I like client interaction, I think we all like that; if you end up going out on your own, and you have that opportunity, that's a big thing. Marketing was a big thing for us. Being on our own, you had to go out and sell your own services, and I guess speaking at a Society of Actuaries meeting is something to aspire to. That's a little bit about me, how I got to where I am. We do have a number of people who are actuaries that are really no longer applying their traditional DB skills. I haven't done a valuation in close to 10 years. We do work with traditional DB actuaries. We work with some of the smaller firms, and I think we found a definite niche there because the smaller firms don't want to do this stuff. We don't want to do what they're doing, so it sort of is a perfect marriage for us. We've got several partners that are small DB actuarial firms, and it works out great for both of us. They can concentrate on what they like to do.

That's the formal part of my presentation. Any questions?

MR. GENNO: I'll start with one question, and maybe it'll prompt some from the audience. Can you talk about some of the challenges you faced in setting up your own business?

MR. CROYLE: We ended up with a fairly large client right off the bat, so it didn't really affect us that much. What we did wrong was we had this large client, and we didn't leverage off of that. It took us years to actually say, 'Hey, we've got this thing going for us. We need to really leverage off of that.' And I've seen other people do the same thing. And that large client eventually decided, 'Hey, we're going to consolidate all the stuff we've been doing with one vendor.' So we had about a year-and-a-half-long wakeup call, and within that year and a half we actually doubled our revenue. We went out and really marketed hard; we had to learn how to market ourselves and do that sort of stuff. But, yes, the marketing is critical. If you have the opportunity where you have some income, you need to definitely leverage off of that because it's amazing how quick it goes.

MR. GENNO: For the audience: Have you contemplated setting up your own business? I know some people in the audience who have done so.

MR. CROYLE: It's challenging definitely from a marketing standpoint. The way we've done it with the marketing, the best way is to actually go out and have

alliances, especially with other smaller firms. We've won the administration work for a client that had 10 DB plans last year, which was great for us, but we couldn't have done it without the small actuarial firm that we were partnered with. So from our perspective, partnering is as critical as anything. We've got five DB actuaries on staff. None of us have kept current on the current regulations, none of us could do a valuation anymore. But we certainly know what's involved, and we certainly know we can actually talk to clients about what they need to do and that sort of thing, but none of us do that anymore.

I think one of the other big advantages that we've got is being small, and the round shape of all of our actuaries, I guess, if you want to think about it that way: all of us can actually go in and talk to a client. We can talk to their IT staff. We can talk to their HR people. We can talk to their administrators. We can talk to anybody without having to bring a whole team of, 'Here's 15 people. These people talk to you on this subject, etc.' It gives us a pretty good competitive advantage. And if I had any advice, that's really what I'd say: Just really broaden everything that you do.

MR. GENNO: Other questions from the audience? I'll ask a few more if others don't have any right now. Before the session started, Mike, we talked together about the idea of doing, in essence, an actuarial valuation for DC plans. And you alluded to it in your comments earlier in your presentation. Can you talk a bit more about the underlying concept, and how you approach it in practice?

MR. CROYLE: Okay, the underlying concept would be that you're going to collect all the DC information, what people are contributing, what the match is, and be able to project out either stochastically or deterministically, however you want to do it, to when they can afford to retire. If you want to think of it as a graph, you're going to have: Here's what your retirement assets are, and here's what your need is, and where those two components interact, that's when you can determine, hey, this person can probably afford to retire at this point. So, essentially, you would do this on the entire population. You can do it differently than a DB valuation because, again, you can look at that until they've been here for three years. They're probably not going to stay. So you might want to ask, 'Okay, if I just want to look at the people who have been in the plan for three years, is this plan going to be able to produce retirement benefits for this population?' And if it turns out 40 percent of your population's never going to be able to afford to retire based on the plan you're producing, you may need to rethink the design of your plan. One of the things that we were talking about before was consulting on your 401(k) plan design. So use that as a tool to do your DC consulting, which involves, again, actuarial concepts of projecting things out either deterministically or stochastically.

MR. GENNO: I'll offer another example where you can similarly perform projections, and it doesn't necessarily have to be in the context of a retirement

plan. We've all been trained in demographics. We have the skills to take an employee population in a pension plan and project that population forward, apply

assumptions about anticipated turnover patterns, future salary growth, future anticipated retirement patterns, etc. This is all part of our fundamental skill set as DB actuaries.

As with Mike's example just now, where he envisioned applying actuarial valuation skills in the context of a DC plan, think of some of the demographic and modeling skills you have and how you could apply them in the context of the evolution of an employee population within an organization. This doesn't even necessarily have to tie in at all to pension or benefit programs. Your demographic analysis could involve a projection for an employer that examines certain inputs with respect to turnover patterns based on age, service and business unit, and also considers factors that we don't typically take into account in our valuations as DB actuaries, such as skill sets, development of competencies and career progression of individual employees, and applies demographic principles to project the employee population forward year by year over a five- or 10-year horizon.

Based on such a demographic projection, you can begin to discuss a variety of important human resource-related questions with management. What will the future employee population look like? How will turnover affect the knowledge base and skill sets of the workforce? How will employees' opportunities for career advancement within the firm be affected? How many new recruits will the firm have to find each year? How could the projected employee population evolve differently, based on testing alternative scenarios?

Employers today face significant challenges in managing their workforce—including anticipating turnover patterns; using that information to anticipate their succession planning needs; developing training plans to enable staff to take on new roles and develop new skills; knowing what recruiting challenges they're going to face in the marketplace; and understanding the associated costs of turnover.

These are fundamental workforce management issues that HR managers face on a regular basis—and we, as actuaries, tend not to get involved with such issues, or where we do it's very peripheral (such as in the context of projecting forward DB plan demographics and financial obligations). By taking the same actuarial skills and asking the broader question, 'What's going to happen to your workforce?' we have real opportunities to do interesting consulting work for clients that is grounded directly in our unique ability as actuaries to perform this kind of analysis.

Let's pass the podium over to Brian Ternoey. Brian's current focus is exclusively on the investment side of the business. He has some observations on opportunities for investment actuaries, and ideas on how to enhance your skill sets—both through formal education as well as informal training—if investment-related work is the path you want to follow.

MR. BRIAN C. TERNOEY: I guess I'm a fallen-away actuary. I still do actuarial work and, in fact, enrolled work in some very specialized areas that are very deeply tied to investment. So I'll give you a couple of examples of that along the way.

Basically in terms of the program where it talked about what additional training is necessary and all that, it's pretty easy in the investment field to talk about the chartered financial analyst (CFA) exams. Have many people run into those yet, or at least heard the term so you know? CFAs are out there. AIMR, the Association for Investment Management and Research, just changed their name, I think early this month, to the CFA Institute. And the CFA series of exams is an interesting overlap to a lot of the material that's covered by actuaries. So in those terms there's a very natural link here between investments and actuaries.

CFAs have what they define as their body of knowledge, and it's actually very concise. It's 37 pages long, and you can get it at their Web site. If you look at that material, you'll see that probably a lot of things, statistics and the like, are very common to the actuarial field where you would easily understand much of what's going on. And unlike a lot of the other fields that actuaries deal with, I think you'd find more kinship with CFAs than other groups. So in that sense that there's a lot of natural draw into investments if you want to take this analytical approach, there's multifactor risk analysis, valuing futures contracts and then really understanding how those things change under different economic scenarios and being ahead of the game instead of behind the game. There's a lot of good stuff there. So in that sense, there's quite a bit going on.

However, I think the history has been that actuaries and CFAs don't really mix that well, or investment consultants and actuarial consultants haven't mixed that well. That seems to be an American phenomenon more than, say, in the United Kingdom or Canada, where actuaries always have been traditionally involved in investment consulting, and it's been seen as part of their realm. In the United Kingdom actuaries do most of the big investment consulting jobs. So, again, the overlap of that knowledge is quite apparent, and the actual practice of that is quite apparent. In the United States I think investment consulting, though, evolved more from the investment management side of things, and the CFAs are the people out there who are supposed to be analyzing the stocks, signing on as to this is or is not a good price to buy this stock or bond.

So it's more the bottom-up side of the investment thing. What do I put in a portfolio once you give me the pot of money? And that tradition is what developed in the United States from a very large and aggressive investment community, and that led into the question: Where's the money? The money's in pension funds. And so then these consultants sprang up quite a bit with a big boom starting back in, I guess, the 1960s in pension funding. That's where the money lives, and so that's where you'll find investment management people. There are other big areas like endowments and state funds of various types. Those are large chunks of money too.

So in that sense what you see—even though a lot of the knowledge is common—is a really different approach to it. And I think some of those differences lie in that actuaries are very critical of data and are used to looking at data and saying, We've got to get the data right, that if you're going to construct decrement tables and all

that, there's a lot that goes into really making that a valid process. But even though you have all this math behind you in the securities analysis, in the end most of the data are very soft and really not all that usable. Likewise, if you look at even asset allocation, efficient frontier theory, they're using data that are typically, at most, 100 years old. What kind of prediction is that of the markets in the broad scheme of things or even over a person's lifespan?

So in many cases the problem is that you have to adjust in the investment world to the fact that you have all these tools, but you've still got to make an awful lot of judgments, and you've still got to step up and with a lot of confidence and say, 'This is the bet. This is where we're going.' And you automatically know that for every buyer there's a seller, so 50 percent of the people have already voted against you. It's an interesting confluence when those two come together. In the pension area there are different sides to deal with. So when we're dealing with the side that asks, 'What's the structure of the plan? Should I be in equities and fixed income—and what proportion?' there's still a lot of good actuarial scrutiny that ought to be done there, and it shouldn't be taken too lightly. There is a better body of data with which to deal with things like that.

On the other hand, as you go through the structure, you can then ask, 'Well, should we be passively or actively invested?' I come from the actuarial side, and so in a lot of my investment structure work with a client, we'll assume that your first level of risk in this is to just say, 'Well, let's see, if we earn the market, and if we want to keep dividing the market up into smaller pieces, equity and fixed income, and then take the equity and divide that between large cap and small cap or value and growth or international and emerging markets, we can keep cutting the data up in fairly decent ways.' But a lot of that baseline that we would use raises the question, 'Is there any reason to go beyond the risk of passing management? Let's just get the market.' And there's a lot of evidence that keeps saying bright managers over the long haul cancel each other out.

The investment community, on the other hand, has come up with this idea of alpha, that there ought to be a return above the market, and an active manager ought to seek alpha. You can find one that's smart and consistent and will, over time, add something above the market. And you want to hire that guy and let someone else with some other money be the one that cancels out. So, again, those traditions can clash, and in the investment community it's got a lot more to do with hiring the manager who's got the flash and the knowledge, and it's much more a beauty contest than an analysis. And it's tough for the actuary in that circumstance to give into that, I think. It's certainly tough for me, but I want to stick with the data and say, 'Case not proven, why take that risk?' I've learned over the years that I can find parts of the market that are inefficient, and a manager should add value, so it

should be part of my job to seek those managers and try to find out what it is. It's not past performance that predicts those managers.

As an actuary I can verify to you that past performance is a biased indicator. Good past performance usually indicates they'll have poor performance in the future. Bad past performance isn't quite as strong an indicator. It might be that you are just plain incompetent or a crook, but unlike good past numbers, it doesn't predict that your time will come and you'll suddenly be in the sunlight and look great. So that's the difference that you have in these two areas, and it isn't easy for them to get along. I felt I had to overcome the prejudice in the investment community of being an actuary and saying, 'Well, no, I can put my pencil down and listen to this guy's beauty contest, and I won't come up with a quantitative number that says whether he's good or bad.' But it's tough because there is just a lot more that you have to absorb in the investment community when you're actually looking for a manager as opposed to just setting up the plan. But it has been an area that will periodically want the scrutiny and the detail that an actuary can bring to it.

I'll give you just a couple of examples. I spend a lot of time on plan terminations. That's really the area I still work in as a true enrolled actuary and can claim to be doing something that other enrolled actuaries don't seem to do very well, and at the same time talk to the investment side of the house and say, 'You don't get it. You don't understand what they're saying. You don't understand why you're exposing your clients to risks.' A good example of that was back when there were a lot of underfunded plans that clients would have just as soon gotten rid of frozen plans and the like. This is probably almost ancient history by now, but there was a time when there were underfunded frozen plans around that people would have just as soon gotten rid of, but it wasn't the right time.

Then suddenly came the booms in the market, several good years of performance, and the plans are overfunded, and they say, 'Oh, it's a good time to move out of these plans,' but the actuarial numbers are maybe six months old, and so you're always looking too late in the ball game. So by the time the actuary says, 'Aw, you know that plan we've been talking about terminating for several years, it's ready to go,' you've really missed the optimal opportunity for the client to terminate that plan. The valuation date didn't line up with the optimal asset/liability alignment. And on the investment side, the investment people couldn't appreciate that it's not just earning more money out of equities or something, goose up the returns of the fund and you'll be overfunded sooner, but it was the interplay of liabilities and assets. We saw that quite a bit.

But in the last market downturn, with the really hard-core damage done, from the cases I've looked at, was from the ballooning values of the liabilities, not from the equity losses. Equity losses come and go. But it was the booming value of the liabilities that hit hard. Now you've got to put in hard cash as well as eat your bad returns. So that was a good example of where you needed someone who understood both sides or could interpret both sides, and that was me saying to the

actuary, 'No, you're not giving me the data quite the way I want it.' It really wasn't difficult to come up with the data the way I want it, to translate the liabilities into something dynamic, so that I could take the liabilities as of the last valuation date

and come up with a decent estimate as to what that liability was worth today. I used Treasury futures for that and the like, but something that I could really go out and buy, and that would be, if I bought that today or six months from now, it would be a good value of the liabilities. It was a great idea.

If you wanted to talk to the investment side of the house, the big houses, and say, 'Well, we've got this problem that we want to immunize or hedge the liability,' they all wanted to do cash-flow matching, project out the payment stream that was inside that liability and match that against bonds, and we kept saying, 'Well, no, that's not the problem. We're trying to immunize or hedge the insurance premium of terminating this contract.' But we had to somehow project the actuary's data into something that we could buy any day, and we could watch the stocks and the bonds and all the value of the assets and see when assets really did exceed liabilities on that day, and then we could do something with it. We could say, 'Oh, you got it. May 19 you're there. Now just give us six months to go buy annuities or something like that and hope that nothing changes between then and now.' What we were doing was going out and buying something that day and working with the investment managers to say we may show up on May 19 and say, 'Sell all those equities, we're going to immunize the premium that we projected that we have to pay.' So there's one good example. It tended only to irritate both the actuaries and the investment people until we got the deal done and they said, 'Oh, it works.'

Another example is where the DC and the DB plans come together, if you look at both of them and say, 'I think there's a great opportunity for DB plans to support DC plans in the retirement stage.' We had put variable annuities in—think of it as constructing a variable annuity pool inside the DB plan. And, as people retire from the DC plan and get these huge lump sums, what do they do? A lot of times they go out and buy horribly expensive annuities or variable annuities from someone, typically a broker who's talked them into funding his retirement with their money. And so without much of a watch guard over that whole process, a lot of this hard-earned DC money is being siphoned off, of little value to either the longevity of the participant or a hedge against inflation or a economical investment structure.

Mutual funds and variable annuities have become horribly overpriced and expensive vehicles in most cases, but inside the DB plan you have a very economical way of investing money. That's some of the most inexpensive and yet best-earned money in the world. So there's one way of offering value to the participant, keeping a little volume of assets inside the DB plan. It's certainly a liability and an obligation you'd have to watch, but certainly one of the things DB plans do well is spread mortality. It's the only thing the participant can't do well on their own, and a DC plan doesn't do at all. So there's a hot tip for you.

The third area we're involved in is outsourcing. A lot of our outsourcing issues now are not just the plan sponsor wanting to outsource a DC plan to a mutual fund company or a bank or the like, but the DB work is big now as well. I guess the good news is typically they want to keep the actuary, but typically they want to gain control of the data, and they want to incorporate it with their other data so that

when a participant calls, they can ask, 'How much is in my DC fund; my 401(k)?' That's the easy part. 'But, by the way, what's my benefit under the DB plan?' And then it's expanding even beyond that. 'And what are my health care options?' And, just give them one number, whether they're updating their health care options or thinking about planning for requirement. So that requires really a very common database, and there are huge opportunities in data cleanup in the DB area. We typically work with Fortune 100 companies, and none of the data's any good. I don't want to start naming names, but a whole lot of data cleanup needs to be done, and we have sent people to sites in rural places, going down into basements, some of the data gnawed by rats. It's just amazing how bad the data are. Not that it takes an actuary to turn the data into good data, but there is just a huge lack of appreciation for what terrible shape the data are in.

Those are my examples of how these areas can overlap; does anyone have any specific questions?

MR. GENNO: Has anyone else in the audience had some involvement with investment consulting work, whether it's in the context of a plan termination, or setting investment policy, or helping plan sponsors monitor managers' performance?

FROM THE FLOOR: One area that wasn't touched on, but we found a lot of opportunity around was education of investment committees and boards, especially with the down markets, and then all they see is the millions of dollars going into the pension funds and not really understanding how that money is invested and how it impacts the profit and loss statements. So, we're talking about a huge opportunity there, a communications piece that companies are currently doing.

MR. TERNOEY: Yes, certainly with a lot of the scandals and accounting scandals and the market downturn people are finally getting religion on governance. We always preach this model that says it starts at the board, but you really don't want to have them spend much time on things like investment policy and liability analysis and all those things. But you should think of what you're doing as a complete up and down from that source, and there are so many plans, again, large or small, out there that are not set up in accordance with their own board of directors' directives. They may even have an investment policy, but that empowers people to go out and fire managers or change asset allocations, but they are, in fact, in conflict with the board and how it governs. So that's a good example. And certainly governances may not necessarily be a natural feel for the actuary to be involved in but certainly a related thing, since there's the impact that the interaction of the pot of money and the liabilities can have on financial statements. That certainly is something that they'll be interested in.

MR. GENNO: Any other questions or comments, before we wrap up?

We hope we've been able to offer you some perspectives on what's happening in different countries where DB actuaries have faced the dilemma of an uncertain

future a little earlier than here in North America. We hope we've offered you some perspectives on how actuaries can pursue different career opportunities, addressing that question in two ways: looking at examples where actuaries have said, 'I'm putting aside the traditional DB role and embarking on something quite different,' as well as actuaries who, like many of you, might say, 'I'm still employed primarily in a DB-related role, but maybe there are things I could do that would broaden my opportunities.'

As you reflect on this session and ask yourself (as a DB actuary) about future possible roles and opportunities, there are many different career initiatives you can pursue. It might involve a major change, a quantum change or just subtle changes, as several of you suggested—perhaps simply expanding your horizons within your own firm by asking, 'Can I get involved in a broader range of consulting issues than the traditional DB role that I've enjoyed as my unique niche in the past?' We hope we've offered you some perspectives on this—a little food for thought. Of course, it's not possible to rethink your career completely as a result of an hour-and-a-half session like this, but, with luck, this is one small step on a road that includes a variety of other discussions with your peers, your employers, and your customers.